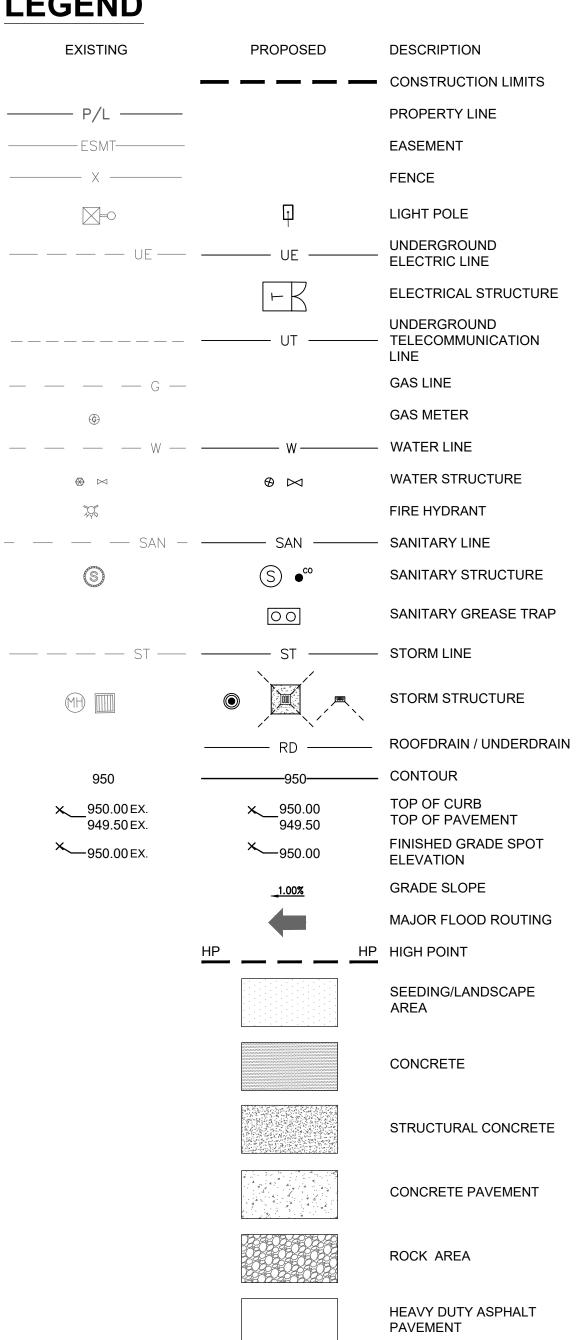
# WHATABURGER

# NEQ HIGHWAY 150 AND SW HOLLYWOOD DRIVE LEE'S SUMMIT, MO 64802 JACKSON COUNTY PROTOTYPE 20-M FINAL DEVELOPMENT PLAN

## **LEGEND**





## **VICINITY MAP**

## **OWNER**

WHATABURGER 300 CONCORD PLAZA DR. SAN ANTONIO, TX 78216 PHONE: (210) 476-6842 **CONTACT: ALYSSIA LESTER** EMAIL: alester@wbhq.com

## **ENGINEER**

ms consultants, inc. 2221 SCHROCK ROAD COLUMBUS, OHIO 43229 PHONE: (614) 898-7100 CONTACT: IAN AULTMAN EMAIL: iaultman@msconsultants.com

## **BENCHMARK**

TBM 1: 1/2 IRON NORTHING: 2822704.4825 EASTING: 978325.3390 **ELEVATION = 1022.68** 

TBM 2: 1/2 IRON NORTHING: 2822484.7625 EASTING: 978055.2866 **ELEVATION** = 1019.71

**BASIS OF BEARINGS:** MO (C) STATE PLANE COORDINATE SYSTEM SPC (2402 MO C)

## **SURVEYOR**

YOUNG - HOBBS AND ASSOCIATES 1202 CROSSLAND AVE. CLARKSVILLE, TN 37040 PHONE: (931) 645-2524 CONTACT: DAVE R. HOBBS

## **GEOTECHNICAL ENGINEER**

TERRACON CONSULTANTS, INC. 4765 WEST JUNCTION STREET SPRINGFIELD, MISSOURI 65802 PHONE: (417) 864-5100 CONTACT: TY G. ALEXANDER, P.E.

THIS PROPERTY IS LOCATED WITHIN AN AREA HAVING ZONE DESIGNATIONS OF "X" BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, ON FLOOD INSURANCE RATE MAP NO. 29095C0532G, WITH A MAP EFFECTIVE DATE OF JANUARY 20TH, 2017, IN JACKSON COUNTY, STATE OF MISSOURI, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID

SHEET INDEX	
COVER SHEET	C-1.0
SURVEY	1 OF 1
SITE DEMOLITION PLAN	C-2.0
SITE DIMENSION PLAN	C-3.0
SITE ZONING PLAN	C-3.1
CONCRETE JOINTING PLAN	C-4.0
SITE GRADING PLAN	C-5.0
SITE DRAINAGE PLAN	C-5.1
STORM SEWER PLAN AND PROFILES	C-5.2
SITE UTILITY PLAN	C-6.0
SITE DETAILS	C-7.0
SITE DETAILS	C-7.1
SITE DETAILS	C-7.2
SITE DETAILS	C-7.3
DETENTION SYSTEM DETAILS	C-7.4
SITE DETAILS	C-7.5
SITE DETAILS	C-7.6
FIRE PROTECTION PLAN	C-8.0
SWPPP PHASE - PRE-CONSTRUCTION	C-9.0
SWPPP PHASE - DURING & POST CONSTRUCTION	C-9.1
SWPPP NOTES	C-10.0
SWPPP NOTES	C-10.1
SWPPP DETAILS	C-10.2
SWPPP DETAILS	C-10.3
LANDSCAPE PLAN	L-1.0
IRRIGATION PLAN	I-1.0

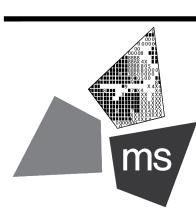
#### REVISION/DATE/DESCRIPTION

SIR UPDATES

I	60% SET	01/24/22
I	PDP APPLICATION TO CITY	02/24/22
ı	RESPONSE TO CITY COMMENTS I	03/29/22
ı	FINAL DEVELOPMENT SET	06/29/22
ı	RESPONSE TO FDP COMMENTS	08/30/22
	RESPONSE TO	09/29/22

MENT WITH THE ARCHITECT LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFI





ms consultants, inc. engineers, architects, planners 2221 Schrock Road Columbus, Ohio 43229-1547 phone 614.898.7100 fax 614.898.7570

PROJECT

PROPOSED PT20M BUILDING

NEQ HWY 150 & SW HOLLYWOOD DR. LEE'S SUMMIT, MO 64082

SHEET TITLE

**COVER SHEET** 



DRAWN BY: CHECKED BY: 40497-21 PROJECT NO:

DRAWING

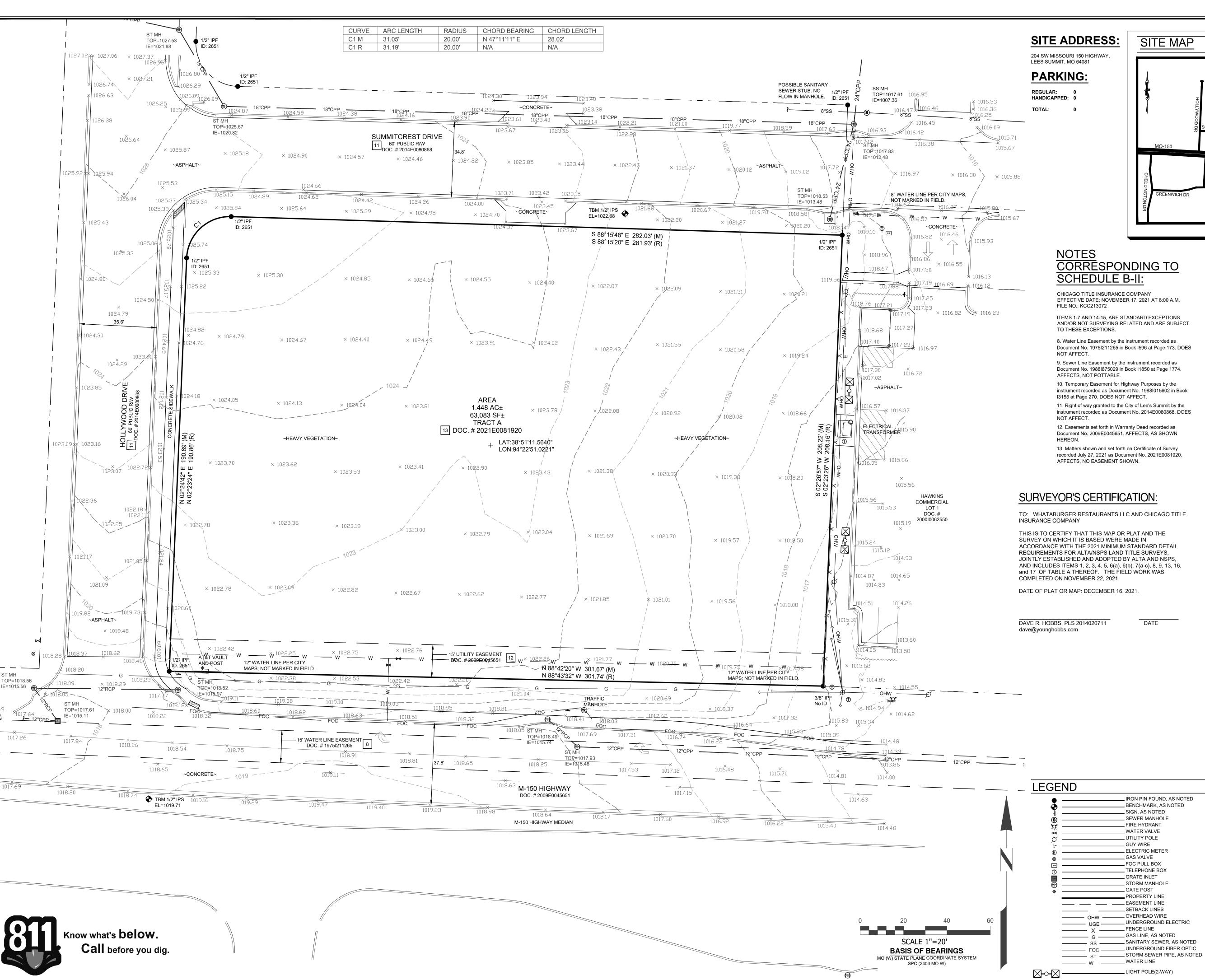
Know what's **below**.

Call before you dig.

C-1.0

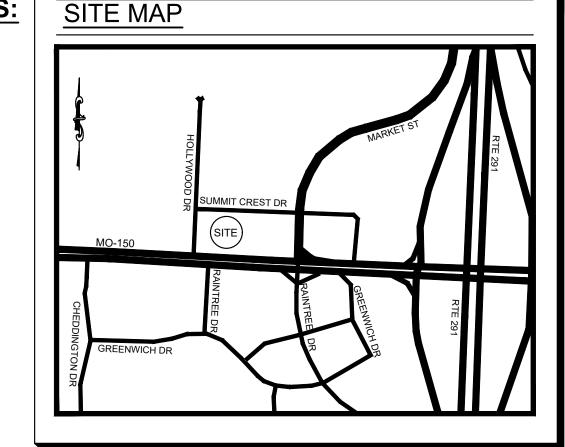
**FLOOD INFORMATION** 

PROPERTY IS SITUATED.



## SITE ADDRESS:

204 SW MISSOURI 150 HIGHWAY,



## **CORRESPONDING TO** SCHEDULE B-II:

CHICAGO TITLE INSURANCE COMPANY EFFECTIVE DATE: NOVEMBER 17, 2021 AT 8:00 A.M. FILE NO.: KCC213072

ITEMS 1-7 AND 14-15, ARE STANDARD EXCEPTIONS AND/OR NOT SURVEYING RELATED AND ARE SUBJECT TO THESE EXCEPTIONS.

8. Water Line Easement by the instrument recorded as Document No. 1975I211265 in Book I596 at Page 173. DOES

9. Sewer Line Easement by the instrument recorded as Document No. 1988I875029 in Book I1850 at Page 1774. AFFECTS, NOT POTTABLE.

10. Temporary Easement for Highway Purposes by the instrument recorded as Document No. 1988I015602 in Book I3155 at Page 270. DOES NOT AFFECT.

11. Right of way granted to the City of Lee's Summit by the instrument recorded as Document No. 2014E0080868. DOES

12. Easements set forth in Warranty Deed recorded as Document No. 2009E0045651. AFFECTS, AS SHOWN

13. Matters shown and set forth on Certificate of Survey recorded July 27, 2021 as Document No. 2021E0081920. AFFECTS, NO EASEMENT SHOWN.

## SURVEYOR'S CERTIFICATION:

TO: WHATABURGER RESTAURANTS LLC AND CHICAGO TITLE

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 5, 6(a), 6(b), 7(a-c), 8, 9, 13, 16, and 17 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON NOVEMBER 22, 2021.

DATE OF PLAT OR MAP: DECEMBER 16, 2021.

DATE

RON PIN FOUND, AS NOTED

\_ BENCHMARK, AS NOTED

\_SIGN, AS NOTED \_ SEWER MANHOLE

\_ FIRE HYDRANT

\_ ELECTRIC METER

\_\_ WATER VALVE

\_\_ UTILITY POLE

\_ GUY WIRE

\_\_ GAS VALVE

\_ FOC PULL BOX

\_\_TELEPHONE BOX \_\_ GRATE INLET

\_ STORM MANHOLE

\_\_PROPERTY LINE

\_\_ UNDERGROUND ELECTRIC

\_\_ GATE POST

\_\_ FENCE LINE

## **TABLE A NOTES:**

ITEM 2: ADDRESS SHOWN IS PER TITLE COMMITMENT NO. KCC213072.

> THIS PROPERTY IS LOCATED WITHIN AN AREA HAVING ZONE DESIGNATIONS OF "X" BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, ON FLOOD INSURANCE RATE MAP NO.29095C0532G, WITH A MAP REVISED DATE OF JANUARY 20, 2017, IN JACKSON COUNTY, STATE OF MISSOURI, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PROPERTY IS SITUATED.

CONTOURS WERE DERIVED FROM RANDOM SHOTS AND CROSS SECTIONS AND ARE SHOWN AT ONE FOOT INTERVALS. ELEVATIONS SHOWN HEREON ARE BASED ON GPS OBSERVATIONS TOGETHER WITH AN OPUS SOLUTION, DATED 11/22/2021 (NAVD88, GEOID18).

ITEM 6A: NO ZONING REPORT PROVIDED TO THIS SURVEYOR.

THERE WAS NO EVIDENCE OF RECENT EARTH MOVING, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS OBSERVED IN THE PROCESS OF CONDUCTING THE FIELDWORK.

THERE WAS NO EVIDENCE OF RECENT CHANGES IN STREET RIGHT OF WAY LINES. THERE WAS NO EVIDENCE OF RECENT OR STREET SIDEWALK CONSTRUCTION OR REPAIRS OBSERVED IN THE PROCESS OF CONDUCTING THE FIELDWORK.

### LAND DESCRIPTION AS SURVEYED

PART OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 30, TOWNSHIP 47 NORTH, RANGE 31 WEST, OF THE FIFTH PRINCIPAL MERIDIAN, LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, DESCRIBED AS FOLLOWS:

BEING ALL OF TRACT "A", ON THE CERTIFICATE OF SURVEY, RECORDED JULY 27, 2021 AS DOCUMENT NO. 2021E0081920 IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, ALSO DESCRIBED AS FOLLOWS:

BEGINNING AT A 1/2" IRON PIN FOUND (ID: 2651) AT THE RIGHT OF WAY LINE INTERSECTION OF 150 HIGHWAY AND HOLLYWOOD DRIVE; THENCE WITH THE EAST RIGHT OF WAY LINE OF SAID HOLLYWOOD DRIVE N 02°24'42" E A DISTANCE OF 190.89 FEET TO A 1/2" IRON PIN FOUND (ID: 2651); THENCE WITH THE RIGHT OF WAY LINE INTERSECTION OF SAID HOLLYWOOD DRIVE AND SUMMITCREST DRIVE WITH A CURVE TURNING TO THE RIGHT WITH AN ARC LENGTH OF 31.05 FEET WITH A RADIUS OF 20.00 FEET WITH A CHORD BEARING OF N 47°11'11" E, WITH A CHORD LENGTH OF 28.02 FEET TO A 1/2" IRON PIN FOUND (ID: 2651); THENCE WITH THE SOUTH RIGHT OF WAY

LINE OF SAID SUMMITCREST DRIVE S 88°15'48" E A DISTANCE OF 282.03 FEET TO A 1/2" IRON PIN FOUND (ID: 2651); THENCE LEAVING SAID RIGHT OF WAY LINE WITH THE WEST LINE OF HAWKINS COMMERCIAL LOT 1, RECORDED IN DOCUMENT NO. 2000I0062550 S 02°26'57" W A DISTANCE OF 208.22 FEET TO A 3/8" IRON PIN FOUND IN THE NORTH RIGHT OF WAY LINE OF SAID 150 HIGHWAY; THENCE WITH SAID NORTH RIGHT OF WAY LINE N 88°42'20" W A DISTANCE OF 301.67 FEET TO THE POINT OF BEGINNING, HAVING AN AREA OF 63,083 SQUARE FEET, 1.448 ACRES, MORE OR LESS.

## **SURVEY NOTES:**

INFORMATION REGARDING THE PRESENCE, SIZE AND LOCATION OF UNDERGROUND UTILITIES IS SHOWN HEREON. THIS INFORMATION HAS BEEN SHOWN BASED ON THE LOCATION ABOVE GROUND APPURTENANCES, AVAILABLE DESIGN PLANS AND FLAGS AND PAINT PLACED BY THE UNDERGROUND PROTECTION SERVICE. NO CERTIFICATION IS MADE AS TO THE ACCURACY OF THOROUGHNESS OF THE INFORMATION CONCERNING UNDERGROUND UTILITIES AND STRUCTURES SHOWN HEREON. (MISSOURI ONE CALL 1-800-DIG-RITE). THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A PRIVATE UTILITY LOCATE.

CONTACT PROPER AUTHORITIES BEFORE BUILDING NEAR UTILITY LINES, FOR EASEMENT WIDTH AND RESTRICTIONS. UTILITIES ARE APPROXIMATE AND SHOULD BE VERIFIED PRIOR TO ANY CONSTRUCTION.

UNLESS STATED OTHERWISE, ANY MONUMENT REFERRED TO HEREIN AS AN "IRON PIN SET" IS A SET 5/8" DIAMETER REBAR, WITH AN YELLOW PLASTIC CAP STAMPED "YOUNG-HOBBS"

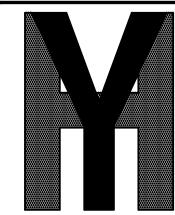
THE PERSON OR ENTITIES NAMED HERON. NO EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE INFORMATION SHOWN HEREON IS TO BE EXTENDED TO ANY PERSONS OR ENTITIES OTHER THAN THOSE SHOWN HEREON.

THERE WERE NO BUILDINGS ON THE SUBJECT PROPERTY AT THE TIME OF THE SURVEY.

THIS SURVEY HAS BEEN PREPARED FOR THE EXCLUSIVE USE OF

LIST OF ENCROACHMENTS: NONE, THE OWNERSHIP OF CURB, UTILITIES, FENCES, AND/OR PERIMETER WALLS SHOWN HEREON ARE NOT KNOWN AND THUS ARE NOT LISTED AS ENCROACHMENTS. CURB, UTILITIES, FENCES, AND/OR PERIMETER WALLS ARE SHOWN IN THEIR RELATIVE POSITION TO THE BOUNDARY.

I DO HEREBY STATE THAT THIS IS A TRUE, COMPLETE AND CORRECT SURVEY OF THE DESCRIBED REAL PROPERTY SITUATED IN THE COUNTY OF GREENE, MISSOURI AND THAT THIS SURVEY WAS EXECUTED IN ACCORDANCE WITH THE CURRENT MISSOURI MINIMUM STANDARDS FOR PROPERTY SURVEYS (URBAN SURVEY 1:20,000)



YOUNG - HOBBS AND **ASSOCIATES** 

> 1202 CROSSLAND AVE. CLARKSVILLE, TN 37040 PHONE 931-645-2524 FAX 931-645-2768

PRELIMINARY - NOT FOR RECORDING OR LAND TRANSFER

DAVE R. HOBBS, PLS 2014020711



ms consultants, inc. engineers, architects, planners 2221 Schrock Road Columbus, Ohio 43229-1547 phone 614.898.7100 fax 614.898.7570

> **ALTA/NSPS LAND TITLE SURVEY**

OWNER **NFORMATION** 

SHUN PING YEH TAX ID: 70-400-04-03-02-3-00-000 DOC. # 2021E0043600

ALSO BEING TRACT "A" DOC. # 2021E0081920

DOC. # 2021E0043599

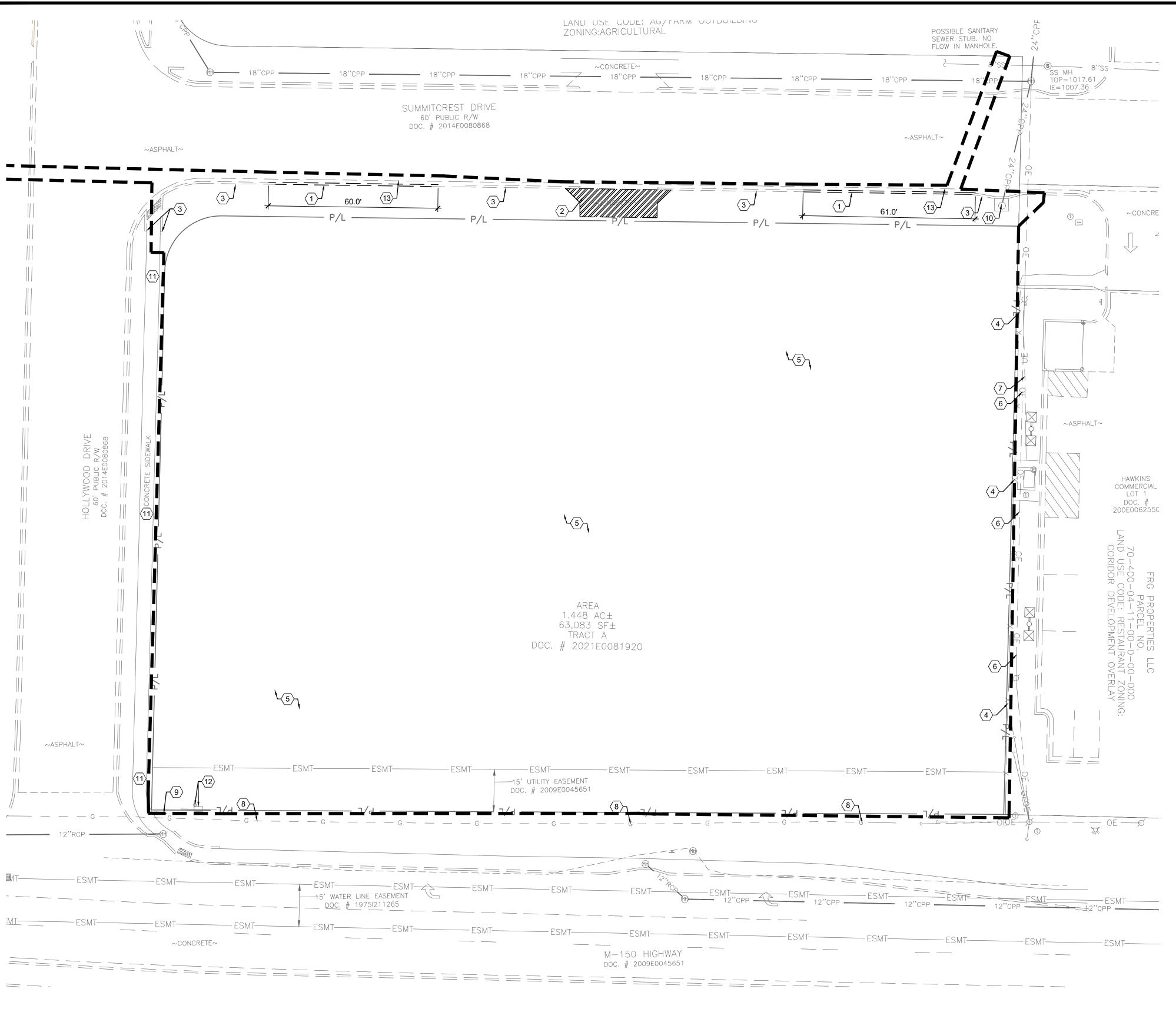
**CITY OF LEES SUMMIT COUNTY OF JACKSON** STATE OF MISSOURI

DRAWN BY: CLH,KAB APPROVED BY: DATE: (FIELD) 11/22/2021 DATE: (OFFICE) 12/16/2021

242-21

YHA PRO.#

SHEET 1 OF 1



## **GENERAL NOTES:**

- 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 AVENUE CLARKSVILLE, TN 37040.
- B. AT START OF PROJECT AND PRIOR TO DEMOLITION OF EXISTING CONDITIONS, CONTRACTOR SHALL BE IN CONTACT WITH ADJACENT PROPERTY OWNERS, CITY REPRESENTATIVE, UTILITY REPRESENTATIVES AND OWNER REPRESENTATIVE TO COORDINATE DEMOLITION TIMING
- C. CONTRACTOR TO REMOVE AND DISPOSE OF ALL DEBRIS AND OTHER MATERIALS RESULTING FROM DEMOLITION AND CONSTRUCTION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
- D. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO ADJACENT PROPERTIES DURING CONSTRUCTION PHASES OF THIS PROJECT. CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR DAMAGE TO NEIGHBORING PROPERTIES OCCURRING AS A RESULT OF CONSTRUCTION ACTIVITIES.
- E. ALL EXISTING UTILITIES ARE SHOWN HEREIN AS REFERENCE ONLY AND ARE BASED ON RECORD OF THE VARIOUS UTILITY COMPANIES, A FIELD SURVEY AND EXISTING PLANS. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS OF ALL UTILITIES PRIOR TO DEMOLITION ACTIVITIES. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES DURING CONSTRUCTION.
- F. 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.
- G. CONTRACTOR SHALL CONFINE ALL STOCKPILING OF DEMOLITION MATERIALS TO WITHIN THE LIMITS OF THE SUBJECT PROPERTY.
- H. CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES PRIOR TO DEMOLITION. SEE SHEETS C-10.0 AND C-10.1 FOR NOTES AND DETAILS.

## **KEYED NOTES:**

- (1) EXISTING CURB TO BE REMOVED AND DISPOSED OF.
- (2) EXISTING CONCRETE TO BE REMOVED AND DISPOSED OF.
  - EXISTING CURB TO REMAIN.
- (4) EXISTING WOODEN FENCE TO REMAIN.
- (5) EXISTING VEGETATION TO BE REMOVED AND DISPOSED OF.
- 6 EXISTING OVERHEAD ELECTRIC LINE TO REMAIN DURING CONSTRUCTION.
- (7) EXISTING UNDERGROUND ELECTRIC LINE TO REMAIN DURING CONSTRUCTION.
- PROTECT EXISTING GAS LINE TO REMAIN DURING CONSTRUCTION.
- 9 EXISTING SIGN TO REMAIN.
- (10) EXISTING STORM MANHOLE TO REMAIN.
- (11) EXISTING CONCRETE SIDEWALK TO REMAIN.
- (12) EXISTING AT&T VAULT AND POST TO REMAIN.
- \_\_\_\_\_\_
- EXISTING GUTTER TO REMAIN ALONG SUMMITCREST DRIVE.

## LEGEND

LLGLIND	
EXISTING	DESCRIPTION
UE	UNDERGROUND ELECTRIC LINE
	UNDERGROUND TELECOMMUNICATION LINE
— — — G —	- GAS LINE
— — — SAN —	SANITARY SEWER
ST	STORM SEWER
	WATER MAIN
———— P/L ————	_ PROPERTY LINE
	CONSTRUCTION LIMITS
ESMT-	EASEMENT
	CONCRETE REMOVAL
	STORM STRUCTURE
⋈ ※	WATER STRUCTURE
***	FIRE HYDRANT

LIGHT POLE

TRAFFIC POLE

TRAFFIC MANHOLE

REVISION/DATE/DESCRIPTION

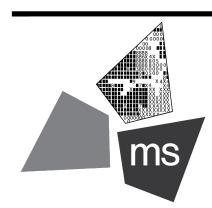
SIR UPDATES

60% SET	01/24/22
PDP APPLICATION TO CITY	02/24/22
RESPONSE TO CITY COMMENTS I	03/29/22
FINAL DEVELOPMENT SET	06/29/22
RESPONSE TO FDP COMMENTS	08/30/22
RESPONSE TO FDP COMMENTS II	09/29/22

#### NOTICE

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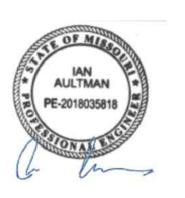
PROJECT

PROPOSED PT20M BUILDING

NEQ HWY 150 & SW HOLLYWOOD DR. LEE'S SUMMIT, MO 64082

SHEET TITLE

SITE DEMOLITION PLAN



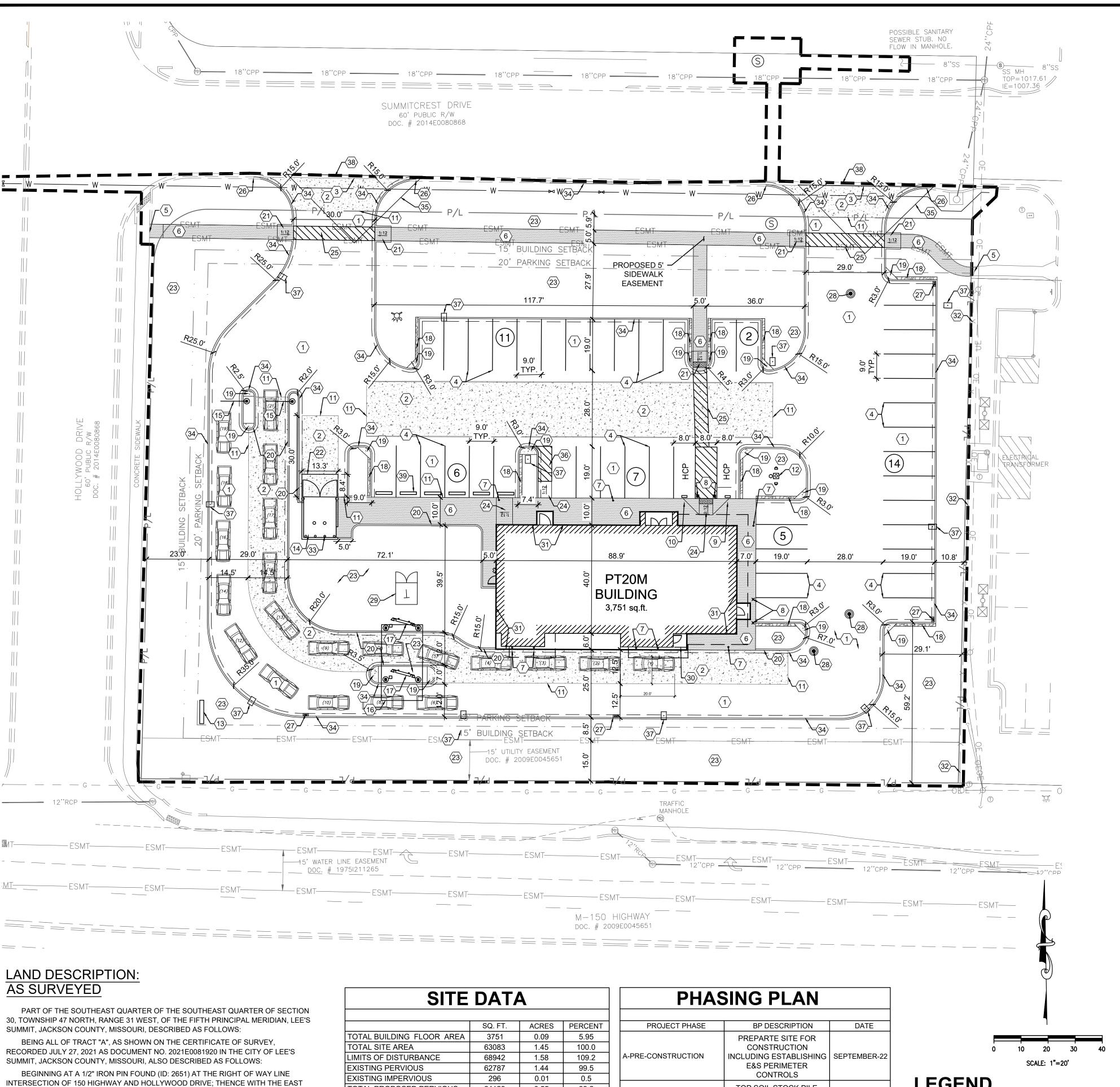
DRAWN BY: TDB

CHECKED BY: PGD

PROJECT NO: 40497-21

DRAWING

C-2.0



RIGHT OF WAY LINE OF SAID HOLLYWOOD DRIVE N 02°24'42" E A DISTANCE OF 190.89 FEET TO A 1/2" IRON PIN FOUND (ID: 2651); THENCE WITH THE RIGHT OF WAY LINE INTERSECTION OF SAID HOLLYWOOD DRIVE AND SUMMITCREST DRIVE WITH A CURVE TURNING TO THE RIGHT WITH AN ARC LENGTH OF 31.05 FEET WITH A RADIUS OF 20.00 FEET WITH A CHORD BEARING OF N 47°11'11" E, WITH A CHORD LENGTH OF 28.02 FEET TO A 1/2" IRON PIN FOUND (ID: 2651); THENCE WITH THE SOUTH RIGHT OF WAY LINE OF SAID SUMMITCREST DRIVE S 88°15'48" E A DISTANCE OF 282.03 FEET TO A 1/2" IRON PIN FOUND (ID: 2651); THENCE LEAVING SAID RIGHT OF WAY LINE WITH THE WEST LINE OF HAWKINS COMMERCIAL LOT 1. RECORDED IN DOCUMENT NO. 200E006255 S 02°26'57" W A DISTANCE OF 208.22 FEET TO A 3/8" IRON PIN FOUND IN THE NORTH RIGHT OF WAY LINE OF SAID 150 HIGHWAY; THENCE WITH SAID NORTH RIGHT OF WAY LINE N 88°42'20" W A DISTANCE OF 301.67 FEET TO THE POINT OF BEGINNING, HAVING AN AREA OF 63,083 SQUARE FEET, 1.448 ACRES, MORE OR LESS.

