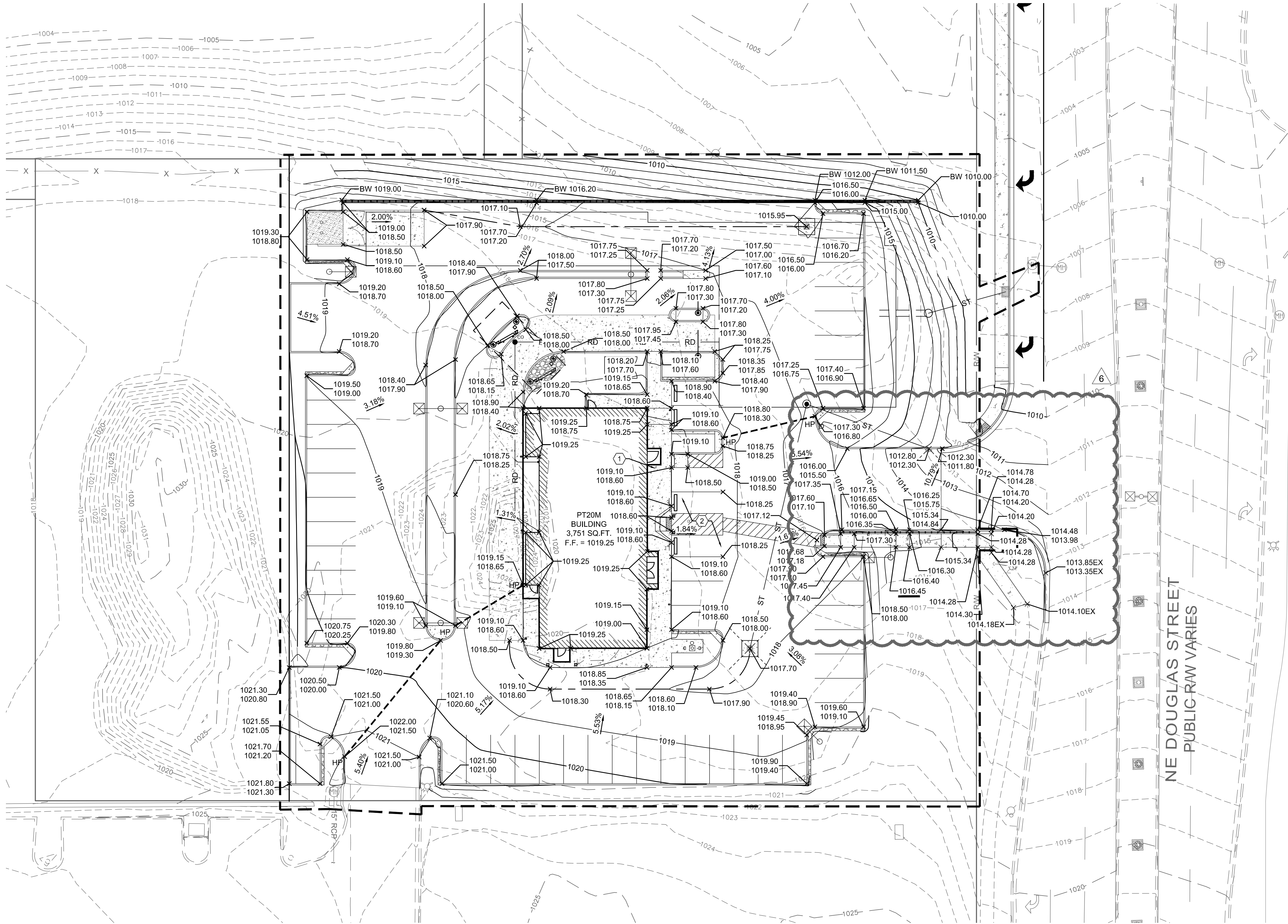


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As-built / Red line 10/26/2021

GENERAL NOTES:

- ALL EXISTING CONDITIONS, TOPOGRAPHY, UTILITIES AND PROPERTY INFORMATION ARE TAKEN FROM A SURVEY OF LAND SITUATED IN THE CITY OF LEE'S SUMMIT, COUNTY OF JACKSON, AND STATE OF MISSOURI, BY SURVEYOR: YOUNG - HOBBS AND ASSOCIATES, 1202 CROSSLAND AVE., CLARKSVILLE, TN 37040, PHONE: (931) 645-2524
- ALL CONSTRUCTION METHODS AND MATERIAL MUST CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF THE FEDERAL, STATE, COUNTY, CITY OR LOCAL REQUIREMENTS, WHICHEVER HAS JURISDICTION.
- ALL PROPOSED SPOT ELEVATIONS SHOWN ARE TOP OF CURB AND FINAL GRADE ELEVATIONS UNLESS OTHERWISE NOTED.
- CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
- CONTRACTOR TO VERIFY ALL EXISTING GRADES AND CONTACT ENGINEER PRIOR TO BEGINNING WORK IF DISCREPANCY IS FOUND. CONTRACTOR TO VERIFY ASSUMED FINISHED FLOOR ELEVATION PRIOR TO BEGINNING WORK.
- THE EXCAVATING CONTRACTOR MUST TAKE PARTICULAR CARE WHEN EXCAVATING IN AND AROUND EXISTING UTILITY LINES AND EQUIPMENT. VERIFY COVER REQUIREMENTS BY UTILITY CONTRACTORS AND/OR UTILITY COMPANIES SO AS TO NOT CAUSE DAMAGE.
- THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES 48 HOURS BEFORE CONSTRUCTION IS TO START. TO VERIFY IF ANY UTILITIES ARE PRESENT ON SITE. ALL VERIFICATIONS (LOCATION, SIZE AND DEPTH) SHALL BE MADE BY THE APPROPRIATE UTILITY COMPANIES. WHEN EXCAVATION IS AROUND OR OVER EXISTING UTILITIES, THE CONTRACTOR MUST NOTIFY THE UTILITY SO A REPRESENTATIVE OF THAT UTILITY COMPANY CAN BE PRESENT TO INSTRUCT AND OBSERVE DURING CONSTRUCTION.
- ALL WORK SHALL BE PERFORMED FROM PRIVATE PROPERTY. ALL TRAFFIC LANES MUST REMAIN OPEN AT ALL TIMES.
- CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING UTILITIES DURING CONSTRUCTION AND ALL DAMAGE SHALL BE REPAIRED TO ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER OR CITY.
- ALL EXISTING UTILITIES ARE TAKEN FROM SURVEY AND DO NOT NECESSARILY REPRESENT ALL UNDERGROUND UTILITIES ADJACENT TO OR UPON PREMISES SHOWN ON PLAN.

KEYED NOTES:

- CONTRACTOR TO MAINTAIN 2.00% MAX CROSS SLOPE ON SIDEWALK.
- CONTRACTOR TO MAINTAIN MAX 2.00% SLOPE IN ALL DIRECTIONS IN HANDICAP ACCESSIBLE AREA.

LEGEND

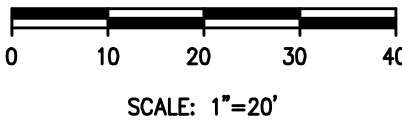
EXISTING	PROPOSED	DESCRIPTION
ST	ST	STORM LINE
HP	HP	STORM STRUCTURE
		DITCH LINE
1015	1015	CONTOUR
X 1019.00 EX.	X 1019.00	TOP OF CURB
X 1018.50 EX.	X 1018.50	TOP OF PAVEMENT
X 1019.00 EX.	X 1019.00	FINISHED GRADE SPOT ELEVATION
	1.00%	GRADE SLOPE
	HP	MAJOR FLOOD ROUTING
	HP	HIGH POINT



The Missouri One Call System is a communications system which was established to help prevent damage to underground facilities and to promote safety. Missouri One Call operators are on duty 24 hours a day, seven days a week. Missouri One Call provides a telephone number for contractors and the general public to call for notification of their intent to use equipment for excavation, grading, blasting, boring, demolition or other types of similar work.

1-800-DIG-RITE or 811

MAKE THE CALL...IT'S THE LAW

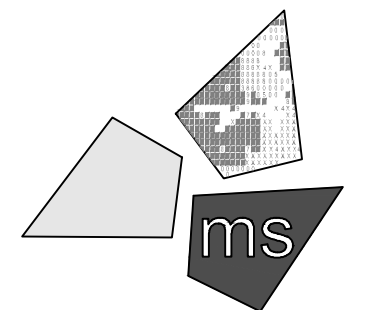


REVISION/DATE/DESCRIPTION

60% Plan Set	10/20/20
90% Plan Set	11/17/20
100% Plan Set/Bid Set	12/16/20
Issue for Construction	04/26/21
Bulletin 2	06/04/21
Bulletin 3	06/25/21
Bulletin 4	07/08/21
Bulletin 6	08/26/21

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phone 614.898.7100
fax 614.898.7570

