

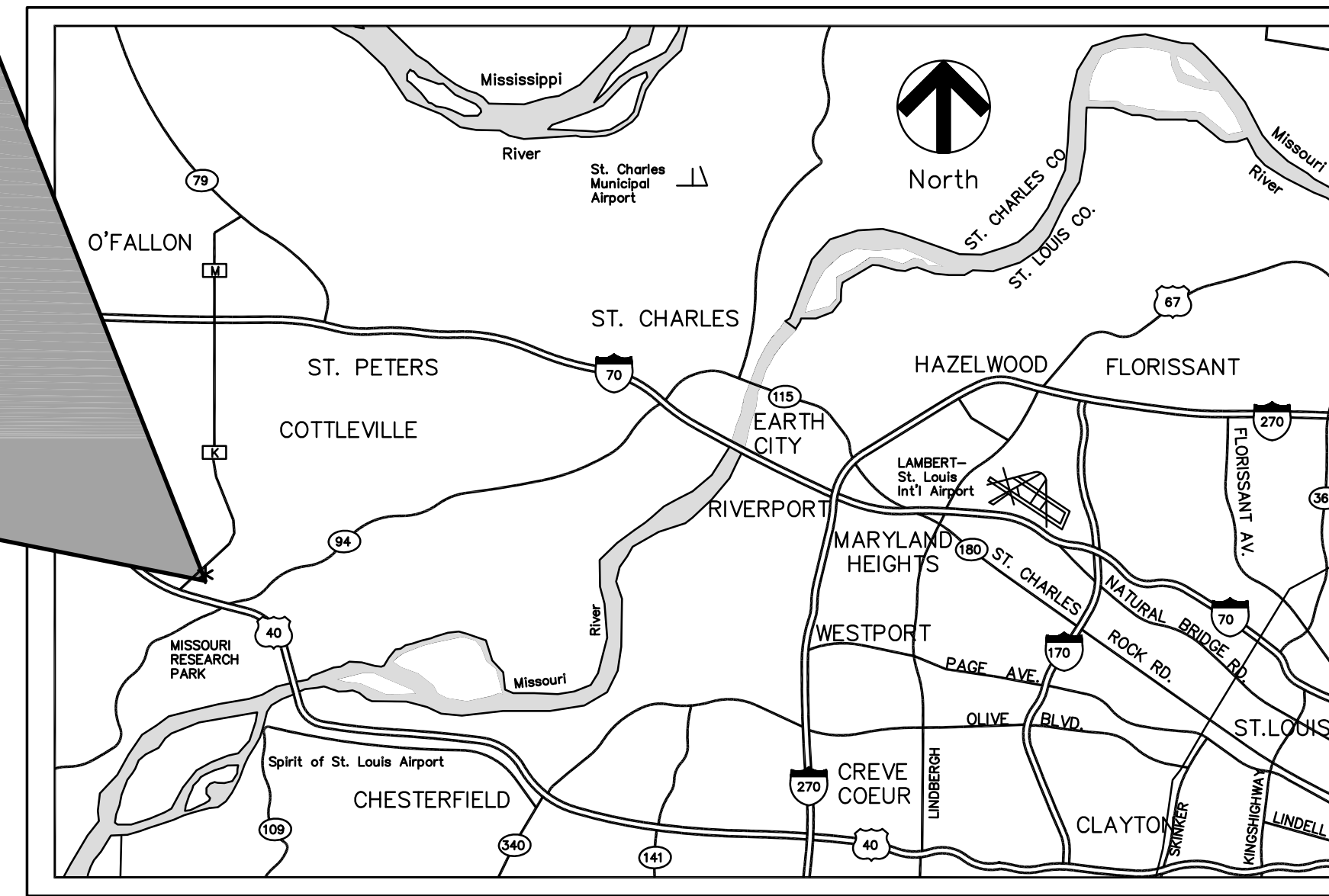
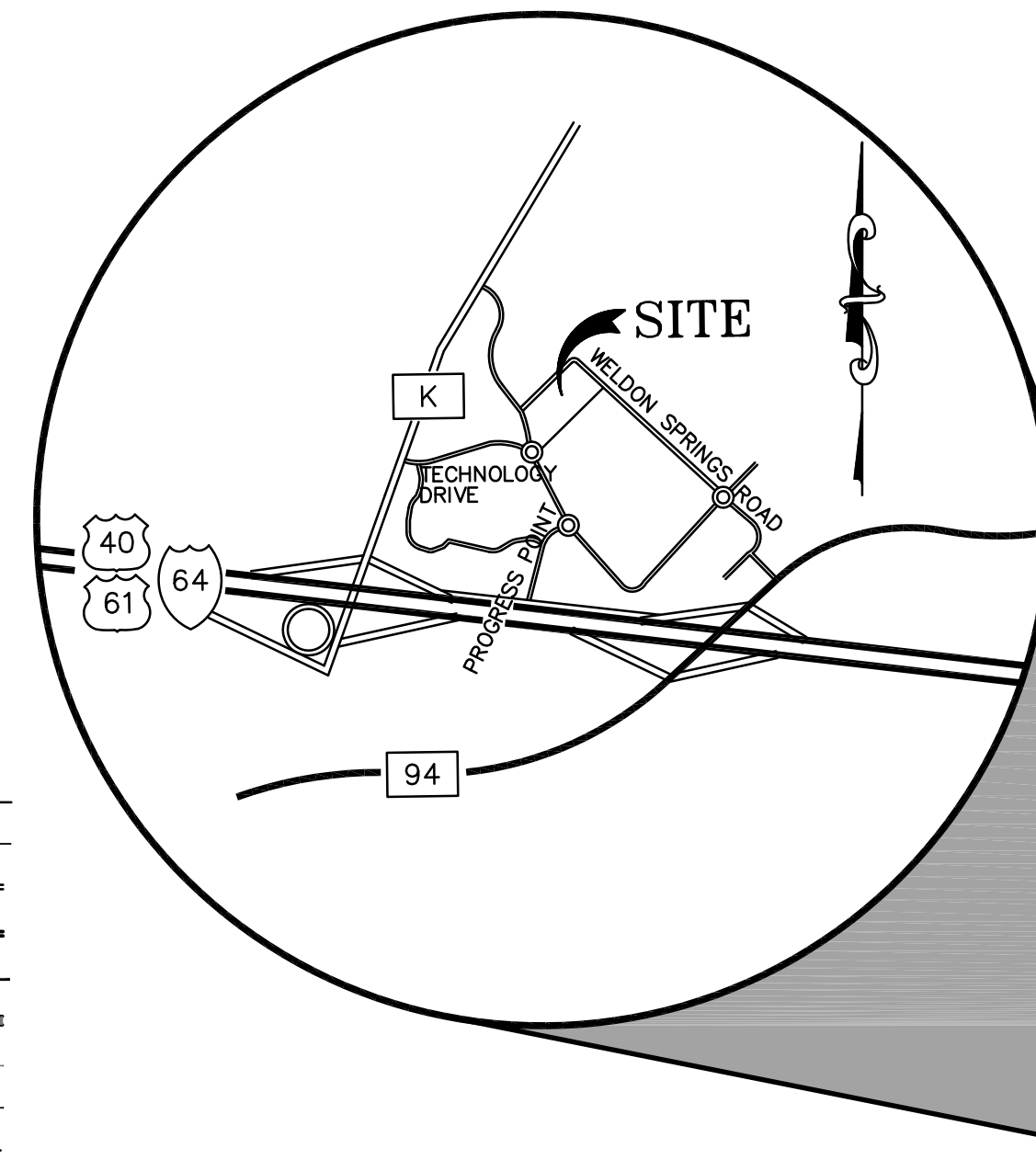
# CENTENE DATA CENTER BUILDING EXPANSION

A TRACT OF LAND BEING ADJUSTED LOT A OF THE BOUNDARY ADJUSTMENT PLAT OF LOT A AND COMMON GROUND AND DETENTION EASEMENT OF PROGRESS POINT, AS RECORDED IN PLAT BOOK 41, PAGE 83, LOCATED IN U.S. SURVEY 1669, TOWNSHIP 46 NORTH, RANGE 3 EAST OF THE 5TH PRINCIPAL MERIDIAN, CITY OF O'FALLON, ST. CHARLES COUNTY, MISSOURI

## IMPROVEMENT PLANS

### SHEET INDEX

- C1.0 TITLE SHEET
- C2.0 SPECIFICATIONS SHEET
- C3.0 EXISTING CONDITIONS & DEMOLITION PLAN
- C4.0 STORMWATER POLLUTION PREVENTION PLAN
- C4.1 S.W.P.P. DETAILS
- C5.0 OVERALL SITE AND GRADING PLAN
- C5.1-5.3 DETAILED SITE AND GRADING PLAN
- C5.4 SITE PLAN SECTIONS
- C6.0 CONSTRUCTION DETAILS
- C7.0 SEWER PROFILES & PIPE HYDRAULICS
- C8.0 WATER QUALITY DETAILS
- C9.0 RETAINING WALL PROFILE
- C10.0 EXISTING DRAINAGE AREA MAP
- C11.0 PROPOSED DRAINAGE AREA MAP
- C12.0 BMP DRAINAGE AREA MAP



LOCATION MAP  
(NOT TO SCALE)

Subject property lies within Flood Zone "X" (areas determined to be outside the 500-year floodplain) per National Flood Insurance Program Flood Insurance Rate Map for St. Charles County, Missouri, and Incorporated Areas. The map is identified as Map No. 29183C0430E with an effective date of August 2, 1996.

### PERTINENT DATA

- SITE ADDRESS = 6430 WELDON SPRING ROAD
- SITE ACREAGE = 8.561 Ac.±
- OWNER (n/f) = CRG-PP LOT A, LLC
- PLAT BOOK = PLAT BOOK 41, PAGE 83
- SITE LOCATION = O'FALLON, MISSOURI 63376
- EXISTING ZONING = HTGD "HIGH TECH CORRIDOR"
- FIRE DISTRICT = COTTLEVILLE FIRE PROTECTION DISTRICT
- SEWER DISTRICT = DUCKETT CREEK SEWER DISTRICT
- WATER SERVICE = MISSOURI AMERICAN WATER COMPANY
- GAS SERVICE = LACLEDE GAS COMPANY
- ELECTRIC SERVICE = AmerenUE ELECTRIC COMPANY
- PHONE SERVICE = SOUTHWESTERN BELL TELEPHONE CO.
- PROPOSED USE = PAGE 56, GRID RR-23
- FEMA FIRM NO. = 29183 C 0430 E DATED 8/2/1996
- FLOOD ZONE = SITE LOCATED IN FLOOD ZONE "X"

### UTILITY CONTACTS:

- WATER SERVICE**  
MISSOURI AMERICAN WATER COMPANY  
535 NORTH NEW BALLAS ROAD  
ST. LOUIS, MO 63141  
PH. 314-996-2286  
CONTACT: TOM AARON
- SEWER DISTRICT**  
DUCKETT CREEK SEWER DISTRICT  
3550 HIGHWAY K  
O'FALLON, MO 63368  
PH. 636-441-1244  
FAX 636-498-8150  
CONTACT: MR. MIKE MERKT
- PHONE SERVICE**  
SOUTHWESTERN BELL TELEPHONE  
402 N. 3rd. STREET  
ST. CHARLES, MO 633023  
PH. 636-949-1324  
CONTACT: TERRY RODGERS
- MoDOT REVIEW OFFICE**  
6780 OLD HIGHWAY "N"  
402 N. 3rd. STREET  
ST. CHARLES, MO 63304  
PH. (314) 340-4334  
CONTACT: MR. SCOTTY D. WARD
- FIRE DISTRICT**  
COTTLEVILLE FIRE PROTECTION DIST.  
P.O. BOX 385 / 1385 MOTHERHEAD ROAD  
COTTLEVILLE, MO 63338  
PH. 636-447-8655  
CONTACT: MARK BOEHLE
- ELECTRIC SERVICE**  
AMEREN UE  
BOONE TRAILS DIVISION  
200 CALLAHAN ROAD  
WENTZVILLE, MO 63378  
PH. 636-639-8306  
CONTACT: TARA RINEY
- GAS SERVICE**  
LACLEDE GAS  
1999 TRADE CENTER EAST  
ST. PETERS, MO 63376  
PH. 636-342-0694  
CONTACT: MS. RAMONA HIPP
- CABLE SERVICE**  
CHARTER COMMUNICATIONS  
815 CHARTER COMMONS DR.  
TOWN & COUNTRY, MO 63017  
PH. 636-220-2196  
CONTACT: JOHN DANOWSKI

### LEGEND

- EXISTING CONTOURS --- 520 ---
- PROPOSED CONTOURS --- 520 ---
- EXISTING SANITARY SEWERS ---
- EXISTING STORM SEWERS ---
- PROPOSED SANITARY SEWERS --- SS ---
- PROPOSED STORM SEWERS ---
- EXISTING RIGHT-OF-WAY ---
- PROPOSED RIGHT-OF-WAY ---
- CENTERLINE ---
- EASEMENT ---
- NON-REINFORCED CONCRETE PAVEMENT [Symbol]
- REINFORCED CONCRETE PAVEMENT [Symbol]
- EXISTING SPOT ELEVATION + EX. 520.15
- PROPOSED SPOT ELEVATION + 520.10
- SWALE [Symbol]
- TO BE REMOVED T.B.R.
- TO BE REMOVED & RELOCATED T.B.R. & R.
- TO BE REMOVED & RELOCATED BY OTHERS T.B.R. & R.B.O.
- TO BE USED IN PLACE U.I.P.
- BACK OF CURB B.C.
- FACE OF CURB F.C.
- TRASH ENCLOSURE [Symbol]
- LIGHT STANDARD OR [Symbol]
- GAS MAIN G
- WATER MAIN W
- UNDERGROUND TELEPHONE T
- FIRE HYDRANT [Symbol]
- POWER POLE [Symbol]
- SILTATION CONTROL [Symbol]

### ABBREVIATIONS

- C.O. - CLEANOUT
- DB. - DEED BOOK
- E. - ELECTRIC
- FL. - FLOWLINE
- FT. - FEET
- FND. - FOUND
- G. - GAS
- M.H. - MANHOLE
- N/F. - NOW OR FORMERLY
- PI. - PLAT BOOK
- PG. - PAGE
- P.V.C. - POLYVINYL CHLORIDE PIPE
- P.O.B. - POINT OF BEGINNING
- P.O.C. - POINT OF COMMENCEMENT
- R.C.P. - REINFORCED CONCRETE PIPE
- SQ. - SQUARE
- T. - TELEPHONE CABLE
- V.C.P. - VETRIFFIED CLAY PIPE
- W. - WATER
- (86'W) - RIGHT-OF-WAY WIDTH

### MISSOURI DEPT. OF NATURAL RESOURCES

PERMIT NO. - MO-RA07437  
EXPIRATION DATE: FEBRUARY 7, 2017

### DNR BENCHMARK

BENCH MARK STATION: SC-18  
ELEVATION = 611.55

DESCRIPTION: BOTH THE STATION AND THE AZIMUTH MARK ARE STANDARD MO DNR ALUMINUM GRS DISK. THE STATION IS STAMPED "SC-18, 1999". THE AZIMUTH IS STAMPED "SC-12, 1990". BOTH DISK ARE SET IN 12 INCH DIAMETER BY 30 INCH DEEP CONCRETE MONUMENTS FLUSH WITH THE GROUND.

STATION, AZIMUTH MARKS AND REFERENCE TIES: THE STATION IS LOCATED AT THE AUGUST A. BUSH WILDLIFE AREA. IT IS IN THE GRASSY AREA WEST OF THE PAVED PARKING LOT FOR THE MAIN BUILDING OF THE BUSH WILDLIFE AREA. THE STATION IS 24 FT. SOUTH OF THE CENTER OF THE ENTRANCE ROAD; 18 FT. WEST OF THE SERVICE DRIVE TO THE BACK OF THE BUILDING.

THE AZIMUTH MARK IS ABOUT 0.25 MILES WEST OF THE STATION AND NEAR THE SOUTHEAST CORNER OF THE PARKING LOT FOR THE AHDEN KNIGHT HAMPTON MEMORIAL LAKE. IT IS 89.0 FT. SOUTHWEST OF THE NORTHWEST CORNER POST OF A RAIL FENCE AROUND THE PARKING LOT; 46.2 FT.

### UTILITY NOTE:

UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS, RECORDS AND INFORMATION, AND, THEREFORE DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NON-EXISTENCE, SIZE, TYPE, NUMBER, OR LOCATION OF THESE FACILITIES, STRUCTURES AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS. THE UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY GRADING, EXCAVATION OR CONSTRUCTION OF IMPROVEMENTS. THESE PROVISIONS SHALL IN NO WAY ABSOLVE ANY PARTY FROM COMPLYING WITH THE UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT, CHAPTER 319 RSMo.



MoDOT LOCATE (314) 340-4100

### FEMA BENCHMARK

RM 57: ELEV. 506.71 (U.S.G.S. - NGVD 1929 DATUM)  
CHISELED SQUARE ON NORTHEAST CORNER OF WELDON SPRING ROAD, BRIDGE OVER SCHOTE CREEK.

### SITE BENCHMARK

ELEV. = 565.12 (U.S.G.S. - NGVD 1929 DATUM)  
R.R. SPIKE IN NEW POWER POLE 70± LT., STA 299+80± RTE. "K".

STOCK AND ASSOCIATES CONSULTING ENGINEERS, INC. AND THE UNDERSIGNED ENGINEER HAVE NO RESPONSIBILITY FOR SERVICES PROVIDED BY OTHERS TO IMPLEMENT THE IMPROVEMENTS SHOWN ON THIS PLAN AND ALL OTHER DRAWINGS UNDER THE UNDERSIGNED ENGINEER'S SEAL. THE CONTRACTOR MEANS AND METHODS ARE THE SOLE RESPONSIBILITY OF THE OWNER AND CONTRACTOR. STOCK AND ASSOCIATES CONSULTING ENGINEERS, INC. HAS NO RESPONSIBILITY TO VERIFY FINAL IMPROVEMENTS AS SHOWN ON THIS PLAN UNLESS SPECIFICALLY CHARGED AND AUTHORIZED TO DO SO BY THE OWNER OR CONTRACTOR.

DRAWN BY: J.M.B. CHECKED BY: G.M.S. DATE: 11/10/2015 JOB NO: 209-4511.8 DUCKETT CREEK # BASE MAP # P- S.C.C. HAT # H&T S.U.P. # M.D.N.R. # MO-RA07437 SHEET TITLE: TITLE SHEET SHEET NO.: C1.0

**PREPARED FOR:**  
CLAYCO  
2199 Innerbelt Business Parkway  
St. Louis, MO 63114  
PHONE: (314) 429-5100  
FAX: (314) 429-3137  
Contact: Tom Sleskhaust

PREPARED BY:

**STOCK & ASSOCIATES**  
Consulting Engineers, Inc.

257 Chesterfield Business Parkway  
St. Louis, MO 63015 PH. (636) 530-9100 FAX (636) 530-9130  
e-mail: general@stockassoc.com  
Web: www.stockassoc.com

IMPROVEMENT PLANS FOR:

**CENTENE DATA CENTER BUILDING EXPANSION**

6430 WELDON SPRING ROAD  
O'FALLON, MISSOURI



12/30/2015  
GEORGE M. STOCK E-25116  
CIVIL ENGINEER  
CERTIFICATE OF AUTHORITY  
NUMBER: 000996

### REVISIONS:

1. 2015-12-07 PROGRESS PRINT
2. 2015-12-09 REVISED PER CITY COMMENTS
3. 2015-12-30 REVISED PER CITY & CLIENT COMMENTS

### PERMITTEE NOTE:

THE PERMITTEE SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING ALL SILTATION AND EROSION OF THE PROJECT AREA. THE PERMITTEE 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 CITY OF O'FALLON AND MODOT AS NECESSARY. THE PERMITTEE'S RESPONSIBILITIES INCLUDE ALL DESIGN AND IMPLEMENTATION AS REQUIRED TO PREVENT EROSION AND THE DEPOSITING OF SILT. THE CITY OF O'FALLON AND AS REQUIRED BY MODOT MAY AT THEIR OPTION DIRECT THE PERMITTEE 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 CITY OF O'FALLON AND AS REQUIRED BY MODOT.

### OWNER NOTE:

ONCE THE CONTRACTOR DELIVERS THE PROPERTY TO THE OWNER, THE OWNER SHALL BE RESPONSIBLE TO MAINTAIN ANY CONTROL MEASURE THAT IS TO REMAIN AS A PERMANENT STRUCTURE TO CONTROL SILTATION AND EROSION.

### SITE DEVELOPMENT PLAN

DIVISION FILE NUMBER: 99104.14.01  
APPROVAL DATE: NOVEMBER 5, 2015

### SITE DEVELOPMENT PLAN CONDITIONS

1. SHOULD THE USE OF THE BUILDING CHANGE FROM THAT DESCRIBED, THE PARKING REQUIREMENTS WILL NEED TO BE RE-EVALUATED.

### CITY PERMIT

CITY PERMIT NUMBER: 15-879-CP

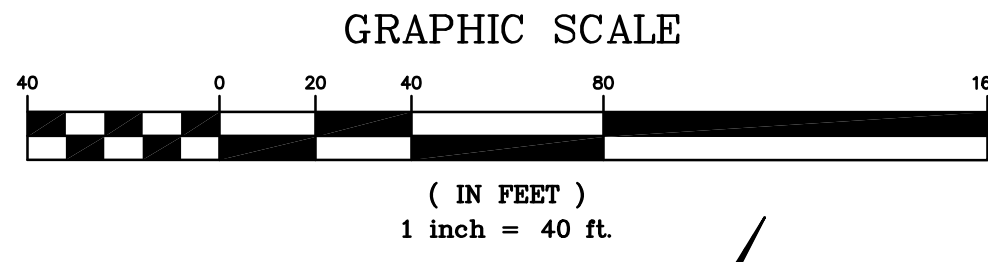
CITY OF O'FALLON  
COMMUNITY DEVELOPMENT DEPARTMENT  
ACCEPTED FOR CONSTRUCTION  
BY: *Jamie Skoville* DATE: 08/03/2017  
PROFESSIONAL ENGINEER'S SEAL  
INDICATES RESPONSIBILITY FOR DESIGN

TITLE SHEET

SHEET NO.: C1.0



- ABBREVIATIONS**
- C.O. - CLEANOUT
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  - E. - ELECTRIC
  - FL. - FLOWLINE
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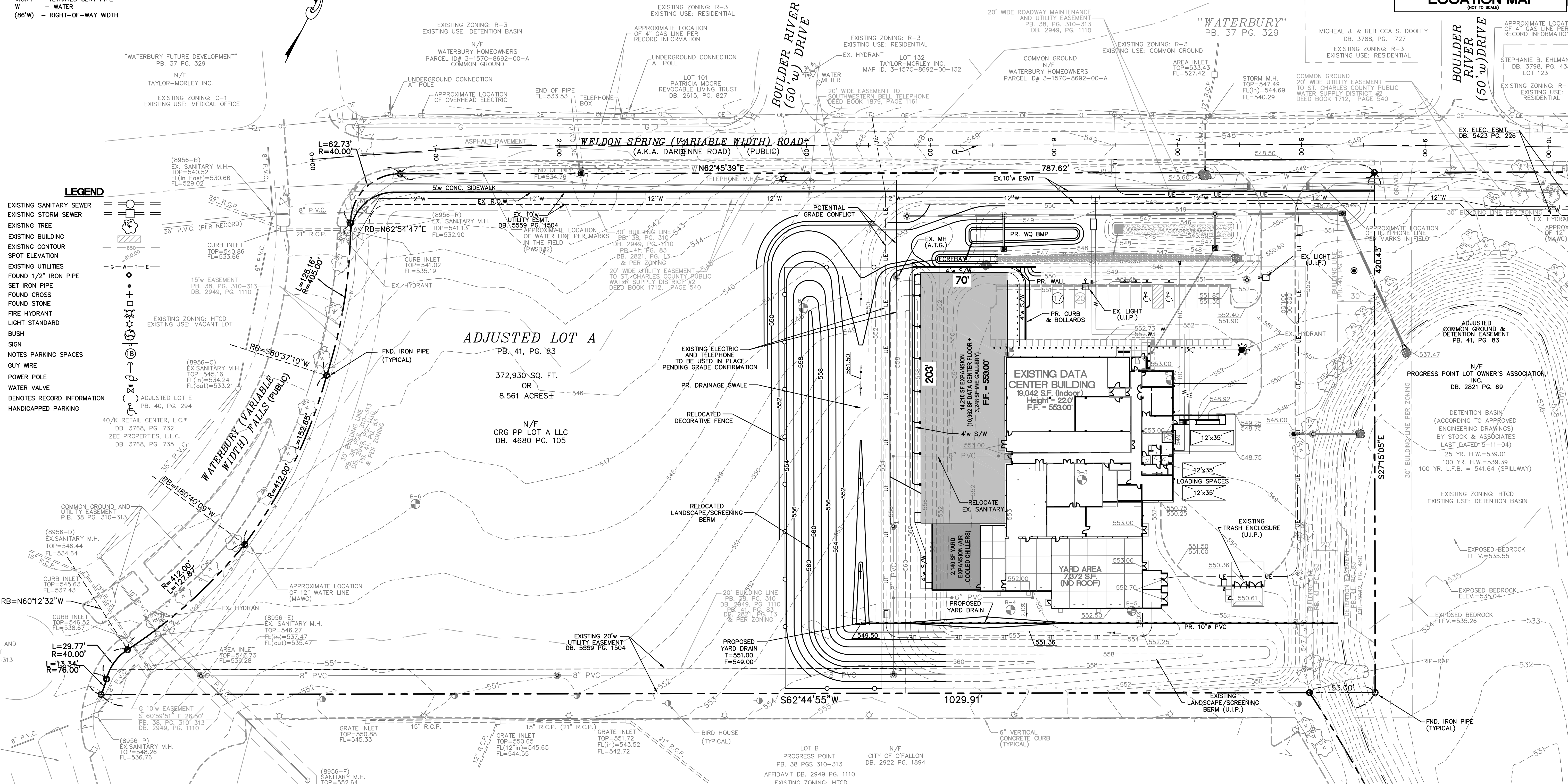
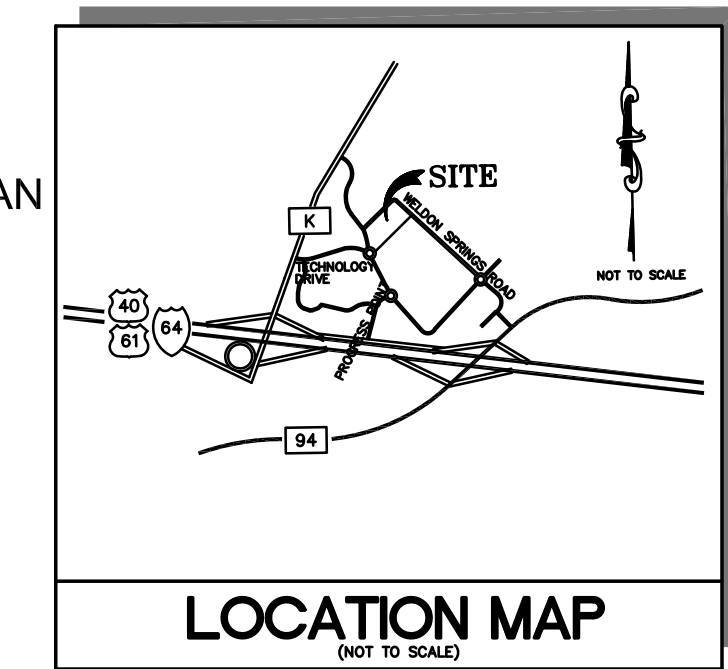


# PRELIMINARY SITE PLAN

A TRACT OF LAND BEING ADJUSTED LOT A OF THE BOUNDARY ADJUSTMENT PLAT OF LOT A AND COMMON GROUND AND DETENTION EASEMENT OF PROGRESS POINT, AS RECORDED IN PLAT BOOK 41, PAGE 83, LOCATED IN U.S. SURVEY 1669, TOWNSHIP 46 NORTH, RANGE 3 EAST OF THE 5TH PRINCIPAL MERIDIAN, CITY OF O'FALLON, ST. CHARLES COUNTY, MISSOURI

**SHEET INDEX**

- C1 PRELIMINARY SITE PLAN
- C2 SITE PLAN DETAILS



- LEGEND**
- EXISTING SANITARY SEWER
  - EXISTING STORM SEWER
  - EXISTING TREE
  - EXISTING BUILDING
  - EXISTING CONTOUR
  - SPOT ELEVATION
  - EXISTING UTILITIES
  - FOUND 1/2" IRON PIPE
  - SET IRON PIPE
  - FOUND CROSS
  - FOUND STONE
  - FIRE HYDRANT
  - LIGHT STANDARD
  - BUSH
  - NOTES PARKING SPACES
  - GUY WIRE
  - POWER POLE
  - WATER VALVE
  - DENOTES RECORD INFORMATION
  - HANDICAPPED PARKING

**PREPARED FOR:**  
CLAYCO  
2199 Innerbelt Business Parkway  
St. Louis, MO 63114  
PHONE: (314) 429-5100  
FAX: (314) 429-3137  
Contact: Tom Slickhaust

**UTILITY NOTE:**  
UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS, RECORDS AND INFORMATION, AND THEREFORE DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NON-EXISTENCE, SIZE, TYPE, NUMBER, OR LOCATION OF THESE FACILITIES, STRUCTURES AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS. THE UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY GRADING, EXCAVATION OR CONSTRUCTION OF IMPROVEMENTS. THESE PROVISIONS SHALL IN NO WAY ABSOLVE ANY PARTY FROM COMPLYING WITH THE UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT, CHAPTER 319 RSMO.