SITE DATA			
	SQ. FT.	ACRES	PERCENT
TOTAL BUILDING FLOOR AREA	3751	0.09	5.95
TOTAL SITE AREA	63083	1.45	100.0
LIMITS OF DISTURBANCE	68942	1.58	109.2
EXISTING PERVIOUS	62787	1.44	99.5
EXISTING IMPERVIOUS	296	0.01	0.5
TOTAL PROPOSED PERVIOUS	24129	0.55	38.2
TOTAL PROPOSED IMPERVIOUS	38954	0.89	61.8
CURRENT ZONING IS CP-2 PLANNED COMMUNITY COMMERCIAL;			
APPROVED BY CITY COUNCIL ON 05/31/22			
FLOOR AREA RATION = 0.059 SF			

	PHASING PLAN		
1	PROJECT PHASE	BP DESCRIPTION	DATE
	A-PRE-CONSTRUCTION	PREPARTE SITE FOR CONSTRUCTION INCLUDING ESTABLISHING E&S PERIMETER CONTROLS	SEPTEMBER-22
	B-PHASE I CONSTRUCTION	TOP SOIL STOCK PILE PROTECTION, SITE CLEARING, TEMPORARY SEEDING, GENERAL SITE PREP	SEPTEMBER-22 DECEMBER-22
	C-PHASE II CONSTRUCTION	CONSTRUCT BUILDING ASPHALT PAVING, STORM STRUCTURE INSTALLATIONS	DECEMBER-22 JANUARY-23
	D-FINAL STABILIZATION	PERMANENT SEEDING	JUNE-23
			<u> </u>

## **GENERAL NOTES:**

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- B. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION, AND IS RESPONSIBLE FOR ANY DAMAGE TO THEM DURING CONSTRUCTION.
- PROVIDE SMOOTH TRANSITION FROM NEWLY PAVED AREAS TO EXISTING PAVED AREAS AS NECESSARY. THE EXISTING EDGE OF PAVEMENT SHALL BE FREE OF ALL LOOSE DEBRIS AT ALL AREAS WHERE PROPOSED PAVEMENT MEETS EXISTING PAVEMENT. THE EDGE OF EXISTING ASPHALT PAVEMENT SHALL BE PROPERLY SEALED WITH A TACK COAT MATERIAL IN ALL AREAS WHERE NEW ASPHALT PAVEMENT IS INDICATED TO JOIN EXISTING.
- D. ALL DIMENSIONS TO FACE OF CURB AND/OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
- REFER TO ARCHITECTURAL DRAWINGS FOR BUILDING DIMENSIONS AND ADDITIONAL INFORMATION.
- ALL CONSTRUCTION METHODS AND MATERIALS MUST CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF THE FEDERAL, STATE, COUNTY, CITY OR LOCAL REQUIREMENTS, WHICHEVER HAS JURISDICTION.
- H. ALL EXCAVATED AREAS TO BE SEEDED AND/OR SODDED AFTER FINISH GRADING UNLESS OTHERWISE NOTED. ALL NEWLY SEEDED/SODDED AREAS SHALL HAVE A MINIMUM OF 4" OF TOPSOIL. HOLD SOIL DOWN 1" FROM PAVEMENT ELEVATION. CONTRACTOR TO SUPPLY STRAW MULCH WHERE GRASS SEED HAS
- I. ALL RADII ARE 3.0 FEET UNLESS OTHERWISE SHOWN. ALL RADII INDICATED ON PLANS SHALL BE CONSTRUCTED AS CIRCULAR ARCS.
- J. THERE ARE NO OIL AND GAS WELLS (ACTIVE/INACTIVE/CAPPED) PER THE MISSOURI DEPARTMENT OF NATURAL RESOURCES MAPPING.
- ALL CONSTRUCTION SHALL FOLLOW THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813. WHERE DISCREPANCIES EXISTING BETWEEN THESE PLANS AND THE DESIGN AND CONSTRUCTION MANUAL , THE DESIGN AND CONSTRUCTION MANUAL SHALL
- L. THE CONTRACTOR SHALL CONTACT THE CITY'S DEVELOPMENT SERVICES ENGINEERING INSPECTION TO SCHEDULE A PRE CONSTRUCTION MEETING WITH A FIELD ENGINEERING INSPECTOR PRIOR TO ANY LAND DISTURBANCE WORK AT (816) 969-1200.

## **KEYED NOTES:**

- PROPOSED HEAVY DUTY ASPHALT PAVEMENT, SEE DETAIL ON SHEET C-7.0.
- PROPOSED HEAVY DUTY CONCRETE PAVEMENT, SEE DETAIL ON SHEET C-7.0.
- PROPOSED HEAVY DUTY CONCRETE PAVEMENT TO BE FLUSH WITH EXISTING ASPHALT PAVEMENT.
- PROPOSED PAINTED PARKING STRIPING (TYPICAL). ALL PARKING STRIPES ARE TO BE 4" PAINTED WHITE, UNLESS OTHERWISE NOTED ON THE PLANS, DETAILS OR SPECIFICATIONS.
- CONNECT TO EXISTING SIDEWALK. SEE THE GRADING PLAN FOR MORE DETAILS.
- PROPOSED CONCRETE SIDEWALK. SEE DETAIL ON SHEET C-7.0.
- PROPOSED BOLLARD, TYP. OF 8. SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR DETAILS.
- PROPOSED ILLUMINATED BOLLARD, TYP. OF 4. SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR DETAILS.
- GENERAL CONTRACTOR TO PROVIDE AND INSTALL (1) POLE-MOUNTED ADA PARKING SIGNS. SIGNS PROVIDED BY CONTRACTOR TO MEET LOCAL REQUIREMENTS, SEE DETAIL ON SHEET C-7.0.
- GENERAL CONTRACTOR TO PROVIDE AND INSTALL (1) POLE-MOUNTED ADA PARKING SIGN WITH "VAN ACCESSIBLE" SIGN. SIGNS PROVIDED BY CONTRACTOR TO MEET LOCAL REQUIREMENTS, SEE DETAIL ON SHEET C-7.0.
- CONCRETE TO BE FLUSH WITH ADJACENT ASPHALT PAVEMENT. SEE DETAIL ON SHEET C-7.1.
- FLAGPOLE WITH GROUND-MOUNTED LIGHTS, UNITEDFLAG AND BANNER, GARRISON TYPE OR OWNER APPROVED EQUAL, 30' HIGH, 5" BUTT ALUMINUM WITH 14 GAUGE ALUMINUM BALL FINIAL. INCLUDE ALUMINUM ROLLER AND SLEEVE. HARDWARE TO INCLUDE STATIONARY STRUCK, NYLON FLAGSNAPS, AND HALYARDS. ENTIRE ASSEMBLY (INCLUDING FOUNDATION) TO CONFORM TO APPLICABLE CODES, INCLUDING WIND LOADS. SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR DETAILS.
- PROPOSED 35' HT POLE SIGN, CONTRACTOR TO COORDINATE WITH OWNER. SEE ELECTRICAL PLANS AND SIGNAGE PACKAGE FOR DETAILS.
- PROPOSED DUMPSTER ENCLOSURE AND CONCRETE PAD. SEE THE STRUCTURAL AND ARCHITECTURAL SHEETS FOR DETAILS.
- PROPOSED HEADACHE BAR. SEE ARCHITECTURAL PLANS FOR DETAILS.
- PROPOSED MENU BOARD CANOPY. SEE ARCHITECTURAL PLANS FOR DETAILS.
- PROPOSED EXTERIOR MENU BOARD. SEE ARCHITECTURAL PLANS FOR DETAILS.
- PROPOSED 1' WIDE CRUSHED GRANITE STRIP. SEE DETAIL ON SHEET L-1.0.
- PROPOSED CONCRETE ISLAND NOSE. SEE DETAIL ON SHEET C-7.1.
- PROPOSED 6" MONOLITHIC CURB. SEE DETAIL ON SHEET C-7.1.
- PROPOSED ADA SIDEWALK RAMP. SEE DETAIL ON SHEETS C-7.0 & C-7.1.
- CONCRETE DUMPSTER ENCLOSURE APRON. TRASH ENCLOSURE AREA SHALL BE IMPROVED WITH A PORTLAND CEMENT CONCRETE PAD AND PORTLAND CEMENT CONCRETE APPROACH 30 FEET IN LENGTH, MEASURED FROM THE ENCLOSURE OPENING. THE PAD AND APPROACH SHALL BE IMPROVED WITH A MINIMUM 6" OF FULL DEPTH UNREINFORCED PORTLAND CEMENT CONCRETE CONSTRUCTED ON A SUB-GRADE OF 4" OF GRANULAR BASE COURSE. SEE DETAIL ON SHEET C-7.0.
- PROPOSED LANDSCAPE AREA. SEE LANDSCAPE PLAN ON SHEET L-1.
- PROPOSED CURB RAMP. SEE DETAIL ON SHEET C-7.0.
- PROPOSED SIDEWALK CROSSING. SEE DETAIL ON SHEET C-7.2.
- CONNECT PROPOSED CURB TO EXISTING CURB (TRANSITION REQUIRED).
- PROPOSED STORM INLET. SEE SHEETS C-5.0 AND C-7.5 FOR DETAILS.
- PROPOSED STORM MANHOLE/JUNCTION BOX. SEE SHEETS C-5.0, C-7.5, AND C-7.6 FOR DETAILS.
- PROPOSED ELECTRIC TRANSFORMER. COORDINATE DETAILS AND LOCATION WITH UTILITY OWNER AND ELECTRICAL PLANS. SEE SHEET C-6.0.
- PROPOSED HAND RAIL. SEE ARCHITECTURAL SHEETS FOR DETAILS.
- PROPOSED STRUCTURAL FOUNDATION.
- EXISTING WOODEN FENCE TO REMAIN.
- TRASH ENCLOSURE SHALL BE PROTECTED THROUGH INSTALLATION OF 4" BOLLARDS (TYP. OF 4) ALONG THE REAR WALL OF THE TRASH ENCLOSURE.
- SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR DETAILS. TYPE CG-1 CURB AND GUTTER. SEE DETAIL ON SHEET C-7.1.

PROPOSED PARKING STRIPING. SEE DETAIL ON SHEET C-7.0.

- SITE TRIANGLE.
- PROPOSED LIGHT POLE AND FOUNDATION. SEE STRUCTURAL PLANS FOR DETAILS.
- EXISTING GUTTER LINE TO BE MAINTAINED.
- PROPOSED PRE-CAST CONCRETE WHEEL STOP (TYP. OF 6). SEE DETAIL ON SHEET C-7.3.

LEGEND				PARKING SETBACK LINE
FEATURE	DESCRIPTION			GUTTER LINE
	CONCRETE SIDEWALK	E	SMT	PROPOSED SIDEWALK EASEMENT
	HEAVY DUTY ASPHALT PAVEMENT	E	SMT-	EXISTING EASEMENT
	HEAVY DUTY CONCRETE PAVEMENT	EXISTING	PROPOSED	
	CONSTRUCTION LIMITS	<u></u>	P	LIGHT POLE
	BUILDING SETBACK LINE	**		FIRE HYDRANT

PARKING DATA			
REQUIRED PROVIDED			
ARD	53	43	
CAP	3	2	
56 45			
RKING SPACE REQUIRED PER 1000 S.F. OF THE			

HANDIO TOTAL GROSS BUILDING FLOOR AREA (3,751 SF OF DINING AREA) \*\*1 ADA SPACE PER 25 STANDARD SPACES

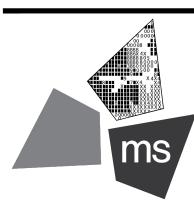
\*\*FEWER SPACES ALLOWABLE IF EVIDENCE OF SUCCESS ON SIMILAR PROJECTS CAN BE PROVIDED. \*PARKING JUSTIFICATION WAS SUBMITTED TO THE CITY ON 03/29/22 AS PART OF THE PDP PROCESS.

REVISION/DATE/DESCRIPTION

SIR UPDATES	09/13/21
60% SET	01/24/22
PDP APPLICATION TO CITY	02/24/22
RESPONSE TO CITY COMMENTS I	03/29/22
FINAL DEVELOPMENT SET	06/29/22
RESPONSE TO FDP COMMENTS	08/30/22
RESPONSE TO FDP COMMENTS II	09/29/22

CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREE-MENT WITH THE ARCHITECT NO OTHER USE, DISSEMINATIO OR DUPLICATION MAY BE MADE VITHOUT PRIOR WRITTEN CONSEN OF THE ARCHITECT. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFI-CALLY RESERVED.





ms consultants, inc. engineers, architects, planners 2221 Schrock Road Columbus, Ohio 43229-1547 phone 614.898.7100

fax 614.898.7570

PROJECT

PROPOSED PT20M BUILDING

NEQ HWY 150 & SW HOLLYWOOD DR. LEE'S SUMMIT, MO 64082

SHEET TITLE

SITE DIMENSION PLAN



DRAWN BY: CHECKED BY: 40497-21 PROJECT NO:

DRAWING

# SUMMIT, JACKSON COUNTY, MISSOURI, DESCRIBED AS FOLLOWS: SUMMIT, JACKSON COUNTY, MISSOURI, ALSO DESCRIBED AS FOLLOWS: 63,083 SQUARE FEET, 1.448 ACRES, MORE OR LESS. CBK LAND HOLDINGS LLC PARCEL NO. 70-400-04-03-02-2-00-000 TI SUMMIT CREST PLAZA LLC PARCEL NO. LAND USE CODE: AG/FARM OUTBUILDING 70-500--03-14-00-0-00-000 LAND USE CODE: SHOP. CENTER-NHBD ZONING: PLANNED COMMUNITY COMMERCIAL SUMMITCREST DRIVE 60' PUBLIC R/W DOC. # 2014E0080868 PIVIX PROPERTY BOUNDARY OF PARCEL TO BE REZONED HFI 463 WARD LLC PARCEL NO. 70-400-04-03-02-3-00-000 CURRENT ZONING: PLANNED COMMUNITY COMMERCIAL - M-150 CORRIDOR DEVLOPMENT OVERLAY DISTRICT; APPROVED BY CITY COUNCIL ON 05/31/22. **ZONING MAP** NTS PROPOSED SITE LOCATION —

TALLGRASS HOLDINGS LLC
PARCEL NO.
70-910-19-03-00-0-000
LAND USE CODE: RESTAURANT
ZONING: PLANNED COMMUNITY COMMERCIAL—
M-150 CORRIDOR DEVELOPMENT OVERLAY DISTRICT

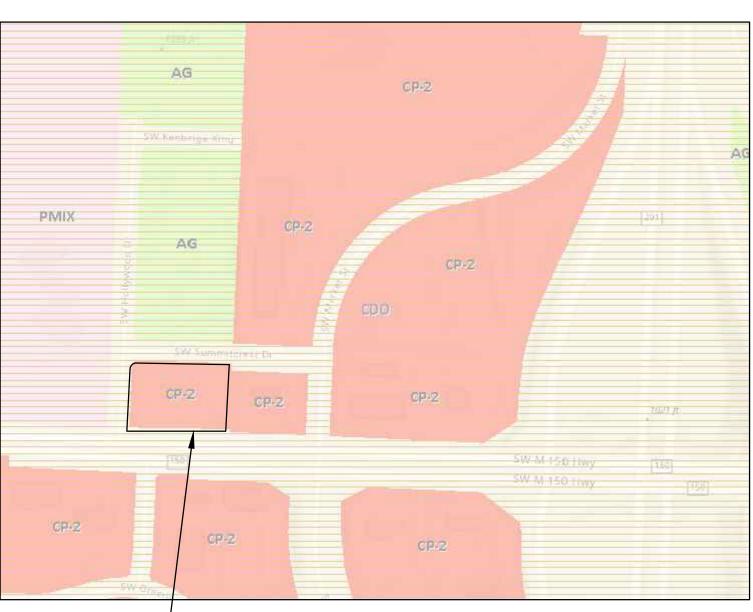
BANK OF LEE'S SUMMIT
PARCEL NO.
70-910-20-01-00-0-000
LAND USE CODE: BANK
ZONING: PLANNED COMMUNITY COMMERCIAL—
M-150 CORRIDOR DEVELOPMENT OVERLAY DISTRICT

## LAND DESCRIPTION: AS SURVEYED

PART OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 30, TOWNSHIP 47 NORTH, RANGE 31 WEST, OF THE FIFTH PRINCIPAL MERIDIAN, LEE'S

BEING ALL OF TRACT "A", AS SHOWN ON THE CERTIFICATE OF SURVEY, RECORDED JULY 27, 2021 AS DOCUMENT NO. 2021E0081920 IN THE CITY OF LEE'S

BEGINNING AT A 1/2" IRON PIN FOUND (ID: 2651) AT THE RIGHT OF WAY LINE INTERSECTION OF 150 HIGHWAY AND HOLLYWOOD DRIVE; THENCE WITH THE EAST RIGHT OF WAY LINE OF SAID HOLLYWOOD DRIVE N 02°24'42" E A DISTANCE OF 190.89 FEET TO A 1/2" IRON PIN FOUND (ID: 2651); THENCE WITH THE RIGHT OF WAY LINE INTERSECTION OF SAID HOLLYWOOD DRIVE AND SUMMITCREST DRIVE WITH A CURVE TURNING TO THE RIGHT WITH AN ARC LENGTH OF 31.05 FEET WITH A RADIUS OF 20.00 FEET WITH A CHORD BEARING OF N 47°11'11" E, WITH A CHORD LENGTH OF 28.02 FEET TO A 1/2" IRON PIN FOUND (ID: 2651); THENCE WITH THE SOUTH RIGHT OF WAY LINE OF SAID SUMMITCREST DRIVE S 88°15'48" E A DISTANCE OF 282.03 FEET TO A 1/2" IRON PIN FOUND (ID: 2651); THENCE LEAVING SAID RIGHT OF WAY LINE WITH THE WEST LINE OF HAWKINS COMMERCIAL LOT 1, RECORDED IN DOCUMENT NO. 200E006255 S 02°26'57" W A DISTANCE OF 208.22 FEET TO A 3/8" IRON PIN FOUND IN THE NORTH RIGHT OF WAY LINE OF SAID 150 HIGHWAY; THENCE WITH SAID NORTH RIGHT OF WAY LINE N 88°42'20" W A DISTANCE OF 301.67 FEET TO THE POINT OF BEGINNING, HAVING AN AREA OF



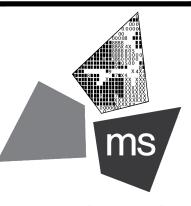
REVISION/DATE/DESCRIPTION

П	SIR UPDATES	09/13/21
П	60% SET	01/24/22
П	PDP APPLICATION TO CITY	02/24/22
П	RESPONSE TO CITY COMMENTS I	03/29/22
П	FINAL DEVELOPMENT SET	06/29/22
	RESPONSE TO FDP COMMENTS	08/30/22
	RESPONSE TO FDP COMMENTS II	09/29/22

#### NOTICE

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ms consultants, inc. engineers, architects, planners 2221 Schrock Road Columbus, Ohio 43229-1547 phone 614.898.7100 fax 614.898.7570

PROJECT

PROPOSED PT20M BUILDING

NEQ HWY 150 & SW HOLLYWOOD DR. LEE'S SUMMIT, MO 64082

SHEET TITLE

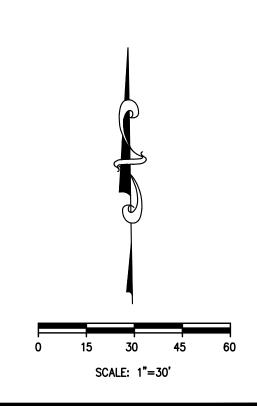
SITE ZONING PLAN

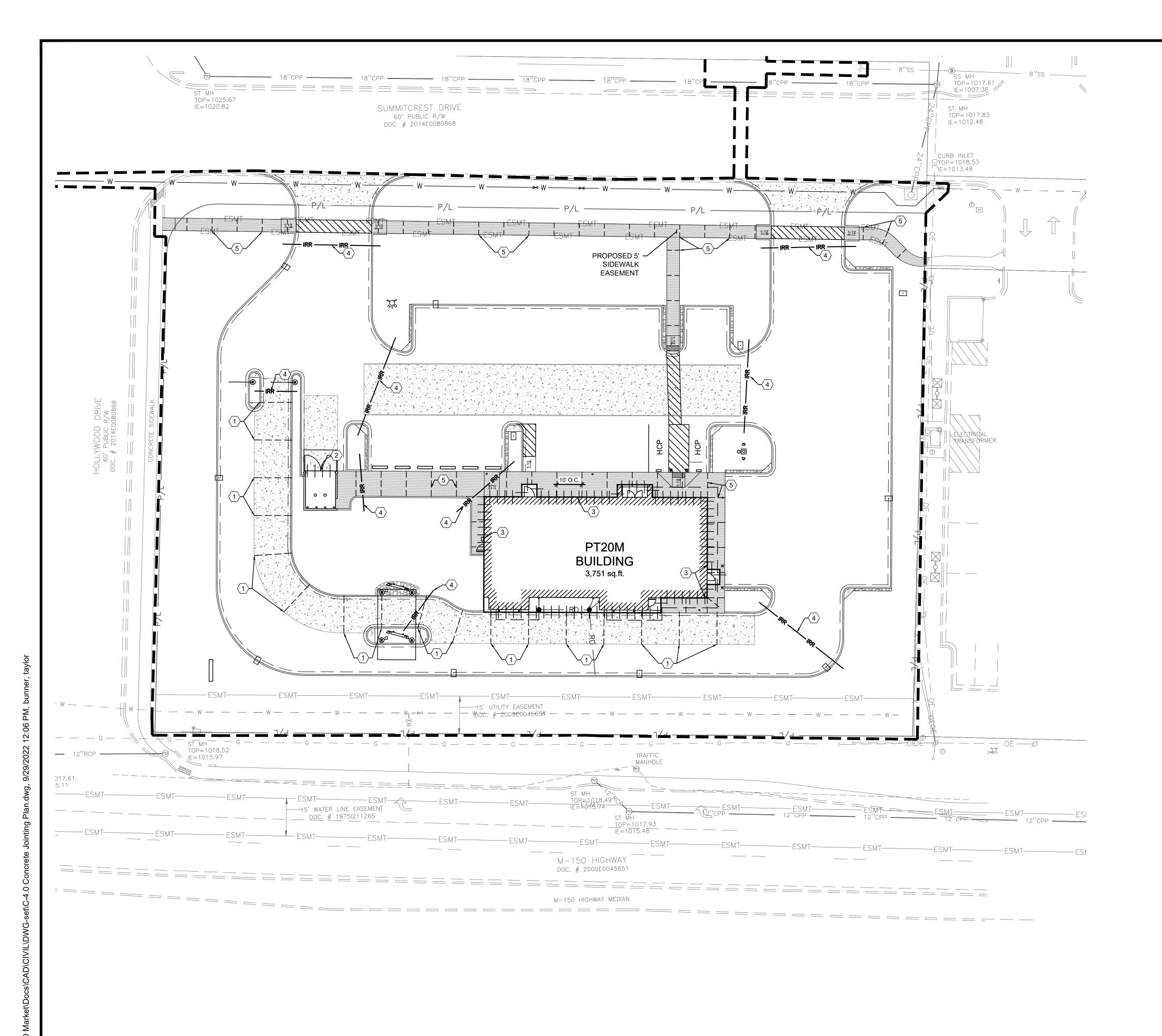


CHECKED BY: 40497-21 PROJECT NO:

DRAWING

C-3.1





## **GENERAL NOTES:**

- A. PAVEMENT SPECIFICATION AND RECOMMENDATIONS TO BE TAKEN FROM GEOTECHNICAL REPORT.
- B. PORTLAND CEMENT CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI.
- C. MAXIMUM CONTROL JOINT SPACING SHALL NOT EXCEED 15 FEET.
- D. EXPANSION JOINTS SHALL BE USED WHEREVER THE PAVEMENT WILL ABUT A STRUCTURAL ELEMENT SUBJECT TO DIFFERENT MAGNITUDE OF MOVEMENT (E.G., LIGHT POLES, RETAINING WALLS, EXISTING PAVEMENT, STAIRWAYS, ENTRYWAY PIERS, BUILDING WALLS, MANHOLES, ETC.)
- E. EXPANSION JOINTS SHALL BE SEALED PER DETAILS ON SHEET C-7.0 TO MINIMIZE MOISTURE INFILTRATION INTO SUBGRADE SOILS AND RESULTANT CONCRETE DETERIORATION AT THE
- F. SLEEVES SHOWN ARE FOR IRRIGATION ONLY. ADDITIONAL SLEEVES MAY BE REQUIRED FOR OTHER FRANCHISE UTILITIES. CONTRACTOR SHALL COORDINATE LOCATION AND SUPPLY ADDITIONAL SLEEVES REQUIRED FOR ELECTRICAL AND TELECOMMUNICATION SERVICES.
- G. ALL CONCRETE JOINTS SHALL RUN CONTINUOUSLY THROUGH CURBS.

## **KEYED NOTES:**

- SAWED CONSTRUCTION JOINT REQUIRED, TYPICAL. SEE DETAIL ON SHEET C-7.0.
- DOWELED EXPANSION JOINT REQUIRED, TYPICAL. SEE DETAIL ON SHEET C-7.0.
- EXPANSION JOINT REQUIRED WHERE CONCRETE OR CURB ABUTS BUILDING FOUNDATION, STORM STRUCTURE, FLUME, OR SIDEWALK OPENING. SEE DETAIL ON SHEET C-7.0.
- SCHEDULE 40 PVC IRRIGATION SLEEVE, SEE SHEET I-1.0 FOR MORE INFORMATION.
- (5) INSTALL CONTRACTION JOINTS 10' ON CENTER AS SHOWN ON DETAIL C ON SHEET C-7.0 (TYP).

HEAVY DUTY ASPHALT PAVEMENT

## **LEGEND**

HEAVY DUTY CONCRETE PAVEMENT

PROJECT

2221 Schrock Road

phone 614.898.7100 fax 614.898.7570

PROPOSED PT20M BUILDING

ms consultants, inc. engineers, architects, planners

Columbus, Ohio 43229-1547

REVISION/DATE/DESCRIPTION

01/24/22

02/24/22

06/29/22

08/30/22

09/29/22

SIR UPDATES

PDP APPLICATION

RESPONSE TO CITY

**DEVELOPMENT SET** 

RESPONSE TO

RESPONSE TO

NOTICE

THIS ARCHITECTURAL AND ENGI-

CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREE-

WITHOUT PRIOR WRITTEN CONSENT OF THE ARCHITECT. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFI-

NEERING DRAWING IS GIVEN IN

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CALLY RESERVED.

FDP COMMENTS

FDP COMMENTS II

60% SET

NEQ HWY 150 & SW HOLLYWOOD DR. LEE'S SUMMIT, MO 64082

SHEET TITLE

CONCRETE
JOINTING PLAN



DRAWN BY: TDB

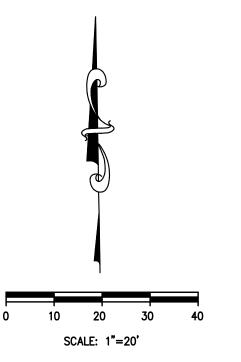
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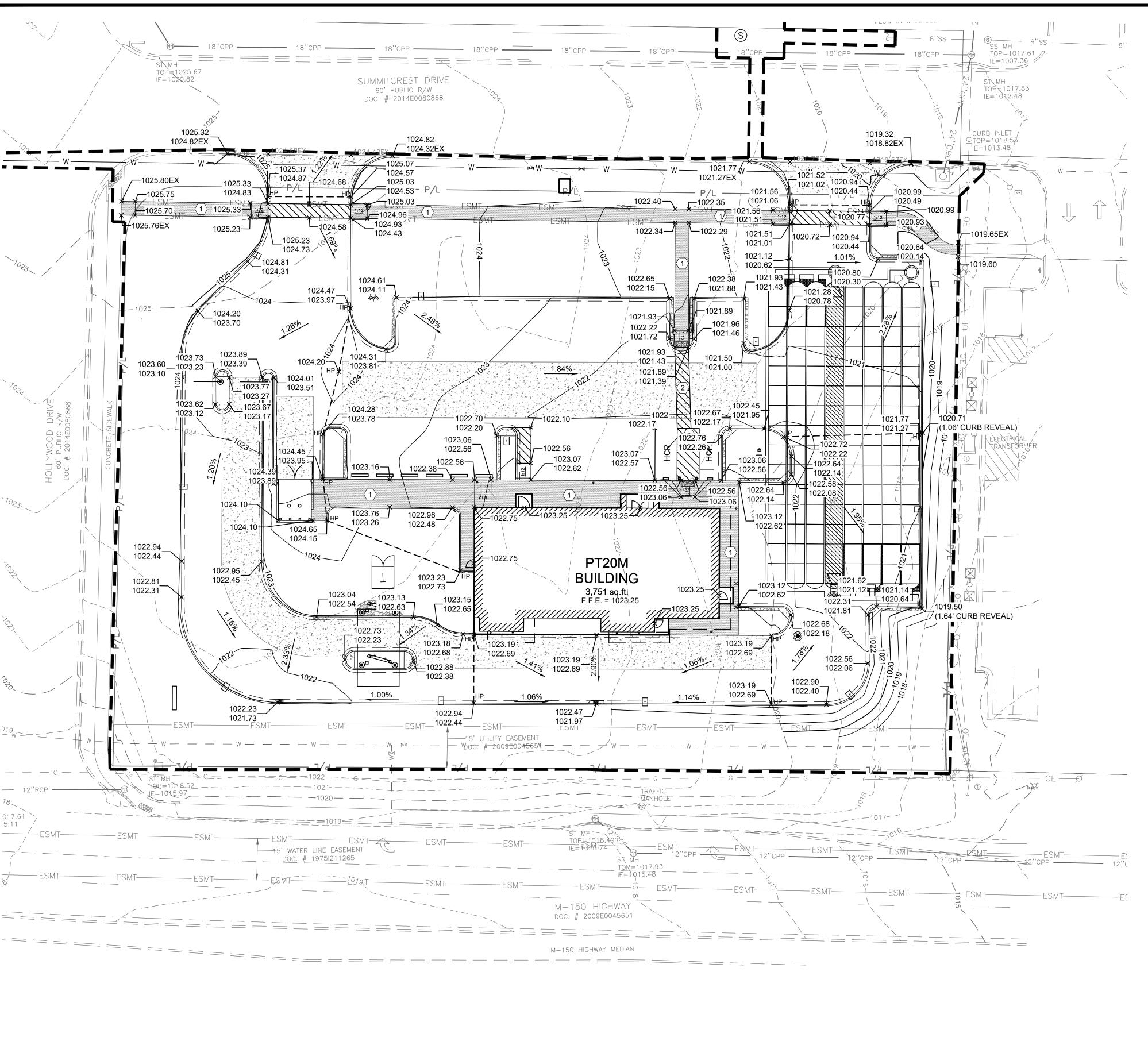
PROJECT NO: 40497-21

DRAWING

Call before you dig.

