

FOOD AND FUEL EXPRESSO, STORE NO. 37

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

FINAL DEVELOPMENT PLAN

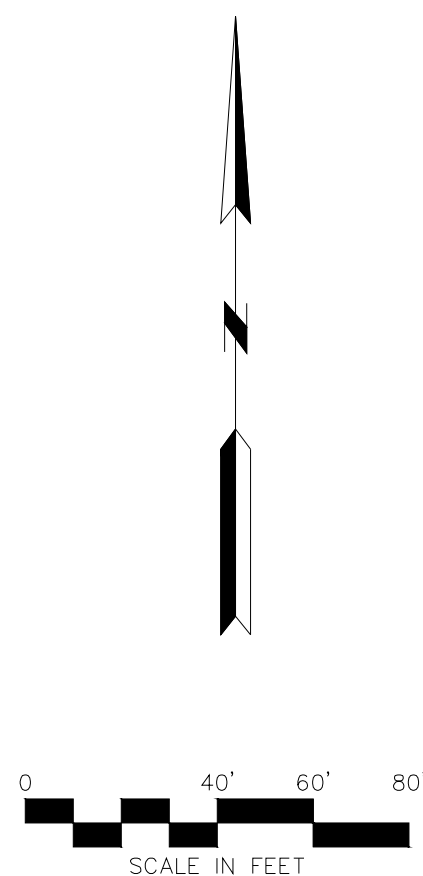
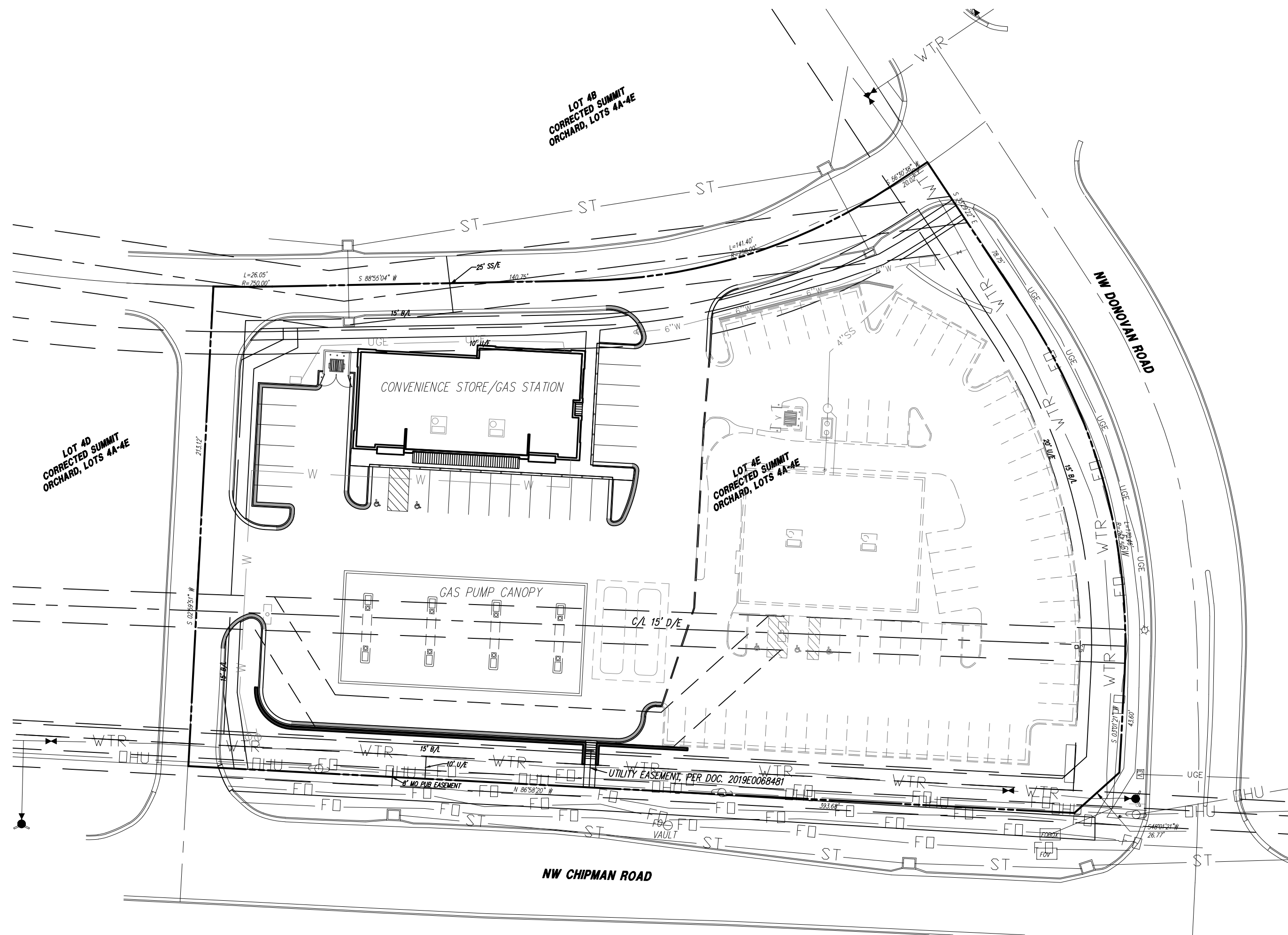
CONVENIENCE STORE/GAS STATION

INDEX

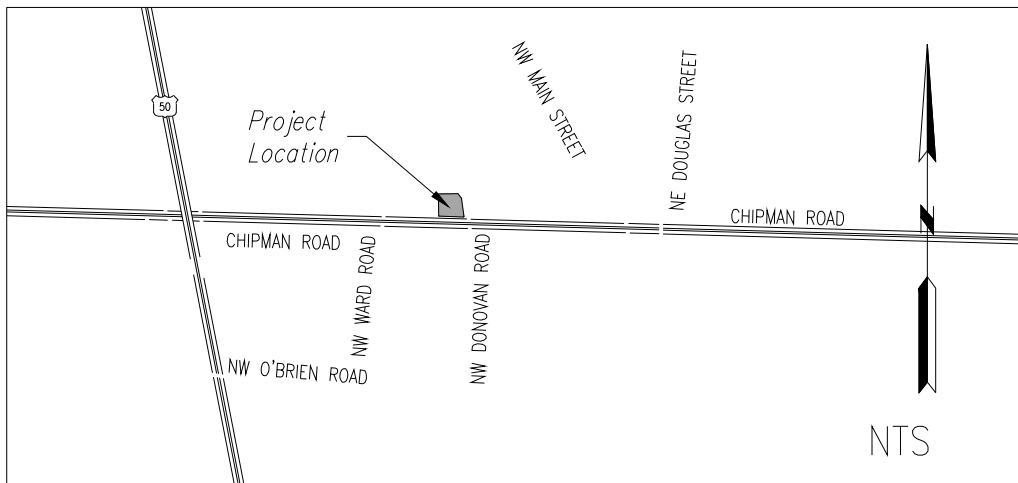
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BUILDING ELEVATIONS
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VICINITY MAP



GENERAL NOTES:

1. The underground utilities shown herein have been plotted from available information and do not necessarily reflect the actual existence, or nonexistence, size, type, number, or locations of these or other utilities. The contractor shall be responsible for verifying the actual locations of all underground utilities, shown or not shown, and said utilities shall be located in the field prior to any grading, excavation, or construction of improvements. These provisions shall in no way absolve any party from complying with the "UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT", Chapter 319, RSMO.
2. Gas, Water, and other Utilities shall not conflict with the depth or horizontal location of existing and proposed sanitary and storm sewers, including building laterals.
3. Prior to submittal of construction bids, the Contractor shall be required to visit the site to verify existing conditions and proposed improvements.
4. The Contractor shall be responsible for notification and coordination with all Utility Companies.
5. The Contractor shall notify the Engineer immediately of any discrepancies in the plans.
6. All sidewalk shall be ADA compliant.
7. All curb shall be C&G-1 unless otherwise noted.
8. There are no oil or gas wells located on the subject property as of October 23, 2019 as shown by the Missouri Geological Survey GEOSTRAT (Geosciences Technical Resource Assessment Tool).

PLANS PREPARED FOR
S.M. Trading Corporation
7415 W. 130TH ST., SUITE 100
OVERLAND PARK, KANSAS 66213
CONTACT - JERRY ROUSH
913-396-5021
jroush@fuelexpresso.com

PLANS PREPARED BY
HG CONSULT
11010 HASKELL ST. #210,
KANSAS CITY, KS 66109
CONTACT: KEVIN STERRETT
816-703-7098

PROJECT BENCHMARK:

- #1 Top of Sanitary Manhole lid at north west corner of site in roadway.
N: 1004782.5190
E: 2819746.9750
TOP ELEV. 1006.08

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CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
02/14/2022

UTILITIES

City of Lee's Summit
Department of Public Works
220 SE Green
Lee's Summit, Mo.
816-969-1800

EVERGY
401 SE Bailey Road
Lee's Summit, Mo. 64081
816-347-4320

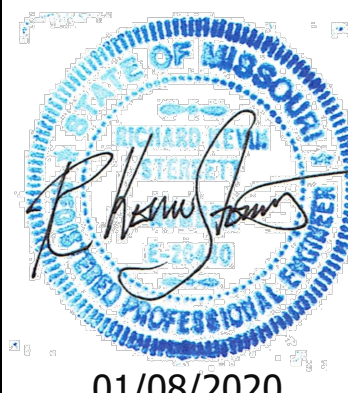
Spire
Dorsey Troutman
3025 SE Clover Dr
Lee's Summit, MO 64082
816-969-2298

AT&T
Craig Perkins
500 E. 8th Street
Kansas City, MO 64106
816-275-2721

Comcast
New Construction Hotline
866-771-2281

Missouri One Call
1-800-344-7483

NO.	BY	DATE	REVISION
1	EDH	11/20/19	CITY COMMENTS
2	RKS	12/13/19	CITY COMMENTS
3	EDH	1/06/20	CITY COMMENTS

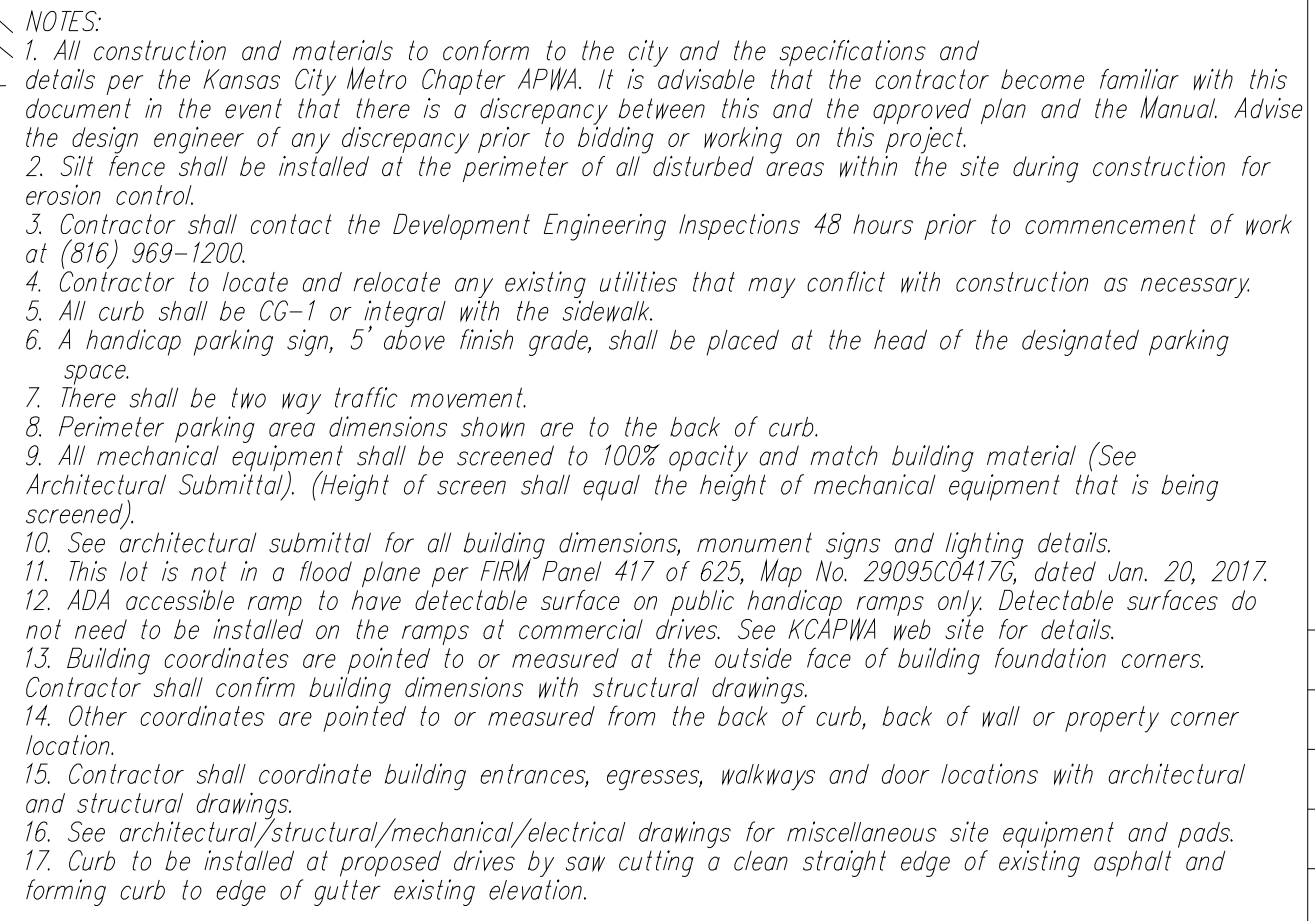


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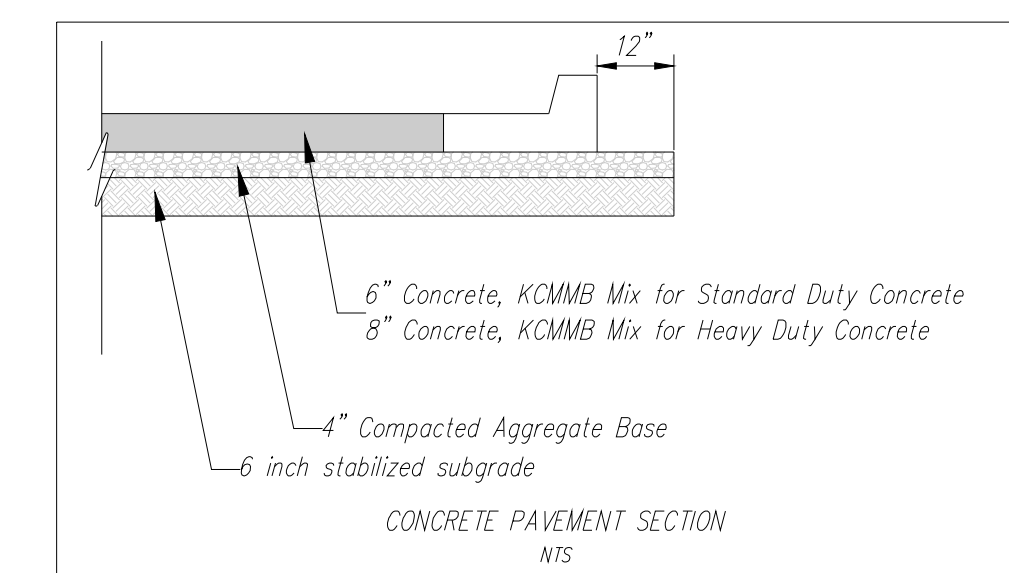
COVER SHEET