**FEMA BENCHMARK**

RM 57: ELEV. 506.71 (U.S.G.S. - NGVD 1929 DATUM) CHIELED SQUARE ON NORTHEAST CORNER OF WELDON SPRING ROAD, BRIDGE OVER SCHOTE CREEK.

**SITE BENCHMARK**

ELEV. = 565.12 (U.S.G.S. - NGVD 1929 DATUM) R.R. SPIKE IN NEW POWER POLE 70'± LT., STA 299+80± RTE. "K".

**PERTINENT DATA**

- = 6430 WELDON SPRING ROAD
- = 8.561 Ac.±
- = CRG-PP LOT A, LLC
- = PLAT BOOK 41, PAGE 83
- = O'FALLON, MISSOURI 63376
- = HTCD "HIGH TECH CORRIDOR"
- = COTTLEVILLE FIRE PROTECTION DISTRICT
- = DUCKETT CREEK SEWER DISTRICT
- = MISSOURI AMERICAN WATER COMPANY
- = LAOULEE GAS COMPANY
- = AmerenUE ELECTRIC COMPANY
- = SOUTHWESTERN BELL TELEPHONE CO.
- = PAGE 56, GRID RR-23
- = BUSINESS AND STORAGE
- = 23183 C 0430 E DATED 8/2/1996
- = FEMTA FIRM NO.
- = FLOOD ZONE

**BICYCLE RACK CALCULATIONS:**  
REQUIRED: ONE SPACE PER EVERY 15 AUTOMOBILE PARKING SPACES (MIN. 4) 17 PARKING SPACES/15=1.13  
REQUIRED: 4 BICYCLE SPACES

**LOADING CALCULATIONS:**  
REQUIRED: 1 PER 5000 SF + 1 PER EACH ADDITIONAL 20,000 SF = 3 REQ'D  
PROVIDED: 3

**PARKING CALCULATIONS:**  
REQUIRED PARKING BASED ON CLASSIFICATION: "DATA CENTER/SUPPORT SPACE"

BUILDING AREA	GSF	USE	DESIGN OCCUPANCY	ACTUAL
DATA CENTER	25,800	B (BUSINESS)	258	10
SUPPORT SPACE	8,800	S (STORAGE)	29	0
TOTAL REQUIRED:			287 SPACES	
TOTAL PROVIDED:			17 SPACES*	

\*SEE ENCLOSED LETTER FOR SUPPLEMENTAL PARKING CALCS

**ACCESSIBLE SPACES**  
REQUIRED: 1-25 SPACES PROVIDED  
REQUIRED: 1 ACCESSIBLE SPACE (1 VAN ACCESSIBLE)  
PROVIDED: 2 ACCESSIBLE SPACES (2 VAN ACCESSIBLE)

**SITE COVERAGE CALCULATIONS:**

AREA	S.F.	%	ACRES
BUILDING	42,844	11.5%	0.98
LANDSCAPE	303,346	81.3%	6.97
PAVEMENT	26,740	7.2%	0.61
TOTAL	372,930	100%	8.561 +/-

**TREE PRESERVATION CALCULATIONS:**  
REQUIRED: MINIMUM 20% OR 15 TREES/ACRE RETAINED  
56 EXISTING TREES x 0.20 = 11 TREES  
PROVIDED TREES: 9 TREES  
TOTAL TREES ON SITE: 60 TREES

PREPARED BY: **STOCK & ASSOCIATES** Consulting Engineers, Inc.  
257 Chesterfield Business Parkway  
St. Louis, MO 63005 PH. (636) 530-9100 FAX (636) 530-9130  
e-mail: general@stockassoc.com Web: www.stockassoc.com

SITE DEVELOPMENT PLAN FOR: **CENTENE DATA CENTER BUILDING EXPANSION**  
6430 WELDON SPRING ROAD  
O'FALLON, MISSOURI

00/00/0000  
GEORGE M. STOCK E-25116  
CIVIL ENGINEER  
CERTIFICATE OF AUTHORITY  
NUMBER: 000996

REVISIONS:

DATE	BY	DESCRIPTION
09/15/2015	J.M.B.	209-4511.2

DRAWN BY: J.M.B. CHECKED BY: G.M.S.  
DATE: 09/15/2015 JOB NO: 209-4511.2  
DUCKETT CREEK # BASE MAP #  
S.C.C. HAT # HAT S.U.P. #  
M.D.N.R. #  
M.O. #  
SHEET TITLE: PRELIMINARY SITE DEVELOPMENT PLAN  
SHEET NO.: C1.0



# EROSION AND SEDIMENT CONTROL NOTES

- Installation of perimeter sediment control shall be implemented as the first step of grading the site.
- Inspection of siltation control devices shall take place once every seven days and within 48 hours of any 0.5"/24 hour rain or greater rain event. Any siltation control in need of repair shall be immediately.
- No graded areas are to remain bare for over 14 days without being seeded and mulched per specifications. If seasonal conditions prohibit seeding, mulching or matting shall be used.
- All slopes or drainage channels, once constructed to final grade, shall be seeded and mulched per specifications within seven (7) days.
- Silt fences shall be installed immediately around each storm sewer structure once final construction of each individual structure is complete.
- All siltation control devices shall remain in place until upslope areas have been permanently stabilized.
- Erosion control shall not be limited to what is shown on the plan. Whatever means necessary shall be taken to prevent siltation and erosion from entering natural streams and adjacent roadsways, properties, and ditches.
- When deemed necessary, positive steps should be exercised to prevent this soil from damaging adjacent property and siting up all storm drainage systems whether on or off site.
- LOCATIONS AND DETAILS FOR ALL SILTATION CONTROL DEVICES SHALL FOLLOW "ST. CHARLES COUNTY SOIL AND WATER CONSERVATION DISTRICT EROSION AND SEDIMENT CONTROL" GUIDELINES.

### Siltation Control Schedule Implementation

- Perimeter siltation control and construction entrances to be installed.
- Begin placing aggregate base in parking areas once area has reached final grade to prevent erosion.
- Place silt fence around each storm sewer structure as it is completed.
- Immediately seed areas upon reaching final grade that are to be permanently seeded.

### Temporary Access Roads and Parking Areas Specifications

- Temporary roads shall follow the contour of the natural terrain to the extent possible. Slopes should not exceed 10 percent.
- Grades should be sufficient to provide drainage, but should not exceed 10 percent.
- Roadbeds shall be at least 24 feet wide.
- All cuts and fills shall be 3:1 or flatter to the extent possible.
- Drainage ditches shall be provided as needed.
- The roadbed or parking surface shall be cleared of all vegetation, roots and other objectionable material.
- A 10-inch course of 2" MINUS aggregate shall be applied immediately after grading or the completion of utility installation within the right-of-way. Filter fabric may be applied to the roadbed for additional stability in accordance with fabric manufacturer's specifications.

### Vegetation

All roadside ditches, cuts, fills and disturbed areas adjacent to parking areas and roads shall be stabilized with appropriate temporary or permanent vegetation according to the applicable standards and specifications.

### Maintenance

Both temporary and permanent roads and parking areas may require periodic top dressing with new gravel. See notes adjacent to the roads and parking areas should be checked periodically to ensure that a vigorous stand of vegetation is maintained. Roadside ditches and other drainage structures should be checked regularly to ensure that they do not become clogged with silt or other debris.

All erosion control systems shall be inspected and necessary corrections made within 24 hours of any rainstorm resulting in 1/2 inch of rain or more.

### Straw Bale Siltation Control Specifications

#### Sheet Flow Applications

- Bales shall be placed in a single row, lengthwise on the contour, with both ends of adjacent bales tightly abutting one another.
- All bales shall be either wire-bound or string-tied. Straw bales shall be installed so that bindings are oriented around the sides rather than along the tops and bottoms of the bales (in order to prevent deterioration of the bindings). See Detail shown on sheet 5 of 8.
- The barrier shall be entrenched and backfilled. A trench shall be excavated the width of a bale and the length of the proposed barrier to a minimum depth of 4 inches. After the bales are staked and chinked, the excavated soil shall be backfilled against the barrier. Backfill soil shall conform to the ground level on the downhill and shall be built up to 4 inches against the uphill side of the barrier (See detail shown on sheet 5 of 8).
- Each bale shall be securely anchored by at least two stakes or rebars driven through the straw. The first stake in each bale shall be driven toward the previously laid bale to force the bales together. Stakes or rebars shall be driven deep enough into the ground to securely anchor the bales.
- The gaps between bales shall be chinked (filled by wedging) with straw to prevent water from escaping between the bales. (Loose straw scattered over the area immediately uphills from a straw bale barrier tends to increase barrier efficiency).
- Inspection shall be frequent and repair or replacement shall be made promptly as needed.
- Straw bale barriers shall be removed when they have served their usefulness, but not before the upslope areas have been permanently stabilized.

#### Channel Flow Applications

- Bales shall be placed in a single row, lengthwise, oriented perpendicular to the contour, with ends of adjacent bales tightly abutting one another.
- The remaining steps for installing a straw bale barrier for sheet flow applications apply here, with the following addition:
  - The barrier shall be extended to such a length that the bottoms of the end bales are higher in elevation than the top of the lowest middle bale (see detail) to assure that sediment-laden runoff will flow either through or over the barrier but not around it.

#### Maintenance

- Straw bale barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.
- Close attention shall be paid to the repair of damaged fence, end runs and undercutting beneath fence.
- Necessary repairs to barriers or replacement of silt fence shall be accomplished promptly.
- Sediment deposits should be removed after each rainfall. They must be removed when the level of deposition reaches approximately one-half the height of the barrier.
- Any sediment deposits remaining in place after the straw bale barrier is no longer required shall be dressed to conform to the existing grade, prepared and seeded.

#### Silt Fence Specifications

- Silt Fence to be woven geotextile fabric Mirafix 100X or equal.
- Fabric to be supported by metal tee post with spade base spaced on 5 centers with 6" x 6"/10" x 10" gage welded wire fence. See detail shown on sheet 5 of 8.
- Fabric shall be entrenched and backfilled. A trench shall be excavated a minimum of 6 inches deep for the length of the fence. The excavated soil shall be backfilled against the fence. See detail this sheet.
- Fence height shall be a minimum of 4 feet in height, with the fabric installed on the fence on the upstream side.
- Silt fences shall be used only on sheet flow conditions.
- Silt fences shall be installed around all storm sewer structures.

#### Maintenance

- Silt fence barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.
- Close attention shall be paid to the repair of damaged bales, end runs and undercutting beneath bales.
- Necessary repairs to barriers or replacement of bales shall be accomplished promptly.
- Sediment deposits should be removed after each rainfall. They must be removed when the level of deposition reaches approximately one-half the height of the barrier.
- Any sediment deposits remaining in place after the silt fence barrier is no longer required shall be dressed to conform to the existing grade, prepared and seeded.

# GENERAL NOTES

- BOUNDARY AND TOPOGRAPHIC SURVEY BY STOCK & ASSOCIATES.
- ALL UTILITIES SHOWN HAVE BEEN LOCATED BY SURVEY AND RECORD INFORMATION. THEIR LOCATION SHOULD BE CONSIDERED APPROXIMATE. THE CONTRACTOR HAS THE RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES, PRIOR TO CONSTRUCTION, TO HAVE EXISTING UTILITIES FIELD LOCATED.
- NO SLOPE SHALL BE STEEPER THAN 3:1 OR AS APPROVED BY GEOTECHNICAL ENGINEER.
- FEMA MAP 29183C0430 E DATED 8/2/96 ZONE "X" AND OTHER AREAS.
- ALL SLOPES TO BE STABILIZED IMMEDIATELY AFTER GRADING.
- ALL UTILITIES SERVING SITE ARE UNDERGROUND.
- ALL CONSTRUCTION AND MATERIALS USED SHALL CONFORM TO CURRENT CITY OF OFALLON STANDARDS.
- ALL FILL PLACED UNDER PROPOSED STORM AND SANITARY SEWER, PROPOSED ROADS, AND/OR PAVED AREAS SHALL BE COMPACTED TO 90% MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED AASHTO 1-180 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. 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 OFALLON PRIOR TO THE PLACEMENT OF FILL. PROOF ROLLING MAY BE REQUIRED TO VERIFY SOIL STABILITY AT THE DISCRETION OF THE CITY OF OFALLON.
- DEVELOPER MUST SUPPLY CITY CONSTRUCTION INSPECTORS WITH SOIL REPORTS PRIOR TO OR DURING SITE SOIL TESTING. REPORTS MUST CONTAIN THE FOLLOWING INFORMATION:
  - MAXIMUM DRY DENSITY
  - OPTIMUM MOISTURE CONTENT
  - MAXIMUM/MINIMUM ALLOWABLE MOISTURE CONTENT
  - CURVE MUST BE PLOTTED SHOWING DENSITY FROM A MINIMUM OF 90% COMPACTION AND ABOVE DETERMINED BY THE "MODIFIED AASHTO-180 COMPACTION TEST" OR FROM A MINIMUM OF 95% AS DETERMINED BY THE "STANDARD PROCTOR TEST" AASHTO T-99, METHOD C" (ASTM D-698). PROCTOR TYPE MUST BE DESIGNATED ON DOCUMENT.
  - CURVE MUST HAVE ATLEAST 5 DENSITY POINTS
  - SPECIFIC GRAVITY
  - NATURAL MOISTURE CONTENT
  - LIQUID LIMIT
  - PLASTIC LIMIT
- BE ADVISED THAT IF THIS INFORMATION IS NOT PROVIDED TO THE CITY'S CONSTRUCTION INSPECTOR THE CITY WILL NOT ALLOW GRADING OR CONSTRUCTION ACTIVITIES TO PROCEED ON ANY PROJECT SITE.
- ALL PAVED ROADWAYS GOING ON AND OFFSITE WILL BE KEPT FREE OF DIRT, ROCKS, GRAVEL OR OTHER MATERIALS DURING CONSTRUCTION.
- 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.
- ALL PAVING TO BE IN ACCORDANCE WITH ST. CHARLES COUNTY STANDARDS AND SPECIFICATIONS EXCEPT AS MODIFIED BY THE CITY OF OFALLON ORDINANCES.
- CONTRACTOR TO FOLLOW GEOTECHNICAL ENGINEER RECOMMENDATIONS PREPARED BY MIDWEST TESTING; REPORTS DATED OCTOBER 12, 2015 (MT #14002)
- CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ANY ROCK ENCOUNTERED. CONTRACTOR SHOULD FAMILIARIZE THEMSELVES WITH ALL THE GEOTECHNICAL REPORTS LISTED ABOVE AND REVIEW THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
- PRESENT ZONING: "HTCD" (HIGH TECH CORRIDOR DISTRICT) BUILDING SETBACK REQUIREMENTS PER ZONING:
  - (A) FRONT YARD - THIRTY FEET (30')
  - (B) SIDE YARD - TWENTY FEET (20')
  - (C) REAR YARD - THIRTY FIVE FEET (35')
- IMPROVEMENTS ARE TO BE MADE TO THE ADJACENT RIGHT OF WAY OF ALL DEVELOPMENTS TO MEET CITY OF OFALLON STANDARDS AND SPECIFICATION. ANY ADJUSTMENTS IN THE GRADING OF RIGHT OF WAY WHETHER IT BE EXISTING CONDITIONS OR CAUSED BY THE CONSTRUCTION OF THE DEVELOPMENT SHALL BE APPROVED BY THE CITY OF OFALLON UPON INSPECTION OF THE SITE.
- ENGINEER ASSUMES 1 INCHES OF TOPSOIL, TO BE TREATED ON SITE.
- SEE LANDSCAPE PLAN FOR TREE PRESERVATION CALCULATIONS AND FOR PROPOSED TREE LOCATIONS AND INFORMATION.
- DRIVEWAYS AND ENTRANCES PER ST. CHARLES COUNTY STANDARDS, AND THE CITY OF OFALLON.
- ALL PUBLIC ROADWAYS SHALL BE KEPT FREE OF DIRT, ROCK, SILT, OR OTHER DEBRIS. MUD, DIRT, OR OTHER MATERIALS DEPOSITED ON THE ROADWAY BY VEHICLES ENTERING OR LEAVING THE SITE WILL BE REMOVED WITHIN A REASONABLE TIME FRAME.
- THE DEVELOPER IS TO POST A FINANCIAL GUARANTEE OF PERFORMANCE (PER APPROVED COST ESTIMATE) PRIOR TO CONSTRUCTION PLAN APPROVAL AS REQUIRED BY ARTICLE 405 OF THE SUBDIVISION ORDINANCE.

# EARTHWORK NOTES

BULK CUT.....	3,430	±	CUBIC YARD
BULK FILL.....	1,745	±	CUBIC YARD

THE ENGINEER HAS CALCULATED THE ABOVE QUANTITIES OF EARTHWORK TO BE REGARDED AS AN ESTIMATE OF THE BULK MOVEMENT OR REDISTRIBUTION OF SOILS ON THIS PROJECT. AS AN ESTIMATE, THESE QUANTITIES ARE INTENDED FOR GENERAL USE, AND THE ENGINEER ASSUMES NO LIABILITY FOR COST OVERRUNS DUE TO EXCESS EXCAVATED MATERIALS OR SHORTAGES OF FILL. THE QUANTITIES ESTIMATED FOR EACH OF THE IMPROVEMENT ITEMS LISTED ABOVE ARE BASED UPON THE HORIZONTAL AND VERTICAL LOCATION OF THE IMPROVEMENTS AS PROPOSED ON THE SITE ENGINEERING PLANS PREPARED BY STOCK AND ASSOCIATES CONSULTING ENGINEERS.

THE ENGINEER'S EARTHWORK ESTIMATE DOES NOT INCLUDE ANY OF THE FOLLOWING ITEMS REQUIRING EARTHWORK THAT MAY BE NECESSARY FOR COMPLETION OF THE PROJECT: MISCELLANEOUS UNDERGROUND CONDUITS, INCLUDING SEWER LINES AND WATER MAINS LESS THAN SIXTY INCHES IN DIAMETER, STANDARD MANHOLES; PROCESS OR TRANSFER PIPING; ELECTRICAL OR TELEPHONE CONDUITS; BASES FOR LIGHT STANDARDS; BUILDING FOOTINGS AND FOUNDATIONS, ETC.

THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACTUAL SIZE OF THE FIELD EXCAVATIONS MADE FOR THE INSTALLATION OF UNDERGROUND STRUCTURES, AND AS SUCH, THE ACTUAL QUANTITIES OF EARTHWORK FROM SUCH ITEMS MAY VARY FROM THE ESTIMATE SHOWN ABOVE.

THE ENGINEER ASSUMES NO RESPONSIBILITY FOR COSTS INCURRED DUE TO UNSUITABLE MATERIAL THAT MUST BE REMOVED FROM SITE.

THE ABOVE QUANTITIES ARE AN ESTIMATE AND SHOULD BE CONSIDERED AS SUCH. IT IS THE GRADING CONTRACTORS RESPONSIBILITY TO PREPARE A QUANTITY TAKEOFF AND NOTE ANY DISCREPANCIES TO THE ENGINEER.

ASSUMPTIONS:  
15% SHRINKAGE ON FILL.  
BUILDING SUBGRADE = 12" (48" IN DATA FLOOR AREA)  
EXCESS MATERIAL TO BE STOCKPILED ON-SITE, DISTRIBUTED EVENLY AT END OF PROJECT.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN "ALL" GEOTECHNICAL INVESTIGATIONS FROM THE "OWNER". CONTRACTOR SHALL REVIEW AND FAMILIARIZE THEMSELVES WITH RECOMMENDATIONS AS OUTLINED BY THE PROJECT GEOTECHNICAL ENGINEER AND INCORPORATE IT IN THEIR PROPOSED SCOPE OF WORK.

CONTRACTOR TO FOLLOW GEOTECHNICAL ENGINEER RECOMMENDATIONS PREPARED BY MIDWEST TESTING; REPORT TITLED "GEOTECHNICAL EXPLORATION CENTENE DATA CENTER BUILDING EXPANSION, OFALLON, MISSOURI DATED OCTOBER 12, 2015 (MT #14002)

# GENERAL NOTES CONTINUED

- CONSTRUCTION WORKING HOURS  
OCTOBER 1 - MAY 31  
MONDAY-SUNDAY  
7:00 AM to 7:00 PM  
JUNE 1 - SEPTEMBER 30  
MONDAY-FRIDAY  
6:00 AM to 8:00 PM  
SATURDAY & SUNDAY  
7:00 AM to 8:00 PM  
CONSTRUCTION DONE OUTSIDE OF THESE HOURS REQUIRES WRITTEN APPROVAL FROM THE CITY ADMINISTRATOR OR CITY ENGINEER.
- IF MATERIALS SUCH AS TREES, ORGANIC DEBRIS, RUBBLE, FOUNDATIONS, OR OTHER DELETERIOUS MATERIALS ARE NOT TO BE REUSED, THEY SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.
- ALL INSTALLATIONS AND CONSTRUCTION SHALL CONFORM TO THE APPROVED ENGINEERING DRAWINGS. HOWEVER, IF THE DEVELOPER CHOOSES TO MAKE MINOR MODIFICATIONS IN DESIGN AND/OR SPECIFICATIONS DURING CONSTRUCTION, HE/SHE SHALL MAKE SUCH CHANGES AT HIS/HER OWN RISK, WITHOUT ANY ASSURANCE THAT THE CITY ENGINEER WILL APPROVE THE COMPLETED INSTALLATION OR CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO NOTIFY THE CITY ENGINEER OF ANY CHANGES FROM THE APPROVED DRAWINGS. THE DEVELOPER MAY BE REQUIRED TO CORRECT THE INSTALLED IMPROVEMENTS SO AS TO CONFORM TO THE APPROVED ENGINEERING DRAWINGS. THE DEVELOPER MAY REQUEST A LETTER FROM THE CONSTRUCTION INSPECTION DIVISION REGARDING ANY FIELD CHANGES APPROVED BY THE CITY INSPECTORS.
- ALL LOW PLACES WHETHER ON-SITE OR OFF-SITE SHALL BE GRADED TO ALLOW POSITIVE DRAINAGE. TEMPORARY DITCHES CAN BE USED. ANY OFF-SITE DRAINAGE EASEMENTS WILL BE ACQUIRED BEFORE GRADING BEGINS.
- ALL GRADED AREAS SHALL BE SEEDED AND MULCHED (STRAWED) WITHIN 14 DAYS OF STOPPING LAND DISTURBANCE ACTIVITIES. VEGETATIVE GROWTH SHALL BE ESTABLISHED WITHIN 6 WEEKS OF GRADING WORK BEING STOPPED OR COMPLETED IN ANY AREA. VEGETATIVE GROWTH SHALL BE SUFFICIENT TO PREVENT EROSION (70% COVERAGE PER SQUARE FOOT) AS REQUIRED BY MDNR AND EPA.
- CLEARING LIMITS SHALL BE VISIBLY MARKED IN THE FIELD PRIOR TO REMOVAL OF TREES.
- CLEARING LIMITS SHALL BE VISIBLY MARKED IN THE FIELD PRIOR TO GRADING.
- ALL EROSION CONTROL SYSTEMS ARE INSPECTED AND CORRECTED WEEKLY, ESPECIALLY WITHIN 48 HOURS OF ANY RAINSTORM RESULTING IN ONE-HALF INCH OF RAIN OR MORE. ANY SILT OR DEBRIS LEAVING THE SITE AND AFFECTING PUBLIC RIGHTS-OF-WAYS OR STORM WATER DRAINAGE FACILITIES SHALL BE CLEANED UP WITHIN 24 HOURS AFTER THE END OF THE STORM.
- ALL OUTSIDE TRASH CONTAINERS, HVAC UNITS, ELECTRIC, TELEPHONE AND GAS METERS, SATELLITE DISHES, AND ROOFTOP MECHANICAL APPARATUS SHALL BE THOROUGHLY SCREENED WITH MATERIALS AND/OR LANDSCAPING TO CONCEAL THE VISIBILITY OF SUCH ITEMS FROM THE VIEW OF RIGHTS-OF-WAY AND/OR ADJACENT PROPERTIES AS APPROVED BY THE PLANNING AND ZONING COMMISSION.
- SEE ARCHITECTURAL DRAWINGS FOR ALL BUILDING DIMENSIONS AND DETAILS.
- ROOF TOP MECHANICAL EQUIPMENT ARE SHOWN BY PARAPET WALL AND GROUND MOUNTED MECHANICAL EQUIPMENT MUST BE FULLY SCREENED WITH LANDSCAPING OR SOILD MATERIALS.
- ALL PROPOSED WATER LINE SHALL BE C900 PVC OR BETTER.
- BRICK SHALL NOT BE USED IN THE CONSTRUCTION OF STORM SEWER STRUCTURES.
- ALL PROPOSED FENCING REQUIRES A SEPARATE PERMIT THROUGH THE PLANNING DIVISION.
- ALL TRAFFIC SIGNALS, STREET SIGNS, SIGN POSTS, BACKS AND BRACKET ARMS SHALL BE PAINTED BLACK USING CARBOLINE RUBSTON PENETRATING SEALER SG AND CARBOLINE 133 HP PAINT (OR EQUIVALENT AS APPROVED BY THE CITY). SIGNS DESIGNATING STREET NAME SHALL BE ON THE SAME POST AS TRAFFIC CONTROL SIGNS.
- ALL CONCRETE PIPES WILL BE INSTALLED WITH O-RING RUBBER TYPE GASKETS.
- CONTRACTOR TO ADJUST FINAL GRADE AS NECESSARY FOR AREAS TO BE SODDED TO MAINTAIN POSITIVE DRAINAGE.
- ALL LIGHT POLES ARE TO BE LOCATED WITHIN LANDSCAPED ISLANDS.
- LIGHTING VALUES WILL BE REVIEWED ON SITE PRIOR TO THE FINAL OCCUPANCY INSPECTION. CORRECTIONS WILL NEED TO BE MADE IF NOT IN COMPLIANCE WITH CITY STANDARDS.
- ENSURE SIDEWALKS, CURB RAMPS, RAMP AND ACCESSIBLE PARKING SPACES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 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. (ENSURE AT LEAST ONE 8' WIDE HANDICAP AISLE IS PROVIDED AND CURB RAMPS DO NOT PROJECT INTO THE HANDICAP ACCESS AISLE) ALL HANDICAP RAMPS ARE TO BE CONCRETE.
- ANY EXISTING WELLS AND/OR SPRINGS WHICH MAY EXIST ON THE PROPERTY MUST BE SEALED IN A MANNER ACCEPTABLE TO THE CITY OF OFALLON CONSTRUCTION INSPECTION DEPARTMENT AND FOLLOWING MISSOURI DEPARTMENT OF NATURAL RESOURCES STANDARDS AND SPECIFICATIONS.
- TRAFFIC CONTROL IS TO BE PER MDOT OR MUTCD WHICHEVER IS MORE STRINGENT.

# DUCKETT CREEK SANITARY DISTRICT CONSTRUCTION NOTES

- Underground utilities have been plotted from available information and therefore location shall be considered approximate only. The verification of the location of all underground utilities, either shown or not shown on these plans, shall be the responsibility of the contractor and shall be located prior to any grading or construction of improvements.
- Gas, water and other underground utilities shall not conflict with the depth or horizontal location of existing or proposed sanitary and storm sewers, including house laterals.
- All existing site improvements disturbed, damaged or destroyed shall be repaired or replaced to closely match preconstruction conditions.
- Fill under proposed storm and sanitary sewer lines and paved areas including trench backfills within and off the road right-of-way shall be compacted to 90 percent of maximum density as determined by the Modified AASHTO 1-180 Compaction Test (ASTM D1557)". All tests shall be verified by a Soils Engineer concurrent with grading and backfilling operations. The compacted fill shall be free of ruts and shall be non-yielding and non-pumping during proofrolling and compaction.
- The contractor shall prevent all storm, surface water, mud and construction debris from entering the existing sanitary sewer system.
- All sanitary sewer flowlines and tops built without elevations furnished by the engineer will be the responsibility of the sewer contractor.
- Easements shall be provided for all sanitary sewers on the record plat.
- All construction and materials shall conform to the current construction standards of the Duckett Creek Sanitary District.
- Adjustment to the connection to Duckett Creek Sanitary main requires DCSD Inspection. Contact Steve Overby, DCSD Chief Inspector at 636.441.1244 to schedule inspection. 48-hour advance notice required.

### SITE COVERAGE CALCULATIONS:

42,524 S.F. 11.4% (0.98 ACRES) BUILDING:  
303,666 S.F. 81.4% (6.97 ACRES) LANDSCAPE:  
26,740 S.F. 7.2% (0.61 ACRES) PAVEMENT:  
372,930 S.F. 100% (8.561 +/- ACRES) TOTAL

PRESENT ZONING: "HTCD" (HIGH TECH CORRIDOR DISTRICT)

- BUILDING SETBACK REQUIREMENTS PER ZONING:  
(A) FRONT YARD - THIRTY FEET (30')  
(B) SIDE YARD - TWENTY FEET (20')  
(C) REAR YARD - THIRTY FIVE FEET (35')

OFallon P&Z Parking Requirements  
Data Center / Support Space

BUILDING AREA	GSF	USE	DESIGN OCCUPANCY	ACTUAL
DATA CENTER	27,345	B (BUSINESS)	273	10
SUPPORT SPACE	5,907	S (STORAGE)	20	0
TOTAL REQUIRED:	293 SPACES			
TOTAL PROVIDED:	17 SPACES*			

Handicapped Spaces:  
1-25 spaces provided  
17 Rear Spaces Provided  
Required: 1 Total Parking Spaces  
Provided: 2 Total Parking Spaces (2 Van Accessible)

Required Bicycle Parking:  
- One (1) space per fifteen required automobile parking spaces (min. 4)  
- Required automobile parking spaces is 17 spaces.  
- Required bicycle parking is 4 spaces.