C-4.0





## **GENERAL NOTES:**

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- B. ALL CONSTRUCTION METHODS AND MATERIAL MUST CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF THE FEDERAL, STATE, COUNTY, CITY OR LOCAL REQUIREMENTS, WHICHEVER HAS JURISDICTION.
- C. ALL PROPOSED SPOT ELEVATIONS SHOWN ARE TOP OF CURB AND FINAL GRADE ELEVATIONS UNLESS OTHERWISE NOTED.
- D. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

VERIFY COVER REQUIREMENTS BY UTILITY CONTRACTORS AND/OR UTILITY COMPANIES SO AS TO NOT CAUSE DAMAGE.

- E. 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.

  F. THE EXCAVATING CONTRACTOR MUST TAKE PARTICULAR CARE WHEN EXCAVATING IN AND AROUND EXISTING UTILITY LINES AND EQUIPMENT.
- G. 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
- H. 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.
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- 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. ALL STORM CONDUITS ARE ADS N-12 SMOOTH INTERIOR HDPE PIPE OR APPROVED EQUAL, UNLESS OTHERWISE NOTED.
- M. ALL CONSTRUCTION SHALL FOLLOW THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813. WHERE DISCREPANCIES EXIST BETWEEN THESE PLANS AND THE DESIGN AND CONSTRUCTION MANUAL, THE DESIGN AND CONSTRUCTION MANUAL SHALL PREVAIL.
- N. THE CONTRACTOR SHALL CONTACT THE CITY'S DEVELOPMENT SERVICES ENGINEERING INSPECTION TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH A FIELD ENGINEERING INSPECTOR PRIOR TO ANY LAND DISTURBANCE WORK AT (816) 969-1200.

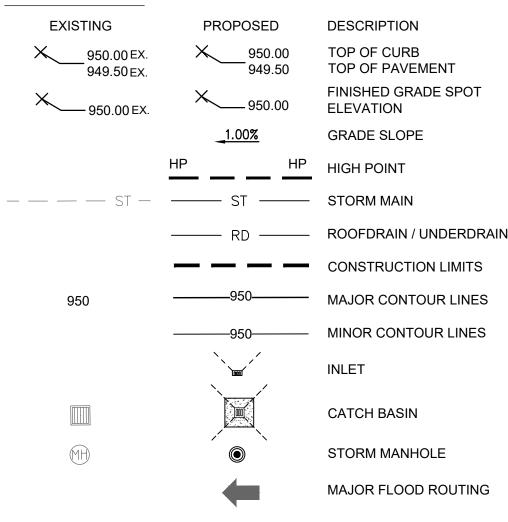
## **KEYED NOTES:**

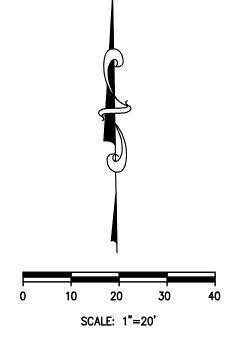
(1) CONTRACTOR TO MAINTAIN 2.00% MAX CROSS SLOPE ON SIDEWALK.

PRESENT TO INSTRUCT AND OBSERVE DURING CONSTRUCTION.

(2) CONTRACTOR TO MAINTAIN MAX 2.00% SLOPE IN ALL DIRECTIONS IN HANDICAP ACCESSIBLE AREA

## **LEGEND**







REVISION/DATE/DESCRIPTION

SIR UPDATES

	60% SET	01/24/22
	PDP APPLICATION TO CITY	02/24/22
	RESPONSE TO CITY COMMENTS I	03/29/22
	FINAL DEVELOPMENT SET	06/29/22
	RESPONSE TO FDP COMMENTS	08/30/22
ı	RESPONSE TO	09/29/22

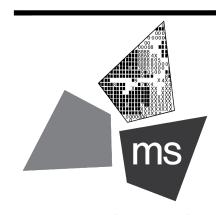
FDP COMMENTS II

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PROJECT

PROPOSED PT20M BUILDING

NEQ HWY 150 & SW HOLLYWOOD DR. LEE'S SUMMIT, MO 64082

SHEET TITLE

SITE GRADING PLAN



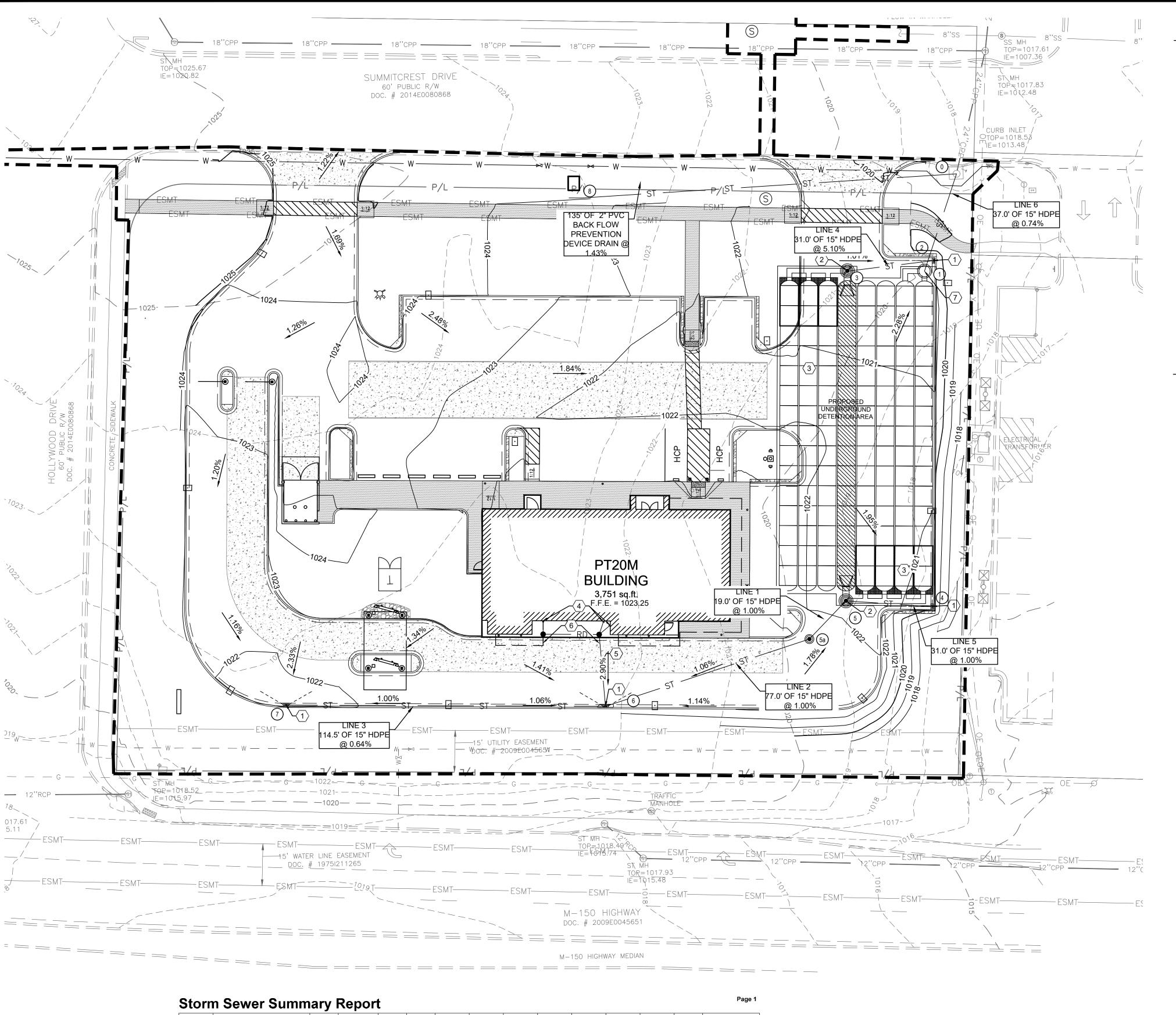
DRAWN BY: TDB

CHECKED BY: PGD

PROJECT NO: 40497-21

DRAWING

C-5.0



Invert EL Dn

30.930 1013.75

Pipe - 13

Pipe - 10

Pipe - 9

Pipe - 12

Pipe - 14

Pipe - 11

2.80

1.96

2.71

1.02

0.19

Line Slope (%)

1014.41

1014.60

1014.60 | 1015.38

1015.38 1016.41

1014.41 | 1016.00 | 0.26

1014.15 | 1014.46 | n/a

1013.65 | 1013.92 | 0.06

EL Up

31.102 | 1013.75 | 1015.34 | 5.112

36.725 | 1013.48 | 1013.75 | 0.735

1013.94

1014.71 1.001

1015.85 0.995

1014.06 1.002

HGL Junct (ft)

1016.41 j

1016.00

1014.46 j End

1013.92 End None

Junction

Type

Curb-

End Curb-

## **GENERAL NOTES:**

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- VERIFY ASSUMED FINISHED FLOOR ELEVATION PRIOR TO BEGINNING WORK.

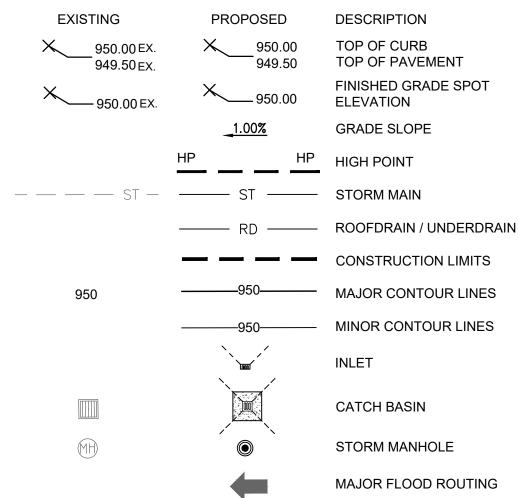
  F. THE EXCAVATING CONTRACTOR MUST TAKE PARTICULAR CARE WHEN EXCAVATING IN AND AROUND EXISTING UTILITY LINES AND EQUIPMENT.
- VERIFY COVER REQUIREMENTS BY UTILITY CONTRACTORS AND/OR UTILITY COMPANIES SO AS TO NOT CAUSE DAMAGE.

  THE CONTRACTOR SHALL NOTICY ALL LITELITY COMPANIES AS HOURS RECORD CONSTRUCTION IS TO START TO VERIEV IE ANY LITELITY OF A PERIOD CONTRACTOR SHALL NOTICY ALL LITELITY COMPANIES AS HOURS RECORD CONSTRUCTION IS TO START TO VERIEV IE ANY LITELITY OF A PERIOD CONSTRUCTION IS TO START TO VERIEV IE ANY LITELITY OF A PERIOD CONSTRUCTION IS TO START TO VERIEV IE ANY LITELITY OF A PERIOD CONSTRUCTION IS TO START TO VERIEV IE ANY LITELITY OF A PERIOD CONSTRUCTION IS TO START TO VERIEV IE ANY LITELITY OF A PERIOD CONSTRUCTION IS TO START TO VERIEV IE ANY LITELITY OF A PERIOD CONSTRUCTION IS TO START TO VERIEV IE ANY LITELITY OF A PERIOD CONSTRUCTION IS TO START TO VERIEV IE ANY LITELITY OF A PERIOD CONSTRUCTION IS TO START TO VERIEV IE ANY LITELITY OF A PERIOD CONSTRUCTION IS TO START TO VERIEV IE ANY LITELITY OF A PERIOD CONSTRUCTION IS TO START TO VERIEV IE ANY LITELITY IN THE CONTRACTOR ST
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## **KEYED NOTES:**

- PROPOSED CURB INLET AND FINGER DRAIN. SEE DETAILS ON SHEETS C-7.1 AND C-7.5.
- PROPOSED STORM MANHOLE/JUNCTION BOX. SEE DETAILS ON SHEET C-7.5 AND C-7.6.
- PROPOSED UNDERGROUND DETENTION SYSTEM, ADS STORMTECH MC-3500 CHAMBER SYSTEM, 19665 CF. SEE DETAILS ON SHEET C-7.5.
- PROPOSED DOWNSPOUT COLLECTOR SYSTEM.
- 6" STORM LINE FROM ROOF DRAIN TO CONNECT TO PROPOSED STORM SYSTEM. CONTRACTOR TO MAINTAIN A MINIMUM SLOPE OF 1.00% ON ALL ROOF DRAIN PIPES.
- PROPOSED STORM CLEANOUT. SEE DETAIL ON SHEET C-7.1 FOR DETAILS.
- PROPOSED OUTLET CONTROL STRUCTURE. SEE DETAIL ON SHEET C-7.6 FOR DETAILS.

## **LEGEND**



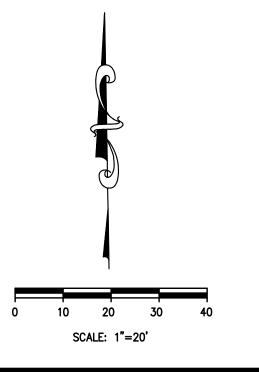
DETENTION SUI		MMARY
DESIGNED	AS-BUILT	REQUIRED
DETENTION	DETENTION	DETENTION
7/01/11/45	7/01/19/15	7/01/1945

19,000 CU. FT.

20,540 CU.FT.

# STORM STRUCTURE DATA

- © EXISTING STORM INLET
  RIM = 1018.53
  EX: 24" INV. (NE) = 1013.48
  PR: 15" INV (SW) = 1013.48
  PR. 2" INV (W) = 1014.56
- PROPOSED OUTLET CONTROL STRUCTURE
  RIM = 1020.30
  PR: 15" INV = 1013.75
- PROPOSED CURB INLET
  RIM = 1020.16
  PR: 15" INV OUT (W) = 1016.06
- (3) PROPOSED STORM MANHOLE RIM = 1020.54 PR: 15" INV IN (E) = 1015.75 PR: BOTTOM INV = 1013.75
- PROPOSED CURB INLET RIM = 1020.67 PR. 15" INV. OUT (W) = 1014.06
- 5 PROPOSED STORM MANHOLE RIM = 1021.58 PR: 15" INV IN (SW,E) = 1013.75 PR: BOTTOM INV = 1013.75
- PROPOSED STORM MANHOLE
  RIM = 1022.40
  PR: 15" INV OUT (NE) = 1013.94
  PR: 15" INV IN (SW) = 1014.14
- PROPOSED CURB INLET
   RIM = 1021.98
   PR: 15" INV OUT (NE) = 1014.91
   PR: 15" INV IN (W) = 1015.11
- 7 PROPOSED CURB INLET RIM = 1021.75 PR: 15" INV OUT (E) = 1015.85
- 8 PROPOSED 2" BACKFLOW VAULT DRAIN RIM = 1021.75 PR: 2" INV (S) = 1015.89





REVISION/DATE/DESCRIPTION

	SIR UPDATES	09/13/21
	60% SET	01/24/22
	PDP APPLICATION TO CITY	02/24/22
	RESPONSE TO CITY COMMENTS I	03/29/22
	FINAL DEVELOPMENT SET	06/29/22
ı	RESPONSE TO FDP COMMENTS	08/30/22

RESPONSE TO

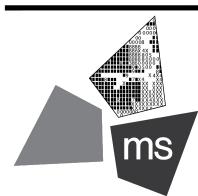
FDP COMMENTS II

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PROJECT

fax 614.898.7570

PROPOSED PT20M BUILDING

NEQ HWY 150 & SW HOLLYWOOD DR. LEE'S SUMMIT, MO 64082

SHEET TITLE

SITE DRAINAGE PLAN



DRAWN BY: TDB

CHECKED BY: PGD

PROJECT NO: 40497-21

DRAWING

C-5.1

## ~CONCRETE~ IE = 102Q.82SUMMITCREST DRIVE TOP=1017.83 60' PUBLIC R/W IE=1012.48 DOC. # 2014E0080868 PROPOSED WATER MAIN EXTENSION ~ASPHALT~ SEE PUBLIC IMPROVEMENT PLANS FOR TOP=1018.57 8" WATER LINE PER CITY IE=1013.48/ MAPS; NOT MARKED IN ~CONCRETE~ \ PARKING SETBA PROPOSED 5 \SIDEWALK EASEMENT COMMERCIAL DOC. # 200E0062550 PT20M BUILDING 1.448 A 63,083 6" PVC @1.00% 114.53 L.F.~15" HDPE @ 0.65% ~ASPHALT~

## STORM STRUCTURE DATA

EXISTING STORM INLET RIM = 1018.53
 EX: 24" INV. (NE) = 1013.48
 PR: 15" INV (SW) = 1013.48
 PR. 2" INV (W) = 1014.56

- PROPOSED OUTLET CONTROL STRUCTURE
  RIM = 1020.30
  PR: 15" INV = 1013.75
- PROPOSED CURB INLET RIM = 1020.16 PR: 15" INV OUT (W) = 1016.06
- PROPOSED STORM MANHOLE
  RIM = 1020.54
  PR: 15" INV IN (E) = 1015.75
  PR: BOTTOM INV = 1013.75
- PROPOSED CURB INLET
  RIM = 1020.67
  PR. 15" INV. OUT (W) = 1014.06
- PROPOSED STORM MANHOLE
  RIM = 1021.58
  PR: 15" INV IN (SW,E) = 1013.75
  PR: BOTTOM INV = 1013.75
- PROPOSED STORM MANHOLE
  RIM = 1022.40
  PR: 15" INV OUT (NE) = 1013.94
  PR: 15" INV IN (SW) = 1014.14
- PROPOSED CURB INLET
  RIM = 1021.98
  PR: 15" INV OUT (NE) = 1014.91
  PR: 15" INV IN (W) = 1015.11
- PROPOSED CURB INLET RIM = 1021.75 PR: 15" INV OUT (E) = 1015.85
- PROPOSED 2" BACKFLOW VAULT DRAIN RIM = 1021.75 PR: 2" INV (S) = 1015.89

## **KEYED NOTES:**

**LEGEND** 

**EXISTING** 

PROPOSED CURB INLET AND FINGER DRAIN. SEE DETAILS ON SHEETS C-7.1 AND C-7.5.

DESCRIPTION

— ROOFDRAIN / UNDERDRAIN

CONSTRUCTION LIMITS

— MAJOR CONTOUR LINES

MINOR CONTOUR LINES

— STORM MAIN

INLET

CATCH BASIN

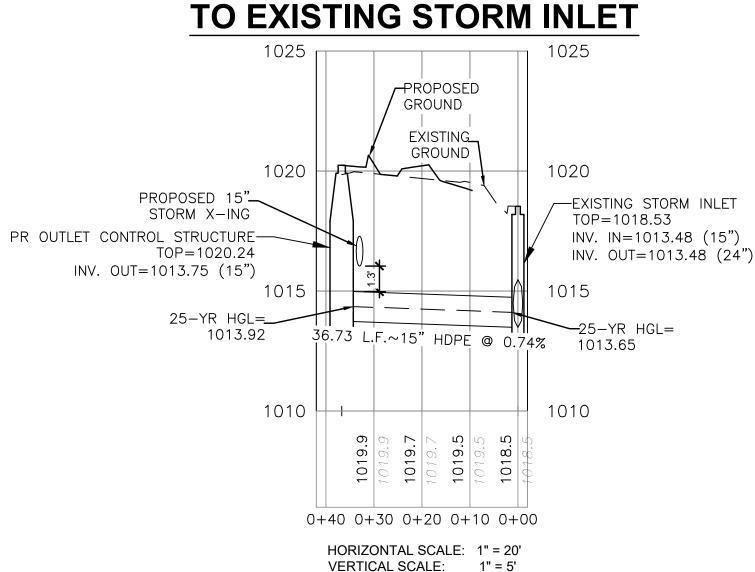
STORM MANHOLE

MAJOR FLOOD ROUTING

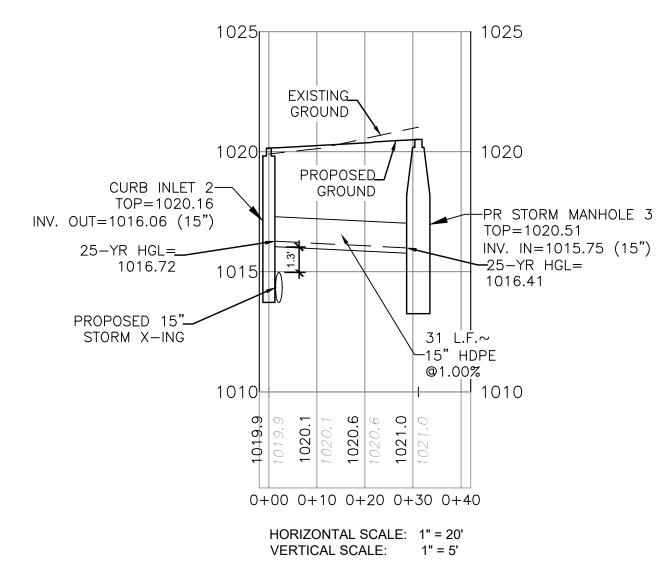
- PROPOSED STORM MANHOLE/JUNCTION BOX. SEE DETAILS ON SHEET C-7.5 AND C-7.6.
- PROPOSED UNDERGROUND DETENTION SYSTEM, ADS STORMTECH MC-3500 CHAMBER SYSTEM, 19665 CF. SEE DETAILS ON SHEET C-7.5.
- 4 PROPOSED DOWNSPOUT COLLECTOR SYSTEM.
- 6" STORM LINE FROM ROOF DRAIN TO CONNECT TO PROPOSED STORM SYSTEM. CONTRACTOR TO MAINTAIN
- A MINIMUM SLOPE OF 1.00% ON ALL ROOF DRAIN PIPES.
- PROPOSED STORM CLEANOUT. SEE DETAIL ON SHEET C-7.1 FOR DETAILS.

  PROPOSED OUTLET CONTROL STRUCTURE. SEE DETAIL ON SHEET C-7.6 FOR DETAILS.

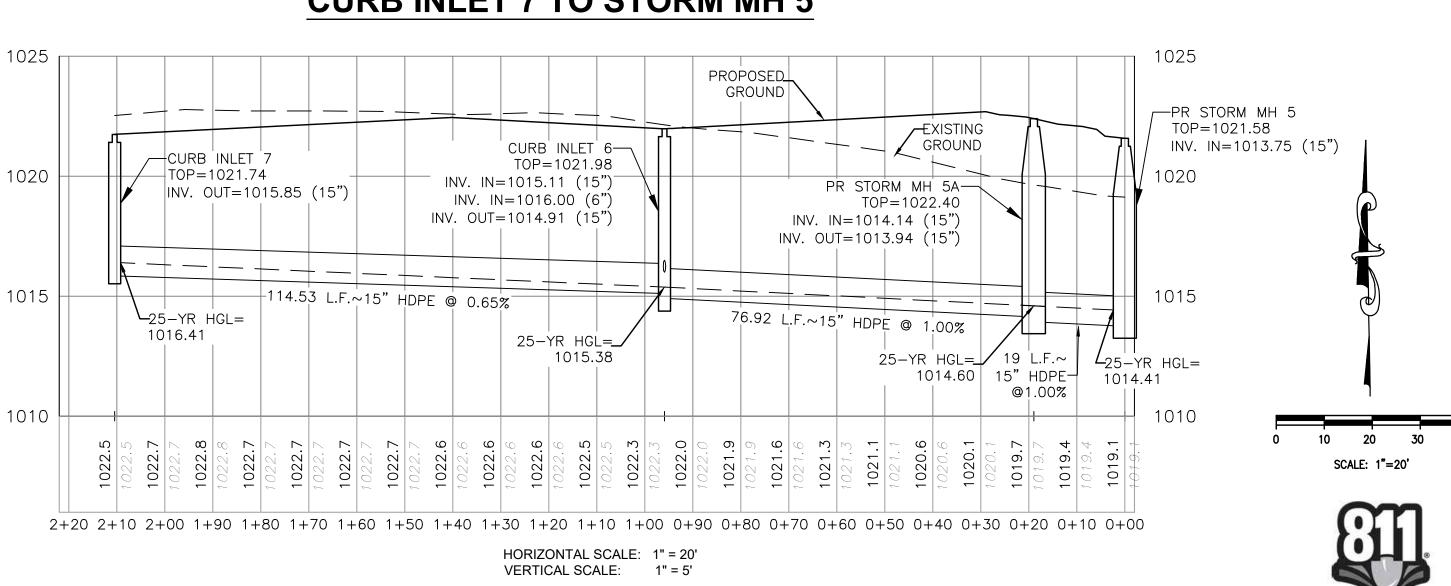
# OUTLET CONTROL STRUCTURE



## CURB INLET 2 TO STORM MH 3



## **CURB INLET 7 TO STORM MH 5**



REVISION/DATE/DESCRIPTION

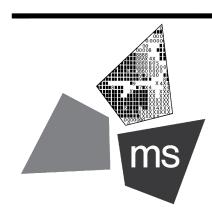
SIR UPDATES	09/13/21
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FINAL DEVELOPMENT SET	06/29/22
RESPONSE TO FDP COMMENTS	08/30/22
RESPONSE TO FDP COMMENTS II	09/29/22

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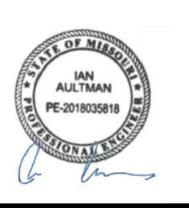
PROJECT

PROPOSED PT20M BUILDING

NEQ HWY 150 & SW HOLLYWOOD DR. LEE'S SUMMIT, MO 64082

SHEET TITLE

STORM SEWER
PLAN AND PROFILE



DRAWN BY: TDB

CHECKED BY: PGD

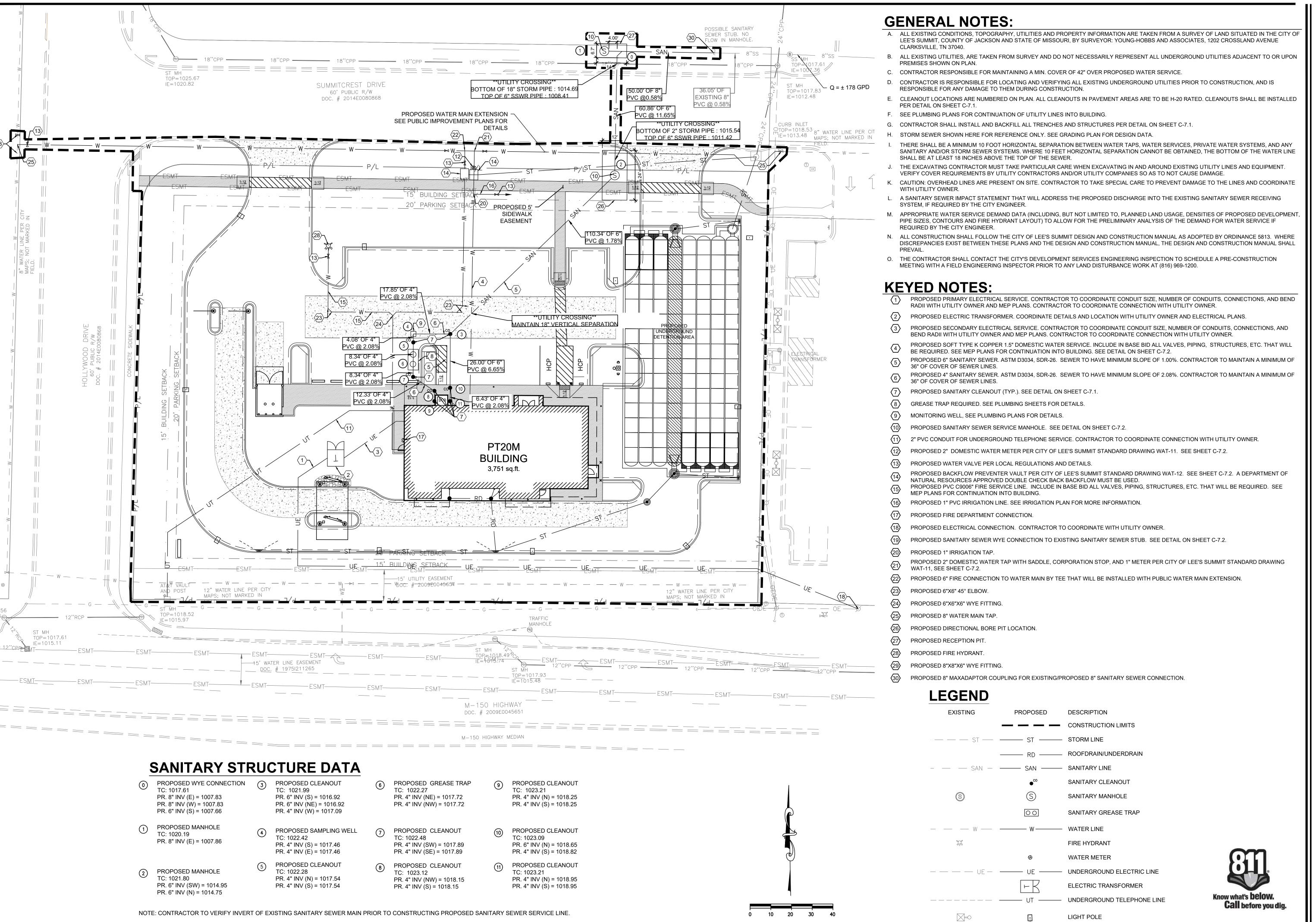
PROJECT NO: 40497-21

DRAWING

Know what's **below**.

Call before you dig.

C-5.2



SCALE: 1"=20'

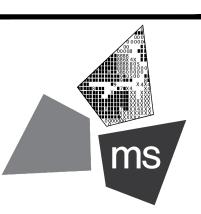
REVISION/DATE/DESCRIPTION

П	SIR UPDATES	09/13/2
	60% SET	01/24/2
	PDP APPLICATION TO CITY	02/24/2
	RESPONSE TO CITY COMMENTS I	03/29/2
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	RESPONSE TO FDP COMMENTS	08/30/2
ш	RESPONSE TO	00/00/0

FDP COMMENTS II

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PROJECT

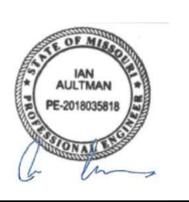
fax 614.898.7570

PROPOSED PT20M BUILDING

NEQ HWY 150 & SW HOLLYWOOD DR. LEE'S SUMMIT, MO 64082

SHEET TITLE

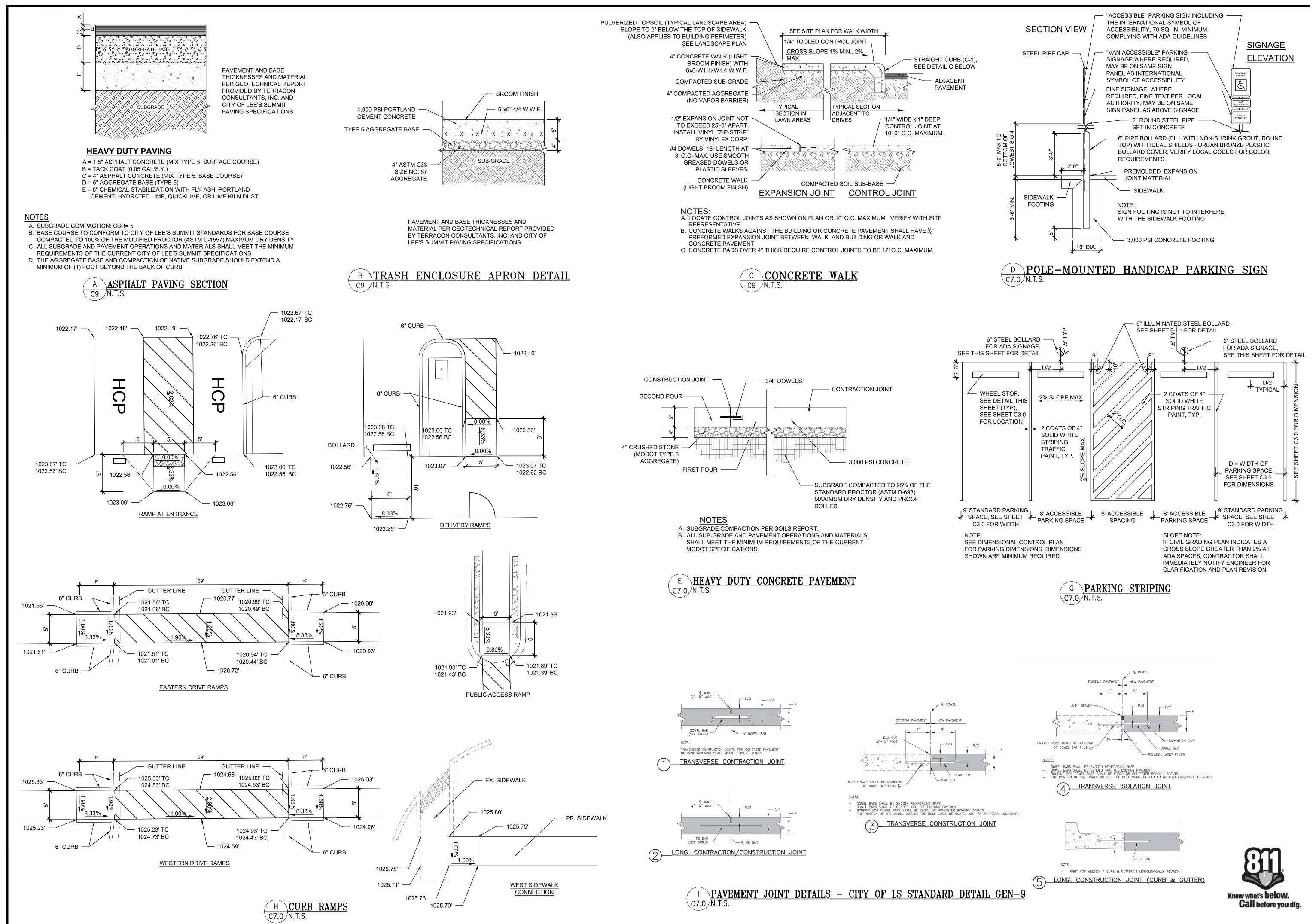
SITE UTILITY PLAN



CHECKED BY: 40497-21 PROJECT NO:

DRAWING

C-6.0



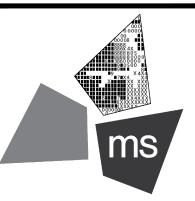
REVISION/DATE/DESCRIPTION

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NEQ HWY 150 & SW HOLLYWOOD DR.

