# PORTION OF LOT 5 OF THE PARTITION OF ERATSTUS POST'S ESTATE CITY OF BRIDGETON, ST LOUIS COUNTY, MISSOURI

LOCATED IN SECTION 32, TOWNSHIP 46 NORTH, RANGE 5 EAST OF THE 6TH PRIME MERIDIAN 953 NORTHWEST PLAZA DRIVE, BRIDGETON, MO 63044

PIN: 12M230123

### **LEGAL DESCRIPTION:**

A TRACT OF LAND BEING PART OF LOT 5 OF THE PARTITION OF ERATSTUS POST'S ESTATE, ACCORDING TO THE PLAT THEREOF ATTACHED TO THE COMMISSIONER'S REPORT RECORDED IN BOOK 25 PAGE 509 OF THE ST. LOUIS COUNTY RECORDS, IN U.S. SURVEYS 406 AND 1203, TOWNSHIP 46 NORTH, RANGE 5 EAST, CITY OF BRIDGETON, ST. LOUIS COUNTY, MISSOURI AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A SET 1/2" IRON ROD, SET FOR THE SOUTHWEST CORNER OF LOT 6 OF LINDBERGH BOULEVARD THE FOLLOWING COURSES AND DISTANCES: SOUTH 56 DEGREES 53 MINUTES 01 SECONDS WEST 40.04 FEET; THENCE SOUTH 44 DEGREES 01 MINUTES 33 SECONDS WEST 95.00 FEET; THENCE SOUTH 44 DEGREES 58 MINUTES 33 SECONDS WEST 59.57 FEET TO A SET 1/2" IRON ROD SET FOR THE POINT OF BEGINNING OF THE HEREIN DESCRIBED TRACT OF DEGREES 31 MINUTES 40 SECONDS EAST 228.71 FEET TO A SET 1/2" IRON ROD SET ON THE FOOT EASEMENT RECORDED IN PLAT BOOK 362 PAGE 213 OF THE ST. LOUIS COUNTY RECORDS THENCE SOUTH 55 DEGREES 38 MINUTES 48 SECONDS WEST ALONG SAID NORTHWESTERLY LINE OF SAID REA AND THE SOUTHEASTERLY LINE OF SAID 15 FOOT EASEMENT, A DISTANCE OF 221.57 FEET TO A SET 5/8" IRON ROD: THENCE DEPARTING LAST SAID NORTHWESTERLY AND SOUTHEASTERLY LINES NORTH 34 DEGREES 21 MINUTES 34 SECONDS WEST 93.12 FEET; THENCE ON THE SOUTHEASTERLY LINE OF AFOREMENTIONED LINDBERGH BOULEVARD; THENCE ALONG THE SOUTHEASTERLY LINE OF SAID LINDBERGH BOULEVARD THE FOLLOWING COURSES AND DISTANCES: NORTH 46 DEGREES 52 MINUTES 04 SECONDS EAST 110.32 FEET; THENCE SOUTH 47 DEGREES 53 MINUTES 27 SECONDS EAST 31.30 FEET; THENCE NORTH 42 DEGREES 06 MINUTES 33 SECONDS EAST 100.00 FEET; THENCE NORTH 44 DEGREES 58 MINUTES 33 SECONDS EAST 40.56 FEET TO THE POINT OF BEGINNING.

# ABBREVIATIONS:

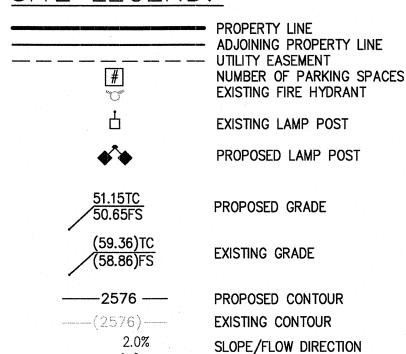
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	COB	CITY OF BRIDGETON		-
	CF	CURB FACE		
	FF	FINISHED FLOOR		
	FG	FINISHED GRADE		
	FL	FLOW LINE		
	FS	FINISHED SURFACE		
	GB	GRADE BREAK		
	HP	HIGH POINT		
	INV	INVERT		
	LP	LOW POINT		
	S.F.	SQUARE FEET		
	TC	TOP OF CURB		
	TS	TOP OF STEP		
	TG	TOP OF GRATE		
	R/W	RIGHT OF WAY		
	ELEC/E	ELECTRIC TRENCH		
	EXIST	EXISTING		
	GAS/G	GAS TRENCH		
	INV	INVERT		
	PROP	PROPOSED		
	RCP	REINFORCED CONCRETE PIP	Ε	
	S	SEWER (SANITARY)		
		,		

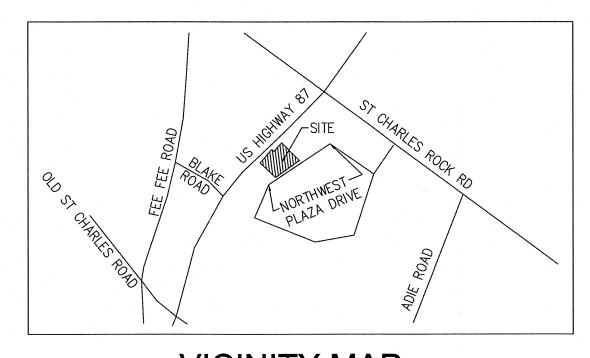
SANITARY SEWER MANHOLE

STORM DRAIN

**TELEPHONE** 

**TYPICAL** WATER





**VICINITY MAP** 

## CONTACT LIST

GULSHAN ENTERPRISES 4415 HIGHWAY 6 SUGARLAND, TX 77478 ATTN: VANESSA BAUTISTA (281) 201-2727

TAIT & ASSOCIATES, INC 6163 E. COUNTY ROAD 16 LOVELAND, CO 80537 ATTN: LAURIE CLARK, PE (970) 613-1447

# GEOTECHNICAL ENGINEER

GATEWAY GEOTECHNICAL, LLC 17736 EDISON AVENUE CHESTERFIELD, MISSOURI 63005 ATTN: SHARI A. CUNNINGHAM. PE (636) 532-7747

SURVEYOR SABUR, INC. 1751 ASHBY RD. ST. LOUIS. MO 63114 ST LOUIS, MO 63114 ATTN: MICHAEL SATER, PLS

WATER MISSOURI AMERICAN WATER CO. 727 CRAIG ROAD ST LOUIS, MO 63141 ATTN: GINA BAYES (314) 996-2464

(314) 428-1414

# ARCHITECT

DESIGN PARAMETERS, LLC 19647 SOLAR CIRCLÉ, #B-102 PARKER, CO 80134 ATTN: JEFFREY BAKER (303) 668-1474

# LANDSCAPE ARCHITECT

SUNLIT DESIGNS, LLC 6644 WADSWORTH BOULEVARD, SUITE 4 ARVADA, CO 80003 ATTN: BRUCE KEHR, LEED A.P. (303) 909-3850

# STORM & SANITARY SEWER

METROPOLITAN ST LOUIS SEWER DISTRICT 2350 MARKET ST #400 ST LOUIS, MO 63103 ATTN: CHRISTOPHER BETTS (371) 768-2273

AMEREN MISSOURI PO BOX 790352 ST LOUIS, MO 63179-0352 ATTN: SHELLEY MORRIS (314) 344-9527

LACLEDE GAS COMPANY 700 MARKET STREET ST. LOUIS, MO 63101 ATTN: KENT THAEMERT (314) 349-2697

# SHEET INDEX

C1 - COVER SHEET

C2 - SITE PLAN C3 - GRADING PLAN

C4 - EROSION CONTROL PLAN C5 - EROSION CONTROL DETAILS

C6 - UTILITY PLAN C7 - SITE DETAILS

C8 - SITE DETAILS CONTINUED

C9 - PHOTOMETRIC PLAN S1 - COVER SHEET

S2 - STORM AND SANITARY PLAN

S3 - PLAN AND PROFILE

S4 - STORM DRAIN & SANITARY SEWER DETAILS

S5 - BMP DRAINAGE AREA MAP

S6 - BMP DETAILS

DR1 - PRE-DEVELOPMENT DRAINAGE PLAN DR2 - POST-DEVELOPMENT DRAINAGE PLAN

L1 - LANDSCAPE PLANS

L2 - LANDSCAPE DETAILS 11 - IRRIGATION PLAN

12 - IRRIGATION DETAILS

13 - IRRIGATION DETAILS

### OWNER'S SIGNATURE

I (WE), THE UNDERSIGNED, SHALL COMPLY WITH ALL REGULATIONS CONTAINED IN FORMER CHAPTER 59. THE FOLLOWING SIGNATURES

GUI SHAN ENTERPRISES, INC.

	,, ,, ,, ,, ,	<b>C</b> 117 <b>C</b> 111111	.020,		
ΙΥ				DATE	
Ā	MIN	DHANANI,	MANAGER		

STATE OF MISSOURI CITY OF ST ANN AND COUNTY OF ST LOUIS

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS \_\_\_\_\_ DAY OF \_\_\_\_\_ BY AMIN DHANANI.

WITNESS MY HAND AND OFFICIAL SEAL

NOTARY PUBLIC

#### SURVEYOR'S CERTIFICATION

I. MICHAEL A. SATER, A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THE SURVEY FOR THE POPEYE'S RESTAURANT WAS MADE UNDER MY SUPERVISION AND THE ACCOMPANYING PLAN ACCURATELY AND PROPERLY SHOWS SAID SURVEY.

MICHAEL A. SATER, MO P.L.S., #2001001915

CLERK AND RECORDER'S CERTIFICATION

STATE OF MISSOURI

COUNTY OF ST LOUIS

I HEREBY, CERTIFY THAT THIS INSTRUMENT WAS FILED FOR RECORD IN MY OFFICE AT \_\_\_\_ \_ AND DULY RECORDED UNDER RECEPTION # \_\_

CLERK AND RECORDER

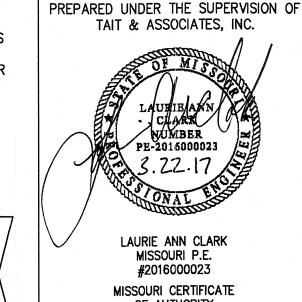
#### CITY ENGINEER STATEMENT:

ALL WORK SHALL BE CONSTRUCTED TO CITY OF BRIDGETON AND COUNTY OF ST LOUIS STANDARDS AND SPECIFICATIONS. THIS DRAWING HAS BEEN REVIEWED AND FOUND TO BE IN GENERAL COMPLIANCE WITH THESE STANDARDS AND SPECIFICATIONS AND OTHER ST ANN REQUIREMENTS. THE ENGINEERING DESIGN AND CONCEPT REMAINS THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER WHOSE STAMP AND SIGNATURE

CITY ENGINEER (OR DESIGNEE)

DATE

BENCH MARK: NORTH OF THE CURB INLET ON THE EAST SIDE OF NORTHWEST PLAZA DRIVE. BM ELEV=590.65



OF AUTHORITY #20160021606

C1 of 22



VISUAL INDICATIONS OF UTILITIES ARE A S SHOWN. UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS. ARE APPROPRIATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF

CONSTRUCTION. FOR ACTUAL FIELD

LOCATIONS OF UNDERGROUND

UTILITIES CALL 1-800-344-7483

# UNAUTHORIZED CHANGES & USES:

THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES OF THESE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS PRIOR TO CONSTRUCTION. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES, PIPES, AND/OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. THERE MAYBE EXISTING UTILITIES NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL ASCERTAIN THE TRUE VERTICAL AND HORIZONTAL LOCATION OF THOSE UNDERGROUND UTILITIES TO BE USED PRIOR TO CONSTRUCTION AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY PUBLIC OR PRIVATE UTILITIES, SHOWN OR NOT SHOWN HEREON.

#### BASIS OF BEARINGS:

3, 2015.

THE BASIS OF THE BEARING SYSTEM IS PER EXHIBIT "A" OF THE TITLE COMMITMENT PER OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY WITH A FILE NUMBER OF 5762STL, AND AN EFFECTIVE DATE OF NOVEMBER

"SQUARE" CUT ON THE NORTHWEST EDGE OF THE CONCRETE BASE OF THE FIRST LIGHT STANDARD

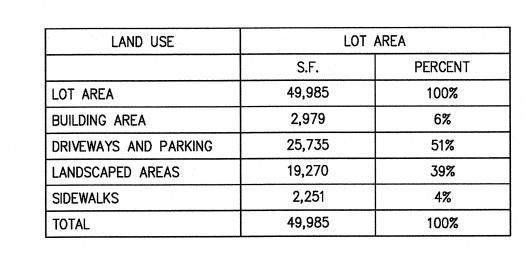
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LOCATED IN SECTION 32, TOWNSHIP 46 NORTH, RANGE 5 EAST OF THE 6TH PRIME MERIDIAN 953 NORTHWEST PLAZA DRIVE, BRIDGETON, MO 63044

PIN: 12M230123

PROPERTY N/F OF WIGEON, LLC.

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ZONE DISTRICT	PUD	, IIA
GENERAL ZONE LOT INFORMATION	SQ. FT.	ACRES
ZONE LOT SIZE	49,985	1.15
AREA TO BE DEEDED FOR ADDITIONAL RIGHT-OF-WAY	0	0
NET PROJECT AREA (AFTER DEEDING OF ANY NEEDED PUBLIC RIGHT-OF-WAY)	49,985	1.15
PROPOSED USE	DRIVE-THRU	RESTAURANT
GROSS FLOOR AREA	2,97	9 SF
DESIGN ELEMENTS	MAXIMUM	PROVIDED
BUILDING HEIGHT, STORIES	NA	1
BUILDING HEIGHT, FEET	45'	24.50'
OVERALL BUILDINGS OR STRUCTURE LENGTH		84.00'
PARKING	REQUIRED	PROVIDED
PARKING REQUIREMENT		/50SF & EMPLOYEES
STANDARD SPACES	34	34
COMPACT SPACES	NA	0
ACCESSIBLE	2	2
TOTAL	36	36
STACKING SPACES (ORDER BOX TO PICK-UP WINDOW)	NA	4
STACKING SPACES (BEFORE ORDER BOX)	NA	3
NORTH SETBACK	15'	58.32'
SOUTH SETBACK	15'	55.64
EAST SETBACK	NA	89.34'
WEST SETBACK	NA	90.54

## SITE NOTES:

- (1) PROTECT EXISTING IMPROVEMENTS IN PLACE
- (2) INSTALL LANDSCAPING PER LANDSCAPE PLAN ON SHEET L1.
- (3) INSTALL LIGHT FIXTURE PER PHOTOMETRIC PLAN ON SHEET C9.
- INSTALL HEAVY DUTY CONCRETE PAVING PER DETAIL 8 ON SHEET C7 AND GEOTECHNICAL REPORT #15-3065.
- 5 INSTALL STANDARD DUTY CONCRETE PAVING PER DETAIL 7 ON SHEET C7 AND GEOTECHNICAL REPORT #15-3065.
- (6) INSTALL 6" CURB AND GUTTER PER DETAIL 502.14 ON SHEET
- (7) INSTALL 2' CURB CUT AS SHOWN HEREON PER DETAIL 9 ON
- (8) INSTALL 4" THICK SIDEWALK, DIMENSIONS AS SHOWN ON PLANS; PER COUNTY DETAIL 608.5 ON SHEET C8.
- (9) INSTALL CURB RAMP WITH TRUNCATED DOMES PER ST. LOUIS COUNTY DETAIL 608.41 ON SHEET C8.
- INSTALL CURB RAMP WITH TRUNCATED DOMES PER ST. LOUIS COUNTY DETAIL 608.44 ON SHEET C8.
- INSTALL CURB RAMP TYPE "2" WITH TRUNCATED DOMES PER ST. LOUIS COUNTY DETAIL 608.40 ON SHEET C8.
- 12 INSTALL ADA PARKING SIGN PER 5 ON SHEET C7 DETAIL ON BUILDING FACADE AND STRIPE PER ADA REQUIREMENTS. AS SHOWN HEREON.
- install "drive thru" pavement markings as shown hereon (2 coats).
- (14) INSTALL 4" TRAFFIC WHITE PARKING STRIPE (2 COATS).
- INSTALL "DO NOT ENTER" SIGN AS SHOWN HEREON PER DETAIL
- (16) INSTALL "STOP" SIGN AS SHOWN HEREON PER DETAIL 1 ON
- (17) INSTALL MONUMENT SIGN PER SIGNAGE PLANS
- (18) INSTALL POLE SIGN PER SIGNAGE PLANS
- (19) INSTALL BIO-RETENTION POND PER DIMENSIONS AND DETAILS AS SHOWN ON MSD PLANS (S1-S6).
- TIE TO EXISTING CURB AND GUTTER.
- (21) REMOVE CURB AND GUTTER. 220LF
- 22 PROPOSED FIRE HYDRANT
- (23) WHEEL STOP (TYP) PER DETAIL 3 ON SHEET C7.
- TERMINATION CURB PER DETAIL 6 ON SHEET C7.
- 25) COBBLE STONE DIAPHRAGM, PER DIMENSIONS AND DETAILS AS SHOWN ON MSD PLANS (S1-S6).
- 26 SAWCUT PAVEMENT
- \$\foating \text{STRIP FOR NO PARKING}

### GENERAL NOTES:

- 1. DURING CONSTRUCTION, IF SITE RUNOFF FLOWS INTO A TEMPORARY SEDIMENT BASIN THAT WILL BE CONVERTED TO A PERMANENT BIORETENTION AREA; THEN AFTER THE TRIBUTARY AREA IS TOTALLY STABLE THE SEDIMENT BASIN WILL NEED TO BE CLEANED OF ALL SILT, SEDIMENT, AND TRASH THAT HAS ACCUMULATED WITHIN IT. OVER EXCAVATE AS NEEDED TO ALLOW FULL DEPTH OF THE BMP SECTION. BMP PLANTING CAN BE DONE ONLY AFTER THIS HAS BEEN DONE AND THE MSD INSPECTOR PROVIDES APPROVAL TO PLACE THE PLANTINGS.
- 2. DURING CONSTRUCTION, SITE RUNOFF SHALL NOT FLOW INTO THE BIORETENTION AREA. ALL STORMWATER FLOW TO THE BMP AREA SHALL BE DIVERTED, PLUGGED, OR DISCONNECTED UNTIL THE CONSTRUCTION SITE IS STABLE AND THE MSD INSPECTOR PROVIDES APPROVAL TO PLACE THE BMP(S) ONLINE.
- 3. LIMITS OF DISTURBANCE:
- THE CONTRACTOR SHALL STAY WITHIN THE LIMITS OF DISTURBANCE AS SHOWN ON THE PLANS AND MINIMIZE DISTURBANCE WITHIN THE WORK AREA WHEREVER POSSIBLE.

#### CITY ENGINEER STATEMENT:

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CITY ENGINEER (OR DESIGNEE)

PREPARED UNDER THE SUPERVISION OF TAIT & ASSOCIATES, INC. NUMBER LAURIE ANN CLARK MISSOURI P.E. #2016000023 MISSOURI CERTIFICATE OF AUTHORITY

#20160021606

DATE

VISUAL INDICATIONS OF UTILITIES ARE A S SHOWN. UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROPRIATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 1-800-344-7483

19.00'

\ TYP (14) \ \(\mathcal{U}\_{20}\)

PROPERTY N/F OF

WIGEON, LLC.

15.00'ELECTRIC EASEMENT

## UNAUTHORIZED CHANGES & USES:

( IN FEET )

1 INCH = 20 FEET

S55'38'48"W

- SITE BENCHMARK

221.57' (R&S)

NORTHWEST PLAZA DRIVE

(48' ROADWAY ACCESS EASEMENT)

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## ENGINEERS NOTE TO CONTRACTOR:

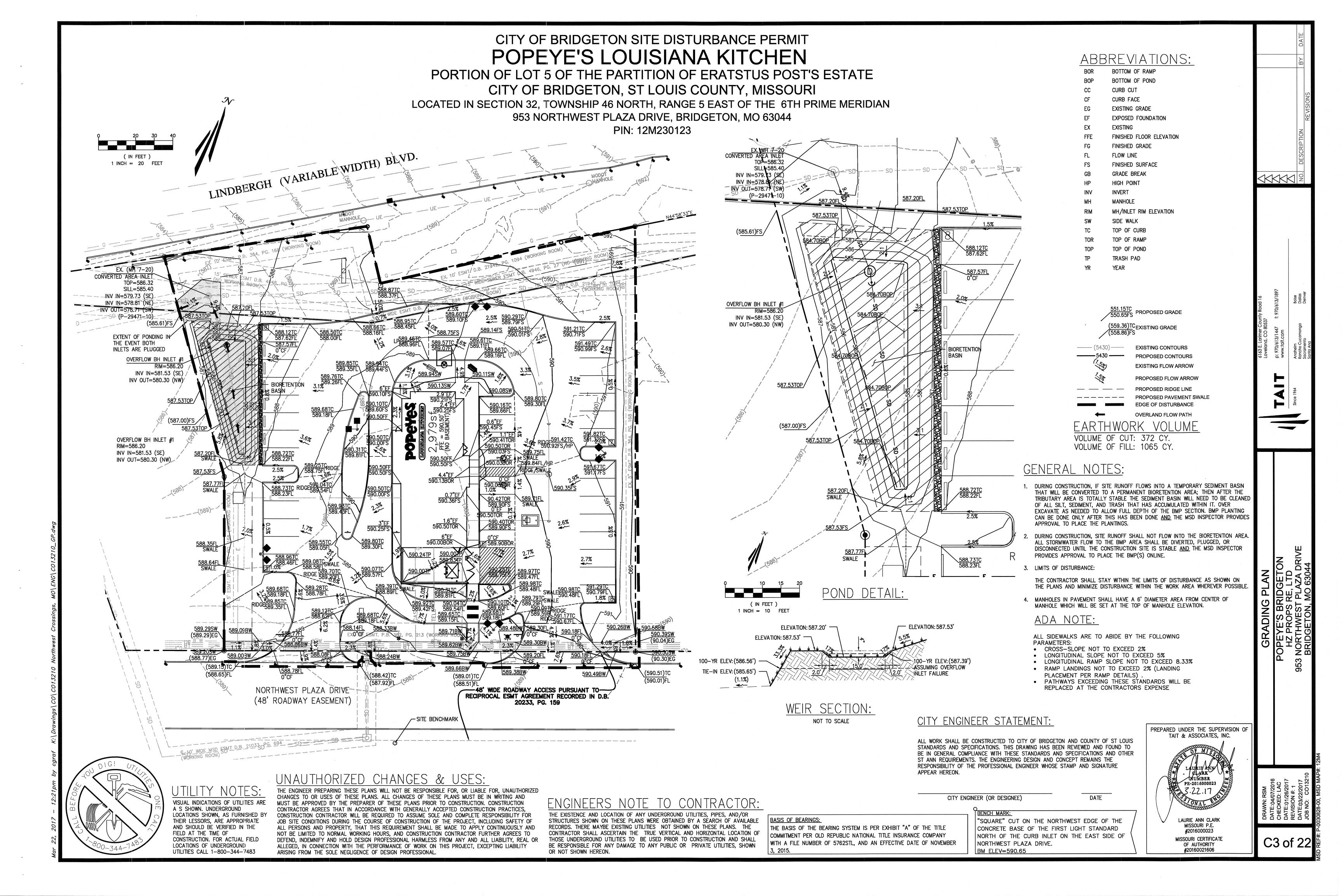
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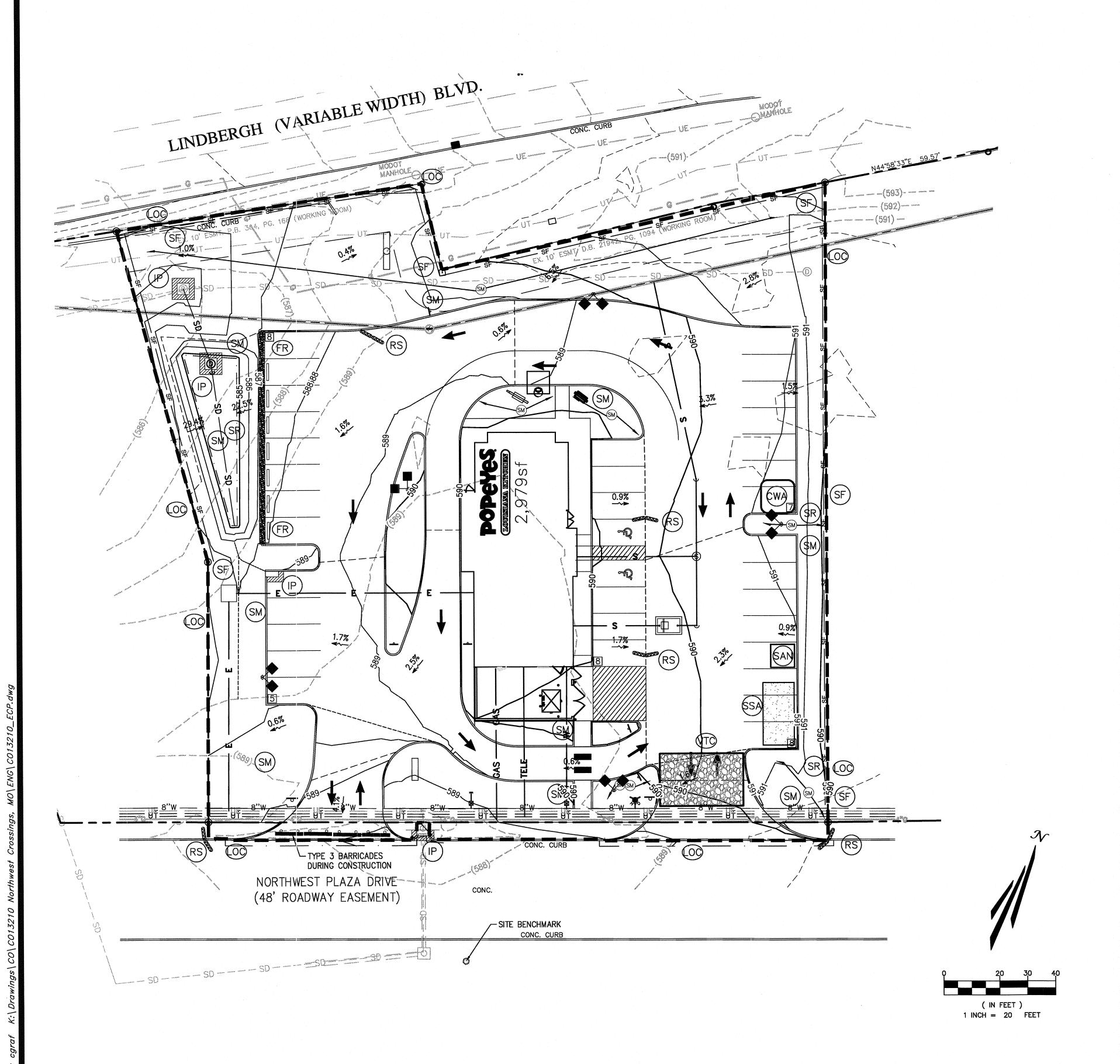
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BENCH MARK: "SQUARE" CUT ON THE NORTHWEST EDGE OF THE

