

SNYDER & ASSOCIATES
Engineers and Planners

TOTAL SUSPENDED SOLIDS REMOVAL

for

KWIK TRIP STORE #532 SITE REDEVELOPMENT

**3525 State Road 157
City of La Crosse
La Crosse County, Wisconsin**

**January 21, 2025
Revised May 14, 2025**

Prepared by:
Snyder & Associates
5010 Voges Road
Madison, WI 53718
Phone: (608) 838-0444

Prepared for:
Kwik Trip, Inc.
1626 Oak Street
P.O. Box 2104
La Crosse, WI 54602-2107
(608) 781-8988

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SECTION 1

INTRODUCTION

The purpose of this stormwater management and erosion control plan is to evaluate the impacts of the proposed site redevelopment on stormwater runoff leaving the site.

The project site is located at 3525 State Road 157, City of La Crosse, La Crosse County, Wisconsin (See Figure 1).

Currently the site consists of a commercial building, fueling island with the associated paved and impervious areas. The project will remove a portion of the existing paved area and install new fuel islands and piping and reconstruct the disturbed parking area and install a Upflow filter.

The estimated construction start date is 1 March 2025.

SECTION 2

CITY OF LA CROSSE STORMWATER REQUIREMENTS

2.1 SUSPENDED SOLIDS REMOVAL

Since the project is redevelopment, the City of La Crosse Stormwater Ordinance requires a 40% reduction in TSS from the parking and roadway areas of the site.

The existing area to be disturbed contains 0.159 acres of parking area. When we run the existing area through WinSLAMM it generates 56.39 lbs of TSS.

This means we have 56.4 lbs of TSS that requires a 40% reduction in TSS (56.4×0.40) = 22.56 lbs of Total Suspended Solids that must be captured.

Table 2-1: Total Suspended Solid Reduction Results

	Particulate Solids Yield (lbs.)	Percent Particulate Solids Reduction
Total of All Land Uses without Controls	56.39	
Outfall Total with Controls	56.39	0.00%
Annualized Total After Outfall Controls	57.17	

See the WinSLAMM modeling assumptions in Appendix A for additional information.

To provide for the Total Suspended Solids reduction (TSS) on our site we will install the Upstream Technologies SAFFL Baffle in the proposed storm sewer structure (MH-1) located at the northwest corner of the disturbed area.

This structures will be 48" diameter manhole having a 4' sump. This structure will provide 86.9% reduction in Total Suspended Solids (TSS). See the Downstream Technologies report for Water Quality Volume. We meet our site WQv requirement. See appendix B for the Saffle Baffle report by Upstream Technologies.

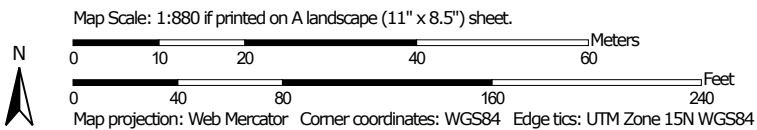
2.2 MONITORING AND MAINTENANCE

Upon acceptance of the improvements, the owner of the property will own and maintain the proposed storm sewer structures, piping and the bioretention basin. Appendix C includes a draft of the Maintenance Agreement relating to the stormwater management measures.

FIGURE 1

LOCATION OF SITE ON AN AERIAL PHOTO

Soil Map—La Crosse County, Wisconsin
(Kwik Trip #532)




Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

1/20/2025
Page 1 of 3

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: La Crosse County, Wisconsin

Survey Area Data: Version 23, Sep 3, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 31, 2020—Sep 2, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

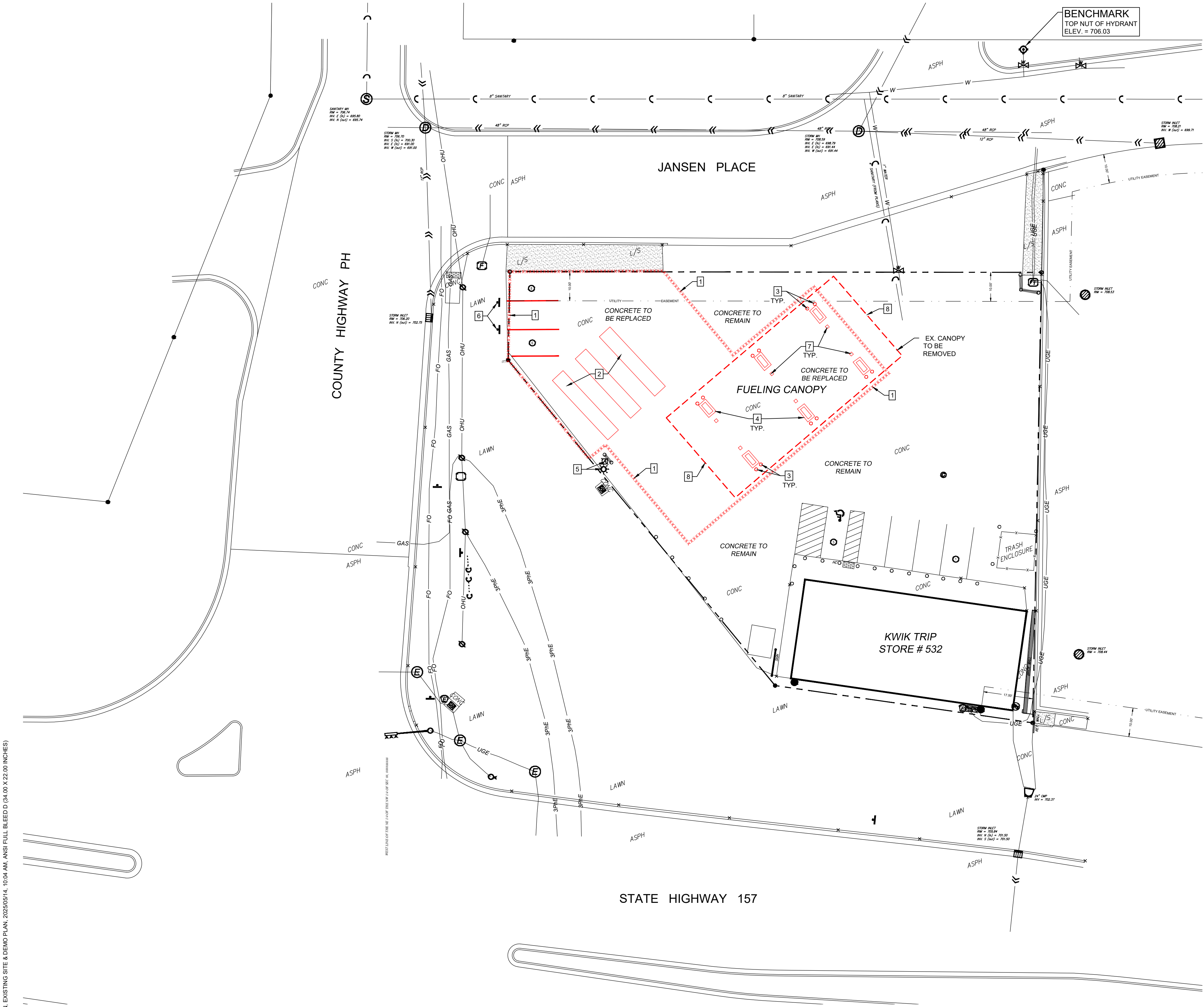
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2020	Urban land, valley trains	2.9	100.0%
Totals for Area of Interest		2.9	100.0%

FIGURE 2

ENGINEERING PLANS

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PLAN NOTES:

CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS PRIOR TO COMMENCING WORK ON SITE
CONTRACTOR SHALL CALL FOR UTILITY LOCATIONS PRIOR TO COMMENCING WORK ON SITE
EXISTING SITE CONDITIONS BASED ON AN ALTA SURVEY PROVIDED BY KWIK TRIP

SURVEY COMPANY:
PARAGON ASSOCIATES
DATED: AUGUST 2024

CONTRACTOR TO OBTAIN ALL NECESSARY PERMITS FOR DEMOLITION AND CONSTRUCTION PRIOR TO COMMENCING ANY WORK ON SITE.