SHEET TITLE



DRAWN BY: 40497-21

DRAWING

C-7.0

PROJECT

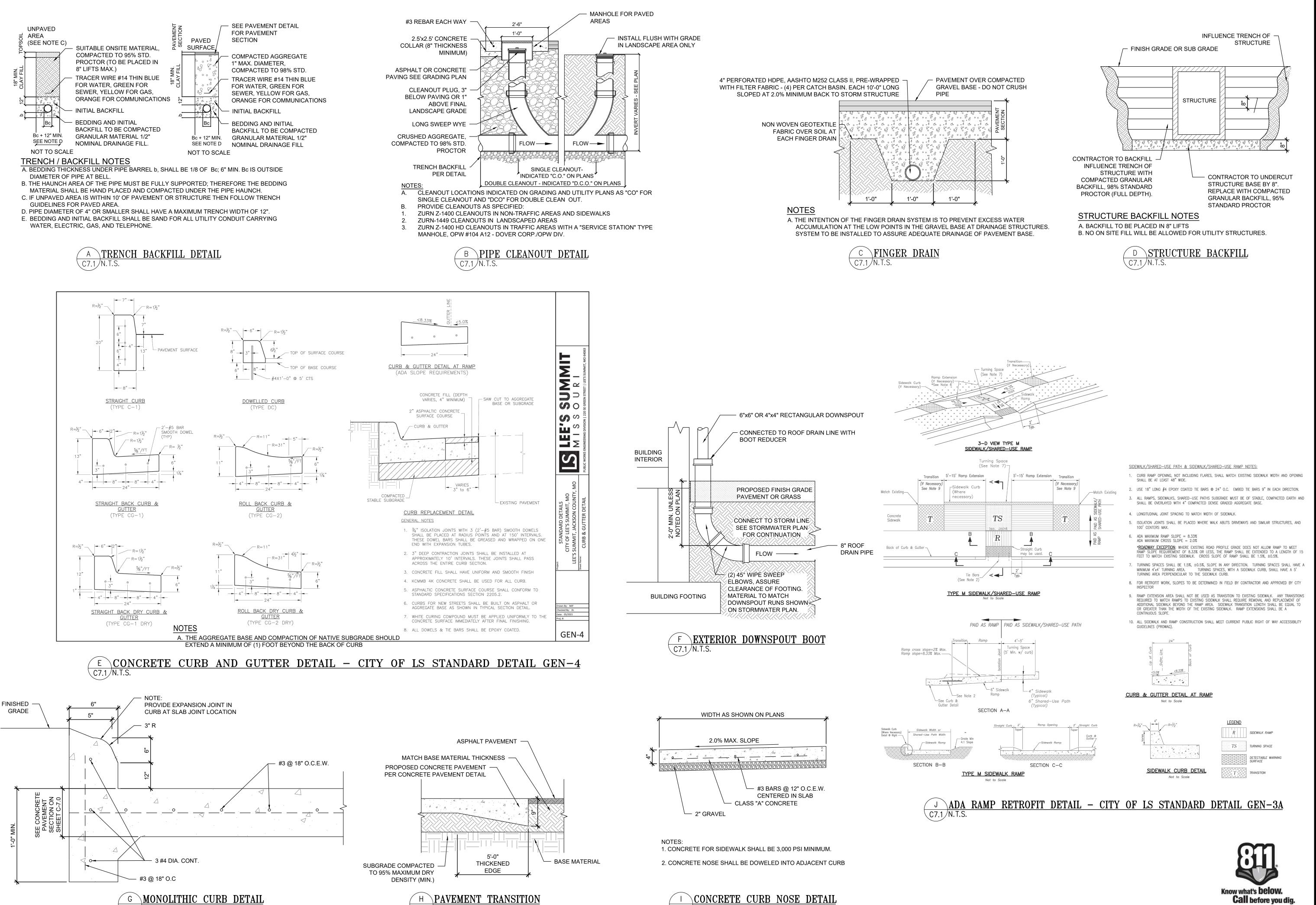
PROPOSED PT20M BUILDING

LEE'S SUMMIT, MO 64082

SITE DETAILS



CHECKED BY: PROJECT NO:



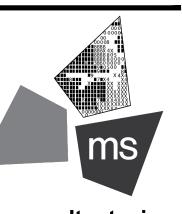
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SHEET TITLE

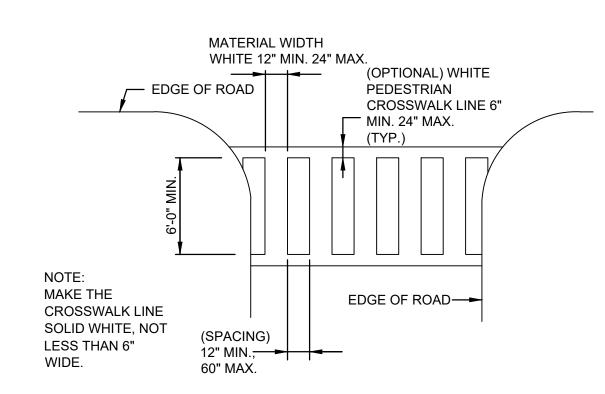
SITE DETAILS



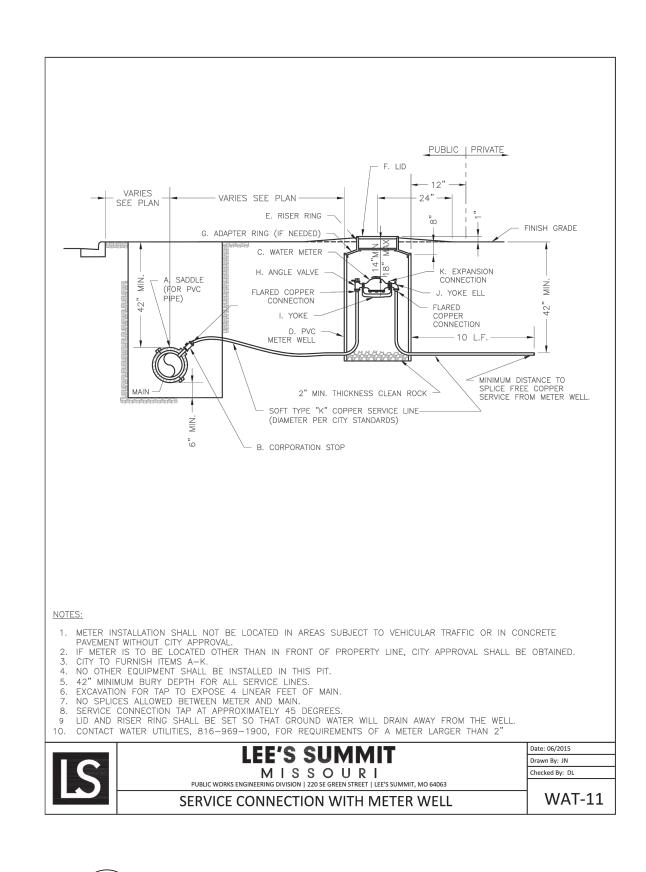
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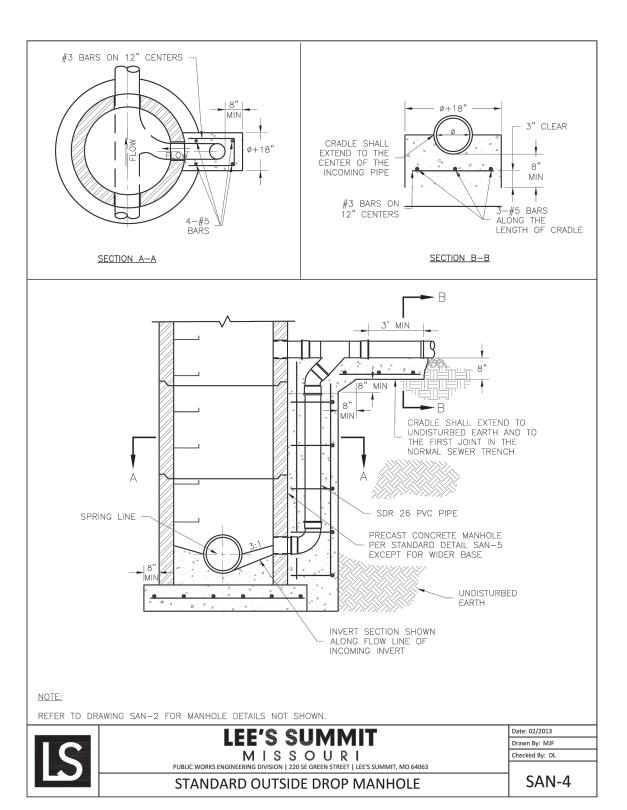
A VALVE STEM EXTENSION AND VALVE BOX C7.2 N.T.S.



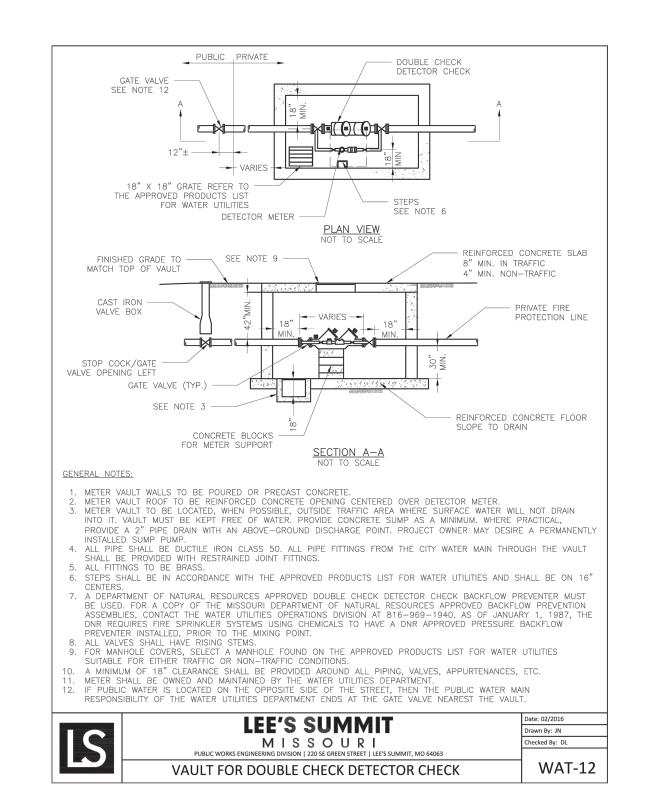
D SIDEWALK CROSSING DETAIL C7.2 N.T.S.



B SERVICE CONNECTION/METER WELL C7.2 N.T.S.

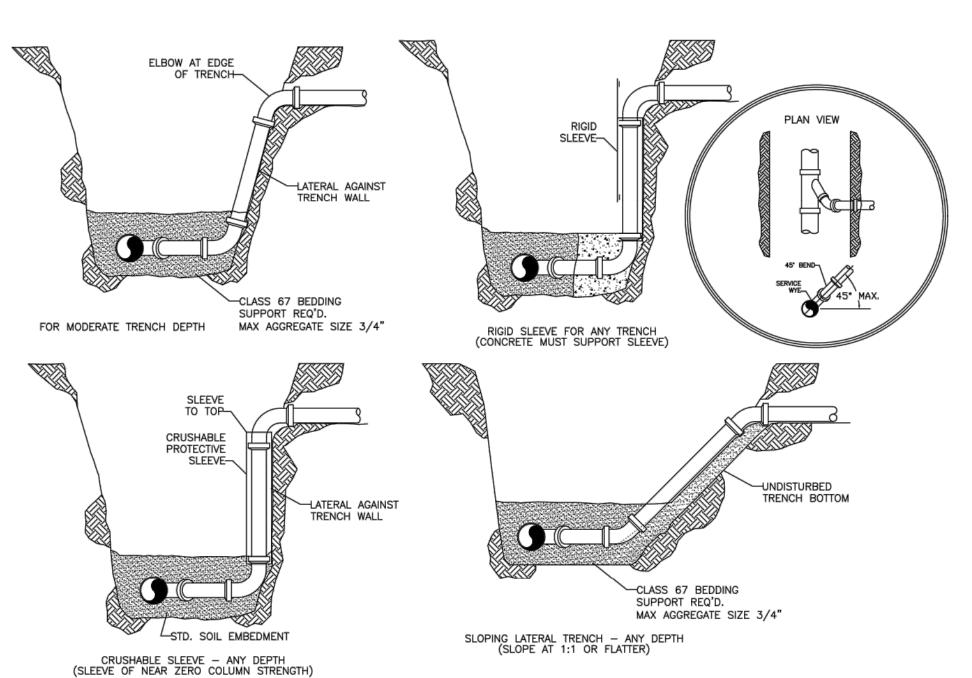


E STANDARD DROP MANHOLE DETAIL C7.2 N.T.S.



C VAULT FOR DOUBLE CHECK DETECTOR CHECK C7.2 N.T.S.

# SANITARY SEWER SERVICE WYE



F SANITARY SERVICE WYE DETAIL C7.2 N.T.S.



REVISION/DATE/DESCRIPTION

SIR UPDATES

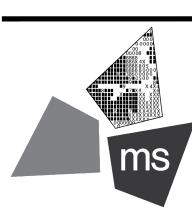
60% SET	01/24/22
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09/13/21

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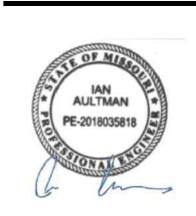
PROJECT

PROPOSED PT20M BUILDING

NEQ HWY 150 & SW HOLLYWOOD DR. LEE'S SUMMIT, MO 64082

SHEET TITLE

SITE DETAILS

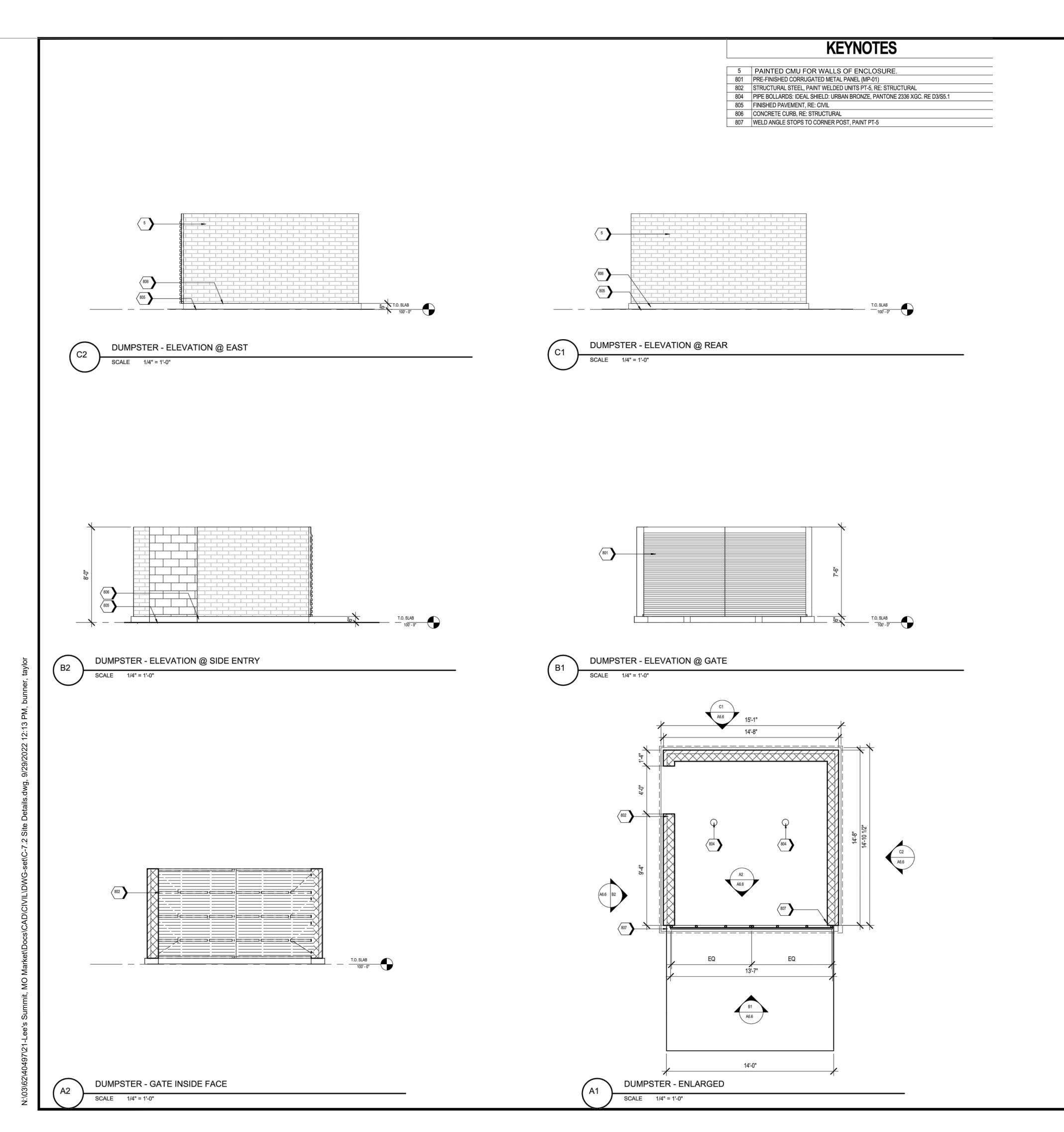


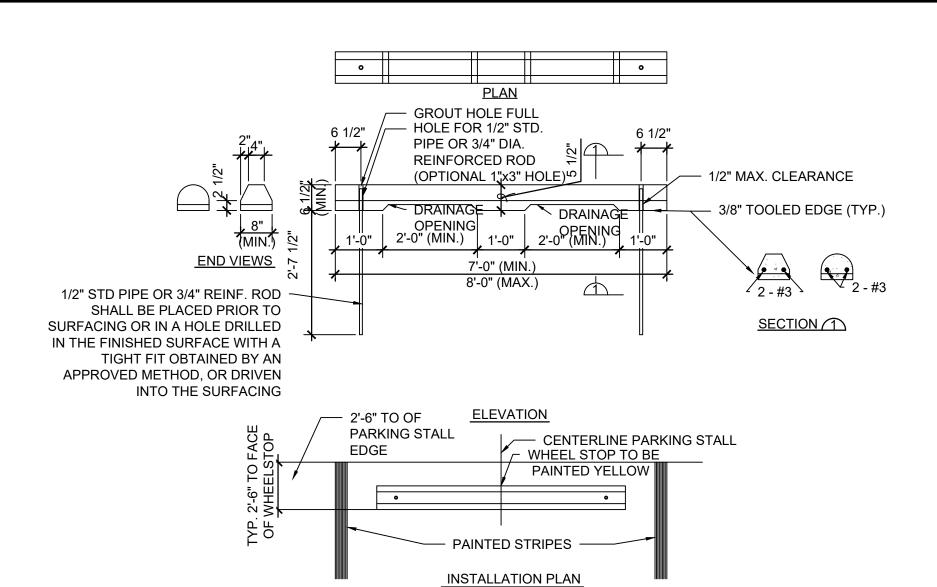
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CHECKED BY: PGD

PROJECT NO: 40497-21

DRAWING





B PRE-CAST CONCRETE WHEEL STOP C7.3 N.T.S.

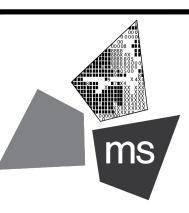
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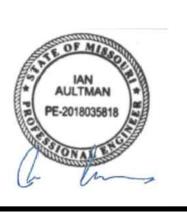
PROJECT

PROPOSED PT20M BUILDING

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SHEET TITLE

SITE DETAILS



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Know what's **below**. **Call** before you dig.

PROJECT NO.

PROJECT INFORMATION



## WHATABURGER - LEES SUMMIT (2)

MC-3500 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH MC-3500.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
- 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 LEVEL 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
  "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAM
  LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<.4 min) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER
  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".

  1 TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/ET/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. 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.
- 8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. 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:

  1 THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.

  1 THE STRUCTURAL EVALUATION SHALL DEMONISTRATE 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 ASTIM P2787 AND SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.

  1 THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTIM 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.

#### LEES SUMMIT, MO IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

- STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A
  PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- 2. STORMTECH MC-3500 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 AN EXCAVATOR SITUATED OVER THE CHAMBERS.
  STORMTECH RECOMMENDS 3 BACKFILL METHODS:

  STONESHOOTER 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.
- 4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- 5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- 6. MAINTAIN MINIMUM 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
- 7. INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
- 9. 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 MATERIALS 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
- 1. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- 2. THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:

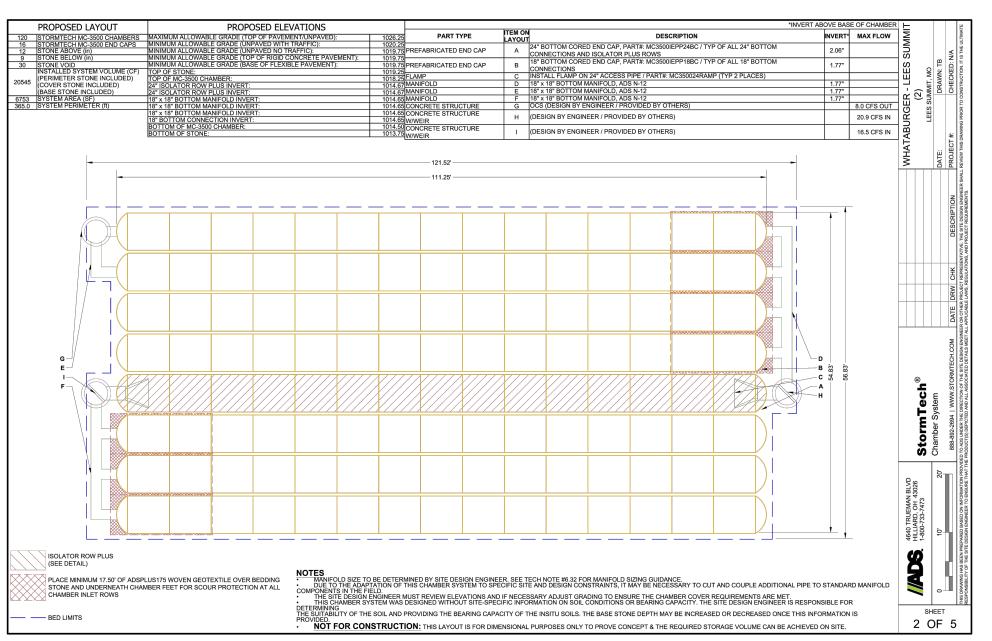
  NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.

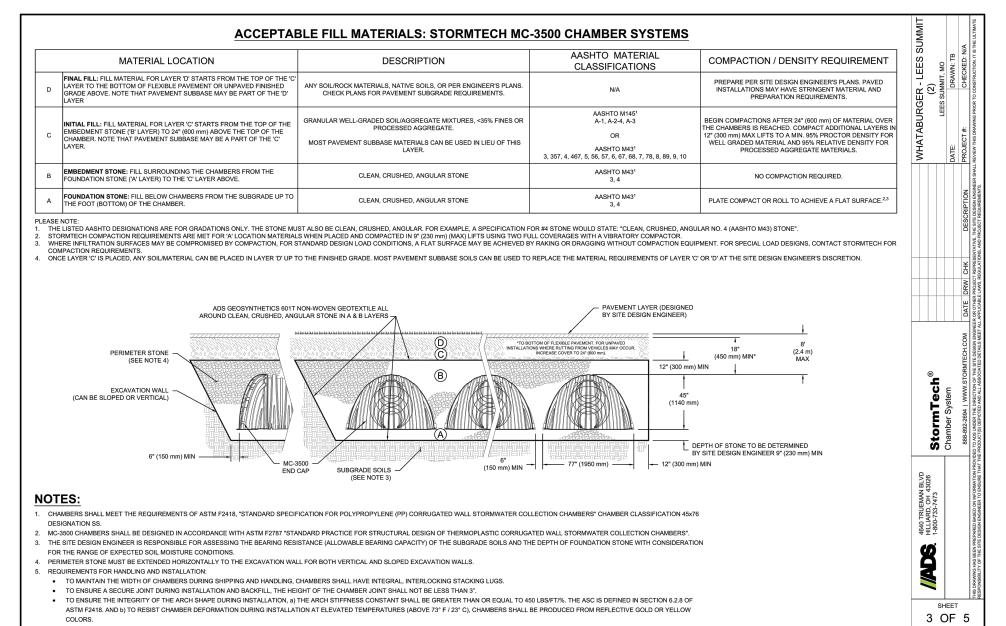
  NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".

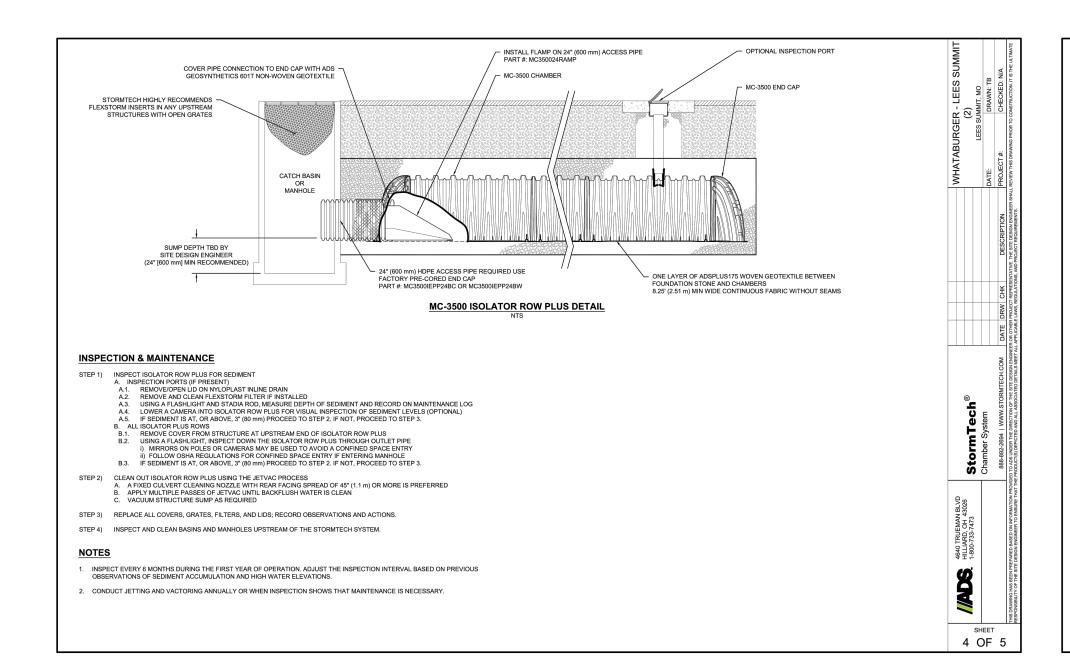
  WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".

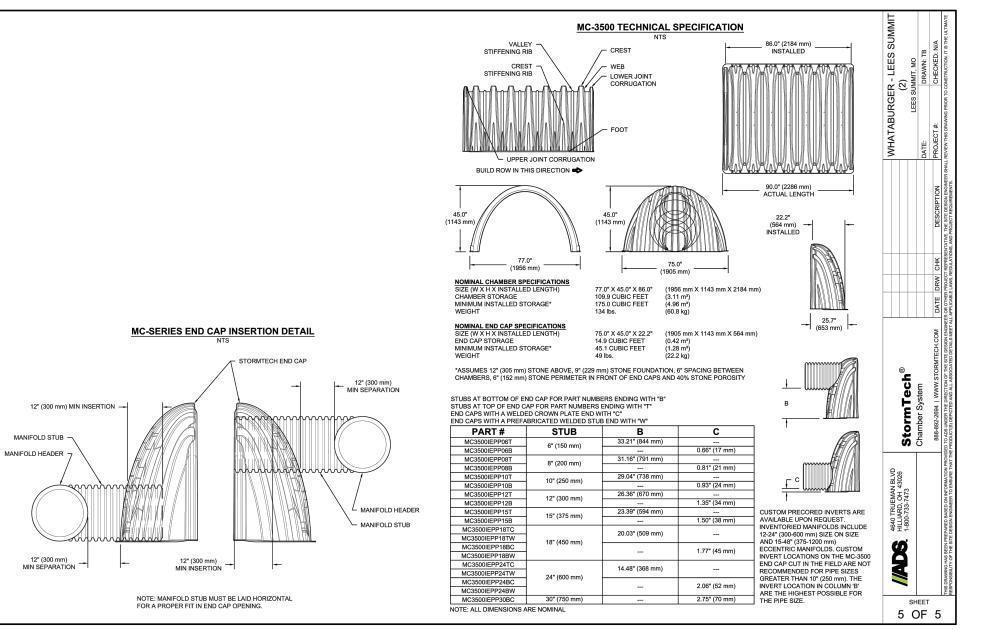
#### 3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING. USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.