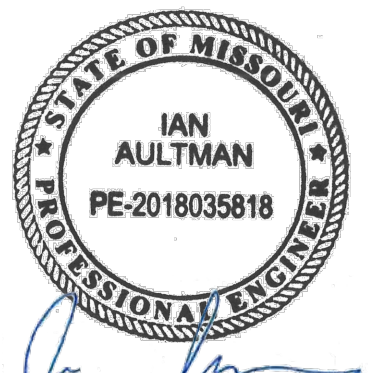
PROJECT

WHATABURGER
PT20M BUILDING

1460 NE DOUGLAS ST.
LEE'S SUMMIT, MO
64086

SHEET TITLE

SITE
GRADING
PLAN



DRAWN BY: LLK/AMA

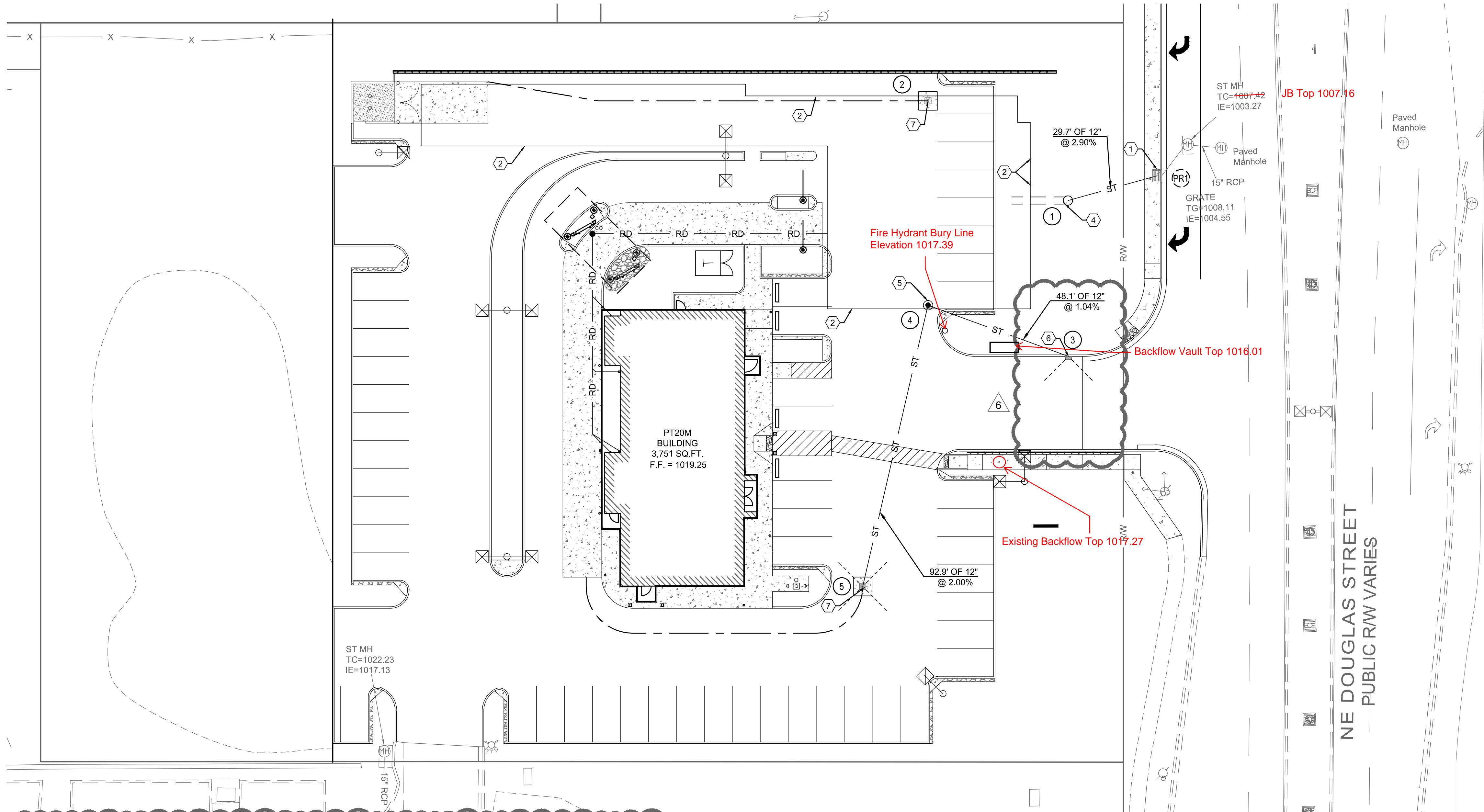
CHECKED BY: KEA

PROJECT NO: 40497-01

DRAWING

C-6

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- A. ALL EXISTING CONDITIONS, TOPOGRAPHY, UTILITIES AND PROPERTY INFORMATION ARE TAKEN FROM A SURVEY OF LAND SITUATED IN THE CITY OF LEE'S SUMMIT, COUNTY OF JACKSON, AND STATE OF MISSOURI, BY SURVEYOR: YOUNG - HOBBS AND ASSOCIATES, 1202 CROSSLAND AVE., CLARKSVILLE, TN 37040, PHONE: (931) 645-2524
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- I. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING UTILITIES DURING CONSTRUCTION AND ALL DAMAGE SHALL BE REPAIRED TO ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER OR CITY.
- J. CONTRACTOR SHALL INSTALL AND BACKFILL STRUCTURES AND TRENCHES PER DETAILS ON SHEET C-10.
- K. ALL EXISTING UTILITIES ARE TAKEN FROM SURVEY AND DO NOT NECESSARILY REPRESENT ALL UNDERGROUND UTILITIES ADJACENT TO OR UPON PREMISES SHOWN ON PLAN.
- L. 12" STORM CONDUITS ARE ADS N-12 SMOOTH INTERIOR HDPE PIPE OR APPROVED EQUAL.
- M. COMPACTED FILL SHALL BE PLACED A MINIMUM OF 18" ABOVE THE TOP OF PIPE PRIOR TO INSTALLATION.

KEYED NOTES:

- 1 CONNECT PROPOSED STORM SYSTEM OUTLET TO PROPOSED CURB INLET BY OTHERS.
- 2 PROPOSED UNDERGROUND DETENTION, ADS STORMTECH MC-4500 CHAMBER SYSTEM, 14,400 CF. SEE DETAILS ON SHEETS C-12 AND C-13.
- 3 NOT USED.
- 4 PROPOSED OUTLET CONTROL STRUCTURE. SEE DETAILS ON SHEET C-10.
- 5 PROPOSED MANHOLE. SEE DETAILS ON SHEET C-13.1.
- 6 PROPOSED CURB INLET. SEE DETAIL ON SHEET C-13.1.
- 7 PROPOSED CATCH BASIN WITH CONCRETE COLLAR. SEE DETAILS ON SHEET C-10.