# STORM SEWER NOTES

- ALL CONCRETE SHALL BE REINFORCED, AND CONFORM TO A.S.T.M. DESIGNATION C76-80 CLASS III UNLESS NOTED.
- ALL STORM SEWER STRUCTURES WITHIN PROJECT SITE TO BE CONSTRUCTED IN ACCORDANCE WITH METROPOLITAN ST. LOUIS SEWER DISTRICT STANDARD CONSTRUCTION SPECIFICATIONS FOR SEWER AND DRAINAGE FACILITIES, 2009
- TYPE "C" BEDDING IS REQUIRED FOR PIPES IN ROCK.
- ALL TRENCH BACKFILLS UNDER PAVEMENT SHALL BE GRANULAR BACKFILLED.
- ALL CURB INLETS AND AREA INLETS TO HAVE 5/8" TRASH BAR ACROSS INLET OPENINGS.
- "O" RING RUBBER GASKET TO BE USED ON ALL STORM SEWER PIPE.
- GRANULAR BACKFILL TO BE PLACED WITH A MINIMUM OF 1'H:1'V SLOPE FROM EDGE OF PAVEMENT.
- BRICK SHALL NOT BE USED IN THE CONSTRUCTION OF STORM SEWER STRUCTURES.
- PROVIDE 36" MINIMUM COVER FOR STORM SEWERS
- PROVIDE CONCRETE CRADLES FOR RCP AND CONCRETE ENCASEMENTS FOR HOPE AT CROSSING WITH SANITARY SEWER.
- COMPACTED ROCK BACKFILL IS REQUIRED IN THE DISTURBED GROUND AROUND THE STRUCTURE OF ALL DROP STRUCTURES.
- ALL STORM SEWERS ARE TO BE CONSIDERED PRIVATE, UNLESS OTHERWISE NOTED.
- CONTRACTORS TO PROVIDED ALTERNATE BID FOR ADS N-12 ULTRA WT OR EQUAL (SMOOTH INTERIOR) AASHTO TYPE "S" (N-12 ULTRA WT).
- ALL STRUCTURES AND MANHOLES SHALL HAVE POSITIVE DRAINAGE THROUGH THE STRUCTURE.
- CONNECTIONS AT ALL STORM OR SANITARY STRUCTURES TO BE MADE WITH "A-LOCK" JOINT OR EQUAL.

# DUCKETT CREEK NOTES CONT'D

- All sanitary sewer building connections shall be designed so that the minimum vertical distance from the low point of the basement to the flowline of a sanitary sewer at the corresponding building connection shall not be less than the diameter of the pipe plus the vertical distance of 2-1/2 feet.
- All sanitary sewer manholes shall be waterproofed on the exterior in accordance with Missouri Dept. of Natural Resources specification 10 CSR-8.120(7)(E).
- All PVC sanitary sewer pipe shall conform to the requirements of ASTM D-3034 Standard Specification for PSM Polyvinyl Chloride Sewer Pipe, SDR-35 or equal, with "clean" 1/2 inch to 1 inch granular stone bedding uniformly graded. This bedding shall extend from 4 inches below the pipe to springline of pipe. Immediate backfill over pipe shall consist of same size clean or "minus" stone from springline of pipe to 6 inches above the top of pipe.
- All sanitary and storm sewer trench backfills shall be water jettied outside of paved areas. Granular backfill will be used under pavement areas.
- All pipes shall have positive drainage through manholes. No flat invert structures are allowed.
- Brick shall not be used on sanitary sewer manholes.
- Existing sanitary sewer service shall not be interrupted.
- Maintain access to existing residential driveways and streets.
- Pre-manufactured adapters shall be used at all PVC to DIP connections. Rubber boot / Mission-type couplings will not be allowed.
- Any permits, licenses, easements, or approvals required to work on public or private properties or roadways are the responsibility of the developer.
- "Type N" Lock-Type Cover and Locking Device (Lock-Lug) shall be used where lock-type covers are required.
- It is the responsibility of the Contractor to adjust all sanitary sewer manholes (that are affected by the development) to finish grade.
- Epoxy Coating shall be used on all sanitary sewer manholes that receive pressurized mains.

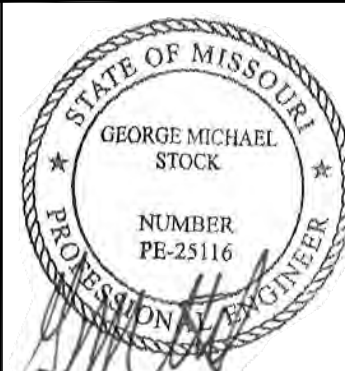
257 Chesterfield Business Parkway  
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**STOCK & ASSOCIATES**  
Consulting Engineers, Inc.

PREPARED BY:

IMPROVEMENT PLANS FOR:

**CENTENE DATA CENTER BUILDING EXPANSION**  
6430 WELDON SPRING ROAD  
OFALLON, MISSOURI



GEORGE M. STOCK E-25116  
CIVIL ENGINEER  
CERTIFICATE OF AUTHORITY  
NUMBER: 000996

REVISIONS:

- 2015-12-07 PROGRESS PRINT
- 2015-12-09 REVISED PER CITY COMMENTS
- 2015-12-30 REVISED PER CITY & CLIENT COMMENTS

DRAWN BY: J.M.B. CHECKED BY: G.M.S.  
DATE: 11/10/2015 JOB NO: 209-4511.8  
DUCKETT CREEK # BASE MAP #:  
P-  
S.C.C. MAT # H&T SUP. #  
M.D.N.R. # MO-RA07437  
SHEET TITLE:

SPECIFICATIONS SHEET

SHEET NO.: C2.0

# STORMWATER DETENTION

THE PROPOSED SITE IS LOCATED WITHIN TWO EXISTING WATERSHEDS. STORMWATER DETENTION BASINS WERE CONSTRUCTED FOR BOTH OF THESE WATERSHEDS AS PART OF PHASE I AND II OF THE PROGRESS POINT DEVELOPMENT. THE DETENTION BASIN CALCULATIONS INCLUDED CONSIDERATIONS FOR FUTURE DEVELOPMENT OF LOT 'A'. THEREFORE, NO ADDITIONAL DETENTION IS REQUIRED.

# TRAFFIC CONTROL

TRAFFIC CONTROL IS TO BE PER MDOT AND/OR MUTCD STANDARDS, WHICHEVER IS MOST STRINGENT.

### LEGAL DESCRIPTION

Adjusted Lot A of Progress Point Village

Adjusted Lot A of "Boundary Adjustment Plan of Lot A and Common Ground and Detention Easement of PROGRESS POINT," a subdivision in St. Charles County, Missouri, according to the plat thereof recorded in Plat Book 41 page 83 of the St. Charles County Records and being more particularly described as follows:

BEGINNING at the northeast corner of Adjusted Lot A of "Boundary Adjustment Plan of Lot A and Common Ground and Detention Easement of PROGRESS POINT," a subdivision in St. Charles County, Missouri, according to the plat thereof recorded in Plat Book 41 page 83 of the St. Charles County Records; thence along the northeastern line of said Adjusted Lot A South 27 degrees 15 minutes 05 seconds East, a distance of 420.43 feet to the Southeast corner thereof; thence along the southeastern line of said lot South 62 degrees 44 minutes 55 seconds West, a distance of 1029.90 feet to the Eastern line of Waterbury Falls Drive, variable width; thence along said Eastern line the following: along a curve to the left having a radius of 76.00 feet, an arc length of 13.34 feet, and a chord which bears North 37 degrees 49 minutes 34 seconds West, a chord distance of 13.32 feet to a point; thence along a curve to the right having a radius of 40.00 feet, an arc length of 29.77 feet, and a chord which bears North 08 degrees 28 minutes 08 seconds East, a chord distance of 29.09 feet to a point; thence along a curve to the left having a radius of 412.00 feet, an arc length of 127.87 feet, and a chord which bears North 20 degrees 54 minutes 01 seconds East, a chord distance of 127.35 feet to a point; thence along a curve to the left having a radius of 412.00 feet, an arc length of 152.65 feet, and a chord which bears North 01 degrees 16 minutes 59 seconds West, a chord distance of 151.77 feet to a point; thence along a curve to the left having a radius of 405.00 feet, an arc length of 125.16 feet, and a chord which bears North 18 degrees 14 minutes 02 seconds West, a chord distance of 124.66 feet to a point; thence along a curve to the right having a radius of 40.00 feet, an arc length of 62.73 feet, and a chord which bears North 17 degrees 50 minutes 13 seconds East, a chord distance of 56.49 feet to the Southern line of Weldon Spring Road, variable width; thence along said Southern line North 62 degrees 45 minutes 39 seconds East, a distance of 787.62 feet to the Point of Beginning and containing 372,930 square feet or 8.561 acres more or less as per calculations by Stock & Associates during the month of April, 2010.

# VEGETATION ESTABLISHMENT

\* VEGETATION ESTABLISHMENT PER "ST. CHARLES COUNTY SOIL AND WATER CONSERVATION DISTRICT EROSION AND SEDIMENT CONTROL" GUIDELINES.

### SEEDBED PREPARATION

- LOOSEN SOIL TO DEPTH OF 3 INCHES FOR BROADCAST SEEDING OR DRILLING.
- AVOID EXCESSIVELY WET CONDITIONS

### AMENDMENTS

\* PER SOIL TEST OR FOLLOWING TABLE:

	LBS./1,000 S.F.			LIME
	N	P	K	
TEMPORARY SEEDING PERMANENT	0.7 / 1.0	0.7 / 1.4	0.7 / 1.4	14 ENM+ / 14 ENM+

+ SOIL TEST RESULTS TAKE PRECEDENCE, DUE TO HIGHLY VARIABLE SOIL pH.

### SEEDING RATES

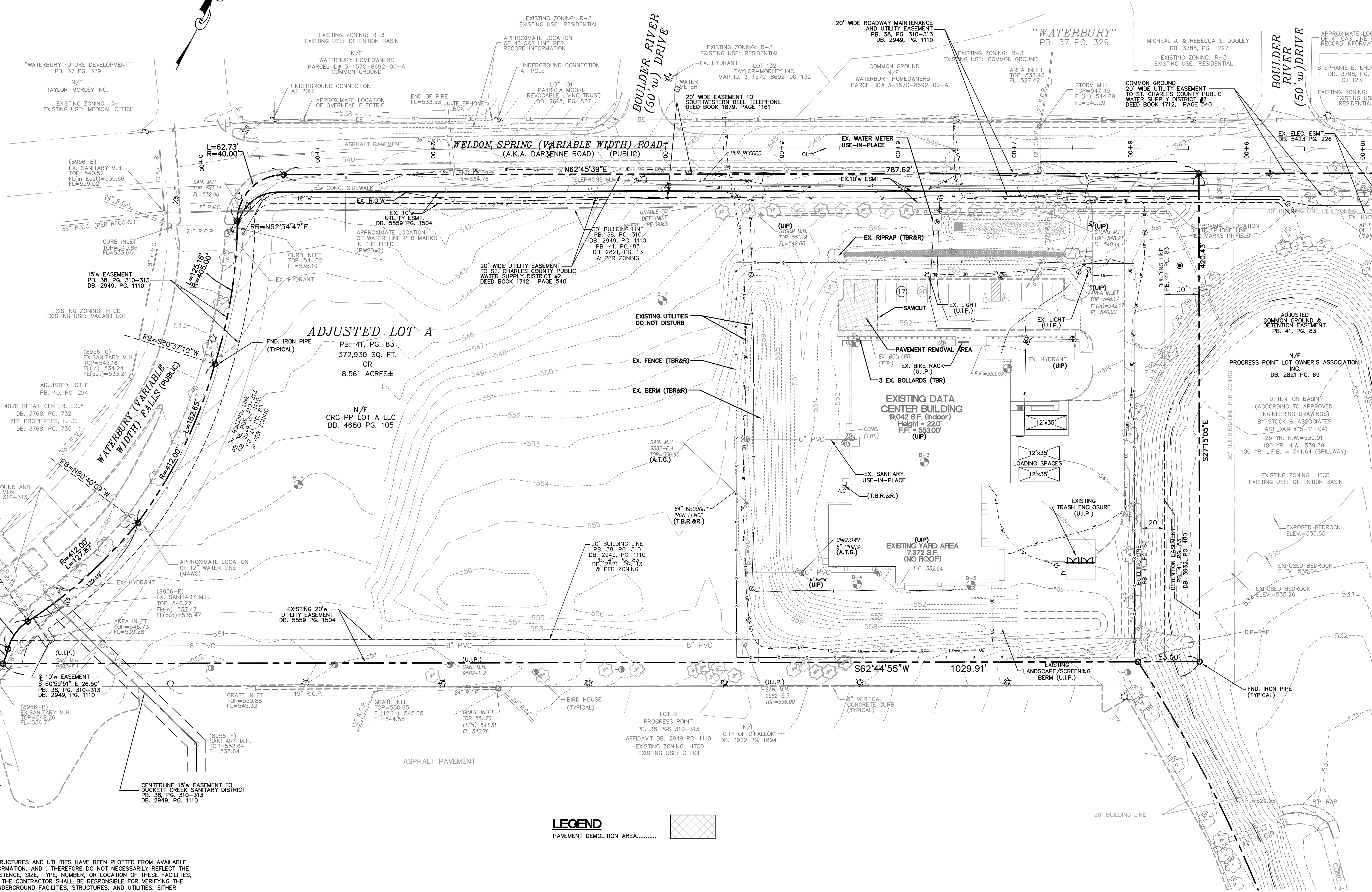
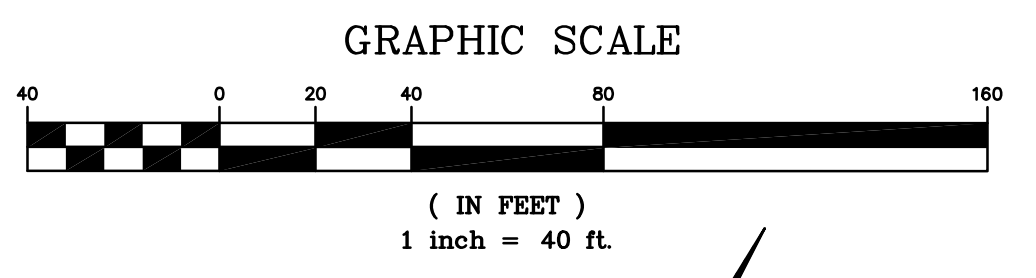
TEMPORARY OATS	80 LBS. / ACRE
WHEAT OR RYE	90-120 LBS. / ACRE
PERMANENT FESCUES	80 LBS. / ACRE
KENTUCKY BLUEGRASS	50 LBS. / ACRE
PERENNIAL RYEGRASS	80 LBS. / ACRE

### SEEDING PERIODS

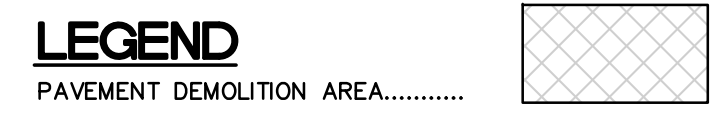
TEMPORARY OATS	JANUARY 1 - JUNE 1 / AUGUST 1 - OCTOBER 1
WHEAT/RYE	JANUARY 1 - JUNE 1 / JULY 15 - NOVEMBER 15
PERMANENT FESCUE	FEBRUARY 1 - JUNE 1 / AUGUST 1 - NOVEMBER 1
KENTUCKY BLUEGRASS	FEBRUARY 1 - JUNE 1 / AUGUST 1 - NOVEMBER 1
PERENNIAL RYE GRASS	FEBRUARY 1 - JUNE 1 / AUGUST 1 - NOVEMBER 1

### MULCH





**UTILITY NOTE:**  
 UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS, RECORDS AND INFORMATION, AND, THEREFORE DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NON-EXISTENCE, SIZE, TYPE, NUMBER, OR LOCATION OF THESE FACILITIES, STRUCTURES AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS. THE UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY GRADING, EXCAVATION OR CONSTRUCTION OF IMPROVEMENTS. THESE PROVISIONS SHALL IN NO WAY ABSOLVE ANY PARTY FROM COMPLYING WITH THE UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT, CHAPTER 319 RSMo.



PREPARED BY:  
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IMPROVEMENT PLANS FOR:  
**CENTENE DATA CENTER BUILDING EXPANSION**  
 6430 WELDON SPRING ROAD  
 OFALLON, MISSOURI

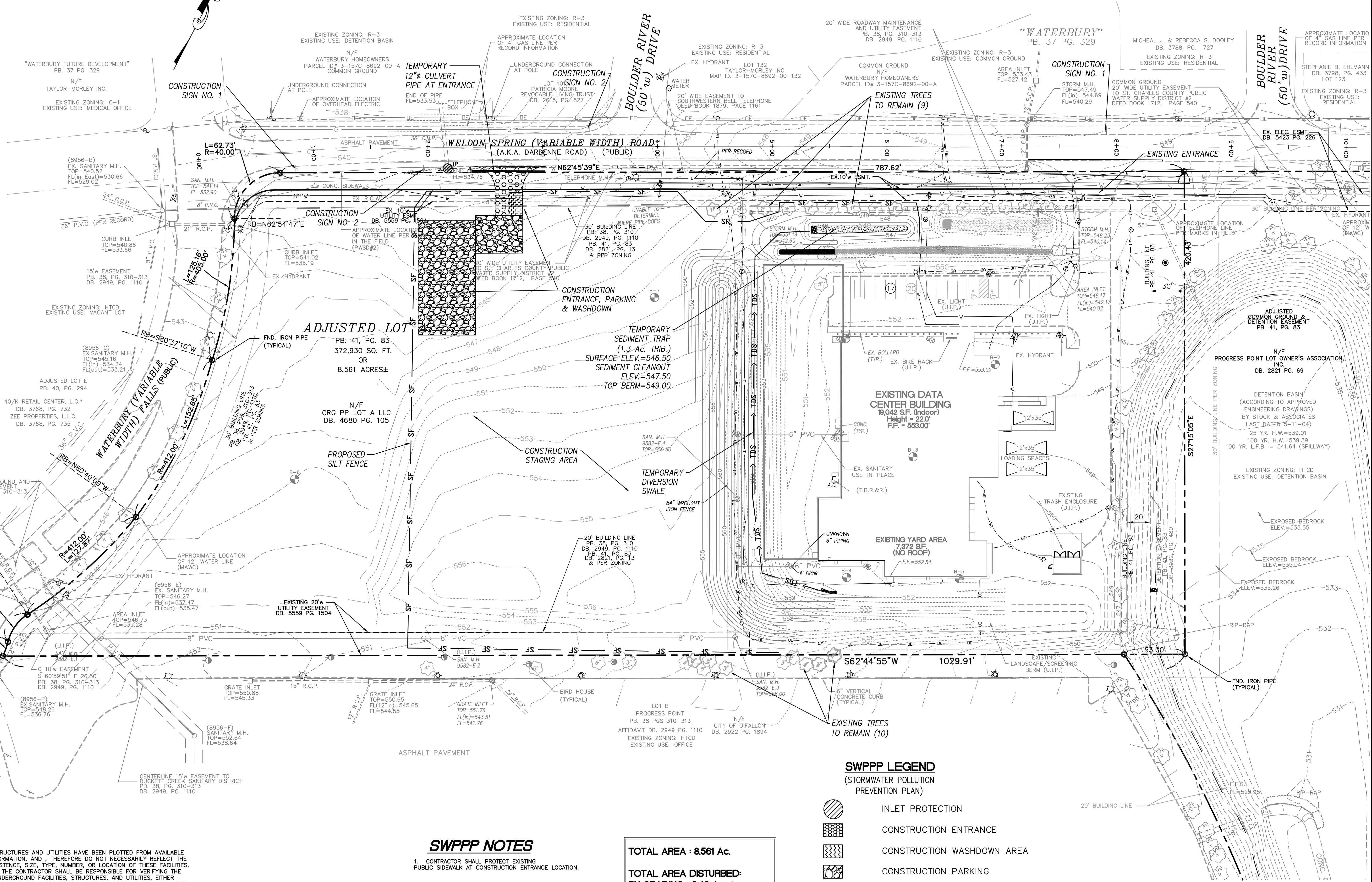
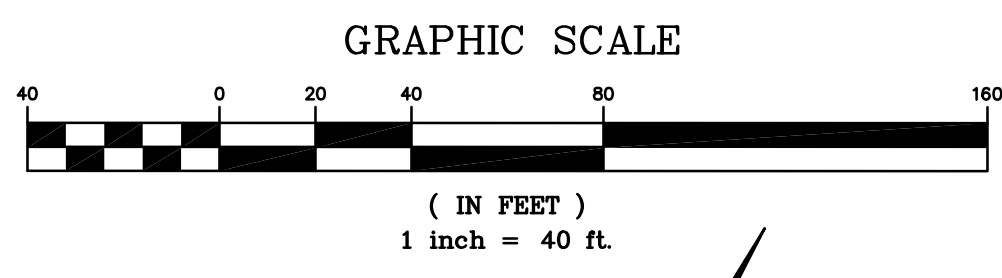
12/30/2015  
 GEORGE M. STOCK E-25116  
 CIVIL ENGINEER  
 CERTIFICATE OF AUTHORITY  
 NUMBER: 000996

- REVISIONS:
- 2015-12-07 PROGRESS PRINT
  - 2015-12-09 REVISED PER CITY COMMENTS
  - 2015-12-30 REVISED PER CITY & CLIENT COMMENTS

DRAWN BY: J.M.B.	CHECKED BY: G.M.S.
DATE: 11/10/2015	JOB NO: 209-4511.8
DUCKETT CREEK # P-	BASE MAP # -
S.C.C. HAT # -	HAT S.U.P. # -
M.D.N.R. # MO-RA07437	

SHEET TITLE:  
**EXISTING CONDITIONS & DEMOLITION PLAN**  
 SHEET NO.:  
**C3.0**





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 UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS, RECORDS AND INFORMATION, AND, THEREFORE DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NON-EXISTENCE, SIZE, TYPE, NUMBER, OR LOCATION OF THESE FACILITIES, STRUCTURES AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS. THE UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY GRADING, EXCAVATION OR CONSTRUCTION OF IMPROVEMENTS. THESE PROVISIONS SHALL IN NO WAY ABSOLVE ANY PARTY FROM COMPLYING WITH THE UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT, CHAPTER 319 RSMo.

**SWPPP NOTES**  
 1. CONTRACTOR SHALL PROTECT EXISTING PUBLIC SIDEWALK AT CONSTRUCTION ENTRANCE LOCATION.

**TOTAL AREA : 8.561 Ac.**  
**TOTAL AREA DISTURBED BY GRADING: 3.46 Acs.±**

**SWPPP LEGEND**  
 (STORMWATER POLLUTION PREVENTION PLAN)

	INLET PROTECTION
	CONSTRUCTION ENTRANCE
	CONSTRUCTION WASHDOWN AREA
	CONSTRUCTION PARKING
	SILTATION FENCE
	TEMPORARY DIVERSION SWALE

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DRAWN BY: J.M.B. CHECKED BY: G.M.S.  
 DATE: 11/10/2015 JOB NO: 209-4511.8  
 DUCKETT CREEK # BASE MAP #  
 S.C.C. HAT # HAT S.U.P. #  
 M.D.N.R. # MO-RA07437  
 SHEET NO.: C4.0  
 STORMWATER POLLUTION PREVENTION PLAN



**GENERAL NOTES:**

- ADDITIONAL SWPPP DETAILS AS REQUIRED BY THE CITY OF OFALLON AND/OR ST. CHARLES COUNTY AND/OR MISSOURI DEPARTMENT OF TRANSPORTATION.
- PRIOR TO THE ISSUANCE OF A LAND DISTURBANCE PERMIT, A GRADING SURETY AND INSPECTION FEES MUST BE APPROVED BY AND PAID TO THE CITY OF OFALLON.
- PRIOR TO ANY LAND DISTURBANCE ACTIVITY, A LAND DISTURBANCE PERMIT FROM THE STATE OF MISSOURI DEPARTMENT OF NATURAL RESOURCES WILL BE REQUIRED.
- ANY LAND CLEARING, CONSTRUCTION, OR DEVELOPMENT INVOLVING THE MOVEMENT OF EARTH SHALL BE IN ACCORDANCE WITH THE SWPPP, AND THE PERSON ISSUED A LAND DISTURBANCE PERMIT ASSUMES AND ACKNOWLEDGES RESPONSIBILITY FOR COMPLIANCE WITH THE CITY OF OFALLON LAND DISTURBANCE CODE AND THE APPROVED SWPPP AT THE SITE OF THE PERMITTED ACTIVITY.
- ALL LAND DISTURBANCE PERMITS AND THE SWPPP SHALL BE MAINTAINED IN THE CONSTRUCTION TRAILER AS ESTABLISHED BY THE CONTRACTOR TO BE AVAILABLE FOR VIEWING AT ALL TIMES.
- ADDITIONAL SILTATION CONTROL SHALL BE INSTALLED AS REQUIRED BY THE CITY OF OFALLON.
- NO ENDANGERED SPECIES AND HISTORIC PROPERTIES DOCUMENTATION ARE KNOWN AT THIS TIME.
- ANTICIPATED DEWATERING METHODS SHALL INCLUDE THE USE OF A PORTABLE PUMP POWERED BY A GENERATOR.
- SEDIMENT SHALL BE WASHED FROM ALL VEHICLES AT WASH DOWN STATION PRIOR TO LEAVING THE SITE. NO TRACKING OF MUD ONTO ANY ROADWAY SHALL BE ALLOWED.
- NO ON-SITE TEMPORARY ACTIVITIES LIKE A CONCRETE OR ASPHALT BATCH PLANT IS EXPECTED.
- THE STORM WATER RUNOFF FROM THE PROJECT DOES NOT FLOW INTO A "VALUABLE RESOURCE WATER" AS DEFINED BY THE MISSOURI DEPARTMENT OF NATURAL RESOURCES.
- A "SPECIAL INSPECTOR", APPROVED BY ST. CHARLES COUNTY, SHALL BE RETAINED BY THE PERMIT HOLDER TO CONDUCT REGULAR INSPECTION OF LAND DISTURBANCE ACTIVITIES AND SWPPP MEASURES AS DETAILED IN THE ST. CHARLES COUNTY SOIL AND WATER CONSERVATION DISTRICT EROSION AND SEDIMENT CONTROL GUIDELINES.
- CLEARING, EXCEPT THAT NECESSARY TO ESTABLISH SEDIMENT CONTROL DEVICES, SHALL NOT BEGIN UNTIL ALL SEDIMENT CONTROL DEVICES HAVE BEEN INSTALLED AND HAVE BEEN STABILIZED.
- CLEARING TECHNIQUES THAT RETAIN EXISTING VEGETATION TO THE MAXIMUM EXTENT PRACTICABLE SHALL BE USED AND THE TIME PERIOD FOR DISTURBED AREAS TO BE WITHOUT VEGETATIVE COVER SHALL BE MINIMIZED TO THE EXTENT PRACTICAL. IF TREES ARE TO BE REMOVED AS A RESULT OF CLEARING, GRUBBING OR CONSTRUCTION, CONSIDER CHIPPING, GRINDING OR SHREDDING THEM FOR USE ON SITE AS A TEMPORARY, EROSION CONTROL BMP DURING CONSTRUCTION.
- CONSTRUCTION WASTE MATERIAL AND FUEL FOR CONSTRUCTION EQUIPMENT MAY BE STORED ON SITE DURING CONSTRUCTION ACTIVITIES. THE CONSTRUCTION WASTE MATERIAL SHALL BE HAULED TO AN APPROVED LANDFILL AS APPROPRIATE AND BE CONTAINED BY SILT FENCE, CONSTRUCTION EQUIPMENT FUEL, IF STORED, SHALL BE STORED IN APPROVED CONTAINERS SUITABLE FOR TRANSPORT.
- AREAS SHALL BE IMMEDIATELY SEEDED (OR OTHERWISE STABILIZED) WHEN NO ACTIVITY IS EXPECTED TO OCCUR WITHIN FIVE (5) CALENDAR DAYS.
- IF SEEDING OR ANOTHER VEGETATIVE EROSION CONTROL METHOD IS USED, IT SHALL BECOME ESTABLISHED WITHIN TWO (2) WEEKS OR THE SITE SHALL BE RE-SEEDED OR A NON-VEGETATIVE OPTION EMPLOYED.
- TECHNIQUES SHALL BE EMPLOYED TO ENSURE STABILIZATION ON STEEP SLOPES AND IN DRAINAGE WAYS.
- SOIL STOCKPILES MUST BE STABILIZED OR COVERED AT THE END OF EACH WORKDAY OR PERIMETER CONTROLS MUST BE IN PLACE TO PREVENT SILT FROM THE STOCKPILE FROM LEAVING THE SITE.
- THE ENTIRE SITE MUST BE STABILIZED, USING A HEAVY MULCH LAYER OR ANOTHER METHOD THAT DOES NOT REQUIRE GERMINATION TO CONTROL EROSION, AT THE CLOSE OF THE CONSTRUCTION SEASON.
- TECHNIQUES SHALL BE EMPLOYED TO PREVENT THE BLOWING OF DUST OR SEDIMENT FROM THE SITE.
- TECHNIQUES SHALL BE EMPLOYED TO PREVENT UPLAND RUNOFF PAST DISTURBED SLOPES.
- AT LEAST ONCE EVERY WEEK AND NO LATER THAN 48 HOURS AFTER EVERY RAINFALL EVENT WHICH RESULTS IN STORMWATER RUNOFF ALL EROSION AND SILTATION CONTROL DEVICES SHALL BE INSPECTED FOR DAMAGE AND AMOUNT OF SEDIMENTATION ACCUMULATED AND CORRECTIVE ACTIONS TAKEN. REPORTS OF THESE INSPECTIONS AND CORRECTIVE ACTIONS SHALL BE PREPARED ON THE FORMS PROVIDED BY THE CITY OF OFALLON AND/OR ST. CHARLES COUNTY AND SUBMITTED TO THE CITY OF OFALLON WITHIN 5 DAYS OF THE INSPECTION.
- THE CONTRACTOR SHALL MAINTAIN A 10% SURPLUS OF ALL EROSION AND SILTATION CONTROL DEVICES FOR EMERGENCY REPAIRS WHICH THE SURPLUS SHALL BE STORED AT THE CONSTRUCTION OFFICE.
- SEDIMENT BUILD-UP REMOVED DURING ROUTINE BMP MAINTENANCE SHALL REMAIN ON-SITE. SEDIMENT SHALL BE RELOCATED TO WITHIN THE STOCKPILE AREA OR TO A LEVEL AREA (1% MAX.) ABSENT OF CONCENTRATED FLOWS. LEVEL OUT SEDIMENT AND ALLOW TO DRY.
- ACTION PLAN FOR RESPONDING TO ANY LOSS OF SEDIMENT OFF-SITE:  
OWNER TO REMOVE BY HAND OR BY SKID-STEER OR BOBCAT VEHICLE. SEDIMENT TO BE TRANSPORTED BACK ONTO GRADING SITE. INSPECT AND REPAIR BMP'S AS REQUIRED. REPORTS TO THE CITY OF OFALLON AND/OR ST. CHARLES COUNTY SHALL BE SUBMITTED AS REQUIRED.
- ACTUAL SIZE AND LOCATION OF THE CONSTRUCTION TRAILER, STAGING & WASHDOWN AREA TO BE COORDINATED WITH THE SITE CONTRACTOR AND CITY OF OFALLON. THE CONSTRUCTION ENTRANCE SHALL MEET ST. CHARLES COUNTY SIGHT DISTANCE REQUIREMENTS. THE PROPOSED LOCATION MUST BE APPROVED BY CITY OF OFALLON AND/OR ST. CHARLES COUNTY.
- SEE BMP QUANTITY TABLE FOR DESCRIPTIONS OF PRACTICES TO BE USED DURING CONSTRUCTION. WHEN CONSTRUCTION IS COMPLETE, THE GROUND WILL BE COVERED WITH A COMBINATION OF SOD, SEED & MULCH AND ROCK LINING.
- A LIST OF EPA ALLOWABLE NON-STORM WATER DISCHARGES MAY INCLUDE: WATER LINE FLUSHING, LANDSCAPE IRRIGATION, UNCONTAMINATED PUMPED GROUND WATER, DISCHARGE FROM POTABLE WATER SOURCES, LAWN WATERING, WASH DOWN STATION AND STREET WASH WATER.
- IF CUT AND FILL OPERATIONS OCCUR DURING A SEASON NOT FAVORABLE FOR IMMEDIATE ESTABLISHMENT OF PERMANENT GROUND COVER, A FAST GERMINATING ANNUAL SUCH AS RYE GRASSES OR SUDAN GRASSES SHALL BE UTILIZED TO RETARD EROSION, IF ADEQUATE STORMWATER CONVEYANCE AND EROSION CONTROL DEVICES HAVE NOT BEEN ESTABLISHED.
- STORM WATER PIPES, OUTLETS AND CHANNELS SHALL BE PROTECTED BY SILT BARRIERS AND KEPT FREE OF WASTE AND SILT AT ALL TIMES PRIOR TO FINAL SURFACE STABILIZATION AND/OR PAVING.
- DESCRIPTION OF B.M.P.'S TO CONTROL EROSION AND SEDIMENTATION (INTERIM AND PERMANENT STABILIZATION PRACTICES)