ALL EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO DEMOLITION ACTIVITIES. SEE SHEET C 200 FOR LOCATIONS OF EROSION CONTROL MEASURES.

DEMOLITION KEYNOTES

- EXISTING PAVEMENT TO BE SAW CUT FOR DEMOLITION WORK
CONTRACTOR TO VERIFY SAW CUT LOCATION BASED ON JOINTS IN THE EXISTING CONCRETE PAVEMENT, ADJUST AS NECESSARY
- EXISTING UNDERGROUND STORAGE TANKS TO BE REMOVED AND REPLACED
- EXISTING BOLLARDS TO BE REMOVED / REPLACED
- EXISTING FUEL DISPENSER AND ISLANDS TO BE REMOVED AND REPLACED
- EXISTING AIR FILLING STATION AND LIGHT TO BE PROTECTED DURING TANK REMOVAL / REPLACEMENT
- REMOVE / REPLACE EXISTING SIGNS AS NECESSARY FOR TANK EXCAVATION AND STORM SEWER
- REMOVE EXISTING CANOPY COLUMNS
- REMOVE EXISTING CANOPY

LEGEND

SURVEY FEATURES

- SECTION CORNER (AS NOTED)
- FOUND 1/2" O.D. IRON BAR (UNLESS NOTED)
- FOUND 1" O.D. IRON PIPE (UNLESS NOTED)

EXISTING TOPOGRAPHY

- CONTOUR MAJOR
- CONTOUR MINOR
- SPOT ELEVATION
- SPOT ELEVATION TOP / BOTTOM OF CURB OR WALL

EXISTING UTILITY SYMBOLS

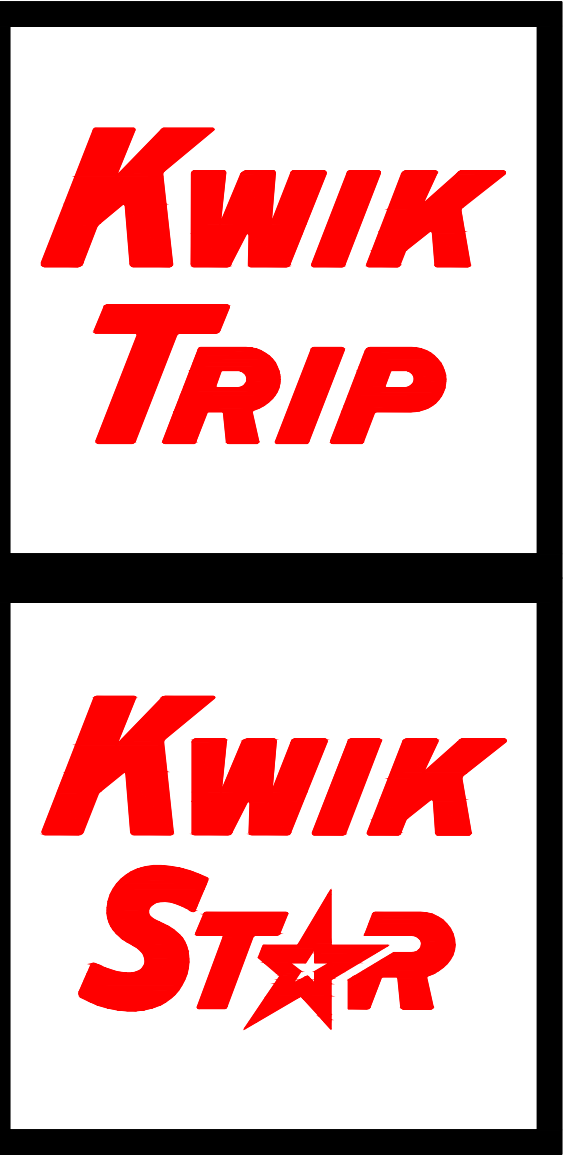
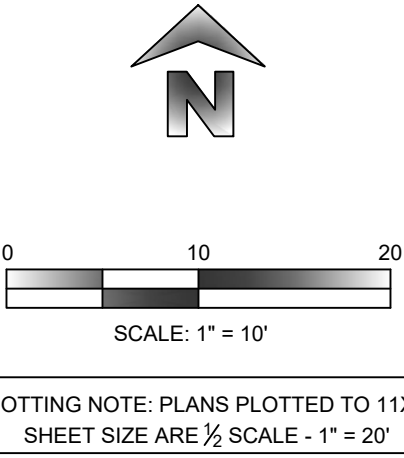
- SANITARY MANHOLE
- STORM MANHOLE
- CURB INLET
- AREA DRAIN
- DOWNSPOUT, DRAINS TO PIPE
- DOWNSPOUT
- HYDRANT
- WATER VALVE
- ELECTRIC MANHOLE
- TRANSFORMER
- ELECTRIC METER
- UTILITY POLE
- GUY ANCHOR
- FIBER OPTIC PULLBOX
- UNKNOWN PULLBOX
- UNKNOWN CABINET

EXISTING UTILITY LINES

- 3/4" O.D. x 18" IRON BAR (11.5 LBS/LIN. FT.)
- SET MAG NAIL
- SANITARY SEWER
- STORM SEWER
- WATERMAIN
- UNDERGROUND ELECTRIC
- UNDERGROUND ELECTRIC (3 PHASE)
- OVERHEAD UTILITIES
- GAS
- FIBER OPTIC

EXISTING MISC FEATURES

- BOLLARD
- PARKING COUNT
- HANDICAP PARKING
- TACTILE MAT (ADA)
- AIR COMPRESSOR
- FUEL LID
- FUEL PUMP
- SINGLE POST SIGN
- TRAFFIC SIGNAL



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EXISTING SITE & DEMOLITION PLAN

CONVENIENCE STORE # 532

3525 STATE ROAD 157
LACROSSE, WI 54603

#	DATE	DESCRIPTION
	5/14/2025	REVISED STORM SEWER

DRAWN BY S. ANDERSON / M. WAHL

SCALE NOTED

PROJ. NO. 125.0123.30

DATE MARCH 14, 2025

SHEET C 020

3525 STATE ROAD 157
LACROSSE, WI 54603

V:\Projects\2025\125.0123.30\CADD\1250123 PLAN.dwg LUIS OLSON, SITE KEYNOTE - DIMENSION PLAN - 20250514 - 10:04 AM, ANSI FULL BLEED D (34.00 X 22.00 INCHES)