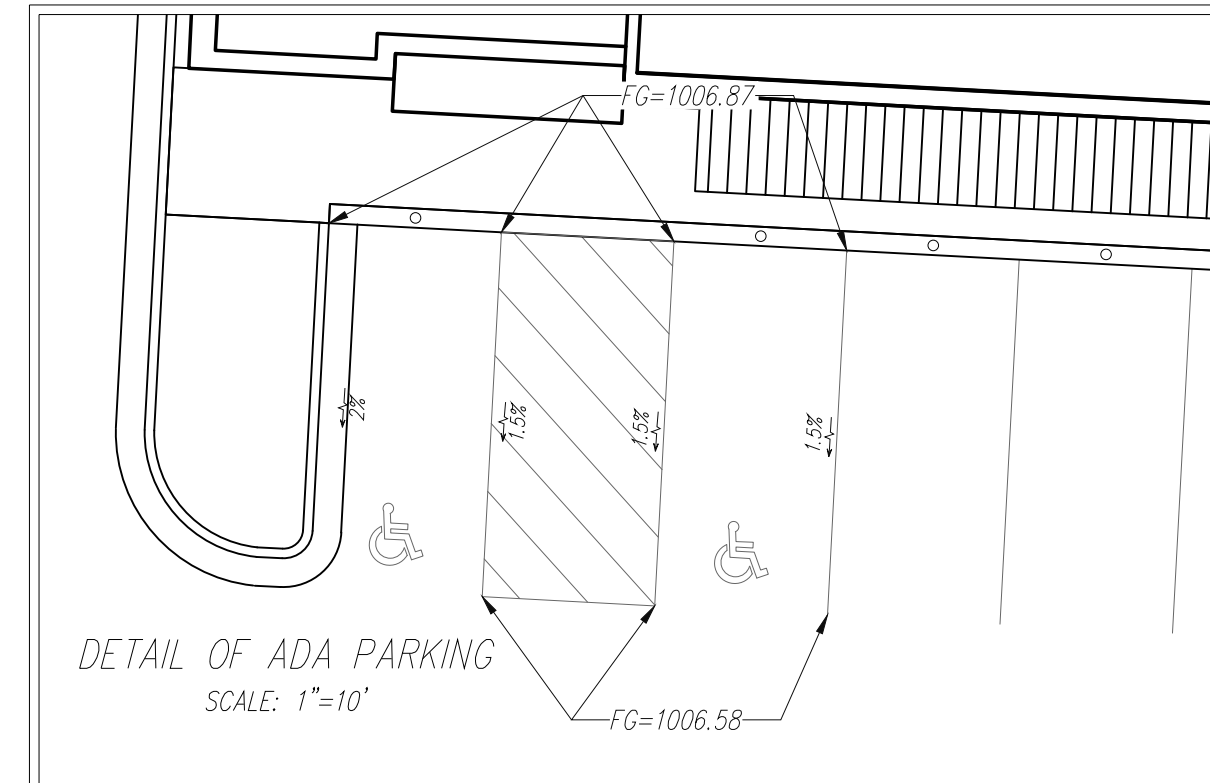
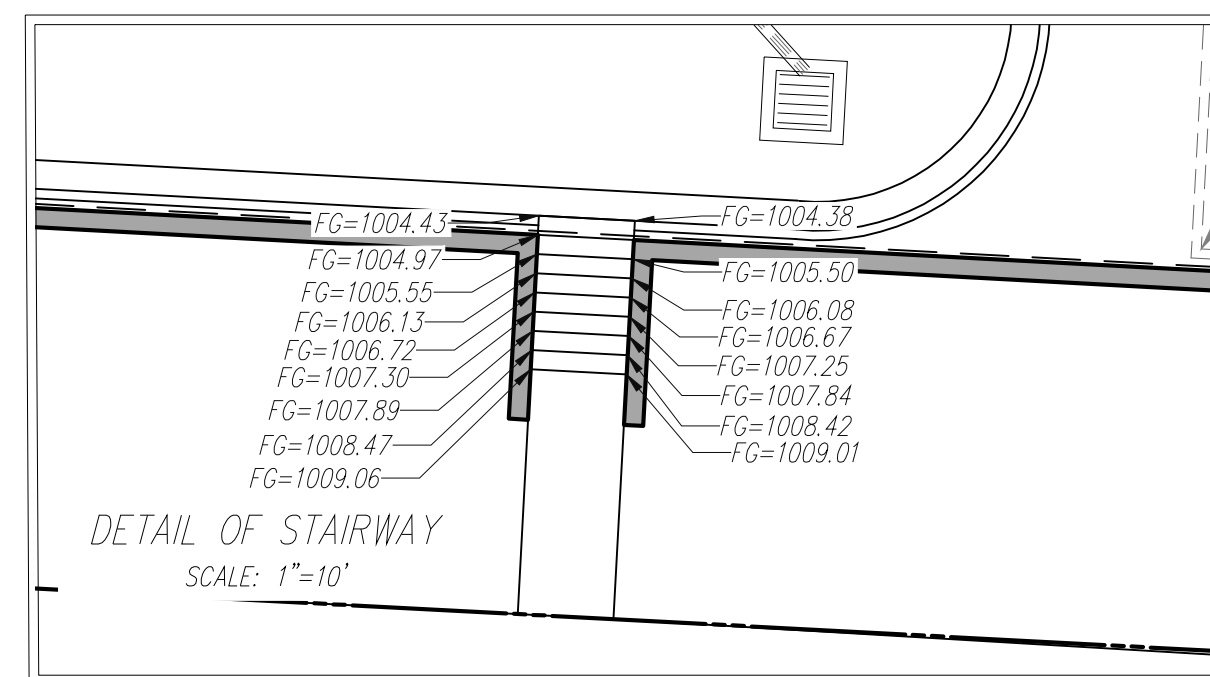
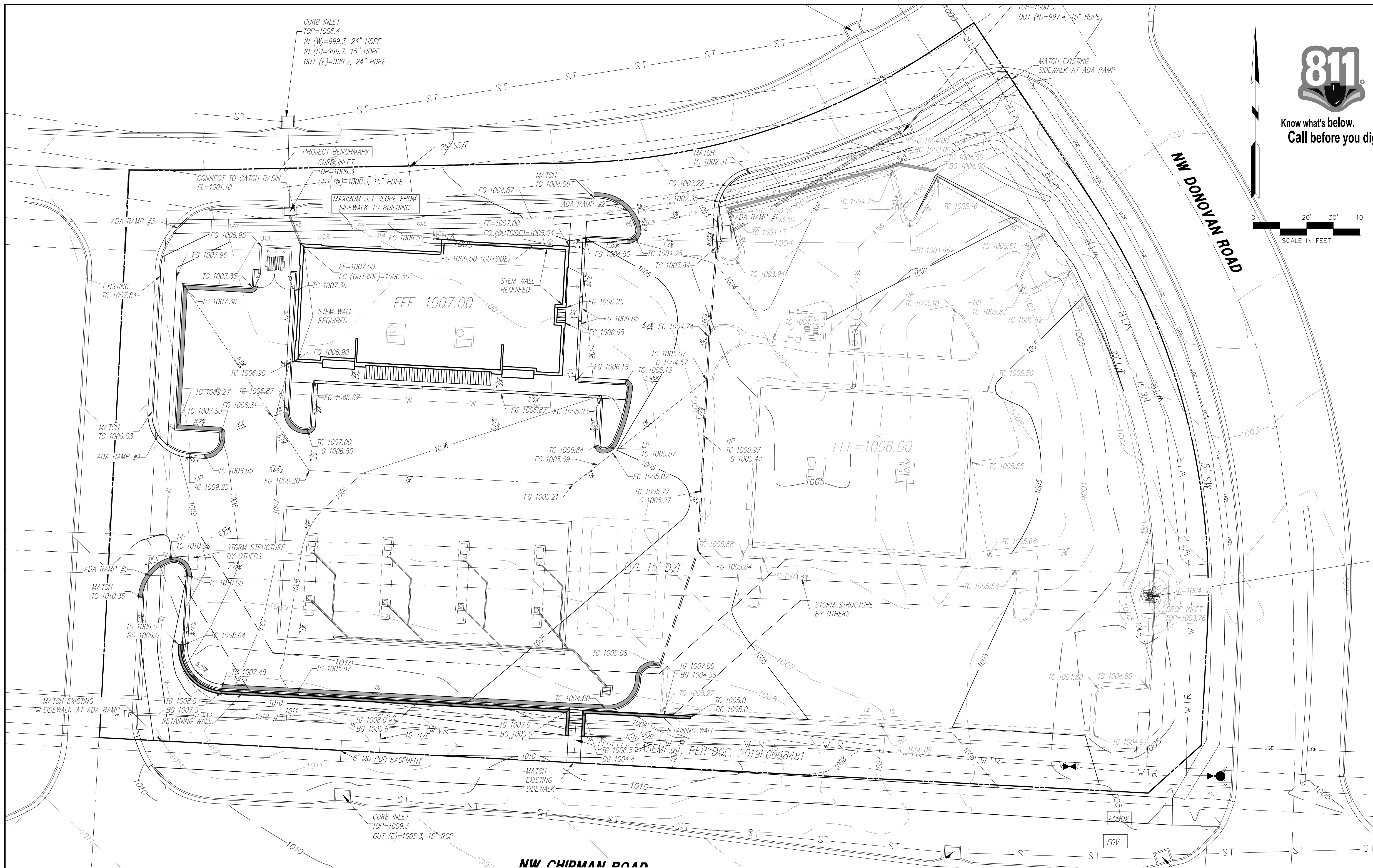
FOOD AND FUEL EXPRESSO
LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

X-REF NO. 19-131B	1
DRAWING NO. 19069	14
DATE OCTOBER 16, 2019	
JOB NO. 19069	



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KEY	
PROPOSED	EXISTING
— 979 —	Grades — 960 —
— "Dry" straight back curb and gutter	
TC	Top of Curb
FG	Finish Grade
G	Gutter Elevation
HP	High Point
LP	Low Point
FFE	Finish Floor Elevation
TG	Top of Grade (Retaining Wall)
BG	Bottom of Grade (Retaining Wall)

GRADING AND DRAINAGE NOTES:

Information pertaining to under ground utilities was obtained from available records and field locations when possible, but the contractor must determine the exact location and elevation of all existing utilities by digging test pits by hand at all utility crossings in advance of machine trenching. If clearances are less than specified on these plans or 24", which ever is less, contact the Engineer and the Owner/Developer prior to proceeding with construction. All structures located within Right of Way or otherwise noted on these plans shall be constructed per City Standards. If structure(s) are not prototypical or construction cannot be achieved contractor shall submit shop drawing to HC Consult, for review and approval. Contractor shall be responsible for relocation or removal of existing underground utilities shown or not shown at no additional cost to the owner.

Contractor shall coordinate with utility companies on adjusting existing utility line as required by cut and fill at no additional cost to the owner.

Contractor shall be held responsible for the design and implementation of sheeting, shoring, bracing and special excavation measures required to meet OSHA, Federal, State and Local regulations pursuant to the installation of the work indicated on these drawings.

All disturbed areas and slopes shall be graded smooth and (4") of top soil applied. The area shall be seeded and watered until hardy grass growth has been established.

Storm drain pipe bedding shall be installed per APWA, section 2100.

Elevations are called out to top of curb, top of pavement, or top of structure, unless otherwise noted.

Parking lot grading shall be performed to route storm water as directed to the storm collection system.

All curbs shall be CG-1.

Clear and grub areas to be filled, remove trees, vegetation, roots, or other debris, and other materials that would affect the stability of the fill.

Ensure that fill material is free of brush, rubbish, rocks, logs, stumps, building debris, and other materials inappropriate for constructing stable fills.

Do not incorporate frozen material or soft, muck, or highly compressible materials into fill slopes.

Permanently stabilize all graded areas after final grading is completed on each area of the grading plan, apply temporary stabilization measures on all graded areas when work is to be interrupted or delayed (see Erosion Control Plan(s)).

Contractor shall match top of proposed drainage structures with proposed grades. If a discrepancy occurs between proposed grades and proposed structure tops, the grading shall govern. If the discrepancy is more than 4 inches the contractor shall contact the Engineer of Record.

All utilities, including storm sewer, shown within public easements or right of ways shall be constructed to the governing agency's specifications. All other utilities shall be constructed to the client's or the governing agency's specifications, whichever is more stringent, if there is a question as to which specifications should apply the contractor shall contact the Engineer of Record.

All existing structures, unless otherwise noted to remain. All fencing, trees, & etc., within construction area shall be removed & disposed of off site, unless otherwise noted. Any burning on site shall be subject to local ordinances and/or the owner/developers standards and specifications.

All drainage structures shall be pre-cast.