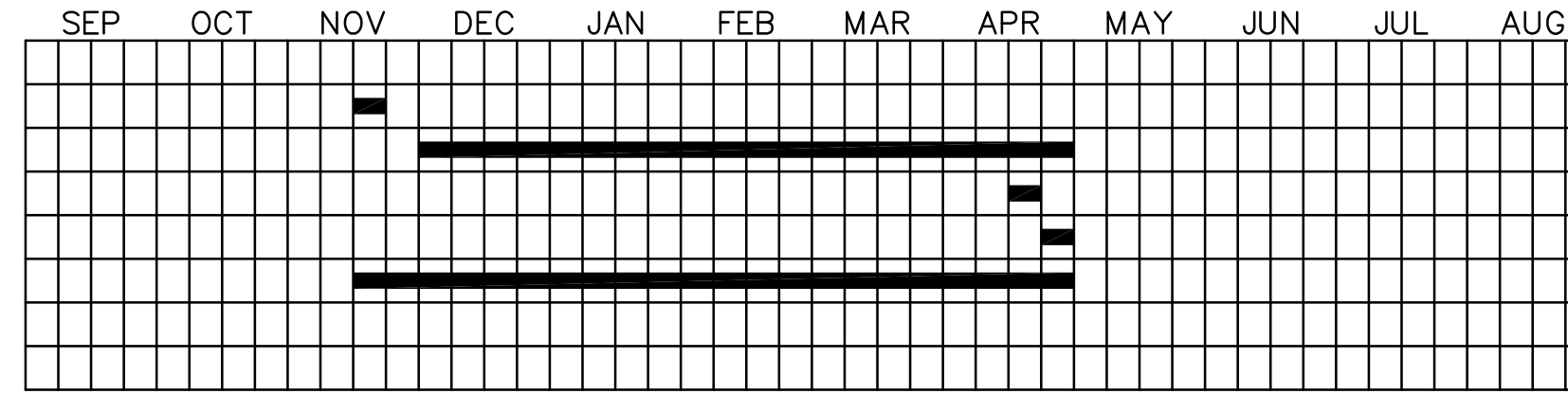
- FOR DETAILED DESCRIPTION OF EACH BMP, SEE SHEET C4.1 AND C4.2, "STORMWATER POLLUTION PREVENTION PLAN DETAILS".
- DEVELOPER SHALL ESTABLISH PERIMETER SILTATION CONTROLS AS SHOWN ON THE PLANS PRIOR TO ANY CONSTRUCTION ACTIVITIES. AREAS REQUIRING MINOR CLEARING &/OR GRADING PRIOR TO INSTALLATION OF SILTATION CONTROL SHALL BE COMPLETED IN A TIMELY MANNER AND SILTATION CONTROL ESTABLISHED IMMEDIATELY FOLLOWING.
- UPON COMMENCEMENT OF INITIAL CLEARING AND GRUBBING OPERATIONS, AS WELL AS FUTURE GRADING OPERATIONS, WHEN TOPSOIL MUST BE STRIPPED FROM GRADED AREAS AND STOCKPILED FOR FINAL GRADING AND/OR REDISTRIBUTION, THE STOCKPILES WILL BE KEPT ON SITE BUT MUST STAY CLEAR OF ALL CONSTRUCTION ACTIVITY. THE STOCKPILE MUST BE STABILIZED WITH TEMPORARY VEGETATION OR COVERED AT THE END OF EACH WORKDAY, AND PERIMETER CONTROLS MUST BE IN PLACE TO PREVENT SOIL LOSS AND SEDIMENT TRANSPORT FROM THE STOCKPILE ITSELF UNTIL NEEDED.
- TEMPORARY ROADS, IF REQUIRED, SHALL FOLLOW THE CONTOUR OF THE NATURAL TERRAIN TO THE EXTENT POSSIBLE. SLOPES SHALL NOT EXCEED 10 PERCENT SLOPE.
- CONTRACTOR SHALL CLEAR AND GRUB THOSE AREAS OF THE SITE SCHEDULED FOR CONSTRUCTION. AREAS NOT SCHEDULED FOR IMMEDIATE CONSTRUCTION SHALL NOT BE CLEARED OF ESTABLISHED VEGETATION UNTIL REQUIRED. REMAINDER OF SITE SHALL BE GRADED, AS REQUIRED, CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF SILTATION CONTROL THROUGHOUT THE DURATION OF THE PROJECT.
- IF SEEDING OR ANOTHER VEGETATIVE EROSION CONTROL METHOD IS USED, IT SHALL BECOME ESTABLISHED WITHIN TWO WEEKS OR THE SITE SHALL BE RE-SEEDED OR A NON-VEGETATIVE OPTION EMPLOYED. REFER TO PLANS FOR VEGETATION/SEEDING RATES AND MIXTURES, AND ACCEPTABLE TIMES OF USE.
- SEEDED AREAS ADJACENT TO THE ROADS AND PARKING AREA SHOULD BE CHECKED PERIODICALLY TO ENSURE THAT A VIGOROUS STAND OF VEGETATION IS MAINTAINED. ROADSIDE DITCHES AND OTHER DRAINAGE STRUCTURES SHOULD BE CHECKED REGULARLY TO ENSURE THAT THEY DO NOT BECOME CLOGGED WITH SILT OR OTHER DEBRIS.
- WHERE NATURAL VEGETATION IS REMOVED DURING GRADING, VEGETATION SHALL BE RE-ESTABLISHED IN SUCH A DENSITY AS TO PREVENT EROSION.
- TECHNIQUES SHALL BE EMPLOYED TO PREVENT THE BLOWING OF DUST OR SEDIMENT FROM THE SITE.
- TECHNIQUES SHALL BE EMPLOYED TO DIVERT UPLAND RUNOFF PAST DISTURBED SLOPES.
- ALL PROPOSED TURF AREAS, ONCE CONSTRUCTED TO FINAL GRADE, SHALL BE SEEDED WITHIN FIVE DAYS AFTER FINAL GRADING OF THE SITE WHERE SHOWN ON THE PLANS, SHOULD WEATHER CAUSE DELAYS IN EARTHWORK OPERATIONS, ADDITIONAL SILTATION CONTROL MEASURES MAY BE REQUIRED.
- ANY DISTURBED AREAS WHICH WILL REMAIN UNWORKED FOR FIVE DAYS OR MORE SHALL BE STABILIZED WITH SEEDING AND MULCHING PER SPECIFICATIONS WITHIN FIVE DAYS. IF SEASONAL CONDITIONS PROHIBIT SEEDING, MULCHING OR MATTING SHALL BE USED.
- THE CONTRACTOR SHALL PROVIDE THEIR PERSONNEL WITH SHOVELS, A WASHDOWN STATION, OR OTHER EQUIPMENT AS NECESSARY TO REMOVE DIRT FROM THE WHEELS OF ALL VEHICLES LEAVING ANY CLEARING OR GRADING SITE WHERE MUD HAS ACCUMULATED ON THE WHEELS. BEFORE SUCH VEHICLES ENTER ANY PUBLIC OR PRIVATE STREET OF THE CITY OR COUNTY, IT SHALL BE UNLAWFUL FOR THE DEVELOPER TO PERMIT ANY VEHICLE TO LEAVE SUCH PLACE WITH MUD ON THE WHEELS WHICH IS LIABLE TO BE DISPERSED OVER ANY PUBLIC OR PRIVATE STREET OF THE CITY OR COUNTY, AND IT SHALL BE UNLAWFUL FOR ANY DRIVER OF A VEHICLE TO ENTER UPON THE PUBLIC OR PRIVATE STREETS OF THE CITY OF COUNTY WITHOUT HAVING REMOVED OR HAD MUD REMOVED FROM THE WHEELS PRIOR TO SUCH ENTRY. EACH OCCURRENCE SHALL BE A SEPARATE OFFENSE.
- SEDIMENTATION CONTROLS AND TECHNIQUES SHALL BE REMOVED OR DISCONTINUED ONLY AFTER THE SITE IS COMPLETELY STABILIZED, VEGETATION IS WELL ESTABLISHED, AND ALL PAVEMENT AREAS ARE INSTALLED.

- DESCRIPTION OF B.M.P.'S TO PREVENT POTENTIAL POLLUTANTS (CONSTRUCTION WASTES, TOXIC OR HAZARDOUS SUBSTANCES, PETROLEUM PRODUCTS, PESTICIDES, HERBICIDES, SITE LITTER, SANITARY WASTES, ETC.)
- SOLID NON-HAZARDOUS CONSTRUCTION WASTE - DISPOSE OF IN TRASH DUMPSTERS OR APPROVED EQUIVALENT IN A LOCATION APPROVED BY THE ENGINEER. POTENTIALLY SOLUBLE OR LEACHABLE SOLID WASTE SHALL BE STORED OFF THE GROUND AND IN COVERED LEAK-PROOF CONTAINERS. SOLID WASTE SHALL BE STORED OFF THE GROUND AND IN COVERED LEAK-PROOF CONTAINERS. SOLID WASTE SHALL BE PROPERLY DISPOSED OF OFF-SITE ON A REGULAR BASIS.
  - HAZARDOUS WASTE - HAZARDOUS WASTE SHALL BE SEGREGATED FROM NON-HAZARDOUS CONSTRUCTION DEBRIS. LIQUID OR SEMI-LIQUID HAZARDOUS WASTE SHALL BE STORED IN APPROPRIATE CONTAINERS (CLOSED DRUMS OR SIMILAR) AND SHALL BE KEPT UNDER COVER, GRANULAR, SOLUBLE, OR LEACHABLE HAZARDOUS WASTE MATERIALS SHALL BE STORED OFF THE GROUND AND IN COVERED LEAK-PROOF CONTAINERS. THE ENGINEER SHALL APPROVE ANY HAZARDOUS WASTE STORAGE AREA LOCATIONS.
  - HAZARDOUS WASTE SHALL BE PROPERLY DISPOSED OF OFF-SITE ON A REGULAR BASIS BY A REPUTABLE, LICENSED HAZARDOUS WASTE HAULER.
  - COLLECTION, STORAGE, AND FUELING AREAS SHOULD BE LOCATED ON-SITE IN AN AREA THAT DOES NOT RECEIVE A SUBSTANTIAL AMOUNT OF RUNOFF FROM UPLAND AREAS AND DOES NOT DRAIN DIRECTLY TO LAKES, CREEKS, STREAMS, RIVERS, SEWERS, GROUNDWATER, WETLANDS, OR ROAD DITCHES.
  - IT IS NOT THE INTENT OF THIS SWPPP TO SUPERSEDE OR REPLACE NORMAL SITE ASSESSMENT AND REMEDIATION PROCEDURES CONCERNING HAZARDOUS MATERIALS. SIGNIFICANT SPILLS AND/OR CONTAMINATION WARRANT AN IMMEDIATE RESPONSE BY TRAINED PROFESSIONALS. SUSPECTED JOB SITE CONTAMINATION SHOULD IMMEDIATELY BE REPORTED TO REGULATORY AUTHORITIES AND PROTECTIVE MEASURES TAKEN.
  - FRESH CONCRETE WASTE AND CONCRETE EQUIPMENT WASHDOWNS SHALL BE CONTAINED AND SHALL BE STORED AWAY FROM DRAINAGE DITCHES, SWALES AND DRAINAGE STRUCTURES. WHERE APPROPRIATE, CONTAINMENT BERMS SHALL BE PLACED AROUND WASTE STORAGE AREAS.
  - MIXING, PUMPING, TRANSFERRING OR OTHERWISE HANDLING CONSTRUCTION CHEMICALS SUCH AS FERTILIZER, LIME, ASPHALT, CONCRETE DRYING COMPOUNDS, AND ALL OTHER POTENTIALLY HAZARDOUS MATERIALS SHALL BE PERFORMED IN AN AREA AWAY FROM ANY WATERCOURSE, DITCH, OR STORM DRAIN.
  - EQUIPMENT FUELING AND MAINTENANCE, OIL CHANGING, ETC. SHALL BE PERFORMED ONLY IN AN AREA DESIGNATED FOR THE PURPOSE. THE DESIGNATED AREA SHALL BE EQUIPPED FOR RECYCLING OIL AND CATCHING SPILLS.
  - ON-SITE FUELING/MAINTENANCE FACILITIES AND STORAGE AREAS ARE REQUIRED TO ADHERE TO ALL APPLICABLE FEDERAL AND STATE REGULATIONS CONCERNING STORAGE AND DISPENSERS.
  - PROVISIONS SHALL BE MADE SO THAT A SUFFICIENT NUMBER OF TEMPORARY TOILET FACILITIES ARE AVAILABLE TO SERVE THE NUMBER OF WORKERS ON-SITE. TOILET FACILITIES SHALL NOT BE LOCATED WITHIN 50 FEET OF A STORM INLET.
  - PROVISIONS SHALL BE MADE FOR LITTER CONTROL.

- DURING THE COURSE OF CONSTRUCTION EXCAVATION OR GRADING, THE DEVELOPER IS REQUIRED TO COLLECT AND DISPOSE OF ALL PAPER, REFUSE, STICKS, LUMBER AND OTHER BUILDING WASTE, AND ALL OTHER WASTE MATERIAL, AND TO PREVENT THE SAME FROM BLOWING OR OTHERWISE BEING SCATTERED OVER ADJACENT PUBLIC OR PRIVATE PROPERTY. ANY WASTE MATERIAL THAT IS BLOWN OR SCATTERED OVER THE SITE, AS WELL AS ON ANY ADJACENT PUBLIC OR PRIVATE PROPERTY, SHALL BE PICKED UP DAILY, AND DISPOSED OF PROPERLY. WASHOUT FROM CONCRETE TRUCKS MUST BE CONTROLLED IN A MANNER SO AS NOT TO ADVERSELY IMPACT THE SITE, ADJACENT PUBLIC OR PRIVATE PROPERTY, OR ADJACENT STREAMS AND STORM SEWER SYSTEMS. LOCATE THE CONCRETE WASHOUT IN A DIRT AREA WHERE THE LIQUID PORTION OF THE WASHOUT AND SOAK INTO THE GROUND. CONCRETE WASHOUT SHALL BE CONTAINED IN DESIGNATED AREAS ONLY. DRIED CONCRETE LEFT ON-SITE SHALL BE BURIED 2' MINIMUM BELOW FINISHED GRADE.

**ESTIMATED SCHEDULE of OPERATIONS**

ESTIMATED START DATE: NOVEMBER 15, 2015  
(ALL DATES ARE SUBJECT TO ACTUAL APPROVAL OF PLANS AND RECEIPT OF PERMITS FOR REQUIRED WORK AND OWNER/CONTRACTOR SCHEDULE.)



UTILITY RELOCATION (n/a)  
INSTALL SEDIMENT/EROSION CONTROL (1 WEEK)  
BUILDING CONSTRUCTION (20 WEEKS)  
FINAL GRADING (1 WEEK)  
FINAL SEEDING/MULCHING AND CLEANUP (1 WEEK)  
MAINTAIN ALL BMPs (THROUGHOUT PROJECT)

**BMP QUANTITIES**

TYPE	BMP	QUANTITY	10% SURPLUS	TOTAL	UNIT	USAGE
SODDING	803-10.00	-	-	-	SY	PERMANENT
CHECK DAM	806-35.00	-	-	-	EACH	TEMPORARY
CONSTRUCTION ROAD	806-45.99	-	-	-	EACH	TEMPORARY
WASHDOWN STATION	806-46.00	1	-	1	EACH	TEMPORARY
CONSTRUCTION ENTRANCE	806-46.01	1	-	1	EACH	TEMPORARY
CONC. WASTE MANAGEMENT	806-46.03	1	-	1	EACH	TEMPORARY
ROCK OUTLET (FES)	806-55.10	-	-	-	EACH	PERMANENT
ROCK INLET (FES)	-	-	-	-	EACH	PERMANENT
INLET PROTECTION	806-45.12	1	1	2	EACH	TEMPORARY
SILT FENCE	806-70.00	1,182	118	1,300	LF	TEMPORARY

TOTAL AREA : 8.561 Ac.

TOTAL AREA DISTURBED BY GRADING: 3.46± AcS

EXISTING SITE RUNOFF COEFFICIENT: 0.10  
PROPOSED SITE RUNOFF COEFFICIENT: 0.17  
HYDROLOGIC SOIL GROUP: D (LEAN CLAY/FAT CLAY/SILT)

**S.W.P.P. NOTE:**

SEE SHEET C4.0 FOR S.W.P.P. BMP LOCATIONS

**EMERGENCY CONTACT INFORMATION**

**SPECIAL INSPECTOR**  
ERIC FISCHER, P.E.  
STOCK & ASSOCIATES  
257 CHESTERFIELD BUSINESS PKWY  
ST. LOUIS, MO 63005  
636.530.9100 (OFFICE)

**OWNER/OFFICIAL IN CHARGE**  
BOB LEIMBERG  
SENIOR PROJECT MANAGER  
CLAYCO  
2199 INNERBELT BUSINESS CENTER DRIVE  
ST. LOUIS, MO 63114  
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**NOTE**

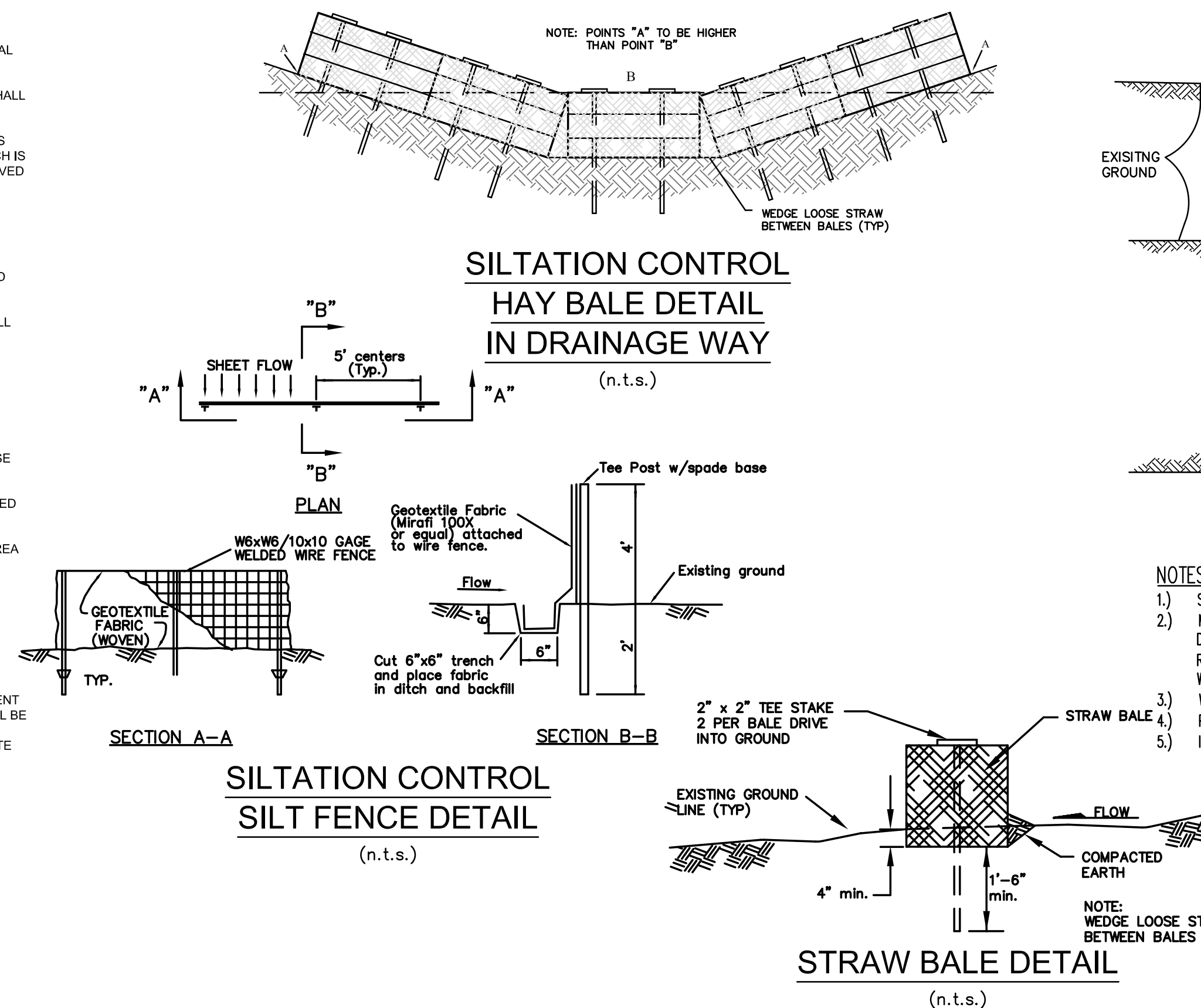
SWPPP INSPECTIONS MUST BE SCHEDULED AT LEAST ONCE PER WEEK AND NO LATER THAN 48 HOURS AFTER A RAINFALL THAT CAUSES STORMWATER RUNOFF TO OCCUR ON-SITE.

**NOTIFICATION**

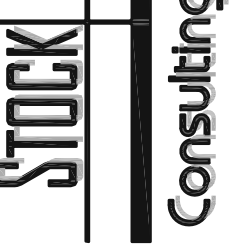
IN THE EVENT OF SILT RUNOFF FROM THE SUBJECT PROPERTY ONTO OFFSITE PROPERTY OWNERS  
1.) THE CONTRACTOR SHALL NOTIFY OFFSITE PROPERTY OWNER AND OBTAIN CONSENT TO REMOVE SEDIMENT AND RESTORE TO ORIGINAL CONDITION.  
2.) THE SPECIAL INSPECTOR MUST DOCUMENT ANY SILT RUNOFF FROM THE SITE AND REPORT WHEN THE CLEAN-UP HAS BEEN COMPLETED ON THE CITY OF OFALLON SWPPP INSPECTION REPORT. ALL REPORTS MUST BE SUBMITTED TO THE CITY OF OFALLON DEPARTMENT OF PUBLIC WORKS.

**EXISTING SITE RESOURCES SUMMARY TABLE**

NATURAL RESOURCE	PRESENCE?	ADDITIONAL INFORMATION
WETLANDS	NO	NONE IDENTIFIED ON SITE.
STREAMS AND FLOODPLAIN	YES	ZONE X, IDENTIFIED ON SITE
KARST	NO	NOT IDENTIFIED ON SITE.
PONDS	NO	NONE IDENTIFIED ON SITE.
SPRINGS/SEEPS	NO	NONE IDENTIFIED ON SITE.
SINKHOLES	NO	NONE IDENTIFIED ON SITE.