LEGEND

EXISTING	PROPOSED	DESCRIPTION
ST	ST	STORM LINE
		STORM STRUCTURE
		DITCH LINE

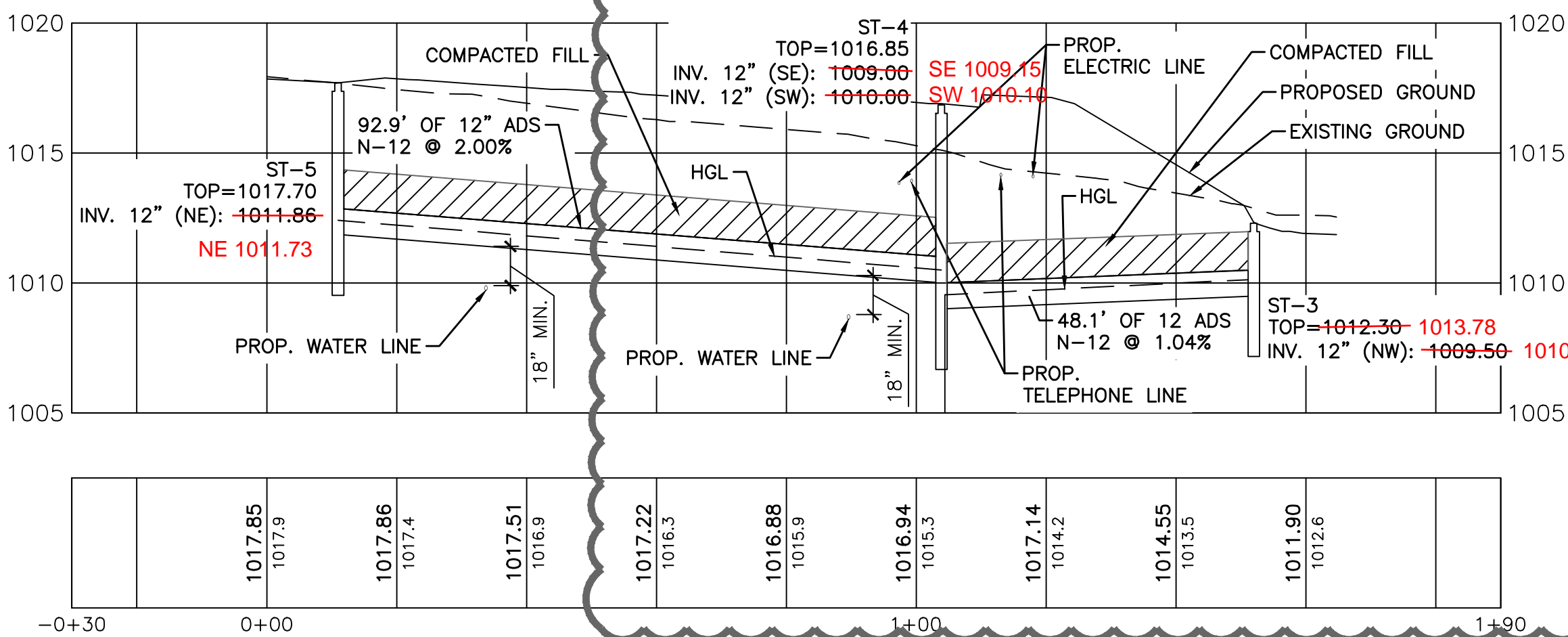
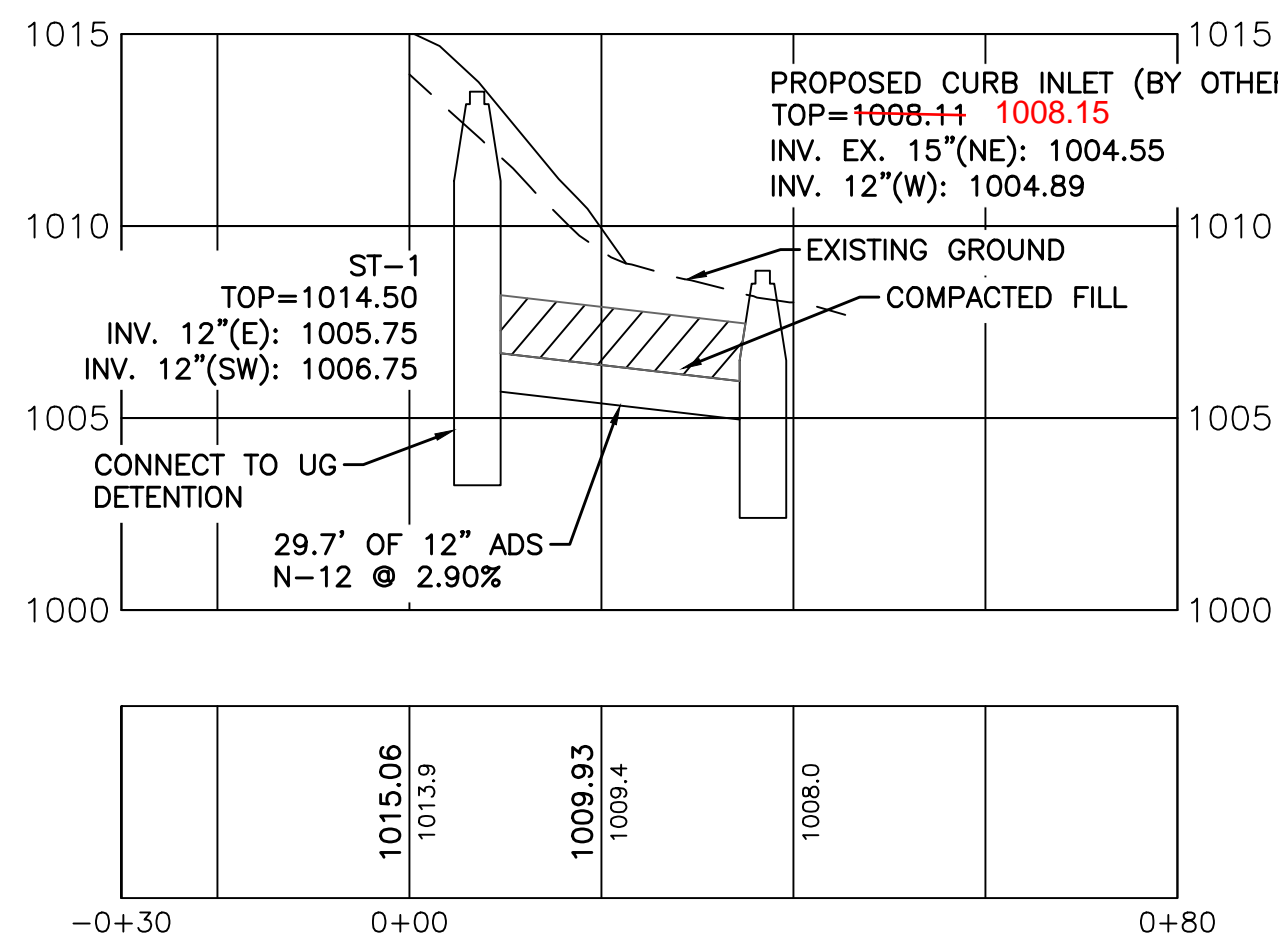
As-built / Red line 10/26/2021