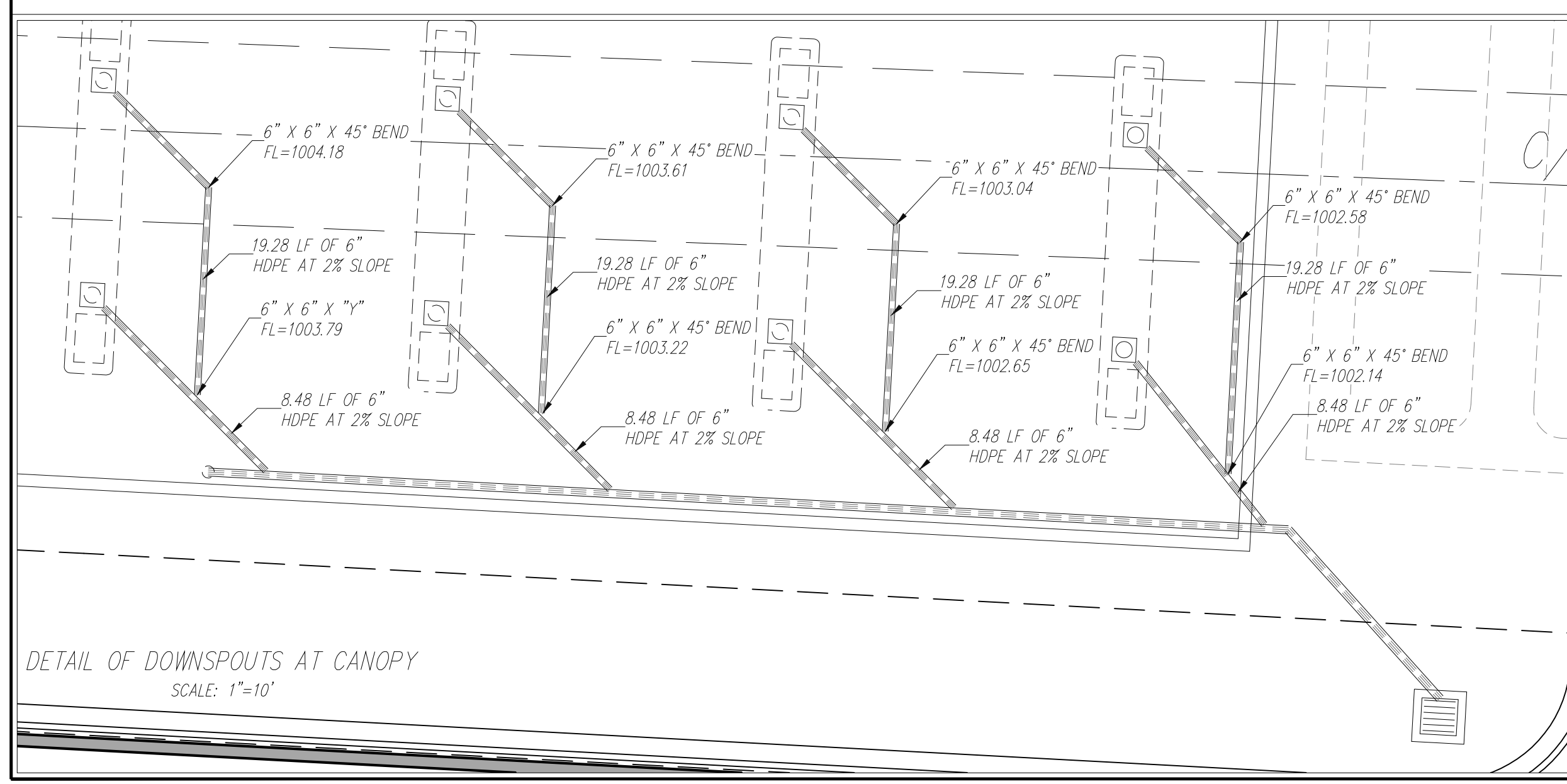
All drainage structures and storm sewer pipes shall meet heavy duty traffic (H20) loading and be installed accordingly.

Contractor shall notify all utility companies having underground utilities on site or in right-of-way prior to excavation. Contractor shall contact utility locating company (STATE ONE CALL system) and locate all utilities prior to grading start.

Site grading shall not proceed until Erosion Control measures have been installed.

After permits have been obtained and Erosion Control measures installed, the contractor shall grade building pad & aprons to 0" to - 1/2" of subgrade.

No slope greater than 3:1.



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01/08/2020

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GRADING PLAN

FOOD AND FUEL EXPRESSO

LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

X-REF NO.
19-1316

DRAWING NO.
19069

DATE
OCTOBER 16, 2019

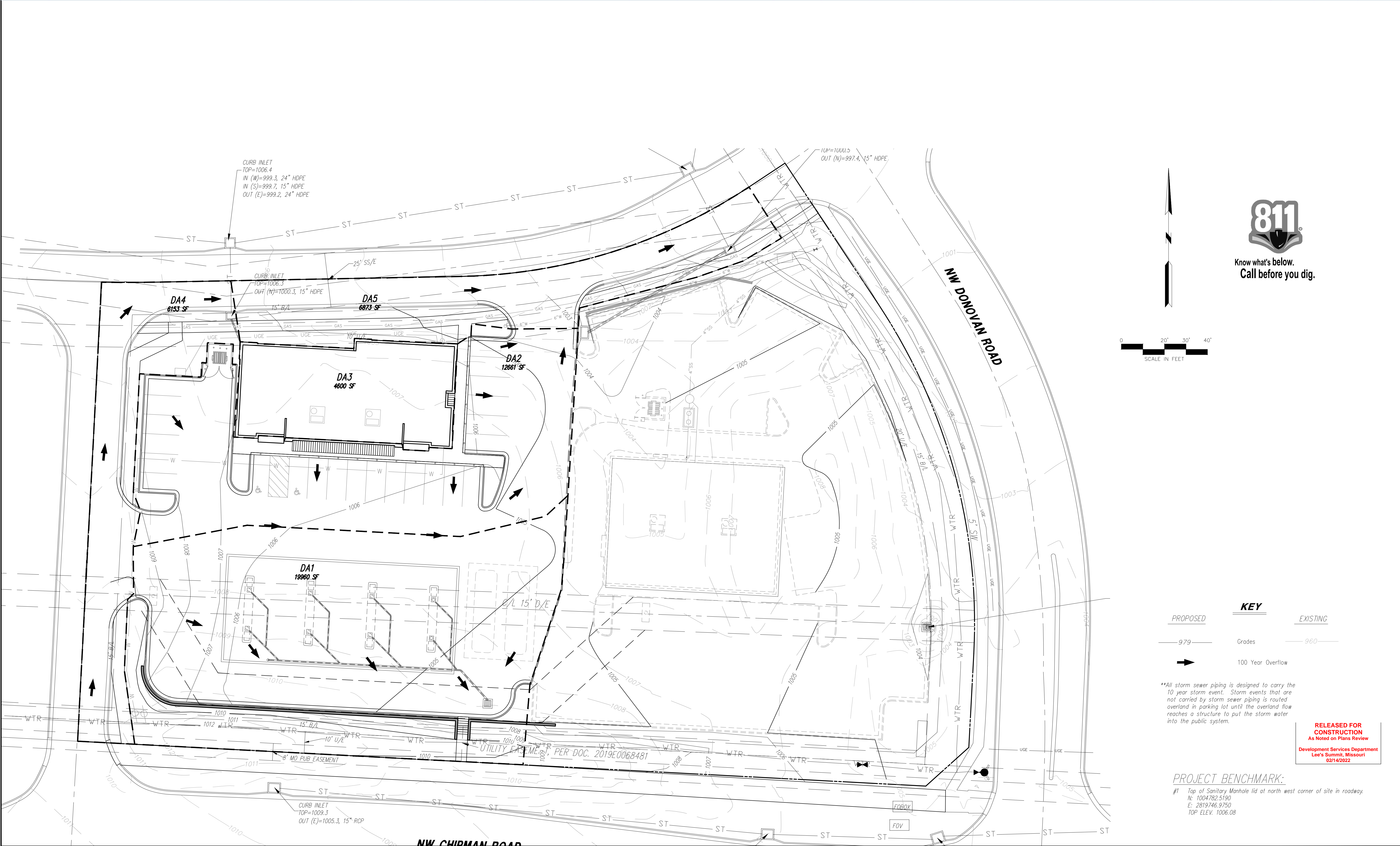
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19069

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STORM SEWER CALCULATIONS

HT SOLUTIONS

STORM SEWER NO.	SEWER LOCATION		TRIBUTARY AREA (AC.)		COMPOSITE RUNOFF COEFFICIENT	TIME OF FLOW			10 YEAR DESIGN					100 YEAR DESIGN							CURB INLET		PIPE DESIGN						
	FROM AREA OR STRUCTURE	TO AREA OR STRUCTURE	AREA DESIGNATION ACRES	TOTAL		Ti	Tt	Tc	INTENSITY [in/hr] I[10]	RUNOFF [cfs]				INTENSITY [in/hr] I[100]	RUNOFF [cfs]				In Pipe Downstream [cfs]	By Pass Out [cfs]	Pipe Size [in]	Pipe Slope [%]	Pipe Type	Rough Coeff [MANNNG]	Design Velocity [fps]	Depth Flow (inches) Q[100]	Full Velocity [fps]	Full Flow [cfs]	
										AREA Q[10]	In Pipe Upstream (cfs)	By Pass In (cfs)	Total Q[10]		AREA Q[100]	In Pipe Upstream (cfs)	By Pass In (cfs)	TOTAL Q[100]											
-	DROP INLET	36" PIPE	DA1	0.46	0.46	0.90	5.0	0.0	5.0	7.35	3.0	-	0.0	3.0	10.32	5.3	-	0.0	5.3	5.3	0.0	-	-	-	-	-	-	-	
LINE 1	CB 1B	EX CB 1A	DA2	0.29	0.75	0.90	5.0	0.0	5.0	7.35	1.9	0.0	0.0	1.9	10.32	3.4	0.0	0.0	3.4	3.4	0.0	15	1.00	HDPE	0.011	1.8	7.0	2.1	8.2
-	ROOF	8" HDPE	DA3	0.11	0.86	0.90	5.0	0.0	5.0	7.35	0.7	0.0	0.0	0.7	10.32	1.3	0.0	0.0	1.3	1.3	0.0	8	2.00	HDPE	0.011	1.89	4.8	2.0	2.2
-	ROAD CB	ROAD CB	DA4	0.15	1.01	0.90	5.0	0.0	5.0	7.35	1.0	0.0	0.0	1.0	10.32	1.7	0.0	0.0	1.7	1.7	0.0	15	1.80	HDPE	0.011	1.9	4.2	3.0	11.0
-	ROAD CB	ROAD CB	DA5	0.16	1.17	0.90	5.0	0.0	5.0	7.35	1.1	0.0	0.0	1.1	10.32	1.9	0.0	0.0	1.9	1.9	0.0	15	2.12	HDPE	0.011	2.1	4.2	3.1	12.2



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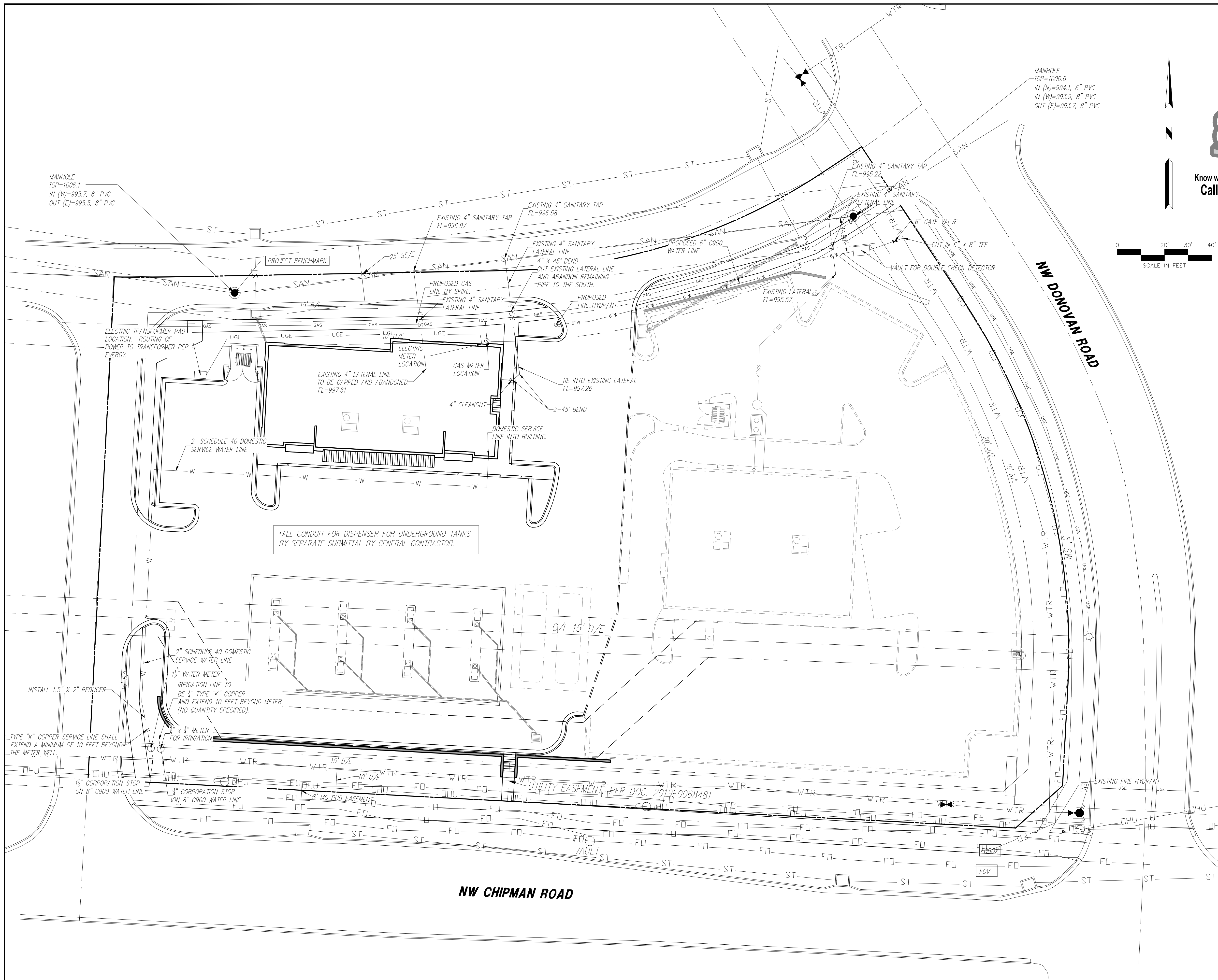
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CORPORATE LICENSE No. E200005873

811
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DRAINAGE AREA MAP
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LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

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- UTILITY NOTES:
1. All utility installation to be in accordance to Lee's Summit "DESIGN AND CONSTRUCTION MANUAL" per Ordinance 5813. See manual for specifications and standard details.
 2. Sanitary sewer service to be 4" Schedule 40 or SDR-26 PVC at 2% minimum slope.
 3. Storm pipe to be HDPE, corrugated with smooth interior.
 4. Roof drains for canopy to be connected to drop inlet at south side of lot. Roof drains for building to be connected to 8" HDPE pipe on north side of building to public storm sewer system.
 5. Contractor to contact the Water Utilities Department, Operations Division, at (816) 969-7606 to schedule water main taps and cut-ins, 48 hours in advance.
 6. Thrust blocks to be provided at all water line bends and tee locations.
 7. All mechanical units shall be roof mounted.
 8. Domestic water lines to be 1.5" diameter Type K Copper from main to meter and extend 10 feet beyond meter. 2" diameter Schedule 40 PVC from 10' from meter to building.
 9. Contractor to coordinate with EVERGY for temporary and permanent electric alignment and connection.
 10. See MEP plans for all utility information inside of the building.
 11. Contractor to verify all invert elevations for existing sewer connections. Contact civil engineer if conflict arises.