PREPARED BY:



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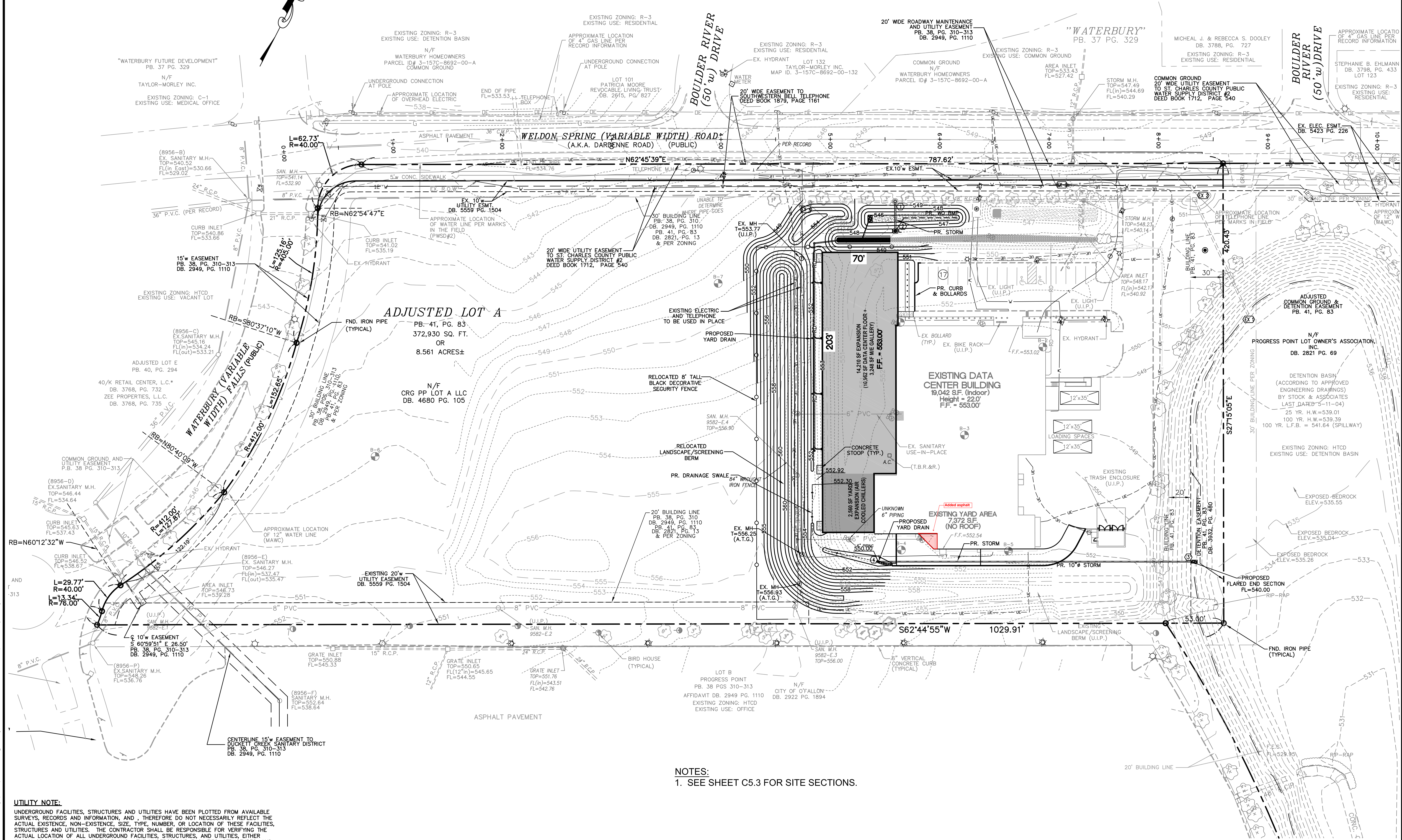
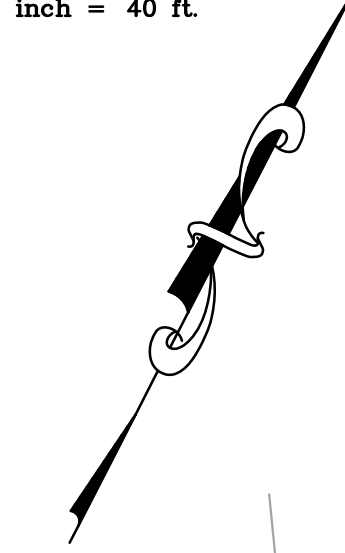
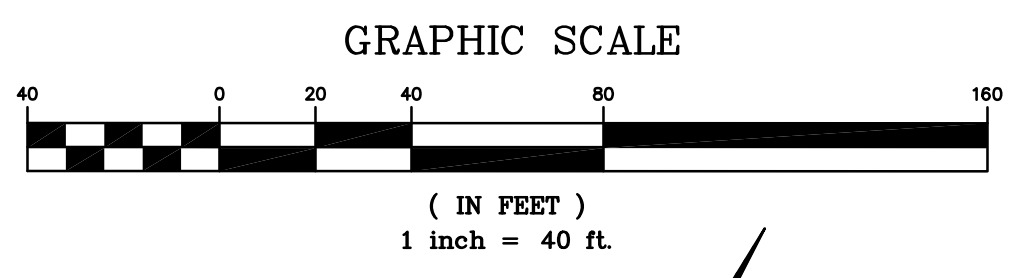
DRAWN BY: J.M.B. CHECKED BY: G.M.S.  
DATE: 11/10/2015 JOB NO: 209-4511.8  
DUCKETT CREEK # BASE MAP #  
S.C.C. H&T # H&T S.U.P. #  
M.D.N.R. # MO-RA07437  
SHEET TITLE:

S.W.P.P.P. DETAILS

SHEET NO.: C4.1

DRAWN BY: J.M.B. CHECKED BY: G.M.S. DATE: 11/10/2015 JOB NO: 209-4511.8



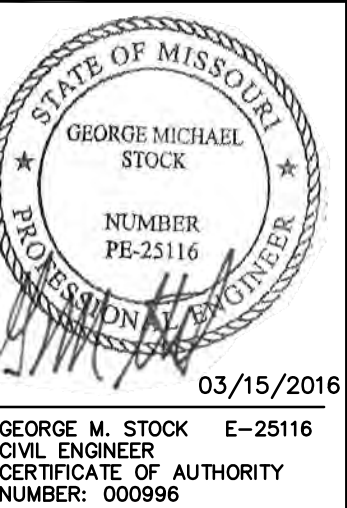


**NOTES:**  
 1. SEE SHEET C5.3 FOR SITE SECTIONS.

**UTILITY NOTE:**  
 UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS, RECORDS AND INFORMATION, AND, THEREFORE DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NON-EXISTENCE, SIZE, TYPE, NUMBER, OR LOCATION OF THESE FACILITIES, STRUCTURES AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS. THE UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY GRADING, EXCAVATION OR CONSTRUCTION OF IMPROVEMENTS. THESE PROVISIONS SHALL IN NO WAY ABSOLVE ANY PARTY FROM COMPLYING WITH THE UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT, CHAPTER 319 RSMo.

PREPARED BY:  
**STOCK & ASSOCIATES**  
 Consulting Engineers, Inc.  
 257 Chesterfield Business Parkway  
 St. Louis, MO 63015 PH: (636) 530-9100 FAX (636) 530-9130  
 e-mail: general@stockassoc.com  
 Web: www.stockassoc.com

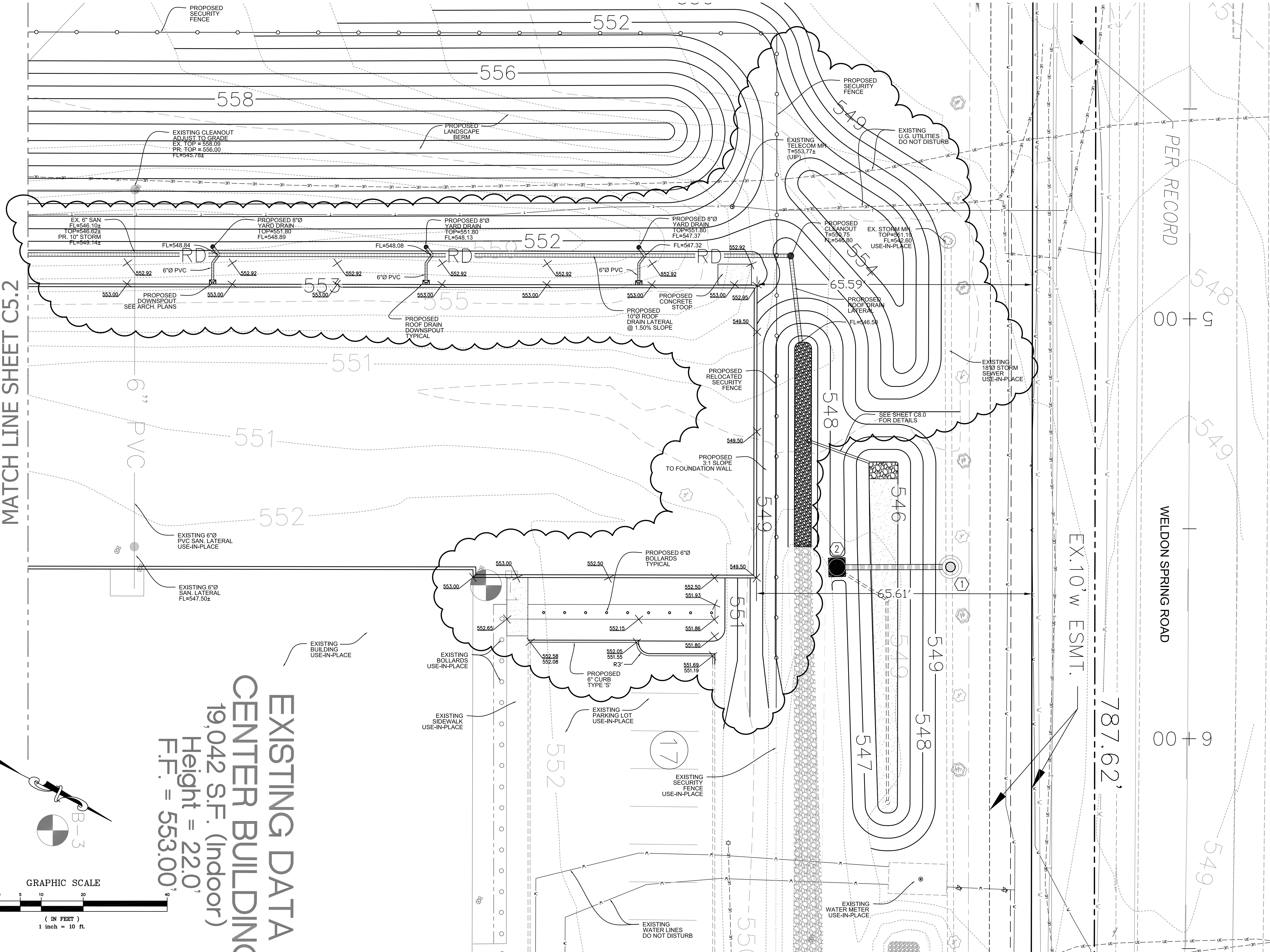
IMPROVEMENT PLANS FOR:  
**CENTENE DATA CENTER BUILDING EXPANSION**  
 6430 WELDON SPRING ROAD  
 OFALLON, MISSOURI



REVISIONS:  
 1. 2015-12-07 PROGRESS PRINT  
 2. 2015-12-09 REVISED PER CITY COMMENTS  
 3. 2015-12-30 REVISED PER CITY & CLIENT COMMENTS  
 4. 2016-01-14 REVISED PER CITY COMMENTS  
 5. 2016-03-15 REVISED PER OWNER COMMENTS

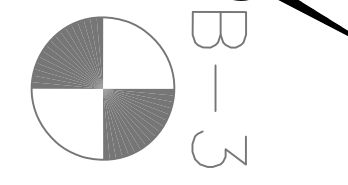
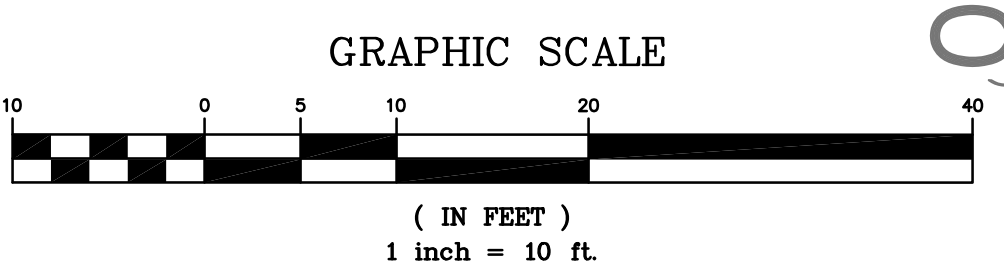
DRAWN BY: J.M.B. CHECKED BY: G.M.S.  
 DATE: 11/10/2015 JOB NO: 209-4511.8  
 DUCKETT CREEK # BASE MAP #  
 S.C.C. HAT # HAT S.U.P. #  
 M.D.N.R. # MO-RA07437  
 SHEET TITLE: OVERALL SITE AND GRADING PLAN  
 SHEET NO.: C5.0





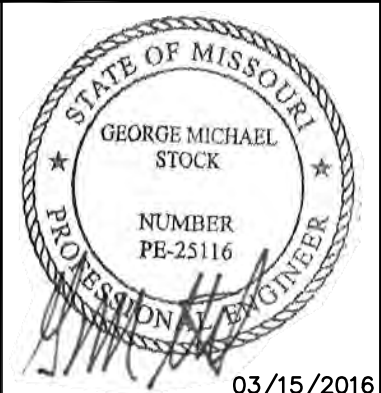
MATCH LINE SHEET C5.2

**EXISTING DATA**  
**CENTER BUILDING**  
 19,042 S.F. (Indoor)  
 Height = 22.0'  
 F.F. = 553.00'



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IMPROVEMENT PLANS FOR:  
**CENTENE DATA CENTER BUILDING EXPANSION**  
 6430 WELDON SPRING ROAD  
 OFALLON, MISSOURI



03/15/2016  
 GEORGE M. STOCK E-25116  
 CIVIL ENGINEER  
 CERTIFICATE OF AUTHORITY  
 NUMBER: 000996

REVISIONS:

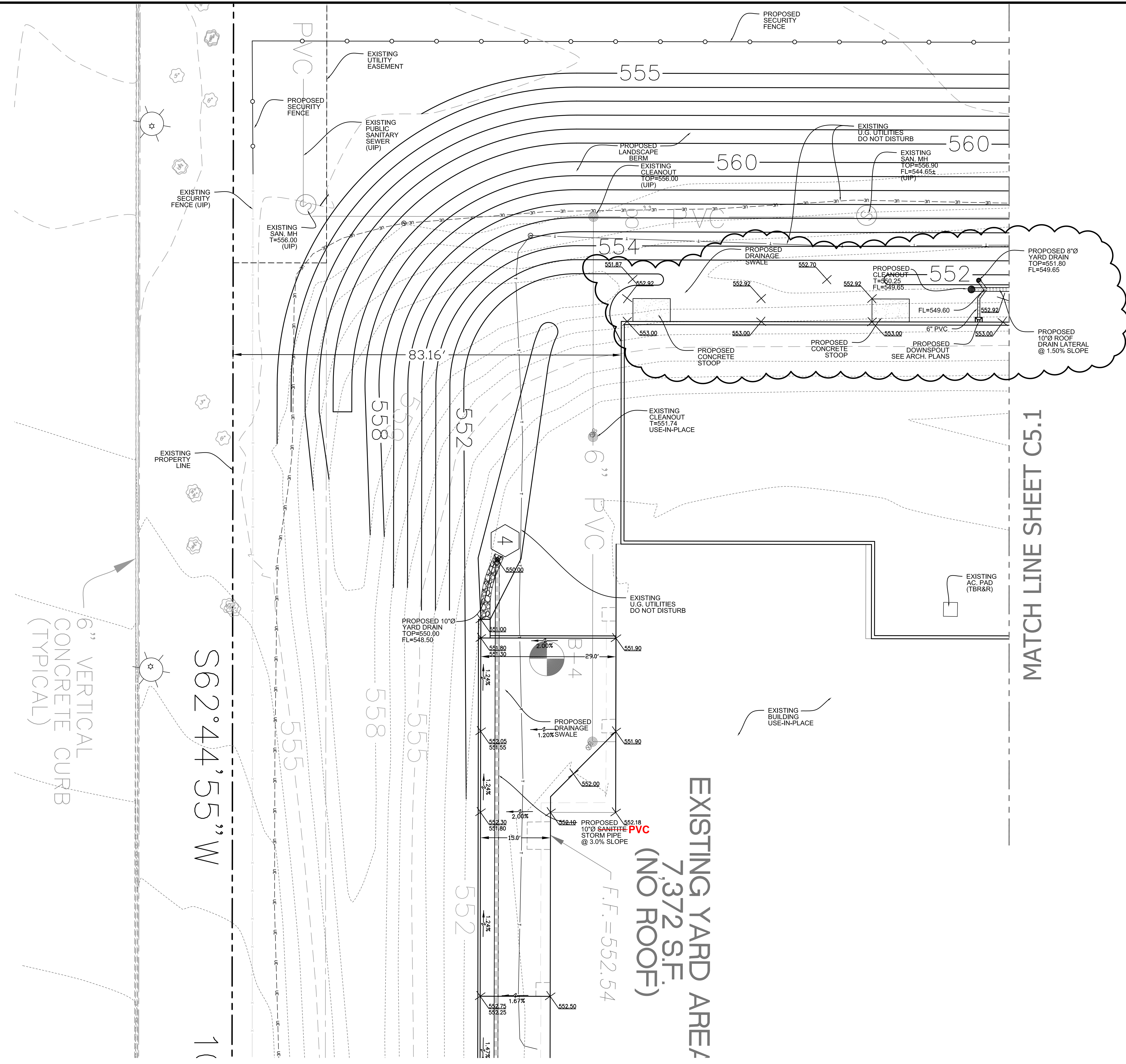
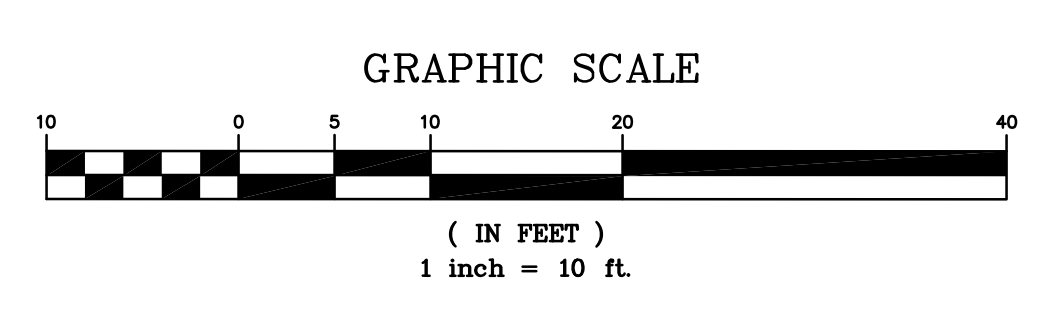
- 2015-12-07 PROGRESS PRINT
- 2015-12-09 REVISED PER CITY COMMENTS
- 2015-12-30 REVISED PER CITY & CLIENT COMMENTS
- 2016-01-14 REVISED PER CITY COMMENTS
- 2016-03-15 REVISED PER OWNER COMMENTS

DRAWN BY: J.M.B.	CHECKED BY: G.M.S.
DATE: 11/10/2015	JOB NO: 209-4511.8
DUCKETT CHECK # P-	BASE MAP # -
S.C.C. H&T # -	H&T S.U.P. # -
M.D.N.R. # MO-RA07437	

SHEET TITLE:  
**DETAILED SITE AND GRADING PLAN**  
 SHEET NO.:  
**C5.1**



DRAWN BY: J.M.B. CHECKED BY: G.M.S. DATE: 11/10/2015 JOB NO: 209-4511.8



6" VERTICAL CONCRETE CURB (TYPICAL)

S62°44'55" W

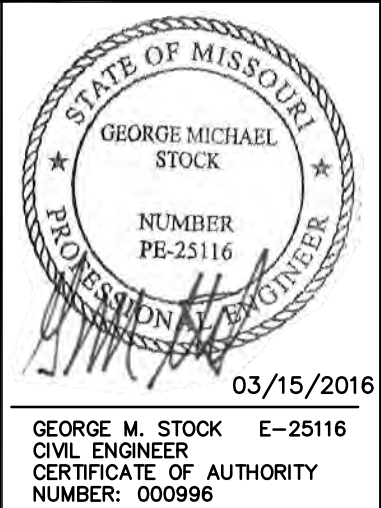
83.16'

EXISTING YARD AREA  
7,372 S.F.  
(NO ROOF)

MATCH LINE SHEET C5.1

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IMPROVEMENT PLANS FOR:  
**CENTENE DATA CENTER  
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6430 WELDON SPRING ROAD  
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- REVISIONS:
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DRAWN BY: J.M.B.	CHECKED BY: G.M.S.
DATE: 11/10/2015	JOB NO: 209-4511.8
DUCKETT CREEK #: P-	BASE MAP #: -
S.C.C. H&T #: -	H&T S.U.P. #: -
M.D.N.R. #: MO-RA07437	
SHEET TITLE: DETAILED SITE AND GRADING PLAN	
SHEET NO.: C5.2	











NOTE: PROVIDE STORM SEWER INLET MARKINGS PER FOLLOWING:

NOTE: PROVIDE A MARKING ON THE STORM SEWER INLETS. THE CITY WILL ALLOW THE FOLLOWING MARKERS AND ADHESIVE PROCEDURES ONLY AS SHOWN IN THE TABLE BELOW OR AN APPROVED EQUAL BY ALMETEX INDUSTRIES. "PEEL AND STICK" ADHESIVE PADS WILL NOT BE ALLOWED.

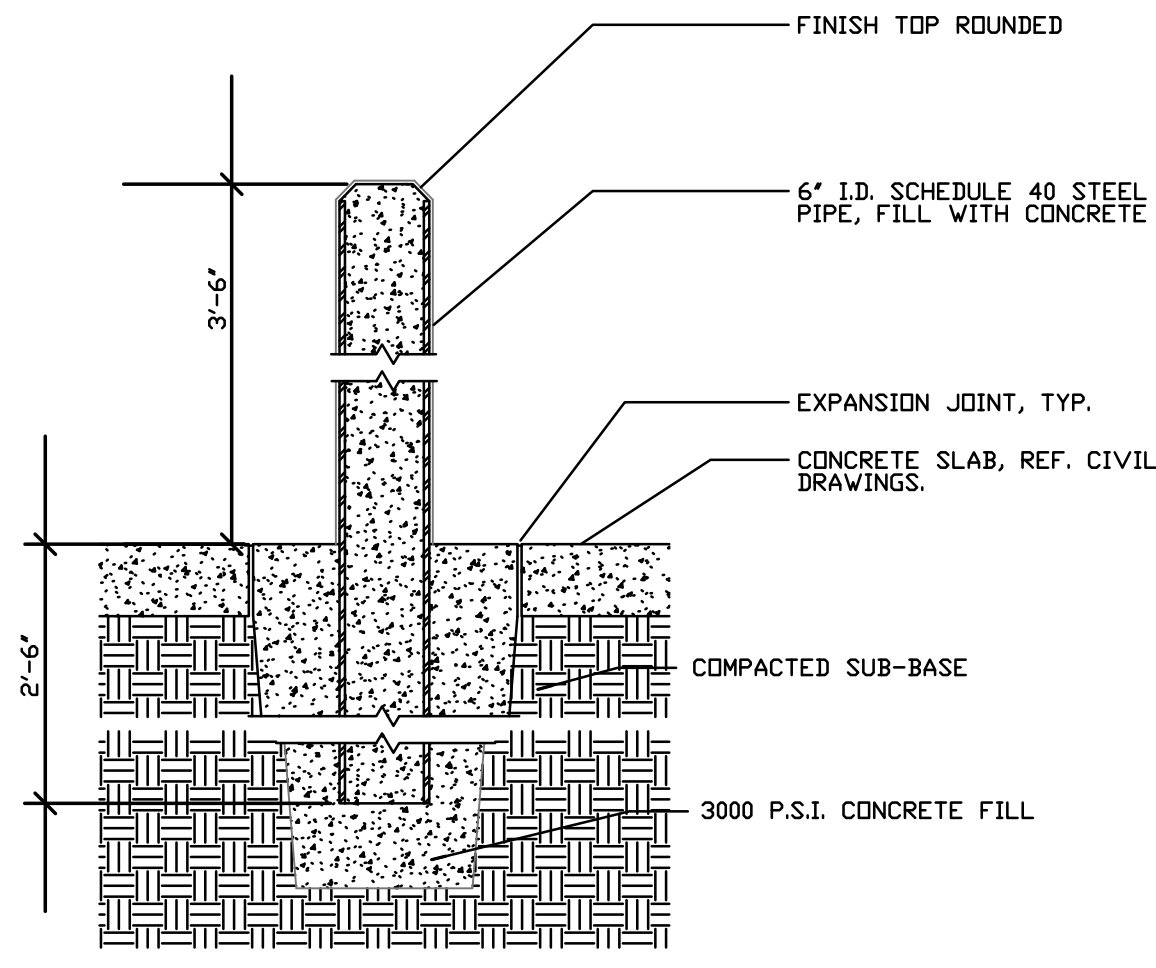
Manufacturer	Size	Adhesive	Style	Message (Part #)	Website
ACP International	3 7/8"	Epoxy	Crystal Cap	No Dumping Drains To Waterways (SD-W-Cc)	www.acpinternational.com
DAS Manufacturing, Inc.	4"	Epoxy	Standard Style	No Dumping Drains To Stream (#SDS)	www.dasmanufacturing.com

**PRECAST CONCRETE STORMWATER STRUCTURES**

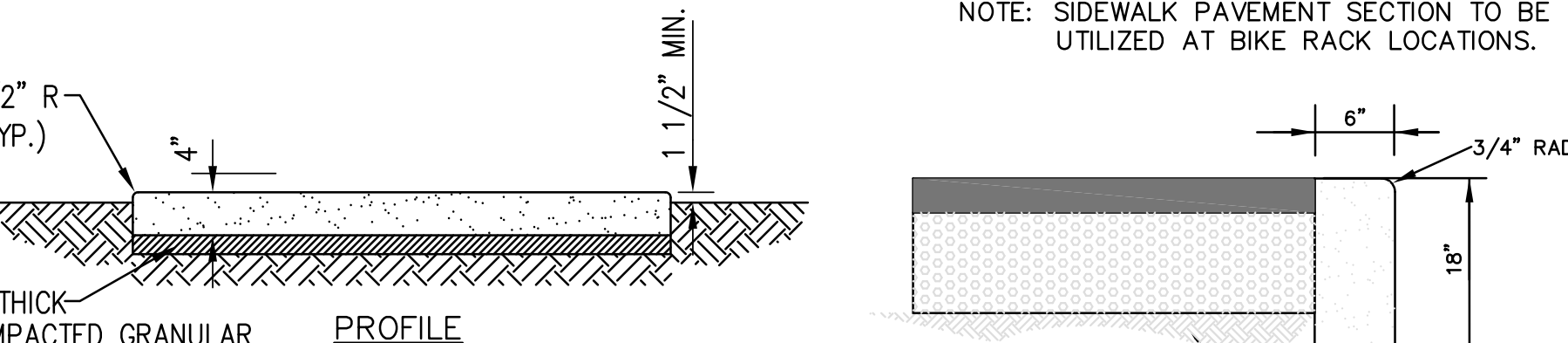
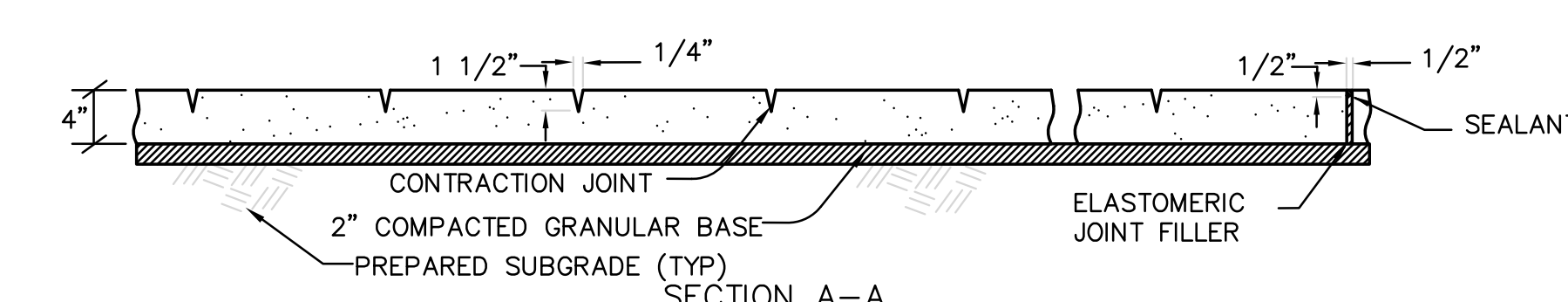
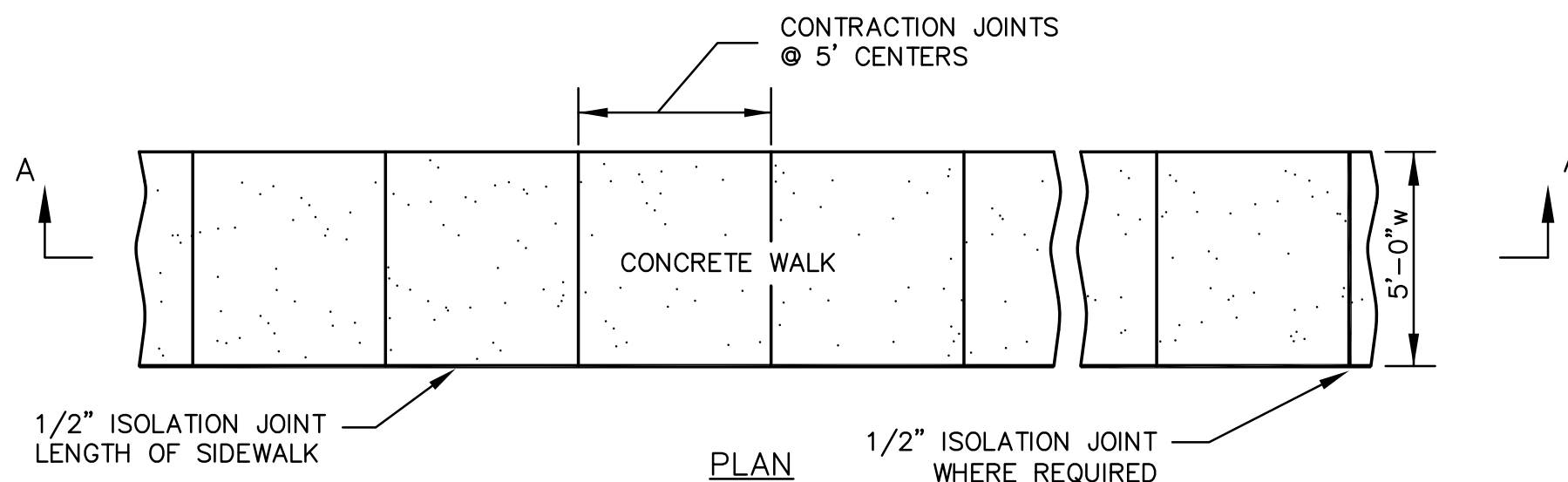
MINIMUM DISTANCE FLOWLINE TO TOP OF STONE OR GRATE

PIPE ID NOMINAL INCHES	AREA INLET CIRCULAR BASE DIA.				2 GRATE INLET CIRCULAR BASE DIA. SQUARE (MAX)				SINGLE STREET INLET CIRCULAR BASE DIA. RECTANGLE (MAX)			
	42"	48"	54"	60"	42"	48"	54"	60"	42"	48"	54"	60"
12"	45"	48"	51"	54"	38"	41"	44"	47"	34"	37"	40"	43"
15"	48"	51"	54"	57"	41"	44"	47"	50"	37"	40"	43"	46"
18"	51"	54"	57"	60"	44"	47"	50"	53"	40"	43"	46"	49"
21"	54"	57"	60"	63"	47"	50"	53"	56"	43"	46"	49"	52"
24"	57"	60"	63"	66"	50"	53"	56"	59"	46"	49"	52"	55"
27"	60"	63"	66"	69"	53"	56"	59"	62"	49"	52"	55"	58"
30"	63"	66"	69"	72"	56"	59"	62"	65"	52"	55"	58"	61"
33"	66"	69"	72"	75"	59"	62"	65"	68"	55"	58"	61"	64"

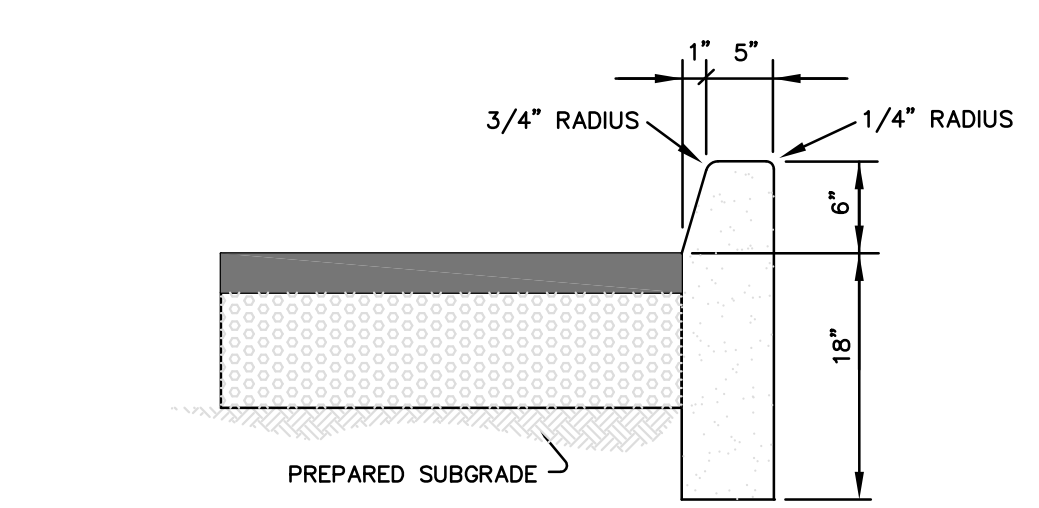
NOTE: 1. 48" DIA. BASE REQUIRES 7" HIGH TRANSITION SECTION TO 42" DIA., SIMILAR TO "ADAPTER RING".  
2. 60" DIA. BASE REQUIRES 24" HIGH CONCENTRIC REDUCER TRANSITION TO 42" DIA., SIMILAR TO "ADAPTER RING".