CONCRETE BASE OF THE FIRST LIGHT STANDARD NORTH OF THE CURB INLET ON THE EAST SIDE OF NORTHWEST PLAZA DRIVE. BM ELEV=590.65

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PHASING NOTES:

PHASE 1: (PRE-CONSTRUCTION)

-SILT FENCE

-VEHICLE TRACKING CONTROL

-SANITARY FACILITIES

-INLET PROTECTION FOR EXISTING

-ROCKS SOCKS ALONG EXISTING CURB

PHASE 2: (DURING GRADING, AND PAVING)

-CONCRETE WASHOUT AREA

PRIOR TO ANY CONCRETE WORK

-INLET PROTECTION FOR PROPOSED

ONCE INSTALLED

-SEEDING AND MULCHING

STOCKPILES OVER 7-DAYS IDLE

PHASE 3: (POST PAVING)

PHASE 3: (POST PAVING)

-FINAL LANDSCAPE INSTALLATION PER LANDSCAPE PLANS

-REMOVE INLET PROTECTION ONCE STABILIZED

-REMOVE ROCK SOCKS ONCE STABILIZED -REMOVE SEDIMENT FROM INLET AND STORM DRAIN SYSTEM

EROSION CONTROL PLAN SYMBOLS

<u>TITLE</u>	<u>KEY</u>	SYMBOL
CONCRETE WASHOUT AREA INSTALL PER STLSECM DRAWING NO. 806-46.03	(WA)	
INLET PROTECTION INSTALL PER STLSECM DRAWING NO. 806-45.02	(IP)	
LIMITS OF CONSTRUCTION		
FILTER SOCK INSTALL PER STLSECM DRAWING NO. 806-45.08	RS	
SANITARY FACILITY INSTALL PER STLSECM	SAN	
PERMANENT SEEDING AND MULCHING SURFACE ROUGHENING INSTALL PER STLSECM DRAWING NO. 803-10.00 & 806-5	SM (SR) 5.19	SR SM
SILT FENCE INSTALL PER STLSECM DRAWING NO. 806-70.00	SF -	SF SF
STABILIZED STAGING AREA/PARKING INSTALL PER STLSECM	SSA	
VEHICLE TRACKING CONTROL INSTALL PER STLSECM DRAWING NO. 806.46.01	<b>VTO</b>	
FILTER ROLLS (TYPE 4 STAKING) INSTALL PER STLSECM DRAWING NO. 806.65.02	FR	

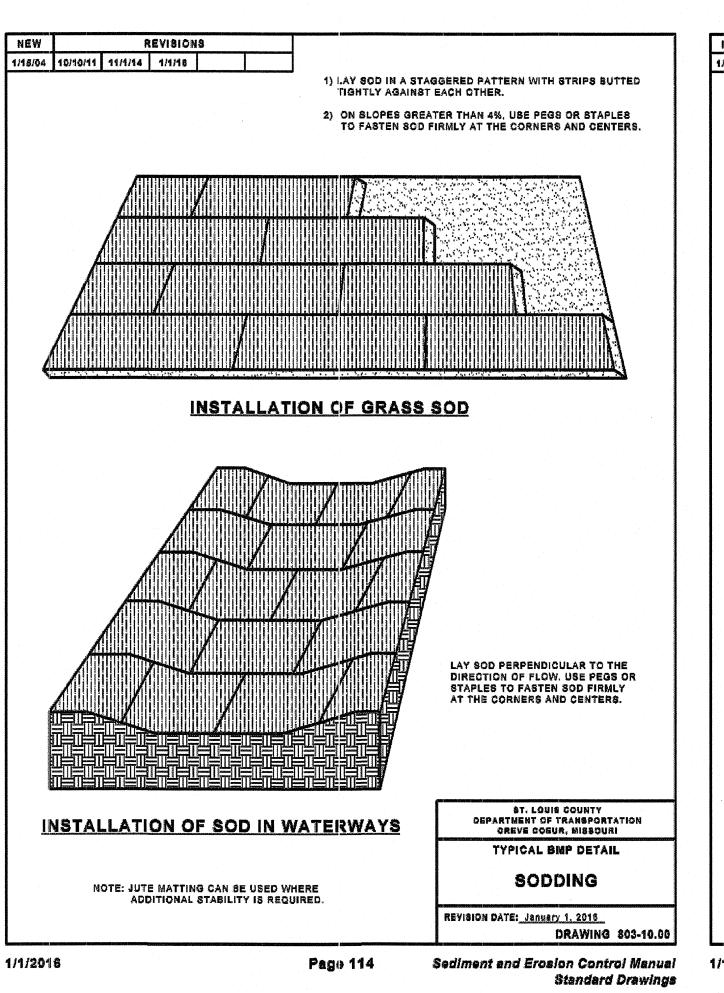
NOTE: LOCATIONS OF THE TRACKING CONTROL AND CONCRETE WASHOUT ARE SUGGESTED. CONTRACTOR MAY PLACE IN ALTERNATE LOCATION AS NEEDED.

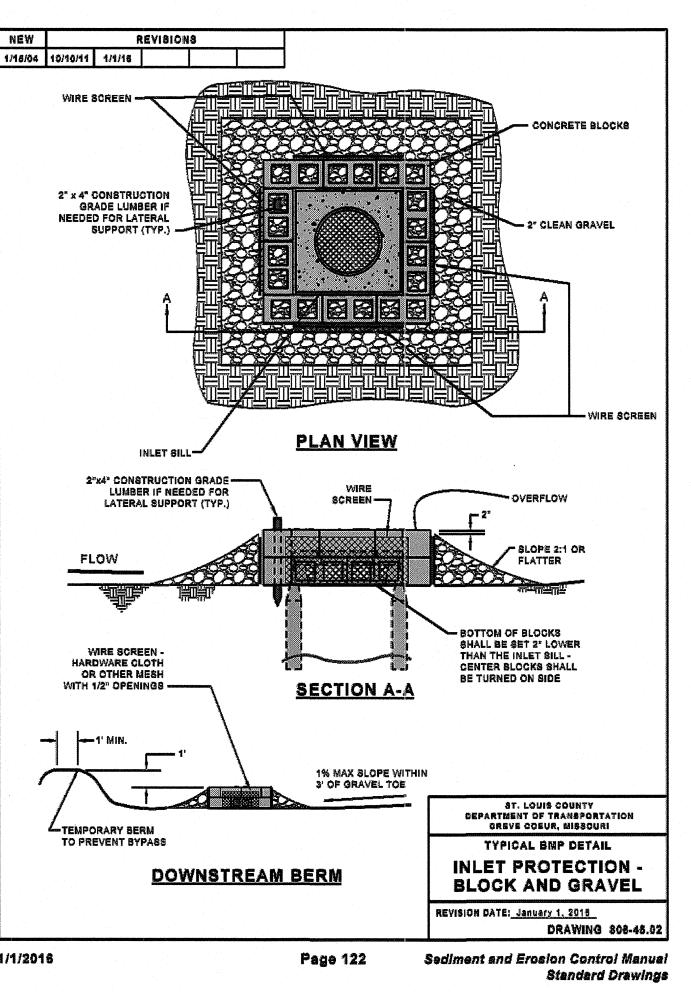
\*ALL REFERENCED DETAILS MAY BE FOUND ON SHEET C5.

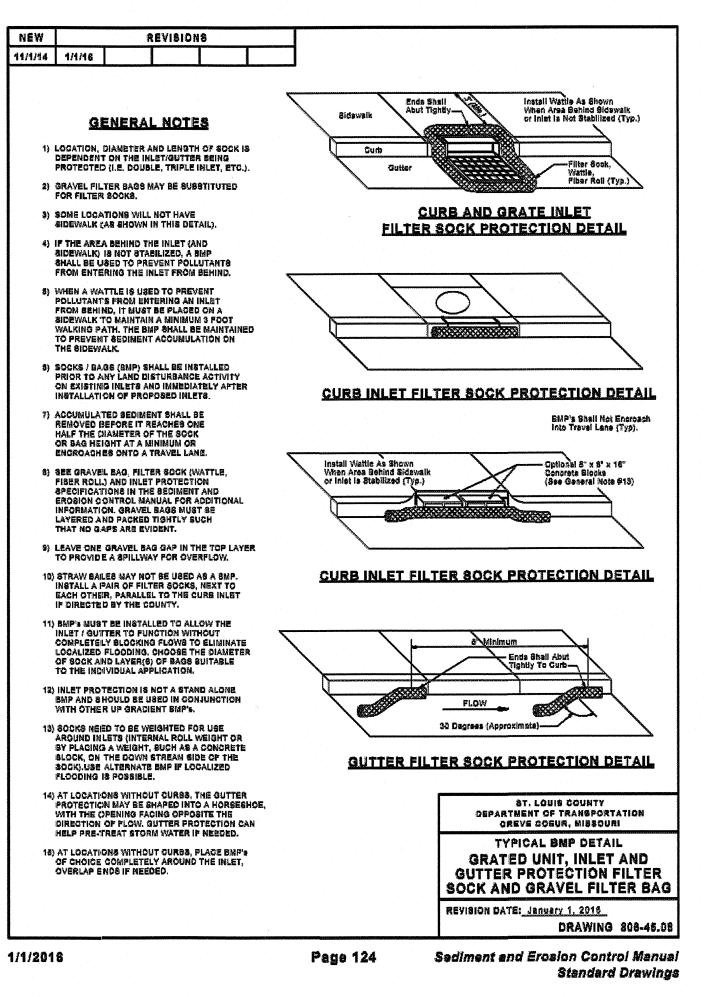
UTILITY NOTES:

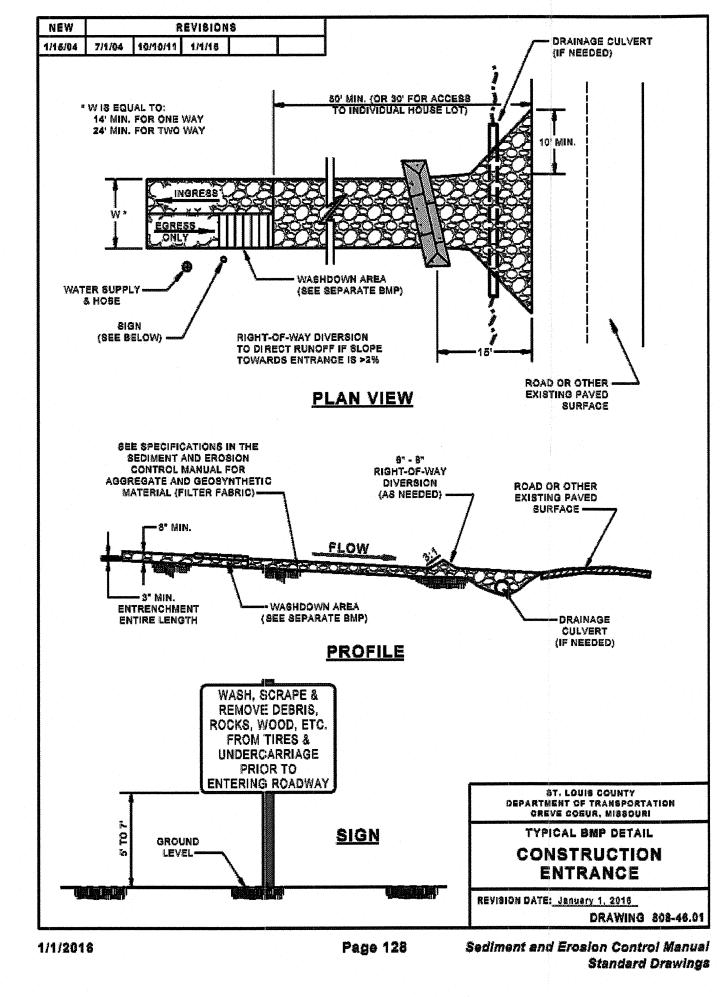
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C4 of 22





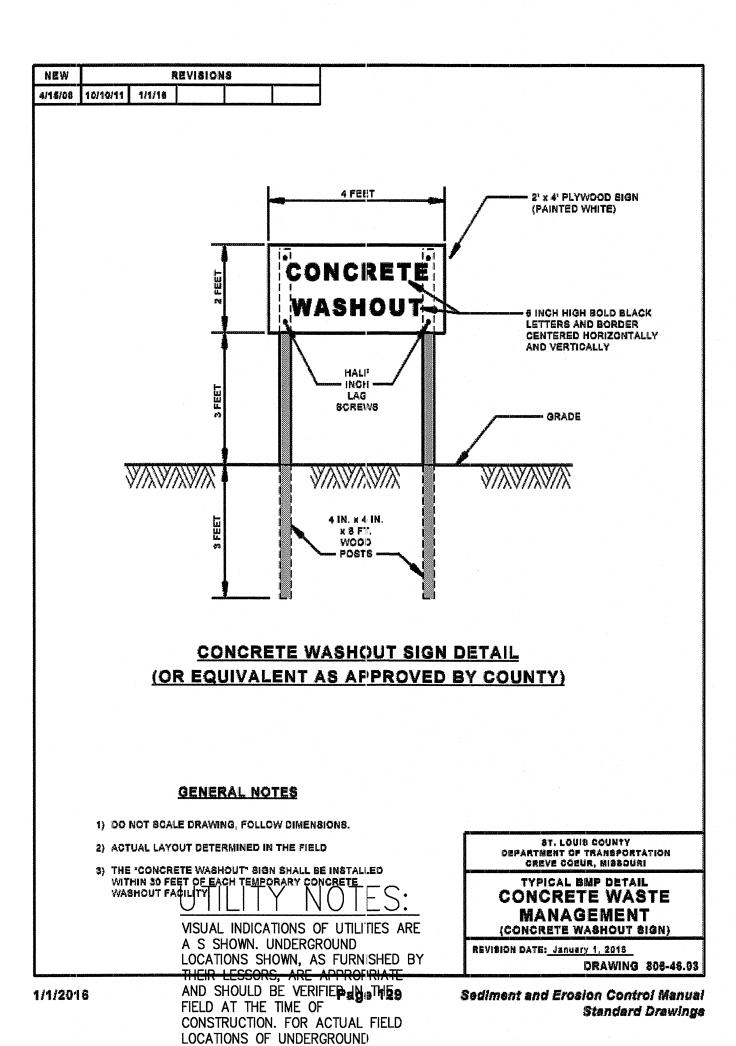




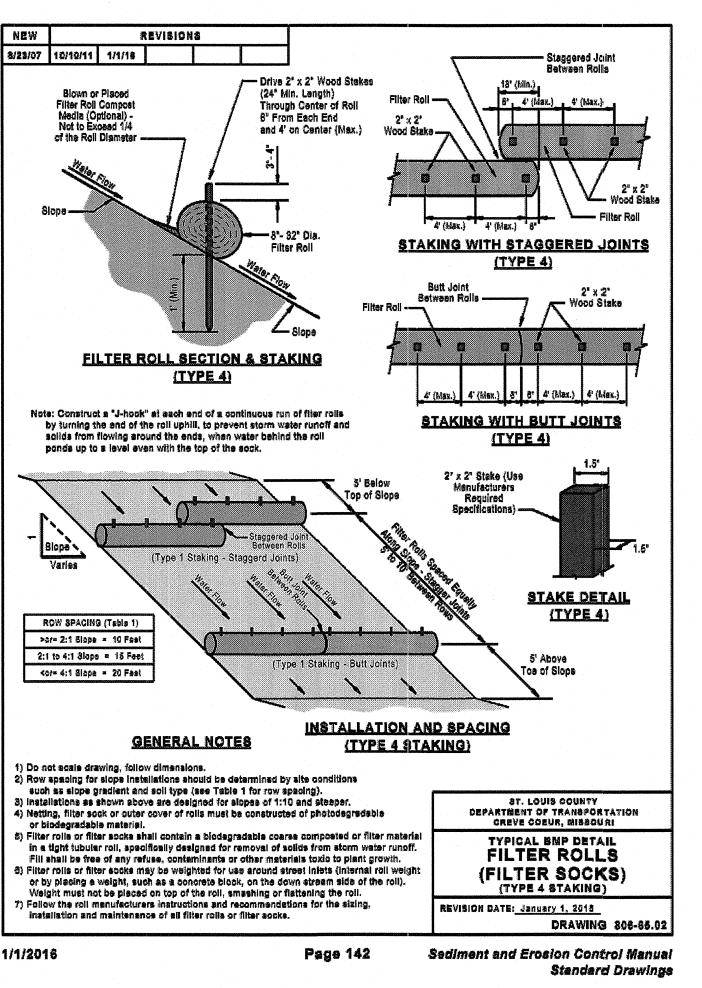
44441 <sup>2</sup>

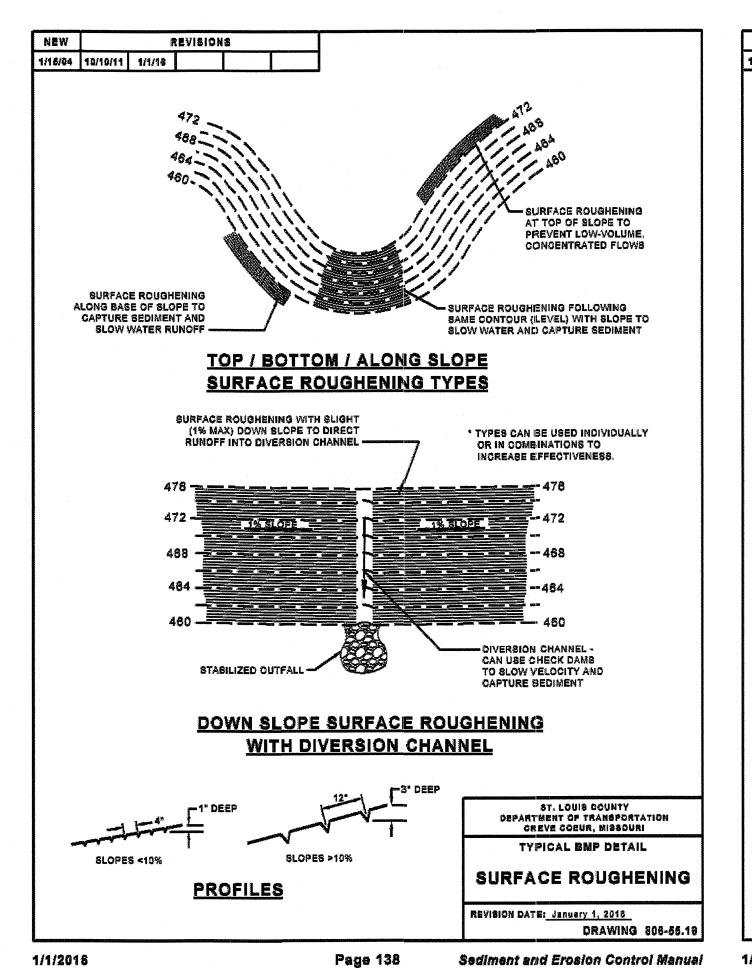
CONTROL DETAILS
E'S BRIDGETON
ROPS RE, LTD

C5 of 22

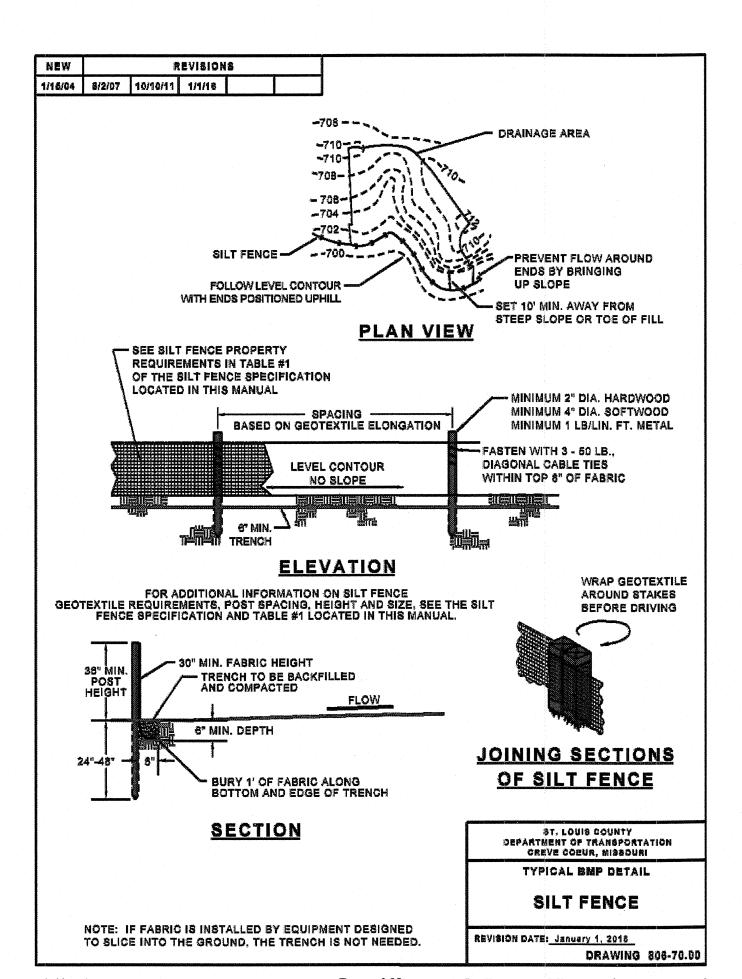


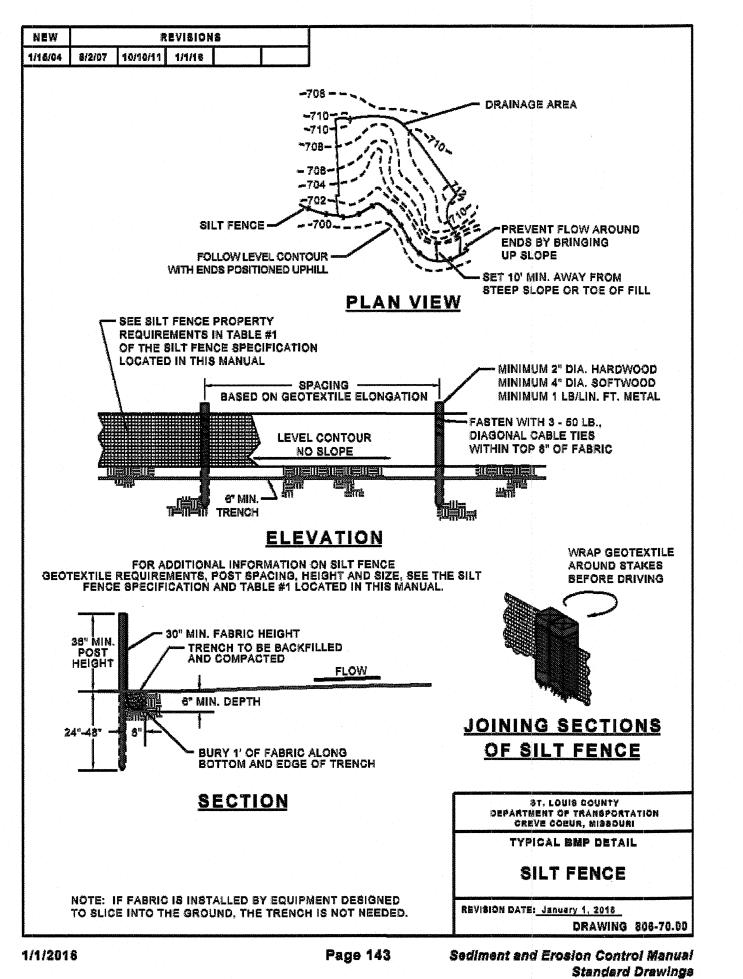
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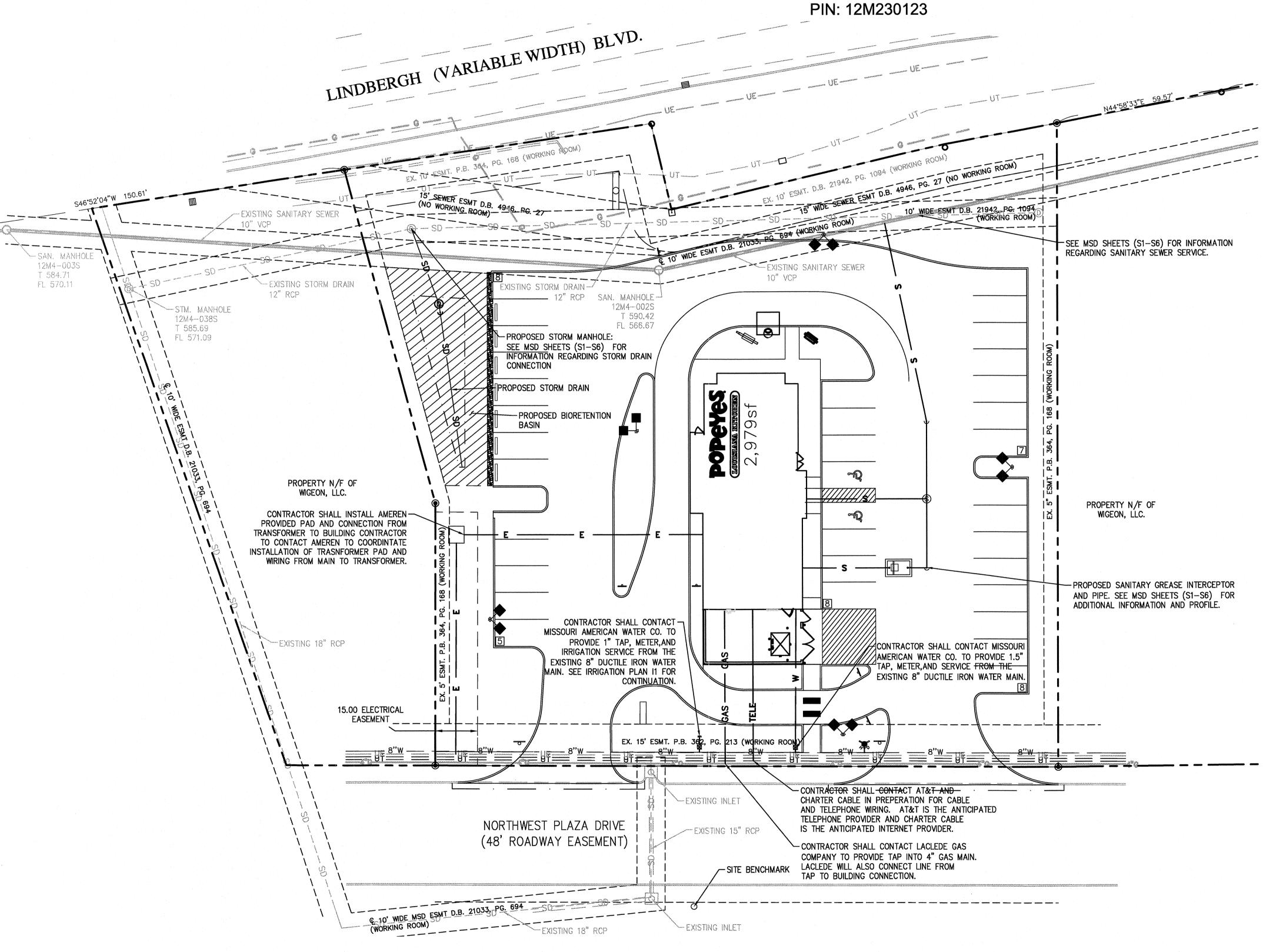
Standard Drawings





# PORTION OF LOT 5 OF THE PARTITION OF ERATSTUS POST'S ESTATE CITY OF BRIDGETON, ST LOUIS COUNTY, MISSOURI

LOCATED IN SECTION 32, TOWNSHIP 46 NORTH, RANGE 5 EAST OF THE 6TH PRIME MERIDIAN 953 NORTHWEST PLAZA DRIVE, BRIDGETON, MO 63044



# GENERAL UTILITY NOTES:

2. PROTECT ALL EXISTING UTILITIES.

3. UTILITY CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE BOTH SAINT LOUIS COUNTY

STANDARDS AND THE GOVERNING AGENCY LISTED BELOW: WATER - MISSOURI AMERICAN WATER

GAS - LACLEDE GAS COMPANY

TELEPHONE - AT&T ELECTRIC - AMEREN

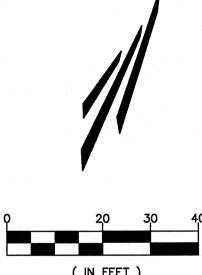
STORM & SANITARY - MSD

4. SEE MSD SHEETS (S1-S6) FOR INFORMATION ON SANITARY SEWER AND STORM DRAIN CONSTRUCTION.

## UTILITY LEGEND:

Е	PROPOSED ELECTRIC LIN
GAS GAS	PROPOSED GAS LINE
SD	PROPOSED STORM DRAIN
s	PROPOSED SEWER LINE
TELE	PROPOSED TELEPHONE
	PROPOSED WATER LINE
MASS CASTACION SOCIALIS CONTACAS PRANCISCO PRANCISCO SERVIZION SERVIZION SERVIZIONI CONTACAS	EXISTING ELECTRIC LINE
work companies the designation approach electrons continues the designation ordered and the	EXISTING GAS LINE
SD SD SD	EXISTING STORM DRAIN
reas resource. The resource resource secretary resource. The countries resource reason	EXISTING SEWER LINE
WEST MARRIES TO WARRIES THAT THE THAT THE SAME TO THE THAT THE SAME THE THAT THE THE THAT THE THE THE THAT THE THE THAT THE THE THE THE THE THE THE THE THE TH	EXISTING TELEPHONE
men manner. M. menter menter transfer M. menter menter transfer.	EXISTING WATER LINE





1 INCH = 20 FEET

#### CITY ENGINEER STATEMENT:

ALL WORK SHALL BE CONSTRUCTED TO CITY OF BRIDGETON AND COUNTY OF ST LOUIS STANDARDS AND SPECIFICATIONS. THIS DRAWING HAS BEEN REVIEWED AND FOUND TO BE IN GENERAL COMPLIANCE WITH THESE STANDARDS AND SPECIFICATIONS AND OTHER ST ANN REQUIREMENTS. THE ENGINEERING DESIGN AND CONCEPT REMAINS THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER WHOSE STAMP AND SIGNATURE APPEAR HEREON.