COUNTY HIGHWAY PH



SITE PLAN KEYNOTES

- 1 3'-6" X 7'-0" CONCRETE ISLANDS W/ 6" EXPOSURE WITH FUEL DISPENSERS, DISPENSER PER OWNER
- 2 6" DEPTH (MIN.) CONCRETE SLAB-ON-GRADE WITH #3 REBAR 3' O.C. CONCRETE SEALER: TK-26UV - 6,075 ± SQ.FT.
- 3 36" HT., 6" DIA. CONCRETE FILLED PIPE BOLLARD SEE DETAIL ON SHEET
- 4 NEW UNDERGROUND FUEL STORAGE TANKS BY OWNER
- 5 8" DEPTH (MIN.) CONCRETE SLAB-ON-GRADE WITH #4 REBAR 3' O.C. CONCRETE SEALER: TK-26UV - 4,170 ± SQ.FT.
- 6 REPAINT PARKING STALLS AS NECESSARY, COLOR TO MATCH EXISTING PAVEMENT PAINT
- 7 18" CONCRETE CURB AND GUTTER

SITE INFORMATION

ZONING DISTRICT: RETAIL
TOTAL SITE AREA: 21,319 ± SF / 0.49 ± ACRES
EX BUILDING AREA: 2,652 SF
EX CANOPY AREA: 2,625 SF
REMOVED / REPLACED PAVEMENT: 6,940 SF

PARKING STALL COUNT

EXISTING PARKING: 7 STANDARD STALLS
PUMP PARKING: 12 SPOTS AT PUMPS
ADA PARKING: 1 STALL WITH LOADING ZONE ADJACENT

FIRE LANE:

JANSEN PLACE WILL ACT AS THE FIRE LANE ACCESS TO THE BUILDING

FLOOD INFORMATION:

NO PORTIONS OF THIS PARCEL ARE LOCATED IN ANY FLOOD ZONE AS PER FIRM #55063C0252D, EFFECTIVE DATE OF APRIL 2, 2008 & REVISED DATE OF JANUARY 6, 2012.

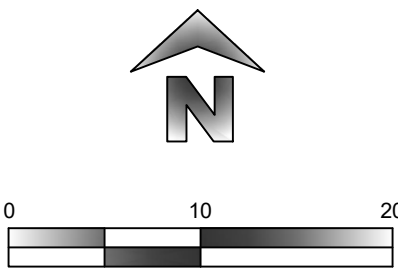
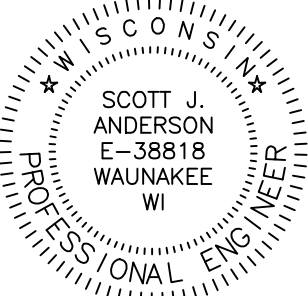
NOTE:

CONCRETE SAWCUT LINE LOCATIONS MAY VARY AND SHALL FOLLOW EXISTING JOINT LINES

CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES ON AND ADJACENT TO THE SITE PRIOR TO THE START OF THE PROJECT.

RADII ARE FROM EDGE OF PAVEMENT

DIMENSIONS ARE FROM EDGE OF PAVEMENT



PLOTTING NOTE: PLANS PLOTTED TO 11X17
SHEET SIZE ARE 1/2 SCALE - 1" = 20'

**Kwik
TRIP**

**Kwik
STAR**

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& ASSOCIATES**
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SITE KEYNOTE / DIMENSION PLAN

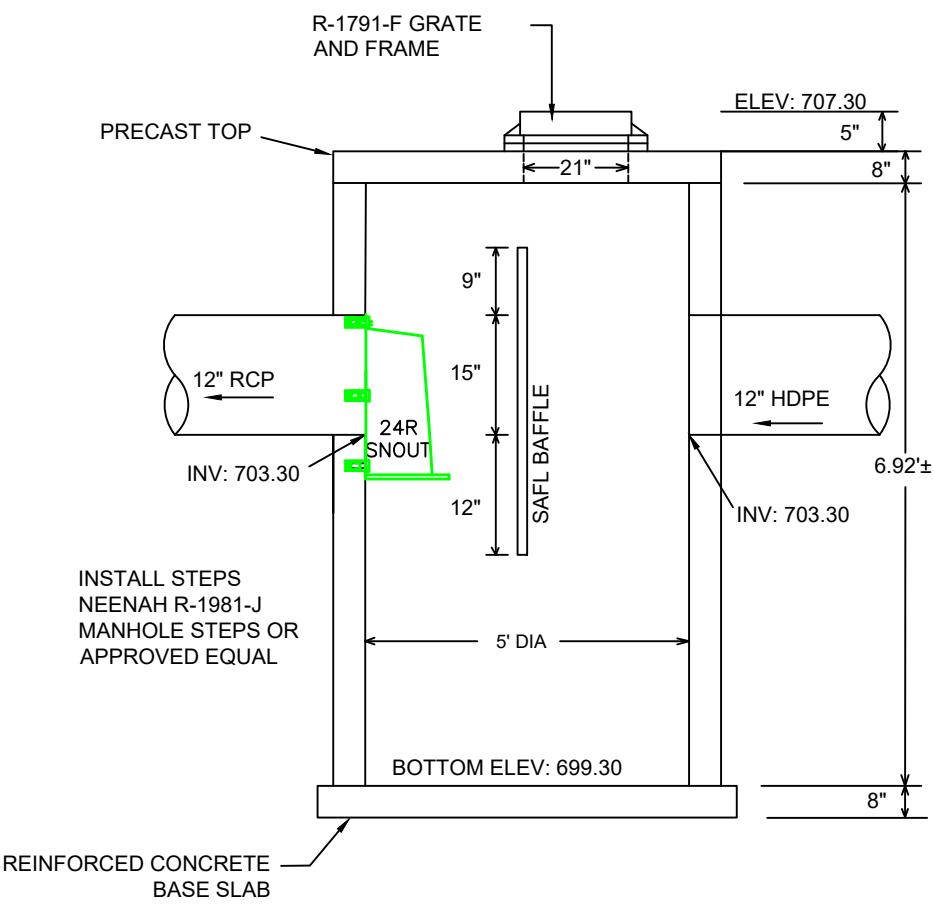
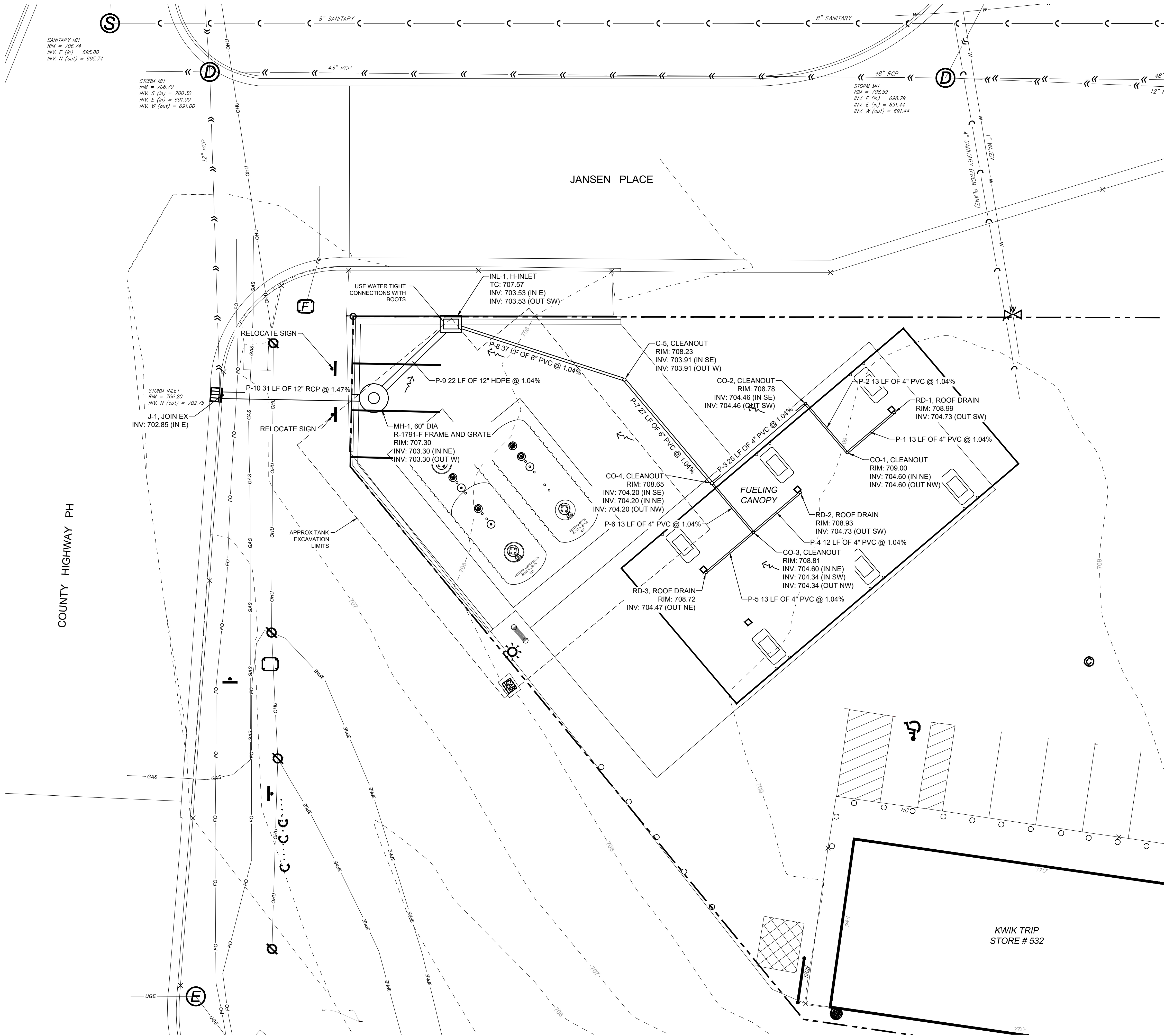
CONVENIENCE STORE # 532