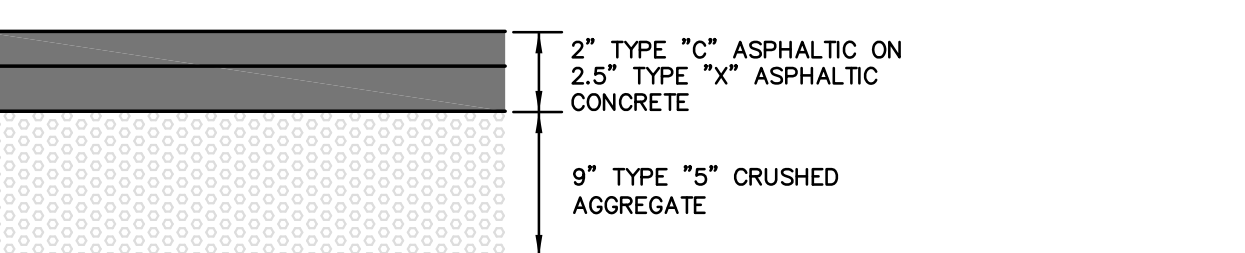
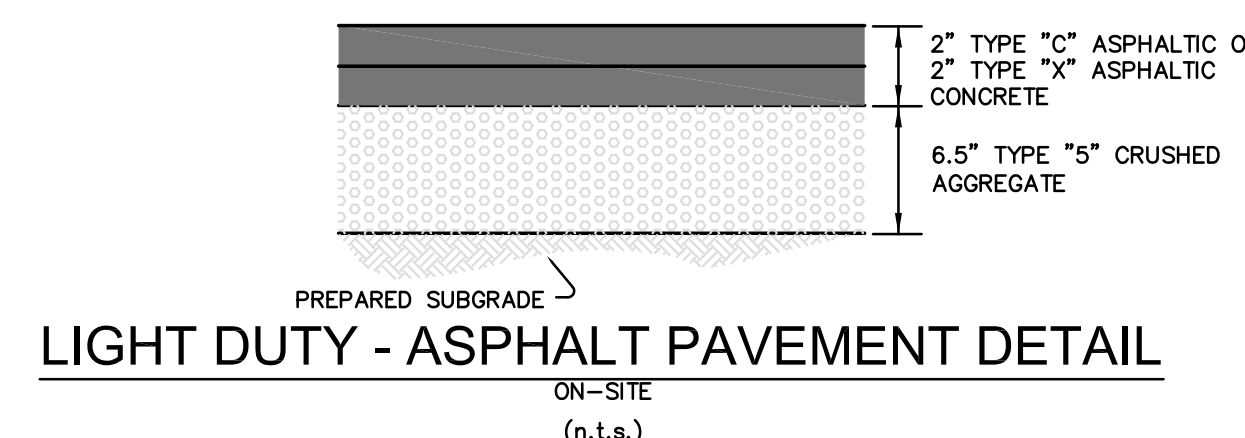
**PIPE BOLLARD DETAIL**  
(n.t.s.)



**CONCRETE WALK**  
(n.t.s.)



**TYPE "S" CURB & PAVEMENT DETAIL**  
(n.t.s.)

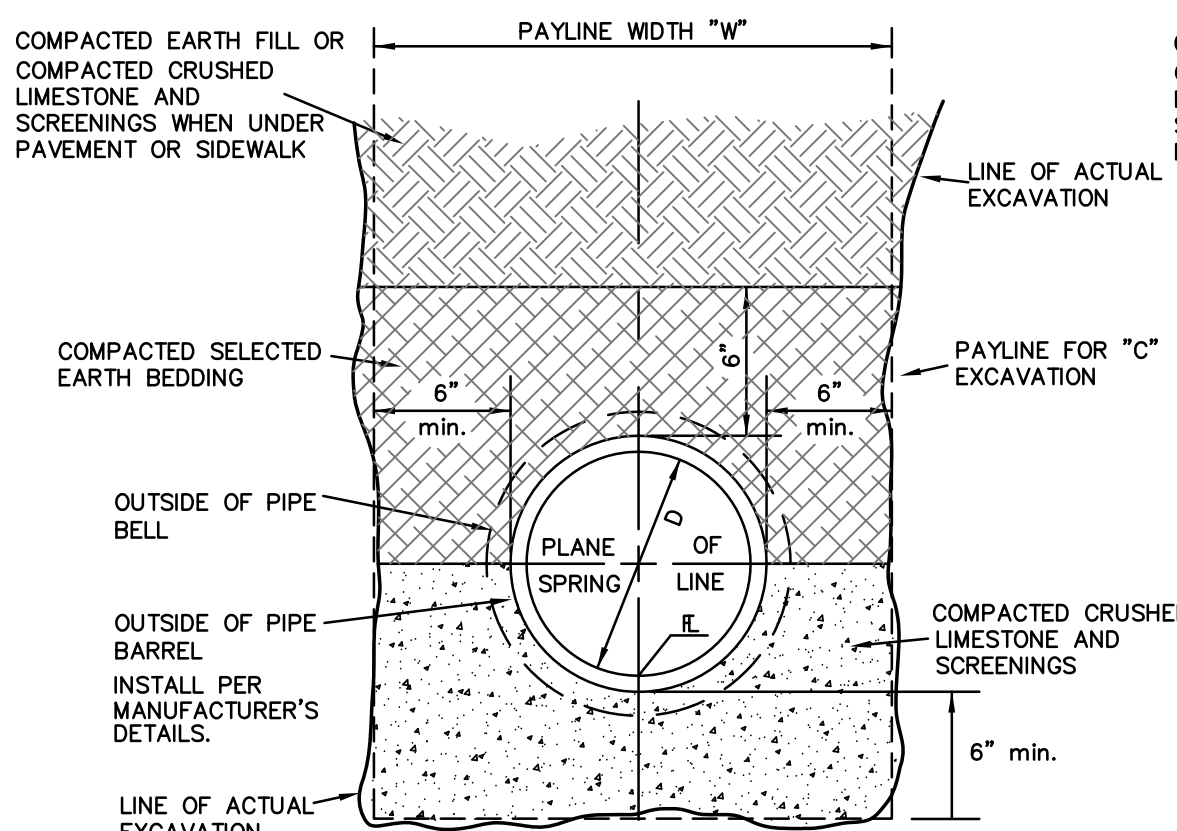


**HEAVY DUTY - ASPHALT PAVEMENT DETAIL**  
(n.t.s.)

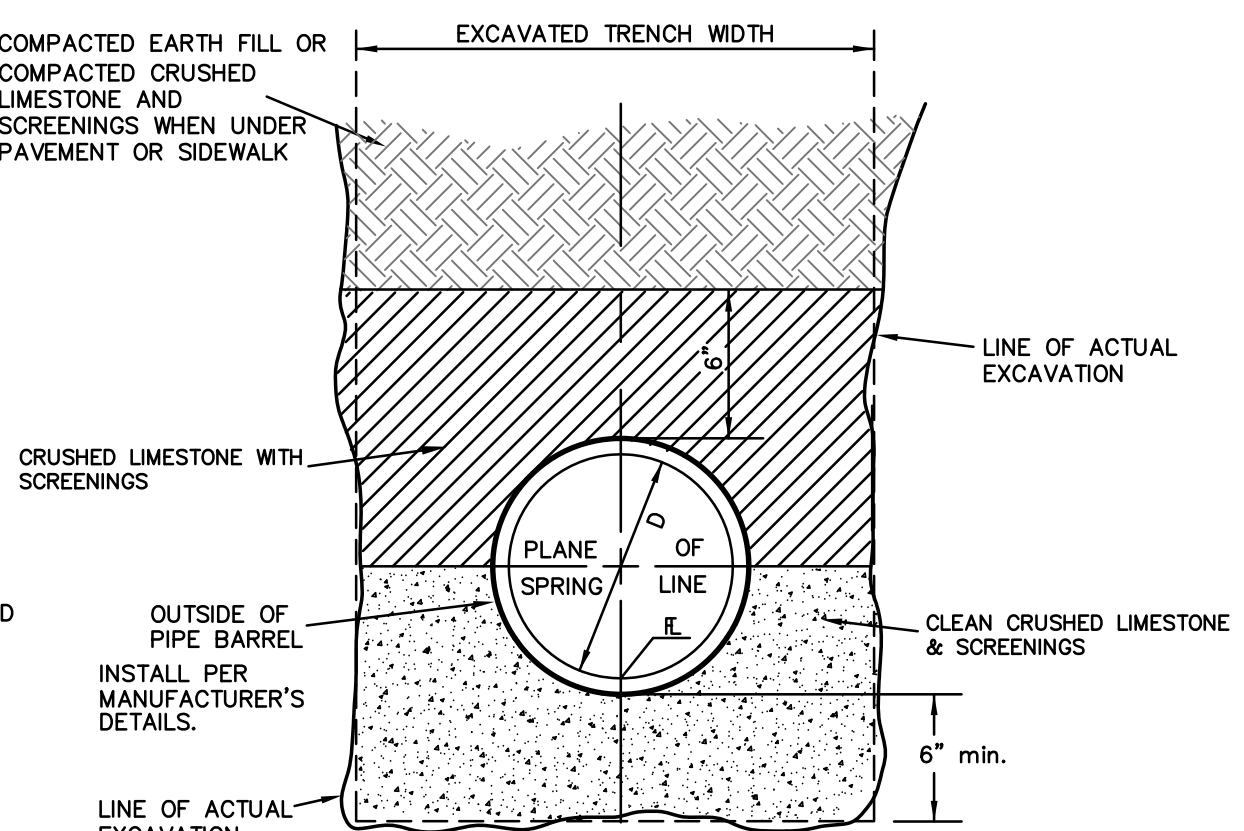


**CONCRETE PAVEMENT DETAIL**  
(n.t.s.)

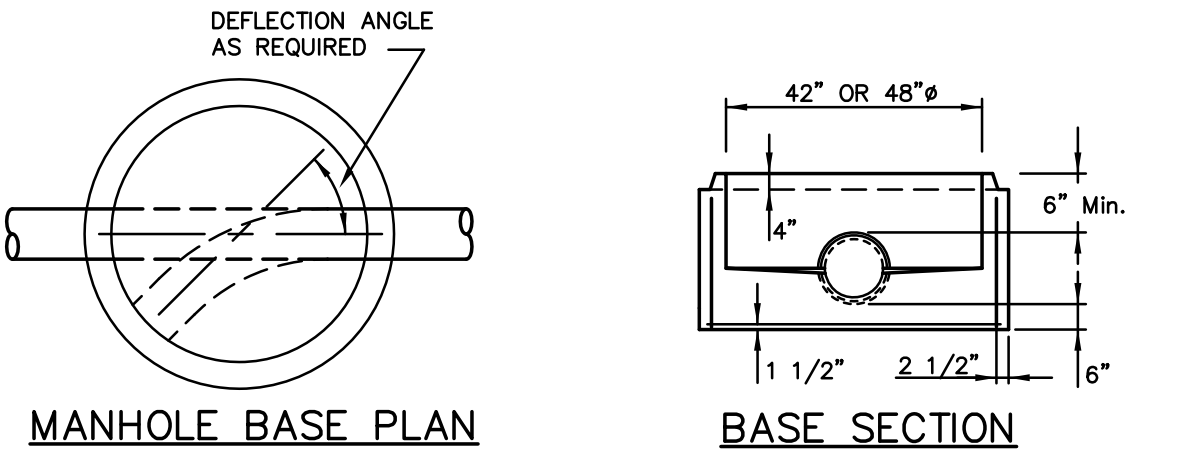
PAVEMENT NOTES:  
1.) CONTRACTOR TO FOLLOW GEOTECHNICAL RECOMMENDATIONS AND ST. CHARLES COUNTY HIGHWAY DEPARTMENT CURRENT SPECIFICATIONS FOR QUALITY ASSURANCE AND MATERIALS FOR PAVEMENT CONSTRUCTION.  
2.) ALL NON-REINFORCED CONCRETE SHALL BE 4,000 PSI AT 28 DAYS.  
3.) ASPHALT SURFACE SHALL BE COMPACTED TO 98% MAXIMUM DENSITY  
4.) AGGREGATE BASE COURSE SHALL BE COMPACTED TO 95% MAXIMUM DENSITY



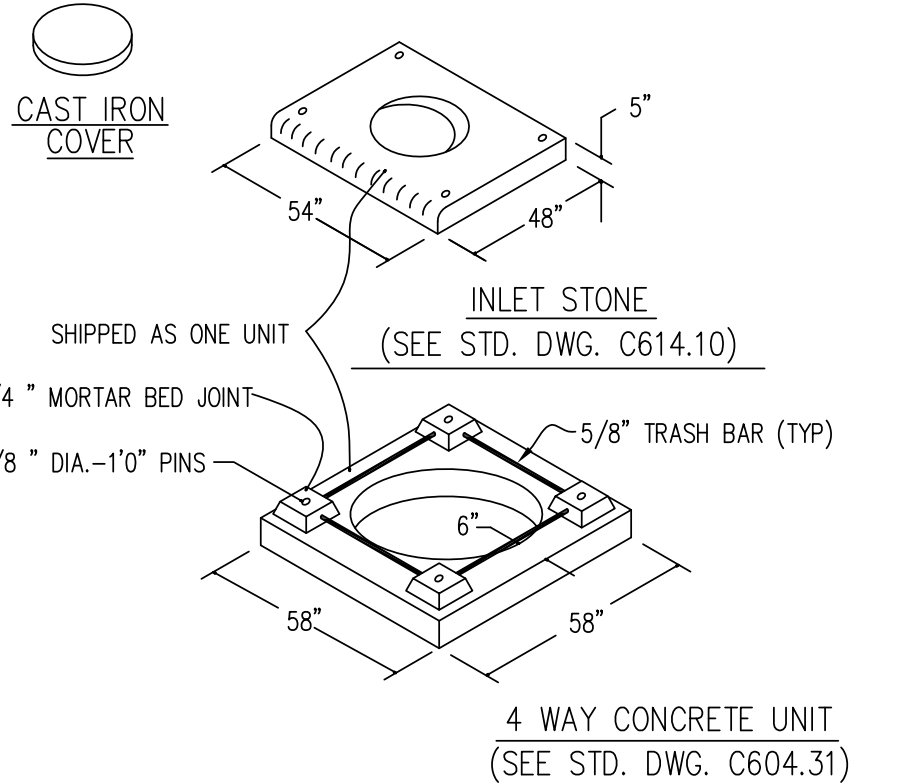
**PIPE BEDDING**  
(MODIFIED FOR REINFORCED CONC. PIPE)



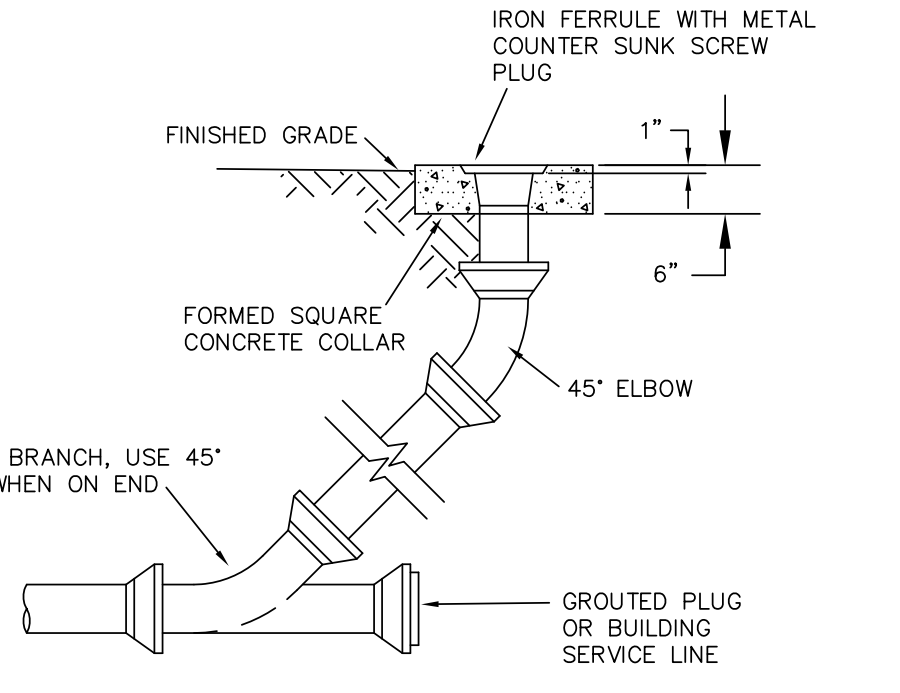
**PIPE BEDDING**  
(FOR ALL PIPE EXCEPT REINFORCED CONC. PIPE)



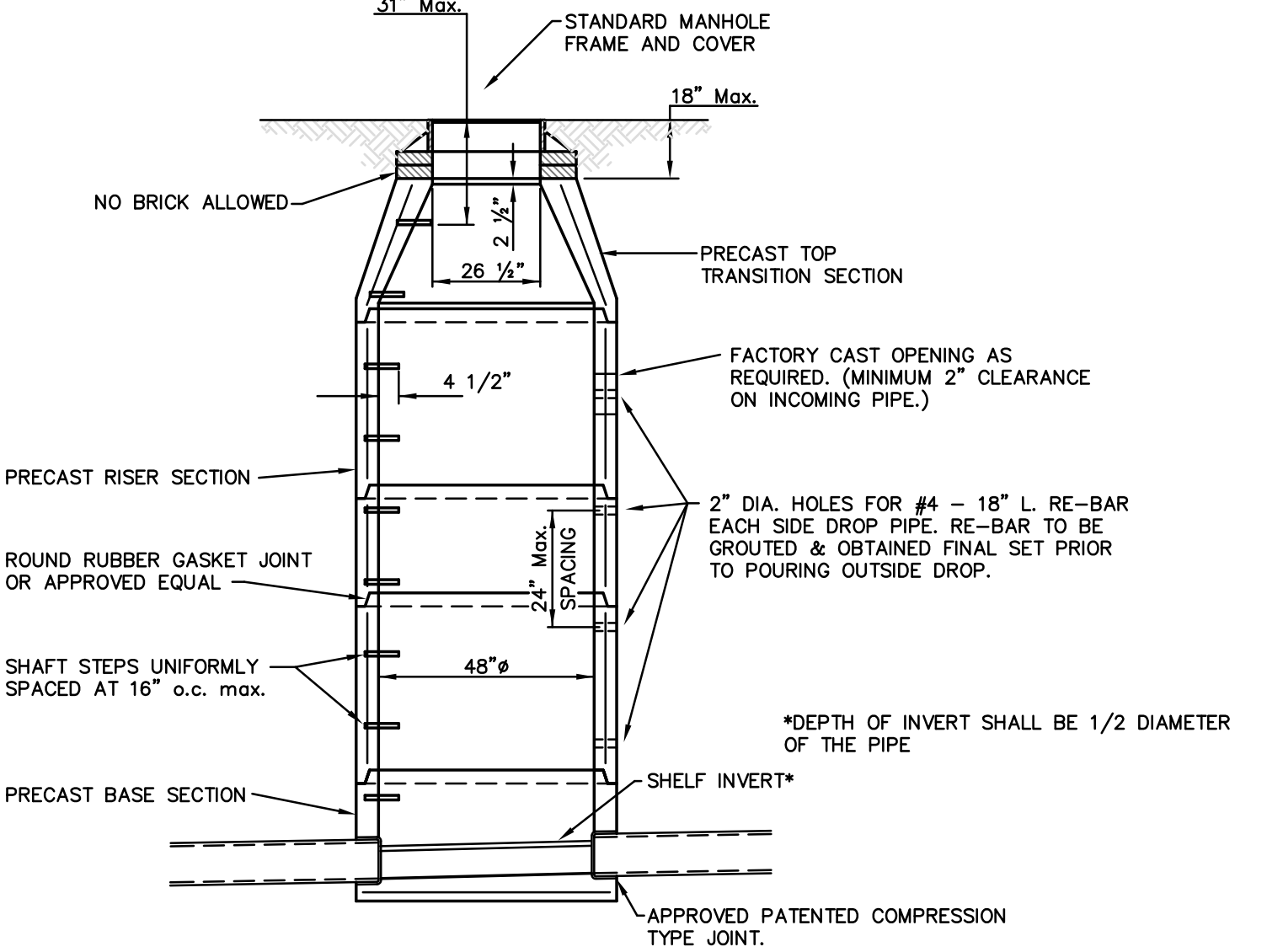
**MANHOLE BASE PLAN**  
**BASE SECTION**



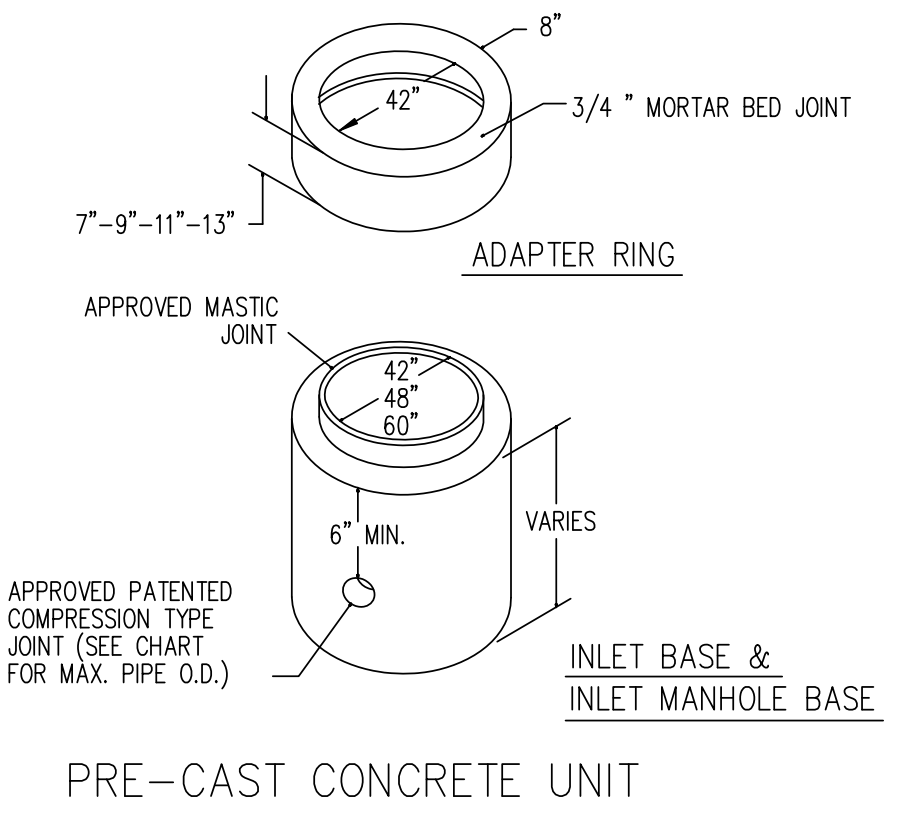
**AREA INLET DETAIL**  
(n.t.s.)



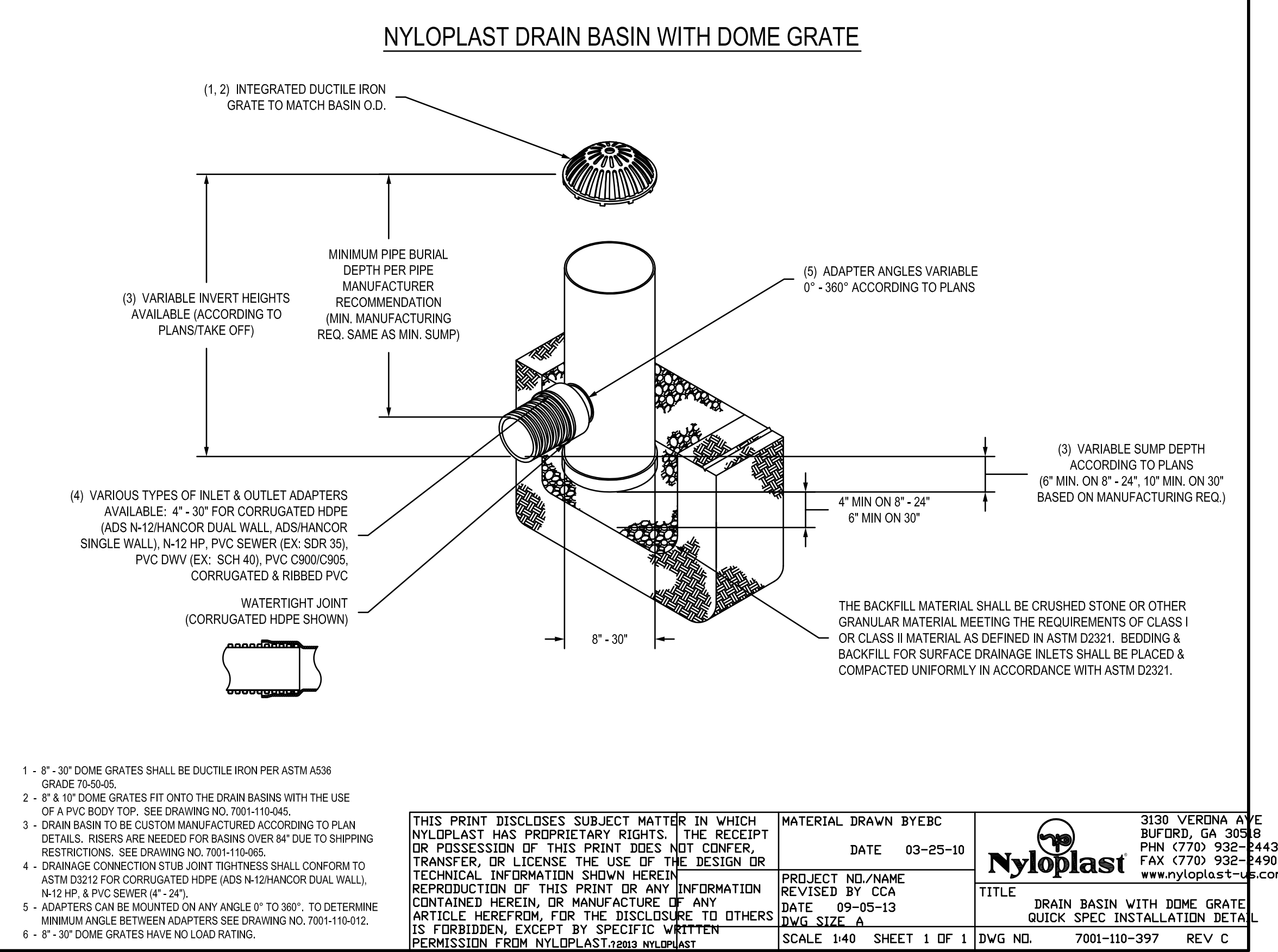
**CLEANOUT**  
(n.t.s.)