NUMBER PE-2016000023

> LAURIE ANN CLARK MISSOURI P.E. #2016000023 MISSOURI CERTIFICATE OF AUTHORITY #20160021606

PREPARED UNDER THE SUPERVISION OF TAIT & ASSOCIATES, INC.

C6 of 22

UNAUTHORIZED CHANGES & USES:

THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES OF THESE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS PRIOR TO CONSTRUCTION. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES, PIPES, AND/OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. THERE MAYBE EXISTING UTILITIES NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL ASCERTAIN THE TRUE VERTICAL AND HORIZONTAL LOCATION OF THOSE UNDERGROUND UTILITIES TO BE USED PRIOR TO CONSTRUCTION AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY PUBLIC OR PRIVATE UTILITIES. SHOWN OR NOT SHOWN HEREON.

#### BASIS OF BEARINGS:

THE BASIS OF THE BEARING SYSTEM IS PER EXHIBIT "A" OF THE TITLE COMMITMENT PER OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY WITH A FILE NUMBER OF 5762STL, AND AN EFFECTIVE DATE OF NOVEMBER 3, 2015.

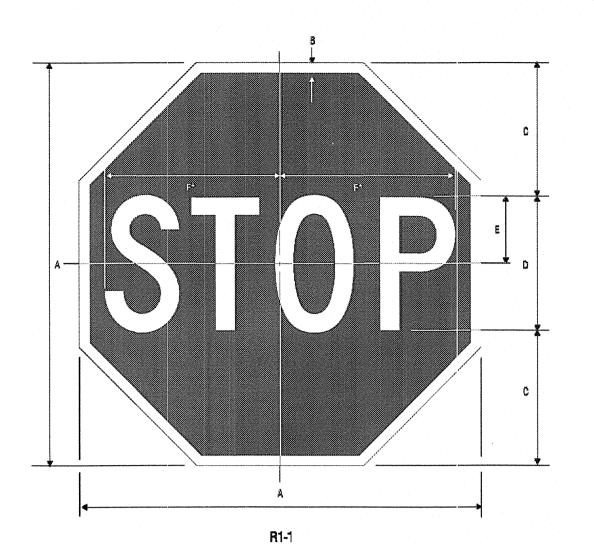
# CITY ENGINEER (OR DESIGNEE)

"SQUARE" CUT ON THE NORTHWEST EDGE OF THE CONCRETE BASE OF THE FIRST LIGHT STANDARD NORTH OF THE CURB INLET ON THE EAST SIDE OF NORTHWEST PLAZA DRIVE. BM ELEV=590.65



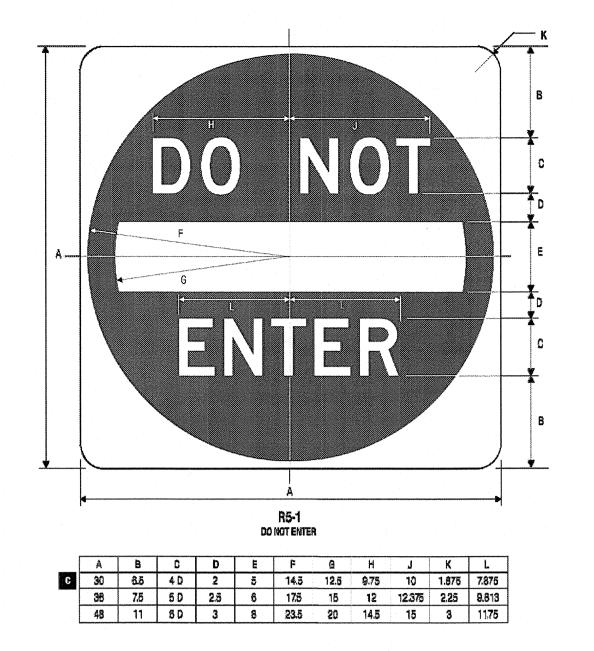
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UTILITIES CALL 1-800-344-7483

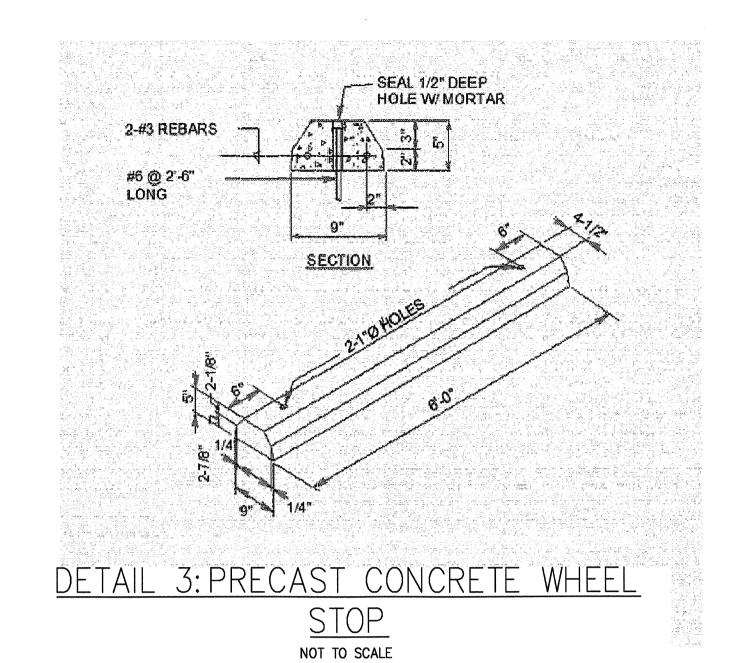


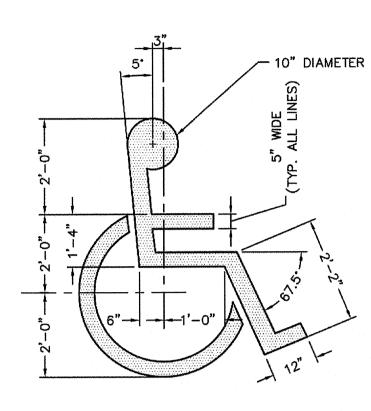
DETAIL 1: STOP SIGN

NOT TO SCALE



DETAIL 2: DO NOT ENTER SIGN NOT TO SCALE





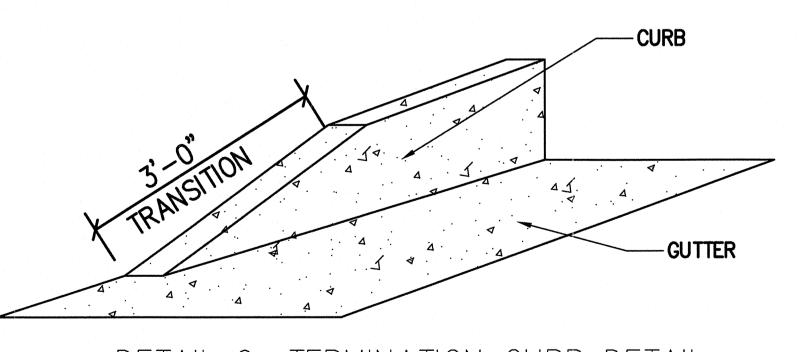
PROVIDE PAINTED SYMBOL AT EACH DESIGNATED ACCESSIBLE PARKING STALL. CENTER SYMBOL IN EACH STALL.

DETAIL 4: HANDICAP PARKING SYMBOL NOT TO SCALE

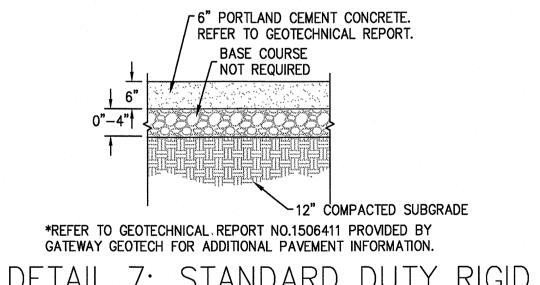


Sign image from the Manual of Traffic Signs <a href="http://www.trafficsign.us/">http://www.trafficsign.us/</a>
This sign image copyright Richard C. Moeur. All rights reserved.

DETAIL 5: HANDICAP PARKING SIGN NOT TO SCALE



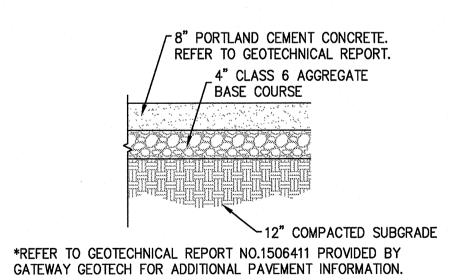
DETAIL 6: TERMINATION CURB DETAIL
SCALE: NOT TO SCALE



DETAIL 7: STANDARD DUTY RIGID

CONCRETE PAVEMENT

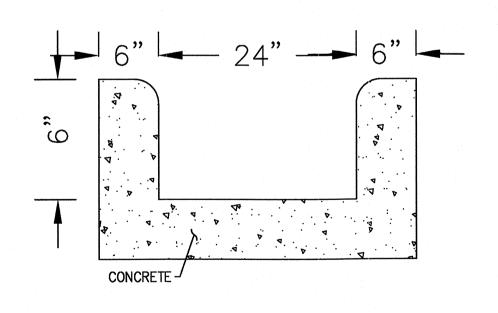
NOT TO SCALE



DETAIL 8: HEAVY DUTY RIGID

CONCRETE PAVEMENT

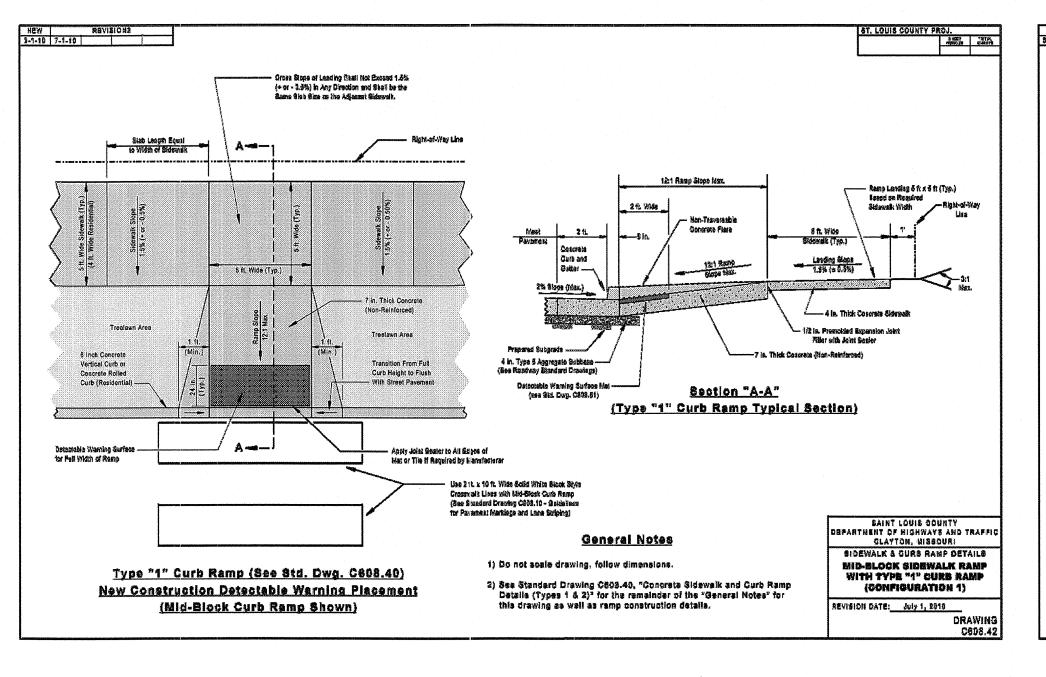
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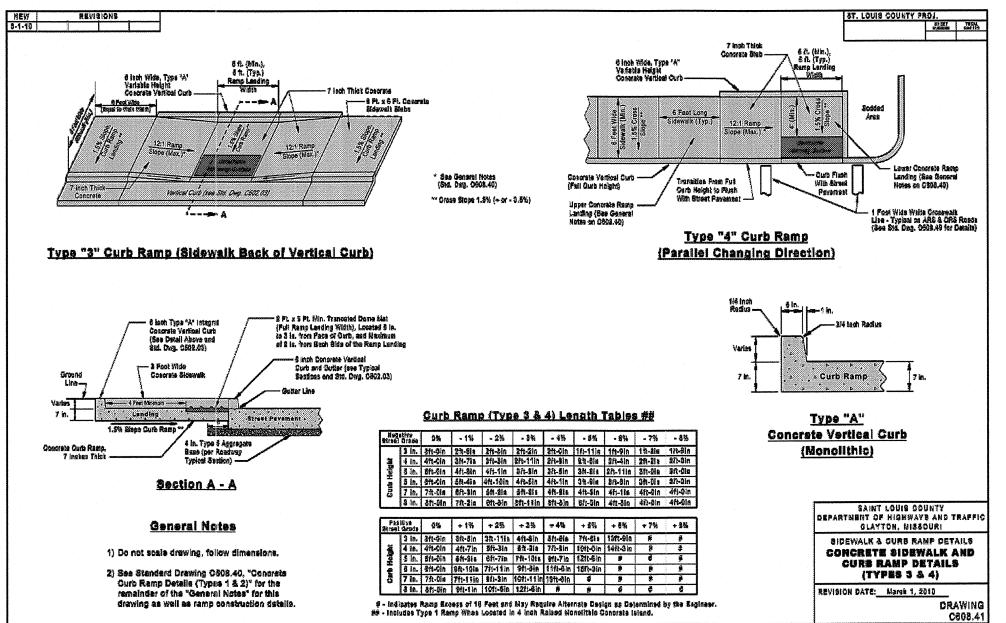


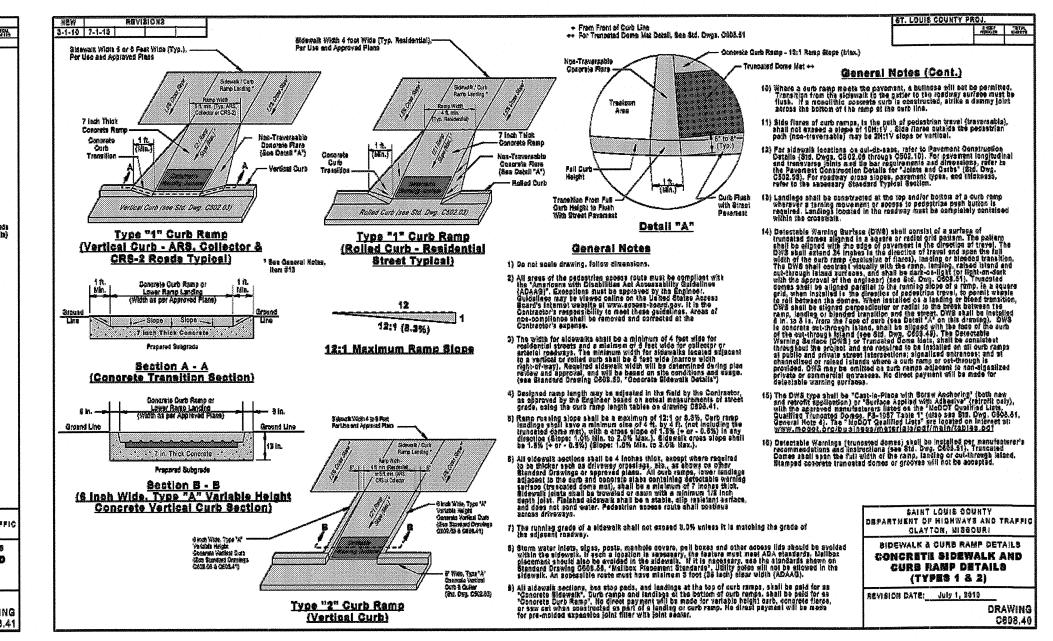
DETAIL 9: 2' CURB CUT DETAIL
NOT TO SCALE

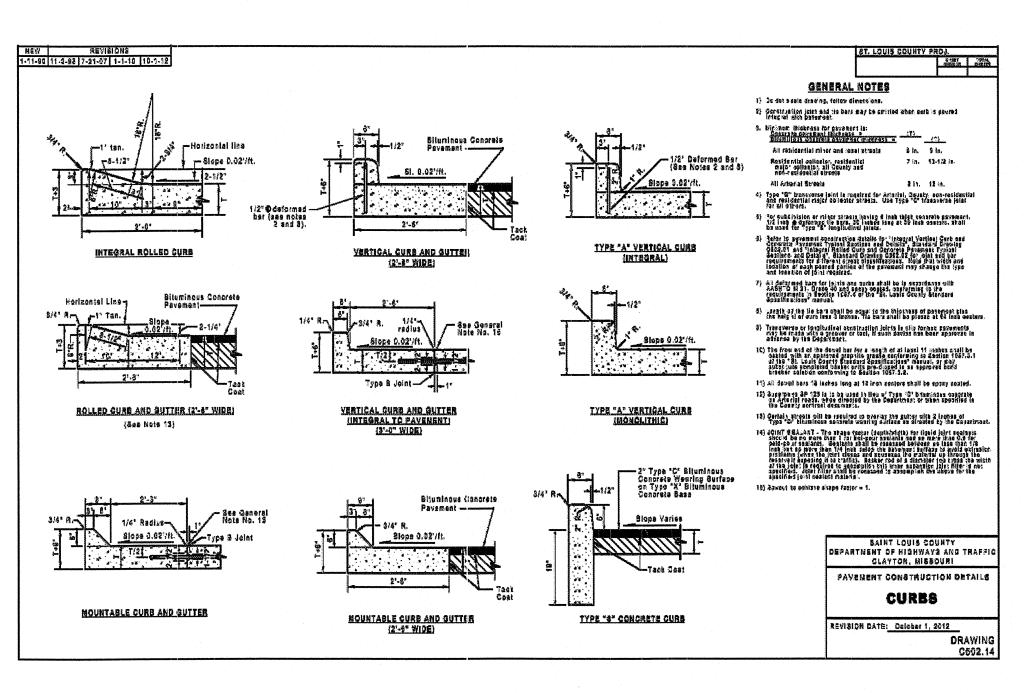
DRAWN: RSM
DATE:04/05/2016
CHECKED: LAC
DATE:04/05/2016
REVISION #: 1
DATE:03/22/2017
JOB NO: CO13210