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LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

UTILTY PLAN

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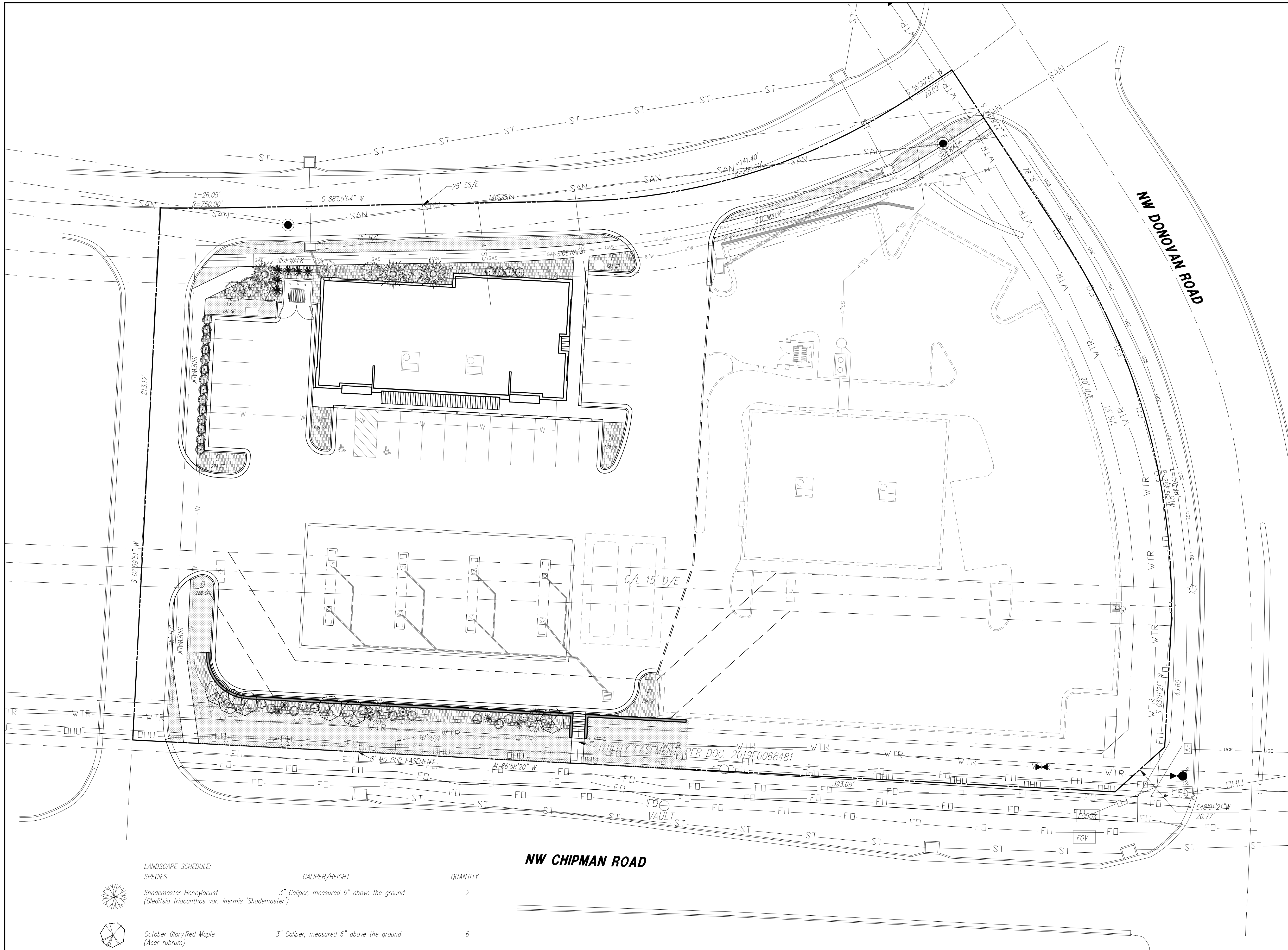
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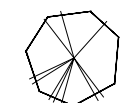
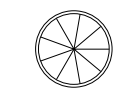




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LANDSCAPE SCHEDULE:		
SPECIES	CALIPER/HEIGHT	QUANTITY
 Shademaster Honeylocust (Gleditsia triacanthos var. inermis 'Shademaster')	3" Caliper, measured 6" above the ground	2
 October Glory/Red Maple (Acer rubrum)	3" Caliper, measured 6" above the ground	6
 Chinese Fringe Tree (Chionanthus retusus)	3" Caliper, measured 6" above the ground	6
 Cornelian Cherry Dogwood (Cornus mas 'Golden Glory')	3" Caliper, measured 6" above the ground	3
 Winter Gem Boxwood (Buxus microphylla var. japonica)	24" Minimum height at time of planting	7
 Fireball Dwarf Burning Bush, (or equal) (Euonymus alatus 'Compactus')	24" Minimum height at time of planting	30
 Skyrocket Juniper (Juniperus scopulorum 'Skyrocket')	6' Minimum height at time of planting	6



- NOTES:
- Open areas not covered with other landscaping materials shall be covered with sod.
 - All trees/shrubs are shown graphically, not numerically.
 - A 3 foot tall berm may be substituted for screening shrubs.
 - Trees shall be located a minimum distance of 5 feet from the sanitary and water lines as measured from the outside of the mature tree trunk to the outside of the pipe.
 - The trees and shrubs shown are for graphical purposes and does not represent the actual count required per the worksheet.
 - Evergreen shrubs used to screen mechanical equipment shall be equal height as the mechanical units at the time of planting. All Landscaping to meet Article 14 of the UDO.

Worksheet for Tree and Shrub Requirements:

A - Size of development site	= 48,795 SF
B - Length of street frontage of development site	= 221.63 LF
C - Trees required on street frontage = 1/30 LF	= 8 Trees
D - Trees provided	= 8 Trees
E - Parking lot area	= 25,253 SF
F - Green space required in parking lot (E x 5%)	= 1,262 SF
G - Green space provided	= 1,312 SF
H - Shrubs required along frontage = 1/20 LF	= 12 Shrubs
Shrubs required along frontage (Parking lot screen)	
143 LF at 12/40 LF	= 4 Shrubs
I - Shrubs Provided	
Shrubs Provided (Parking lot screen)	= 18 Shrubs
Shrubs Provided (Total frontage)	= 4 Shrubs
J - Quantity of additional trees required	
1 tree per 5000 SF of open area (44,218/5,000)	= 9 Trees
K - Additional Trees Provided	= 9 Trees
L - Quantity of additional shrubs required	
2 shrubs per 5000 SF of open area (44,218/5,000)	= 9 Shrubs
M - Additional Shrubs Provided	= 9 Shrubs

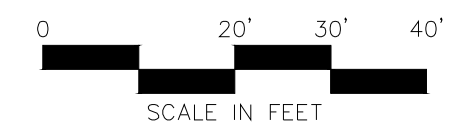
Interior Landscape

Area	SF
A	138
B	120
C	274
D	288
E	174
F	127
G	191
TOTAL	1,312

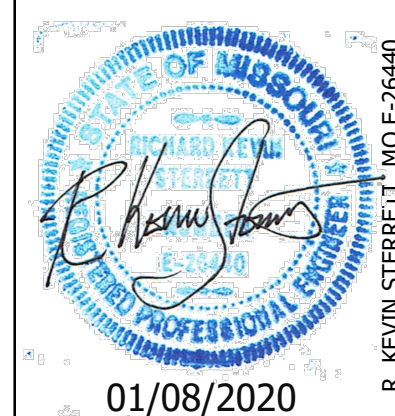
	Decorative rock
	Sodded area



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LANDSCAPE PLAN

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LEE'S SUMMIT - JACKSON COUNTY - MISSOURI