**PRECAST MANHOLE**  
(n.t.s.)



**PRE-CAST CONCRETE UNIT**  
(n.t.s.)



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MATERIAL DRAWN BY: EBC  
DATE: 03-25-10

PROJECT NO./NAME: REVISED BY CCA  
DATE: 09-05-13  
DWG. SIZE: A

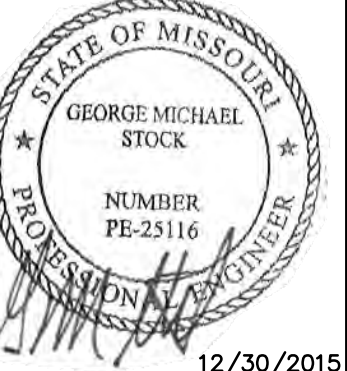
TITLE: DRAIN BASIN WITH DOME GRATE, QUICK SPEC INSTALLATION DETAIL

3130 VERONA AVE  
BURLINGTON, GA 30606  
PHN (770) 932-8443  
FAX (770) 932-8490  
www.nyloplast-us.com

SCALE: 1/40 SHEET 1 OF 1 DWG NO. 7001-110-397 REV C

PREPARED BY:  
**STOCK & ASSOCIATES**  
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257 Chesterfield Business Parkway  
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IMPROVEMENT PLANS FOR:  
**CENTENE DATA CENTER BUILDING EXPANSION**  
6430 WELDON SPRING ROAD  
OFALLON, MISSOURI



12/30/2015  
GEORGE M. STOCK E-25116  
CIVIL ENGINEER  
CERTIFICATE OF AUTHORITY  
NUMBER: 000996

REVISIONS:  
1. 2015-12-07 PROGRESS PRINT  
2. 2015-12-09 REVISED PER CITY COMMENTS  
3. 2015-12-30 REVISED PER CITY & CLIENT COMMENTS

DRAWN BY: J.M.B. CHECKED BY: G.M.S.  
DATE: 11/10/2015 JOB NO: 209-4511.8  
DUCKETT CREEK # BASE MAP #  
S.C.C. HAT # H&T S.U.P. #  
M.D.N.R. #  
MO-RA07437

SHEET TITLE:  
**CONSTRUCTION DETAILS**  
SHEET NO.: **C6.0**



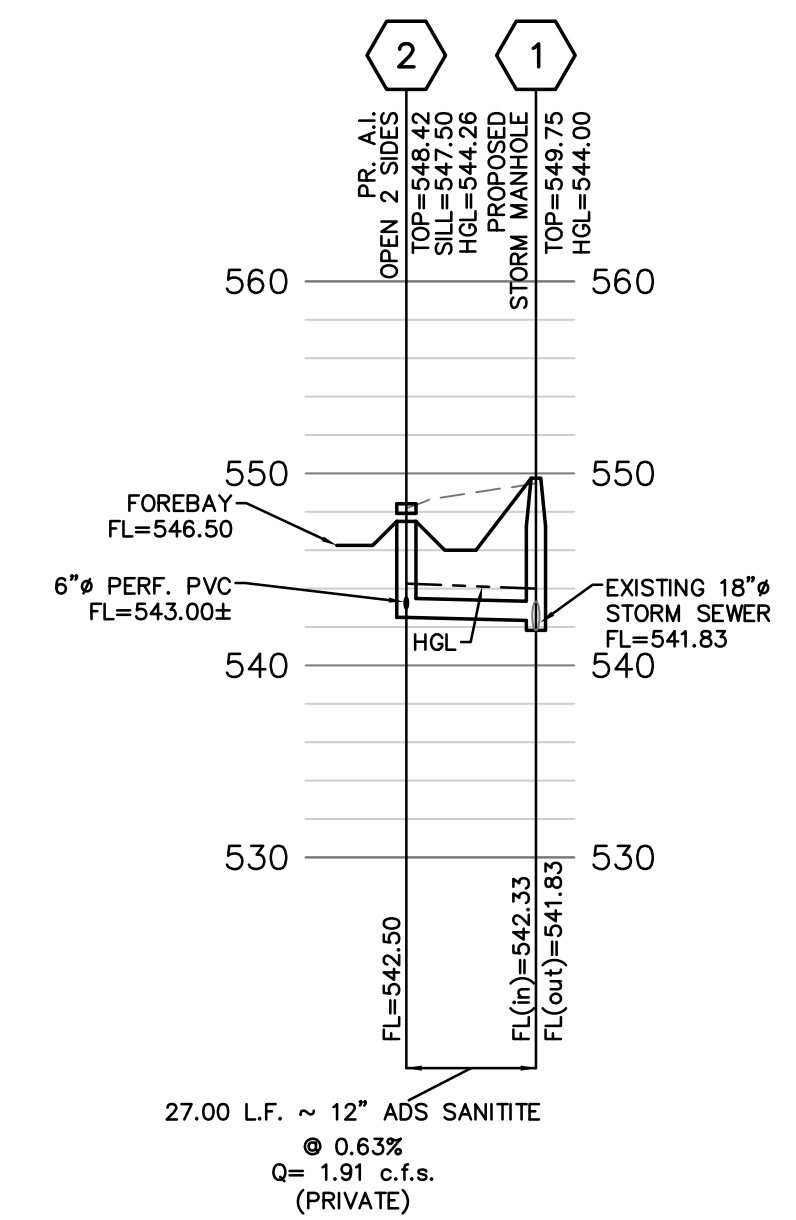
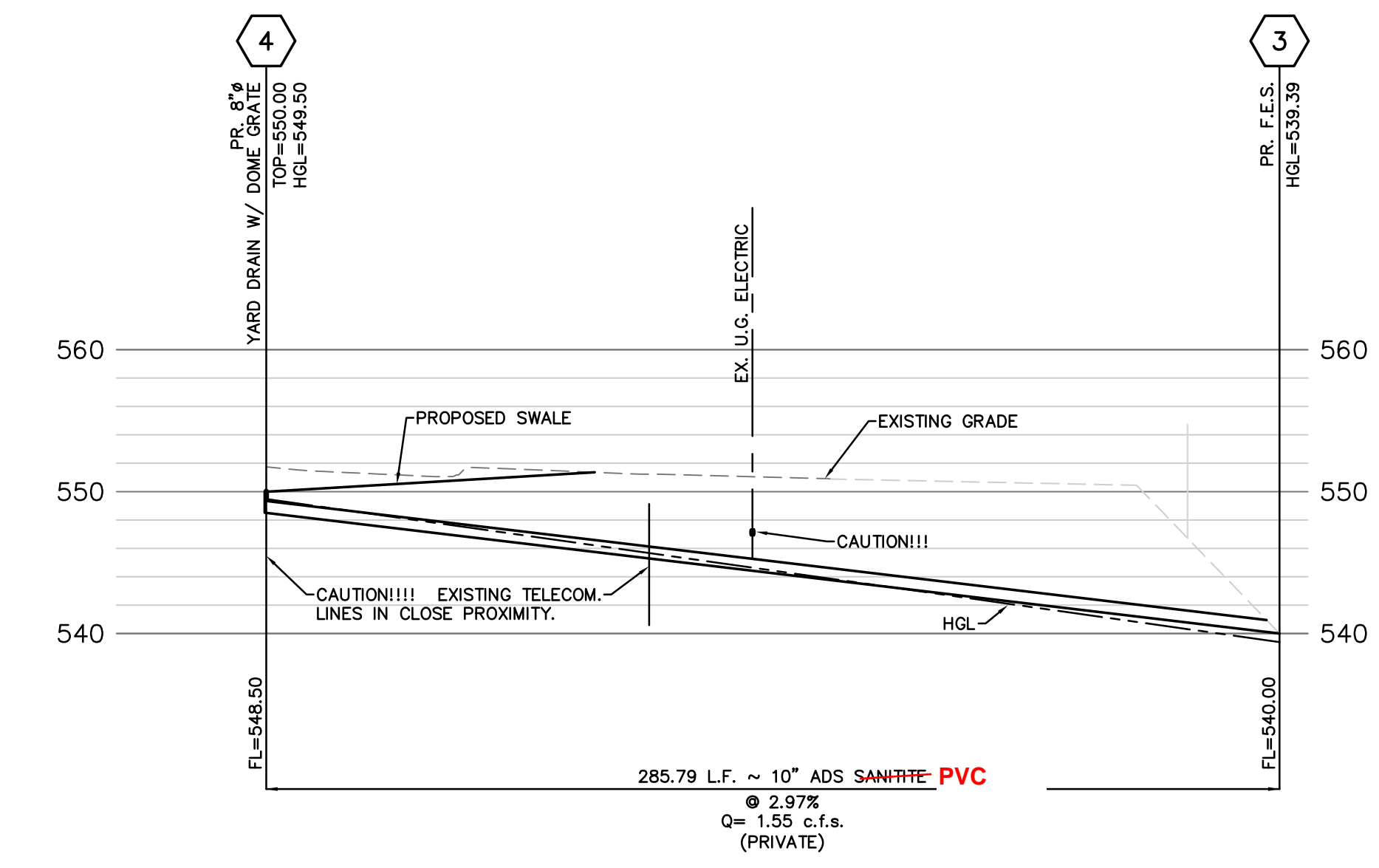
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Project number:		209-4511.8		Checked By:		G.M.S.																							
Project Location:		O'Fallon, Missouri		Date:		11/13/2015																							
LINE		FLOW LINE ELEVATIONS		Bend Coefficients:		Revisions:																							
Structure Number	Upper structure	Lower structure	Upper structure	Lower structure	Length (ft)	Flowline Grade ft/ft	Pipe Size (in.)	Full Flow Cap. (cfs)	December 30, 2015																				
									Total (Q) (cfs)	Mean Full Flow Vel.(V) (ft/s)	Bend Coef.	Curve Coef.	Velocity Head (Vs) (ft)	QV <sub>s</sub> (ft <sup>3</sup> /s)	Pipe Coef. (n)	Hr (ft)	Junction (ft)	Bend (ft)	Curve (ft)	Total H <sub>loss</sub> (ft)	Upper F.L. + Dia. (ft)	Lower H.L. + Hr (ft)	Lower H.L. (ft)	Structure Upper H.L. + H <sub>loss</sub> (ft)	TOP Structure Elevation (ft)	Free Board (ft)	Structure Number		
EX 4	EX 4	1	542.59	541.83	76.75	0.0099	18	10.48	6.00	3.40	0.00	0.00	0.18	1.07	0.013	0.25	0.00	0.25	0.00	0.25	0.00	0.25	544.09	544.25	544.00	544.50	551.25	6.75	EX 4
1	1	EX 3	541.83	540.10	172.26	0.0100	18	10.56	7.91	4.48	0.00	0.00	0.31	2.46	0.013	0.98	0.23	0.44	0.00	0.67	0.00	0.67	543.33	543.07	542.09	544.00	549.75	5.75	1
EX 3	EX 3	EX 2	539.90	538.87	103.07	0.0100	21	15.88	10.19	4.24	0.00	0.00	0.28	2.84	0.013	0.43	0.05	0.39	0.00	0.44	0.00	0.44	541.65	541.05	540.62	542.09	548.00	5.91	EX 3
EX 2	EX 2	EX 1	538.67	537.47	120.16	0.0100	21	15.88	10.34	4.30	0.30	0.00	0.29	2.97	0.013	0.51	0.02	0.09	0.00	0.10	0.00	0.10	540.42	539.90	539.39	540.52	550.17	9.65	EX 2
EX 1	EX 1		537.47																									EX 1	
ASSUME 100 YR POND HGL= 539.39																													
2	2	1	542.50	542.33	27.00	0.0063	12	2.83	1.91	2.43	0.70	0.00	0.09	0.18	0.013	0.08	0.12	0.06	0.00	0.19	0.00	0.19	543.50	544.08	544.00	544.26	548.42	4.16	2
1	1		541.83																									1	
HGL STRUCTURE #2= 544.00																													
4	4	3	548.50	540.00	285.79	0.0297	10	3.79	1.55	2.84	0.00	0.00	0.13	0.19	0.013	1.43	0.17	0.00	0.00	0.17	0.00	0.17	549.33	542.26	540.83	549.50	550.00	0.50	4
3	3		540.00																									3	
ASSUME 100 YR POND HGL= 539.39																													

MEAN FULL FLOW VELOCITY =  $Q_{ACT} / A_{PIPE}$   
 FRICTION LOSS (H<sub>f</sub>) :  $H_f = 2.87 n^2 (LV^2/d^{4.33})$   
 VELOCITY HEAD :  $V_s = V^2/2g$

JUNCTION LOSSES (JUNC.) =  $[Q_{out}V_{out} - \sum(Q_{in}V_{in})] \times 1.33 / [Q_{out}]$   
 BEND LOSSES (BEND) =  $(V^3) \times \text{ANGLE COEFFICIENT}$   
 CURVE LOSS =  $V_s \times \text{CURVE COEFFICIENT}$

Note: 1. IF MORE THAN ONE INCOMING LINE, CALC. EACH BEND LOSS AND ADD TOGETHER.  
 2. NO STRUCTURE LOSSES TO BE CALCULATED AT A DROP  
 3. IF  $QV_{(in)} > QV_{(out)}$ , NO JUNCTION LOSSES TO BE CALCULATED.

PIPE HYDRAULICS



**STORM SEWER NOTE**

ALL DETAILS SHOWN ON THIS SHEET ARE FOR THE CONVENIENCE OF THE CONTRACTOR. THE DETAILS ARE TO BE VERIFIED PER METROPOLITAN ST. LOUIS SEWER DISTRICT STANDARDS FOR STORM SEWERS, & CITY OF OFALLON CONSTRUCTION SPECIFICATIONS. ALL METHODS, MEANS AND MATERIALS SHALL CONFORM TO M.S.D. CURRENT STANDARD CONSTRUCTION SPECIFICATIONS.

**SANITARY SEWER NOTE**

ALL DETAILS SHOWN ON THIS SHEET ARE FOR THE CONVENIENCE OF THE CONTRACTOR. THE DETAILS ARE TO BE VERIFIED PER DUCKETT CREEK SANITARY SEWER DISTRICT STANDARDS FOR SANITARY SEWERS, & CITY OF OFALLON CONSTRUCTION SPECIFICATIONS. ALL METHODS, MEANS AND MATERIALS SHALL CONFORM TO D.C.S.D. CURRENT STANDARD CONSTRUCTION SPECIFICATIONS.

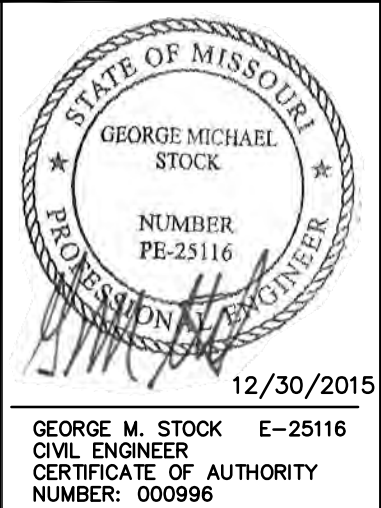
POTENTIAL ROCK EXCAVATION MAY OCCUR PRIOR TO EXCAVATION AND UTILITY INSTALLATION. SHOULD ROCK BE ENCOUNTERED, NOTIFY CLAYCO PRIOR TO COMMENCEMENT OF CONSTRUCTION.

**LINETYPE LEGEND**

EXISTING GRADE.....	-----
PROPOSED GRADE.....	-----
HYDRAULIC GRADE.....	-----
PROPOSED PAVEMENT.....	-----
GRANULAR BACKFILL.....	-----
COMPACTED FILL.....	-----

- CONSTRUCTION NOTES:**
- ALL R.C.P. SHALL BE CLASS III UNLESS NOTED OTHERWISE.
  - ALL P.V.C. SHALL BE ADS "SANITITE" UNLESS NOTED OTHERWISE.
- ALL SEWERS SHOWN ARE PRIVATE, UNLESS OTHERWISE NOTED.  
 ENGINEER APPROVED SHOP DRAWINGS MUST BE SUBMITTED TO THE CITY OF OFALLON AND/OR DUCKETT CREEK SANITARY SEWER DISTRICT.

IMPROVEMENT PLANS FOR:  
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- REVISIONS:
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  - 2015-12-09 REVISED PER CITY COMMENTS
  - 2015-12-30 REVISED PER CITY & CLIENT COMMENTS

DRAWN BY:	J.M.B.	CHECKED BY:	G.M.S.
DATE:	11/10/2015	JOB NO.:	209-4511.8
DUCKETT CREEK #:	P-	BASE MAP #:	-
S.C.C. H&T #:	-	H&T S.U.P. #:	-
M.D.N.R. #:	MO-RA07437		

SHEET TITLE:  
**SEWER PROFILES & PIPE HYDRAULICS**

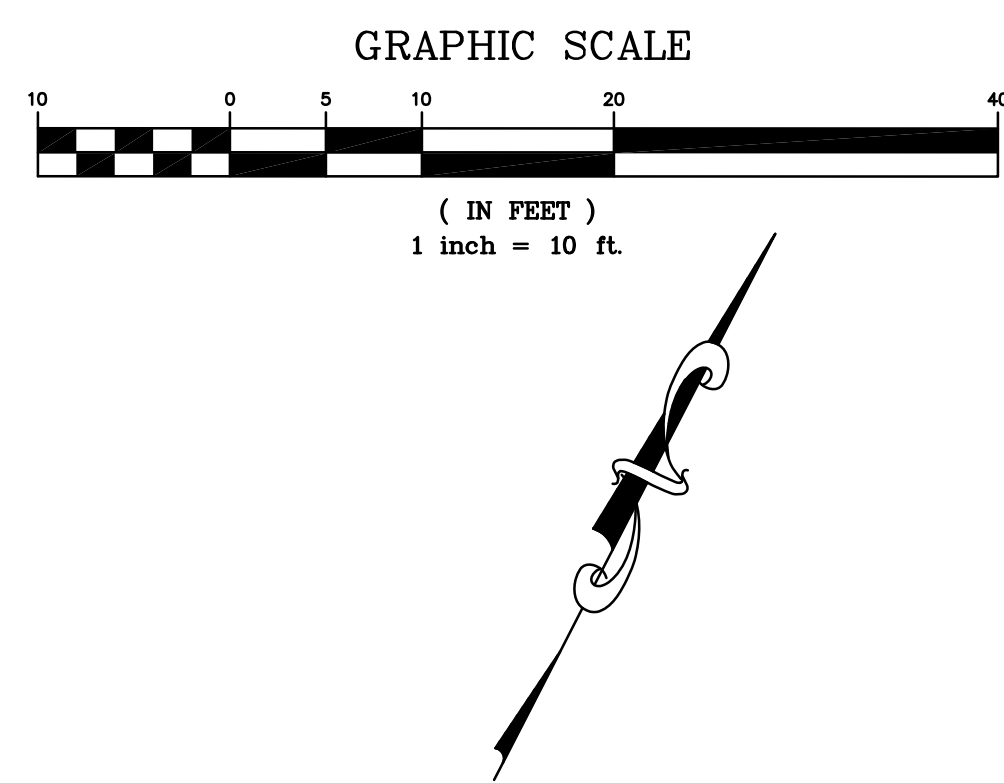
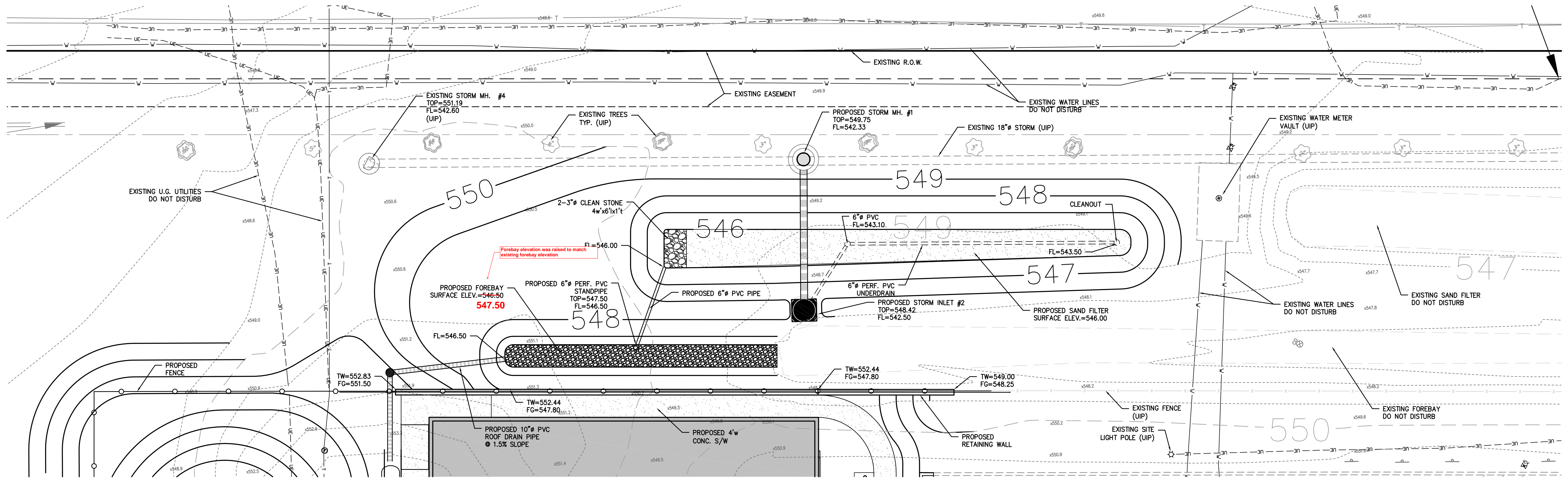
SHEET NO.:  
**C7.0**

PREPARED BY:

**STOCK & ASSOCIATES**  
 Consulting Engineers, Inc.

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**Table 1: Roof Expansion Runoff & Greenspace Surface Sand Filter**

Step 1: Water Quality Volume:

Drainage/Disturbed Area:	0.63	Acres
Percent Impervious Cover(I):	55.5	%
Required WQv Area:	1,433	Cu. FT. [WQv=(1.14*(.05+.009I)*A/12)*43560]

Step 2: Sediment Basin Surface Area(A<sub>s</sub>):

Required WQv:	1433	
A <sub>s</sub> :	95	Ft. <sup>2</sup> (.066 x WQv) <sup>*</sup>

\*Note: This equation is for % Impervious < 75%

Step 3: WQv Pretreatment Forebay

Required WQv:	1,074	Cu. FT. [V <sub>p</sub> =0.75xWQv]	Provided:		
Pretreatment Volume(V <sub>p</sub> ):	358	Cu. FT. [V <sub>p</sub> =0.25xWQv]	Elevation		
			Area		
			Volume		
			546.50	194	0
			547.00	357	138
			547.50	520	357
			548.00	683	658

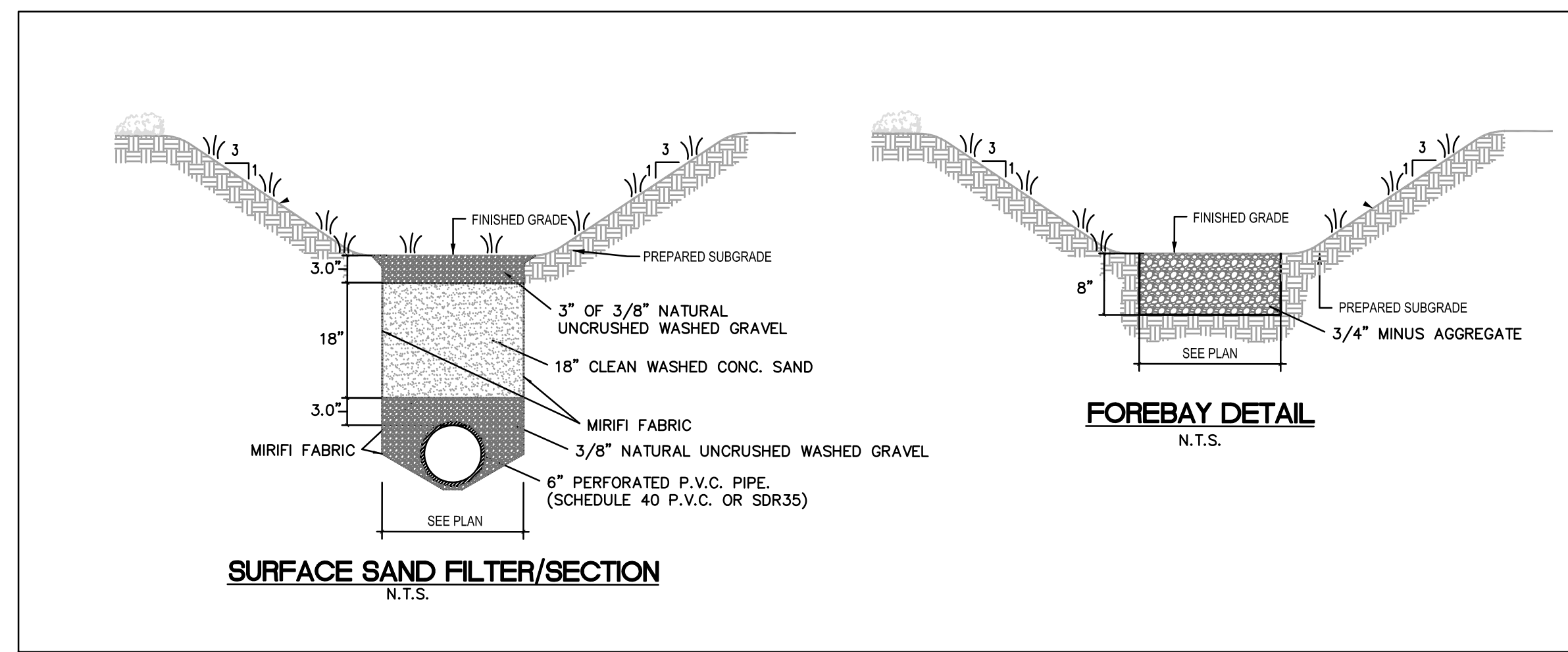
Step 4: WQv Basin Area

Required WQv:	1,433	Cu. FT.	Provided:		
Filter Bed Depth(df):	1.50	Ft.**	Area(A <sub>f</sub> ) =		
Coefficient of Permeability(k):	3.5	Ft./day***	Volume		
Avg. height of water above Bed(h):	0.75	Ft.	Elevation		
Design Filter Bed Drain Time(tf):	1.67	days****	Area		
Surface Area of Filter Bed(A <sub>f</sub> ):	163	Ft. <sup>2</sup> (WQv x df)/((k) x (h + df) x (tf))	Volume		
			546.00	492	0
			546.50	764	314
			547.00	1,050	768
			547.50	1,357	1,369
			547.75	1,511	1,728
			548.00	1,665	2,125

\*\*Filter Bed Depth Typically is 1.5' (18") for sand filter, and has to be 1.0' minimum.  
 \*\*\*k=3.5 ft/day for sand  
 \*\*\*\*Note: 1.67 days for Sand Filters

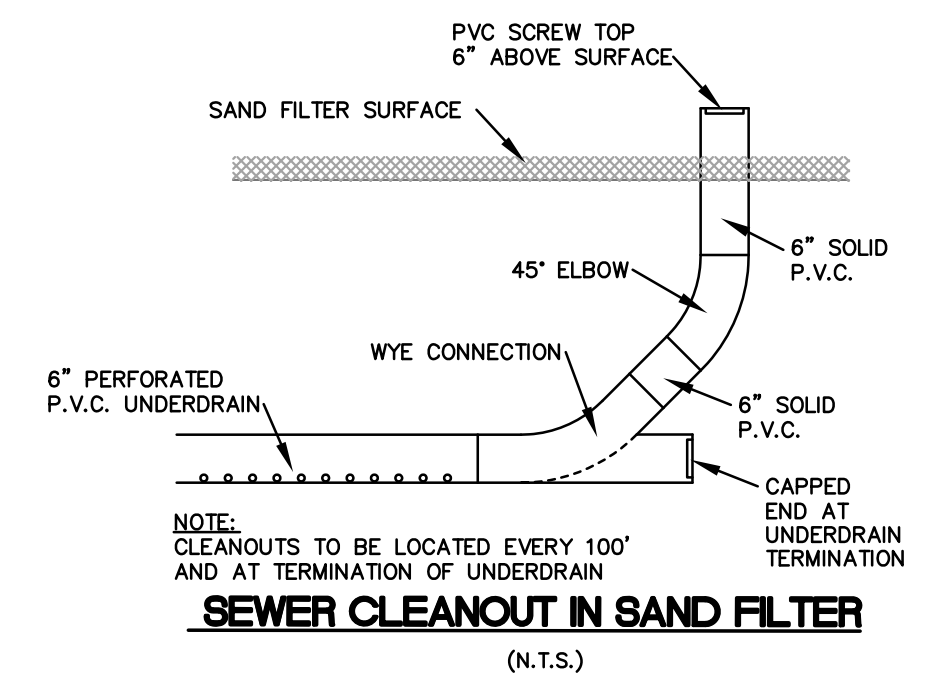
Step 5: Storage Provided(100% WQv)

Required WQv:	1,433		v(Voids) =
Pretreatment Volume(V <sub>p</sub> ):	357	Cu. Ft.	0.40
Treatment Volume(V <sub>t</sub> ):	1,884	Cu. Ft. [V <sub>t</sub> + v(df x A <sub>f</sub> )]	
Provided WQv:	2,241	Cu. Ft. [V <sub>p</sub> + V <sub>t</sub> ]	