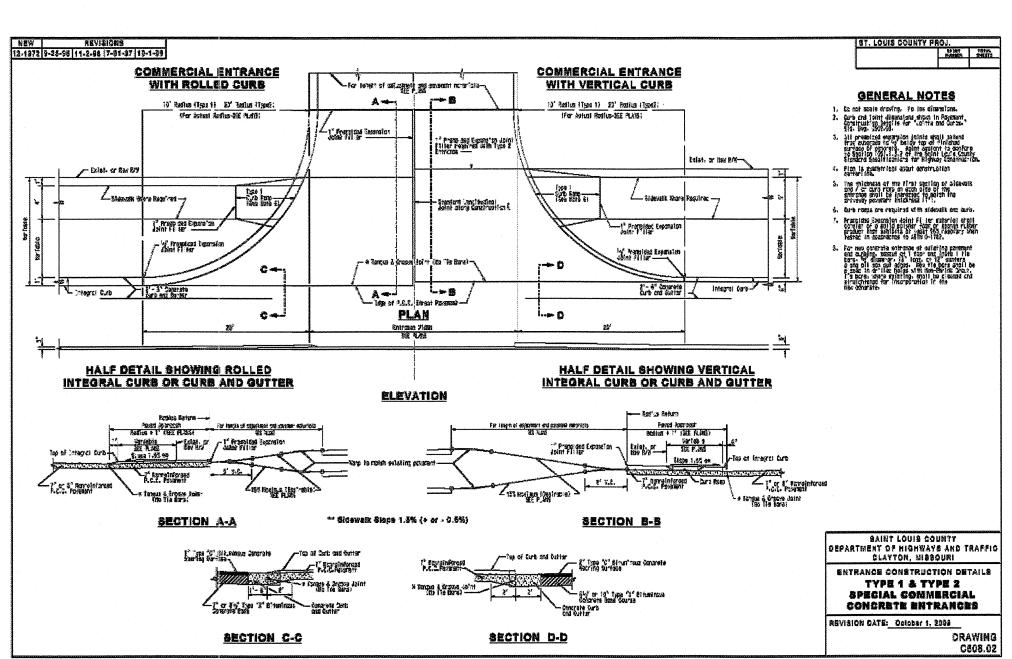
C7 of 22

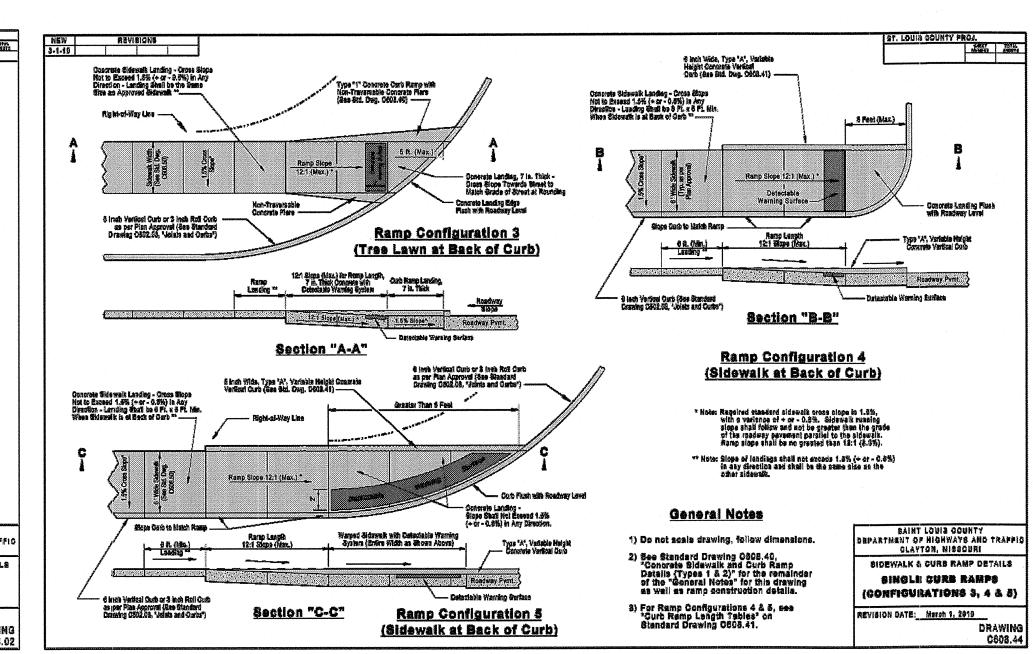


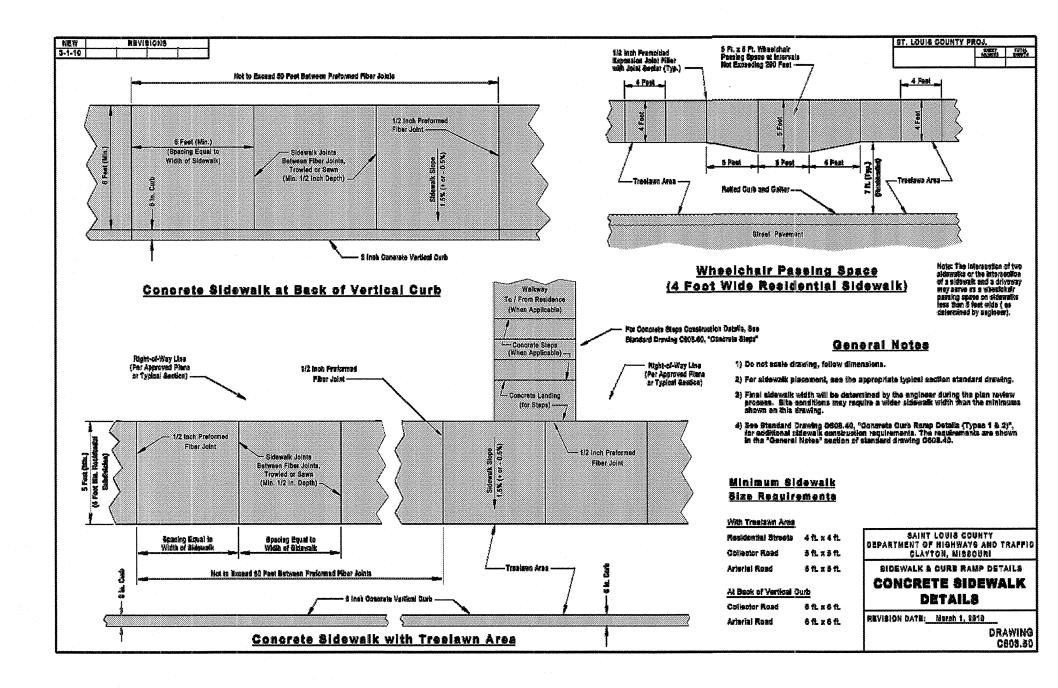


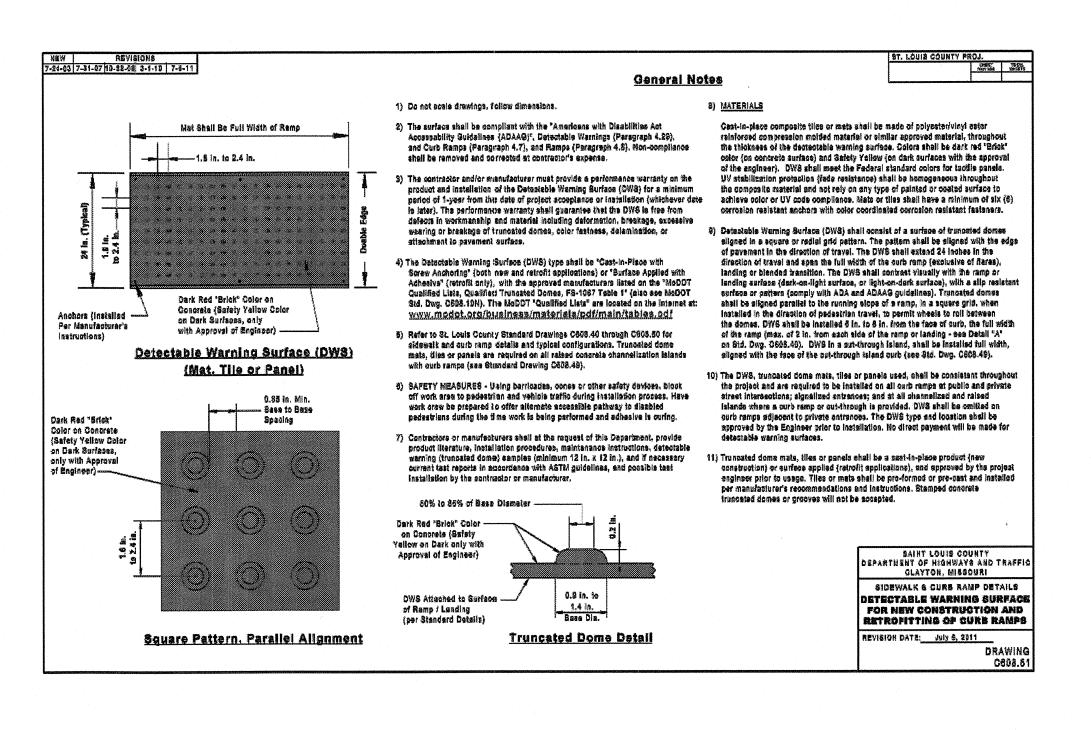












22, 2017 – 12:40pm by cgraf K:\Drawings\CO\COi

C8 of 22

# PORTION OF LOT 5 OF THE PARTITION OF ERATSTUS POST'S ESTATE CITY OF BRIDGETON, ST LOUIS COUNTY, MISSOURI

LOCATED IN SECTION 32, TOWNSHIP 46 NORTH, RANGE 5 EAST OF THE 6TH PRIME MERIDIAN 953 NORTHWEST PLAZA DRIVE, BRIDGETON, MO 63044

PIN: 12M230123

Symbol	Qty	Label	Arrangement	Lumens/Lamp	LLF	Total Watts	Description
4	5	OSQ 4ME-2	2 @ 90 DEGREES	22705	1.000	2230	OSQ-A-NM-4ME-S-57K-UL-B2

Footcandles calculated using initial lumen values	-				
Label	Avg	Max	Min	Avg/Min	Max/Min
Parking Lot	4.62	8.8	1.6	2.89	5.50

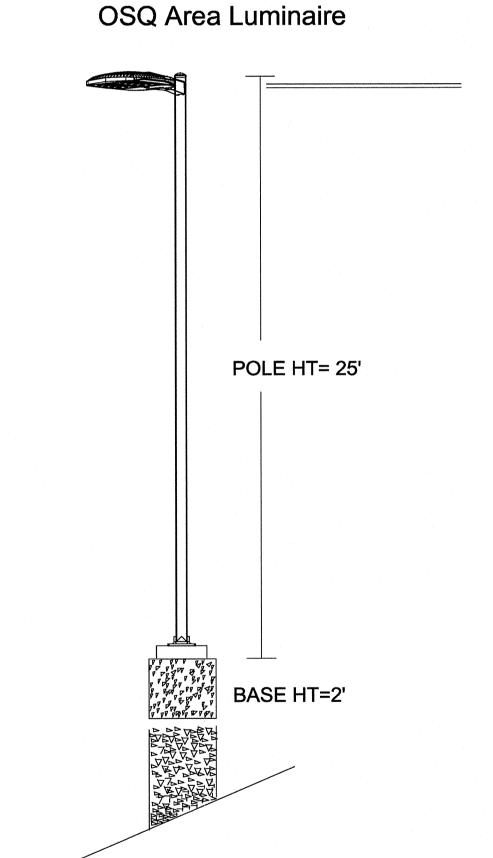
POLE SCHEDULE:

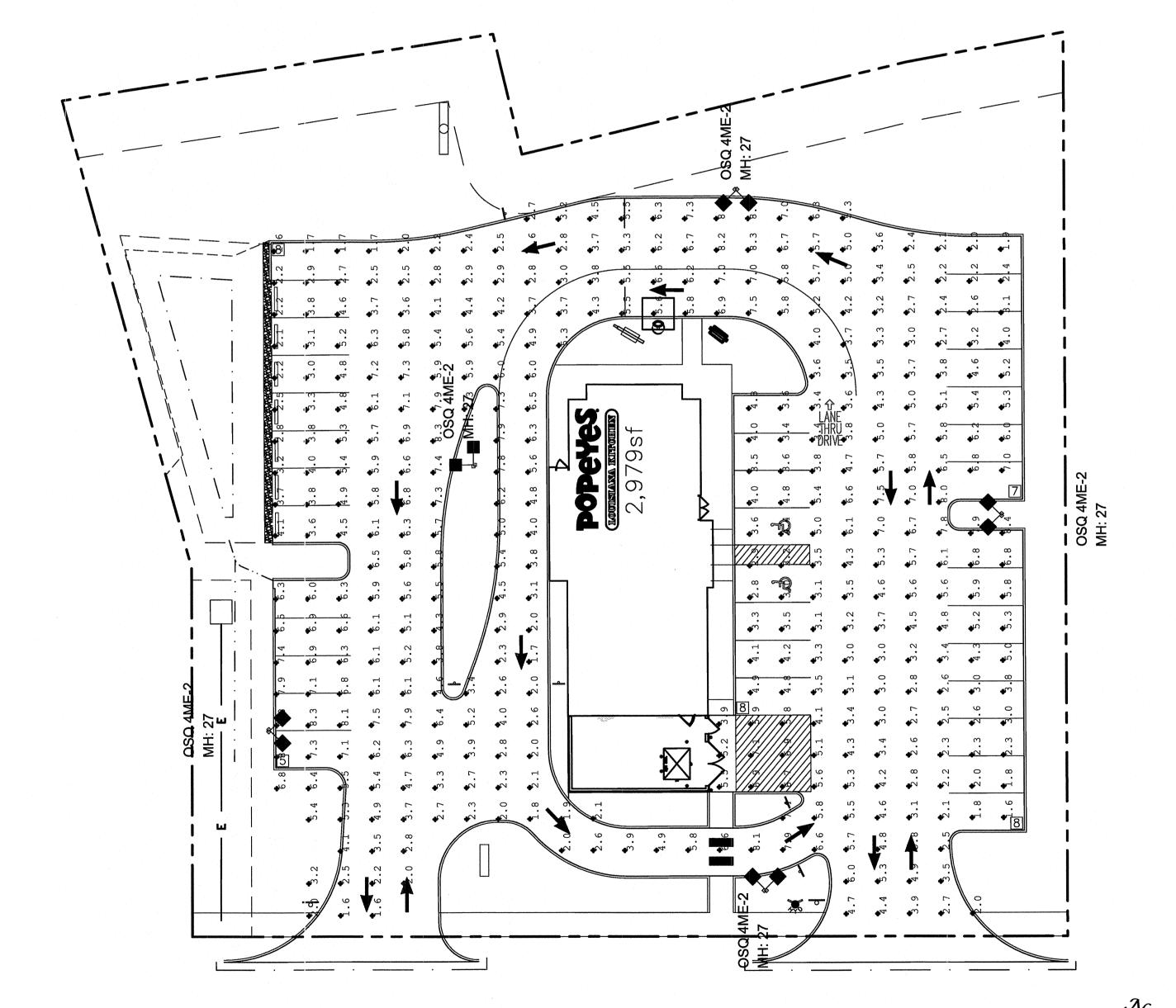
(5) CL-SSP-4007-25-OT-BZ (25' x 4" STEEL SQUARE POLE, 7ga)

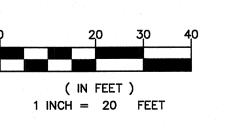
(10) OSQ-AABZ (Adjustable Arm Mount)

(5) - PB-2A4 - (Twin Tenon)

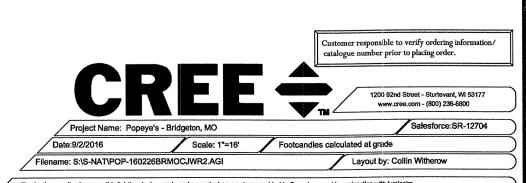
PROPOSED POLES MEET 120 MPH SUSTAINED WINDS











4444 §

# POPEYE'S LOUISIANA KITCHEN

LOT 15 OF NORTHWEST PLAZA, PLAT 13 (PB 364, PG168) CITY OF BRIDGETON, ST LOUIS COUNTY, MISSOURI

LOCATED IN SECTION 32, TOWNSHIP 46 NORTH, RANGE 5 EAST OF THE 6TH PRIME MERIDIAN

953 NORTHWEST PLAZA DRIVE, BRIDGETON, MO 63044

LOC: 12M230123

## MSD GENERAL NOTES:

#### STANDARD CONSTRUCTION:

ALL STORM AND SANITARY SEWER STRUCTURES AND AFPURTENANCES TO BE DEDICATED TO MSD, OR TO BE PRIVATE UNDER MSD INSPECTION. SHALL CONFORM TO THE METROPOLITAN ST. LOUIS SEWER DISTRICT. STANDARD CONSTRUCTION SPECIFICATIONS FOR SEWERS AND DRAINAGE FACILITIES, 2009. THAT WILL INCLUDE STANDARD DETAILS SHOWN THEREIN, AND SHALL INCLUDE ALL SUBSEQUENT CHANGE MADE

SOME RECENT CHANGE CONCERN PIPE FIELD TESTING AND PERFORMANCE, AND INCLUDE THE FOLLOWING:

#### PART 4 - PIPE SEWER CONSTRUCTION

SECTION B, PIPE FILED TESTS, PARAGRAPH 2, REACH INTEGRITY TESTING - DELETE THE FIRST SENTENCE AND THE FOLLOWING REPLACEMENT APPLIES:

ALL SANITARY AND COMBINED SEWERS SHALL SUSTAIN A MAXIMUM LEAKAGE LIMIT OF 100 GALLONS/INCH OF PIPE DIAMETER/MILE OF LINE/DAY, AS REQUIRED BY THE MISSOURI DEPARTMENT OF NATURAL RESOURCES SPECIFICATIONS.

SECTION B, PIPE FIELD TESTS, PARAGRAPH 2, REACH INTEGRITY TESTING, SUBPARAGRAPH C. INFILTRATION/EXFILTRATION TESTING -DELETE THE SIXTH SENTENCE, CONCERNING LEAKAGE LIMITS, AND THE FOLLOWING REPLACEMENT APPLIES:

THE MEASUREMENT OF LEAKAGE SHALL NOT EXCEED 100 GALLONS/INCH OF PIPE DIAMETER/MILE OF LINE/DAY, AS REQUIRED BY THE MISSOURI DEPARTMENT OF NATURAL RESOURCES SPECIFICATIONS.

SECTION B. PIPE FIELD TESTS, PARAGRAPH 4, MANHOLE TESTING, SUBPARAGRAPH A. VACUUM TESTING - AFTER THE FIRST SENTENCE. THE FOLLOWING ADDITION APPLIES:

THE VACUUM TEST MUST BE PERFORMED PRIOR TO BACKFILLING AROUND THE MANHOLE UNLESS THE CONTRACTOR PROVIDES DOCUMENTATION FROM THE PRECAST MANHOLE MANUFACTURER STATING THAT THE MANHOLE MAY BE VACUUM TESTED AFTER BACKFILLING HAS TAKEN PLACE. THE CONTRACTOR MUST SUBMIT THIS DOCUMENTATION PRIOR TO BACKFILLING AROUND ANY MANHOLE.

SECTION B. PIPE FIELD TESTS, PARAGRAPH 4, MANHOLE TESTING. SUBPARAGRAPH B. EXFILTRATION TESTING - DELETE THE SECOND SENTENCE, CONCERNING LEAKAGE LIMITS, AND THE FOLLOWING ADDITION

FOR EXFILTRATION TESTING, THE ALLOWABLE LEAKAGE LIMIT IS 100 GALLONS/INCH OF PIPE DIAMTER/MILE OF LINE/DAY WHEN THE AVERAGE HEAD ON THE TEST SECTION IS THREE FEET (3') OR LESS.

#### MAINTENANCE NOTE:

MAINTENANCE OF THE SEWERS DESIGNATED "PUBLIC" SHALL BE THE RESPONSIBILITY OF THE METROPOLITAN ST. LOUIS SEWER DISTRICT UPON DEDICATION OF THE SEWERS TO THE DISTRICT.

#### STORMWATER MANAGEMENT NOTE:

LAND AREA DISTURBED = 1.15 ACRES

ANY FUTURE LAND DISTURBANCE AND/OR INCREASE IN IMPERVIOUS AREA ON THIS SITE MAY REQUIRE ADDITIONAL STORM WATER MANAGEMENT PER MSD REGULATIONS IN PLACE AT THAT TIME.

#### PRIOR TO OBTAINING A CONSTRUCTION PERMIT FROM THE BE REQUIRED TO PROVIDE THE DISTRICT WITH A COPY OF AN EXECUTED CERTIFICATE OF INSURANCE INDICATING THAT THE PERMITTEE HAS OBTAINED AND WILL CONTINUE TO CARRY COMMERCIAL GENERAL LIABILITY AND COMPREHENSIVE AUTO LIABILITY INSURANCE. THE REQUIREMENTS AND LIMITS SHALL BE AS STATED IN THE "RULES AND REGULATIONS AND ENGINEERING DESIGN REQUIREMENTS FOR SANITARY AND STORMWATER DRAINAGE FACILITY", SECTION 10.090 (ADDENDUM).

- 2. ANY ABANDONED SEWERS SHALL BE REMOVED OR COMPLETELY
- 3. PIPE JOINTS WITH ADAPTERS AND COUPLINGS SHALL BE SUPPLIED AND INSTALLED WITH 316 STAINLESS STEEL NUT AND BOLT CLAMPS (T-BOLT) CONFIGURATION; AND WITH STAINLESS STEEL SHEAR BANDS, BEING A MINIMUM OF TWELVE (12) MILS (MSD STD. CONST SPECS. PT. 2, SUBSECTION H 11). WORM DRIVE HOSE CLAMPS AND CONCRETE BACKFILLING (CAUSTICITY) WILL NO LONGER BE ALLOWED AT THOSE JOINTS. GRANULAR BACKFILL SHOULD BE USED. IF FLOWABLE FILL IS REQUIRED, THE CONTRACTOR SHALL WRAP AND TAPE THE ADAPTERS AND COUPLINGS WITH A SIX (6) MIL POLYETHYLENE SHEET.
- 4. MSD PERMITS ARE REQUIRED PRIOR TO THE ABANDONMENT OR REMOVAL OF EXISTING SEWERS. TO RECEIVE MSD PERMITS THE PROJECT MUST HAVE MSD PLAN APPROVAL. NOTIFY MSD 48 HOURS PRIOR TO SEWER ABANDONMENT AND/OR REMOVAL.
- 5. ALL FILLED AREAS, INCLUDING TRENCH BACKFILLS, UNDER BUILDINGS, PROPOSED STORM AND SANITARY SEWER LINES, AND PAVED AREAS SHALL BE COMPACTED TO A MINIMUM OF 90 PERCENT OF "MODIFIED PROCTOR". FILL IS TO BE PLACED IN A MAXIMUM OF 9-INCH LIFTS. TESTS SHALL BE TAKEN AT A MAXIMUM OF 50-FOOT INTERVALS ALONG THE ROUTE OF THE PIPE; AT A MAXIMUM OF 2-FOOT VERTICALLY AND LATERALLY ON EACH SIDE OF THE PIPE, AT A DISTANCE EQUAL TO THE DEPTH OF FILL OVER THE PIPE. A COPY OF THESE RESULTS WILL BE SUBMITTED TO MSD PRIOR TO CONSTRUCTION APPROVAL.
- 6. TRENCH BACKFILL COMPACTION AND TESTING REQUIREMENTS:

THE CONTRACTOR IS TO REFER TO PART 4. SECTION H OF THE METROPOLITAN ST. LOUIS SEWER DISTRICT, STANDARD CONSTRUCTION SPECIFICATIONS FOR SEWERS AND DRAINAGE FACILITIES, 2009 EDITION, TO ESTABLISH THE REQUIREMENTS FOR THE SPECIFIC TYPE OF BACKFILL BEING USED.

#### 7. EXTERNAL GREASE TRAPS AND SAMPLING MANHOLE:

- AN EXTERNAL GREASE TRAP IS REQUIRE TO BE LOCATED IN AN ACCESSIBLE LOCATION FOR MSD INSPECTION. PROVIDE MEANS FOR VISUAL INSPECTION FROM ABOVE FOR BOTH INFLUENT AND EFFLUENT SIDES. A MSD SAMPLING LOCATION FOR MSD SAMPLING. THE SAMPLING MANHOLE WILL BE LOCATED DOWNSTREAM OF THE GREASE TRAP AND ALL OTHER COMMERCIAL SANITARY LATERAL CONNECTIONS TO FACILITATE MSD SAMPLING. GREASE TRAPS AND SAMPLING MANHOLES WILL BE SHOWN ON THE PLANS AND NOT BE LOCATED IN DRIVE-TRU LANES OR WITHIN PARKING SPACES.
- 8. A BACKWATER VALVE SHALL BE REQUIRED ON ALL SANITARY BUILDING LATERALS PER ST LOUIS COUNTY PLUMBING CODE.
- 9. TB&R AT MSD INSPECTORS DISCRETION:

THE REMOVAL AND REPLACEMENT, OR REHABILITATION OF THE EXISTING STRUCTURE(S) WILL BE DETERMINED BY THE MSD FIELD INSPECTOR. IF THE STRUCTURE IS DETERMINED TO REMAIN IN PLACE, THEN THE TOP SHALL BE ADJUSTED TO GRADE, IF NEEDED.

## CONTACT LIST

#### OWNER **GULSHAN ENTERPRISES** 4415 HIGHWAY 6 SUGARLAND, TX 77478 ATTN: VANESSA BAUTISTA

(281) 201-2727

DEVELOPER HZ PROPS RE, LTD 445 E. FM 1382, SUITE #701 CEDAR HILL, TX 75104 ATTN: VERLIN WOODS (770) 755-5415

## CONSTRUCTION SITE RUNOFF:

CONSTRUCTION SITE RUNOFF SHALL NOT FLOW INTO BMP AREAS.ALL STORMWATER FLOW TO BMP AREAS SHALL BE DIVERTED, PLUGGED OR DISCONNECTED UNTIL CONSTRUCTION SITE IS STABLE AND THE MSD DEDICATION INSPECTOR PROVIDES APPROVAL TO PLACE THE BMP ON-LINE

## LIMITS OF DISTURBANCE:

THE CONTRACTOR SHALL STAY WITHIN THE LIMITS OF DISTURBANCE AS SHOWN ON THE PLANS AND MINIMIZE DISTURBANCE WITHIN THE WORK AREA WHEREVER POSSIBLE

## SEWER CONSTRUCTION AT ONE PERCENT (1%) OR LESS:

FOR SEWER PIPE (STORM, SANITARY AND COMBINED) WITH A DESIGN GRADE LESS THAN ONE PERCENT (1%), VERIFICATION OF THE PIPE GRADE WILL BE REQUIRED FOR EACH INSTALLED REACH OF SEWER, PRIOR TO ANY SURFACE RESTORATION OR INSTALLATION OF ANY SURFACE IMPROVEMENTS. THE CONTRACTOR'S FIELD SUPERVISOR WILL BE REQUIRED TO PROVIDE DAILY DOCUMENTATION VERIFYING THAT THE AS-BUILT PIPE GRADE MEETS THE DESIGN GRADE THROUGH THE SUBMITTAL OF SIGNED CUT SHEETS TO THE DISTRICT UPON REQUEST.

THE CONTRACTOR WILL BE REQUIRED TO REMOVE AND REPLACE ANY SEWER REACH HAVING AN AS-BULT GRADE FLATTER THAN THE DESIGN GRADE BY MORE THAN 0.1%. SEWERS WITH GRADES GREATER THAT THE DESIGN GRADE MAY BE LEFT IN PLACE PROVIDED NO OTHER SEWER GRADE IS REDUCED BY THIS VARIANCE IN THE AS-BUILT GRADE

MSD ALSO RESERVES THE RIGHT TO REQUIRE THE CONTRACTOR TO REMOVE AND REPLACE ANY SEWER (AT ANY TIME PRIOR TO CONSTRUCTION APPROVAL)

FOR WHICH THE AS-BUILT GRADE DOES NOT COMPLY WITH THE GRADE TOLERANCE STATED IN THE ABOVE PARAGRAPHS.

FIELD SURVEYED VERIFICATION MUST BE MADE UNDER THE DIRECTION OF THE LICENSED LAND SURVEYOR OR REGISTERED ENGINEER. THE SEWER CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COST ASSOCIATED WITH THE FIELD VERIFICATION OF THE SEWER GRADE, OR REMOVAL AND REPLACEMENT OF THE SEWER PIPE OR ASSOCIATED APPURTENANCES

A REGISTERED PROFESSIONAL GEOTECHNICAL ENGINEER WILL VERIFY THAT ALL COMPRESSIBLE MATERIAL HAS BEEN REMOVED PRIOR TO FILL PLACEMENT AND THAT ALL FILL. AND FILLED AREAS, INCLUDING TRENCH BACKFILLS, UNDER BUILDINGS AND UNDER SANITARY AND STORM SEWER LINES CONSTRUCTED ABOVE THE ORIGINAL GROUND SURFACE HAS BEEN COMPACTED TO 90% MODIFIED PROCTOR, FILL IS TO BE PLACED IN A MAXIMUM OF NINE-INCH (9") LIFTS. TESTS SHALL BE TAKEN AT A MAXIMUM OF FIFTY-FEET (50') WIDE INTERVALS ALONG THE ROUTE OF THE PIPE, AT A MAXIMUM INTERVAL, OF TWO FEET (2'), VERTICALLY AND LATERALLY ON EACH SIDE OF THE PIPE, AT A DISTANCE EQUAL TO THE DEPTH OF FILL OVER THE PIPE. A COPY OF THESE RESULTS WILL BE SUBMITTED TO MSD PRIOR TO PLACEMENT OF THE SEWER PITP

## STORMWATER MANAGEMENT NOTE:

LAND AREA DISTURBED = 1.15 ACRES

ANY FUTURE LAND DISTURBANCE AND/OR INCREASE IN IMPERVIOUS AREA ON THIS SITE MAY REQUIRE ADDITIONAL STORM WATER MANAGEMENT PER MSD REGULATIONS IN PLACE AT THAT TIME.

### MSD BENCHMARK:

SITE ELEVATIONS WERE ESTABLISHED BY READINGS THAT WERE TAKEN WITH A TRIMBLE R8 GNSS GPS RECEIVER THAT REFERENCES THE MODOT RTK NETWORK (MHTCRTK) (VRS). THIS SYSTEM USES INTEGRATED NETWORKS OF CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS) AND TRIMBLE NAVIGATION GPSNET AND RTKNET SOFTWARE TO PRODUCE MODEL OF SYSTEMATIC GPS DATA WHICH SIGNIFICANTLY IMPROVES RTK ACCURACIES FOR ROVERS WORKING WITHIN THE NETWORK. THE NETWORK REFERENCE STATION POSITIONS AND RESULTING COORDINATES ARE COMPUTED WITH RESPECT TO THE NAD83 (2011)(EPOCH: 2010.0000) REFERENCE FRAME. ELEVATION RESULTS ARE MORE PARTICULARLY DERIVED USING NAVD88 ORTHOMETRIC HEIGHTS BASED ON GEOID 2012A.

SITE BENCHMARK WAS ESTABLISHED. "SQUARE" CUT ON THE NORTHWEST EDGE OF THE CONCRETE BASE OF THE FIRST LIGHT STANDARD NORTH OF THE CURB INLET ON THE EAST SIDE OF NORTHWEST PLAZA DRIVE BENCHMARK ELEVATION (NAVD88)= 590.65

OBSERVED GPS ELEVATION ON ST. LOUIS COUNTY BENCHMARK #8-003, ELEVATION IS 596.77. "X" ON THE SOUTH END OF THE EAST ABUTMENT OF LINDBERGH BOULEVARD AT BRIDGE #845R.

TO ADJUST TO NGVD29 DATUM, ADD 0.41 FEET TO ALL ELEVATIONS. THE OBSERVED ELEVATION ON ST. LOUIS COUNTY BENCHMARK #8-003, 596.77 + 0.41 FEET = 597.18. (THE PUBLISHED NGVD1929 ELEVATION).

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES, PIPES, AND/OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. THERE MAYBE EXISTING UTILITIES NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL ASCERTAIN THE TRUE VERTICAL AND HORIZONTAL LOCATION OF THOSE UNDERGROUND UTILITIES TO BE USED PRIOR TO CONSTRUCTION AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY PUBLIC OR PRIVATE UTILITIES, SHOWN OR NOT SHOWN HEREON.