3525 STATE ROAD 157
LACROSSE, WI 54603

#	DATE	DESCRIPTION
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DRAWN BY	S. ANDERSON / M. WAHL
SCALE	NOTED
PROJ. NO.	125.0123.30
DATE	MARCH 14, 2025
SHEET	C 100

GRADING & EROSION CONTROL PLAN	
CONVENIENCE STORE # 532	
3525 STATE ROAD 157 LACROSSE, WI 54603	
#	DATE DESCRIPTION
_____	5/14/2025 REVISED STORM SEWER
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DATE	MARCH 14, 2025
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MANHOLE (MH-1) WITH SAFL BAFFLE
AND 24R SNOOT
BY DOWNSTREAM TECHNOLOGIES

5' DIA PRECAST MH
TG ELEV: 707.30±
RCP (OUT) INV: 703.30'
DEPTH: 6.92±
SUMP: 4.0'

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STORM SEWER PLAN

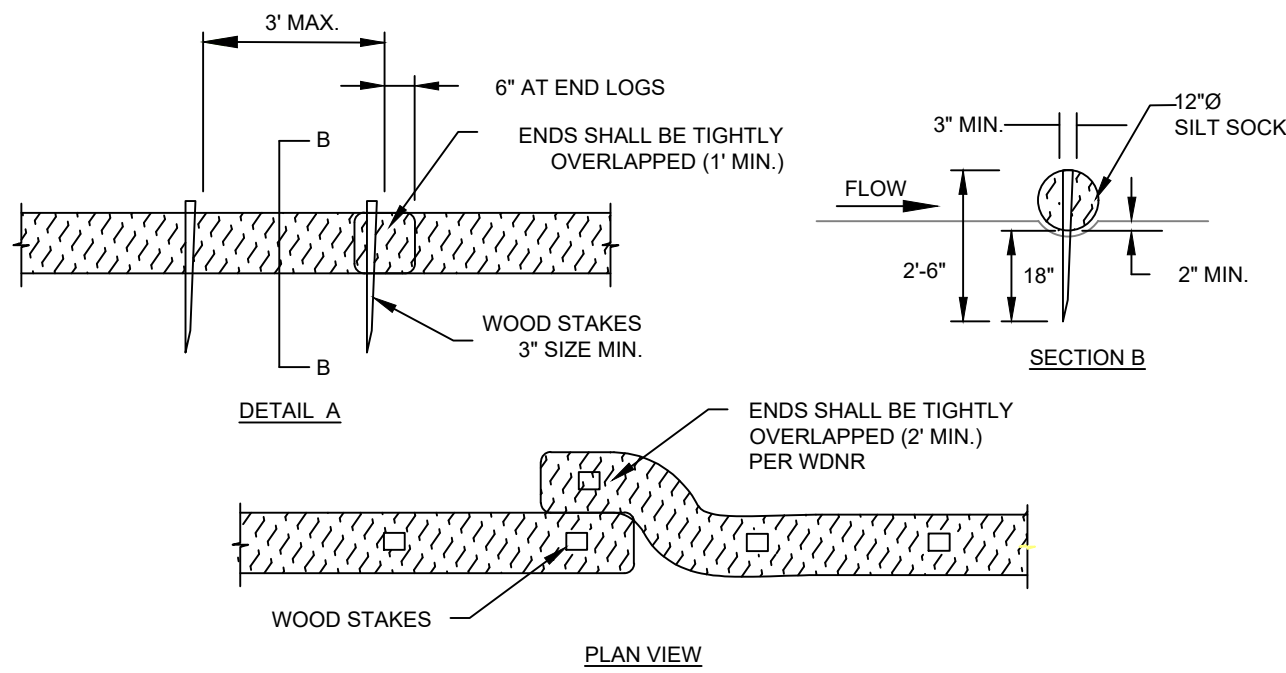
CONVENIENCE STORE # 532

3525 STATE ROAD 157
LACROSSE, WI 54603

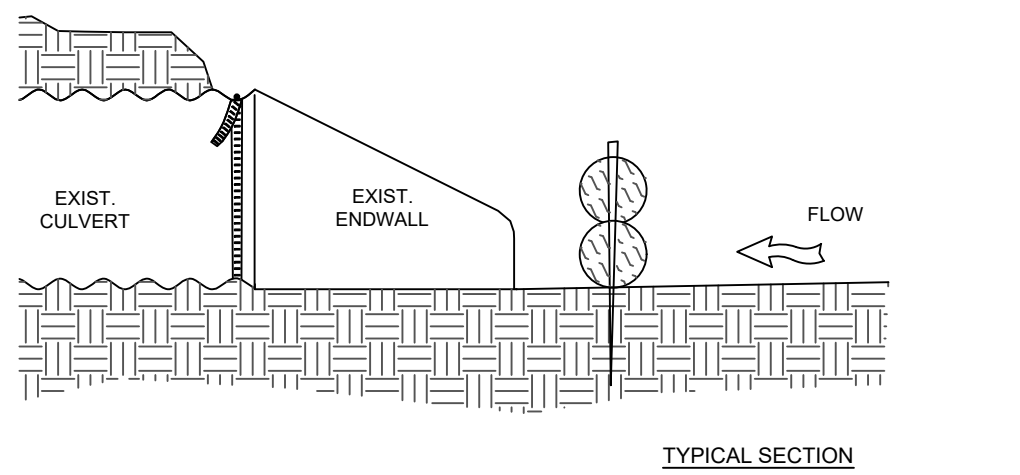
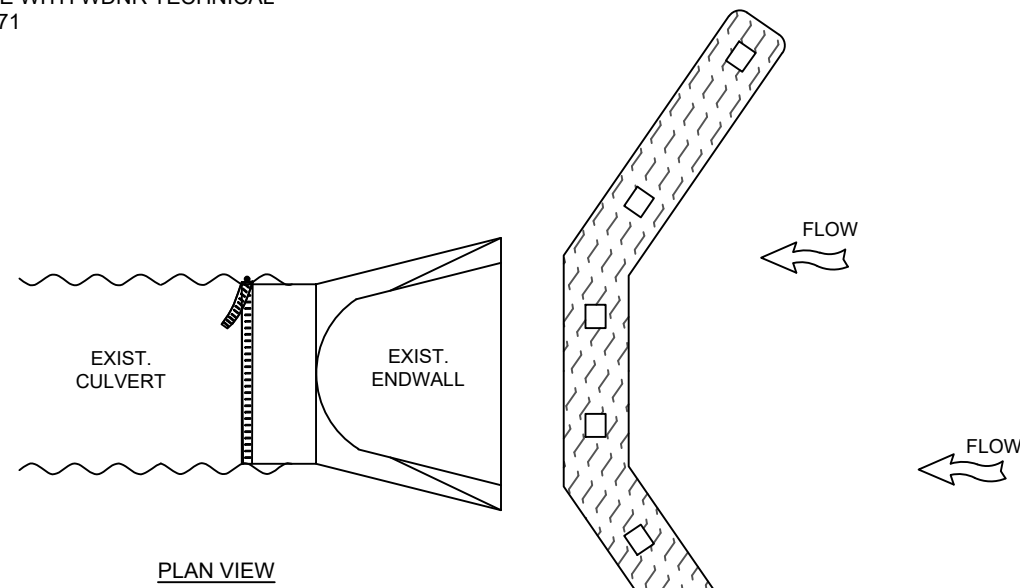
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	5/14/2025	REVISED STORM SEWER

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DATE MARCH 14, 2025
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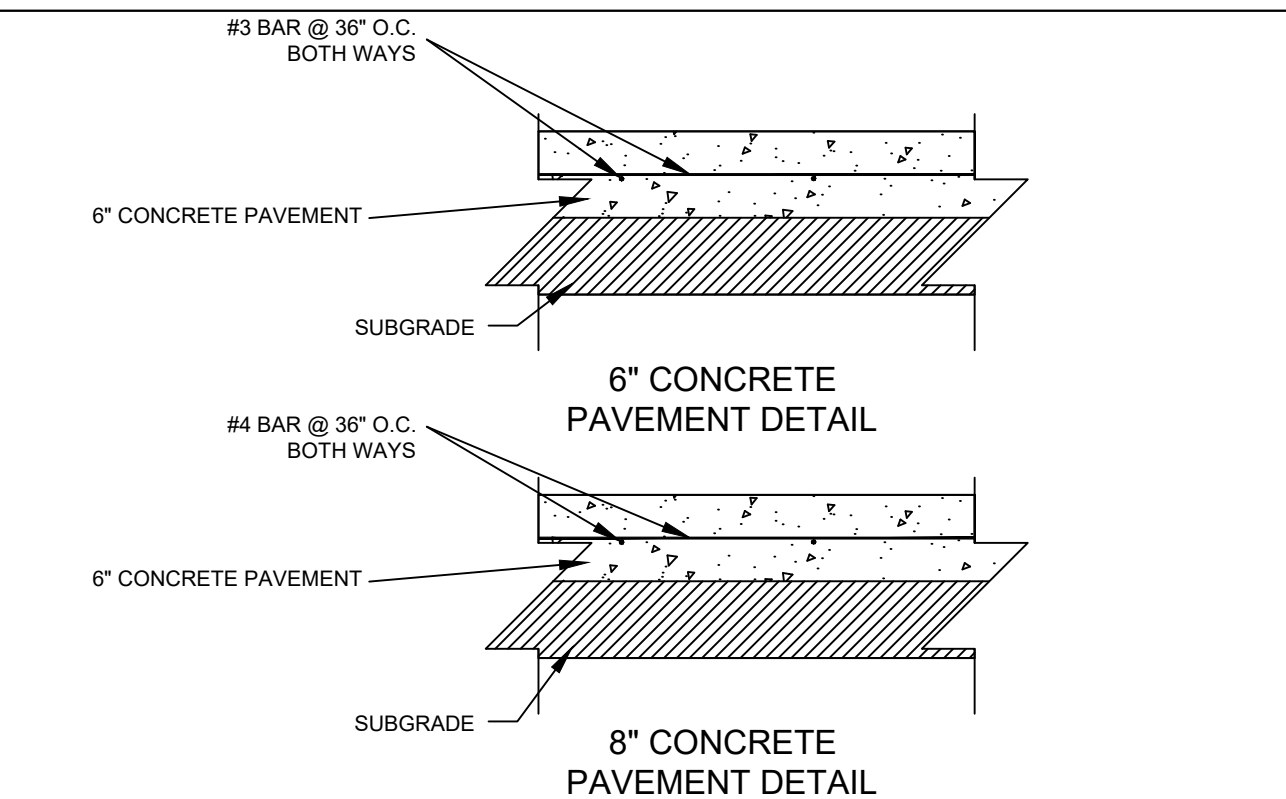