**MATERIAL SPECIFICATIONS FOR SAND FILTERS**

MATERIAL	SPECIFICATION / TEST METHOD	SIZE	NOTES
SAND	CLEAN AASHTO-M6 OR ASTM-C-33 CONCRETE SAND	0.02" TO 0.04"	SAND SUBSTITUTES SUCH AS DIABASE AND GRAYSTONE #10 ARE NOT ACCEPTABLE. NO CALCIUM CARBONATED OR DOLOMITIC SAND SUBSTITUTIONS ARE ACCEPTABLE. NO "ROCK DUST" CAN BE USED FOR SAND.
PEAT	ASH CONTENT: <15% pH RANGE: 5.2 TO 4.9 LOOSE BULK DENSITY 0.12 TO 0.15 g/cc	N/A	THE MATERIAL MUST BE REED-SEDEGE HEMIC PEAT, SHREDDED, UNCOMPACTED, UNIFORM AND CLEAN
LEAF COMPOST		N/A	
UNDERDRAIN GRAVEL	AASHTO-M-43	No. 57 TO 0.75"	NATURAL UNCRUSHED, WASHED
GEOTEXILE FABRIC (IF REQUIRED)	ASTM-D-4833 (PUNCTURE STRENGTH-125 lb.) ASTM-D-4632 (TENSILE STRENGTH-300 lb.)	0.08" THICK EQUIVALENT OPENING SIZE OF #80 SIEVE	MUST MAINTAIN 125 gpm PER SQ. FT. FLOW RATE. NOTE: A 4" PEA GRAVEL LAYER MAY BE SUBSTITUTED FOR GEOTEXILES MEANT TO "SEPARATE" SAND FILTER LAYERS.
IMPERMEABLE LINER (IF REQUIRED)	ASTM-D-4833 (THICKNESS) ASTM-D-412 (TENSILE STRENGTH-1,100 lb., ELONGATION 200%) ASTM-D-424 (TEAR RESISTANCE-150 lb./in) ASTM-D-471 (WATER ABSORPTION: +1 TO 2% MASS)	30 mil. THICKNESS	LINER TO BE ULTRAVIOLET RESISTANT. A GEOTEXILE FABRIC SHOULD BE USED TO PROTECT THE LINER FROM PUNCTURE.
UNDERDRAIN PIPING	F 758, TYPE PS 28 OR AASHTO-M-278	4"-6" RIGID SCHEDULE 40 PVC OR SDR35	3/8" PERF. @ 6" ON CENTER, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER PIPES; NOT NECESSARY UNDERNEATH PIPES.
STONE WINDOW	ASTM-D-448	PEA GRAVEL: 0.75"	USE CLEAN BANK-RUN GRAVEL



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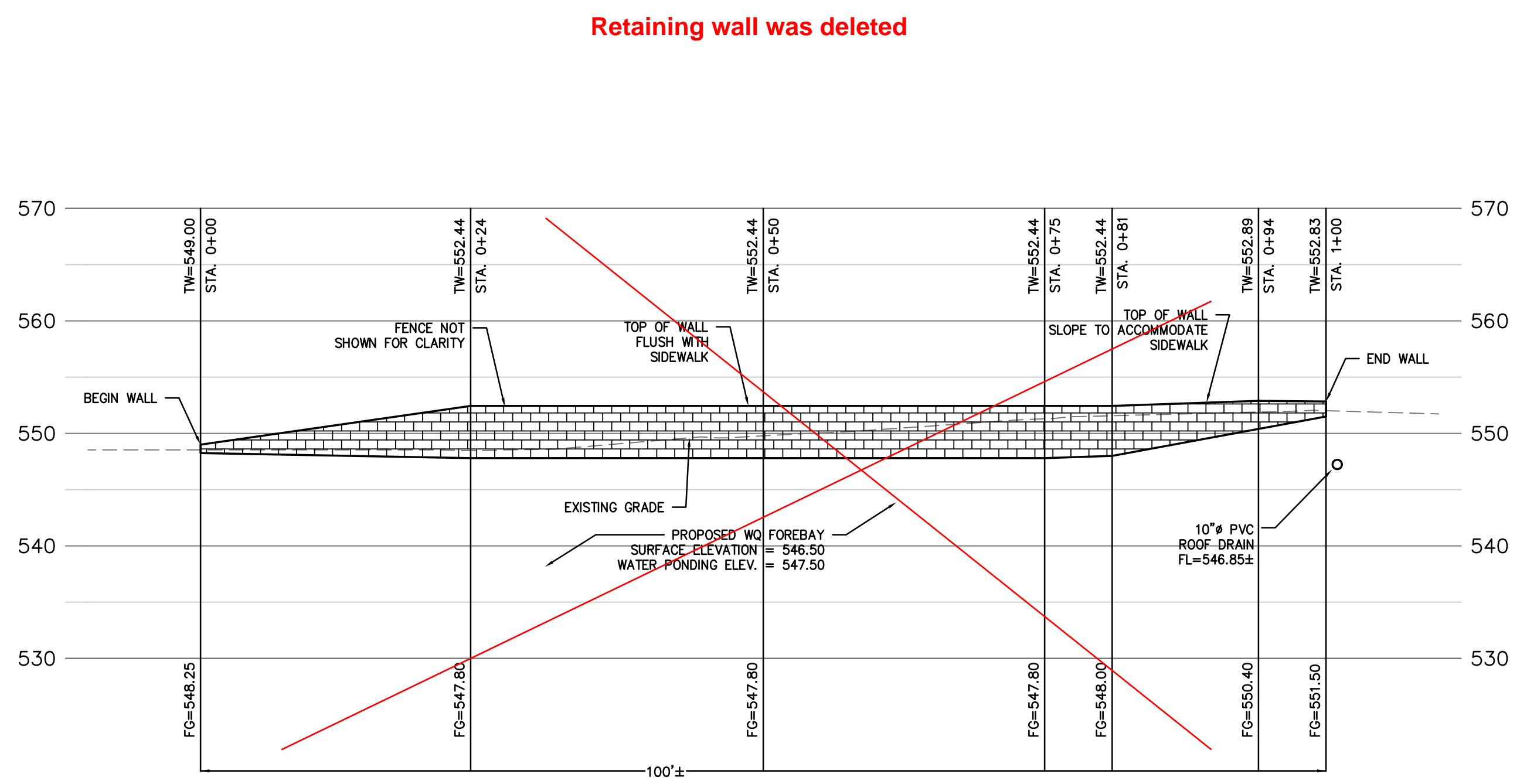
IMPROVEMENT PLANS FOR:  
**CENTENE DATA CENTER BUILDING EXPANSION**  
 6430 WELDON SPRING ROAD OFALLON, MISSOURI

STATE OF MISSOURI  
 GEORGE MICHAEL STOCK  
 CIVIL ENGINEER  
 CERTIFICATE OF AUTHORITY NUMBER: PE-25116  
 12/30/2015

REVISIONS:  
 1. 2015-12-07 PROGRESS PRINT  
 2. 2015-12-09 REVISED PER CITY COMMENTS  
 3. 2015-12-30 REVISED PER CITY & CLIENT COMMENTS

DRAWN BY: J.M.B. CHECKED BY: G.M.S.  
 DATE: 11/10/2015 JOB NO: 209-4511.8  
 DUCKETT CREEK # BASE MAP #  
 S.C.C. H&T # H&T S.U.P. #  
 M.D.N.R. # MO-RA07437  
 SHEET TITLE: WATER QUALITY DETAILS  
 SHEET NO.: C8.0

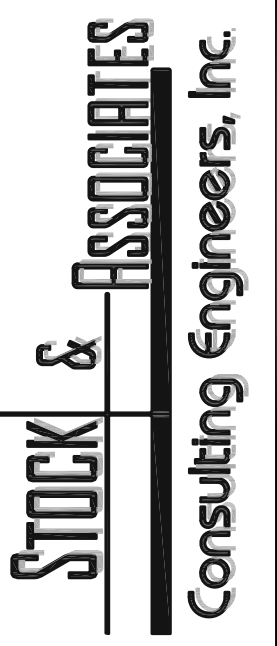




**RETAINING WALL**  
SCALE: 1" = 10'

- WALL NOTES.**
- 1.) SEE STRUCTURAL/ARCHITECTURAL PLANS FOR WALL DETAILS.
  - 2.) THE ABOVE INFORMATION IS A CONCEPT ONLY. ACTUAL DESIGN OF RETAINING WALL SHALL BE BY A LICENSED PROFESSIONAL ENGINEER & SUBMITTED TO STOCK AND ASSOCIATES FOR GENERAL COMPLIANCE WITH GRADING PLAN.
  - 3.) TW= TOP OF RETAINING WALL, FG= FINISH GRADE AT BASE OF WALL.
  - 4.) VERTICAL WALL SYSTEM ASSUMED FOR THIS PROJECT. ZERO BATTER.
  - 5.) WALL DESIGNER SHALL CONSULT GEOTECHNICAL ENGINEER FOR GLOBAL STABILITY.
  - 6.) RETAINING WALL WILL REQUIRE A SEPARATE PERMIT (BUILDING PERMIT) PRIOR TO CONSTRUCTION. ALL WALLS OVER 48" IN HEIGHT ARE REQUIRED TO HAVE ENGINEERED PLANS AND CALCULATIONS.

PREPARED BY:

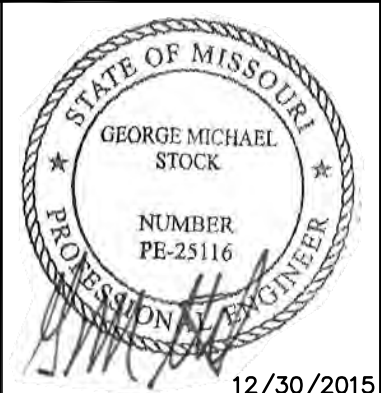


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**CENTENE DATA CENTER  
BUILDING EXPANSION**

6430 WELDON SPRING ROAD  
OFALLON, MISSOURI



GEORGE M. STOCK E-25116  
CIVIL ENGINEER  
CERTIFICATE OF AUTHORITY  
NUMBER: 000996

**REVISIONS:**

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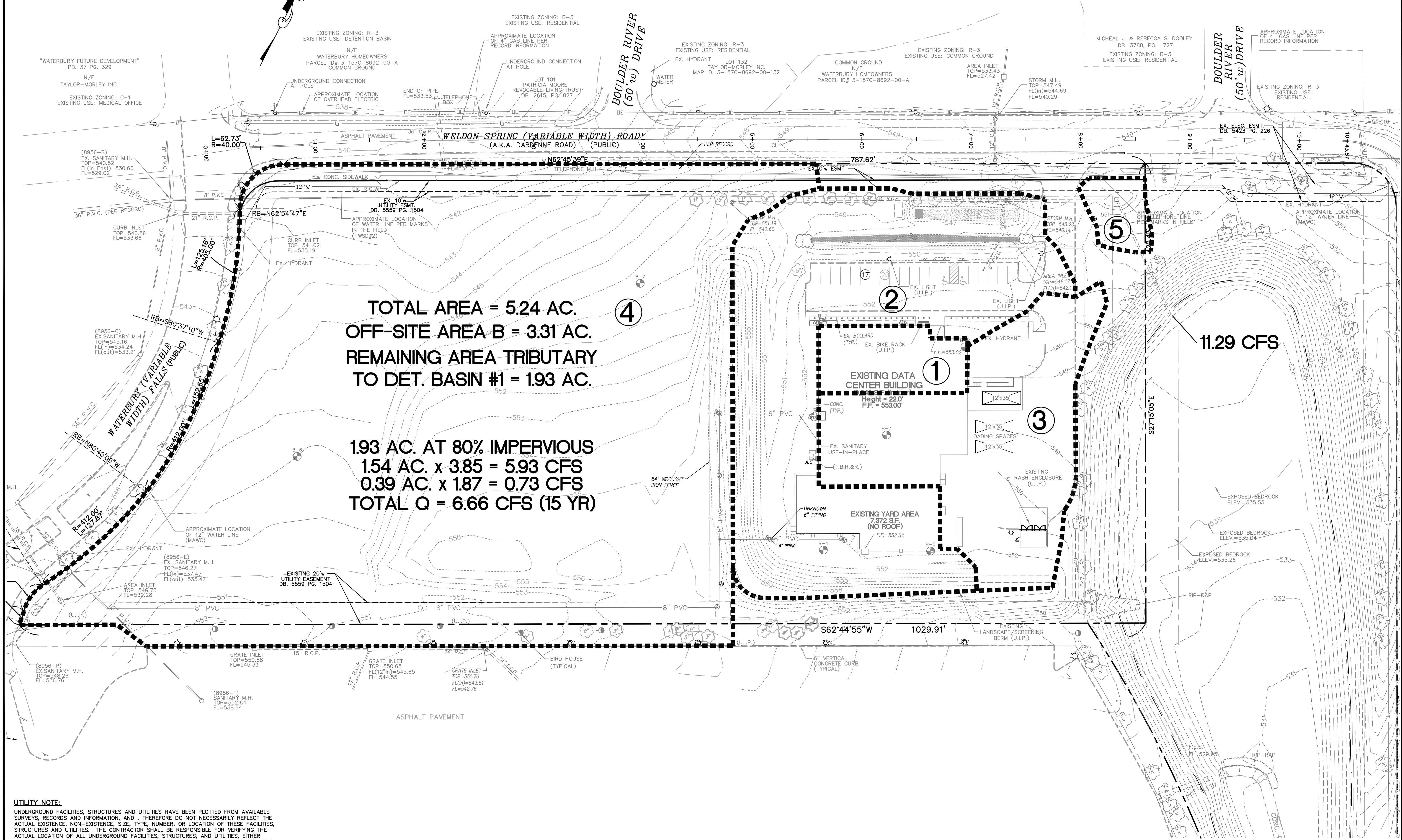
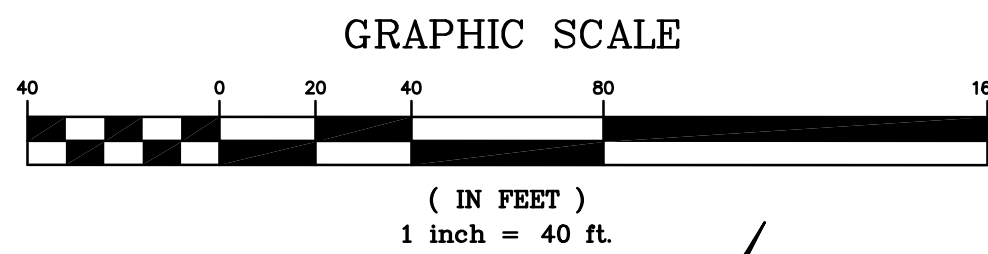
DRAWN BY: J.M.B.	CHECKED BY: G.M.S.
DATE: 11/10/2015	JOB NO: 209-4511.8
DUCKETT CREDIT #: P-	BASE MAP #: -
S.C.C. H&T #: -	H&T S.U.P. #: -
M.D.N.R. #: MO-RA07437	

SHEET TITLE:  
**RETAINING WALL  
PROFILE**

SHEET NO.:  
**C9.0**

DRAWING FILE: I:\work\052015\11\10\15\CenteneDataCenter\111015\111015\_CenteneDataCenter\111015\_CenteneDataCenter.dwg PLOTTED: Dec 10, 2015 10:04 AM PLOTTED BY: J.M.B.





**TOTAL AREA = 5.24 AC.**  
**OFF-SITE AREA B = 3.31 AC.**  
**REMAINING AREA TRIBUTARY TO DET. BASIN #1 = 1.93 AC.**

**1.93 AC. AT 80% IMPERVIOUS**  
**1.54 AC. x 3.85 = 5.93 CFS**  
**0.39 AC. x 1.87 = 0.73 CFS**  
**TOTAL Q = 6.66 CFS (15 YR)**

**11.29 CFS**

**UTILITY NOTE:**  
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IMPROVEMENT PLANS FOR:  
**CENTENE DATA CENTER BUILDING EXPANSION**  
 6430 WELDON SPRING ROAD  
 OFALLON, MISSOURI

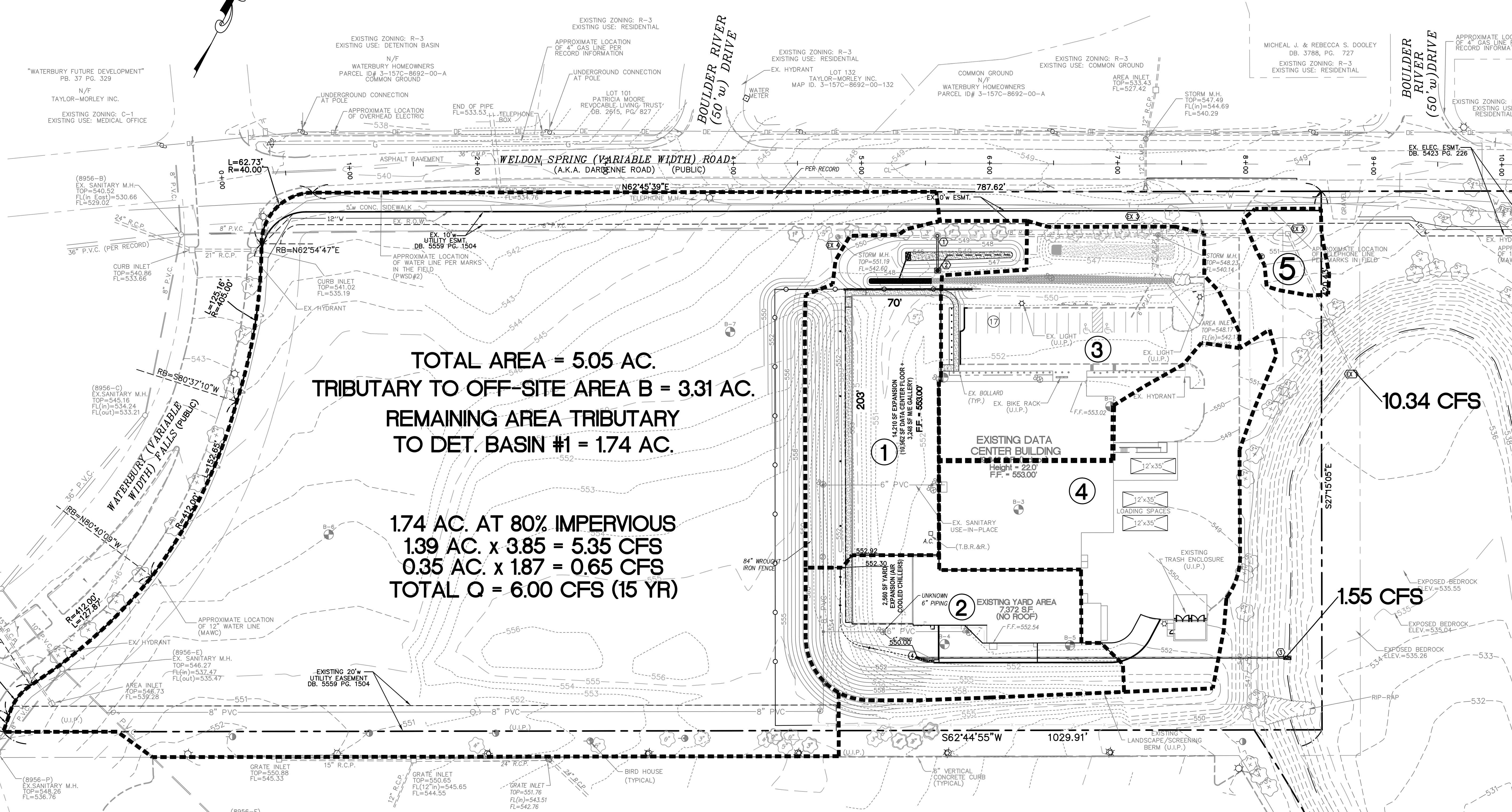
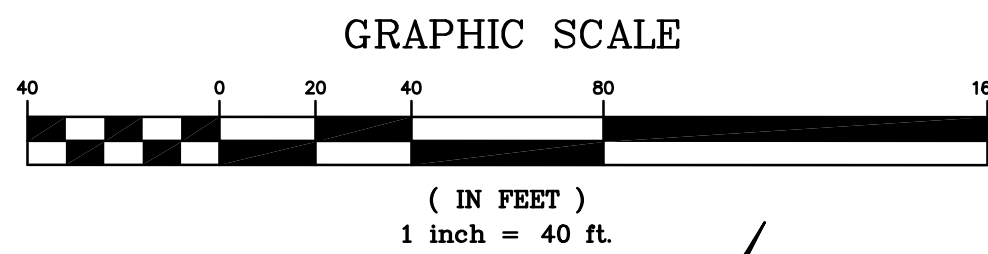
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DRAWN BY: J.M.B. CHECKED BY: G.M.S.  
 DATE: 11/10/2015 JOB NO: 209-4511.8  
 DUCKETT CREEK # BASE MAP #  
 S.C.C. H&T # H&T S.U.P. #  
 M.D.N.R. # MO-RA07437  
 SHEET TITLE: EXISTING DRAINAGE AREA MAP

SHEET NO.: **C10.0**





**TOTAL AREA = 5.05 AC.**  
**TRIBUTARY TO OFF-SITE AREA B = 3.31 AC.**  
**REMAINING AREA TRIBUTARY TO DET. BASIN #1 = 1.74 AC.**

**1.74 AC. AT 80% IMPERVIOUS**  
**1.39 AC. x 3.85 = 5.35 CFS**  
**0.35 AC. x 1.87 = 0.65 CFS**  
**TOTAL Q = 6.00 CFS (15 YR)**

**Centene Data Center - Building Expansion**  
**STORMWATER RUNOFF CALCULATIONS**

209-4511.8  
 November 13, 2015  
 REV: December 30, 2015

T<sub>c</sub> = 20 min.

SUBAREA	AREA (SQ FT)		TOTAL AREA		Q(15) 5%-1.87			Q(100) 5%-2.95			
	IMPERVIOUS	PERVIOUS	SQ FT	AC	ACERAGE	Q(15)	ACERAGE	Q(100)	ACERAGE	Q(100)	
1	15,316	13,107	28,423	0.65	0.35	1.35	0.30	0.56	1.91	3.02	
2	12,383	10,704	23,087	0.53	0.28	1.08	0.25	0.47	1.55	2.44	
3	20,625	10,925	31,550	0.72	0.47	1.81	0.25	0.47	2.28	3.60	
4	26,799	9,294	36,093	0.83	0.62	2.39	0.21	0.39	2.78	4.39	
5	0	3,685	3,685	0.08	0	0	0.08	0.15	0.15	0.24	
<b>TOTAL</b>					<b>2.81</b>	<b>6.67</b>	<b>0.67</b>	<b>1.39</b>	<b>13.69</b>		

**FOR DRAINAGE AREAS ONLY.**  
**NOT FOR CONSTRUCTION.**

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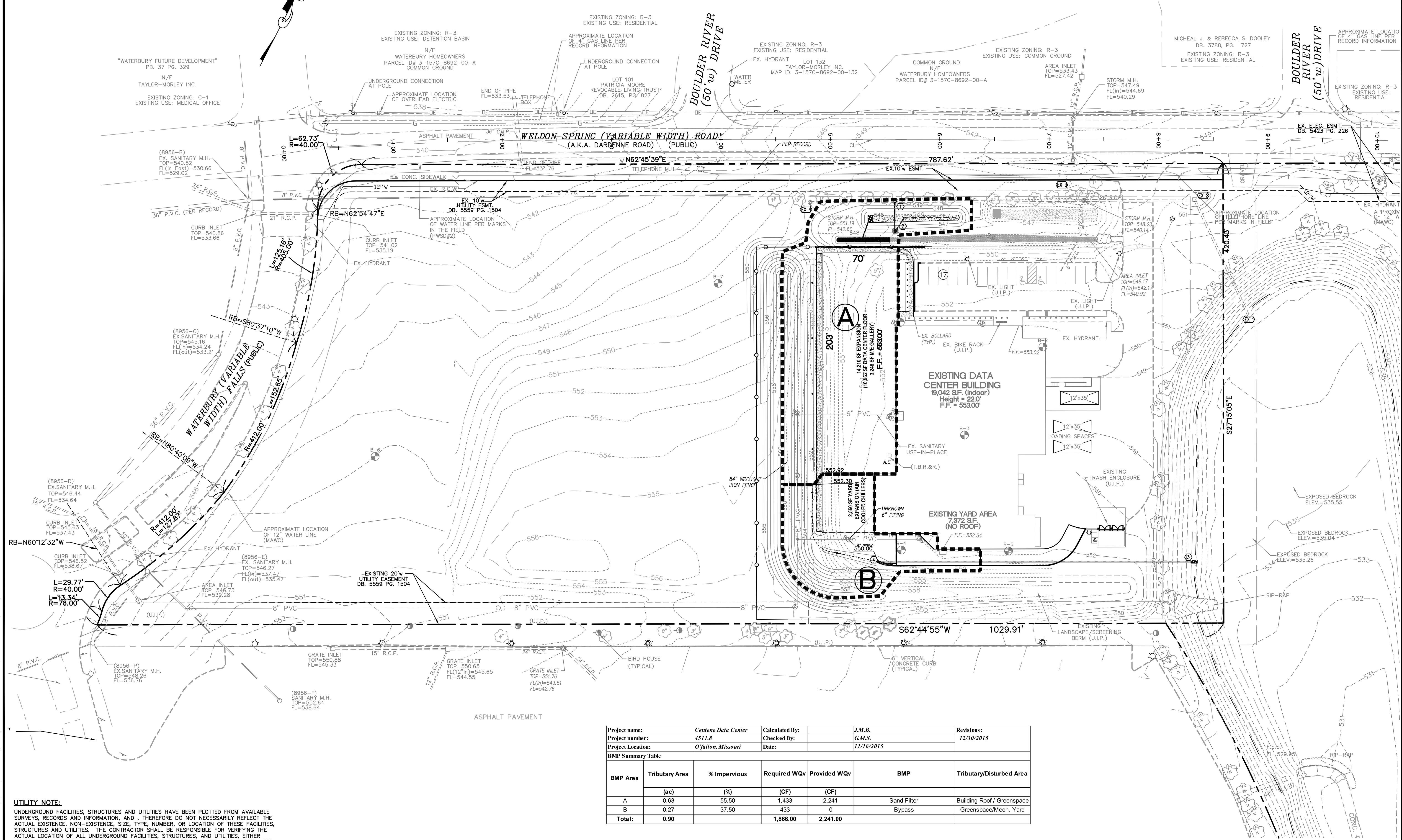
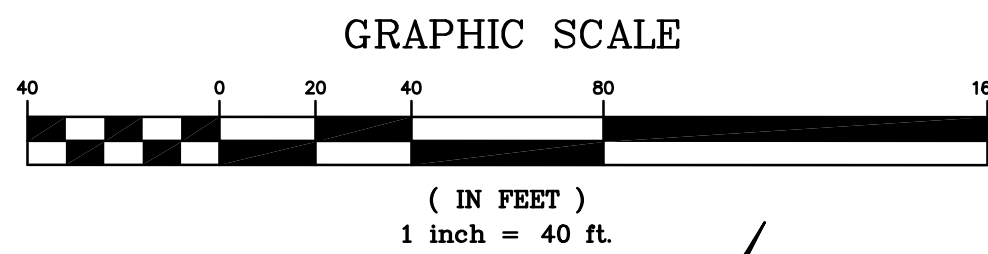
IMPROVEMENT PLANS FOR:  
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 OFALLON, MISSOURI

STATE OF MISSOURI  
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 PROFESSIONAL ENGINEER  
 12/30/2015  
 GEORGE M. STOCK E-25116  
 CIVIL ENGINEER  
 CERTIFICATE OF AUTHORITY  
 NUMBER: 000996

REVISIONS:  
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 2. 2015-12-09 REVISED PER CITY COMMENTS  
 3. 2015-12-30 REVISED PER CITY & CLIENT COMMENTS

DRAWN BY: J.M.B. CHECKED BY: G.M.S.  
 DATE: 11/10/2015 JOB NO: 209-4511.8  
 DUCKETT CREEK # BASE MAP #  
 S.C.C. HAT # HAT S.U.P. #  
 M.D.N.R. #  
 MO-RA07437  
 SHEET TITLE:  
**PROPOSED DRAINAGE AREA MAP**  
 SHEET NO.: **C11.0**





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Project name:	<i>Centene Data Center</i>	Calculated By:	<i>J.M.B.</i>	Revisions:		
Project number:	<i>4511.8</i>	Checked By:	<i>G.M.S.</i>		<i>12/30/2015</i>	
Project Location:	<i>O'Fallon, Missouri</i>	Date:	<i>11/16/2015</i>			
<b>BMP Summary Table</b>						
BMP Area	Tributary Area	% Impervious	Required WQv	Provided WQv	BMP	Tributary/Disturbed Area
	(ac)	(%)	(CF)	(CF)		
A	0.63	55.50	1,433	2,241	Sand Filter	Building Roof / Greenspace
B	0.27	37.50	433	0	Bypass	Greenspace/Mech. Yard
<b>Total:</b>	<b>0.90</b>		<b>1,866.00</b>	<b>2,241.00</b>		

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 S.C.C. HAT # *---* HAT S.U.P. # *---*  
 M.D.N.R. # *MO-RA07437*

SHEET TITLE:  
**BMP DRAINAGE AREA MAP**  
 SHEET NO.: **C12.0**