Storm Sewer Tabulation

Station	Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (l)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID	
Line	To Line	Incr	Total	Incr	Total	Inlet	Syst						Size	Slope	Dn	Up	Dn	Up	Dn	Up		
		(ft)	(ac)	(ac)	(C)	(min)	(min)		(in/hr)	(cfs)	(cfs)	(ft/s)	(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)		
1	End	48.003	0.24	0.24	0.90	0.22	0.22	5.0	5.0	9.9	2.14	3.94	4.63	12	1.04	1009.00	1009.50	1009.53	1010.13	1016.85	1012.30	3 to 4

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line		(ac)	(ac)		(C)	Incr	Total	Inlet (min)					Syst (min)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	
1	End	52.9	0.19	0.19	0.90	0.17	0.17	5.0	5.0	9.9	1.69	5.48	4.08	12	2.00	1010.00	1011.86	1010.50	1012.44	1016.85	1017.70	5 to 4



STORM STRUCTURE DATA

- PROPOSED CURB INLET (BY OTHERS)
TC: ~~1008.11~~ 1008.15
EX: 15" INV (NE) = 1004.55
PR: 12" INV (W) = 1004.89
- PROPOSED 48" DIA. OUTLET CONTROL STRUCTURE
TC: 1014.50
PR: 12" INV (E) = 1005.75
PR: 12" INV (SW) = 1006.75
- PROPOSED 36" L x 36" W CATCH BASIN
TC: ~~1015.85~~ Top 1015.88 FL Out 1007.60
PR: 12" INV (SW) = ~~1009.00~~ 1009.15
- PROPOSED 48" L x 48" W CURB INLET
TC: ~~1012.30~~ 1013.78
PR: 12" INV (NW) = ~~1009.50~~ 1010.28
- PROPOSED 48" L x 48" W MANHOLE
TC: 1016.85
PR: 12" INV (SE) = ~~1010.00~~ 1010.10
PR: 12" INV (SW) = ~~1009.00~~ 1009.15
- PROPOSED 36" L x 36" W CATCH BASIN
TC: 1017.70
PR: 12" INV (NE) = ~~1011.86~~ 1011.73



MISSOURI ONE CALL SYSTEM

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1-800-DIG-RITE or 811

MAKE THE CALL...IT'S THE LAW

1 PROFILE VIEW - ST-1 - EX1

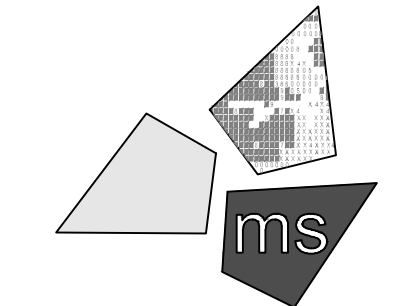
2 PROFILE VIEW - ST-3 - ST-5

REVISION/DATE/DESCRIPTION

60% Plan Set	10/20/20
90% Plan Set	11/17/20
100% Plan Set/Bid Set	12/16/20
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PROJECT