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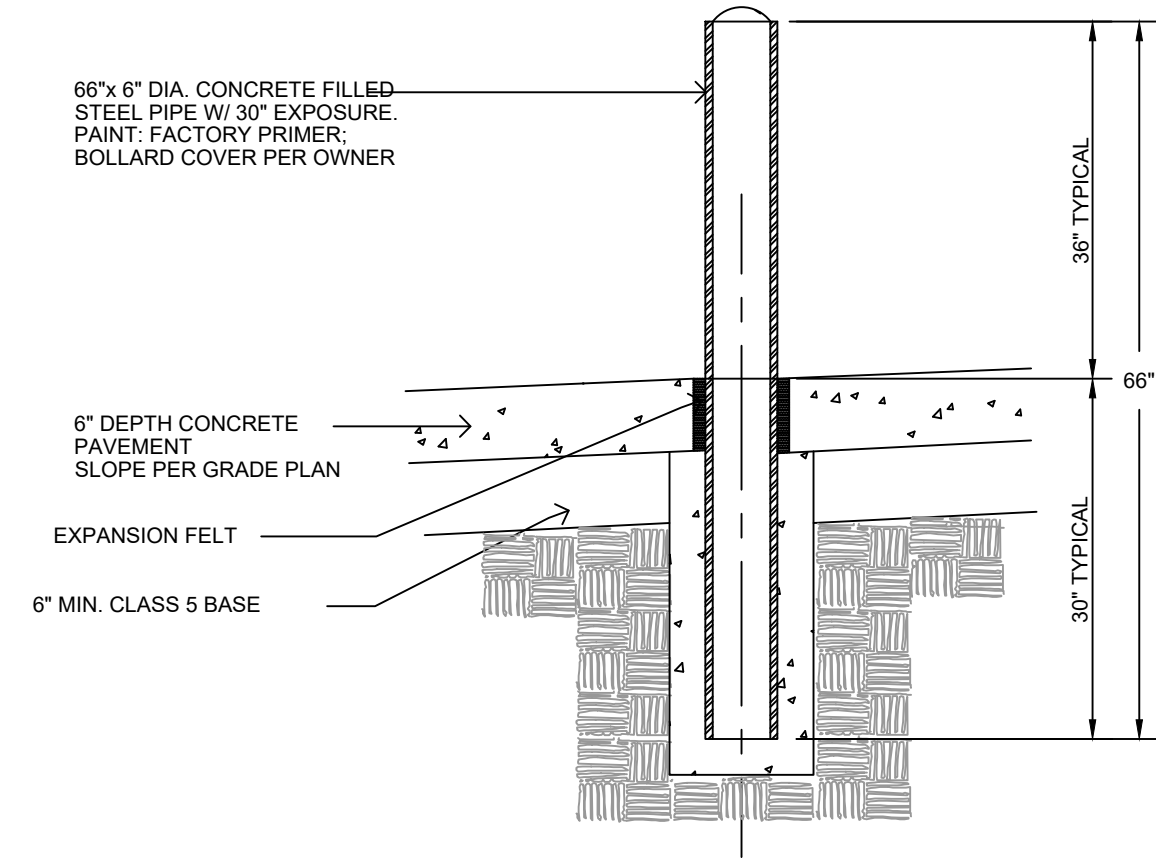
- SILT SOCK INSTALLATION NOTES**
- SEE PLAN VIEW FOR THE LOCATION AND LENGTH OF SILT SOCK.
 - SILT SOCK INDICATED ON INITIAL PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.
 - SILT SOCK SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR, OR COCONUT FIBER.
 - NOT FOR USE IN CONCENTRATED FLOW AREAS.
 - THE SILT SOCK SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 1/2 OF THE DIAMETER OF THE SILT SOCK.
 - SILT SOCK SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH WDNR TECHNICAL STANDARDS 1071
- SILT SOCK MAINTENANCE NOTES**
- THE CONTRACTOR SHALL INSPECT SILT SOCKS DAILY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
 - SEDIMENT ACCUMULATED UPSTREAM OF THE SILT SOCKS SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT DEPTH IS WITHIN 1/2 THE HEIGHT OF THE CREST OF LOG.
 - SILT SOCKS SHALL BE REMOVED AT THE END OF CONSTRUCTION. IF ANY DISTURBED AREA EXISTS AFTER REMOVAL, IT SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED.