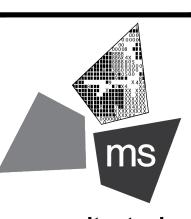
REVISION/DATE/DESCRIPTION

SIR UPDATES	09/13/21
60% SET	01/24/22
PDP APPLICATION TO CITY	02/24/22
RESPONSE TO CITY COMMENTS I	03/29/22
FINAL DEVELOPMENT SET	06/29/22
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RESPONSE TO FDP COMMENTS II	09/29/22

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ms consultants, inc. engineers, architects, planners 2221 Schrock Road Columbus, Ohio 43229-1547 phone 614.898.7100 fax 614.898.7570

PROJECT

PROPOSED PT20M BUILDING

NEQ HWY 150 & SW HOLLYWOOD DR. LEE'S SUMMIT, MO 64082

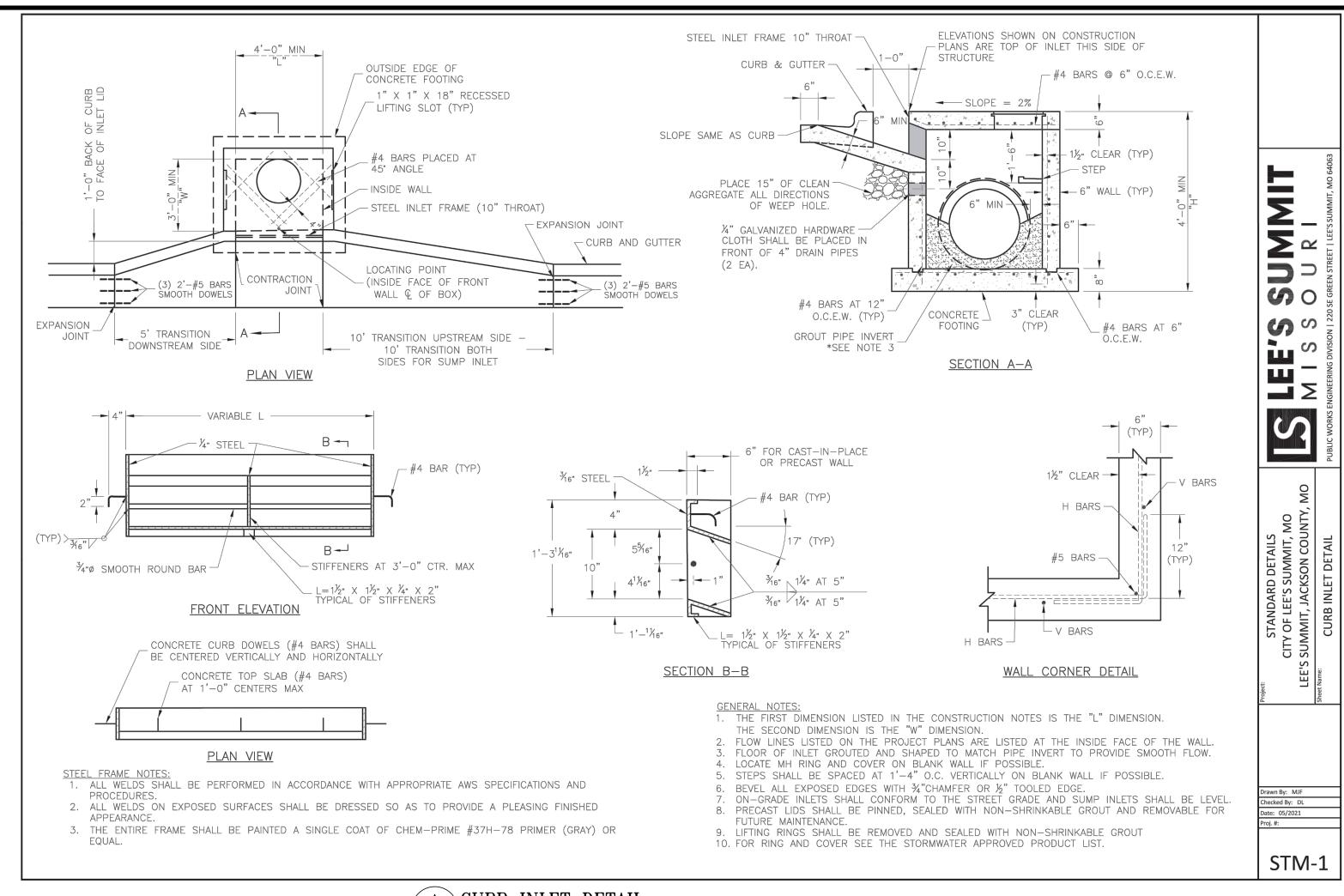
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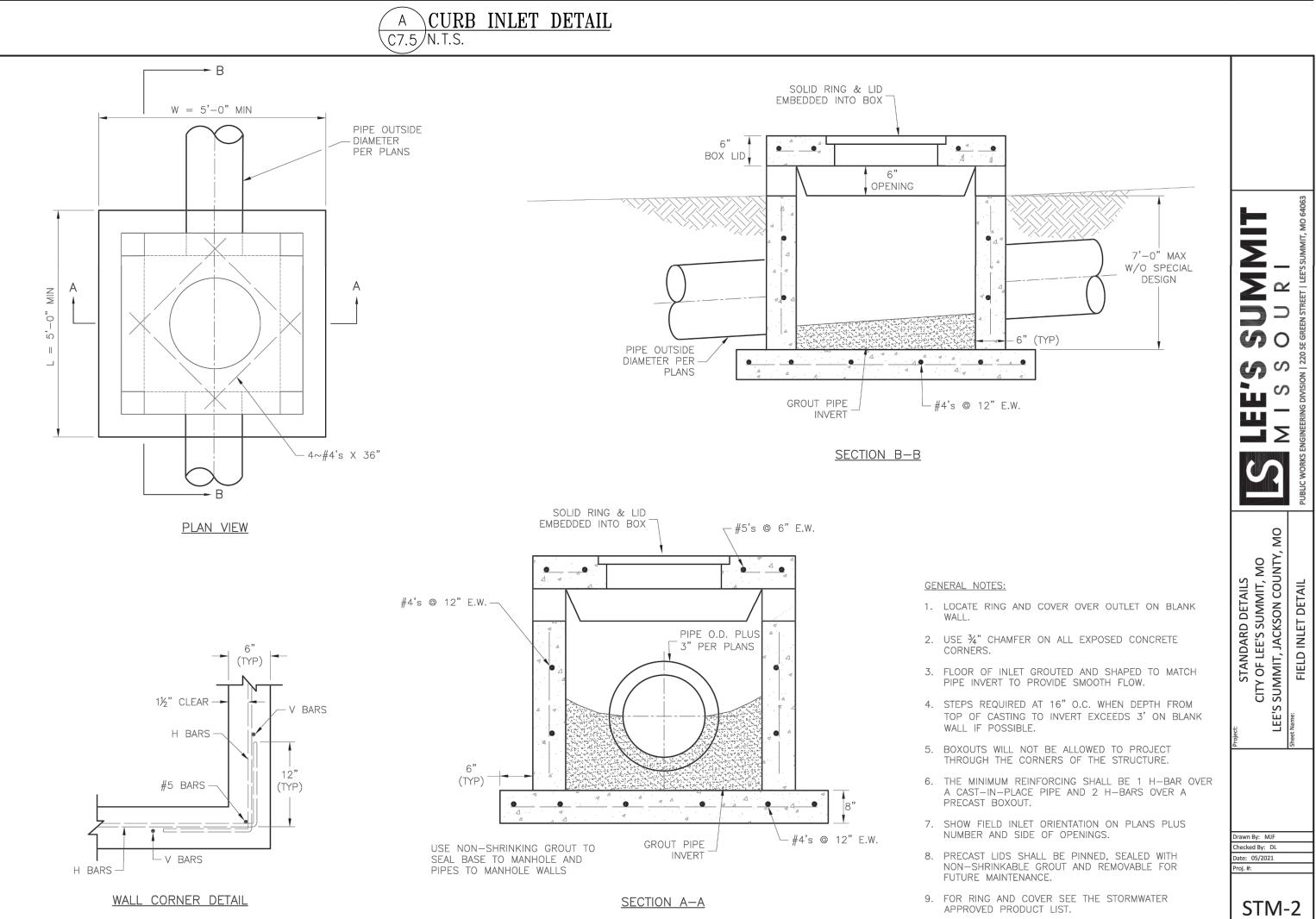
**DETENTION BASIN** DETAILS



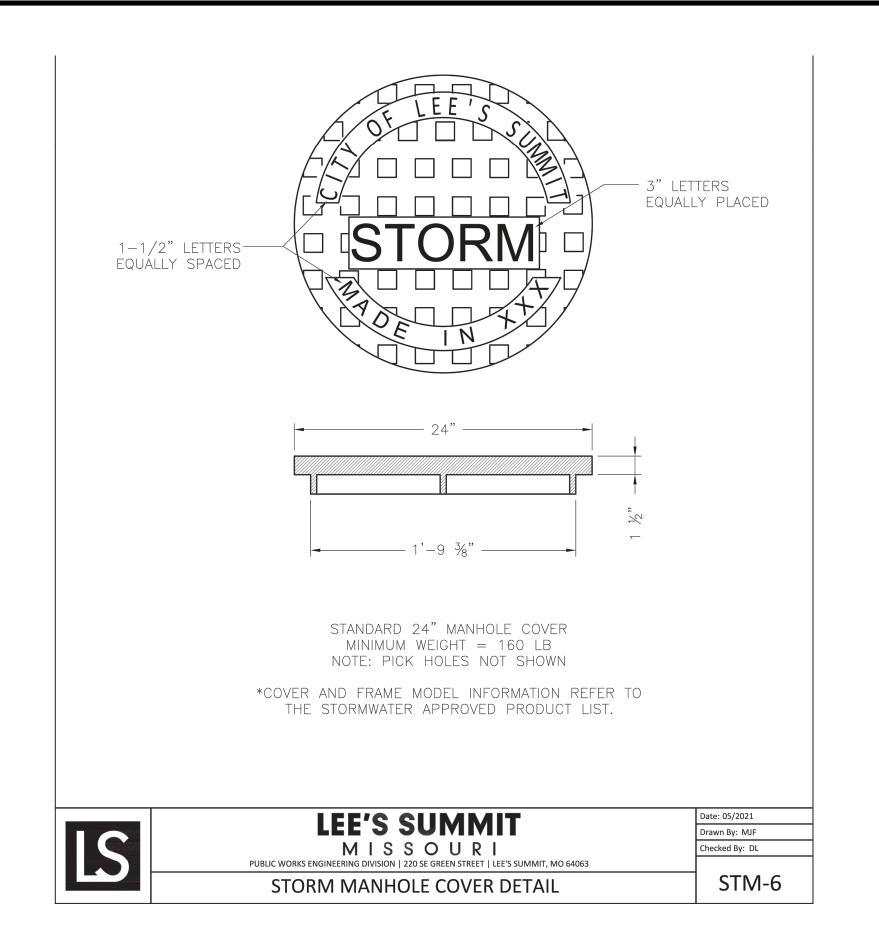
DRAWN BY: CHECKED BY: 40497-21 PROJECT NO:

DRAWING

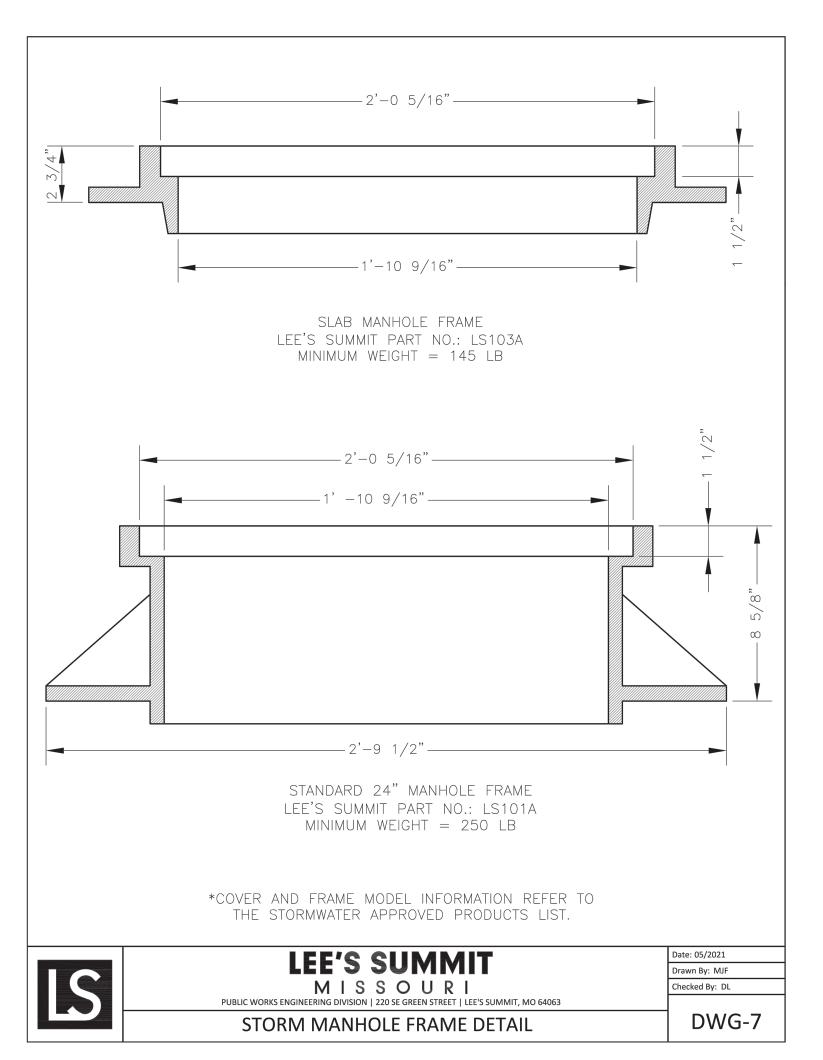




B FIELD INLET DETAIL



C7.5 N.T.S. MANHOLE COVER DETAIL



D STORM MANHOLE FRAME DETAIL C7.5 N.T.S.



REVISION/DATE/DESCRIPTION

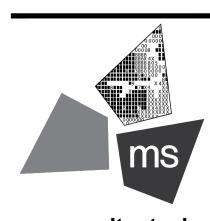
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09/13/21

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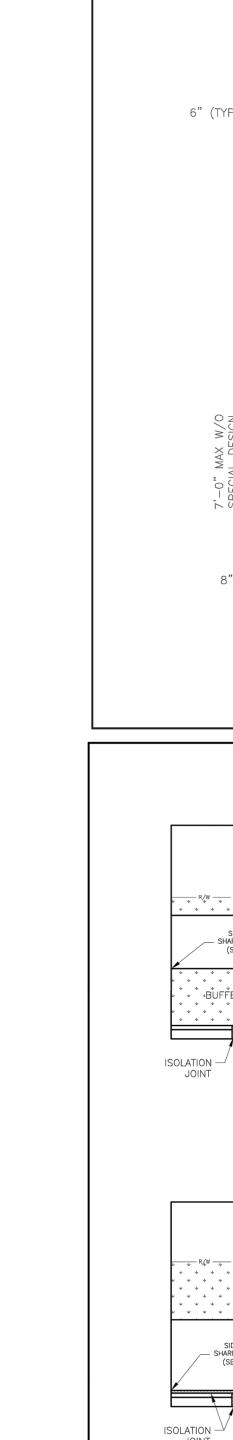
SHEET TITLE

SITE DETAILS



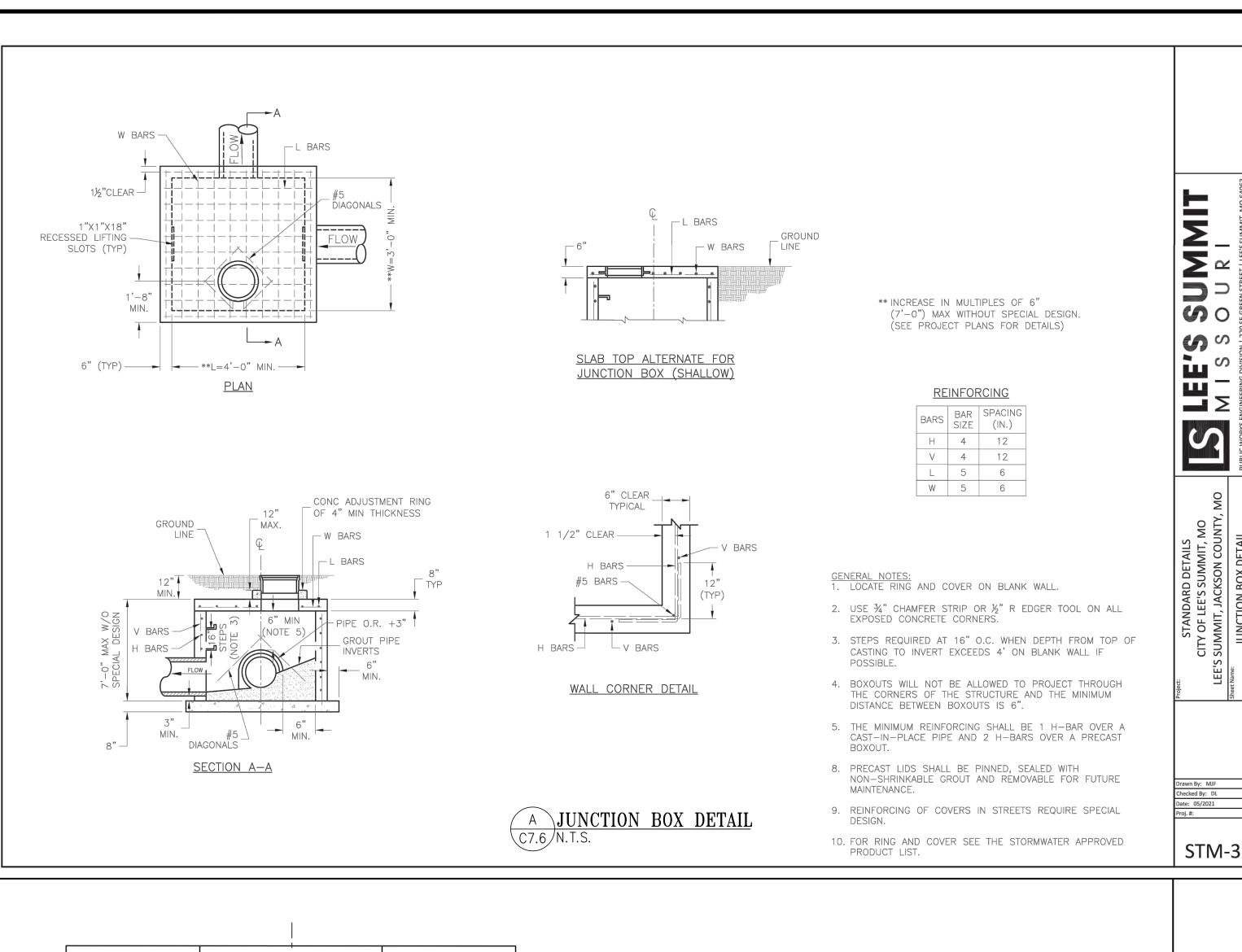
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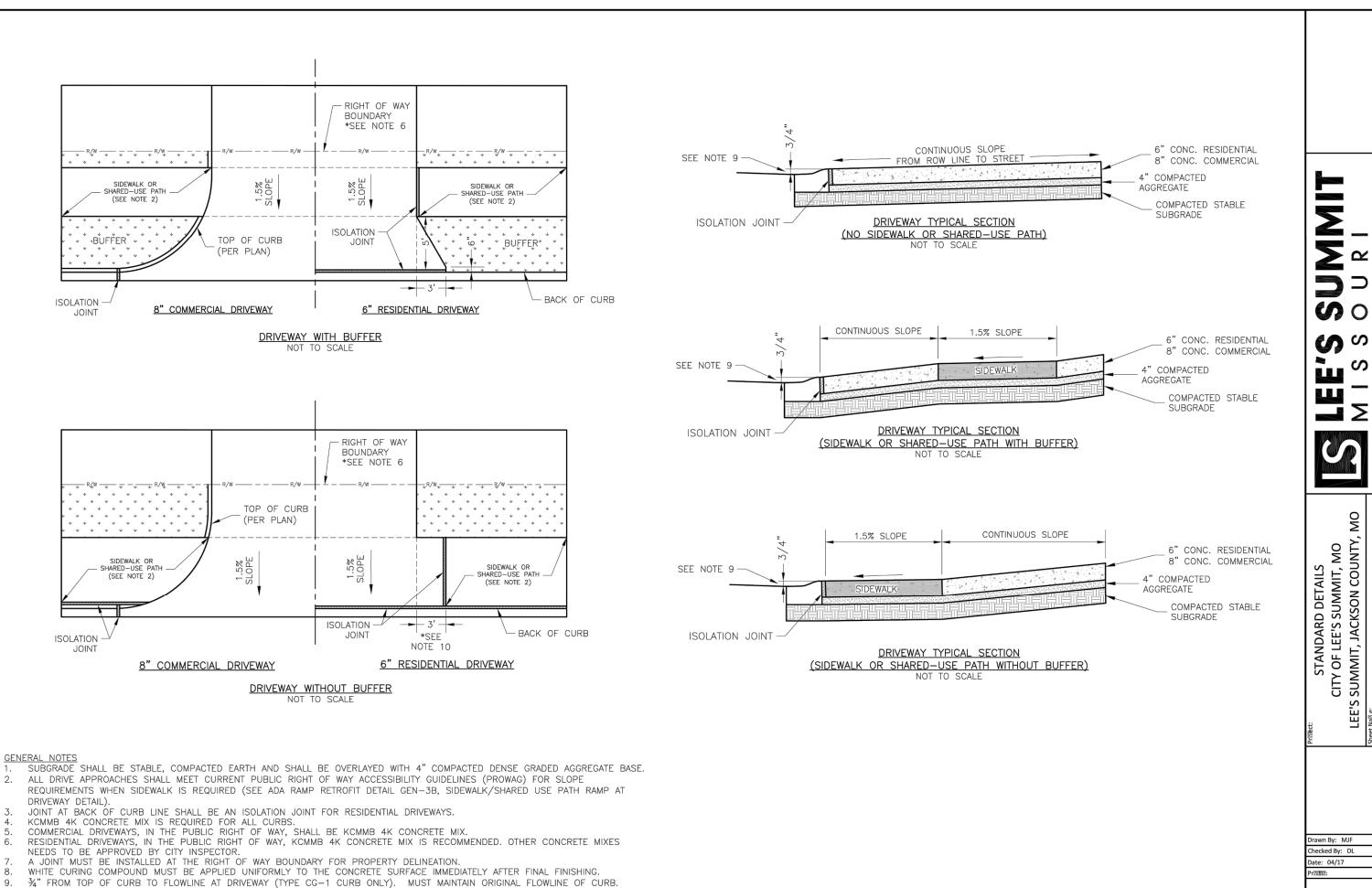
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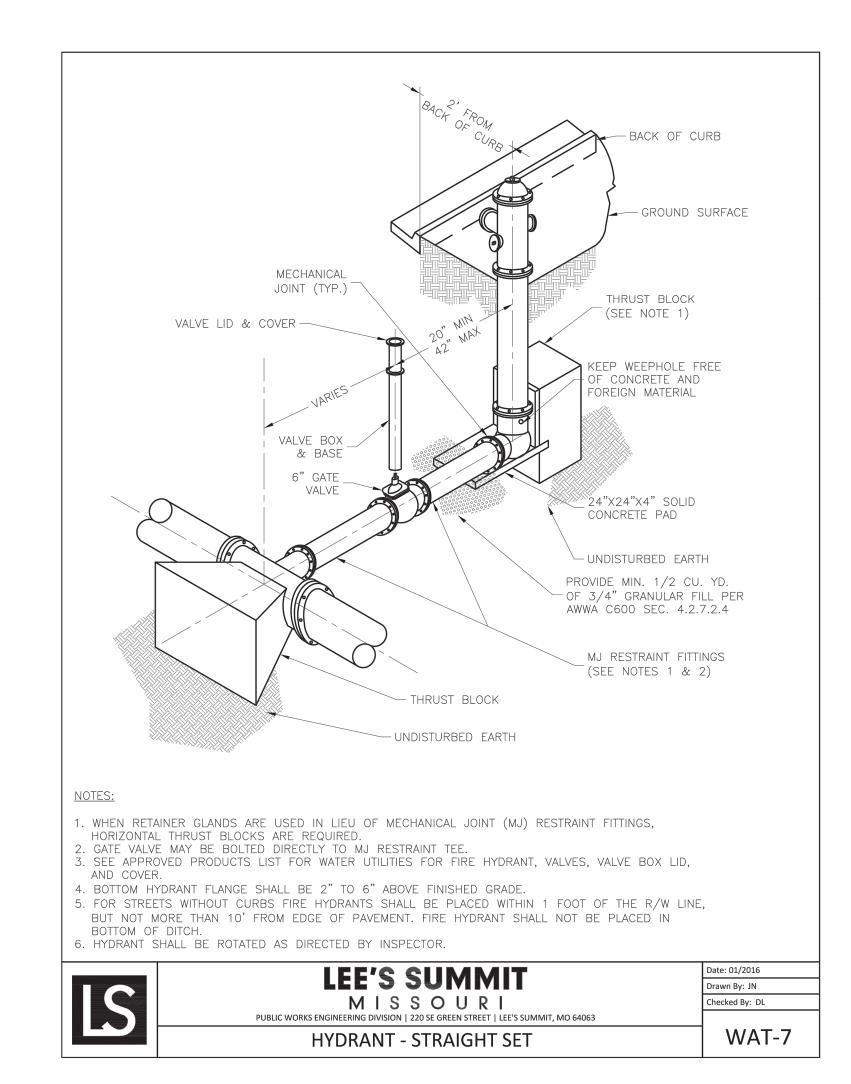


O. SIDEWALK ADJOINING CURB SHALL BE 6" THICK, EXTENDING 3' FROM THE DRÍVEWAY.

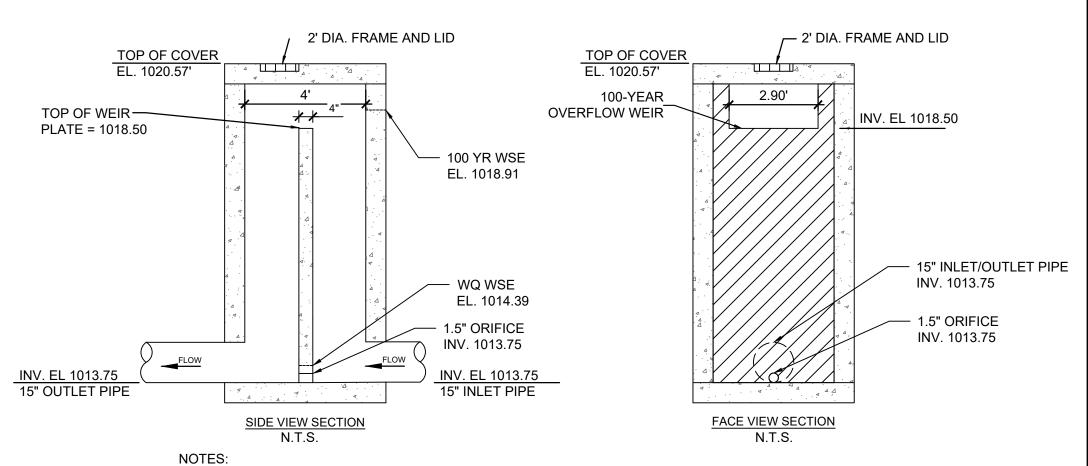
1. THE MAXIMUM WIDTH OF A RESIDENTIAL DRIVEWAY IS 36 FEET WITHIN THE RIGHT OF WAY.







B FIRE HYDRANT DETAIL C7.6 N.T.S.



CONTROL STRUCTURE SHALL BE A STANDARD LEE'S SUMMIT JUNCTION BOX, MODIFIED AS SHOWN.
 PROVIDE MANHOLE STEPS ON ACCESS SIDE OF WEIR WALL.

O OUTLET CONTROL STRUCTURE
C7.6 N.T.S.



REVISION/DATE/DESCRIPTION

SIR UPDATES

01/24/22
02/24/22
03/29/22
06/29/22
08/30/22
09/29/22

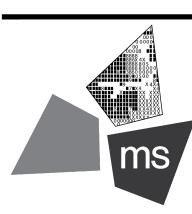
09/13/21

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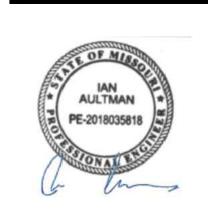
PROJECT

PROPOSED PT20M BUILDING

NEQ HWY 150 & SW HOLLYWOOD DR. LEE'S SUMMIT, MO 64082

SHEET TITLE

SITE DETAILS



DRAWN BY: TDB

CHECKED BY: PGD

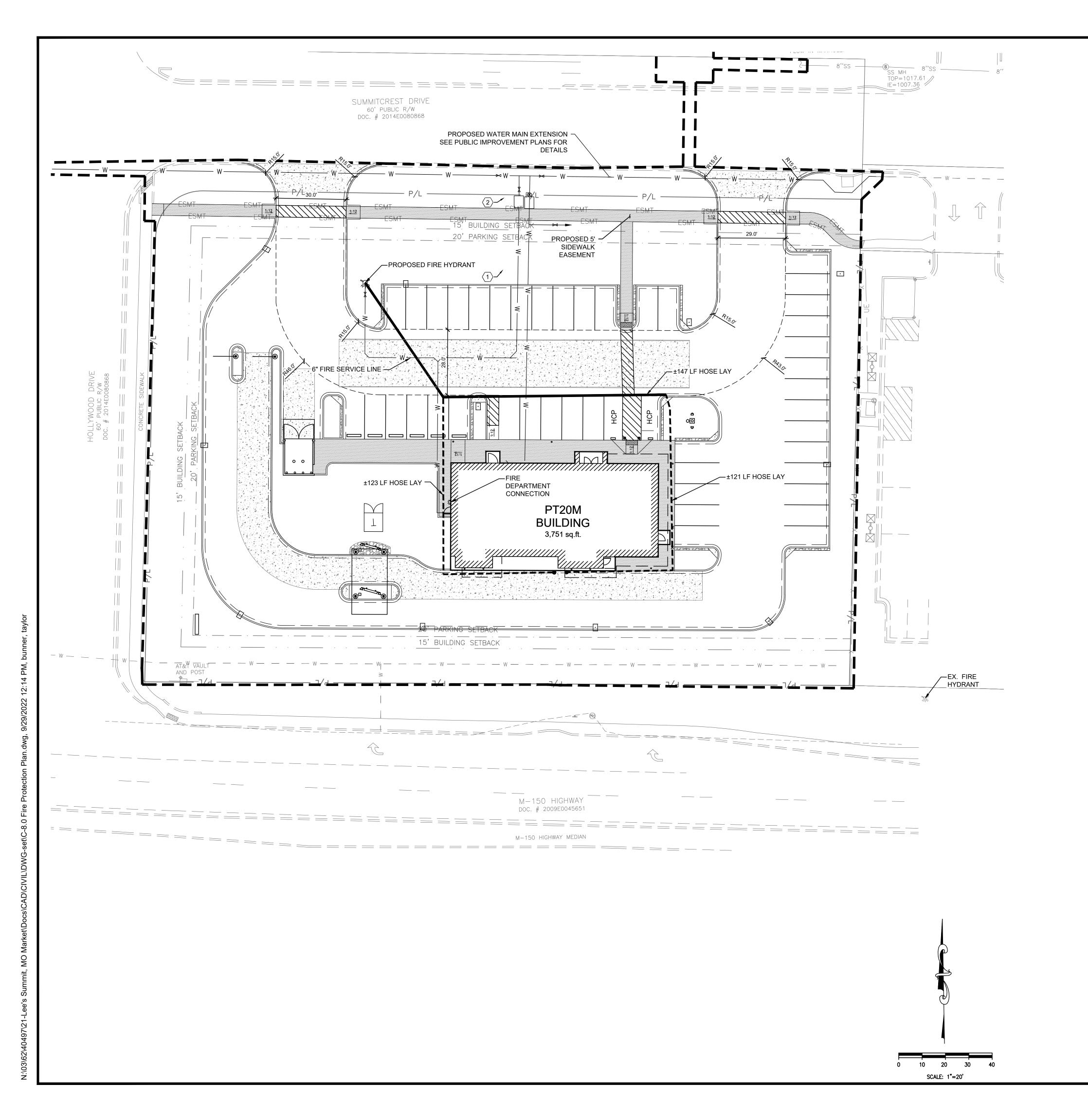
PROJECT NO: 40497-21

DRAWING

C-7.6

C ENTRANCE DETAIL N.T.S.

GEN-1



## **GENERAL NOTES:**

DETAILS SHOWN ON THIS SHEET ARE SCHEMATIC. CONTRACTOR TO CONFIRM MARKINGS CONFORM TO ALL CODES AND REGULATIONS.

FIRE HOSE TRUCK LAY

## **LEGEND**

PROPOSED DESCRIPTION

PROPERTY LINE

FIRE HYDRANT

FIRE LANE

FIRE HOSE HAND LAY

FIRE LANE NO PARKING

LETTERING ON TOP OF CONCRETE
ONLY WHERE NO FACE OF CURB IS AVAILABLE

LIMITS OF FIRE LANE
STRIPE AS SHOWN ON
THIS SHEET

CURB OR
CONCRETE WALK

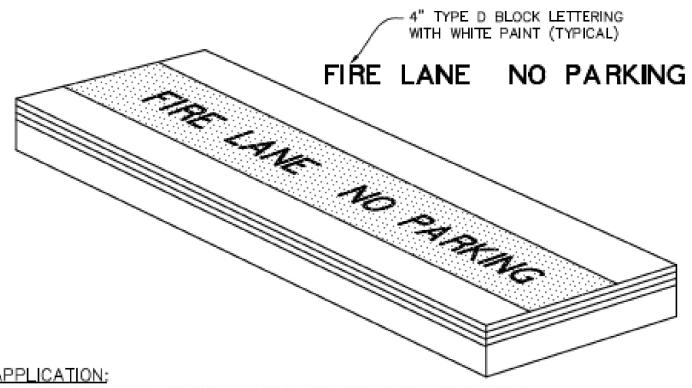
MARKINGS

#### APPLICATION:

- ON 6" CURB: PAINT RED LANE STRIPE ON BOTH FACE AND TOP OF CURB PAINT WHITE LETTERS ON FACE OF CURB ONLY
- 2. LOW CURB (HEADER CURB) OR CONCRETE PAVEMENT:
  PAINT RED LANE STRIPE AND WHITE LETTERS ON TOP OF CURB
- 3. 15 FEET SPACING BETWEEN THE BEGINNING OF THE WHITE LETTERING.