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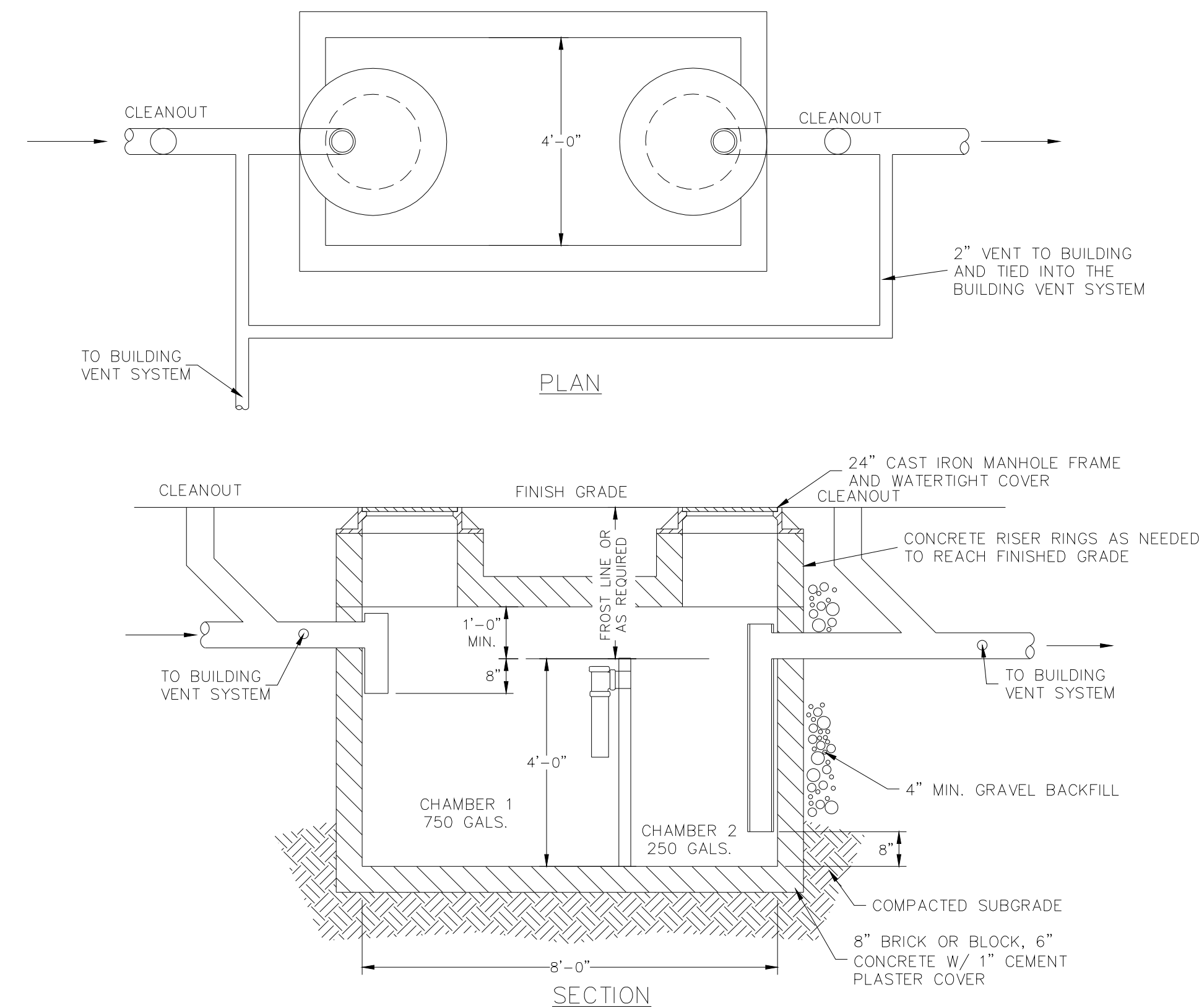
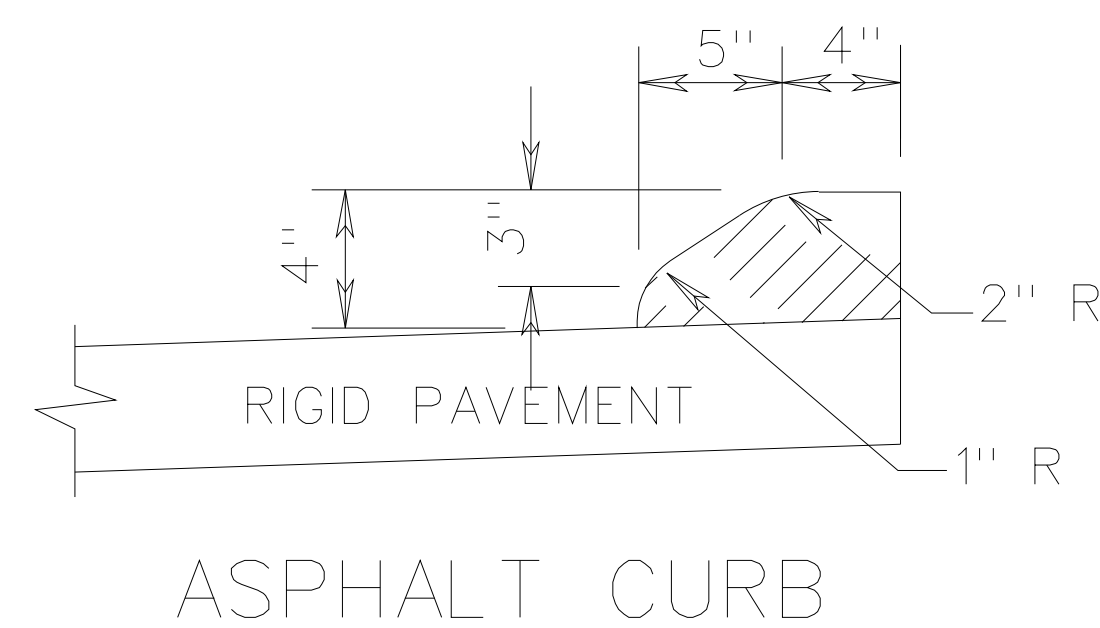
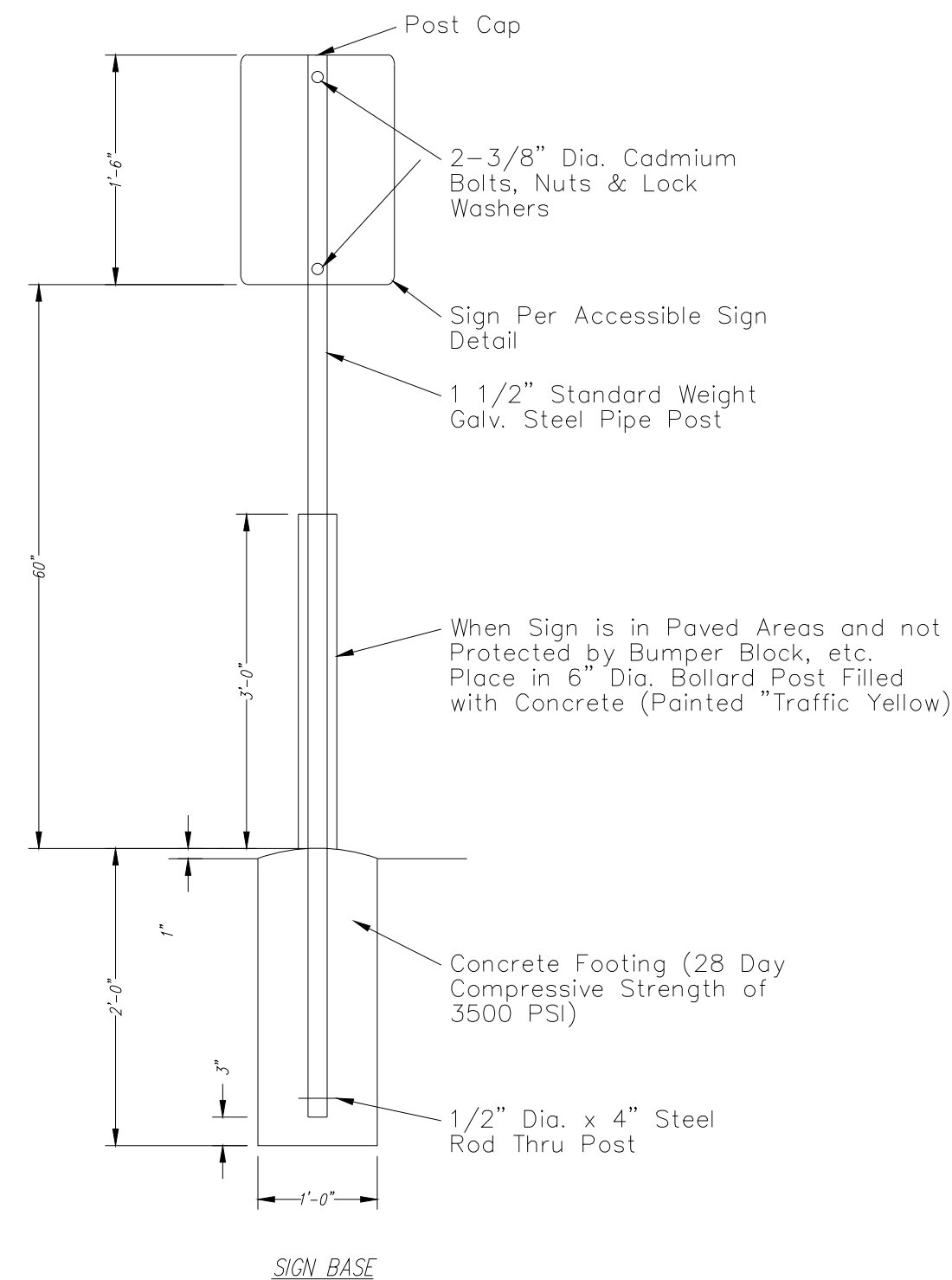
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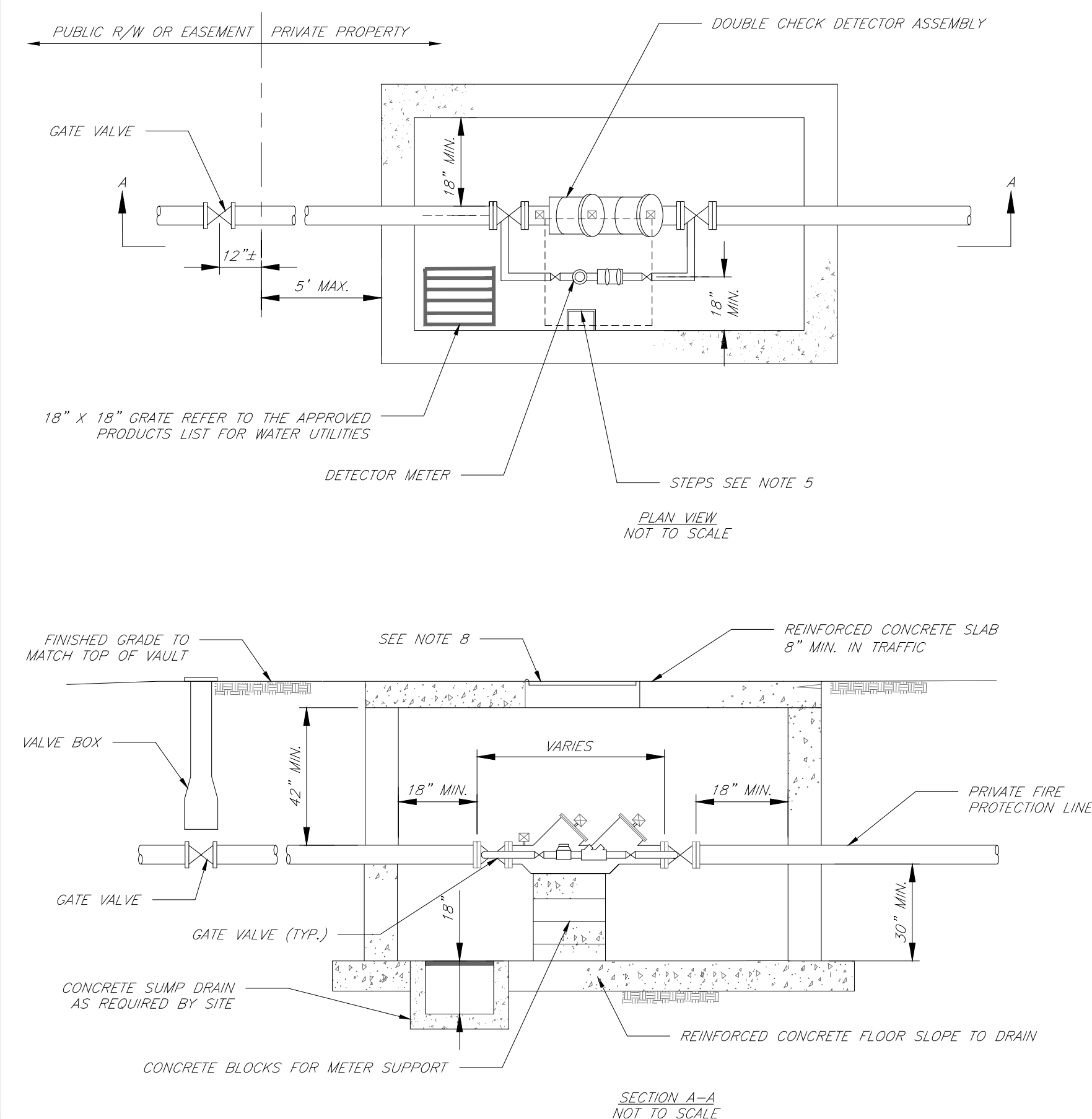
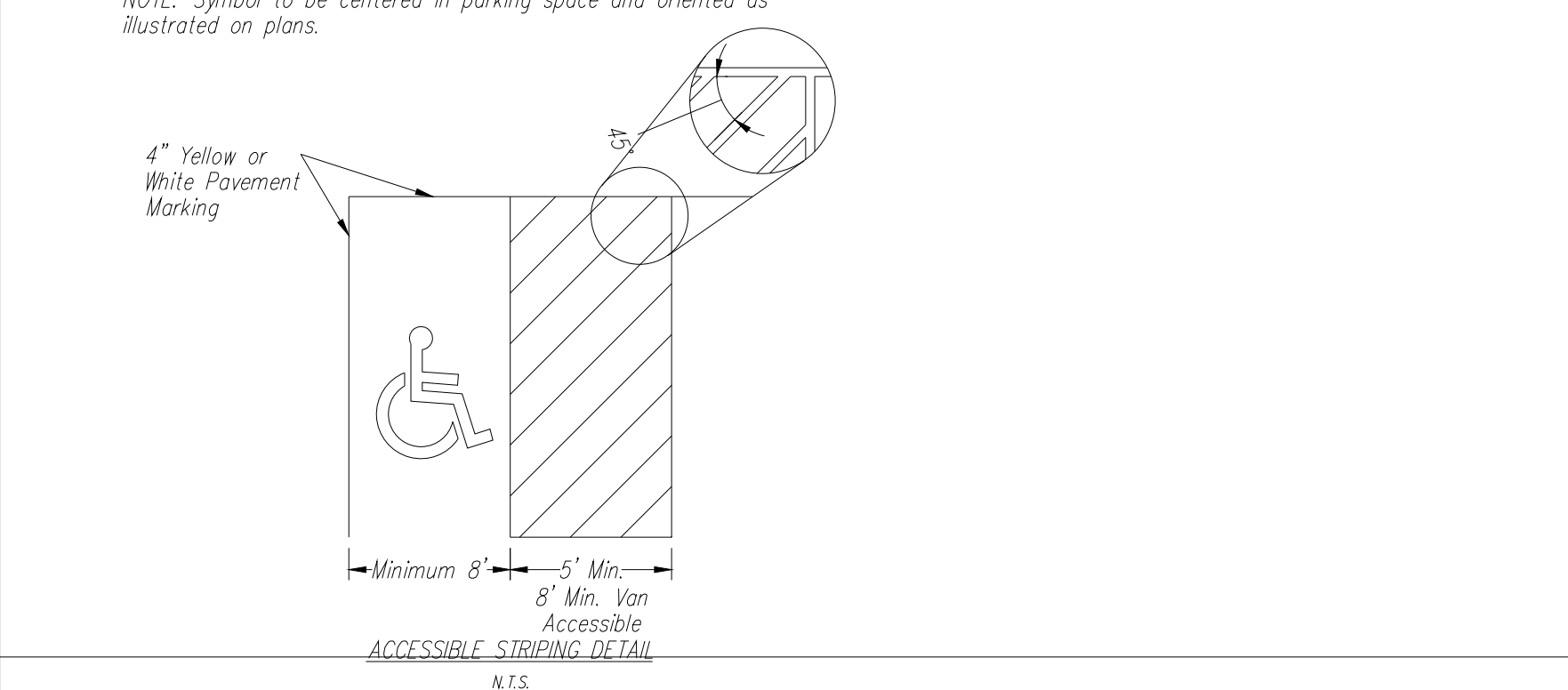
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02/14/2022



NOTE: SIZE AS PER LOCAL REQUIREMENTS
CODE.
1000 GAL. PRE-CAST CONCRETE
FOR REFERENCE USE IN SIZING:
1 GALLON = 0.134 CUBIC FEET VOLUME OF
STD. 1000 GAL. TRAP = 134± C.F.

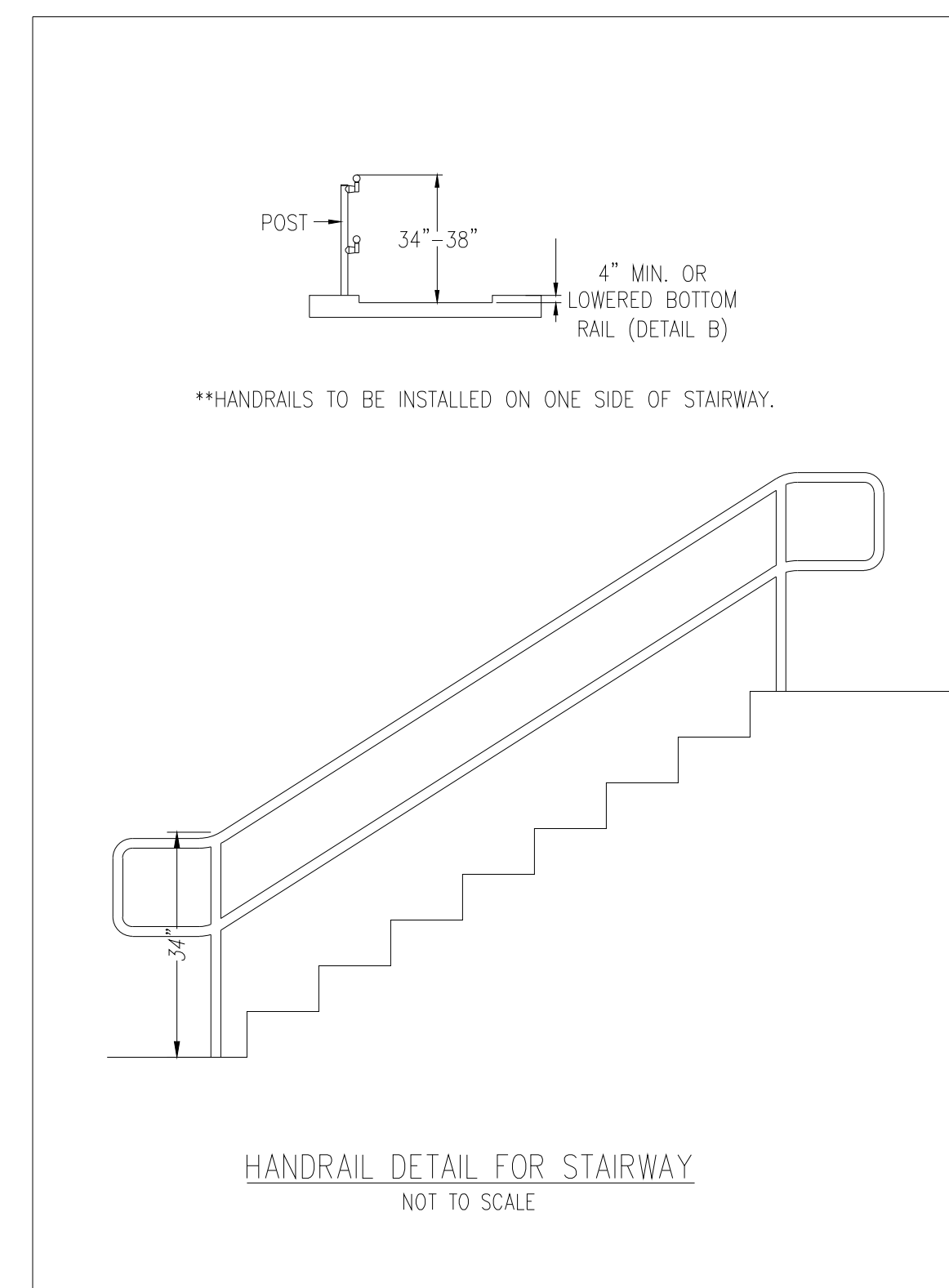
TYPICAL EXTERIOR GREASE INTERCEPTOR
NTS



GENERAL NOTES:

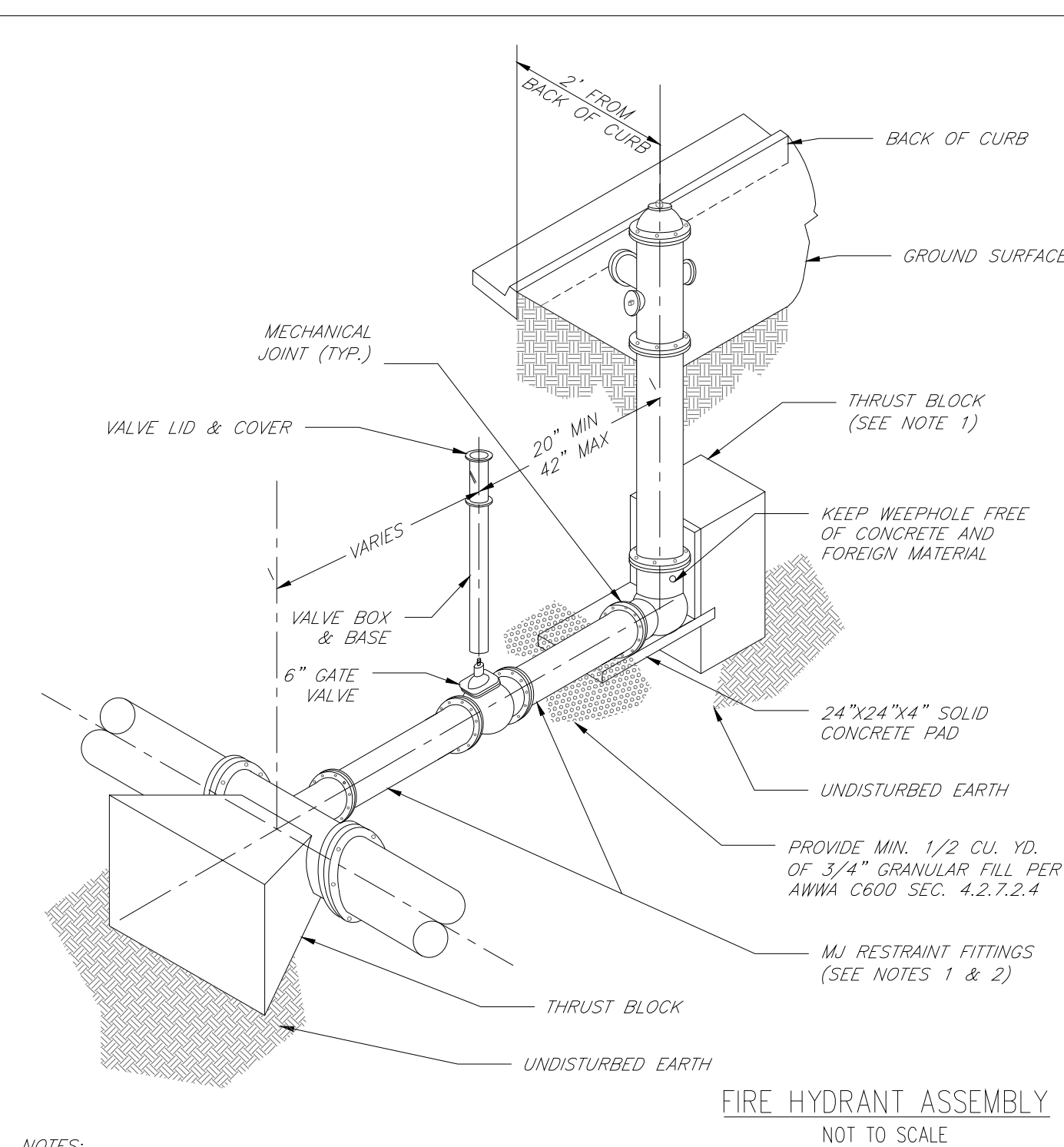
1. METER VALVE WALLS TO BE POURED OR PRECAST CONCRETE. METER VALVE ROOF TO BE REINFORCED CONCRETE WITH OPENING CENTERED OVER DETECTOR METER. REINFORCED WALLS AND SLABS ARE TO BE DESIGNED BY THE OWNER'S ENGINEER OR PRECAST ENGINEER.
2. METER VALVE TO BE LOCATED, WHEN POSSIBLE, OUTSIDE THE TRAFFIC AREA, AND WHERE SURFACE DRAIN INTO IT, PROVIDE CONCRETE SUMP TO DRAIN TO AN ABOVE GROUND DISCHARGE POINT.
3. ALL PIPE AND FITTINGS FROM THE CITY WATER MAIN THROUGH THE VALVE SHALL BE PROVIDED WITH A DETECTOR.
4. ALL FITTINGS FOR THE DETECTOR METER TO BE BRASS.
5. STEPS SHALL BE IN ACCORDANCE WITH THE APPROVED PRODUCTS LIST FOR WATER UTILITIES AND SHALL BE ON 16" CENTERS.
6. DETECTOR ASSEMBLY SHALL BE PROVIDED WITH A PUBLIC COVER. DETECTOR ASSEMBLY BACKFLOW PREVENTER MUST BE USED.
7. ALL VALVES SHALL HAVE RISING STEMS.
8. MANHOLE COVER SHALL BE A BILCO K-1 MODEL UNLESS IN A VEHICLE TRAFFIC AREA. SEE THE PROJECT PRODUCTS LIST FOR WATER UTILITIES FOR SPECIFIC CONDITIONS. THE COVER SHALL HAVE A 1-3/4" Ø HOLE DRILLED FOR A TOUCH/READ DEVICE.
9. A MINIMUM OF 18" CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING, VALVES, APPURTENANCES, ETC.
10. PROVIDE PUBLIC ACCESS TO INSPECTING FOR VALUITS THAT INCLUDE A FIRE DEPARTMENT CONNECTION OR A 3" OR LARGER METER.

VAULT FOR DOUBLE CHECK DETECTOR
NOT TO SCALE



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NOTES:

1. WHEN RETAINER GLANDS ARE USED IN LIEU OF MECHANICAL JOINT (MJ) RESTRAINT FITTINGS, HORIZONTAL THRUST BOLTS ARE REQUIRED.
2. GATE VALVE MAY BE BOLTED DIRECTLY TO MJ RESTRAINT TEE.
3. SEE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FIRE HYDRANT, VALVES, VALVE BOX LID, AND COVER.
4. BOTTOM HYDRANT FLANGE SHALL BE 2" TO 6" ABOVE FINISHED GRADE.
5. FOR STREETS WITHOUT CURBS FIRE HYDRANT SHALL BE PLACED WITHIN 1 FOOT OF THE R/W LINE, BUT NOT MORE THAN 10' FROM EDGE OF PAVEMENT. FIRE HYDRANT SHALL NOT BE PLACED IN BOTTOM OF DITCH.
6. HYDRANT SHALL BE ROTATED AS DIRECTED BY INSPECTOR.

[illegible]

3 KEVIN STERRETT MO F-26440

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CORPORATE LICENSE No. E2010005873



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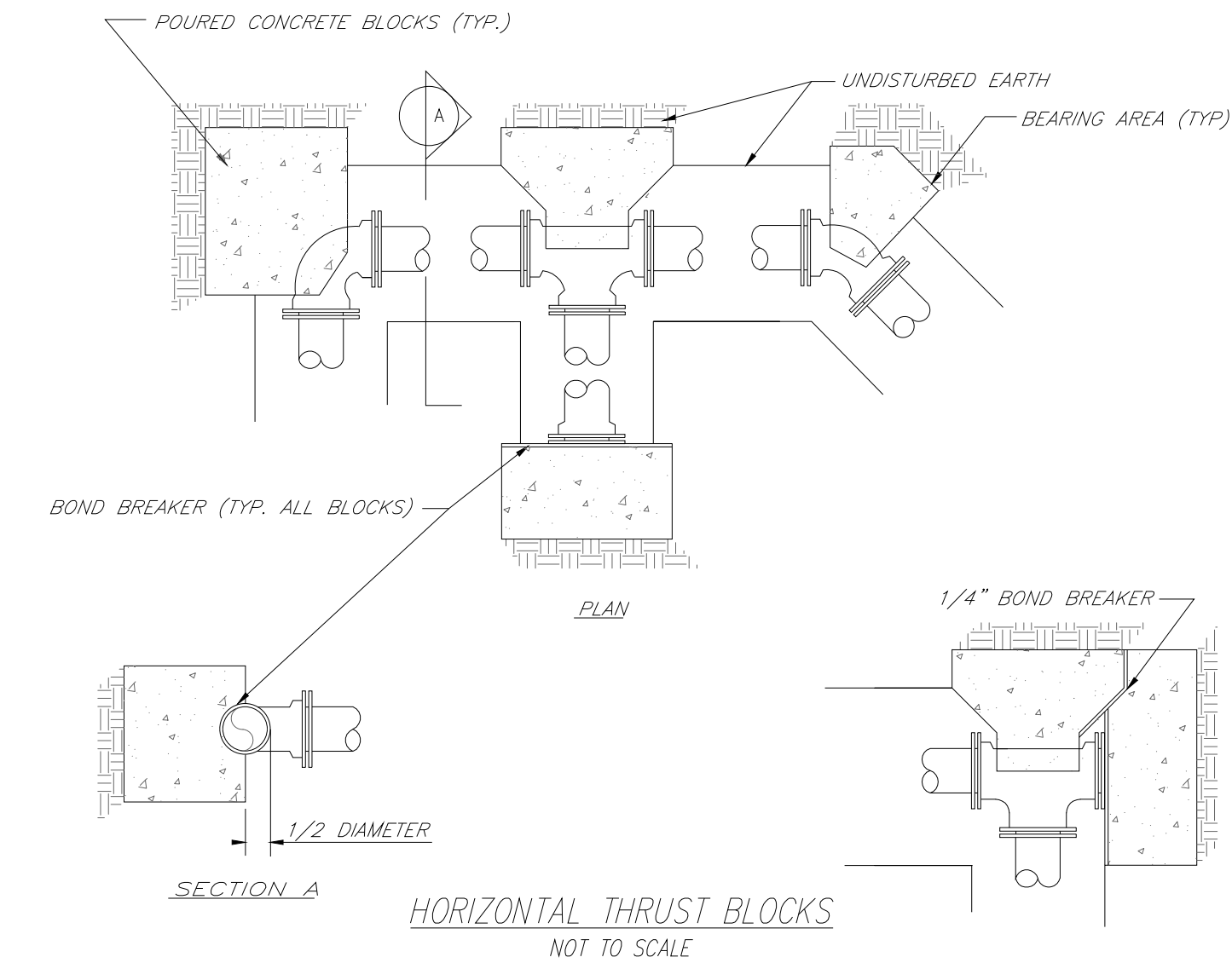
FINAL DEVELOPMENT PLAN
SITE DETAIL SHEET

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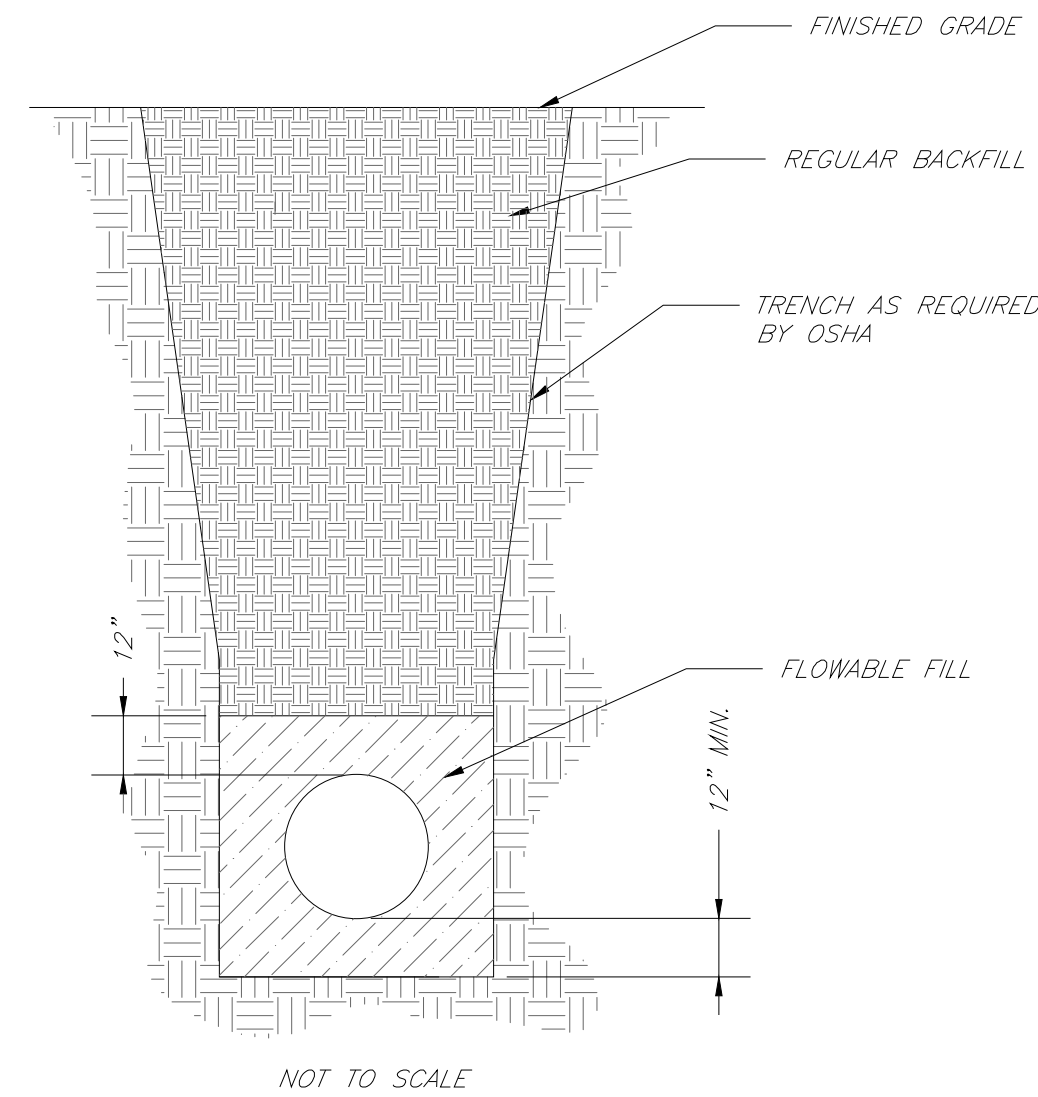
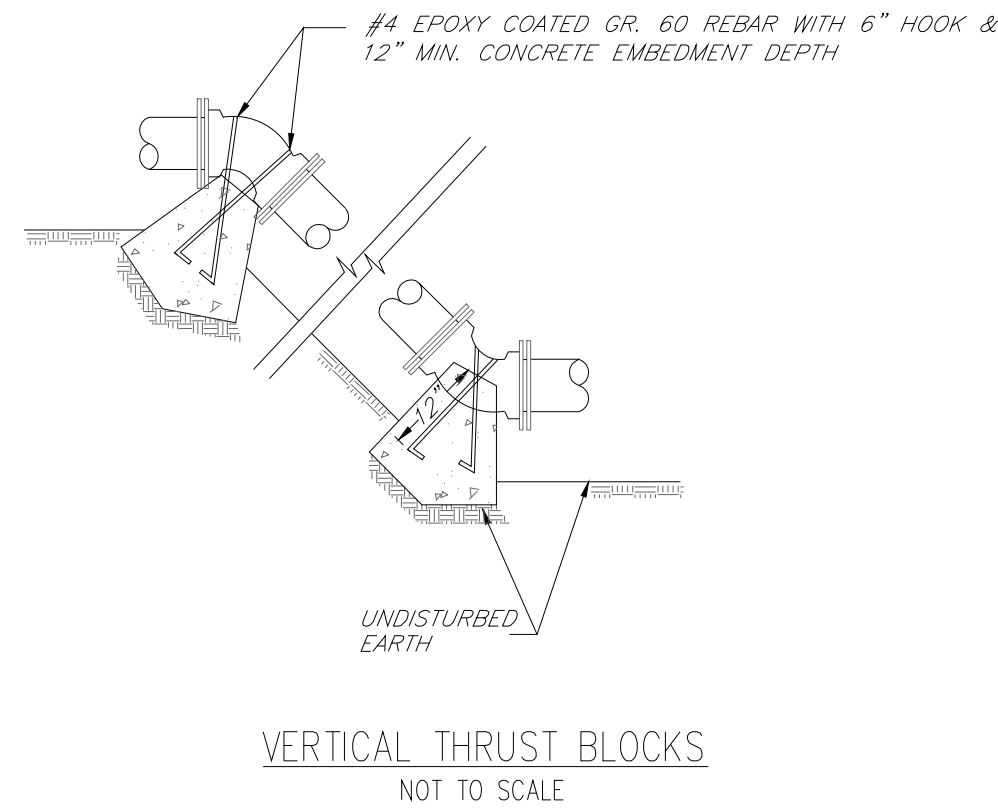
NOTES:

1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING AREA MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.