#### **BASIS OF BEARINGS:**

THE BASIS OF THE BEARING SYSTEM IS PER EXHIBIT "A" OF THE TITLE COMMITMENT PER OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY WITH A FILE NUMBER OF 5762STL, AND AN EFFECTIVE DATE OF NOVEMBER

# SHEET INDEX

S1 - COVER SHEET S2 - STORM AND SANITARY PLAN

S3 - PLAN AND PROFILE

S4 - STORM DRAIN & SANITARY SEWER DETAILS

S5 - BMP DRAINAGE AREA MAP

S6 - BMP DETAILS C2 - SITE PLAN

C3 - GRADING PLAN

C4 - EROSION CONTROL PLAN

L1 - LANDSCAPE PLAN L2 - LANDSCAPE DETAILS

DR1 - PRE-DEVELOPMENT DRAINAGE PLAN DR2 - POST-DEVELOPMENT DRAINAGE PLAN

EASEMENT LINE BUILDING SETBACK \_\_\_\_(5430)-----EXISTING CONTOURS <del>------ 5430 -----</del> PROPOSED CONTOURS

LEGEND:

EXISTING FLOW ARROW PROPOSED FLOW ARROW

LOCATION MAP

SCALE: 1"=1000'

4444

PROPOSED PAVEMENT SWALE

EXISTING SANITARY SEWER

EXISTING 4" GAS LINE PROPOSED TELEPHONE LINE

PROPOSED WATER LINE EXISTING 8" WATER LINE FIRE HYDRANT STORM DRAIN MANHOLE

NUMBER OF PARKING SPACES SANITARY SEWER MANHOLE PROPOSED CONCRETE PAVEMENT PROPOSED PRAIRIE GRASS

# ABBREVIATIONS:

EX EXISTING FINISHED FLOOR ELEVATION

FLOW LINE FINISHED SURFACE

INVERT MANHOLE

RIM ELEVATION TOP OF CURB

BOTTOM OF STORM DRAIN TOP OF SANITARY SEWER

DATE

PRIVATE UNDER MSD INSPECTION

## CITY ENGINEER STATEMENT:

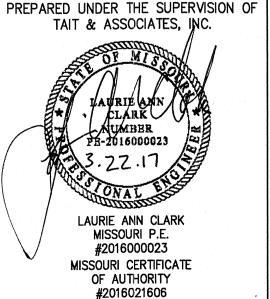
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CITY ENGINEER (OR DESIGNEE)

BM ELEV (NAVD88) =590.65

\*SEE SHEET S1 FOR MSD BENCH MARK

SITE BENCH MARK: "SQUARE" CUT ON THE NORTHWEST EDGE OF THE CONCRETE BASE OF THE FIRST LIGHT STANDARD NORTH OF THE CURB INLET ON THE EAST SIDE OF NORTHWEST PLAZA DRIVE.



S1 of 6

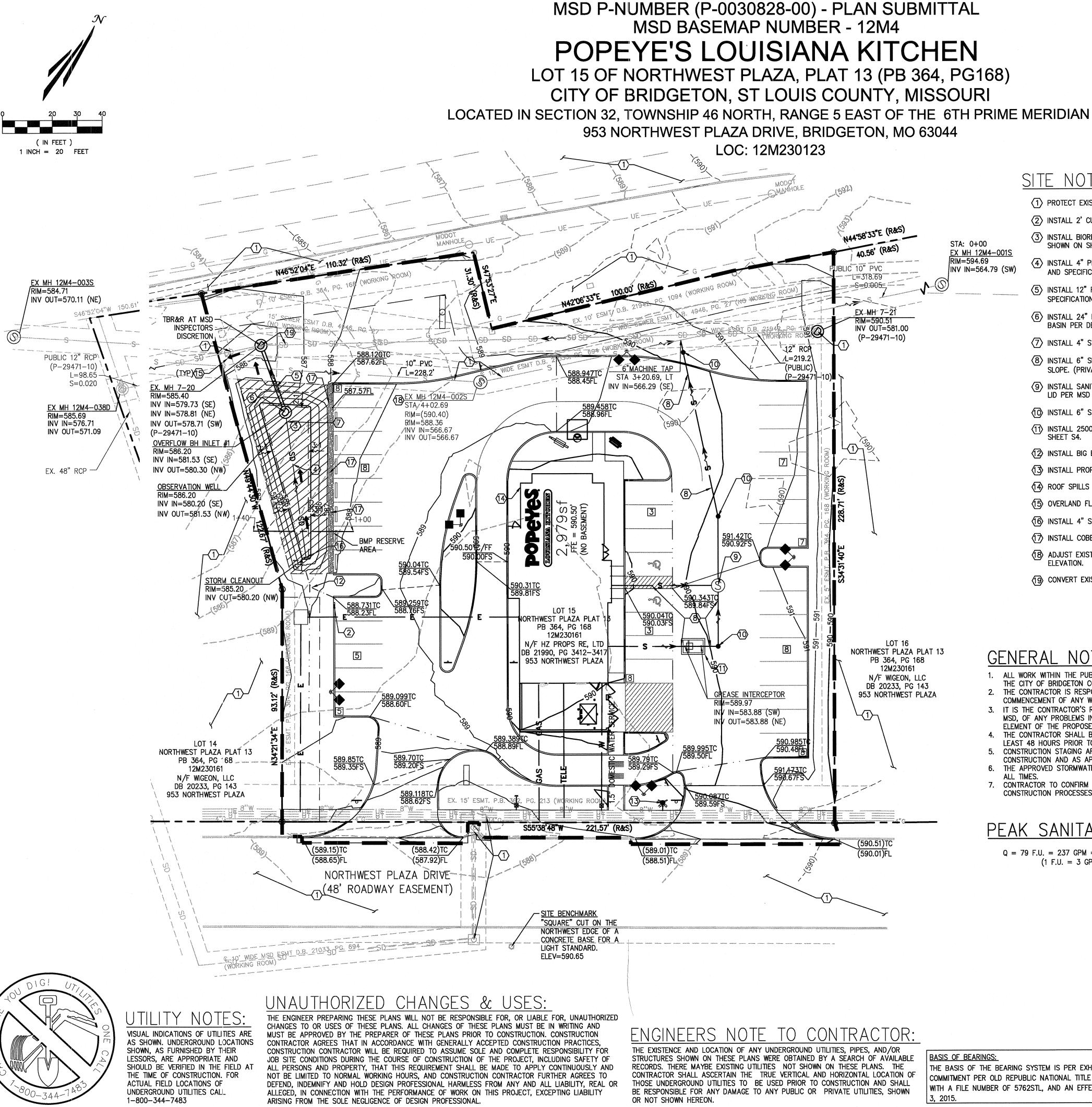
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# ENGINEERS NOTE TO CONTRACTOR:

3, 2015.





- (1) PROTECT EXISTING IMPROVEMENTS IN PLACE.
- (2) INSTALL 2' CURB CUT.
- (3) INSTALL BIORETENTION BASIN PER DIMENSIONS AND DETAILS AS SHOWN ON SHEET S3. SURFACE = 584.70.
- (4) INSTALL 4" PERFORATED PVC UNDERDRAIN PER MSD STANDARDS AND SPECIFICATIONS. (PUMI)
- (5) INSTALL 12" RCP STORM DRAIN PER MSD STANDARDS AND SPECIFICATIONS. (PUMI)
- (6) INSTALL 24" NYLOPLAST STRUCTURE WITH GRATED DOME DRAIN BASIN PER DETAIL ON SHEETS S4 AND S6.
- (7) INSTALL 4" STORM DRAIN OBSERVATION WELL.
- (8) INSTALL 6" SDR-35 PVC SANITARY SEWER PIPE AT 2% MIN SLOPE. (PRIVATE)
- 9 INSTALL SANITARY SEWER SAMPLING MANHOLE WITH LOCK-DOWN LID PER MSD STANDARD DETAIL SHEET 70.
- (10) INSTALL 6" SANITARY SEWER CLEANOUT.
- (11) INSTALL 2500 GAL. GREASE INTERCEPTOR PER DETAILS ON SHEET S4.
- (12) INSTALL BIG BLUESTEM PER SHEETS L1 AND L2.
- (13) INSTALL PROPOSED FIRE HYDRANT.
- (14) ROOF SPILLS TO PROPOSED GRADE.
- (15) OVERLAND FLOW PATH.
- (16) INSTALL 4" STORM DRAIN CLEANOUT.
- (17) INSTALL COBBLE STONE DIAPHRAGM PER DETAIL ON SHEET S3.
- (18) ADJUST EXISTING MANHOLE TO THE PROPOSED SURFACE
- (19) CONVERT EXISTING MANHOLE TO AREA INLET.

# **GENERAL NOTES:**

- 1. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY, OR EASEMENT SHALL CONFORM TO
- THE CITY OF BRIDGETON CONSTRUCTION SPECIFICATIONS AND DESIGN STANDARDS. 2. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS PRIOR TO
- COMMENCEMENT OF ANY WORK ON THE PROJECT. 3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNER/DEVELOPER, AND
- MSD, OF ANY PROBLEMS IN CONFORMING TO THE APPROVED PLANS FOR ANY ELEMENT OF THE PROPOSED IMPROVEMENTS PRIOR TO ITS CONSTRUCTION.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING UTILITY LOCATIONS AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- 5. CONSTRUCTION STAGING AREAS WILL BE REQUIRED TO STAY WITHIN THE LIMITS OF CONSTRUCTION AND AS APPROVED IN THE STORMWATER MANAGEMENT PLAN.
- 6. THE APPROVED STORMWATER MANAGEMENT PLAN WILL BE REQUIRED ON SITE AT
- 7. CONTRACTOR TO CONFIRM ALL UTILITY LOCATIONS PRIOR TO BEGINNING ANY CONSTRUCTION PROCESSES.

# PEAK SANITARY FLOW:

Q = 79 F.U. = 237 GPM = 0.5 CFS(1 F.U. = 3 GPM)

CITY ENGINEER STATEMENT:

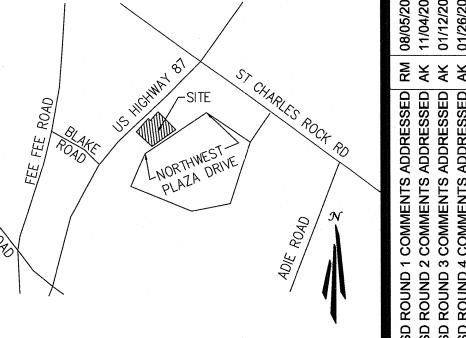
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CITY ENGINEER (OR DESIGNEE)

SITE BENCH MARK:

"SQUARE" CUT ON THE NORTHWEST EDGE OF THE CONCRETE BASE OF THE FIRST LIGHT STANDARD NORTH OF THE CURB INLET ON THE EAST SIDE OF NORTHWEST PLAZA DRIVE.

BM ELEV (NAVD88) =590.65 \*SEE SHEET S1 FOR MSD BENCH MARK



46664

LOCATION MAP SCALE: 1"=1000'

LEGEND:

PROPOSED CONTOURS

PROPOSED FLOW ARROW

EXISTING 8" WATER LINE FIRE HYDRANT

NUMBER OF PARKING SPACES STORM DRAIN MANHOLE SANITARY SEWER MANHOLE PROPOSED CONCRETE PAVEMENT OVERLAND FLOW PATH

# ABBREVIATIONS:

EXISTING

FINISHED FLOOR ELEVATION

FLOW LINE

FINISHED SURFACE INVERT

MANHOLE

RIM ELEVATION TOP OF CURB

BOTTOM OF STORM DRAIN TOP OF SANITARY SEWER

DATE

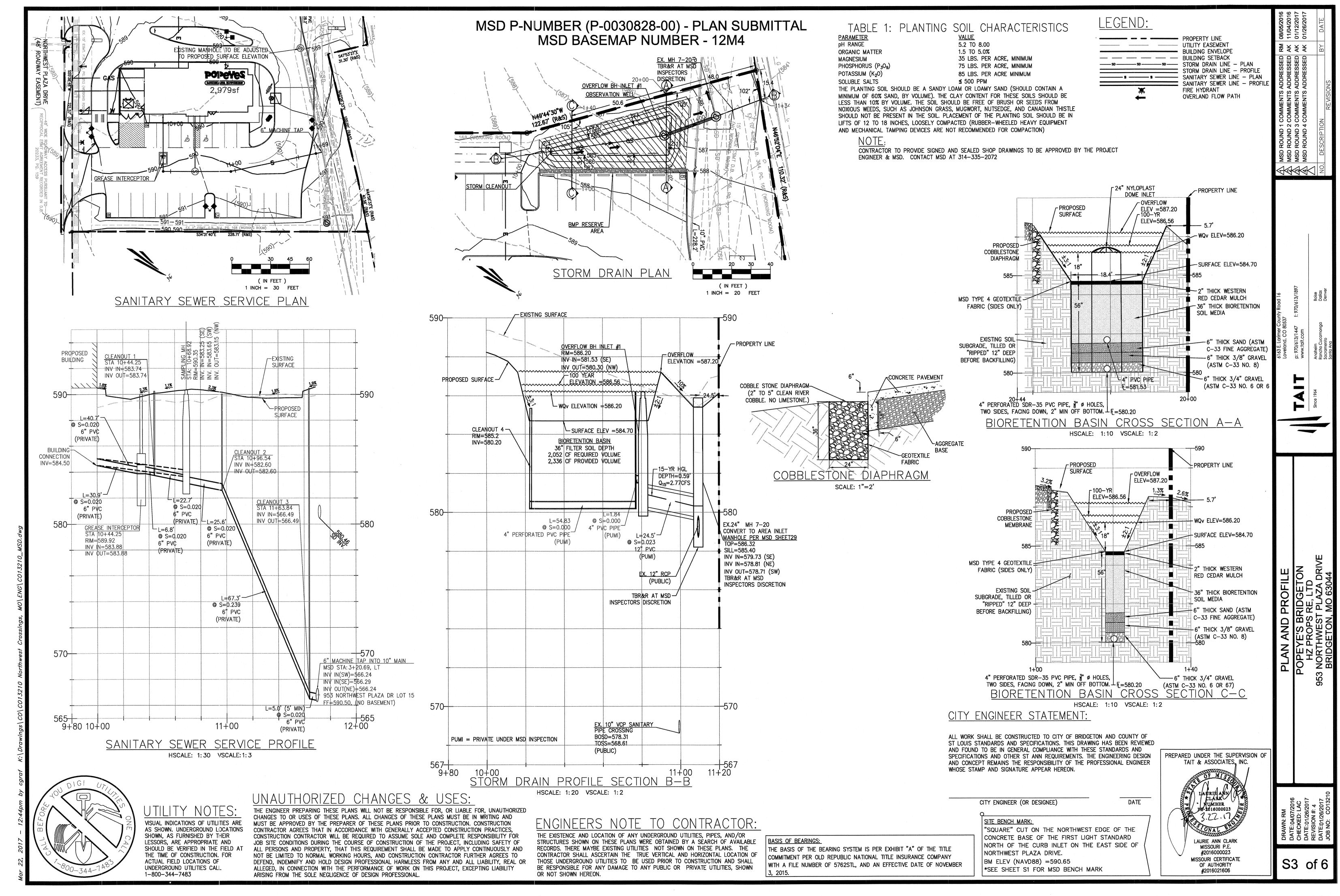
PREPARED UNDER THE SUPERVISION OF TAIT & ASSOCIATES, INC. MUMBER PH-2016000023 3.22.17 LAURIE ANN CLARK MISSOURI P.E. #2016000023 MISSOURI CERTIFICATE

OF AUTHORITY

#2016021606

S2 of 6

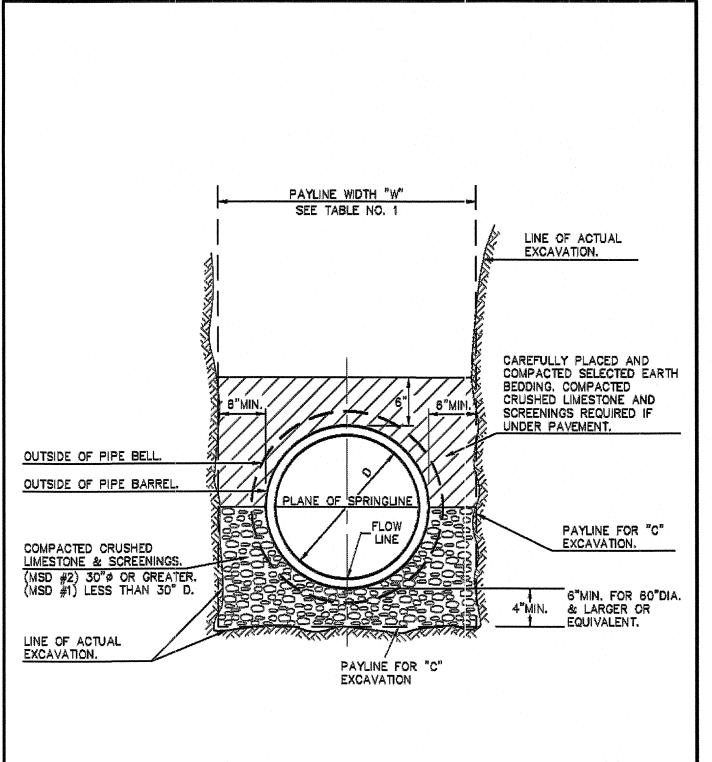
THE BASIS OF THE BEARING SYSTEM IS PER EXHIBIT "A" OF THE TITLE COMMITMENT PER OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY WITH A FILE NUMBER OF 5762STL, AND AN EFFECTIVE DATE OF NOVEMBER



# MSD P-NUMBER (P-0030828-00) - PLAN SUBMITTAL MSD BASEMAP NUMBER - 12M4

SHEET 23

(REV)

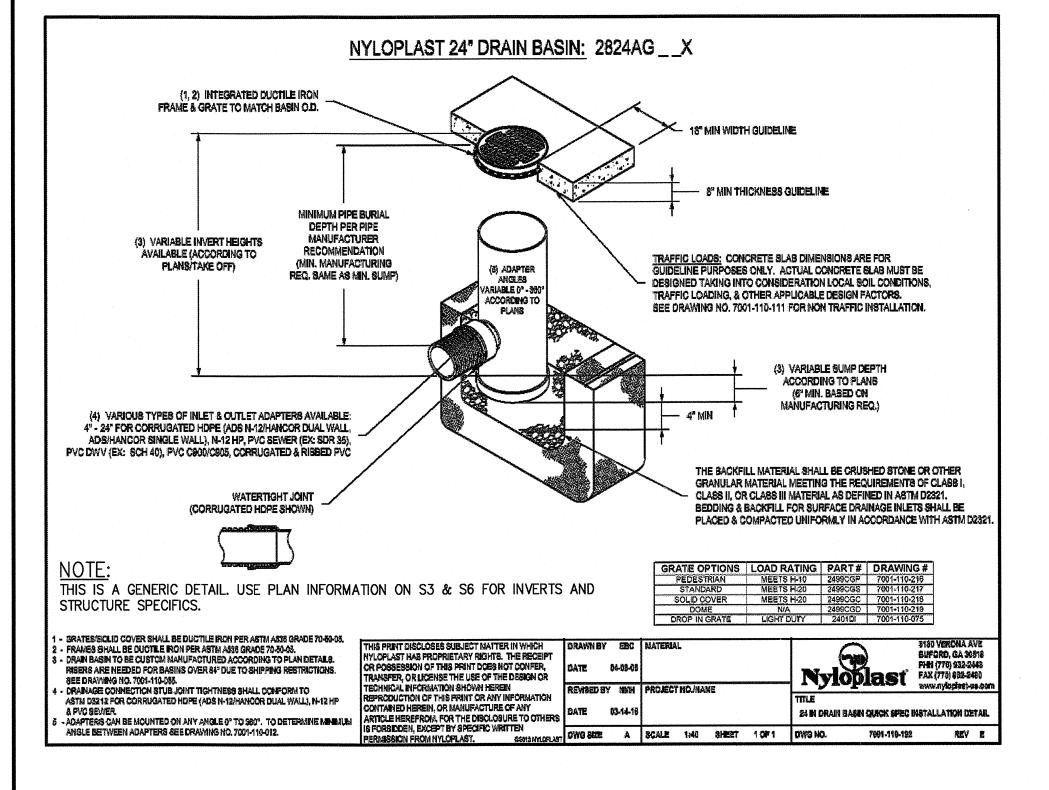


METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction

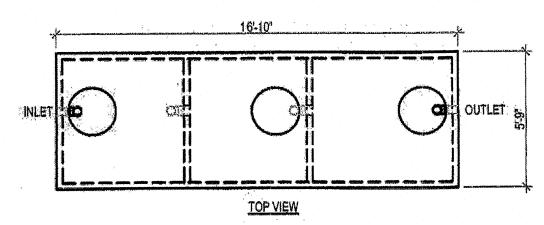
SHEET 5

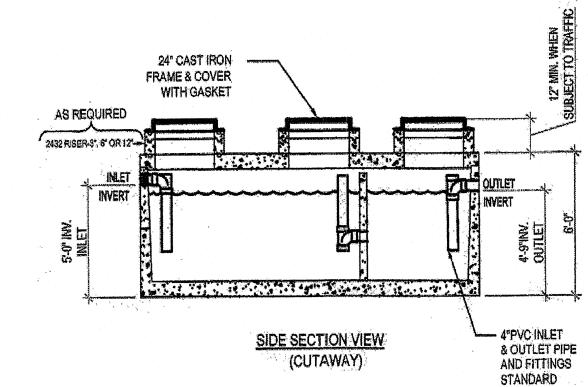
	M.S.D. STANDARD MANHOLE EXISTING STRUCTURE IN PAVEMENT
	SURFACE ELEVATION.   8"   MAY BE ADJUSTED WITH ONE APPROVED METAL GRADE RING.
	4" MAXIMUM.
	* 18" MAX.
	GRADE RING. IF THE TOTAL HEIGHT
	OF ADJUSTMENT IS 8 INCHES OR  MORE, A MAXIMUM OF TWO (2) GRADE  RINGS IS ALLOWED.
	METAL GRADE RINGS ARE NOT ALLOWED A CONSTRUCTION.
	RISER SECTION "B"
	<u>ELEVATION</u>
	1/4" STEEL LIFTING HOOK.  1/4" STEEL LIFTING HOOK.
	CLEARANCE
	2-#3 REBAR CONT. — 8" 26-1/2" DIA. 8" (9 INCHES LAP AND TIED) 42-1/2" DIA.
	42-1/2 DIA.
	DI ANI
	PLAN GRADE RING SECTION
	NOTES:
	1) IF BRICK IS USED <u>DO NOT</u> PLASTER INSIDE OF MANHOLE. 2) IF MANHOLE IS BURIED MORE THAN 18 INCHES, A RISER SECTION WILL HAVE TO BE ADDED.
	3) DIMENSION "A" <u>STOCK</u> GRADE RING HEIGHT OPTIONS. (3 INCHES MINIMUM TO 11 INCHES MAXIMUM.) 4) DIMENSION "B" <u>STOCK</u> RISER SECTION HEIGHT OPTIONS. (12 INCH, 24 INCH, 36 INCH AND 48 INCH)
1	METROPOLITAN ST. LOUIS SEWER DISTRICT
1	ADJUST TO GRADE Standard Details of Sewer Construction

ADJUST TO GRADE

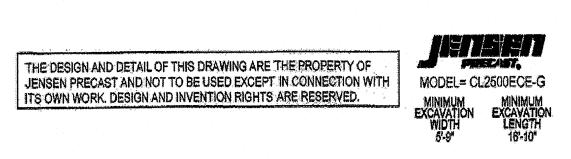




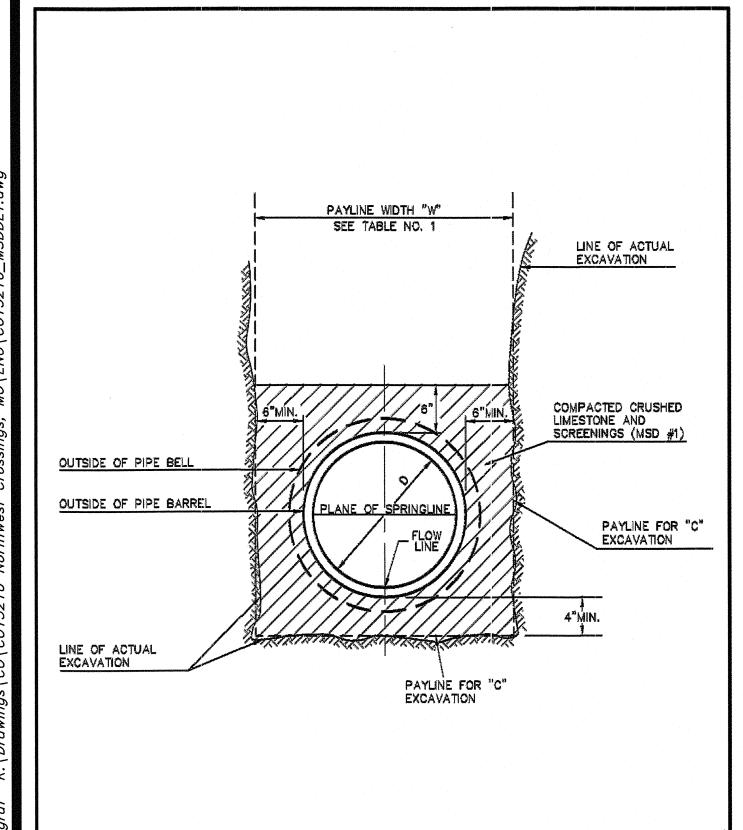




- TANK DESIGNED FOR H-20 TRAFFIC WHEEL LOAD WITH 1' TO 6' MAX. EARTH COVER AND WATER TABLE AT ONE FOOT BELOW GRADE.
- SUITABLE NATIVE SOIL OR GRANULAR SUB-BASE SHALL BE COMPACTED AND LEVELED TO HANDLE ANTICIPATED LOADS. SEE INSTALLATION PROCEDURES SHEET FOR ADDITIONAL INFO.
- EXTERIOR AND INTERIOR CONCRETE SURFACES TO BE COATED WITH AN APPROVED BITUMINOUS MATERIAL.
- FOR COMPLETE DESIGN AND PRODUCT INFORMATION CONTACT JENSEN PREGAST.