## FIRE LANE STRIPING DETAIL

NOT-TO-SCALE



1. CONTRACTOR SHALL COORDINATE WITH FIRE INSPECTOR FOR STRIPING
LOCATIONS
2. PAINT A 6" WIDE RED STRIPE LOCATED 3" OFF EDGE OF PAVEMENT WITH 4"

WHITE LETTERING ON RED STRIPE.

3. SEE SITE, STRIPING AND DIMENSIONAL CONTROL PLAN FOR CURB TYPES & LOCATIONS.

4. 15 FOOT SPACING BETWEEN THE BEGINNING OF THE WHITE LETTERING.

TYPICAL FIRE LANE MARKING DETAIL

NOT TO SCALE

## **KEYED NOTES:**

- 6" FIRE SERVICE LINE.
- 2 PROPOSED BACKFLOW PREVENTER.



### REVISION/DATE/DESCRIPTION

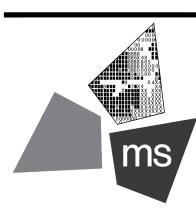
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PROJECT

PROPOSED PT20M BUILDING

NEQ HWY 150 & SW HOLLYWOOD DR. LEE'S SUMMIT, MO 64082

SHEET TITLE

FIRE PROTECTION PLAN



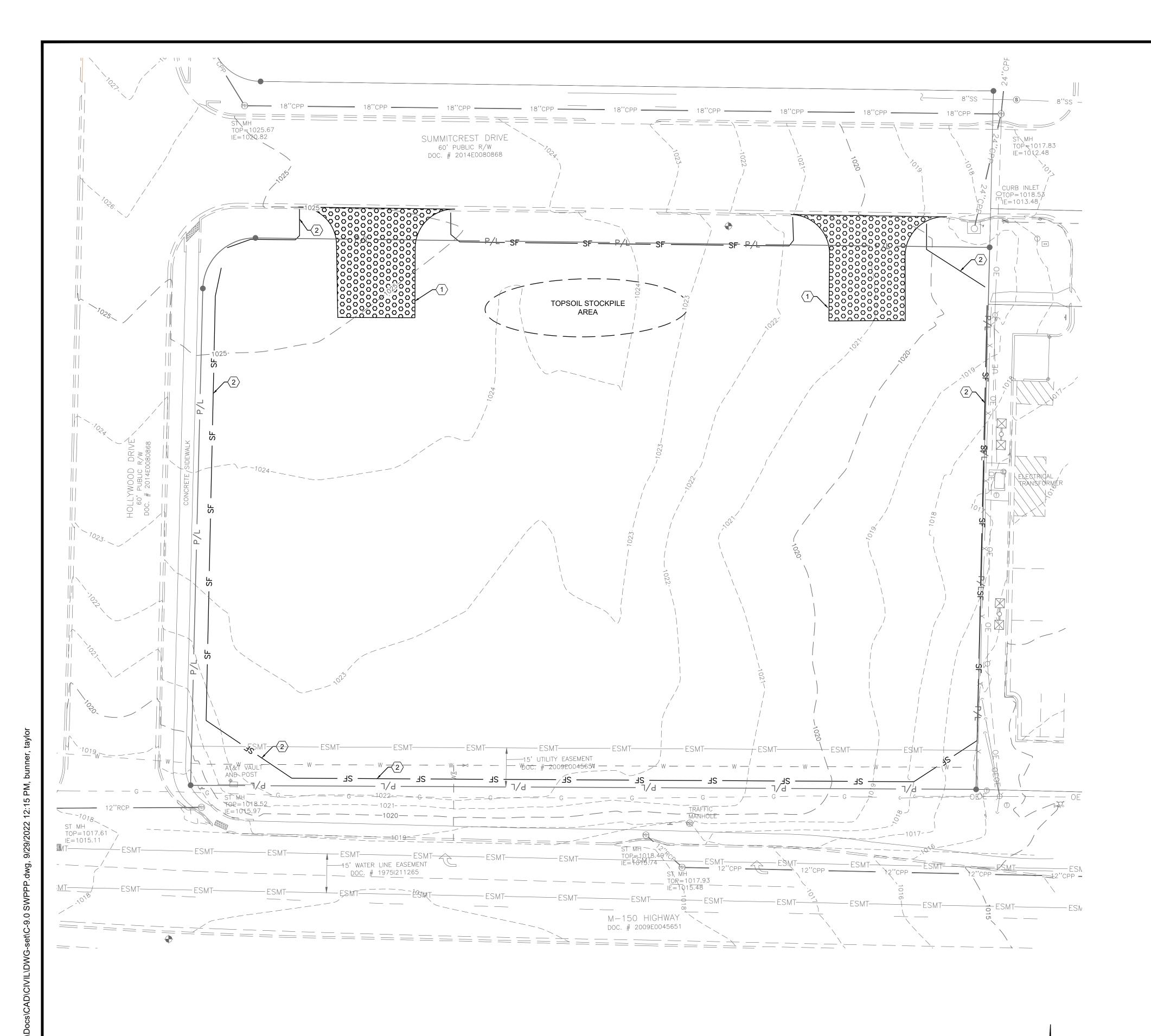
DRAWN BY: TDB

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PROJECT NO: 40497-21

DRAWING

C-8.0





CONSTRUCTION ENTRANCE. SEE DETAIL ON SHEET C-10.2.

(2) TEMPORARY SILT FENCE, SEE DETAIL ON SHEET C-10.2.

CONSTRUCTION SEQUENCE
THE ORDER OF MAJOR ACTIVITIES WILL BE AS FOLLOWS:

1. PRE-CONSTRUCTION MEETING

2. BEFORE ANY SITE GRADING ACTIVITIES BEGIN a. INSTALL PERIMETER SILT FENCES

b. INSTALL INLET PROTECTING ON EXISTING INLETS c. CONSTRUCT TEMPORARY CONSTRUCTION ENTRANCES

\*ALL CONSTRUCTION SHALL FOLLOW THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813. WHERE DISCREPANCIES EXIST BETWEEN THESE PLANS AND THE DESIGN AND CONSTRUCTION MANUAL, THE DESIGN AND CONSTRUCTION MANUAL SHALL PREVAIL.

\*THE CONTRACTOR SHALL CONTACT THE CITY'S DEVELOPMENT SERVICES ENGINEERING INSPECTION TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH A FIELD ENGINEERING INSPECTOR PRIOR TO ANY LAND DISTURBANCE WORK AT (816) 969-1200.

## **LEGEND**

SCALE: 1"=20'

EXISTING	PROPOSED	DESCRIPTION
950	1015	- CONTOUR
	SF	- SILT FENCE
		INLET PROTECTION
		CONCRETE WASHOUT
	000000	CONSTRUCTION ENTRANCE

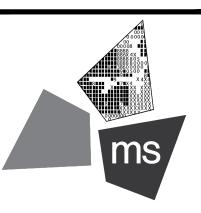


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PROPOSED PT20M BUILDING

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SHEET TITLE

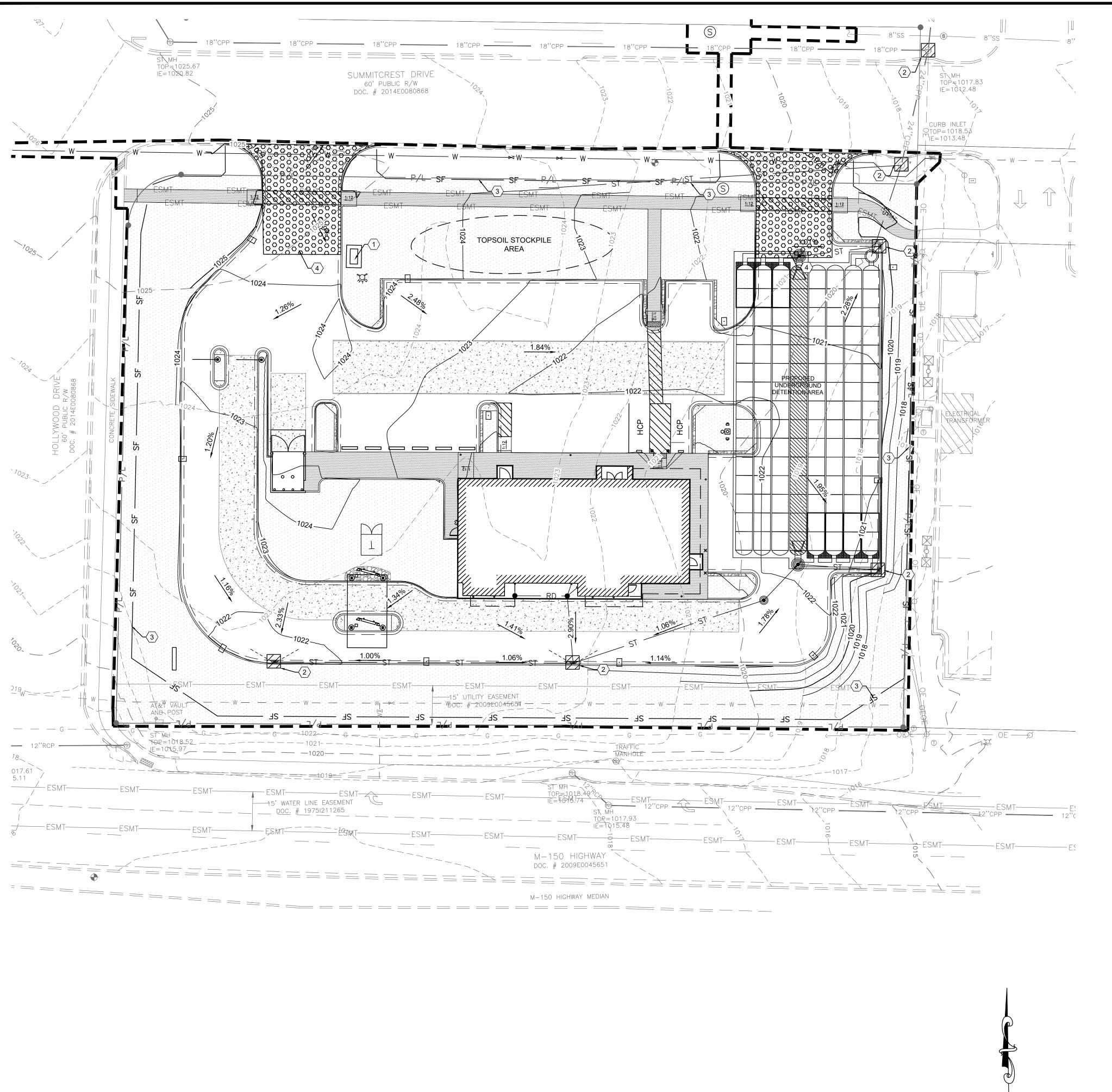
STORMWATER POLLUTION PREVENTION PLAN CONSTRUCTION



CHECKED BY: PROJECT NO:

DRAWING

C-9.0



## **KEYED NOTES:**

- (1) CONCRETE WASHOUT, SEE DETAIL ON SHEET C-10.2.
- 2) INLET PROTECTION. SEE DETAILS ON SHEET C-10.3.
- (3) TEMPORARY SILT FENCE. SEE DETAIL ON SHEET C-10.2.
- CONSTRUCTION ENTRANCE. SEE DETAIL ON SHEET C-10.2.

#### **CONSTRUCTION SEQUENCE**

THE ORDER OF MAJOR ACTIVITIES WILL BE AS FOLLOWS:

#### 1. BEGIN SITE GRADING AND TOPSOIL STRIPPING

- a. ESTABLISH TOPSOIL STOCK PILE WITHIN SILT FENCE PERIMETER
  b. STABILIZE DENUDED AREAS AND STOCKPILES WITHIN 14 DAYS OF LAST CONSTRUCTION ACTIVITY IN THAT AREA
  c. INSTALL EROSION CONTROL MATTING AT LOCATIONS INDICATED ON PLAN
- 2. INSTALL UTILITIES, SANITARY SEWERS, WATER SERVICES, AND STORM SEWERS
- 3. BEGIN CONSTRUCTION OF BUILDING FOUNDATION AND STRUCTURE
- 4. INSTALL CURBS, PREPARE PAVEMENT SUBGRADE AND PROVIDE GOOD AGGREGATE BASE TO AREAS TO BE PAVED
- 5. PAVE AREAS AND EXTERIOR BUILDING CONSTRUCTION
- 6. FINAL GRADING AND PERMANENT SEEDING OF NON-PAVED AREAS OF THE SITE WITHIN 7 DAYS OF FINISHING FINAL GRADE
- 7. ONCE 70% VEGETATIVE COVERAGE IS ACHIEVED, REMOVE EROSION PROTECTION

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## **LEGEND**

SCALE: 1"=20'

	_	
EXISTING	PROPOSED	DESCRIPTION
950	1015	CONTOUR
	SF	SILT FENCE
		INLET PROTECTION
		CONCRETE WASHOUT
	000000	CONSTRUCTION ENTRANCE
		PERMANENT STABILIZATION AREA



#### REVISION/DATE/DESCRIPTION

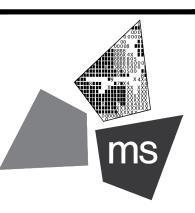
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PROJECT

PROPOSED PT20M BUILDING

NEQ HWY 150 & SW HOLLYWOOD DR. LEE'S SUMMIT, MO 64082

SHEET TITLE

STORMWATER
POLLUTION
PREVENTION PLAN
DURING AND POST
CONSTRUCTION



CHECKED BY: PGD
PROJECT NO: 40497-21

DRAWING

C-9.1

PROJECT NAME AND LOCATION

NWQ HWY 150 & HOLLYWOOD ST

WHATABURGER

LEE'S SUMMIT, MO 64802

OTHER SEDIMENT AND EROSION CONTROL NOTES

- TEMPORARY EROSION CONTROLS WILL BE APPLIED PRIOR TO ONSET OF WINTER WEATHER FOR DISTURBED AREAS THAT WILL BE LEFT IDLE OVER WINTER.
- PERMANENT EROSION CONTROLS WILL BE APPLIED WITHIN 7 DAYS FOR DISTURBED AREAS REMAINING DORMANT FOR OVER
- SEDIMENT CONTROL DEVICES WILL BE IMPLEMENTED FOR ALL AREAS REMAINING DISTURBED OVER 7 DAYS.

#### ADDITIONAL BMP'S

<u>OPEN BURNING:</u> NO MATERIALS MAY BE BURNED WHICH CONTAIN RUBBER, GREASE, ASPHALT, OR PETROLEUM PRODUCTS SUCH AS TIRES, CARS, AUTO PARTS, PLASTICS OR PLASTIC COATED WIRE. OPEN BURNING IS NOT ALLOWED IN RESTRICTED AREAS. RESTRICTED AREAS ARE DEFINED AS:

- 1. WITHIN CORPORATION LIMITS
- 2. WITHIN 1,000 FEET OF A MUNICIPAL CORPORATION
- 3. WITHIN A ONE MILE ZONE OUTSIDE OF A CORPORATION OF 10,000 OR MORE

OUTSIDE THE RESTRICTED AREA, NO OPEN BURNING CAN TAKE PLACE WITHIN 1,000 FEET OF AN INHABITED BUILDING LOCATED OFF THE PROPERTY WHERE THE FIRE IS SET. OPEN BURNING IS PERMISSIBLE IN A RESTRICTED AREA FOR THE FOLLOWING ACTIVITIES: HEATING TAR, WELDING AND ACETYLENE TORCHES, SMUDGE POTS AND SIMILAR OCCUPATIONAL NEEDS, AND HEATING OR WARMTH FOR OUTDOOR BARBEQUES. OUTSIDE OF RESTRICTED AREAS, OPEN BURNING IS PERMISSIBLE FOR LANDSCAPE WASTES (PLANT MATERIAL), LAND-CLEARING WASTES (PLANT MATERIAL, WITH PRIOR WRITTEN PERMISSION FROM EPA), AND AGRICULTURAL WASTES (MATERIAL GENERATED BY CROP, HORTICULTURAL, OR LIVESTOCK PRODUCTION PRACTICES.

DUST CONTROL/SUPPRESSANTS: DUST CONTROL IS REQUIRED TO PREVENT NUISANCE CONDITIONS. DUST CONTROLS MUST BE USED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATION AND NOT BE APPLIED IN A MANNER, WHICH WOULD RESULT IN A DISCHARGE TO WATERS OF THE STATE. ISOLATION DISTANCES FROM BRIDGES, CATCH BASINS, AND OTHER DRAINAGE WAYS MUST BE OBSERVED. APPLICATION (EXCLUDING WATER) MAY NOT OCCUR WHEN PRECIPITATION IS IMMINENT AS NOTED IN THE SHORT TERM FORECAST. USED OIL MAY NOT BE APPLIED FOR DUST CONTROL.

AIR PERMITTING REQUIREMENTS: ALL CONTRACTORS AND SUB CONTRACTORS MUST BE MADE AWARE THAT CERTAIN ACTIVITIES ASSOCIATED WITH CONSTRUCTION WILL REQUIRE AIR PERMITS. ACTIVITIES INCLUDING BUT NOT LIMITED TO MOBILE CONCRETE BATCH PLANTS, MOBILE ASPHALT PLANTS, CONCRETE CRUSHERS, LARGE GENERATORS, ETC., WILL REQUIRE SPECIFIC MISSOURI EPA AIR PERMITS FOR INSTALLATION AND OPERATION. THESE ACTIVITIES MUST SEE AUTHORIZATION FROM THE CORRESPONDING OF MISSOURI EPA. NOTIFICATION FOR RESTORATION AND DEMOLITION MUST BE SUBMITTED TO MISSOURI EPA FOR ALL COMMERCIAL SITES TO DETERMINE IF ASBESTOS CORRECTIVE ACTIONS ARE REQUIRED.

WASTE DISPOSAL: THE CONTRACTOR SHALL PROVIDE LITTER CONTROL AND COLLECTION OF MATERIALS WITHIN THE PROJECT BOUNDARIES DURING CONSTRUCTION. ALL FERTILIZER, HYDROCARBON, OR OTHER CHEMICAL CONTAINERS SHALL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH THE EPA'S STANDARD PRACTICES. NO SOLID MATERIAL INCLUDING BUILDING AND CONSTRUCTION MATERIAL SHALL BE DISPOSED OF, DISCHARGED OR BURIED ONSITE.

OFFSITE VEHICLE TRACKING: LOADED HAUL TRUCKS SHALL BE COVERED WITH A TARPAULIN. EXCESS DIRT MATERIAL ON THE ROADS SHALL BE REMOVED IMMEDIATELY. HAULING ON UNPAVED SURFACES SHALL BE MONITORED TO MINIMIZE DUST AND CONTROL EROSION. HAUL ROADS SHALL BE WATERED OR OTHER CONTROLS PROVIDED AS NECESSARY TO REDUCE DUST AND CONTROL SEDIMENTS.

SANITARY WASTE: THE CONTRACTOR SHALL PROVIDE PORTABLE SANITARY WASTE FACILITIES. THESE FACILITIES SHALL BE COLLECTED OR EMPTIED BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR AS REQUIRED BY STATE REGULATIONS.

FERTILIZERS AND PESTICIDES: FERTILIZER SHALL BE APPLIED AT A RATE SPECIFIED BY THE SPECIFICATIONS OR THE MANUFACTURER. THE APPLICATION OF FERTILIZERS SHALL BE ACCOMPLISHED IN A MANNER AS DESCRIBED BY THE SPECIFICATION OR MANUFACTURER TO ENSURE THE PROPER INSTALLATION AND TO AVOID OVER FERTILIZING. PESTICIDES ARE NOT ANTICIPATED FOR THIS PROJECT.

#### MAINTENANCE

THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTENANCE AND REPAIRS OF EROSION AND SEDIMENT CONTROL DEVICES AND THE REMOVAL OF THE EROSION AND SEDIMENT CONTROL DEVICES AFTER THE NOTICE OF TERMINATION IS EXECUTED.

THE CONTRACTOR SHALL REVIEW THE PROJECT AND ALL EROSION AND SEDIMENT CONTROLS ON A DAILY BASIS AND DURING AND FOLLOWING RAINFALL EVENTS. AN INSPECTION FORM HAS BEEN PROVIDED IN THE SPECIFICATIONS. THE CONTRACTOR SHALL BE REQUIRED TO KEEP A LOG OF ALL THE DAILY INSPECTION REPORTS, GRADING AND STABILIZATION ACTIVITIES, AND SWPPP AMENDMENTS AT THE SITE. THE FOLLOWING PRACTICES WILL BE IMPLEMENTED TO MAINTAIN AND MONITOR EROSION AND SEDIMENT CONTROLS.

- A. PROJECT REVIEW ON A DAILY BASIS.
- B. PROVIDE AND MAINTAIN RAIN GAUGES ONSITE (IF NOT AVAILABLE IN THE AREA) TO RECORD RAINFALL DATA DAILY.
- C. REVIEW STABILIZATION PRACTICES AND CONTROLS ON A DAILY BASIS AND MAINTAIN AND REPAIR THESE MEASURES AND CONTROLS AS NECESSARY. TEMPORARY AND/OR PERMANENT SEEDING, MULCHING AND SODDING SHALL BE REPAIRED IN BARE SPOTS AND WASHOUTS, AND HEALTHY GROWTH ESTABLISHED.
- D. ONCE HEALTHY GROWTH OF TURF IS ESTABLISHED, THE CONTRACTOR SHALL MAINTAIN THESE AREAS TO INSURE THE HEIGHT OF THE GRASS DOES NOT REACH MORE THAN 6 INCHES ABOVE THE ESTABLISHED GRADE.
- E. REVIEW STRUCTURAL PRACTICES ON A DAILY BASIS AND MAINTAIN AND REPAIR THESE MEASURES AND CONTROLS AS NECESSARY. BUILT UP SEDIMENTS SHALL BE REMOVED FROM SILT FENCES AND FILTER CLOTH SHALL BE REPLACED AS NECESSARY AND WHEN THEY HAVE SERVED THEIR USEFULNESS.
- F. AN INSPECTION AND MAINTENANCE REPORT SHALL BE COMPLETED WEEKLY AND WITHIN 24 HOURS OF A RAINFALL EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR SHALL CREATE AN INSPECTION AND MAINTENANCE REPORT LOG AND NOTE ANY AMENDMENTS TO THE SWPPP THAT OCCUR DURING CONSTRUCTION.
- G. IF THE CONTRACTOR ELECTS TO APPLY FOR PERMITS FOR DISCHARGE OF STORMWATER FROM THE SITE DURING CONSTRUCTION, ALL POINTS OF DISCHARGE OF STORMWATER RUNOFF FROM THE SITE SHALL BE INSPECTED ON A DAILY BASIS AND CONTROLS AND MEASURES REPAIRED AS NECESSARY TO MAINTAIN ACCEPTABLE WATER QUALITY AND DISCHARGE VOLUMES IN ACCORDANCE WITH THE PERMIT.

## INSPECTIONS

QUALIFIED PERSONNEL SHALL INSPECT ALL POINTS OF DISCHARGE, AS APPLICABLE, FROM THE PROJECT SITE AND ALL DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN STABILIZED. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR POTENTIAL FOR POLLUTANTS ENTERING THE STORMWATER MANAGEMENT SYSTEM. THE STORMWATER MANAGEMENT SYSTEM AND EROSION AND SEDIMENT CONTROL MEASURES SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. INSPECTION AND MAINTENANCE REPORTS SHALL BE COMPLETED AT LEAST EVERY WEEK AND FOLLOWING A RAINFALL EVENT OF 0.5 INCHES OF WATER OR GREATER (SEE ATTACHED FORM). THESE FORMS SHALL BE RETAINED FOR A PERIOD OF AT LEAST 3 YEARS FOLLOWING THE DATE THE SITE IS FINALLY STABILIZED.

ALLOWABLE NON-STORMWATER DISCHARGE MANAGEMENT

ALLOWABLE NON-STORMWATER DISCHARGES AND THE MEASURES USED TO ELIMINATE OR REDUCE THEM AND TO PREVENT THEM FROM BECOMING CONTAMINATED MAY INCLUDE DEPENDING ON THE PERMIT:

- 1. WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED
- 2. WATER USED TO CONTROL DUST
- 3. POTABLE WATER INCLUDING UNCONTAMINATED WATER LINE FLUSHINGS
- 4. ROUTINE EXTERNAL BUILDING WASH DOWN THAT DOES NOT USE DETERGENTS
- 5. PAVEMENT WASH WATER WHERE SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED (UNLESS ALL SPILLED MATERIAL HAS BEEN REMOVED) AND WHERE DETERGENTS ARE NOT USED
- 6. UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE
- UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDEN
   UNCONTAMINATED GROUND WATER OR SPRING WATER
- 8. FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH PROCESS MATERIALS SUCH AS SOLVENTS
- 9. UNCONTAMINATED EXCAVATION DEWATERING

## 10. LANDSCAPE IRRIGATION

#### ESTABLISH PROPER EQUIPMENT/VEHICLE FUELING AND MAINTENANCE PRACTICES

CONTAMINATED SOILS MUST BE AUTHORIZED UNDER AN ALTERNATE NPDES PERMIT.

EQUIPMENT FUELING AND MAINTENANCE, OIL CHANGING, ETC., SHALL BE PERFORMED AWAY FROM WATERCOURSES, DITCHES, OR STORM DRAINS, IN AN AREA DESIGNATED FOR THAT PURPOSE. THE DESIGNATED AREA SHALL BE EQUIPPED FOR RECYCLING OIL AND CATCHING SPILLS. SECONDARY CONTAINMENT SHALL BE PROVIDED FOR ALL FUEL OIL STORAGE TANKS. THESE AREAS MUST BE INSPECTED EVERY SEVEN DAYS AND WITHIN 24 HOURS OF A 0.5 INCH OR GREATER RAIN EVENT TO ENSURE THERE ARE NO EXPOSED MATERIALS WHICH WOULD CONTAMINATE STORM WATER.

#### SPILL PREVENTION CONTROL PLAN

SITE OPERATORS MUST BE AWARE THAT SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) REQUIREMENTS APPLY. AN SPCC PLAN IS REQUIRED FOR SITES WITH ONE SINGLE ABOVEGROUND STORAGE OF 1,320 GALLONS OR MORE, OR 42,000 GALLONS OF UNDERGROUND STORAGE. SOILS THAT HAVE BEEN CONTAMINATED MUST BE DISPOSED OF IN ACCORDANCE WITH SECTION "CONTAMINATED SOILS" FOUND BELOW.

SPILLS ON PAVEMENT SHALL BE ABSORBED WITH SAWDUST, CAT LITTER OR OTHER ABSORBENT MATERIAL AND DISPOSED OF WITH THE TRASH AT A LICENSED SANITARY LANDFILL. HAZARDOUS OR INDUSTRIAL WASTES SUCH AS MOST SOLVENTS, GASOLINE, OIL-BASED PAINTS, AND CEMENT CURING COMPOUNDS REQUIRE SPECIAL HANDLING. SPILLS SHALL BE REPORTED TO THE EPA (1-913-281-0991). SPILLS OF 25 GALLONS OR MORE OF PETROLEUM PRODUCTS SHALL BE REPORTED TO EPA (1-913-281-0991), THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE WITHIN 30 MINUTES OF THE DISCOVERY OF THE RELEASE. ALL SPILLS, WHICH RESULT IN CONTACT WITH WATER OF THE STATE, MUST BE REPORTED TO THE EPA'S HOTLINE.

#### CONTAMINATED SOILS

IF SUBSTANCES SUCH AS OIL, DIESEL FUEL, HYDRAULIC FLUID, ANTIFREEZE, ETC., ARE SPILLED, LEAKED, OR RELEASED ONTO THE SOIL, THE SOIL SHOULD BE DUG UP AND DISPOSED OF AT A LICENSED SANITARY LANDFILL OR OTHER APPROVED PETROLEUM CONTAMINATED SOIL REMEDIATION FACILITY (NOT A CONSTRUCTION/DEMOLITION DEBRIS LANDFILL). PLEASE BE AWARE THAT STORM WATER RUN OFF ASSOCIATED WITH CONTAMINATED SOILS ARE NOT BEING AUTHORIZED UNDER THE EPA'S GENERAL STORMWATER PERMIT ASSOCIATED WITH CONSTRUCTION ACTIVITIES. IN THE EVENT THERE ARE LARGE EXTENSIVE AREAS OF CONTAMINATED SOILS ADDITIONAL MEASURES ABOVE AND BEYOND THE CONDITIONS OF THE EPA'S GENERAL CONSTRUCTION STORMWATER PERMIT WILL BE REQUIRED. DEPENDING ON THE EXTENT OF CONTAMINATION, ADDITIONAL TREATMENT AND/OR COLLECTION AND DISPOSAL MAY BE REQUIRED. ALL STORMWATER DISCHARGES ASSOCIATED WITH

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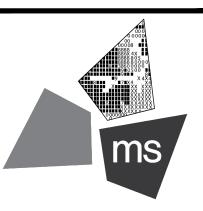
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PROJECT

fax 614.898.7570

PROPOSED PT20M BUILDING

NEQ HWY 150 & SW HOLLYWOOD DR. LEE'S SUMMIT, MO 64082

SHEET TITLE
SWPPP NOTES



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### **TEMPORARY SEEDING**

#### DESCRIPTION

TEMPORARY SEEDINGS ESTABLISH TEMPORARY COVER ON DISTURBED AREAS BY PLANTING APPROPRIATE RAPIDLY GROWING ANNUAL GRASSES OR SMALL GRAINS. TEMPORARY SEEDING PROVIDES EROSION CONTROL ON AREAS IN BETWEEN CONSTRUCTION OPERATIONS GRASSES, WHICH ARE QUICK GROWING, ARE SEEDED AND USUALLY MULCHED TO PROVIDE PROMPT, TEMPORARY SOIL STABILIZATION. IT EFFECTIVELY MINIMIZES THE AREA OF A CONSTRUCTION SITE PRONE TO EROSION AND SHOULD BE USED EVERYWHERE THE SEQUENCE OF CONSTRUCTION OPERATIONS ALLOWS VEGETATION TO BE ESTABLISHED.

#### SPECIFICATIONS FOR TEMPORARY SEEDING

TEMPORARY SEEDING SPECIES SELECTION				
SEEDING DATES	SPECIES	LB/1000 SF	LB/ACREA	
MAR 1 TO AUG 15	OATS	3	128-4 BUSHEL	
	TALL FESCUE	1	40	
	ANNUAL RYEGRASS	1	40	
	PERENNIAL RYGRASS	1	40	
	TALL FESCUE	1	40	
	ANNUAL RYEGRASS	1	40	
	ANNUAL RYEGRASS	1.25	55	
	PERENNIAL RYEGRASS	3.25	142	
	CREEPING RED FESCUE	0.40	17	
	KENTUCKY BLUEGRASS	0.40	17	
	OATS	3	128-3 BUSHEL	
	TALL FESCUE	1	40	
	ANNUAL RYEGRASS	1	40	
AUG 16 TO NOV	RYE	3	112-3 BUSHEL	
	TALL FESCUE	1	40	
	ANNUAL RYEGRASS	1	40	
	WHEAT	3	120-2 BUSHEL	
	TALL FESCUE	1	40	
	ANNUAL RYEGRASS	1	40	
	PERENNIAL RYE	1	40	
	TALL FESCUE	1	40	
	ANNUAL RYEGRASS	1	40	
	ANNUAL RYEGRASS	1.25	40	
	PERENNIAL RYEGRASS	3.25	40	
	CREEPING RED FESCUE	0.40	40	
	KENTUCKY BLUEGRASS	0.40		
NOV 1 TO FEB 29 USE MULCH ONLY OR DORMANT SEEDING				

- STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS AND SEDIMENT TRAPS SHALL BE INSTALLED AND
- STABILIZED WITH TEMPORARY SEEDING PRIOR TO GRADING THE REST OF THE CONSTRUCTION SITE. TEMPORARY SEED SHALL BE APPLIED BETWEEN CONSTRUCTION OPERATIONS ON SOIL THAT WILL NOT BE GRADED OR REWORKED FOR 14

SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.