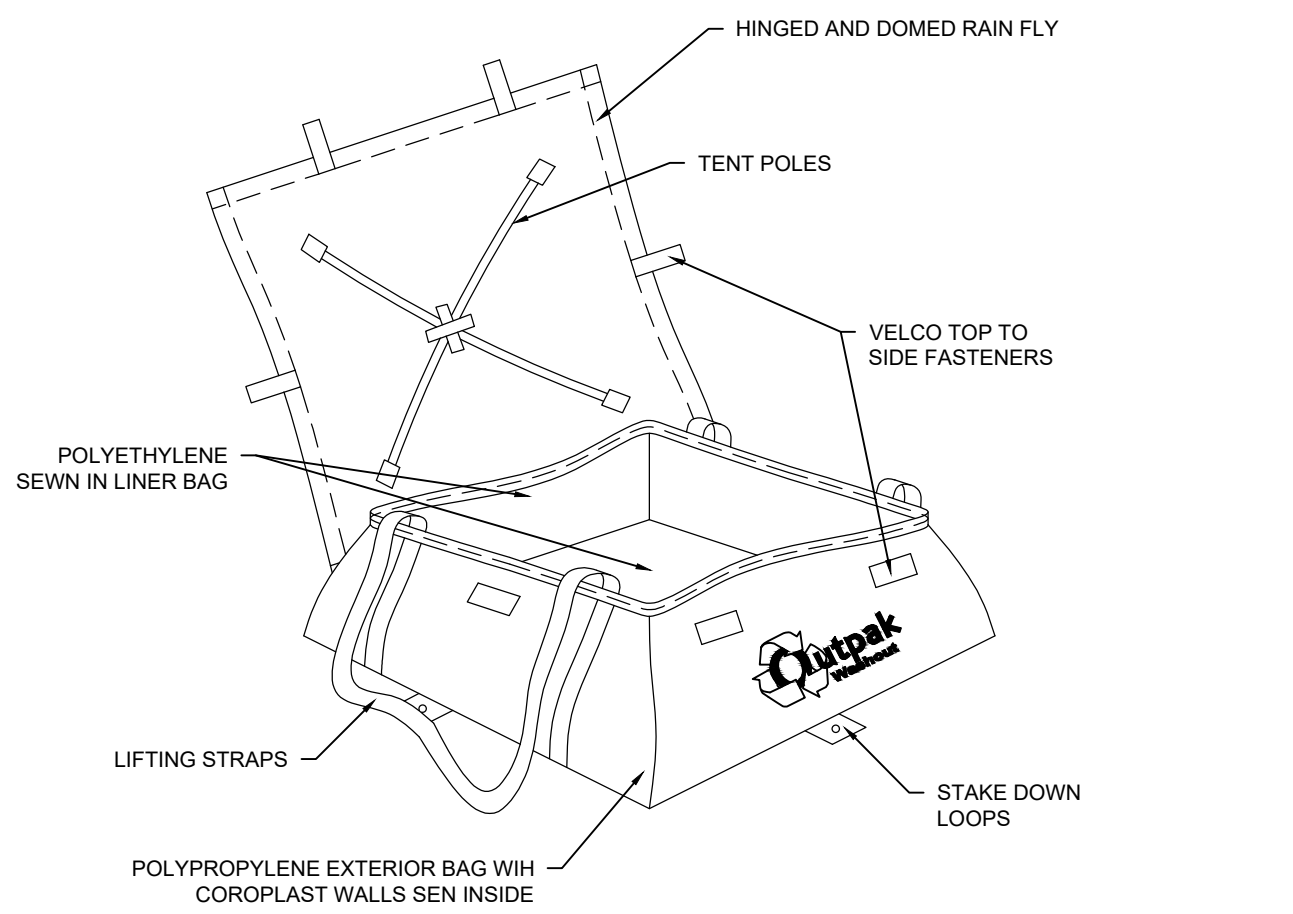
1
C 500
SILT SOCK DETAIL
NOT TO SCALE



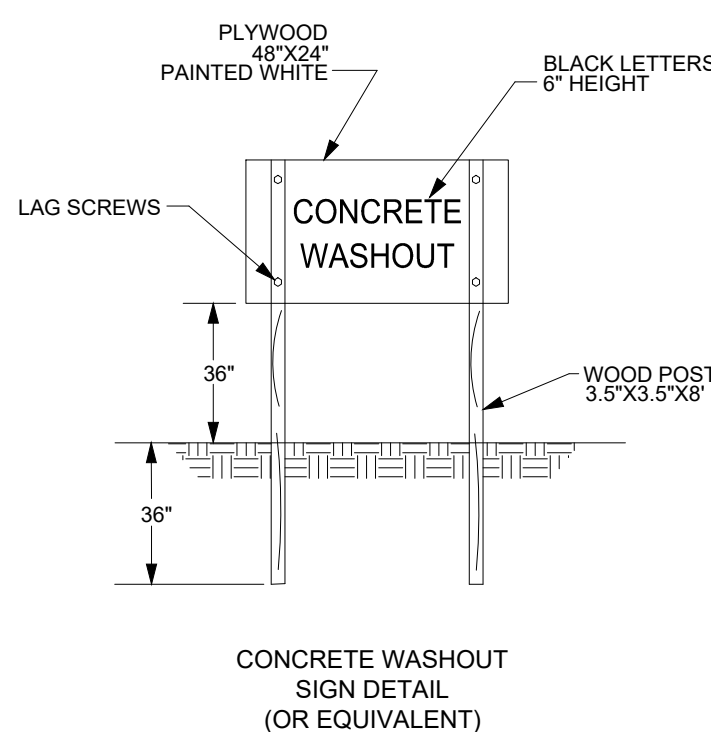
2
C 500
CONCRETE PAVEMENT DETAIL



3
C 500
BOLLARD DETAIL
NOT TO SCALE



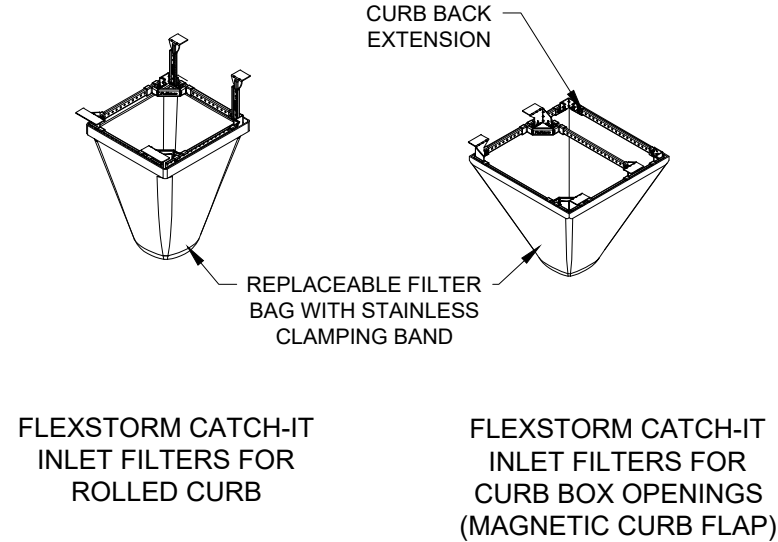
- NOTES:**
- THE CONCRETE WASHOUT SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON THIS PROJECT.
 - AS NECESSARY, SIGNS SHALL BE PLACED THROUGHOUT THE SITE TO INDICATE THE LOCATION OF THE CONCRETE WASHOUT.
 - THE CONCRETE WASHOUT AREA WILL BE REPLACED AS NECESSARY TO MAINTAIN CAPACITY FOR LIQUID WASTE.
 - WASHOUT RESIDUE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE FACILITY.
 - DO NOT WASHOUT INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS.
 - AVOID DUMPING EXCESS CONCRETE IN NON-DESIGNATED DUMPING AREAS.
 - THE WASHOUT SHALL BE USED ONLY FOR NON-HAZARDOUS WASTES.
 - CONTRACTOR MAY USE AN ALTERNATIVE MEATHOD OF CONCRETE WASHOUT WITH THE PROJECT ENGINEERS APPROVAL.