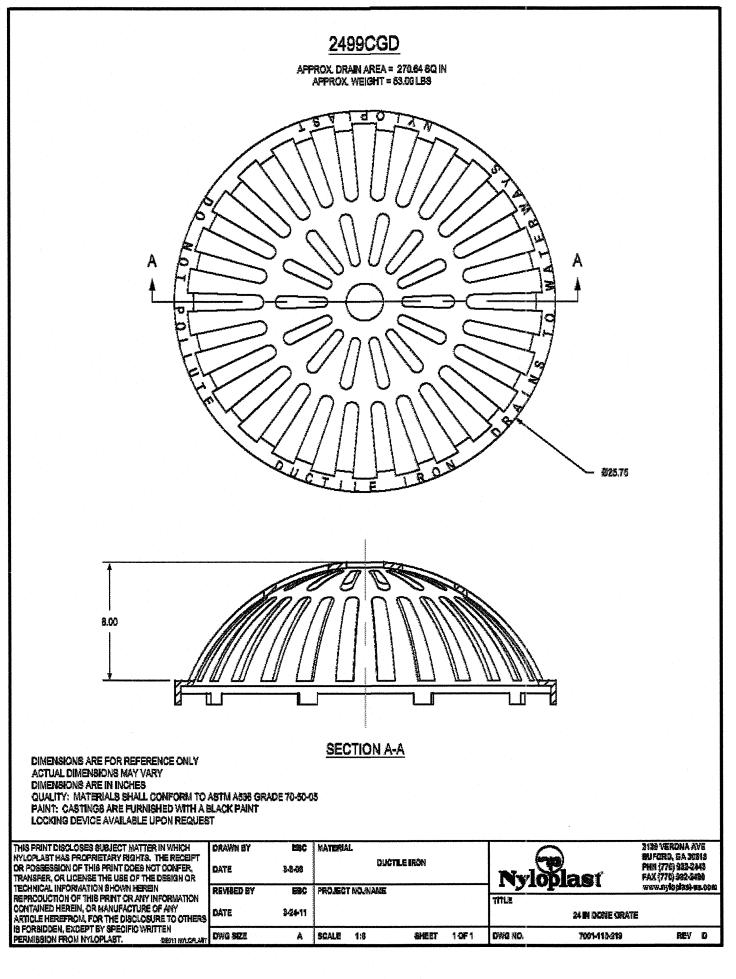
Dr. W.S.H. Ch. J.C.K.

PIPE BEDDING CLASS "C" (MODIFIED FOR REINFORCED

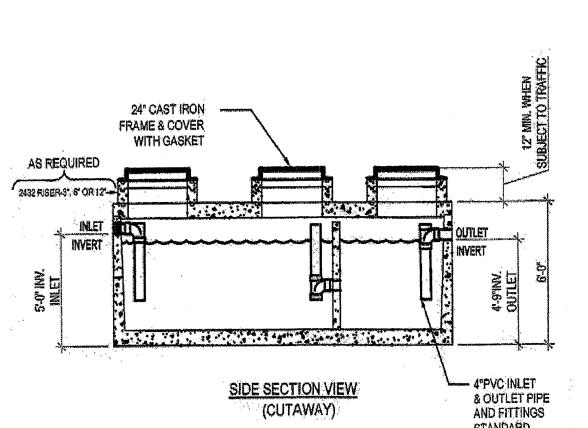
CONCRETE PIPE)

PIPE BEDDING CLASS "C" (FOR ALL 6" to 18" PIPE EXCEPT	METROPOLIT	AN ST. LOUIS	SEWER DISTRICT
	Standard L	Details of Sewe	er Construction
REINFORCED CONCRETE PIPE)	Dr. W.S.H. Ch. J.C.K.	2009	SHEET 4

DETAILS SHOWN FOR PRIVATE CONSTRUCTION ONLY. REFER TO MSD SPECIFICATIONS AND DETAILS FOR PUBLIC SEWER AND PRIVATE UNDER MSD INSPECTION SEWER CONSTRUCTION.



Dr. S.A.M. Ch. P.W.S.

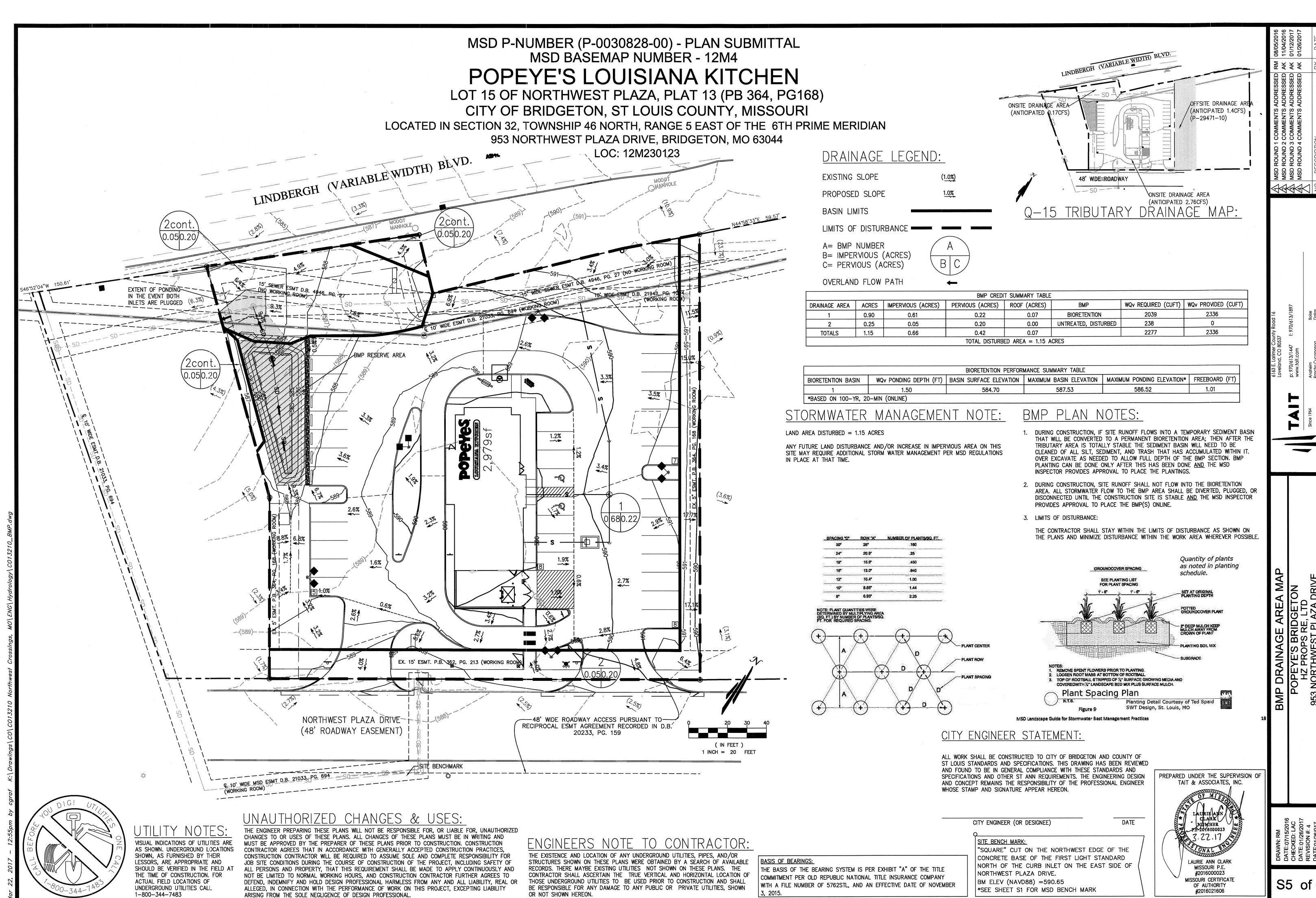


■ LIQUID CAPACITY: 2,500 GALLONS.

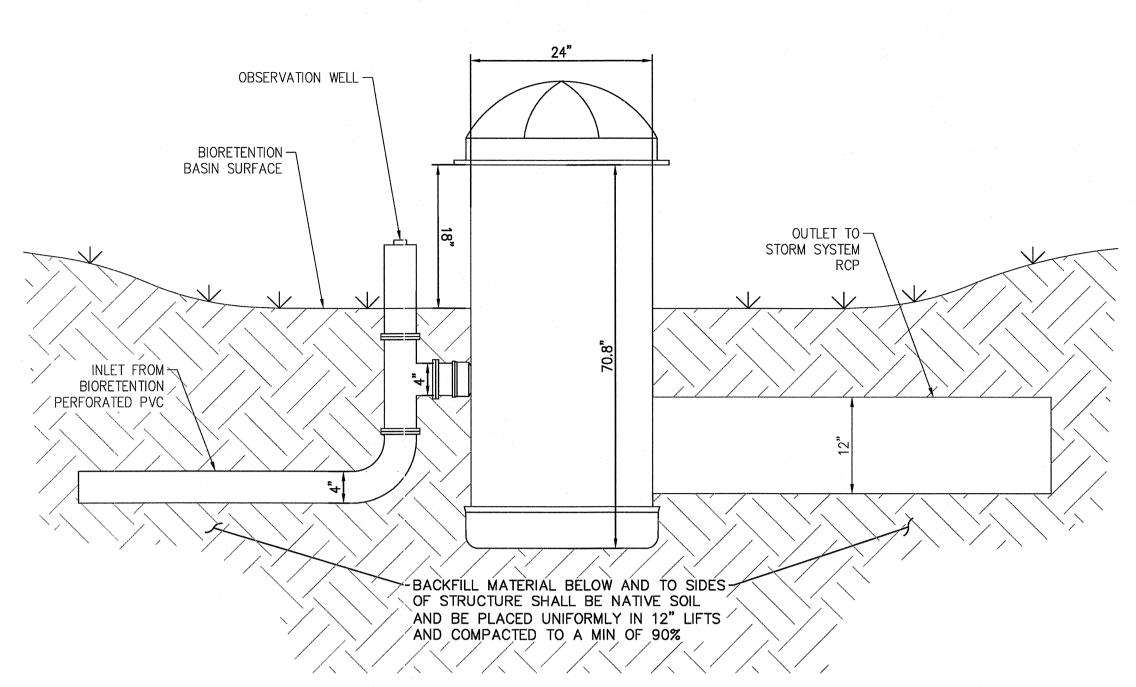


S4 of 6

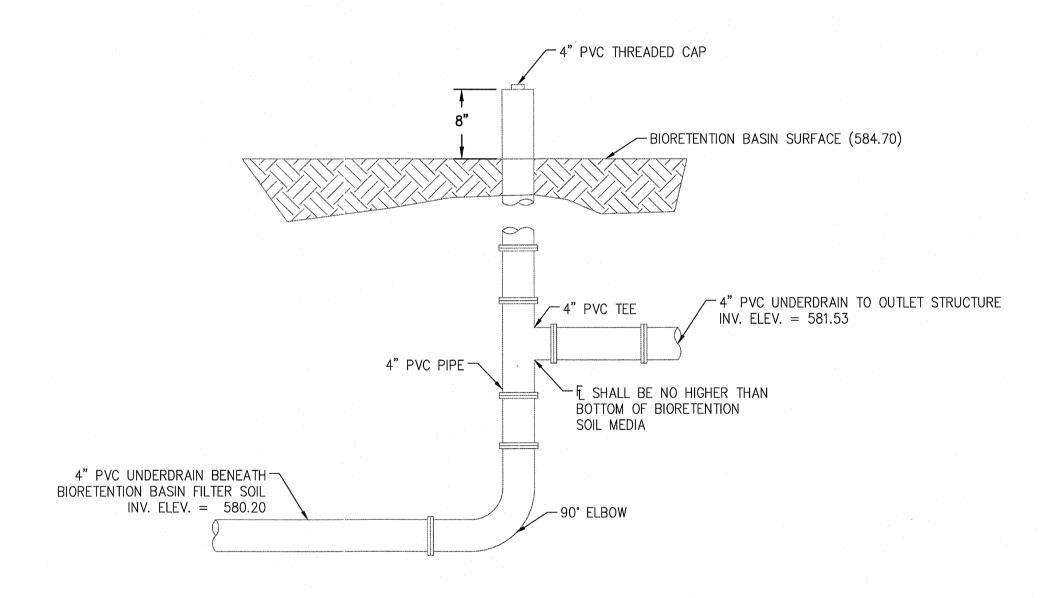
4444



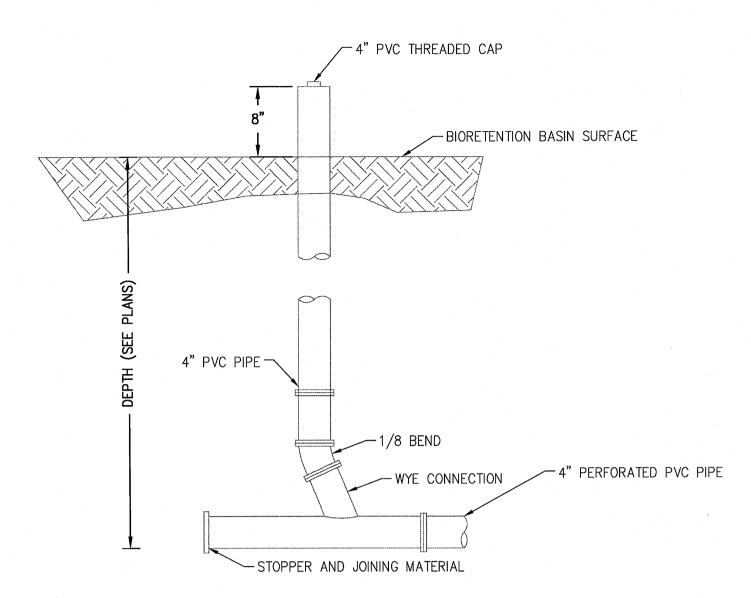
S5 of 6



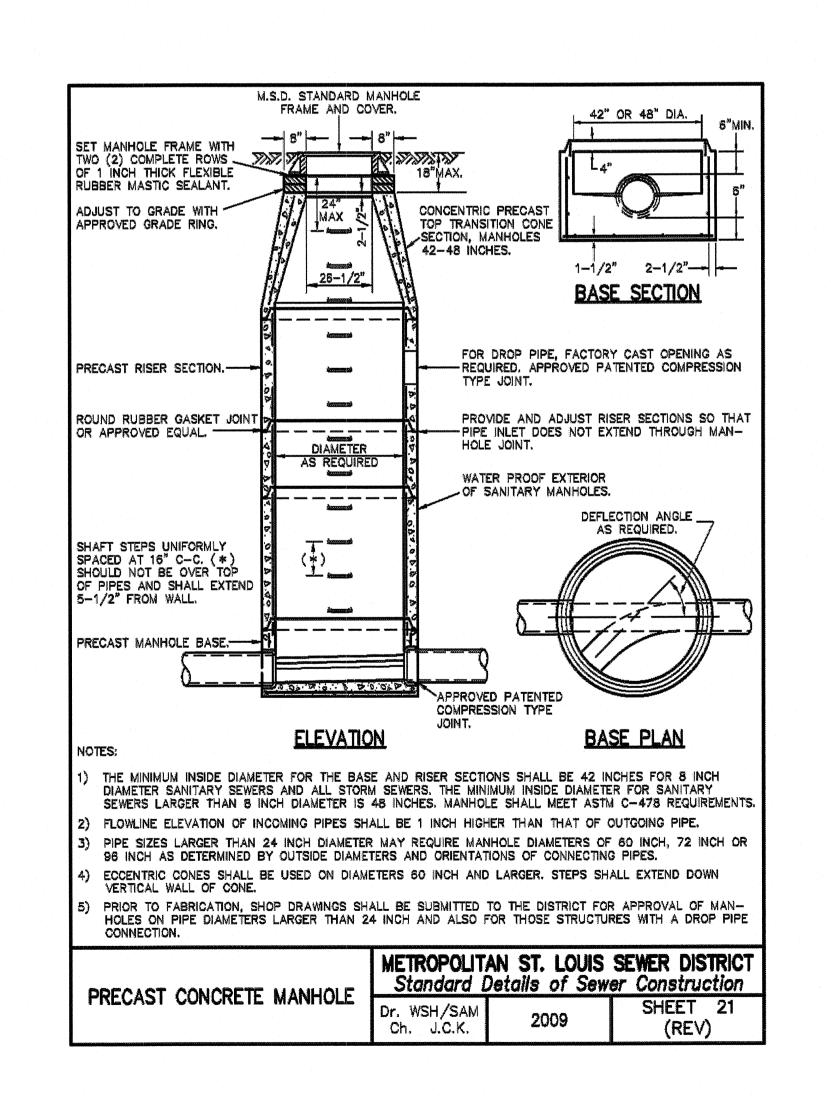
# PVC RISER AND CONNECTION DETAIL



OBSERVATION WELL DETAIL



# UNDERDRAIN CLEANOUT



NOTE.

DETAILS SHOWN FOR PRIVATE CONSTRUCTION ONLY. REFER TO MSD SPECIFICATIONS AND DETAILS FOR PUBLIC SEWER AND PRIVATE UNDER MSD INSPECTION SEWER CONSTRUCTION.

CHECKED: LAC
DATE: 01/26/2017
REVISION #: 4
DATE: 01/26/2017
JOB NO: CO13210

EVISION #: 4 ATE:01/26/2017 B NO: CO13210

S6 of 6

# POPEYE'S LOUISIANA KITCHEN

LOT 15 OF NORTHWEST PLAZA, PLAT 13 (PB 364, PG168) CITY OF BRIDGETON, ST LOUIS COUNTY, MISSOURI

LOCATED IN SECTION 32, TOWNSHIP 46 NORTH, RANGE 5 EAST OF THE 6TH PRIME MERIDIAN

953 NORTHWEST PLAZA DRIVE, BRIDGETON, MO 63044

LOC: 12M230123



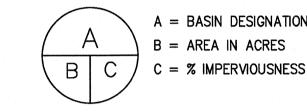
STORMWATER RUNOFF NOTES:

TOTAL LOT AREA: 1.15 ACRE TOTAL DISTURBED AREA: 1.15 ACRE PRE-DEVELOPMENT % IMPERVIOUS: 89% \* PRE-DEVELOPMENT 15-YR STORM RUNOFF: 3.84 CFS

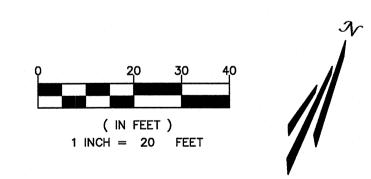
# DRAINAGE LEGEND:

EXISTING SLOPE

BASIN LIMITS



	SUMMARY	RUNOFF	TABLE	
BASIN ID	CONTRIBUTING AREA (ACRES)	IMPERVIOUS AREA (ACRES)	PI (CFS/AC)	PEAK 15YR (CFS)
AA	1.15	1.02	3.34	3.84



### CITY ENGINEER STATEMENT:

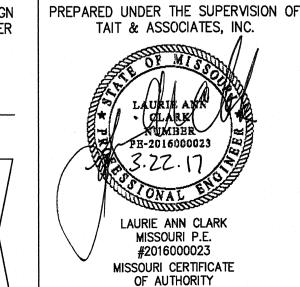
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DATE

CITY ENGINEER (OR DESIGNEE)

SITE BENCH MARK: "SQUARE" CUT ON THE NORTHWEST EDGE OF THE CONCRETE BASE OF THE FIRST LIGHT STANDARD NORTH OF THE CURB INLET ON THE EAST SIDE OF NORTHWEST PLAZA DRIVE.

BM ELEV (NAVD88) =590.65 \*SEE SHEET S1 FOR MSD BENCH MARK



#2016021606

DR1 of 2

AS SHOWN. UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROPRIATE AND

1-800-344-7483

SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL

NORTHWEST PLAZA DRIVE

(48' ROADWAY EASEMENT)

CHANGES TO OR USES OF THESE PLANS. ALL CHANGES OF THESE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS PRIOR TO CONSTRUCTION. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED. IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.

EX. 15' ESMT. P.B. 362, PG. 213 (WORKING ROOM)

SITE BENCHMARK

-48' WIDE ROADWAY ACCESS PURSUANT TO-

RECIPROCAL ESMT AGREEMENT RECORDED IN D.B.

20233, PG. 159

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES, PIPES, AND/OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. THERE MAYBE EXISTING UTILITIES NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL ASCERTAIN THE TRUE VERTICAL AND HORIZONTAL LOCATION OF THOSE UNDERGROUND UTILITIES TO BE USED PRIOR TO CONSTRUCTION AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY PUBLIC OR PRIVATE UTILITIES, SHOWN OR NOT SHOWN HEREON.

THE BASIS OF THE BEARING SYSTEM IS PER EXHIBIT "A" OF THE TITLE COMMITMENT PER OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY WITH A FILE NUMBER OF 5762STL, AND AN EFFECTIVE DATE OF NOVEMBER 3, 2015.

# POPEYE'S LOUISIANA KITCHEN

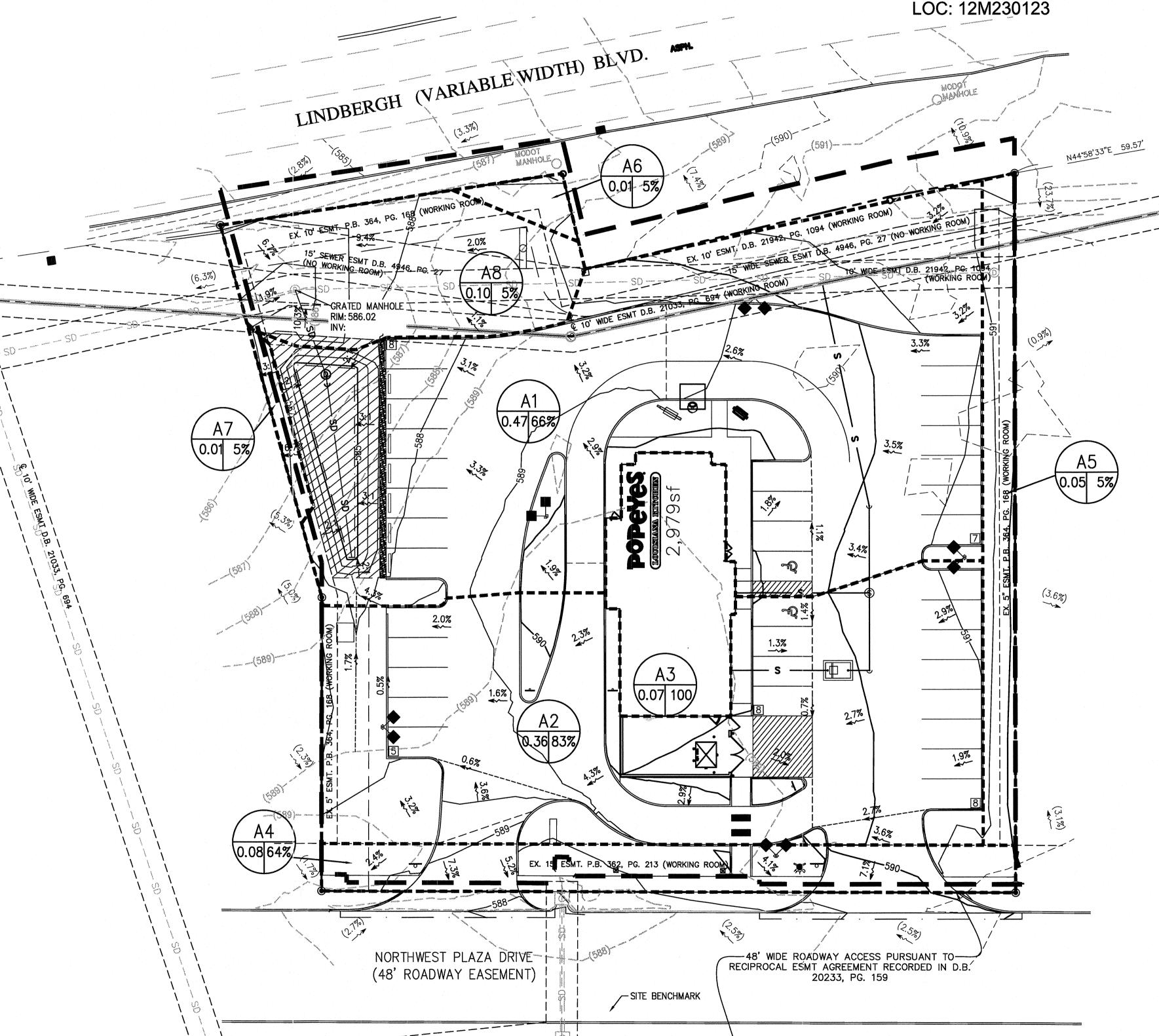
LOT 15 OF NORTHWEST PLAZA, PLAT 13 (PB 364, PG168)

CITY OF BRIDGETON, ST LOUIS COUNTY, MISSOURI

LOCATED IN SECTION 32, TOWNSHIP 46 NORTH, RANGE 5 EAST OF THE 6TH PRIME MERIDIAN

953 NORTHWEST PLAZA DRIVE, BRIDGETON, MO 63044

LOC: 12M230123



# STORMWATER RUNOFF NOTES:

TOTAL LOT AREA: 1.15 ACRE TOTAL DISTURBED AREA: 1.18 ACRE PRE-DEVELOPMENT % IMPERVIOUS: 89% POST-DEVELOPMENT % IMPERVIOUS: 63% PRE-DEVELOPMENT 15-YR STORM RUNOFF: 3.84 POST-DEVELOPMENT 15-YR STORM RUNOFF: 3.29 15 YR, 20 MIN DIFFERENTIAL RUNOFF = 3.29 CFS - 3.84 CFS = -0.55 CFS

## STORMWATER MANAGEMENT NOTE:

LAND AREA DISTURBED = 1.18 ACRES

ANY FUTURE LAND DISTURBANCE AND/OR INCREASE IN IMPERVIOUS AREA ON THIS SITE

# DRAINAGE LEGEND:

EXISTING SLOPE

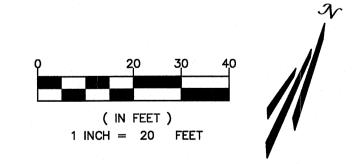
BASIN LIMITS

B C

A = BASIN DESIGNATION

B = AREA IN ACRES C = % IMPERVIOUSNESS

	SUMMARY	RUNOFF	TABLE	
BASIN ID	CONTRIBUTING AREA (ACRES)	PI (CFS/AC)	IMPERVIOUS AREA (ACRES)	PEAK 15YR (CFS)
A1	0.47	2.90	0.31	1.36
A2	0.36	3.19	0.30	1.15
А3	0.07	3.54	0.07	0.25
A4	0.08	2.86	0.05	0.23
A5	0.05	1.70	0.00	0.09
A6	0.01	1.70	0.00	0.02
A7	0.01	1.70	0.00	0.02
A8	0.10	1.70	0.00	0.17
TOTAL	1.15		0.73	3.29



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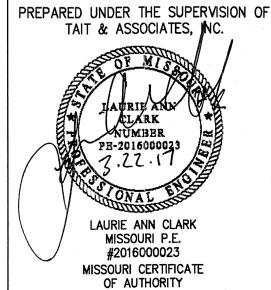
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\*SEE SHEET S1 FOR MSD BENCH MARK

DATE

SITE BENCH MARK: "SQUARE" CUT ON THE NORTHWEST EDGE OF THE CONCRETE BASE OF THE FIRST LIGHT STANDARD NORTH OF THE CURB INLET ON THE EAST SIDE OF NORTHWEST PLAZA DRIVE.