WHATABURGER
PT20M BUILDING

1460 NE DOUGLAS ST.
LEE'S SUMMIT, MO
64086

SHEET TITLE

STORM
SEWER
PLAN



DRAWN BY: LLK/JAMA

CHECKED BY: KEA

PROJECT NO: 40497-01

DRAWING

C-6.1

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4

PROJECT INFORMATION	
ENGINEER	DIRK HUDSON
PRODUCT MANAGER	DIRK HUDSON@ADS-PIPE.COM
ADS SALES REP:	DUSTIN KETCHUM
	316-201-7052
	DUSTIN.KETCHUM@ADS-PIPE.COM
PROJECT NO:	S208128



WHATABURGER 1450 NE DOUGLAS ST. LEE'S SUMMIT, MO

MC-4500 STORMTECH CHAMBER SPECIFICATIONS

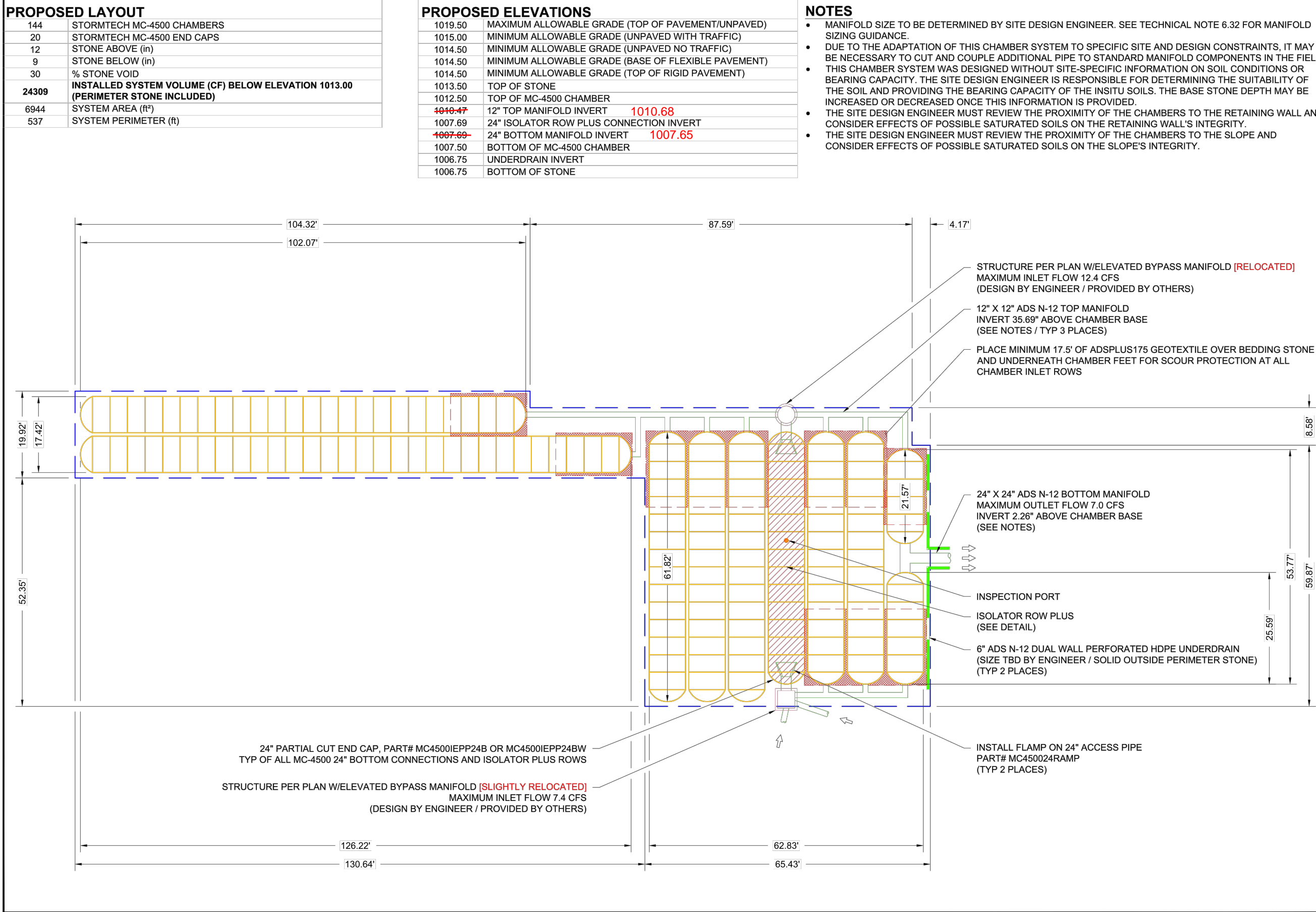
- CHAMBERS SHALL BE STORMTECH MC-4500.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101.
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE APPROVED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-4500 CHAMBER SYSTEM