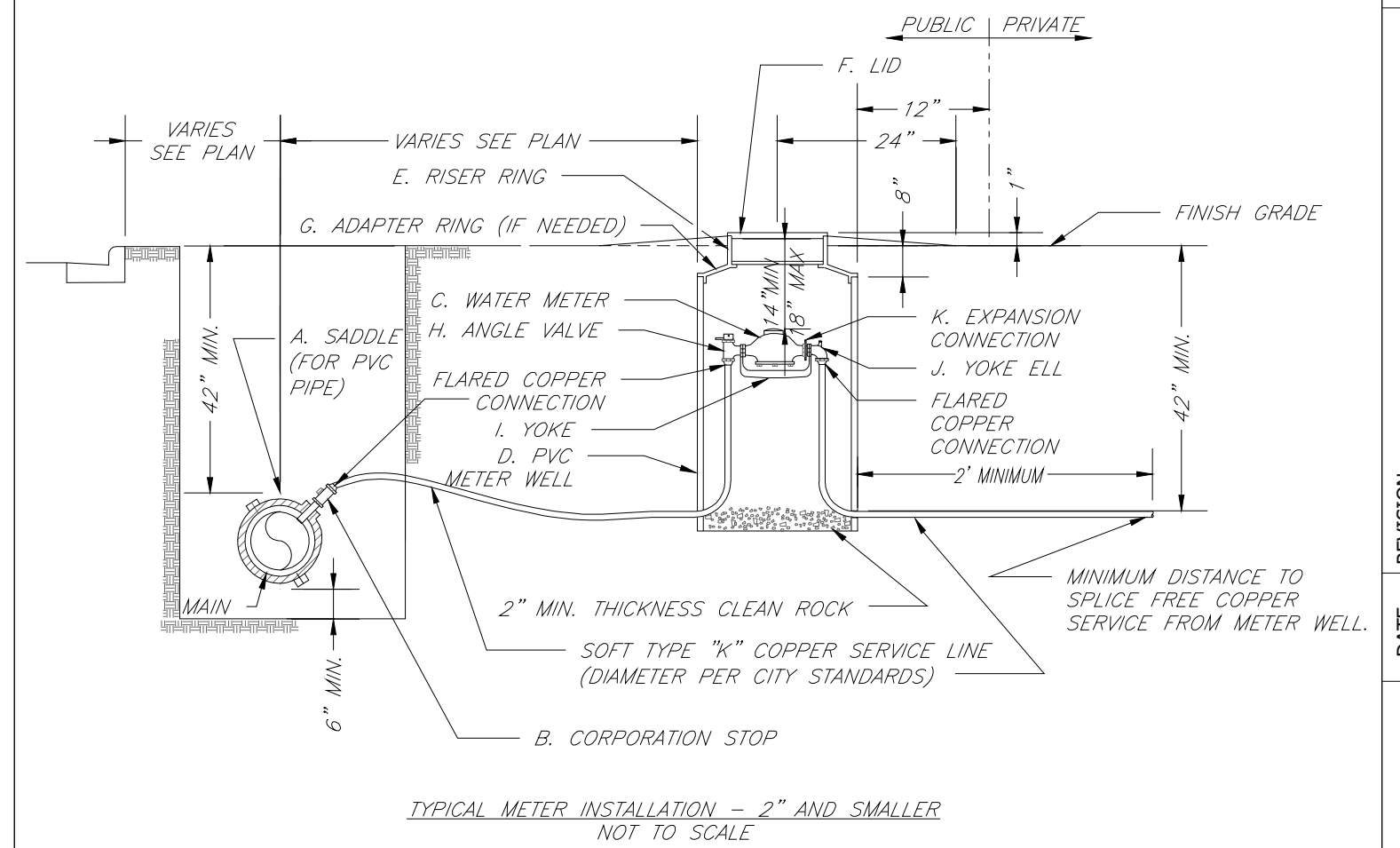
NOTES:

1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.

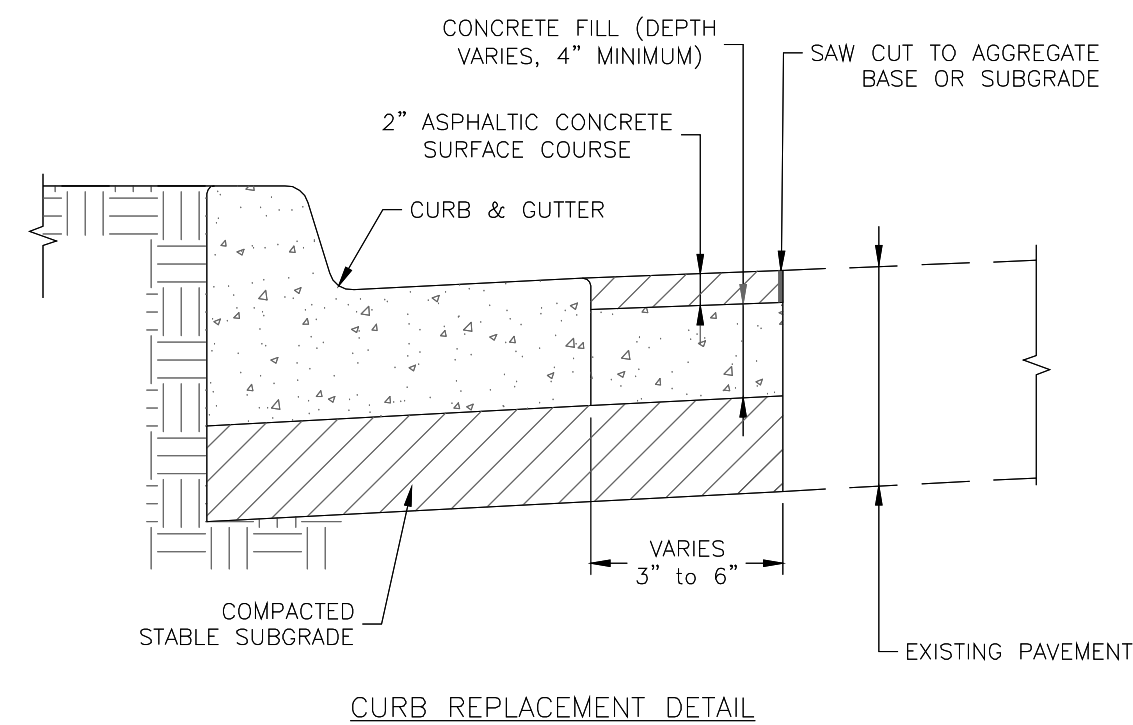
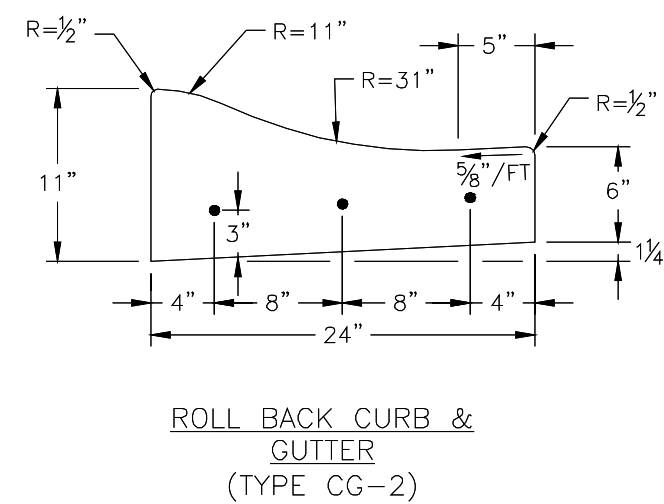
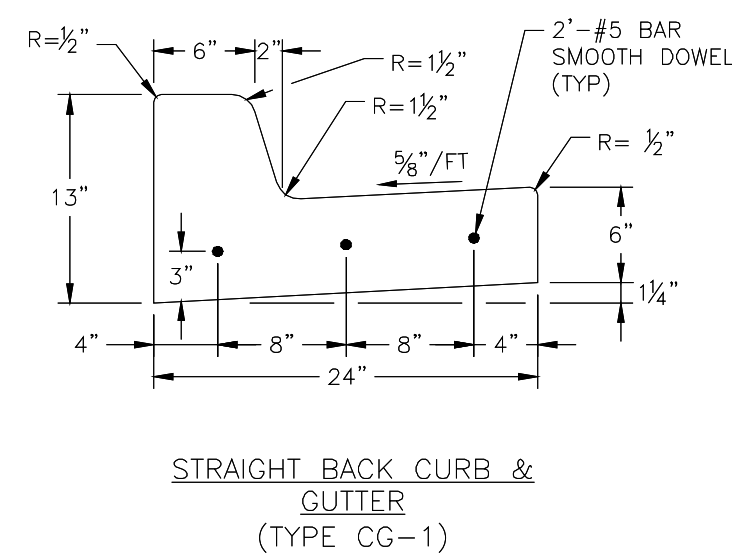
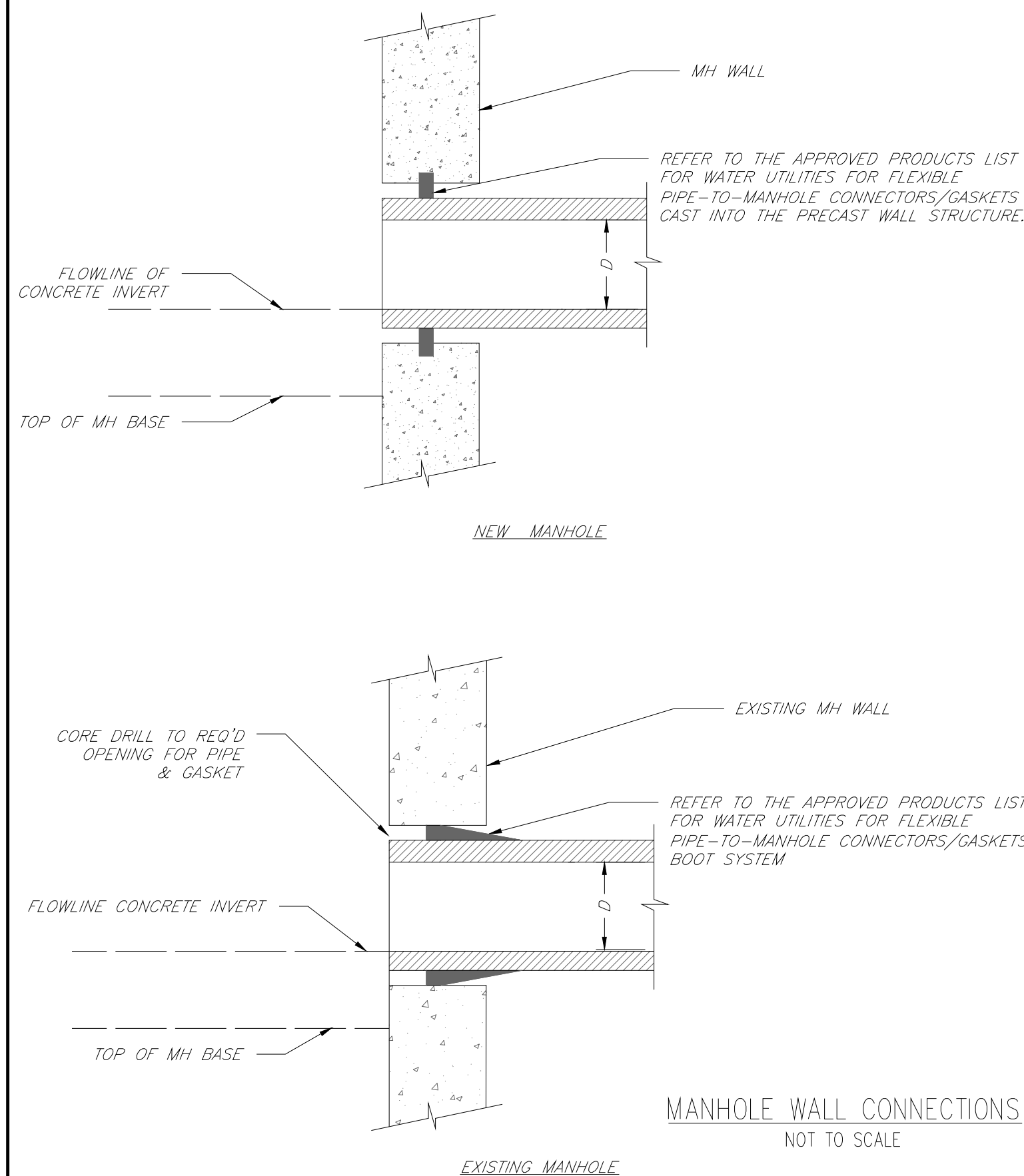


- NOTES:
1. FLOWABLE FILL SHALL MEET THE REQUIREMENTS OF THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL.
 2. REGULAR BACKFILL ABOVE THE TRENCH CHECK SHALL BE FREE OF DEBRIS, ORGANIC MATTER, AND STONES > 6" IN ANY DIMENSION.
 3. TOP OF FLOWABLE BACKFILL SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE.
 4. LENGTH OF TRENCH CHECK SHALL BE A MINIMUM OF 12".