- DAYS OR GREATER. THESE IDLE AREAS SHALL BE SEEDED WITHIN 7 DAYS AFTER GRADING. THE SEEDBED SHOULD BE PULVERIZED AND LOOSE TO ENSURE THE SUCCESS OF ESTABLISHING VEGETATION. TEMPORARY SEEDING
- SHOULD NOT BE POSTPONED IF IDEAL SEEDBED PREPARATION IS NOT POSSIBLE.
- SOIL AMENDMENTS—TEMPORARY VEGETATION SEEDING RATES SHALL ESTABLISH ADEQUATE STANDS OF VEGETATION, WHICH MAY
- REQUIRE THE USE OF SOIL AMENDMENTS. BASE RATES FOR LIME AND FERTILIZER SHALL BE USED. 5. SEEDING METHOD—SEED SHALL BE APPLIED UNIFORMLY WITH A CYCLONE SPREADER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER. WHEN FEASIBLE. SEED THAT HAS BEEN BROADCAST SHALL BE COVERED BY RAKING OR DRAGGING AND THEN LIGHTLY TAMPED INTO PLACE USING A ROLLER OR CULTIPACKER. IF HYDROSEEDING IS USED, THE SEED AND FERTILIZER WILL BE MIXED ON-SITE AND THE

## **MULCHING TEMPORARY SEEDING:**

- APPLICATIONS OF TEMPORARY SEEDING SHALL INCLUDE MULCH. WHICH SHALL BE APPLIED DURING OR IMMEDIATELY AFTER SEEDING. SEEDINGS MADE DURING OPTIMUM SEEDING DATES ON FAVORABLE, VERY FLAT SOIL CONDITIONS MAY NOT NEED MULCH TO ACHIEVE ADEQUATE STABILIZATION. MATERIALS:
- 2.1. STRAW—IF STRAW IS USED, IT SHALL BE UNROTTED SMALL-GRAIN STRAW APPLIED AT A RATE OF 2 TONS PER ACRE OR 90 LBS./ 1,000
- SQ. FT. (2-3 BALES) HYDROSEEDERS—IF WOOD CELLULOSE FIBER IS USED, IT SHALL BE USED AT 2000 LBS./ AC. OR 46 LB./ 1,000-SQ.-FT.
- OTHER—OTHER ACCEPTABLE MULCHES INCLUDE MULCH MATTINGS APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS 2.3. OR WOOD CHIPS APPLIED AT 6 TON/ AC.
- STRAW MULCH SHALL BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR WATER. ANCHORING METHODS:
- 3.1. MECHANICAL—A DISK, CRIMPER, OR SIMILAR TYPE TOOL SHALL BE SET STRAIGHT TO PUNCH OR ANCHOR THE MULCH MATERIAL INTO
- THE SOIL. STRAW MECHANICALLY ANCHORED SHALL NOT BE FINELY CHOPPED BUT LEFT TO A LENGTH OF APPROXIMATELY 6 INCHES. MULCH NETTING—NETTING SHALL BE USED ACCORDING TO THE MANUFACTURERS RECOMMENDATIONS. NETTING MAY BE NECESSARY
- TO HOLD MULCH IN PLACE IN AREAS OF CONCENTRATED RUNOFF AND ON CRITICAL SLOPES. SYNTHETIC BINDERS—SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRI-TAC), DCA-70, PETROSET, TERRA TRACK OR EQUIVALENT MAY
- BE USED AT RATES RECOMMENDED BY THE MANUFACTURER.
- WOOD-CELLULOSE FIBER—WOOD-CELLULOSE FIBER BINDER SHALL BE APPLIED AT A NET DRY WT. OF 750 LB./AC. THE WOOD-CELLULOSE FIBER SHALL BE MIXED WITH WATER AND THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50 LB. / 100 GAL.

## **DUST CONTROL**

## DESCRIPTION

DUST CONTROL INVOLVES PREVENTING OR REDUCING DUST FROM EXPOSED SOILS OR OTHER SOURCES DURING LAND DISTURBING, DEMOLITION AND CONSTRUCTION ACTIVITIES TO REDUCE THE PRESENCE OF AIRBORNE SUBSTANCES WHICH MAY PRESENT HEALTH HAZARDS, TRAFFIC SAFETY PROBLEMS OR HARM ANIMAL OR PLANT LIFE.

## SPECIFICATIONS FOR DUST CONTROL

- 1. VEGETATIVE COVER AND/MULCH APPLY TEMPORARY OR PERMANENT SEEDING AND MULCH TO AREAS THAT WILL REMAIN IDLE FOR OVER 21 DAYS. SAVING EXISTING TREES AND LARGE SHRUBS WILL ALSO REDUCE SOIL AND AIR MOVEMENT ACROSS DISTURBED AREAS. SEE TEMPORARY SEEDING; PERMANENT SEEDING; MULCHING PRACTICES; AND TREE AND NATURAL AREA PROTECTION PRACTICES.
- 2. WATERING SPRAY SITE WITH WATER UNTIL THE SURFACE IS WET BEFORE AND DURING GRADING AND REPEAT AS NEEDED, ESPECIALLY ON HAUL ROADS AND OTHER HEAVY TRAFFIC ROUTES. WATERING SHALL BE DONE AT A RATE THAT PREVENTS DUST BUT DOES NOT CAUSE SOIL EROSION. WETTING AGENTS SHALL BE UTILIZED ACCORDING TO MANUFACTURERS INSTRUCTIONS.
- SPRAY-ON ADHESIVES APPLY ADHESIVE ACCORDING TO THE FOLLOWING TABLE OR MANUFACTURER'S INSTRUCTIONS. 4. STONE – GRADED ROADWAYS AND OTHER SUITABLE AREAS WILL BE STABILIZED USING CRUSHED STONE OR COARSE GRAVEL AS SOON AS PRACTICABLE AFTER REACHING AN INTERIM OR FINAL GRADE. CRUSHED STONE OR COARSE GRAVEL CAN BE USED AS A PERMANENT COVER TO PROVIDE CONTROL OF SOIL EMISSIONS.
- 5. BARRIERS EXISTING WINDBREAK VEGETATION SHALL BE MARKED AND PRESERVED. SNOW FENCING OR OTHER SUITABLE BARRIER MAY BE PLACED PERPENDICULAR TO PREVAILING AIR CURRENTS AT INTERVALS OF ABOUT 15 TIMES THE BARRIER HEIGHT TO CONTROL AIR CURRENTS AND BLOWING SOIL.
- OPERATION AND MAINTENANCE WHEN TEMPORARY DUST CONTROL MEASURES ARE USED; REPETITIVE TREATMENT SHOULD BE APPLIED AS NEEDED TO ACCOMPLISH CONTROL. STREET CLEANING - PAVED AREAS THAT HAVE ACCUMULATED SEDIMENT FROM CONSTRUCTION SHOULD BE CLEANED DAILY, OR AS NEEDED, UTILIZING A STREET SWEEPER OR BUCKET -TYPE END LOADER OR SCRAPER.

## PERMANENT SEEDING

#### **DESCRIPTION**

PERENNIAL VEGETATION IS ESTABLISHED ON AREAS THAT WILL NOT BE RE-DISTURBED FOR PERIODS LONGER THAN 12 MONTHS. PERMANENT SEEDING INCLUDES SITE PREPARATION, SEEDBED PREPARATION, PLANTING SEED, MULCHING, IRRIGATION AND MAINTENANCE.

PERMANENT VEGETATION IS USED TO STABILIZE SOIL, REDUCE EROSION, PREVENT SEDIMENT POLLUTION, REDUCE RUNOFF BY PROMOTING INFILTRATION, AND PROVIDE STORMWATER QUALITY BENEFITS OFFERED BY DENSE GRASS COVER.

#### SPECIFICATION FOR PERMANENT SEEDING

#### SITE PREPARATION:

- 1. SUBSOILER, PLOW, OR OTHER IMPLEMENT SHALL BE USED TO REDUCE SOIL COMPACTION AND ALLOW MAXIMUM INFILTRATION. (MAXIMIZING INFILTRATION WILL HELP CONTROL BOTH RUNOFF RATE AND WATER QUALITY.) SUBSOILING SHOULD BE DONE WHEN THE SOIL MOISTURE IS LOW ENOUGH TO ALLOW THE SOIL TO CRACK OR FRACTURE. SUBSOILING SHALL NOT BE DONE ON SLIP-PRONE AREAS WHERE SOIL PREPARATION SHOULD BE LIMITED TO WHAT IS NECESSARY FOR ESTABLISHING VEGETATION.
- THE SITE SHALL BE GRADED AS NEEDED TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION AND SEEDING. TOPSOIL SHALL BE APPLIED WHERE NEEDED TO ESTABLISH VEGETATION.

#### SEEDBED PREPARATION:

- TEST THE SOIL CONDITIONS FOR FEEDING BEFORE STARTING SEEDING AND MULCHING.
- LIME—AGRICULTURAL GROUND LIMESTONE SHALL BE APPLIED TO ACID SOIL AS RECOMMENDED BY A SOIL TEST. IN LIEU OF A SOIL TEST, LIME SHALL BE APPLIED AT THE RATE OF 100 POUNDS PER 1,000-SQ. FT. OR 2 TONS PER ACRE.
- FERTILIZER—FERTILIZER SHALL BE APPLIED AS RECOMMENDED BY A SOIL TEST. CONTRACTOR SHALL PERFORM LAB TESTING ON SOIL AND PROVIDE A CERTIFIED FERTILIZER RATIO FOR THE SITE SOILS AND SPECIFIED SEED MIX.
- 4. THE LIME AND FERTILIZER SHALL BE WORKED INTO THE SOIL WITH A DISK HARROW, SPRING-TOOTH HARROW, OR OTHER SUITABLE FIELD IMPLEMENT TO A DEPTH OF 3 INCHES. ON SLOPING LAND, THE SOIL SHALL BE WORKED ON THE CONTOUR.

#### SEEDING DATES AND SOIL CONDITIONS:

SEEDING SHOULD BE DONE MARCH 1 TO MAY 31 OR AUGUST 1 TO SEPTEMBER 30. IF SEEDING OCCURS OUTSIDE OF THE ABOVE SPECIFIED DATES, ADDITIONAL MULCH AND IRRIGATION MAY BE REQUIRED TO ENSURE A MINIMUM OF 80% GERMINATION. TILLAGE FOR SEEDBED PREPARATION SHOULD BE DONE WHEN THE SOIL IS DRY ENOUGH TO CRUMBLE AND NOT FORM RIBBONS WHEN COMPRESSED BY HAND. FOR WINTER SEEDING, SEE THE FOLLOWING SECTION ON DORMANT SEEDING.

### DORMANT SEEDINGS:

- SEEDINGS SHOULD NOT BE MADE FROM OCTOBER 1 THROUGH NOVEMBER 20. DURING THIS PERIOD, THE SEEDS ARE LIKELY TO
- GERMINATE BUT PROBABLY WILL NOT BE ABLE TO SURVIVE THE WINTER.
- THE FOLLOWING METHODS MAY BE USED FOR "DORMANT SEEDING": 2.1. FROM OCTOBER 1 THROUGH NOVEMBER 20, PREPARE THE SEEDBED, ADD THE REQUIRED AMOUNTS OF LIME AND FERTILIZER, THEN MULCH AND ANCHOR. AFTER NOVEMBER 20, AND BEFORE MARCH 15, BROADCAST THE SELECTED SEED MIXTURE. INCREASE THE
- SEEDING RATES BY 50% FOR THIS TYPE OF SEEDING. FROM NOVEMBER 20 THROUGH MARCH 15, WHEN SOIL CONDITIONS PERMIT, PREPARE THE SEEDBED, LIME AND FERTILIZE, APPLY THE
- SELECTED SEED MIXTURE, MULCH AND ANCHOR. INCREASE THE SEEDING RATES BY 50% FOR THIS TYPE OF SEEDING. APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDRO-SEEDER (SLURRY MAY INCLUDE SEED
- AND FERTILIZER) ON A FIRM, MOIST SEEDBED. WHERE FEASIBLE, EXCEPT WHEN A CULTIPACKER TYPE SEEDER IS USED, THE SEEDBED SHOULD BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A CULTIPACKER, ROLLER, OR LIGHT DRAG. ON SLOPING LAND, SEEDING OPERATIONS SHOULD BE ON THE

#### MULCHING:

- MULCH MATERIAL SHALL BE APPLIED IMMEDIATELY AFTER SEEDING. DORMANT SEEDING SHALL BE MULCHED. 100% OF THE GROUND SURFACE SHALL BE COVERED WITH AN APPROVED MATERIAL.
- MATERIALS:
- 2.1. STRAW—IF STRAW IS USED IT SHALL BE UNROTTED SMALL-GRAIN STRAW APPLIED AT THE RATE OF 2 TONS PER ACRE OR 90 POUNDS (TWO TO THREE BALES) PER 1,000-SQ. FT. THE MULCH SHALL BE SPREAD UNIFORMLY BY HAND OR MECHANICALLY APPLIED SO THE SOIL SURFACE IS COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000-SQ.-FT. SECTIONS AND SPREAD TWO 45-LB. BALES OF STRAW IN EACH SECTION.
- HYDROSEEDERS—IF WOOD CELLULOSE FIBER IS USED, IT SHALL BE APPLIED AT 2,000 LB./AC. OR 46 LB./1,000 SQ. FT.
- OTHER—OTHER ACCEPTABLE MULCHES INCLUDE ROLLED EROSION CONTROL MATTINGS OR BLANKETS APPLIED ACCORDING TO
- MANUFACTURER'S RECOMMENDATIONS OR WOOD CHIPS APPLIED AT 6 TONS PER ACRE. 3. STRAW AND MULCH ANCHORING METHODS-STRAW MULCH SHALL BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR WATER: 3.1. MECHANICAL—A DISK, CRIMPER, OR SIMILAR TYPE TOOL SHALL BE SET STRAIGHT TO PUNCH OR ANCHOR THE MULCH MATERIAL INTO
- THE SOIL. STRAW MECHANICALLY ANCHORED SHALL NOT BE FINELY CHOPPED BUT, GENERALLY, BE LEFT LONGER THAN 6 INCHES. 3.2. MULCH NETTING—NETTING SHALL BE USED ACCORDING TO THE MANUFACTURER FS RECOMMENDATIONS. NETTING MAY BE
- NECESSARY TO HOLD MULCH IN PLACE IN AREAS OF CONCENTRATED RUNOFF AND ON CRITICAL SLOPES. 3.3. ASPHALT EMULSION—ASPHALT SHALL BE APPLIED AS RECOMMENDED BY THE MANUFACTURE OR AT THE RATE OF 160 GALLONS PER
- 3.4. SYNTHETIC BINDERS—SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRI-TAC), DCA-70, PETROSET, TERRA TACK OR EQUIVALENT MAY
- BE USED AT RATES SPECIFIED BY THE MANUFACTURER. 3.5. WOOD CELLULOSE FIBER—WOOD CELLULOSE FIBER SHALL BE APPLIED AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. THE WOOD
- CELLULOSE FIBER SHALL BE MIXED WITH WATER WITH THE MIXTURE CONTAINING A MAXIMUM OF 50 POUNDS CELLULOSE PER 100 GALLONS OF WATER.

## IRRIGATION:

PERMANENT SEEDING SHALL INCLUDE IRRIGATION TO ESTABLISH VEGETATION DURING DRY WEATHER OR ON ADVERSE SITE CONDITIONS, WHICH REQUIRE ADEQUATE MOISTURE FOR SEED GERMINATION AND PLANT GROWTH. IRRIGATION RATES SHALL BE MONITORED TO PREVENT EROSION AND DAMAGE TO SEEDED AREAS FROM EXCESSIVE RUNOFF. CONTRACTOR SHALL MAINTAIN PERMANENT SEEDING FOR UP TO ONE YEAR FROM SUBSTANTIAL COMPLETION TO FIX, REPAIR, WATER, REFERTILIZE AND/OR RESEED GRASSED AREAS.

OFFD MIX	SEE	DING RATE	NOTES	
SEED MIX	LBS/ACRE	LBS/1,000 SF	NOTES	
	GEN	NERAL USE		
CREEPING RED FESCUE	20-40	<i>1</i> / <sub>2</sub> -1	FOR CLOSE MOWING AND FOR	
DOMESTIC RYEGRASS	10-20	1/4-1/2	WATERWAYS WITH <2.0 FT/SEC VELOCITY	
KENTUCKY BLUEGRASS	20-40	½-1		
TALL FESCUE	40-50	1-11/4		
TURF-TYPE (DWARF) FESCUE	90	21/4		
	STEEP BANK	KS OR CUT SLOPES		
TALL FESCUE	40-50	1-11/4		
CROWN VETCH	10-20	1/4-1/2	DO NOT SEED LATER THAN	
TALL FESCUE	20-30	1/2-3/4	AUGUST	
FLAT PEA	20-25	½-¾	DO NOT SEED LATER THAN	
TALL FESCUE	20-30	½-¾	AUGUST	
	ROAD DITC	HES AND SWALES		
TALL FESCUE	40-50	1-11/4		
TURF-TYPE (DWARF) FESCUE	90	21/4		
KENTUCKY BLUE GRASS	5	<b>%</b> 0		
		LAWNS		
KENTUCKY BLUEGRASS	100-120	2		
PERENNIAL RYEGRASS		2		
KENTUCKY BLUEGRASS	100-120	2	FOR SHADED AREAS	
CREEPING RED FESCUE		1-1/2		

PERMANENT STABILIZATION			
AREA REQUIRING PERMANENT STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS		
ANY AREA THAT WILL LIE DORMANT FOR ONE YEAR OR MORE.	WITHIN 7 DAYS OF THE MOST RECENT DISTURBANCE.		
ANY AREA WITHIN 50 FEET OF A STREAM OR A RIPARIAN SETBACK AREA AND AT FINAL GRADE.	WITHIN 2 DAYS OF REACHING FINAL GRADE.		
ANY AREA AT FINAL GRADE.	WITHIN 7 DAYS OF REACHING FINAL GRADE WITHIN THAT AREA.		

TEMPORARY STABILIZATION				
AREA REQUIRING TEMPORARY STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS			
ANY DISTURBED AREA WITHIN 50 FEET OF A STREAM OR A RIPARIAN SETBACK AREA AND NOT AT FINAL GRADE.	WITHIN 2 DAYS OF THE MOST RECENT DISTURBANCE IF THAT AREA WILL REMAIN IDLE FOR MORE THAN 14 DAYS.			
FOR ALL CONSTRUCTION ACTIVITIES, ANY DISTURBED AREA, INCLUDING SOIL STOCKPILES THAT WILL BE DORMANT FOR MORE THAN 14 DAYS BUT LESS THAN ONE YEAR.	WITHIN 7 DAYS OF THE MOST RECENT DISTURBANCE WITHIN THE AREA.			
DISTURBED AREAS THAT WILL BE IDLE OVER WINTER.	PRIOR TO NOVEMBER 1.			

NOTE: WHERE VEGETATIVE STABILIZATION TECHNIQUES MAY CAUSE STRUCTURAL INSTABILITY OR ARE OTHERWISE UNOBTAINABLE, ALTERNATIVE STABILIZATION TECHNIQUES MUST BE EMPLOYED. THESE TECHNIQUES MAY INCLUDE MULCHING OR EROSION MATTING.

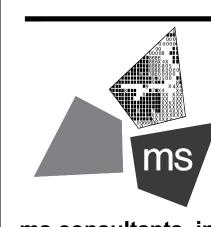
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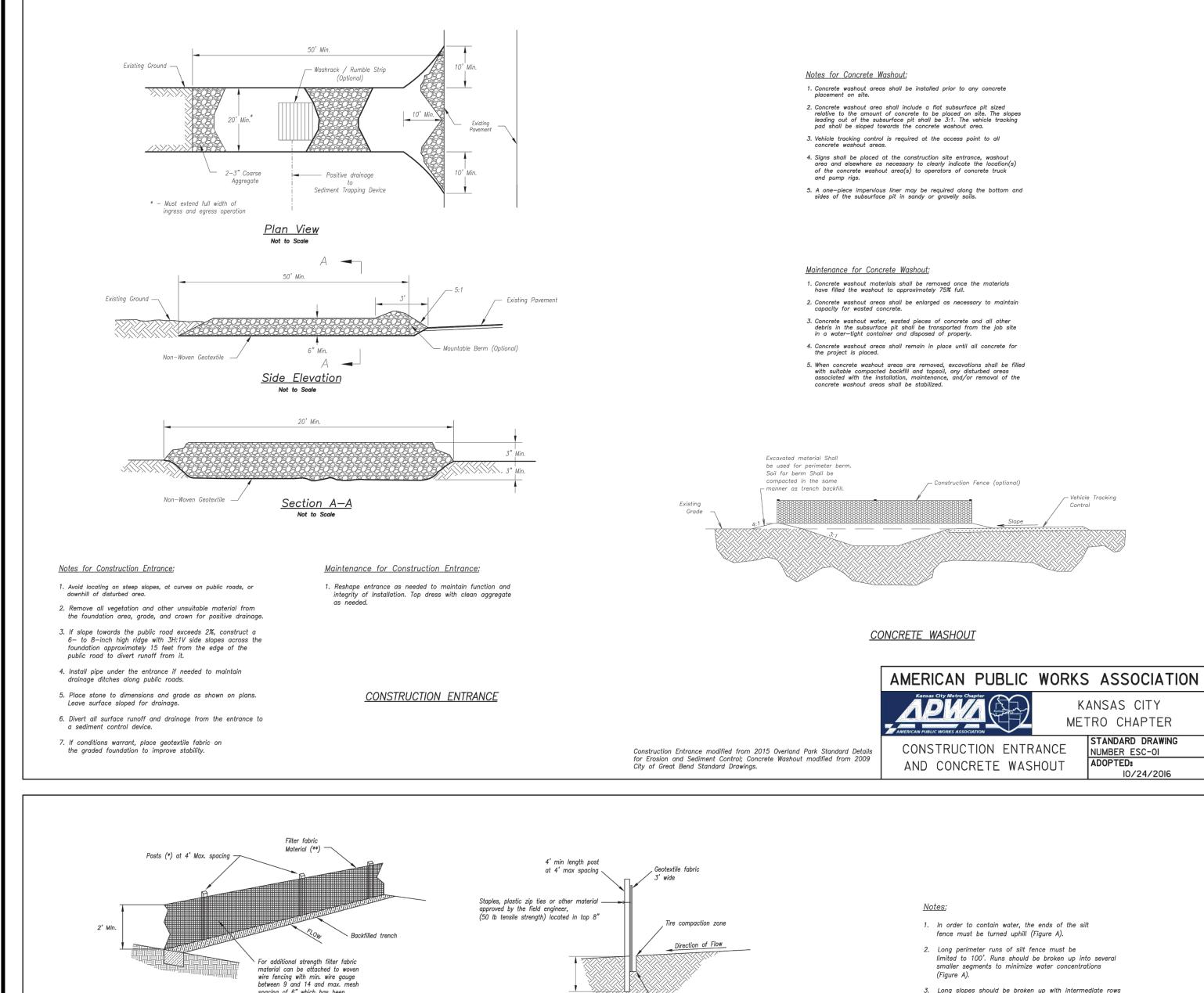
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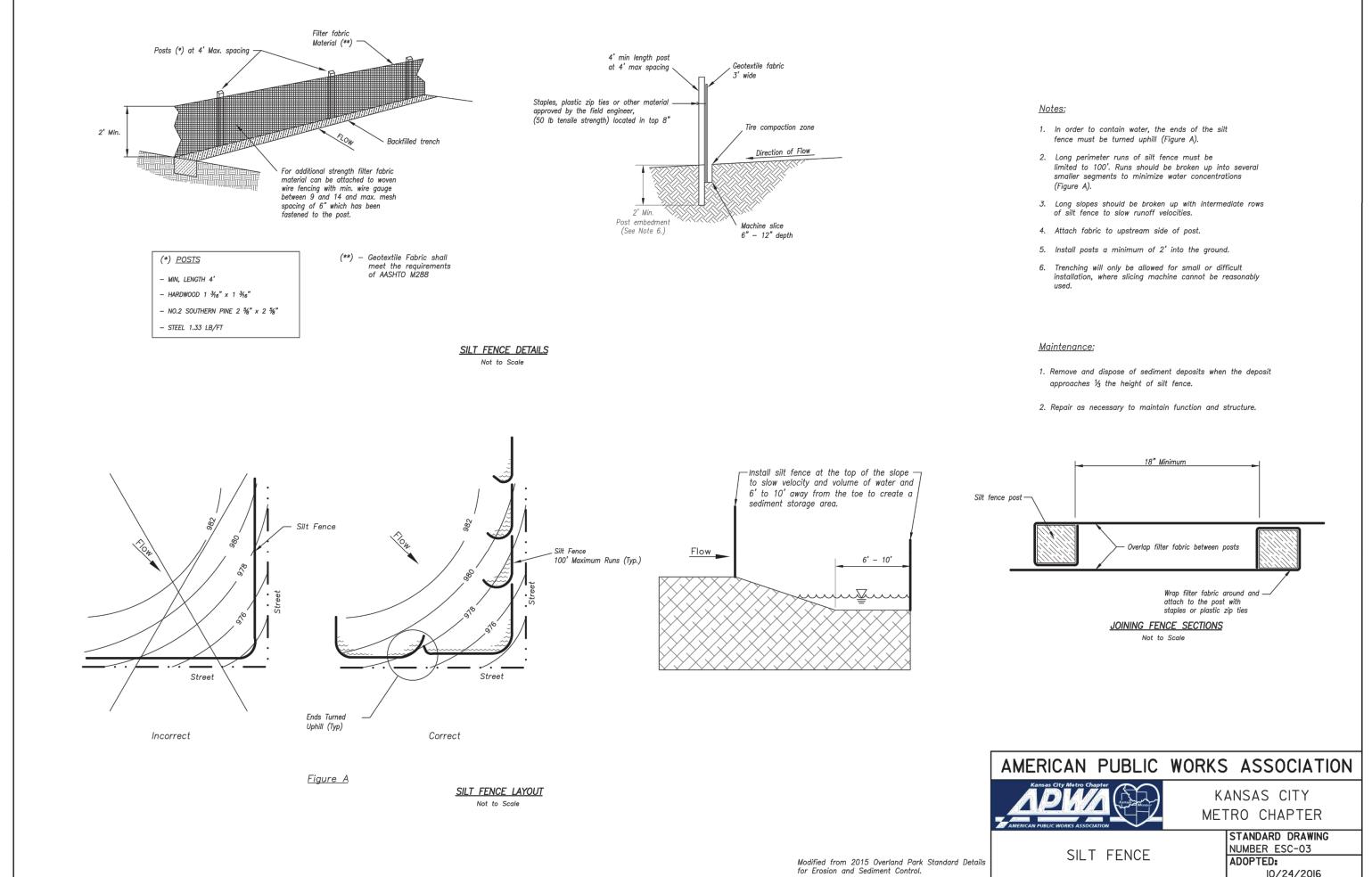
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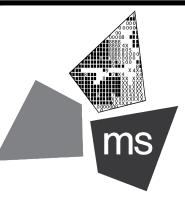
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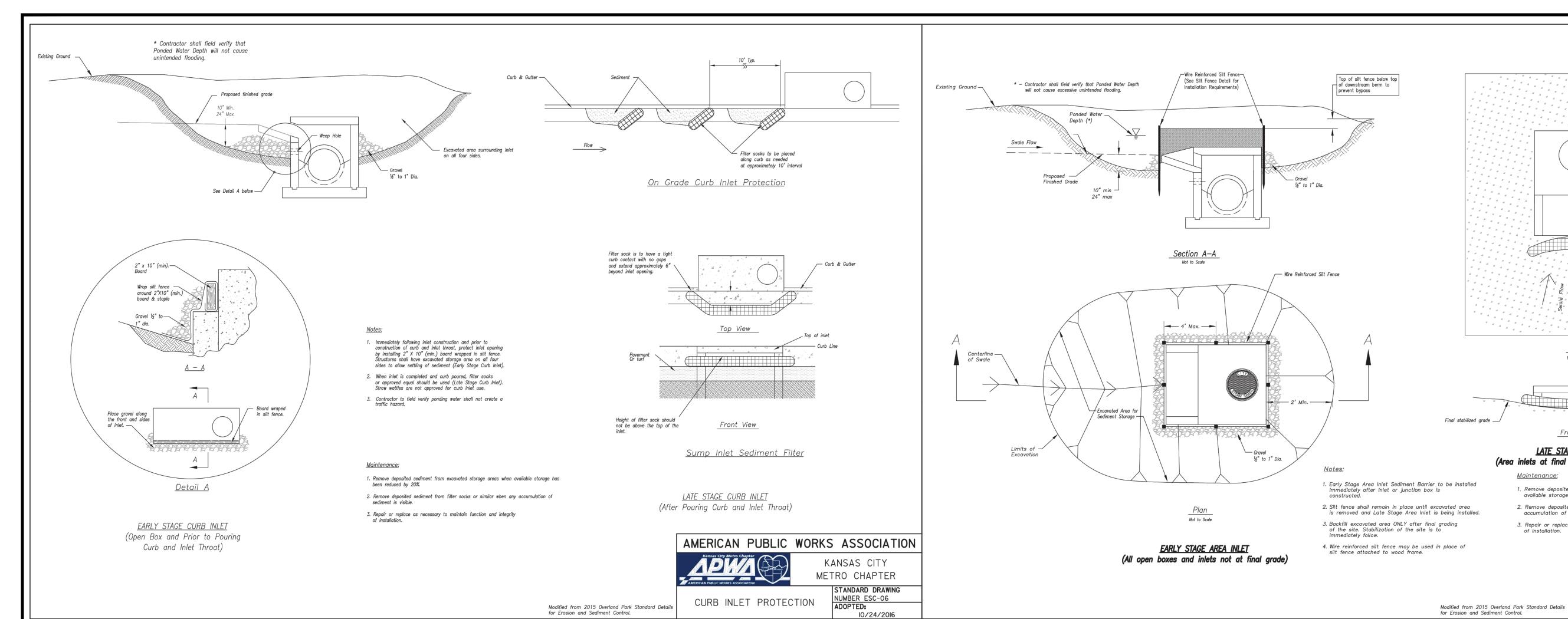


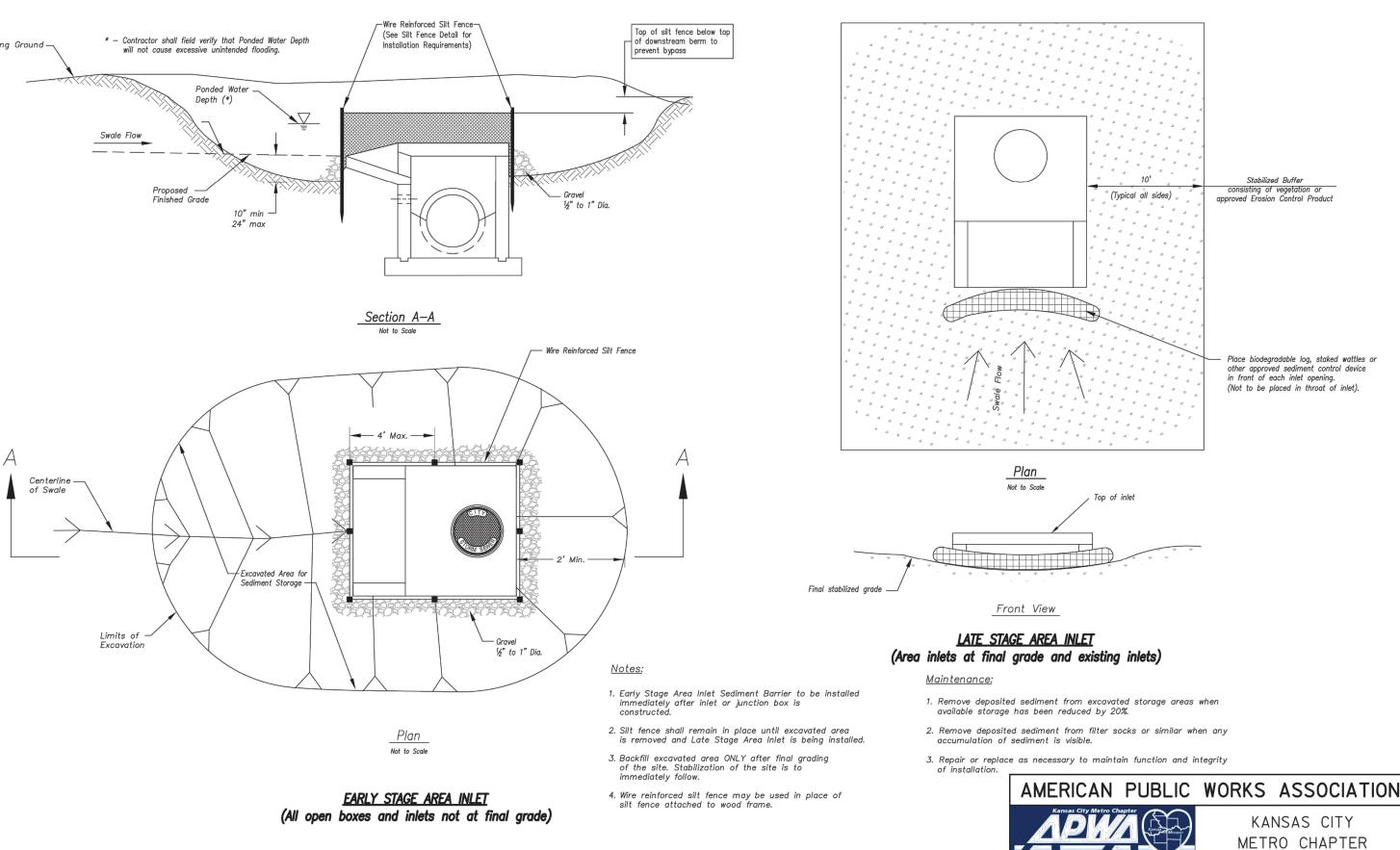
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JUNCTION BOX PROTECTION