- STORMTECH MC-4500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONE SHORTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM 9" (230 mm) SPACING BETWEEN THE CHAMBER ROWS.
- INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
- STONE SHALL BE BROUGHT UP EVENLY AROUND CHAMBERS SO AS NOT TO DISTORT THE CHAMBER SHAPE. STONE DEPTHS SHOULD NEVER DIFFER BY MORE THAN 12" (300 mm) BETWEEN ADJACENT CHAMBER ROWS.
- STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIAL BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

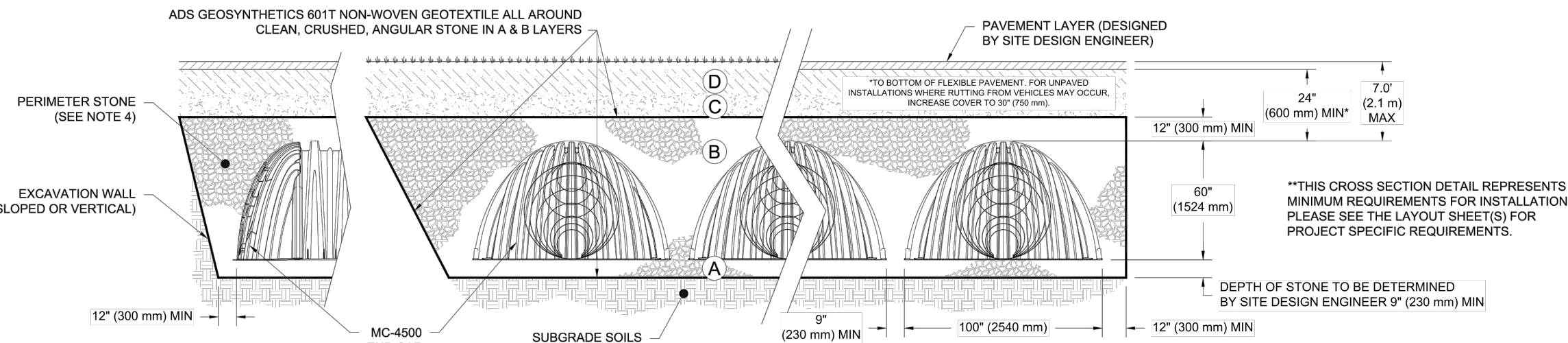
- STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
 - THE USE OF EQUIPMENT OVER MC-4500 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BASE CHAMBERS.
 - NO RUBBER Tired LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
 - FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.
- USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.
- CONTACT STORMTECH AT 1-888-892-2894 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.



4640 TRUENAN BLVD HILLIARD, OH 43026	4640 TRUENAN BLVD HILLIARD, OH 43026	4640 TRUENAN BLVD HILLIARD, OH 43026	4640 TRUENAN BLVD HILLIARD, OH 43026
ADS	ADS	ADS	ADS
PROJECT #	PROJECT #	PROJECT #	PROJECT #
S208128	S208128	S208128	S208128
DATE	DATE	DATE	DATE
10-27-20	10-27-20	10-27-20	10-27-20
DRAWN	DRAWN	DRAWN	DRAWN
AWM	AWM	AWM	AWM
CHECKED	CHECKED	CHECKED	CHECKED
NAB	NAB	NAB	NAB
DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION
WHATABURGER 1450 NE DOUGLAS ST.	WHATABURGER 1450 NE DOUGLAS ST.	WHATABURGER 1450 NE DOUGLAS ST.	WHATABURGER 1450 NE DOUGLAS ST.
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5	5	5	5

ACCEPTABLE FILL MATERIALS: STORMTECH MC-4500 CHAMBER SYSTEMS			
MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE (B LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <3% FINES OR PROCESSED AGGREGATE.	AASHTO M145 ¹ A-1, A-2, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE (A LAYER) TO THE 'C' LAYER ABOVE	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 ¹ 3, 4	NO COMPACTION REQUIRED.
A FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 ¹ 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