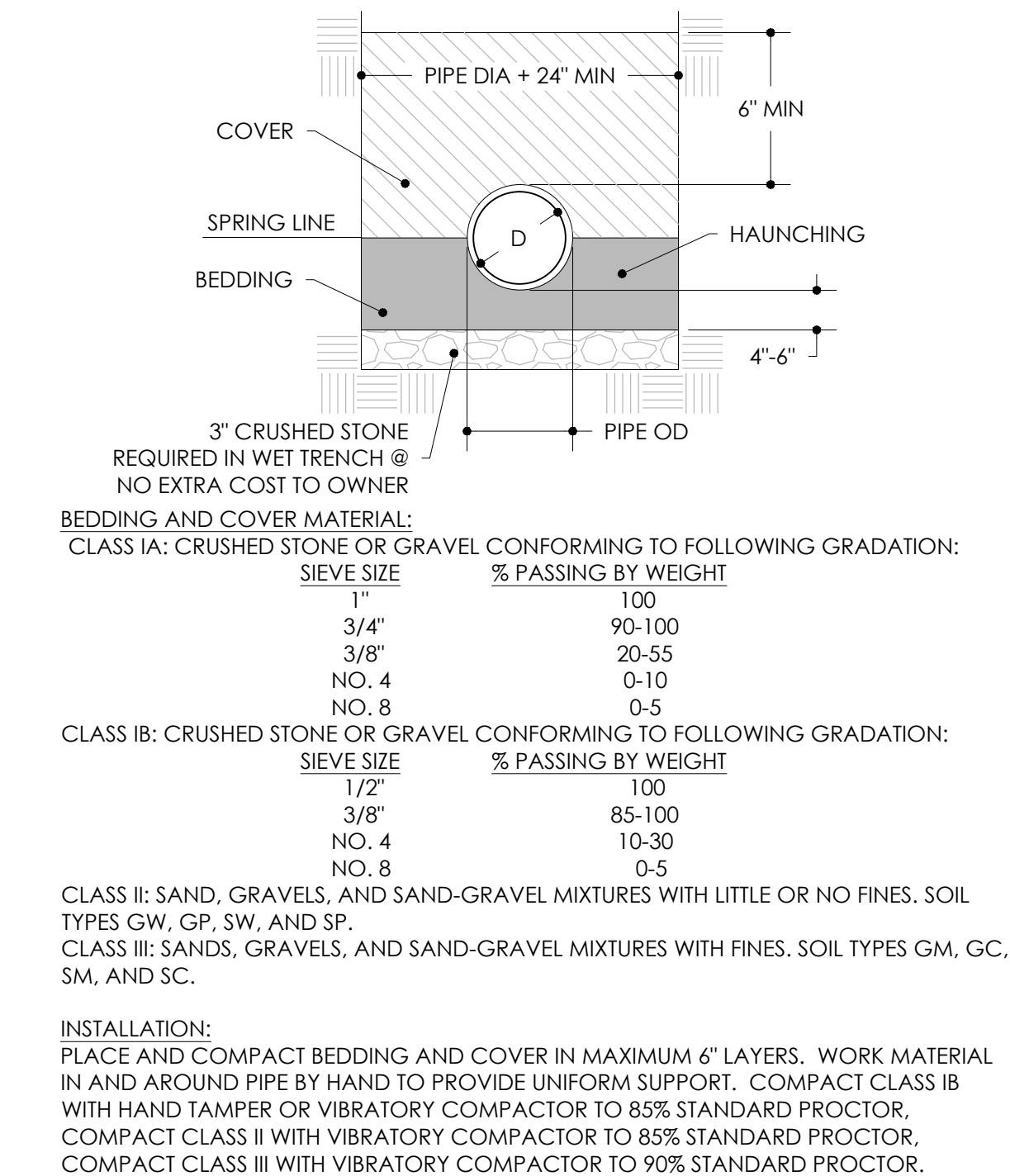
4
C 500
CONCRETE WASHOUT AREA DETAIL

- NOTES:**
- *FLOW RATINGS SHOWN ARE 50% MAXIMUM
- ALL FRAMING IS CONSTRUCTED OF CORROSION RESISTANT STEEL FRAMING FOR PROLONGED PRODUCT LIFE.
 - TOTAL BYPASS CAPACITY WILL VARY WITH EACH SIZED DRAINAGE STRUCTURE. FLEXSTORM DESIGNS FRAMING BYPASS TO MEET OR EXCEED THE DESIGN FLOW OF THE PARTICULAR DRAINAGE STRUCTURE. CONCRETE STRUCTURES MAY REQUIRE ADDITIONAL REVIEW.
 - UPON ORDERING THE ADS P/N CONFIRMATION OF THE DOT CALLOUT, FLEXSTORM ITEM CODE, CASTING MAKE AND MODEL, OR DETAILED DIMENSIONAL FORMS MUST BE PROVIDED.
 - FOR WRITTEN SPECIFICATIONS AND MAINTENANCE GUIDELINES VISIT WWW.INLETFILTERS.COM
- INSTALLATION:**
- REMOVE GRATE