#2016021606

VISUAL INDICATIONS OF UTILITIES ARE AS SHOWN. UNDERGROUND LOCATIONS

SHOULD BE VERIFIED IN THE FIELD AT

SHOWN, AS FURNISHED BY THEIR

LESSORS, ARE APPROPRIATE AND

THE TIME OF CONSTRUCTION. FOR

ACTUAL FIELD LOCATIONS OF

UNDERGROUND UTILITIES CALL

1-800-344-7483

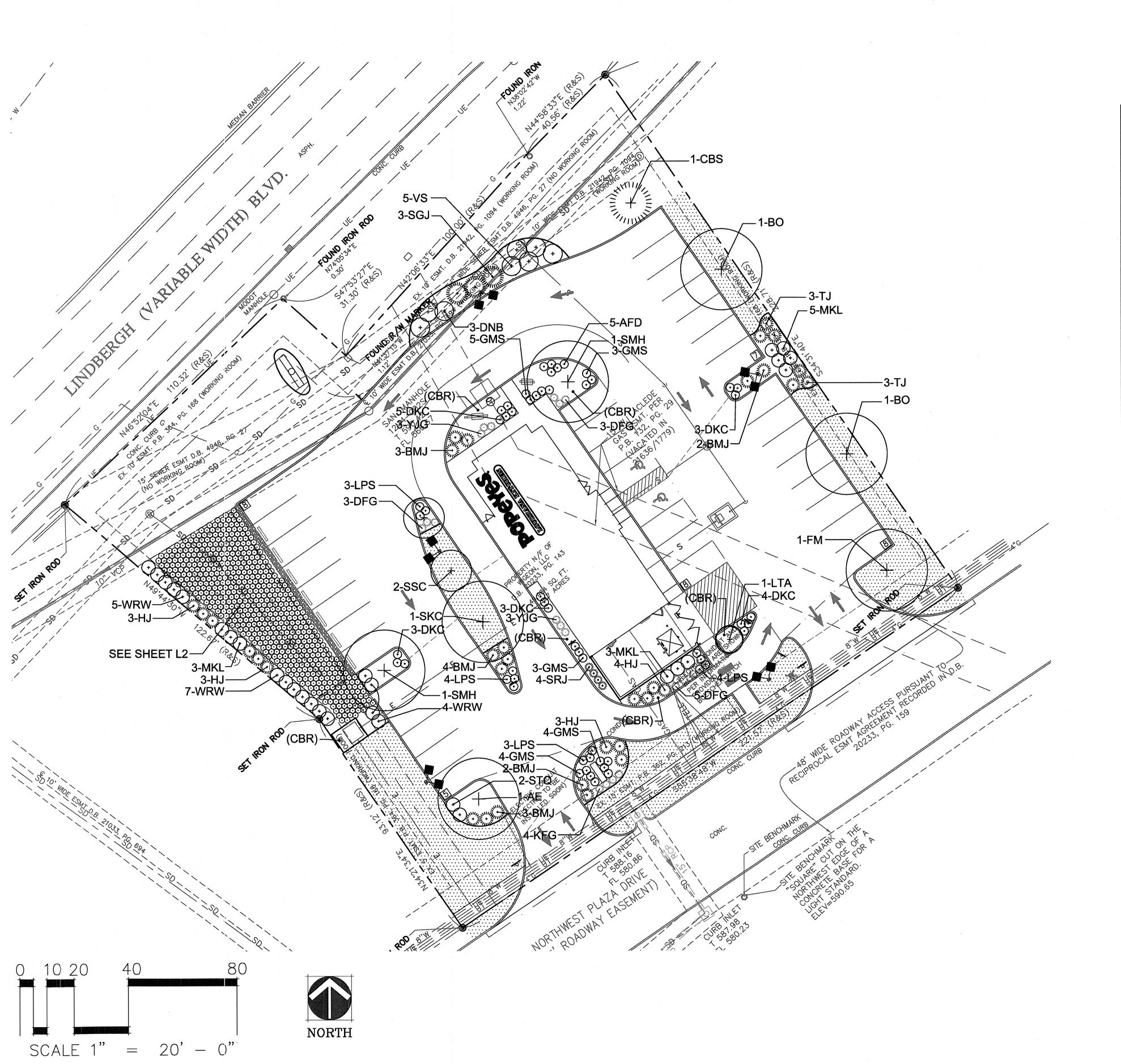
ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL

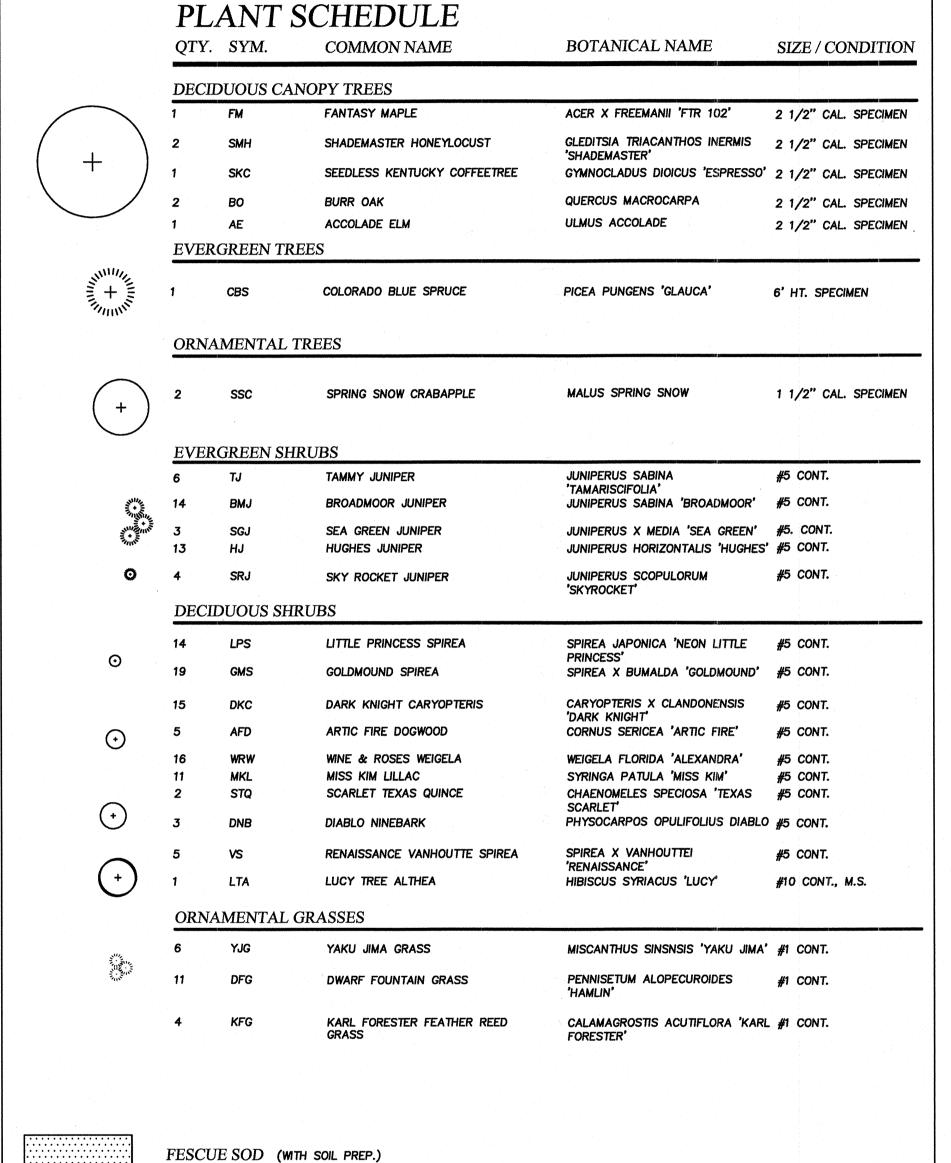
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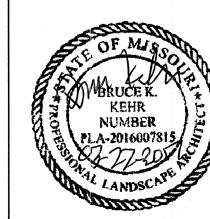
DR2 of 2







IN METRO ST. LOUIS CALL 2-BUSINESS DAYS IN ADVANCE BEFORE
YOU DIG, GRADE OR EXCAVATE FOR THE MARKING
OF UNDERGROUND MEMBER UTILITIES



BRUCE K. KEHR Sunlit Designs, LLC

REGISTERED LANDSCAPE ARCHITECT

MISSOURI PLA # 201600781

L1 of 2

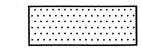
44444

Sunlit Designs, LLC Landscape Architecture & Planning

6644 Wadsworth Blvd.
Suite 4
Arvada, CO 80003
(P)303—909—3850
www.sunlitdesigns.com
bkehr@sunlitdesigns.com

# PLANT SCHEDULE

QTY.	SYM.	COMMON NAME	BOTANICAL NAME	SIZE / CONDITION
BIO-	RETENTION			
70	MPX	MEADOW PHLOX	PHLOX PANICULATA	2 1/4" CONT.
70	LLC	LANCELEAF COREOPSIS	COREOPSIS LANCEOLATA	2 1/4" CONT.
59	SGR	SHOWY GOLDENROD	SOLIDAGO SPECIOSA	2 1/4" CONT.
44	YCF	YELLOW CONEFLOWER	RATIBIDA PINNATA	2 1/4" CONT.
54	LBS	LITTLE BLUESTEM	SCHIZACHYRIUM SCOPARIUM	2 1/4" CONT.
40	AL	ARROWLEAF	SAGITTARIA LATIFOLIA	2 1/4" CONT.
38	MMW	MARSH MILKWEED	ASCLEPIAS INCARNATA	2 1/4" CONT.
28	SR	SOFT RUSH	JUNCUS EFFUSUS	2 1/4" CONT.
42	BFI	SOUTHERN BLUE FLAG IRIS	IRIS VIRGINICA	2 1/4" CONT.
84	PCG	PRAIRIE CORDGRASS	SPARTINA PECTINATA	2 1/4" CONT.
58	BBS	BIG BLUESTEM	ANDROPOGON GERARDII	2 1/4" CONT.



FESCUE SOD (WITH SOIL PREP.)

# **BIO-RETENTION NOTES**

- 1 INSTALLER SHOULD BE FAMILIAR WITH THE LANDSCAPE GUIDE FOR STORMWATER BEST MANAGEMEN PRACTICE DESIGN, ST. LOUIS, MO - REV. 2, MAY 2012 & FOLLOW RECOMMENDATIONS FOR
- 2. SEE CIVIL DRAWINGS FOR GRADING & DETAILING OF STORMWATER STRUCTURES.
- 3. USE WESTERN RED CEDAR MULCH (GORILLA HAIR) AT A DEPTH OF 2 INCHES IN THE BIO-RETENTION BASIN.
- 4. TEST SOIL FOR INFILTRATION CAPACITY PRIOR TO PERFORMING ANY WORK AND REPORT ANY POORLY PERFORMING CONDITIONS TO THE LANDSCAPE ARCHITECT & CIVIL ENGINEER FOR
- 5. COMPACTED SOILS SUCH AS THOSE THAT WERE PREVIOUSLY PARKING OR OTHER HARD SURFACE AREAS MUST BE RIPPED WITH A SUB-SOILER TO A MIN. DEPTH OF 18 INCHES. TOPSOIL WILL NEED TO BE IMPORTED FOR AREAS BEING CONVERTED FROM HARDSURFACE TO LANDSCAPE AREAS / BIO-RETENTION.
- 6. CONTRACTOR TO PROVIDE SIGNED AND SEALED SHOP DRAWINGS TO BE APPROVED BY THE PROJECT ENGINEER & MSD AT 314-335-2072
- 7. BIO-RETENTION PLANTS MUST BE WATERED USING THE AUTOMATIC IRRIGATION SYSTEM, SEE IRRIGATION PLANS, CONTRACTOR IS RESPONSIBLE FOR PLANT REPLACEMENT DURING THE ONE YEAR WARRANTY PERIOD.

#### Planting, Water and Mulch Requirements for Stormwater BMPs

#### Table 3: Planting, Water and Mulch Requirements

Water Availability	Required	Minimum	Water Requirement	Water Requirement	Maximum	
	Planting Period	Container Size	First 3 Weeks*	After 3 Weeks*	Mulch Depth****	
No ability to water after	Late Feb. – April only	2.25" x 3.75" or larger	Water each plug immediately		1.5 for plugs	
Manual watering with standard sprinkler	Late Feb. – Early June Sept. – October	4.5" x 5" (quart) or larger in summer & fall	1" (60 min) every 4 days	1" (60 min) every 7 days until plants established***	1.5" for plugs 2.5" for quarts	
Automatic irrigation (set to water more frequently than normal during first two months after planting)	Late Feb. – Early Oct.	2.25" x 3.75" (plug) or larger in spring 4.5" x 5" (quart) or larger in summer & fall	1" (60 min) every 4 days in spring and fall 1" (60 min) every 3 days in summer	1" (60 min) every 7 days until plants established***	1.5" for plugs 2.5" for quarts	

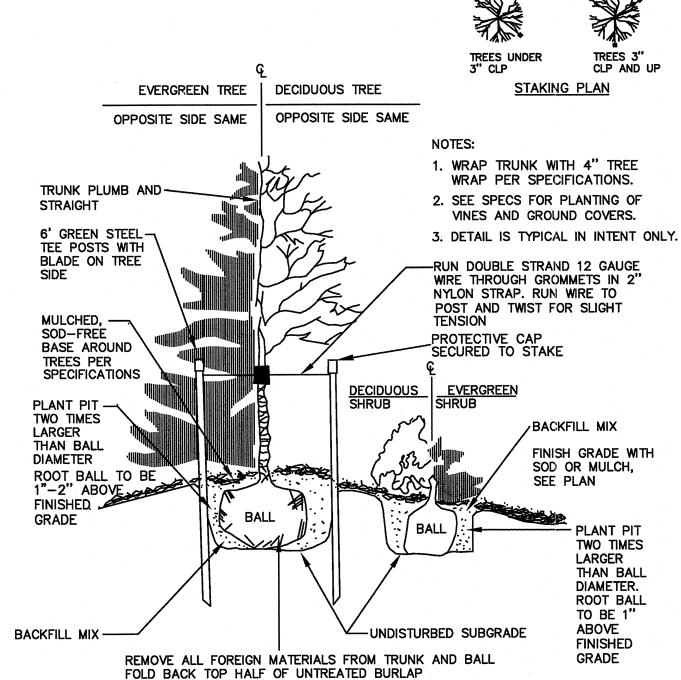
\*This water amount includes natural rainfall. If you get a ½ inch of natural rain then you will need to add a ½ inch of water to meet the 1 inch requirement.

\*\*Requires transport of water to the planting site in large containers and pouring enough water onto each plant (after planting) to moisten the entire planting

\*\*\*Plants are established when roots have grown out of the container soil and into the native soil by 3-5 inches. This normally takes 3-4 months for most perennials and grasses and up to 6-7 months for trees and shrubs.

\*\*\*\*Shredded leaf compost is recommended for use with perennials and grasses. Shredded bark mulch is recommended for tree and shrub plantings at a depth of 3 inches.

# PLANTING DETAIL



BACKFILL MIX: 1/3 APPROVED TOPSOIL, 1/3 ON-SITE SOIL, 1/3 PREMIUM 3 COMPOST

# LANDSCAPE NOTES

- 1. ALL TREES AND SHRUBS SHALL BE PLANTED PER DETAIL. ALL TREES SHALL BE STAKED PER DETAIL FOR A PERIOD OF ONE YEAR. DECIDUOUS TREES ARE TO BE WRAPPED FOR THE FIRST WINTER SEASON, SEE SPECIFICATIONS. PROVIDE OWNER WITH ONE YEAR WARRANTY ON PLANT MATERIAL.
- 2. ALL AREAS TO BE PLANTED ARE TO RECEIVE SOIL PREPARATION OF 5 C.Y. PER 1000 S.F. OF PREMIUM AGED COMPOST AMENDMENT. SUBMIT DELIVERY TICKETS TO L.A. FOR VERIFICATION OF QUANTITIES & MATERIAL.
- 3. ALL PLANTING BEDS ARE TO RECEIVE 3" DEPIH 1"-2" CHICAGO BUFF ROCK (CBR) MULCH OR WESTERN CEDAR (GORILLA HAIR) OVER A WEED CONTROL FABRIC, SEE PLAN FOR LOCATIONS. TREE RINGS ARE TO BE MULCHED WITH 3" DEPTH GORILLA HAIR CEDAR. WEED FABRIC IS NOT REQUIRED IN PERENNIAL BEDS OR TREE RINGS LOCATED IN GRASS AREAS.
- 4. ALL PLANTING BEDS ARE TO BE CONTAINED BY A 4" INTERLOCKING STEEL EDGER, RYERSON OR OTHER APPROVED BY L.A.. EDGER IS NOT REQUIRED WHEN ADJACENT TO CONCRETE WALKS OR AROUND TREE RINGS.
- 5. A "SPECIMEN" TREE REFERS TO A TREE BEING OF SYMMETRICAL SHAPE WITH ONE MAIN LEADER AND A MINIMUM HEIGHT OF 8 FEET FOR DECIDUOUS ORNAMENTAL TREES AND A MINIMUM HEIGHT OF 12 FEET FOR DECIDUOUS SHADE TREES.
- 6. THE LANDSCAPER IS NOT TO START SOIL PREPARATION ACTIVITIES UNTIL MAJOR SITE GRADING HAS BEEN ACCEPTED AND IS WITHIN +/- 1.25 INCHES OF FINAL GRADE. WORK INITIATION BY THE LANDSCAPE CONTRACTOR SIGNIFIES THAT THE CONTRACTOR ACCEPTS THE GRADING AND IS RESPONSIBLE FOR FINAL GRADES SPECIFIED ON GRADING PLANS.
- 7. ALL PLANT SUBSTITUTIONS, INCLUDING PERENNIALS, SHRUBS, AND TREES MUST BE APPROVED BY THE LANDSCAPE ARCHITECT IN WRITING PRIOR TO PLANTING.
- 8. ALL LANDSCAPE AREAS SHALL BE IRRIGATED WITH UNDERGROUND AUTOMATIC IRRIGATION SYSTEM. TREES, SHRUBS, AND DECORATIVE GRASSES WILL BE IRRIGATED BY A SEPERATE ZONE FROM SOD/GRASS; THE IRRIGATION SYSTEM IS TO HAVE A RAIN SENSOR SHUTOFF INSTALLED.
- 9. STOCKPILE 4-6 INCHES OF TOPSOIL TO BE RE-SPREAD FOLLOWING ROUGH GRADING. USE A RIPPER (MINIMUM DEOPTH OF 12 INCHES) ON AREAS WITH COMPACTED SOIL SUCH AS PARKING AREAS BEING CONVERTED TO LANDSCAPING. SOIL BELOW EXISTING PARKING AREAS IS NOT ACCEPTABLE FOR TOPSOIL, IMPORT TOPSOIL IF NECESSARY.
- 10. ALL PLANT MATERIALS SHALL MEET OR EXCEED CURRENT AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.1 AND ACCOMPANYING RULES AND REGULATIONS.

BEFORE YOU DIG CALL UTILITY NOTIFICATION CENTER OF MISSOURI MYBRUCE K. KEHR 811 NUMBER ST. LOUIS CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

BRUCE K. KEHR Sunlit Designs, LLC

> REGISTERED **LANDSCAPE ARCHITECT**

**MISSOURI** PLA # 2016007815

3. DETAIL IS TYPICAL IN INTENT ONLY.

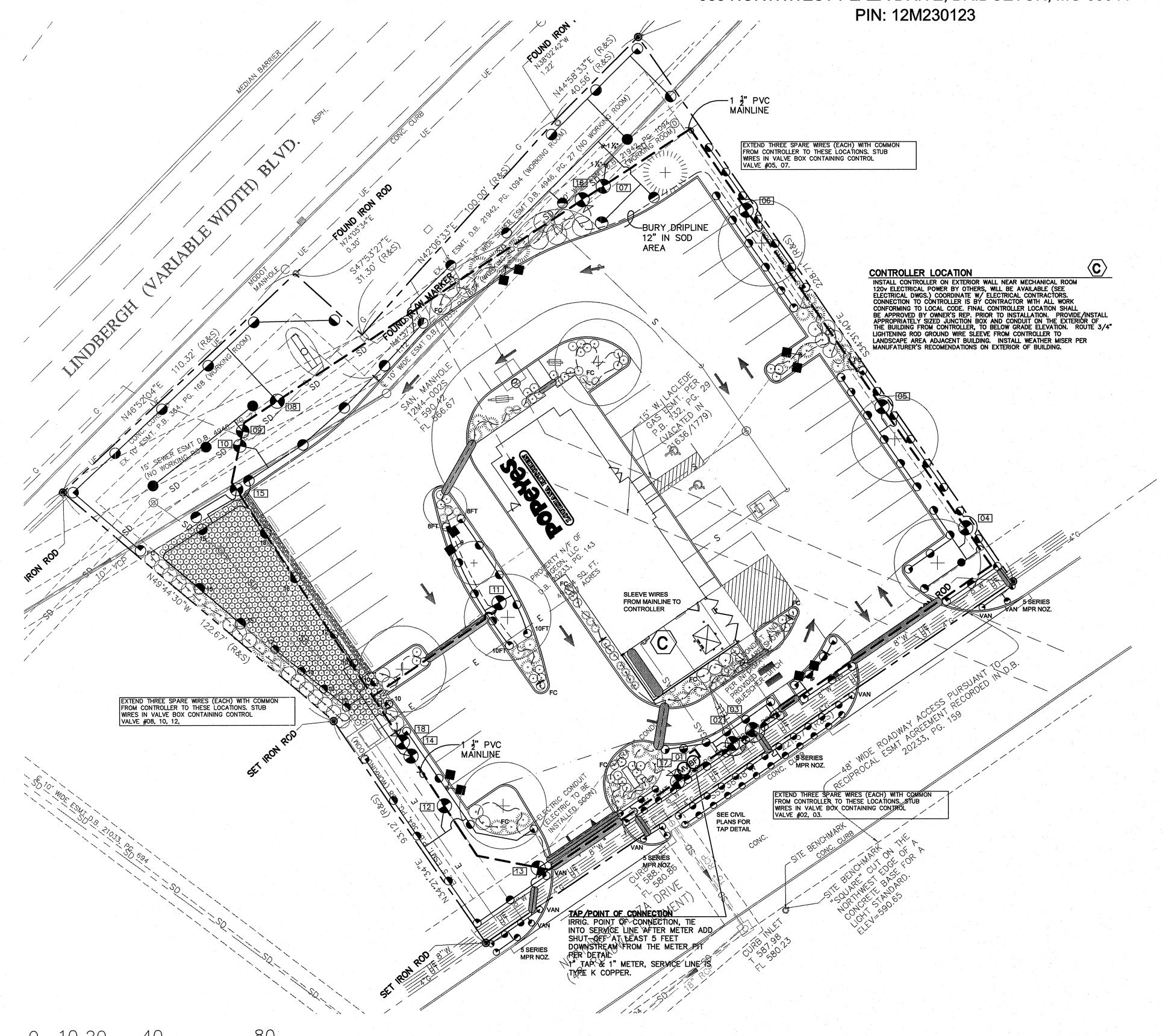
Sunlit Designs, LLC

6644 Wadsworth Blvd. Suite 4 Arvada, CO 80003 (P)303–909–3850

# PORTION OF LOT 5 OF THE PARTITION OF ERATSTUS POST'S ESTATE

CITY OF BRIDGETON, ST LOUIS COUNTY, MISSOURI

LOCATED IN SECTION 32, TOWNSHIP 46 NORTH, RANGE 5 EAST OF THE 6TH PRIME MERIDIAN 953 NORTHWEST PLAZA DRIVE, BRIDGETON, MO 63044



SYMBOL	MANUFACTURER	MODEL NO.	DESCRIPTION	DETAIL NO.
		CLASS 200 PVC	1 1/2" PVC MAINLINE, BELL END PIPE	
		CL 200 PVC	LATERAL LINE, SIZED AS INDICATED, ALL UNSIZED PIPE IS 1"	
		DRIP DISTRIBUTION TUBING	3/4" DIA. POLYETHELENE PIPE (WITH RAINBIRD EMMITERS @ EA. PLANT)	
•••	RAINBIRD	1806-SAM-PRS U-SERIES & MPR NOZZLES	6" POP-UP SPRAY HEAD 12" POP-UP IN BIO-RETENTION	
•••	RAINBIRD		6" POP-UP ROTOR SPRAY HEAD S NOZ. 12" POP-UP IN BIO-RETENTION DZ.	
•	IRRITROL	700 SERIES	3/4"- 1" ELECTRIC CONTROL VALVE - TYPE, 2-WAY w/ MANUAL BLEED PLUG AND FLOW ADJUSTMENT	
•	RAINBIRD	XCZ-100-PRB-COM	1" ELECTRIC CONTROL DRIP VALVE ASSEMBLY — INCLUDES BALL VALVE, 200 MESH INLINE FILTER, REMOTE CONTROL VALVE AND PRESSURE REGULATOR	
<b>©</b>	RAINBIRD	ESP-LXME	20 STATION AUTOMATIC CONTROLLER W/ RAINBIRD WR2 RAIN SENSOR	
MV -	BUCKNER / SU MODEL 3000	PERIOR 1 1/4"	BRASS VALVE (NORMALLY CLOSED) MODEL #3000125	
		LINE SIZE	GATE VALVE - BALL VALVE	
<b>- -</b> BF	FEBCO 825 YA	. <b>1</b> "	BACKFLOW ASSEMBLY IN GUARDSHACK ENCLOSURE INSTALL PER MANF. RECOMENDATIONS	
——————————————————————————————————————	<del>-</del>		POINT OF CONNECTION ASSEMBLY	
			SLEEVING — CLASS 200 PVC TWICE SIZE OF DISTRIBUTION PIPE	
FC	FLUSH CAP	LINE SIZE	FLUSH CAP- PLACE AT ALL DRIP LINE END R	RUNS