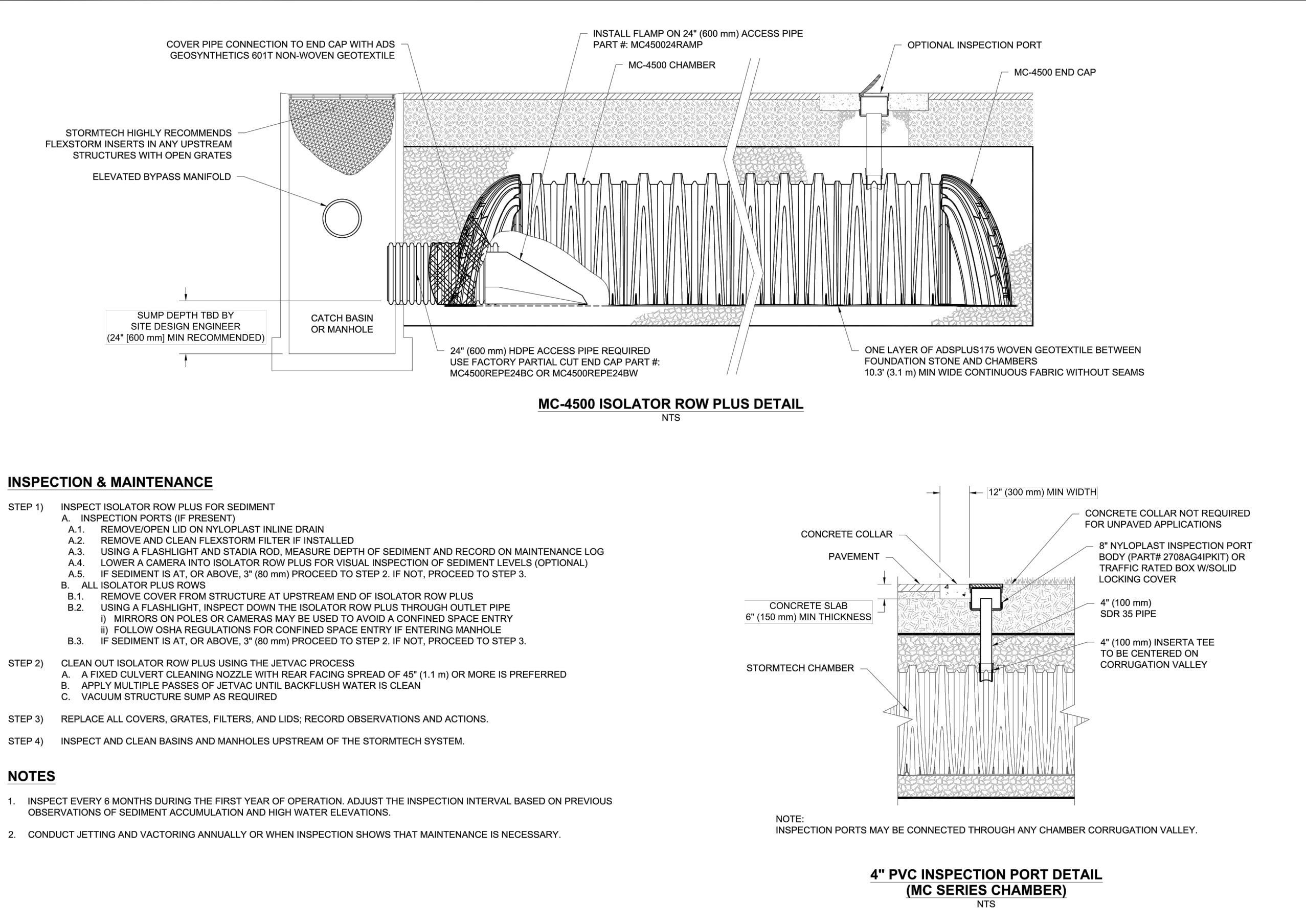
- PLEASE NOTE:
- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
 - STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
 - WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
 - ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL. REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101.
- MC-4500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

4640 TRUENAN BLVD HILLIARD, OH 43026	4640 TRUENAN BLVD HILLIARD, OH 43026	4640 TRUENAN BLVD HILLIARD, OH 43026	4640 TRUENAN BLVD HILLIARD, OH 43026
ADS	ADS	ADS	ADS
PROJECT #	PROJECT #	PROJECT #	PROJECT #
S208128	S208128	S208128	S208128
DATE	DATE	DATE	DATE
10-27-20	10-27-20	10-27-20	10-27-20
DRAWN	DRAWN	DRAWN	DRAWN
AWM	AWM	AWM	AWM
CHECKED	CHECKED	CHECKED	CHECKED
NAB	NAB	NAB	NAB
DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION
WHATABURGER 1450 NE DOUGLAS ST.	WHATABURGER 1450 NE DOUGLAS ST.	WHATABURGER 1450 NE DOUGLAS ST.	WHATABURGER 1450 NE DOUGLAS ST.
LEE'S SUMMIT, MO	LEE'S SUMMIT, MO	LEE'S SUMMIT, MO	LEE'S SUMMIT, MO
3	3	3	3
OF	OF	OF	OF
5	5	5	5



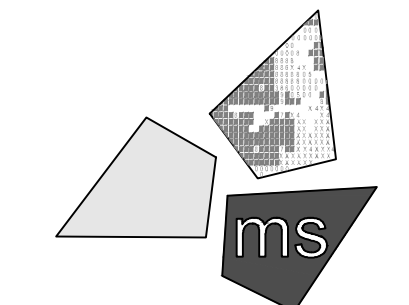
4640 TRUENAN BLVD HILLIARD, OH 43026	4640 TRUENAN BLVD HILLIARD, OH 43026	4640 TRUENAN BLVD HILLIARD, OH 43026	4640 TRUENAN BLVD HILLIARD, OH 43026
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4	4	4	4
OF	OF	OF	OF
5	5	5	5

REVISION/DATE/DESCRIPTION

60% Plan Set	10/20/20
90% Plan Set	11/17/20
100% Plan Set/Bid Set	12/16/20
Issue for Construction	04/26/21
Bulletin 2	06/04/21
Bulletin 3	06/25/21
Bulletin 4	07/08/21

NOTICE

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PROJECT

WHATABURGER
PT20M BUILDING

1460 NE DOUGLAS ST.
LEE'S SUMMIT, MO
64086

SHEET TITLE

DETENTION
SYSTEM
DETAILS



DRAWN BY: LLK/JAM

CHECKED BY: KEA

PROJECT NO: 40497-01

DRAWING

C-12