REVISION/DATE/DESCRIPTION

SIR UPDATES

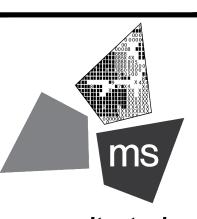
60% SET 01/24/22 PDP APPLICATION 02/24/22 TO CITY RESPONSE TO CITY 03/29/22 COMMENTS I 06/29/22 **DEVELOPMENT SET** RESPONSE TO 08/30/22 FDP COMMENTS RESPONSE TO 09/29/22 FDP COMMENTS II

09/13/21

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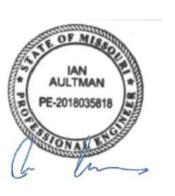
ms consultants, inc. engineers, architects, planners 2221 Schrock Road Columbus, Ohio 43229-1547 phone 614.898.7100 fax 614.898.7570

PROJECT

PROPOSED PT20M BUILDING

NEQ HWY 150 & SW HOLLYWOOD DR. LEE'S SUMMIT, MO 64082

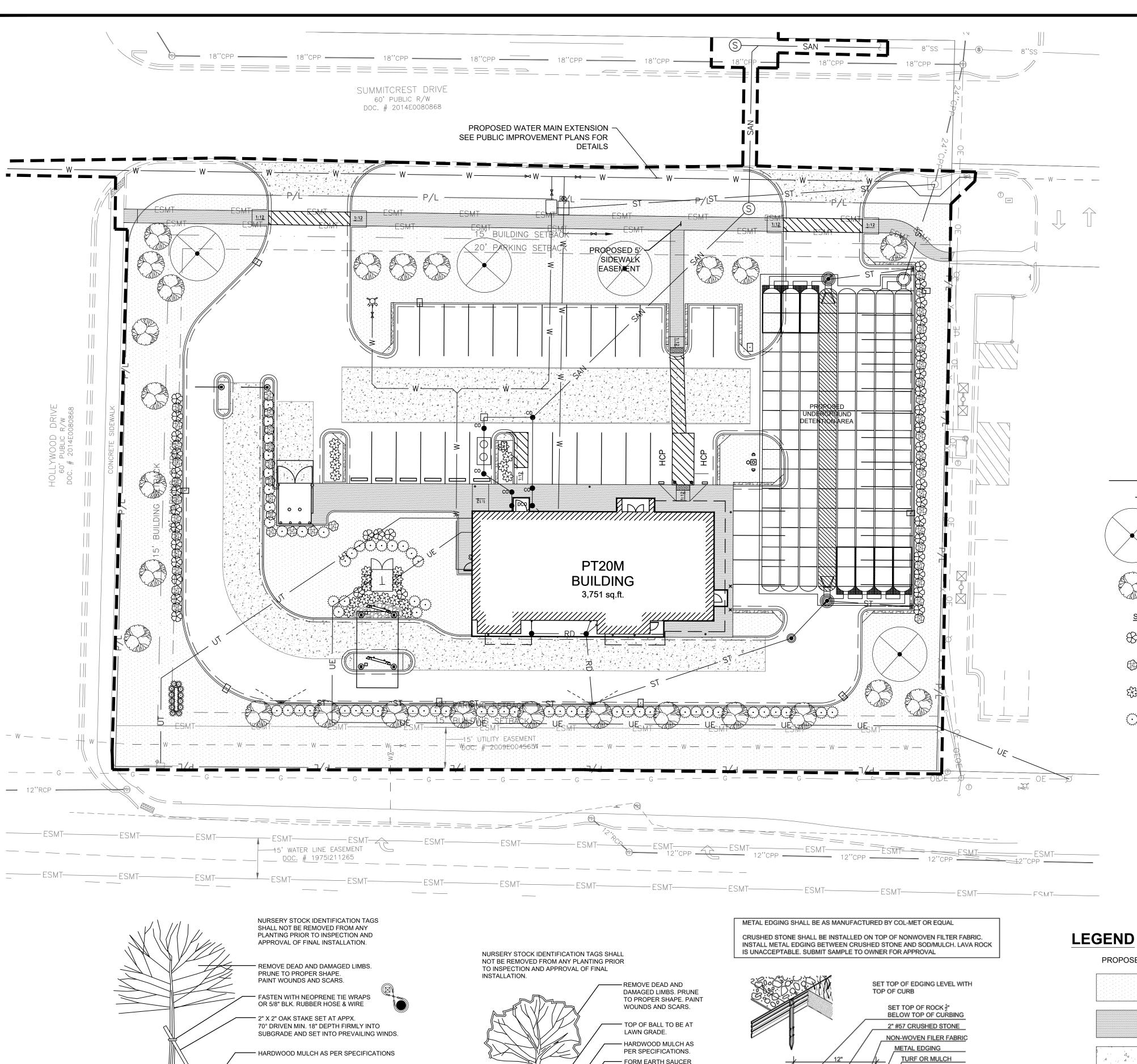
SHEET TITLE SWPPP DETAILS



DRAWN BY: CHECKED BY: 40497-21 PROJECT NO:

DRAWING

C-10.3



—MULCH

— FORM EARTH SAUCER WITH 3" HIGH BERM.

FLOOD WITH WATER TWICE DURING FIRST 24 HOURS.

BURLAP REMOVED FROM THE TOP 1/3 OF THE BALL.

— PLACE ROOT BALL ON UNDISTURBED SUBGRADE.

**DECIDUOUS TREE PLANTING DETAIL** 

WITH 3" HIGH BERM.

UNDISTURBED

SUBGRADE.

B SHRUB PLANTING DETAIL

FLOOD WITH WATER TWICE

DURING FIRST 24 HOURS. BURLAP REMOVED FROM

THE TOP 1/3 OF THE BALL.

## **GENERAL NOTES:**

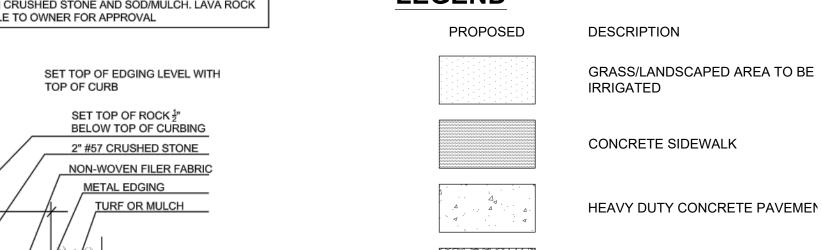
THE CERTIFICATE OF OCCUPANCY IS OBTAINED OR FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE, WHICHEVER IS GREATER. ANY PLANTINGS NEEDING REPLACEMENT WILL BE GUARANTEED FROM THE TIME OF REPLACEMENT IF AFTER FINAL ACCEPTANCE.

A. ALL PLANT MATERIALS TO COMPLY WITH THE LATEST EDITION OF A.N.A. STANDARDS FOR NURSERY STOCK AND BE GUARANTEED UNTIL

- LANDSCAPE CONTRACTOR IS TO VERIFY LOCATION OF ALL UNDERGROUND UTILITIES AND RECEIVE APPROVAL FROM GENERAL CONTRACTOR OR SITE SUPERVISOR, IF NECESSARY, TO MAKE CHANGES IN PLANT LOCATIONS.
- C. LANDSCAPE CONTRACTOR MUST COORDINATE WITH GENERAL CONTRACTOR AND OTHER SITE OPERATIONS.
- D. MINOR ADJUSTMENTS TO THE PLANT LOCATIONS ARE TO BE MADE IN THE CASE OF ANY CONFLICTS WITH PROPOSED UTILITIES.
- ALL PLANTING BEDS AND FREE STANDING TREES TO BE MULCHED WITH 4" OF SHREDDED HARDWOOD MULCH. BEDS ARE TO BE GRADED SMOOTH AND FREE OF SOIL CLODS AND STONES. ALL TREES TO BE STAKED AND WRAPPED WITH KRAFT TREE WRAP.
- F. ALL PLANTS ARE TO BE REMOVED FROM CONTAINERS, CAGES AND NON-BIODEGRADABLE MATERIALS.
- GENERAL CONTRACTOR IS RESPONSIBLE FOR FINISHED GRADES; LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR FINE GRADING AND
- H. ALL ORGANIC MATTER AND DEBRIS ARE TO BE REMOVED FROM THE SITE BY THE LANDSCAPE CONTRACTOR. LAWN AREAS AND BEDS SHOULD BE FREE OF STONES GREATER THAN 2".
- I. PLANT QUANTITIES HAVE BEEN PROVIDED FOR CONVENIENCE ONLY; THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR HIS OWN "TAKE OFFS". DRAWING PREVAILS OVER WRITTEN QUANTITIES.
- THE LANDSCAPE CONTRACTOR SHALL SUBMIT A ONE (1) YEAR MAINTENANCE CONTRACT FOR CONSIDERATION BY THE OWNER. CONTRACT SHALL BE SEPARATE FROM INSTALLATION CONTRACT.
- K. PLANTING BEDS SHALL BE TREATED WITH A PRE-EMERGENT HERBICIDE APPLIED AT PRODUCT SPECIFIED RATE UNLESS OTHERWISE
- L. PLANTING SHALL BE FERTILIZED UPON INSTALLATION. RECOMMENDED FERTILIZER SHALL BE MIXED WITH BACKFILL AT PRODUCT
- M. BED EDGE SHALL BE SMOOTH, CONSISTENT 4 1/2" DEEP AND HAND CUT, EDGES TO BE LOCATED BETWEEN ALL BEDS (INCLUDING TREES)
- N. CONTRACTOR TO SEED ALL DISTURBED AREAS WITH A LOCALLY ADAPTIVE SEED MIX UNLESS OTHERWISE DIRECTED BY THE GENERAL
- O. TOPSOIL SHALL BE BACK FILLED TO PROVIDE POSITIVE DRAINAGE OF ALL LANDSCAPE AREAS. SEE GRADING AND DRAINAGE PLAN SHEET C-5.0.
- P. LANDSCAPING MATERIALS ARE REQUIRED TO PROVIDE FULL SCREENING AT THE TIME OF PLANTING.
- Q. ALL OPEN AREAS NOT COVERED WITH OTHER MATERIALS SHALL BE COVERED WITH SOD.

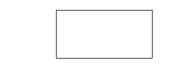
## PROPOSED PLANT SCHEDULE

TREE	<u>s</u>	BOTANICAL NAME	COMMON NAME	<u>TYPE</u>	QTY	HEIGHT AT TIME OF PLANTING	APPROXIMATE MATURE HEIGHT (HXW)	CONT
	AR	ACER RUBRUM	RED MAPLE	DECIDUOUS	4	3" CAL MEASURED AT A POINT 6" ABOVE THE GROUND OR TOP OF ROOT BALL, AT PLANTING.	(40' X 40')	B+B
	AC	AMELANCHIER CANADENSIS	SERVICEBERRY	DECIDUOUS	25	3" CAL MEASURED AT A POINT 6" ABOVE THE GROUND OR TOP OF ROOT BALL, AT PLANTING.	(15' X 25')	В+В
SHRU	<u>BS</u>	BOTANICAL NAME	COMMON NAME		<u>QTY</u>			
\\$	WF	WEIGELA FLORIDA 'ALEXANDRA'	WINE AND ROSES WEIGELA	DECIDUOUS	38	2 GAL	(4' X 4')	
	RI	RHAPHIOLEPIS INDICA 'MAJESTIC BEAUTY'	MAJESTIC BEAUTY INDIAN HAWTHORN	EVERGREEN	44	2 GAL	(4' X 4')	
<b>#</b>	HP	HYDRANGEA PANICULATA 'LITTLE LIME'	LITTLE LIME HYDRANGEA	DECIDUOUS	22	2 GAL	(3' X 3')	
3 · }	IV	ILEX VOMITORIA 'NANA'	DWARF YAUPON	EVERGREEN	60	2 GAL	(4' X 5')	



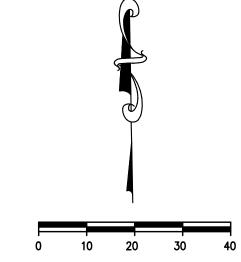


5 1/2 BLACK OR GREEN



**ROCK AREA** 

HEAVY DUTY ASPHALT PAVEMENT



SCALE: 1"=20'



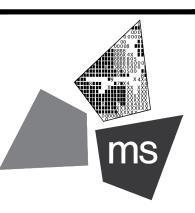
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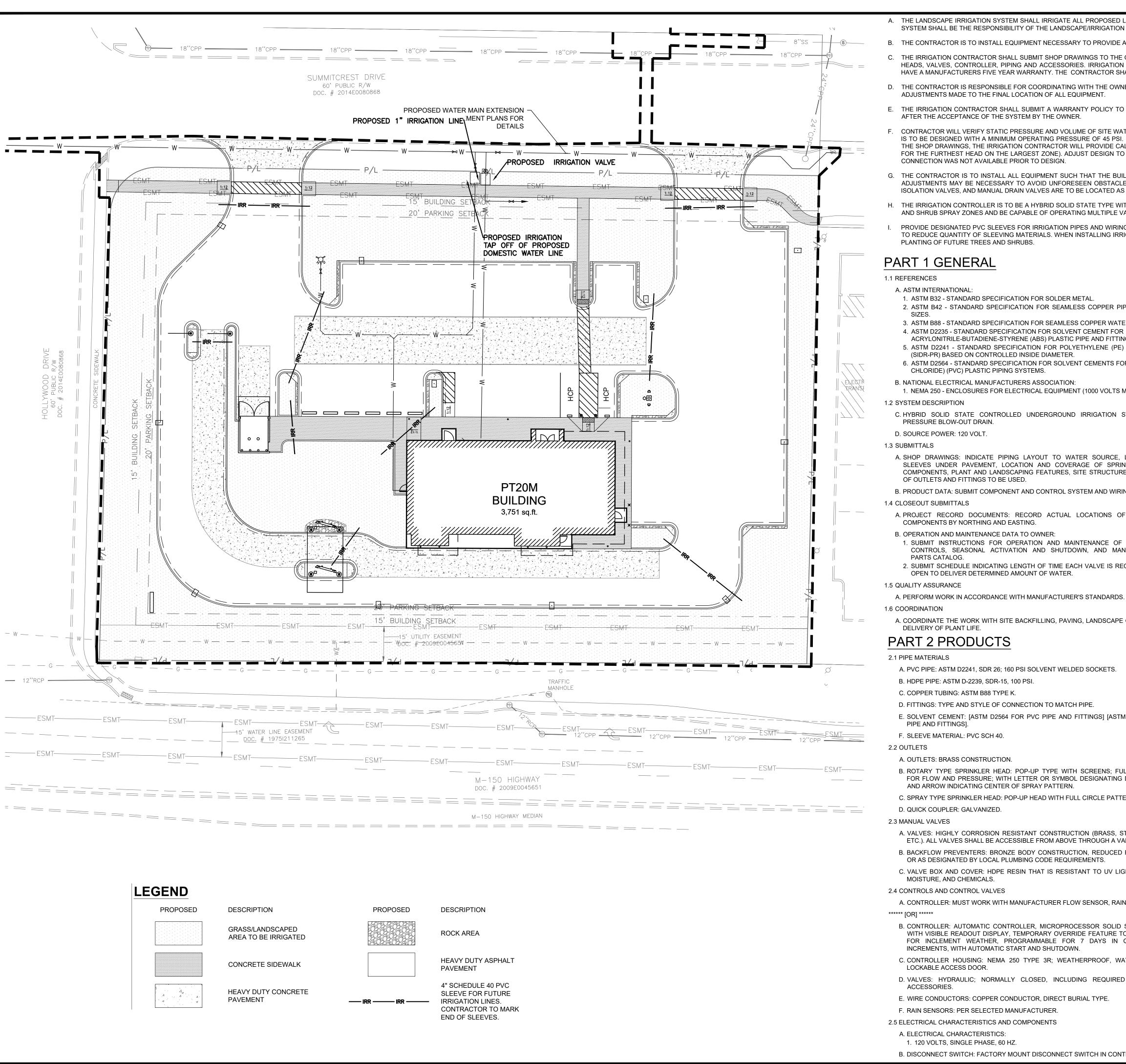
SHEET TITLE

LANDSCAPE PLAN



DRAWN BY: CHECKED BY: 40497-21 PROJECT NO:

DRAWING



- A. THE LANDSCAPE IRRIGATION SYSTEM SHALL IRRIGATE ALL PROPOSED LANDSCAPE AND GRASS AREAS ON THE PROPERTY. THE DESIGN, PERMITTING, AND INSTALLATION OF THE SYSTEM SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE/IRRIGATION CONTRACTOR (CONTRACTOR).
- B. THE CONTRACTOR IS TO INSTALL EQUIPMENT NECESSARY TO PROVIDE A COMPLETE, FUNCTIONAL SYSTEM THAT IS IN COMPLIANCE WITH APPLICABLE CODES AND REGULATIONS.
- C. THE IRRIGATION CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE OWNER'S REPRESENTATIVE FOR APPROVAL, PRIOR TO CONSTRUCTION, WHICH WILL ILLUSTRATE TYPE OF HEADS, VALVES, CONTROLLER, PIPING AND ACCESSORIES. IRRIGATION HEADS, VALVES AND CONTROLLER ARE TO BE FROM A SINGLE MANUFACTURER. ALL EQUIPMENT MUST HAVE A MANUFACTURERS FIVE YEAR WARRANTY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER INSTALLATION AND FIELD ADJUSTMENT OF THE ABOVE ITEMS.
- D. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE OWNER THE FINAL LOCATION OF THE CONTROL PANEL(S). NO ADDITIONAL COSTS SHALL BE ALLOWED FOR ANY ADJUSTMENTS MADE TO THE FINAL LOCATION OF ALL EQUIPMENT.
- E. THE IRRIGATION CONTRACTOR SHALL SUBMIT A WARRANTY POLICY TO THE OWNER WHICH SHALL COVER THE FUNCTION OF THE ENTIRE SYSTEM FOR A PERIOD OF ONE YEAR AFTER THE ACCEPTANCE OF THE SYSTEM BY THE OWNER.
- CONTRACTOR WILL VERIFY STATIC PRESSURE AND VOLUME OF SITE WATER SUPPLY AND ADJUST ENTIRE IRRIGATION SYSTEM ACCORDINGLY. EACH ZONE OF IRRIGATION SYSTEM IS TO BE DESIGNED WITH A MINIMUM OPERATING PRESSURE OF 45 PSI. IF THE PRESSURE IS BELOW 45 PSI, A PROPERLY SIZED BOOSTER PUMP WILL BE REQUIRED. AS PART OF THE SHOP DRAWINGS, THE IRRIGATION CONTRACTOR WILL PROVIDE CALCULATIONS SHOWING PRESSURE LOSS FROM THE POINT OF CONNECTION TO THE FURTHEST HEAD (AND FOR THE FURTHEST HEAD ON THE LARGEST ZONE). ADJUST DESIGN TO MEET AVAILABLE PRESSURES AND VOLUMES. A CURRENT STATIC PRESSURE READING AT THE POINT OF CONNECTION WAS NOT AVAILABLE PRIOR TO DESIGN.
- G. THE CONTRACTOR IS TO INSTALL ALL EQUIPMENT SUCH THAT THE BUILDING, PARKING AREAS, AND SIDEWALKS ARE NOT SPRAYED OR SUBJECT TO EXCESSIVE RUNOFF. FIELD ADJUSTMENTS MAY BE NECESSARY TO AVOID UNFORESEEN OBSTACLES AND SIMPLIFY INSTALLATION. IRRIGATION SYSTEM ACCESSORIES SUCH AS QUICK COUPLER VALVES, ISOLATION VALVES, AND MANUAL DRAIN VALVES ARE TO BE LOCATED AS NECESSARY TO COMPLETE THE SYSTEM.
- H. THE IRRIGATION CONTROLLER IS TO BE A HYBRID SOLID STATE TYPE WITH PLASTIC LOCKABLE CABINET. CONTROLLER MUST HAVE DUAL PROGRAMMING FOR TURF SPRAY ZONES AND SHRUB SPRAY ZONES AND BE CAPABLE OF OPERATING MULTIPLE VALVES PER STATION.
- PROVIDE DESIGNATED PVC SLEEVES FOR IRRIGATION PIPES AND WIRING THAT CROSSES UNDER WALKS, STREETS AND CONCRETE PADS. COMBINE PIPING WHENEVER POSSIBLE TO REDUCE QUANTITY OF SLEEVING MATERIALS. WHEN INSTALLING IRRIGATION PIPE ALONG CURBS OR IN ISLANDS, PLACE PIPE AS CLOSE TO CURB AS POSSIBLE TO ALLOW FOR PLANTING OF FUTURE TREES AND SHRUBS.

## PART 1 GENERAL

#### 1.1 REFERENCES

#### A. ASTM INTERNATIONAL:

- 1. ASTM B32 STANDARD SPECIFICATION FOR SOLDER METAL
- 2. ASTM B42 STANDARD SPECIFICATION FOR SEAMLESS COPPER PIPE, STANDARD
- 3. ASTM B88 STANDARD SPECIFICATION FOR SEAMLESS COPPER WATER TUBE
- ACRYLONITRILE-BUTADIENE-STYRENE (ABS) PLASTIC PIPE AND FITTINGS.
- 5. ASTM D2241 STANDARD SPECIFICATION FOR POLYETHYLENE (PE) PLASTIC PIPE (SIDR-PR) BASED ON CONTROLLED INSIDE DIAMETER.
- 6. ASTM D2564 STANDARD SPECIFICATION FOR SOLVENT CEMENTS FOR POLY (VINYL CHLORIDE) (PVC) PLASTIC PIPING SYSTEMS.
- B. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION:
- 1. NEMA 250 ENCLOSURES FOR ELECTRICAL EQUIPMENT (1000 VOLTS MAXIMUM).

#### 1.2 SYSTEM DESCRIPTION

- C. HYBRID SOLID STATE CONTROLLED UNDERGROUND IRRIGATION SYSTEM, WITH PRESSURE BLOW-OUT DRAIN.
- D. SOURCE POWER: 120 VOLT.

#### 1.3 SUBMITTALS

- A. SHOP DRAWINGS: INDICATE PIPING LAYOUT TO WATER SOURCE, LOCATION OF SLEEVES UNDER PAVEMENT, LOCATION AND COVERAGE OF SPRINKLER HEADS, COMPONENTS, PLANT AND LANDSCAPING FEATURES, SITE STRUCTURES, SCHEDULE OF OUTLETS AND FITTINGS TO BE USED.
- B. PRODUCT DATA: SUBMIT COMPONENT AND CONTROL SYSTEM AND WIRING DIAGRAMS.

#### 1.4 CLOSEOUT SUBMITTALS

- A. PROJECT RECORD DOCUMENTS: RECORD ACTUAL LOCATIONS OF CONCEALED COMPONENTS BY NORTHING AND EASTING.
- B. OPERATION AND MAINTENANCE DATA TO OWNER:
- 1. SUBMIT INSTRUCTIONS FOR OPERATION AND MAINTENANCE OF SYSTEM AND CONTROLS, SEASONAL ACTIVATION AND SHUTDOWN, AND MANUFACTURER'S PARTS CATALOG.
- 2. SUBMIT SCHEDULE INDICATING LENGTH OF TIME EACH VALVE IS REQUIRED TO BE OPEN TO DELIVER DETERMINED AMOUNT OF WATER.

## 1.5 QUALITY ASSURANCE

A. PERFORM WORK IN ACCORDANCE WITH MANUFACTURER'S STANDARDS.

#### A. COORDINATE THE WORK WITH SITE BACKFILLING, PAVING, LANDSCAPE GRADING AND DELIVERY OF PLANT LIFE.

## PART 2 PRODUCTS

## 2.1 PIPE MATERIALS

- A. PVC PIPE: ASTM D2241, SDR 26; 160 PSI SOLVENT WELDED SOCKETS.
- B. HDPE PIPE: ASTM D-2239. SDR-15. 100 PSI.
- C. COPPER TUBING: ASTM B88 TYPE K.
- D. FITTINGS: TYPE AND STYLE OF CONNECTION TO MATCH PIPE.
- E. SOLVENT CEMENT: [ASTM D2564 FOR PVC PIPE AND FITTINGS] [ASTM D2235 FOR ABS PIPE AND FITTINGS].
- F. SLEEVE MATERIAL: PVC SCH 40.

## 2.2 OUTLETS

## A. OUTLETS: BRASS CONSTRUCTION.

- B. ROTARY TYPE SPRINKLER HEAD: POP-UP TYPE WITH SCREENS; FULLY ADJUSTABLE FOR FLOW AND PRESSURE; WITH LETTER OR SYMBOL DESIGNATING DEGREE OF ARC AND ARROW INDICATING CENTER OF SPRAY PATTERN.
- C. SPRAY TYPE SPRINKLER HEAD: POP-UP HEAD WITH FULL CIRCLE PATTERN.
- D. QUICK COUPLER: GALVANIZED.

## 2.3 MANUAL VALVES

- A. VALVES: HIGHLY CORROSION RESISTANT CONSTRUCTION (BRASS, STAINLESS STEEL, ETC.). ALL VALVES SHALL BE ACCESSIBLE FROM ABOVE THROUGH A VALVE BOX.
- B. BACKFLOW PREVENTERS: BRONZE BODY CONSTRUCTION, REDUCED PRESSURE TYPE OR AS DESIGNATED BY LOCAL PLUMBING CODE REQUIREMENTS.
- C. VALVE BOX AND COVER: HDPE RESIN THAT IS RESISTANT TO UV LIGHT, CORROSION MOISTURE, AND CHEMICALS.

## 2.4 CONTROLS AND CONTROL VALVES

- A. CONTROLLER: MUST WORK WITH MANUFACTURER FLOW SENSOR, RAIN SENSOR, AND
- B. CONTROLLER: AUTOMATIC CONTROLLER, MICROPROCESSOR SOLID STATE CONTROL WITH VISIBLE READOUT DISPLAY, TEMPORARY OVERRIDE FEATURE TO BYPASS CYCLE FOR INCLEMENT WEATHER, PROGRAMMABLE FOR 7 DAYS IN QUARTER HOUR INCREMENTS, WITH AUTOMATIC START AND SHUTDOWN.
- C. CONTROLLER HOUSING: NEMA 250 TYPE 3R; WEATHERPROOF, WATERTIGHT, WITH LOCKABLE ACCESS DOOR.
- D. VALVES: HYDRAULIC; NORMALLY CLOSED, INCLUDING REQUIRED FITTINGS AND ACCESSORIES.
- E. WIRE CONDUCTORS: COPPER CONDUCTOR, DIRECT BURIAL TYPE.
- F. RAIN SENSORS: PER SELECTED MANUFACTURER.
- 2.5 ELECTRICAL CHARACTERISTICS AND COMPONENTS
- A. ELECTRICAL CHARACTERISTICS: 1. 120 VOLTS, SINGLE PHASE, 60 HZ.
- B. DISCONNECT SWITCH: FACTORY MOUNT DISCONNECT SWITCH IN CONTROL PANEL.

## PART 3 EXECUTION

#### 3.1 EXAMINATION

- A. VERIFY LOCATION OF EXISTING UTILITIES.
- B. VERIFY REQUIRED UTILITIES ARE AVAILABLE, IN PROPER LOCATION, AND READY FOR USE.

#### 3.2 PREPARATION

- A. ROUTE PIPING TO AVOID PLANTS, GROUND COVER, AND STRUCTURES.
- B. LAYOUT AND STAKE LOCATIONS OF SYSTEM COMPONENTS.
- C. REVIEW LAYOUT REQUIREMENTS WITH OTHER AFFECTED WORK COORDINATE LOCATIONS OF SLEEVES UNDER PAVING TO ACCOMMODATE SYSTEM.

### 3.3 TRENCHING

#### A. TRENCH SIZE:

- 1. MINIMUM COVER OVER INSTALLED SUPPLY PIPING: 18 INCHES. 2. MINIMUM COVER OVER INSTALLED BRANCH PIPING: 15 INCHES.
- B. TRENCH TO ACCOMMODATE GRADE CHANGES AND SLOPE TO DRAIN(S).
- C. MAINTAIN TRENCHES FREE OF DEBRIS, MATERIAL, OR OBSTRUCTIONS DAMAGING TO PIPE.

#### 3.4 INSTALLATION

- A. CONNECT TO UTILITIES.
- B. SET OUTLETS AND BOX COVERS AT FINISH GRADE ELEVATIONS.
- C. PROVIDE FOR THERMAL MOVEMENT OF COMPONENTS IN SYSTEM.
- D. SLOPE PIPING FOR SELF DRAINAGE TO DAYLIGHT.
- E. USE THREADED NIPPLES FOR RISERS TO EACH OUTLET.
- F. INSTALL CONTROL WIRING IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED INSTALLATION PRACTICES. PROVIDE 10 INCH EXPANSION COIL AT EACH CONTROL VALVE, AND AT 100 FT INTERVALS. BURY WIRE BESIDE PIPE. MARK VALVES WITH NEOPRENE VALVE MARKERS CONTAINING LOCKING DEVICE. SET VALVE MARKERS IN VALVE BOXES SET TO FINISH
- G. AFTER PIPING IS INSTALLED, BUT BEFORE OUTLETS ARE INSTALLED AND BACKFILLING COMMENCES, OPEN VALVES AND FLUSH SYSTEM WITH FULL HEAD OF WATER.

## 3.5 BACKFILLING

3.6 FIELD QUALITY CONTROL

- A. BACKFILL WITH COMPACTED BACKFILL IN ACCORDANCE WITH DETAIL A ON
- SHEET C-7.1.
- B. INSTALL 3 INCH SAND BEDDING BELOW AND COVER OVER PIPING.

## C. PROTECT PIPING FROM DISPLACEMENT.

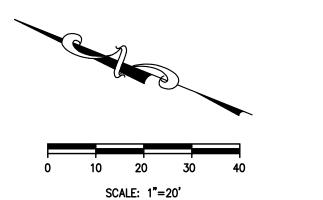
- A. PRIOR TO BACKFILLING, TEST SYSTEM FOR LEAKAGE FOR WHOLE SYSTEM
- TO MAINTAIN 100 PSI PRESSURE FOR ONE HOUR. B. SYSTEM IS ACCEPTABLE WHEN NO LEAKAGE OR LOSS OF PRESSURE
- OCCURS DURING TEST PERIOD. C. PROVIDE ONE COMPLETE SPRING SEASON START-UP AND FALL SEASON

#### SHUTDOWN. 3.7 ADJUSTING

- A. ADJUST CONTROL SYSTEM TO ACHIEVE TIME CYCLES REQUIRED
- B. ADJUST HEAD TYPES FOR FULL WATER COVERAGE AS DIRECTED BY OWNER'S REPRESENTATIVE.

## 3.8 DEMONSTRATION AND TRAINING

A. INSTRUCT OWNER'S PERSONNEL IN OPERATION AND MAINTENANCE OF SYSTEM, INCLUDING ADJUSTING OF SPRINKLER HEADS. USE OPERATION AND MAINTENANCE MATERIAL AS BASIS FOR DEMONSTRATION.





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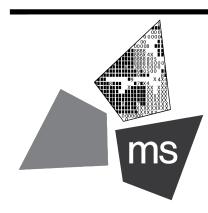
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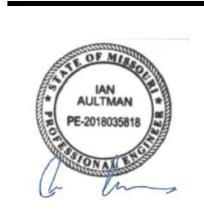
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SHEET TITLE

IRRIGATION PLAN



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40497-21