	ZONING SCHEDULE						
	CLOCK STATION	VALVE #	GPM"s	VALVE SIZE	OPERATING PRESSURE	HEAD TYPE	QUANTITY
	01	01	NA	1 1/4"	30	MASTER VALVE- BUCKNER SUPERIOR # 3000125	
	02	02	7.5	3/4"	30	RAINBIRD 1806SAM-PRS W/ RB U8 SERIES NOZ (8' R)	7Q, 11H
	03	03	4.9	3/4"	30	RAINBIRD 1806SAM-PRS W/ RB 5 SERIES MPR NOZ (5' R)	2Q, 22H,1-VAN
	04	04	8.7	1"	30	RAINBIRD 1806SAM-PRS W/ MPR 5 SERIES/10 SERIES NOZ (5' /10'R)	5Q, 8H, 1F
	05	05	8.6	1"	30	RAINBIRD 1806SAM-PRS W/ RB U10 SERIES NOZ (10' R)	3Q ,9H
	06	06	9.8	1"	30	RAINBIRD 1806SAM-PRS W/ RB U10 SERIES NOZ (10' R)	2Q, 11H
SOD	07	07	15	1"	30	RAINBIRD 1806SAM-PRS W/ RB R17-24 SERIES NOZ (22' R)	1Q,6H,1F, 1 VAN
ZONES	08	08	9.7	1"	30	RAINBIRD 1806SAM-PRS W/ RB R17-24 SERIES NOZ (22' R)	2Q, 5H
$\frac{1}{2} \left( \frac{1}{2} \frac{A}{A} \right) $	09	09	9.7	1"	35	RAINBIRD 1806SAM-PRS W/ RB R17-24 SERIES NOZ (22' R)	3F
	10	10	11.3	1"	30	RAINBIRD 1806SAM-PRS W/ RB R17-24 SERIES NOZ (22' R)	7H
	11	11	9.1	1"	30	RAINBIRD 1806SAM-PRS W/ MPR 8/10/12 SERIES NOZ (8-12'R)	4Q, 6H
	12	12	12.0	1"	30	RAINBIRD 1806SAM-PRS W/ RB R17-24 SERIES NOZ (19' R)	4Q,6H, 1-VAN
	13	13	5.1	3/4"	30	RAINBIRD 1806SAM-PRS W/ RB 5 SERIES MPR NOZ (5' R)	2Q, 3H, 2VAN
BIO-RETENTION	14	14	7.0	3/4"	30	RAINBIRD 1812SAM-PRS W/ RB U10/12 SERIES NOZ (10'-12' R)	7H,1Q
BIO-RETENTION	15	15	5.0	3/4"	30	RAINBIRD 1812SAM-PRS W/ RB RVAN18 SERIES NOZ (15-18' R)	5H
SHRUBS &	16	16	NA	1"	30	RAINBIRD XCZ-100-PRB-COM DRIP IRRIGATION	
TREES IN	17	17	NA	1"	30	RAINBIRD XCZ-100-PRB-COM DRIP IRRIGATION	
BEDS	18	18	NA	1"	30	RAINBIRD XCZ-100-PRB-COM DRIP IRRIGATION	
						SPARE	
				: *			



OF UNDERGROUND MEMBER UTILITIES

BRUCE K. KEHR Sunlit Designs, LL REGISTERED

LANDSCAPE ARCHITECT

MISSOURI PLA # 2016007815

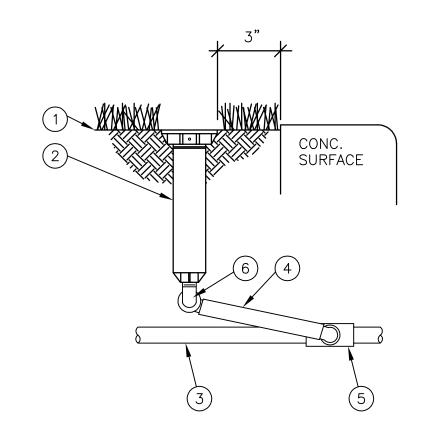
SCALE 1" = 20' - 0"

# CITY OF BRIDGETON SITE DISTURBANCE PERMIT

# POPEYE'S LOUISIANA KITCHEN

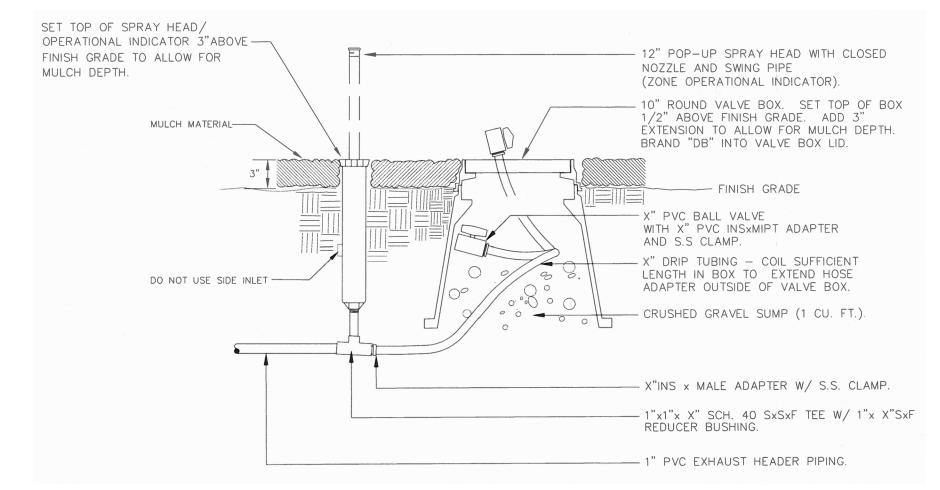
# PORTION OF LOT 5 OF THE PARTITION OF ERATSTUS POST'S ESTATE CITY OF BRIDGETON, ST LOUIS COUNTY, MISSOURI

LOCATED IN SECTION 32, TOWNSHIP 46 NORTH, RANGE 5 EAST OF THE 6TH PRIME MERIDIAN 953 NORTHWEST PLAZA DRIVE, BRIDGETON, MO 63044 PIN: 12M230123

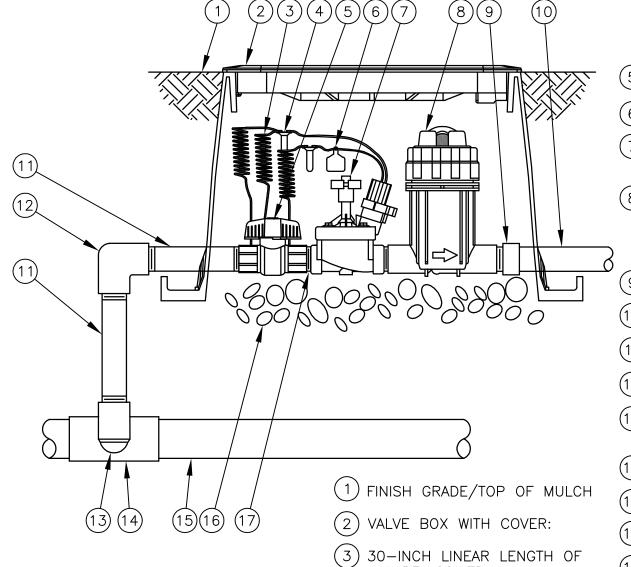


- FINISH GRADE/TOP OF MULCH
- POP-UP SPRAY SPRINKLER: RAIN BIRD 1804 SEE SCHEDULE FOR HEAD /NOZZLE INFO
- POLY LATERAL PIPE
- (5) LATERAL TEE OR ELL
- (6) BARBED MALE ELL





DRIP INDICATOR & FLUSH DETAIL



5 1-INCH BALL VALVE (INCLUDED IN XCZ-PRB-100-COM KIT) (6) ID TAG

(7) REMOTE CONTROL VALVE: RAIN BIRD PESB (INCLUCED IN XCZ-PRB-100-COM KIT)

(8) PRESSURE REGULATING QUICK CHECK BASKET FILTER: RAIN BIRD PRB-QKCHK-100 (INCLUDED IN XCZ-PRB-100-COM KIT) (9) PVC SCH 40 FEMALE ADAPTOR

10 LATERAL PIPE

(11) PVC SCH 80 NIPPLE (LENGTH AS REQUIRED) (12) PVC SCH 40 ELL

(13) PVC SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND PVC SCH 40 ELL (14) PVC SCH 40 TEE OR ELL

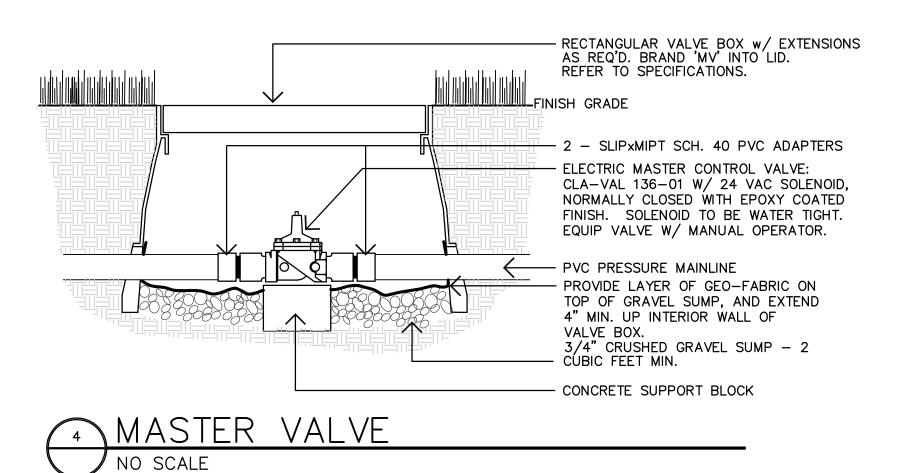
(15) MAINLINE PIPE

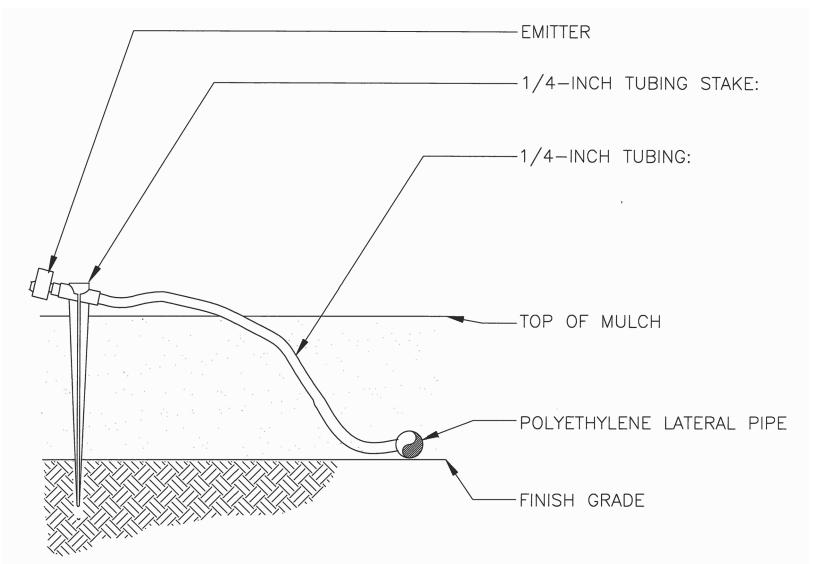
(16) 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL (17) PVC SCH 80 NIPPLE, CLOSE (INCLUDED IN

XCZ-PRB-100-COM KIT) DRIP VALVE ASSEMBLY DETAIL

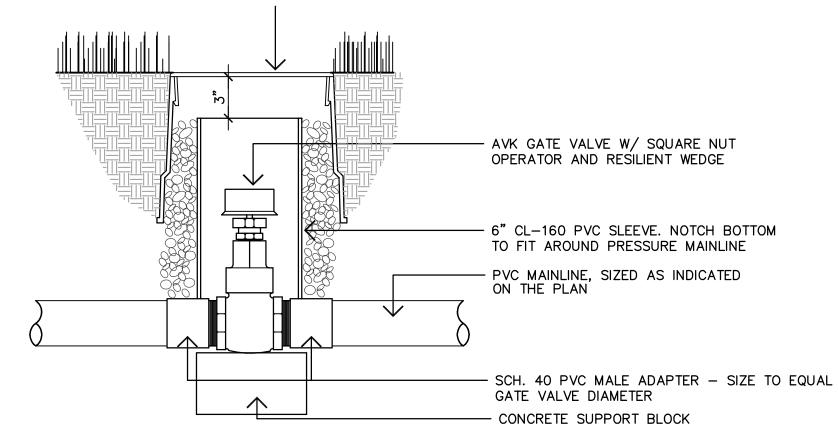
WIRE, COILED

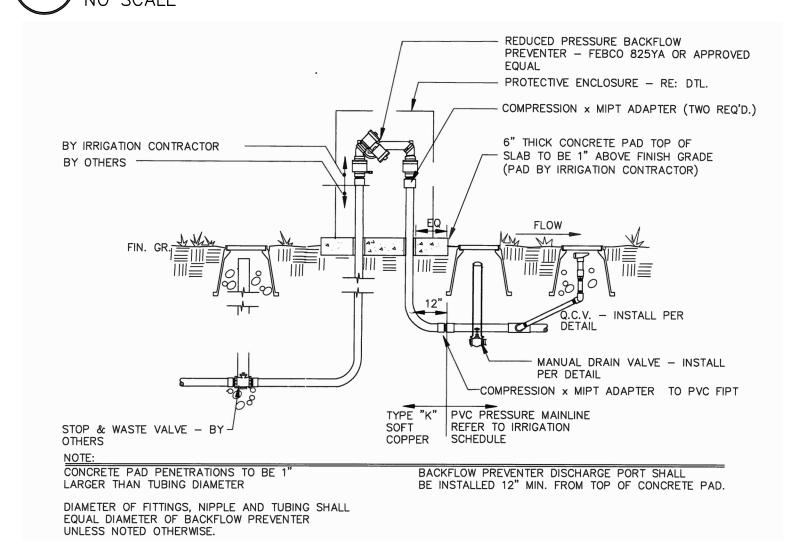
(4) WATERPROOF CONNECTION:





EMMITER DETAIL





BACKFLOW PREVENTER DETAIL

### GENERAL NOTES

- THE SYSTEM DESIGN ASSUMES A MINIMUM DYNAMIC PRESSURE FOR THE IRRIGATION SYSTEM OF 75 PSI AT A MINIMUM DISCHARGE OF 17 GPM AT THE POINT OF CONNECTION. VERIFY PRESSURE AND FLOW ON SITE PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES WITH ASSUMPTIONS.
- . READ THOROUGHLY AND BECOME FAMILIAR WITH THE SPECIFICATIONS AND INSTALLATION DETAILS PRIOR TO
- . DO NOT PROCEED WITH THE INSTALLATION OF THE IRRIGATION SYSTEM WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE DESIGN, OR IF DISCREPANCIES IN CONSTRUCTION DETAILS, LEGENDS, NOTES OR SPECIFICATIONS ARE DISCOVERED.
- . THE DRAWINGS ARE DIAGRAMMATIC, THEREFORE THE FOLLOWING SHOULD BE NOTED: · IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE PLANTING AREAS FOR CLARITY. AVOID CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING MATERIALS AND ARCHITECTURAL FEATURES. INSTALL IRRIGATION PIPE AND WIRING IN LANDSCAPED AREAS WHENEVER POSSIBLE
- USE ONLY STANDARD TEES AND ELBOW FITTINGS. USE OF CROSS TYPE FITTINGS IS NOT PERMITTED. SELECT NOZZLES FOR SPRINKLERS WITH ARCS WHICH PROVIDE COMPLETE AND ADEQUATE COVERAGE WITH MINIMUM OVER SPRAY FOR THE SITE CONDITIONS. CAREFULLY ADJUST THE RADIUS OF THROW AND ARC OF COVERAGE OF EACH
- SPRINKLER TO PROVIDE THE BEST PERFORMANCE. THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF IRRIGATION SLEEVING. SLEEVES ARE TO BE INSTALLED FOR BOTH PIPING AND ELECTRICAL WIRING AT EACH HARDSCAPE CROSSING. COORDINATE INSTALLATION OF SLEEVING WITH OTHER TRADES. ANY PIPE OR WIRE WHERE SLEEVING WAS NOT INSTALLED, REQUIRES HORIZONTAL
- BORING BY THE IRRIGATION CONTRACTOR. INSTALL ELECTRICAL POWER TO THE CONTROLLER(S) IN ACCORDANCE WITH THE NEC AND ALL APPLICABLE LOCAL ELECTRICAL UTILITY CODES.
- B. PROVIDE 2 1 GALLON PER HOUR EMITTERS FOR EACH SHRUB AND 4 2 GALLON PER HOUR EMITTERS FOR EACH TREE. 9. PROVIDE 4 EXTRA POSITIVE (BLACK) AND ONE EXTRA GROUND WIRE (YELLOW) THE ENTIRE LENGTH OF MAIN, LOOP INTO EACH VALVE BOX. MULTI-STRAND WIRE IS PROHIBITED.
- 10. ELECTRIC CONTROL WIRE: TYPE UF WITH 4/64" UL LISTED INSULATION FOR UNDERGROUND BURIAL FOR CLASS II CIRCUITS NO. 12 DIRECT BURIAL COPPER WIRE 14 GUAGE FOR RUNS UP TO 1,000 LINEAR FEET.

Sunlit Designs, LLC 6644 Wadsworth Blvd. Suite 4 Arvada, CO 80003 (P)303-909-3850 www.sunlitdesigns.com bkehr@sunlitdesigns.con

# CITY OF BRIDGETON SITE DISTURBANCE PERMIT

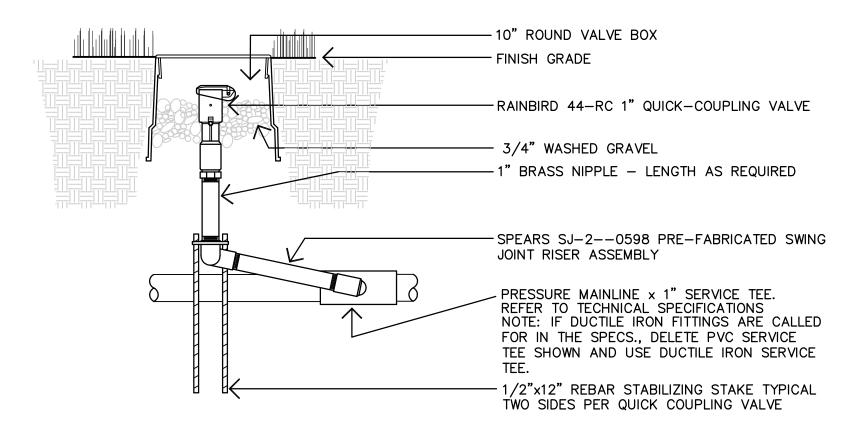
# POPEYE'S LOUISIANA KITCHEN

PORTION OF LOT 5 OF THE PARTITION OF ERATSTUS POST'S ESTATE CITY OF BRIDGETON, ST LOUIS COUNTY, MISSOURI

LOCATED IN SECTION 32, TOWNSHIP 46 NORTH, RANGE 5 EAST OF THE 6TH PRIME MERIDIAN 953 NORTHWEST PLAZA DRIVE, BRIDGETON, MO 63044

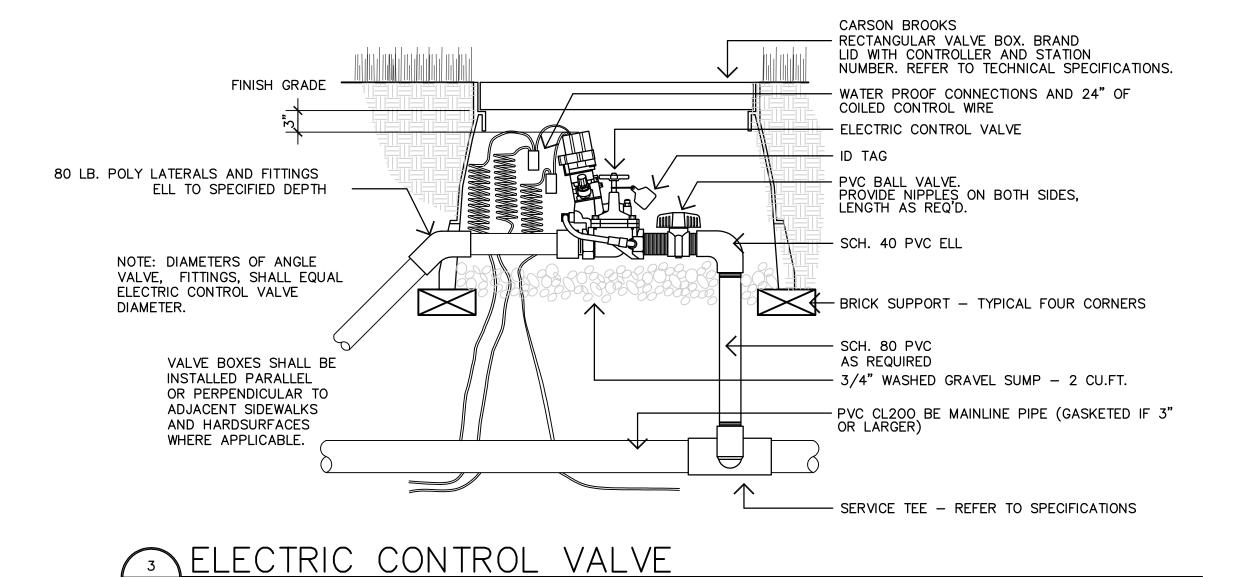
PIN: 12M230123

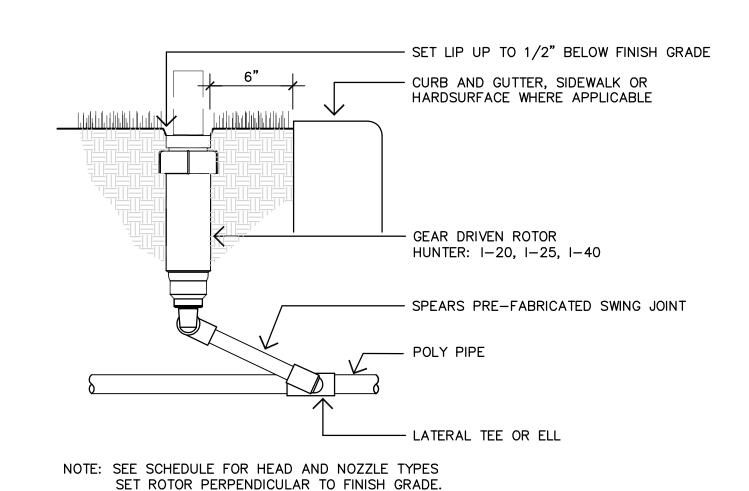
NOTE: COORDINATE LOCATION OF 4 QUICK COUPLERS WITH OWNER'S REPRESENATIVE



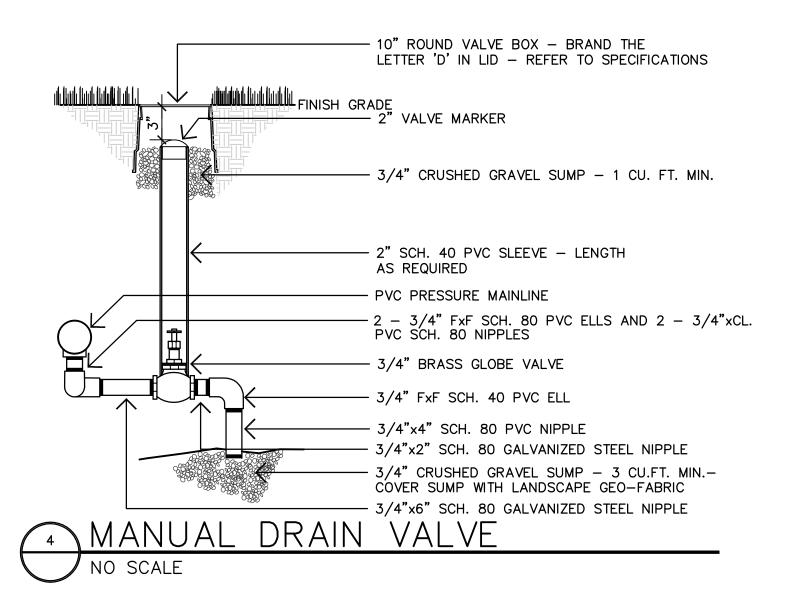
# QUICK COUPLING VALVE

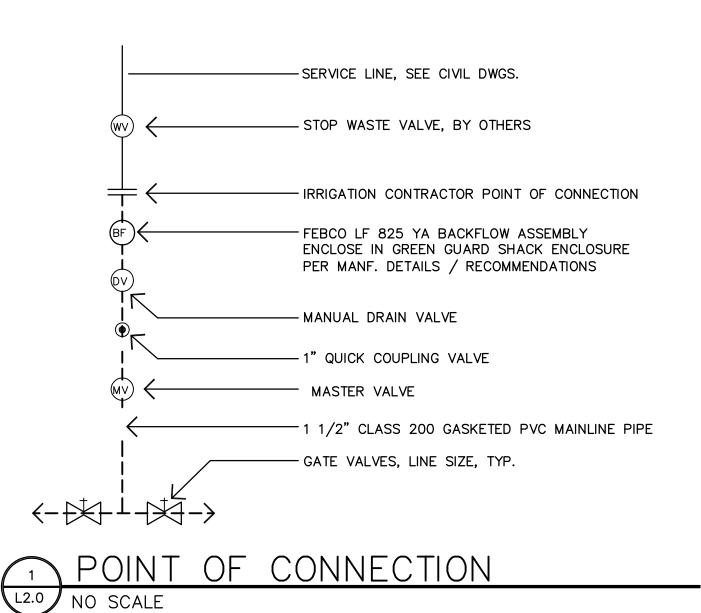
NO SCALE

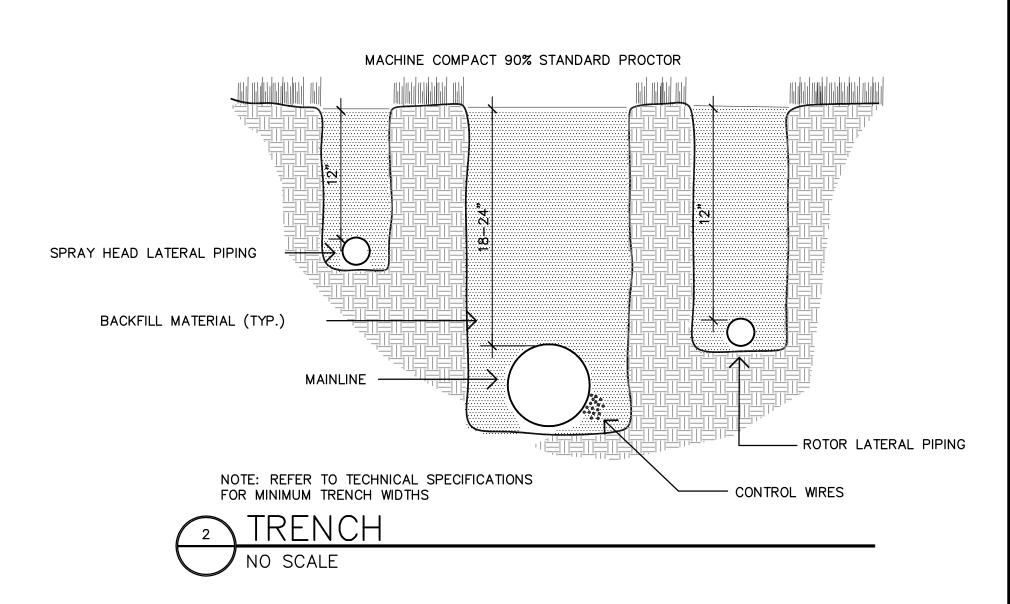












DRAWN:
DATE: 03-21-17
CHECKED: SLD
DATE: 03-21-17
REVISION #:
DATE:

Sunlit Designs, LLC

6644 Wadsworth Blvd. Suite 4 Arvada, CO 80003

(P)303-909-3850

www.sunlitdesigns.com bkehr@sunlitdesigns.con

1-3