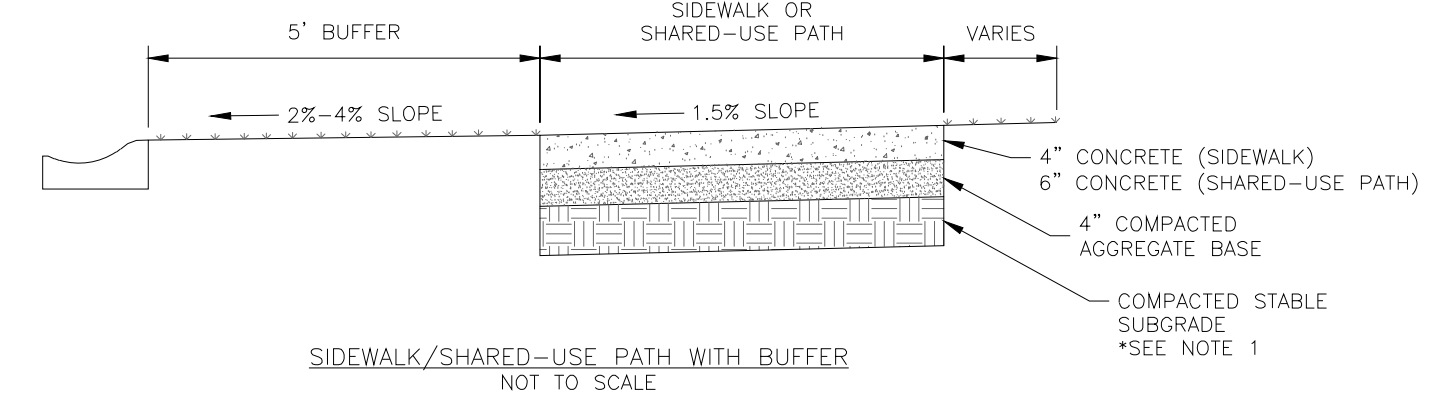
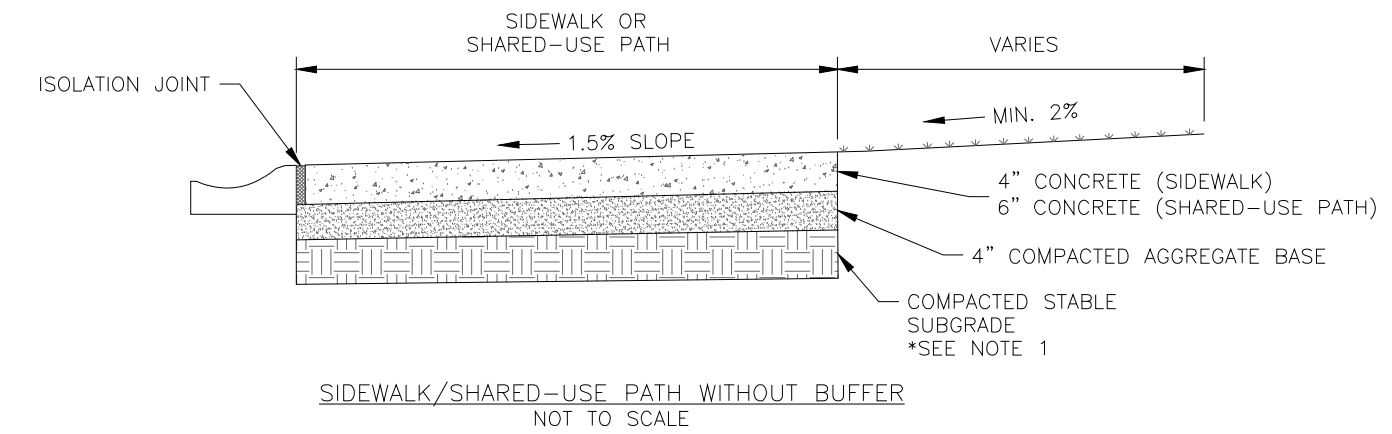
TRENCH CHECK
NOT TO SCALE



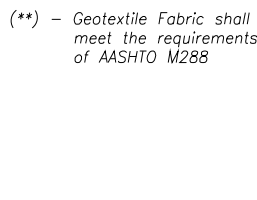
- NOTES:
1. METER INSTALLATION SHALL NOT BE LOCATED IN AREAS SUBJECT TO VEHICULAR TRAFFIC OR IN CONCRETE PAVEMENT WITHOUT CITY APPROVAL.
 2. IF METER IS TO BE LOCATED OTHER THAN IN FRONT OF PROPERTY LINE, CITY APPROVAL SHALL BE OBTAINED.
 3. CITY TO FURNISH ITEMS A-K.
 4. NO OTHER EQUIPMENT SHALL BE INSTALLED IN THIS PIT.
 5. 42" MINIMUM BURY DEPTH FOR ALL SERVICE LINES.
 6. EXCAVATION FOR TAP TO EXPOSE 4 LINEAR FEET OF MAIN.
 7. NO SPRIGS ALLOWED BETWEEN METER AND MAIN.
 8. SERVICE CONNECTION TAP AT APPROXIMATELY 30 DEGREES.
 9. LID AND RISER RING SHALL BE SET SO THAT GROUND WATER WILL DRAIN AWAY FROM THE WELL.



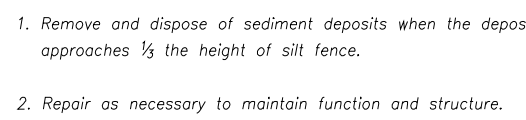
- GENERAL NOTES**
1. 3/4" ISOLATION JOINTS WITH 3 (2'-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIIUS JOINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
 2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
 3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
 4. KCMBB 4K CONCRETE SHALL BE USED FOR ALL CURB.
 5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
 6. CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
 7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.



- GENERAL NOTES:**
1. SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
 2. 1.5% CROSS SLOPE MUST BE MAINTAINED THROUGH DRIVEWAYS.
 3. KOB 44 CONCRETE MIX SHALL BE REQUIRED FOR ALL SIDEWALKS/SHARED-USE PATHS OR AS APPROVED BY THE CITY INSPECTOR.
 4. ALL SIDEWALK/SHARED-USE PATHS SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (ADA).
 5. AN ISOLATION JOINT SHALL BE PLACED AT A MAXIMUM OF 150 FT. CONSTRUCTION JOINTS SHALL BE PLACED THE SAME WIDTH OF SIDEWALK/SHARED-USE PATHS, BUT NO GREATER THAN 10 FT.
 6. AN ISOLATION JOINT SHALL BE PLACED WHERE THE SIDEWALK/SHARED-USE PATHS MEET A RESIDENTIAL DRIVEWAY.
 7. SHARED-USE PATHS WIDTH SHALL BE 10 FT. WIDE.
 8. SIDEWALK/SHARED-USE PATHS SHALL BE FINISHED SHALL BE FULL BROOM FINISH OR AS DIRECTED BY CITY INSPECTOR.
 9. WHEN CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.



SILT FENCE LAYOUT
Not to Scale



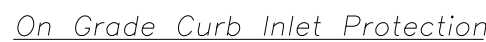
AMERICAN PUBLIC WORKS ASSOCIATION	
	KANSAS CITY METRO CHAPTER
SILT FENCE	STANDARD DRAWING NUMBER ESC-03
	ADOPTED: 10/24/2016



foundation to improve stability.



AMERICAN PUBLIC WORKS ASSOCIATION		
	KANSAS CITY METRO CHAPTER	
CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT	STANDARD DRAWING NUMBER ESC-01	ADOPTED: 10/24/2016



LATE STAGE CURB INLET
(After Pouring Curb and Inlet Throat)



EARLY STAGE CURB INLET
(Open Box and Prior to Pouring
Curb and Inlet Throat)

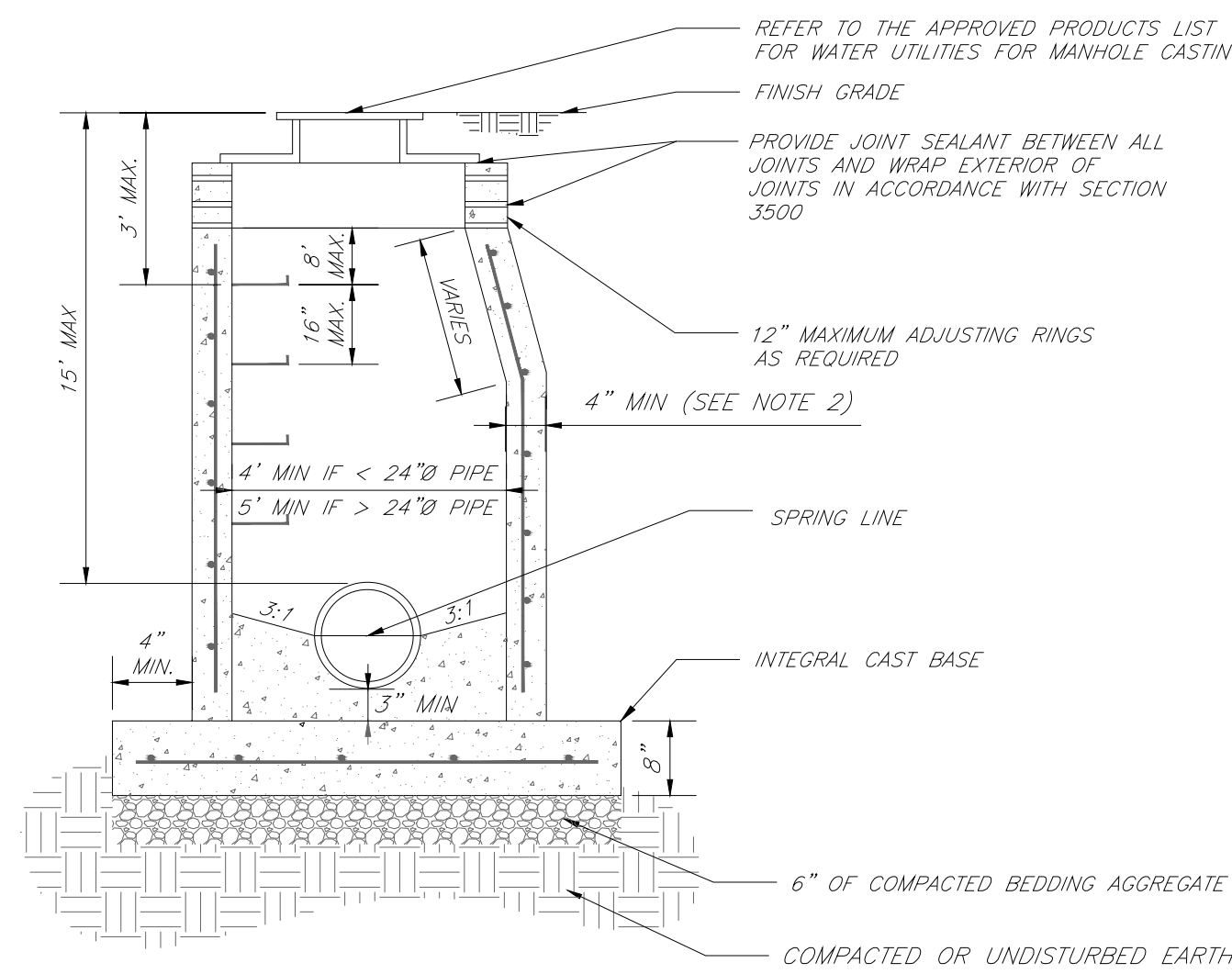
- Notes:

1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" X 10" (min.) board across in soil fence. Structures shall have excavated storage areas on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Straw wattles are not approved for curb inlet use.
3. Contractor to field verify ponding water shall not create a traffic hazard.

Maintenance:

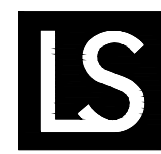
1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

Modified from 2015 Overland Park Standard Details
for Erosion and Sediment Control.



- NOTES:

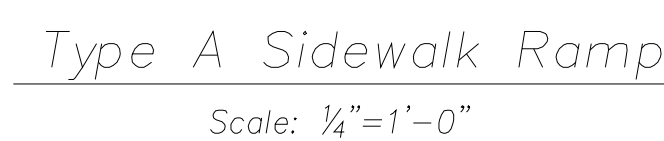
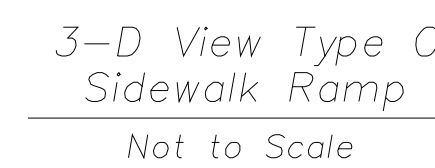
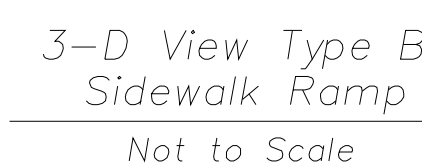
1. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS.
2. A WALL THICKNESS NOT LESS THAN ONE-TWELTH ($\frac{1}{12}$) OF THE INSIDE DIAMETER OR 4", WHICHEVER IS GREATER, SHALL BE USED WHEN THE MANHOLE DEPTH IS LESS THAN 15'.
3. WATERPROOFING SHALL BE REQUIRED ON THE OUTSIDE OF MANHOLES. THE WATERPROOFING SHALL CONSIST OF A TOWEL-ON FILLS WITH A MINIMUM OF TWO COATS OF AN EPDM RUBBER MEMBRANE COATING.
4. ONLY CERTIFIED MANHOLE CONES WILL BE ALLOWED UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
5. THE FILL CONCRETE FLOW CHANNEL FOR SIDE BRANCHES SHALL BE PLACED TO PROVIDE A SMOOTH TRANSITION INTO THE FLOW LINE.
6. REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR APPROVED MANHOLE GASKET MODELS.
7. REFER TO THE APPROVED PRODUCTS LIST FOR APPROVED STEPS.



LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 230 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD PRECAST MANHOLE – SANITARY SEWER

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: SAN-2
Rev: 1/14
Rev:



1. Sidewalk ramp location determined from the intersection of the extension of back of sidewalk and back of curb & gutter.
2. Plan drawings shall include a table of elevations for all points labelled as Elev.
3. Key all construction joints or use tie bars #4 epoxy coated @ 12" o.c.
4. Longitudinal joint spacing to match width of sidewalk.
5. Isolation joints shall be placed where walk abuts driveways and similar structures, and 250' centers max.
6. Sidewalk Ramp shall be lengthened to provide ADA compliance slope but need not exceed 15'.
7. ADA maximum ramp slope = $\frac{1"}{4"} = 2.5\%$ ~~7.5%~~
ADA maximum cross slope = ~~2%~~ $\frac{1"}{20"} = 5\%$ ~~1.5%~~
8. Detectable warnings to comply with ADA requirements.
9. Landing for Type C ramp along the entire curb return is preferred, but may be shortened to minimum ADA compliant dimension.