 - DROP FLEXSTORM INLET FILTER ONTO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE
 - REPLACE GRATE

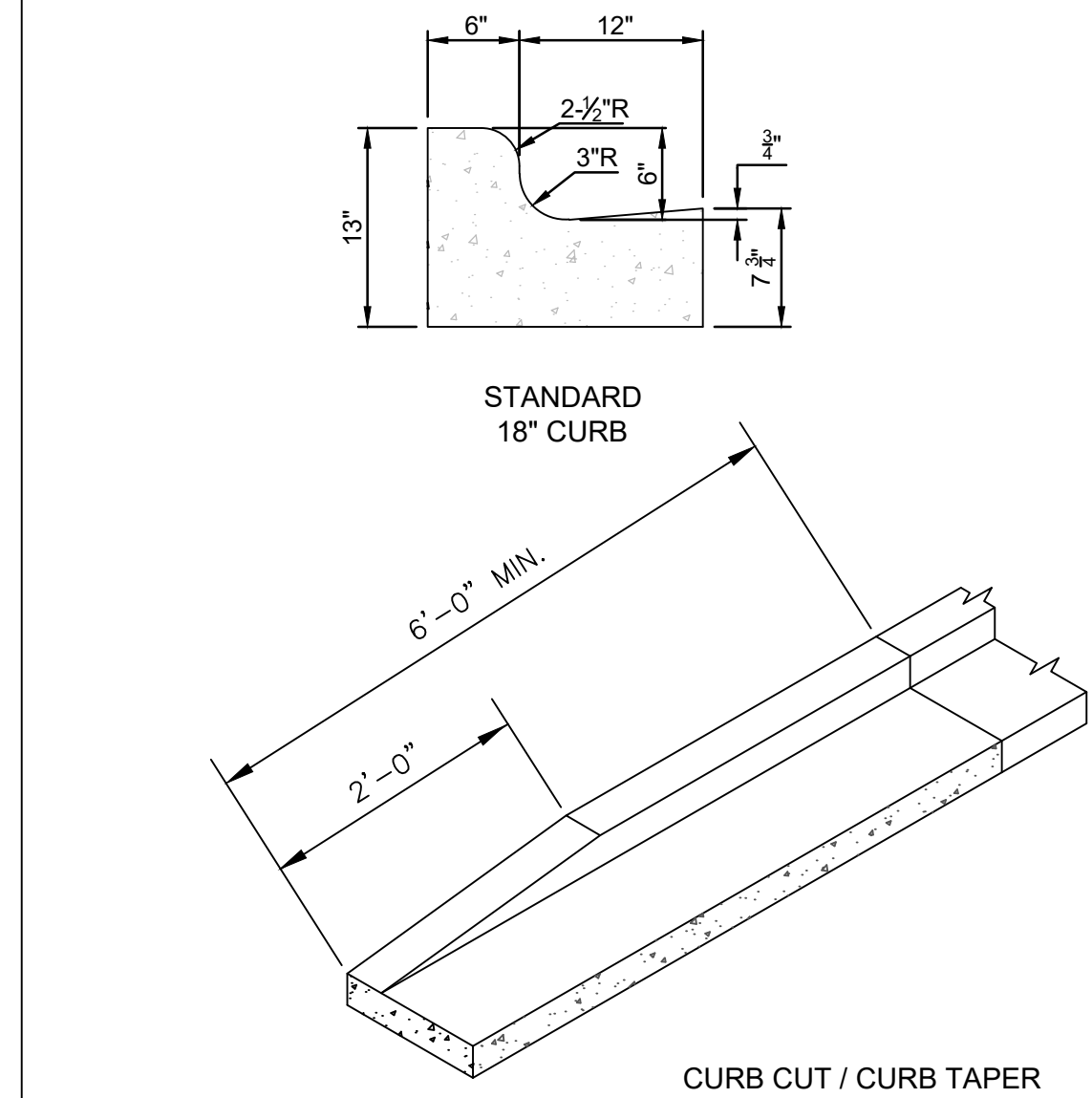
Product selection for FLEXSTORM CATCH-IT Filters (Temporary Inlet Protection)							
Neenah Casting	Inlet Type	Grate Size	Opening Size	Bag Cap (ft ²)	Flow Ratings (CFS)		ADS P/N
					FX	Bypass	
1040/1642/1733	Round	26	24	1.9	1.5	5.4	62MRDFX
3067 w/FLAP	Curb Box	35.25 x 17.75	33.0 x 15.0	3.8	1.9	5.6	62LCBEXTFX
3067 EXTENDED BACK	Curb Box	35.25 x 17.75	33.0 x 15.0	4.4	2.3	5.8	62LCBEXTFX
	Curb Box	35.75 x 23.875	33.5 x 21.0	4.2	2.2	3.3	62LCBFX
	Square/Rect (SQ)	23 x 16	20.5 x 13.5	1.6	1.4	2.2	62MCBFX
	Square/Rect (SQ)	35.25 x 17.75	33 x 15	3.2	2.0	5.2	62LSQFX



6
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INLET PROTECTION
NOT TO SCALE

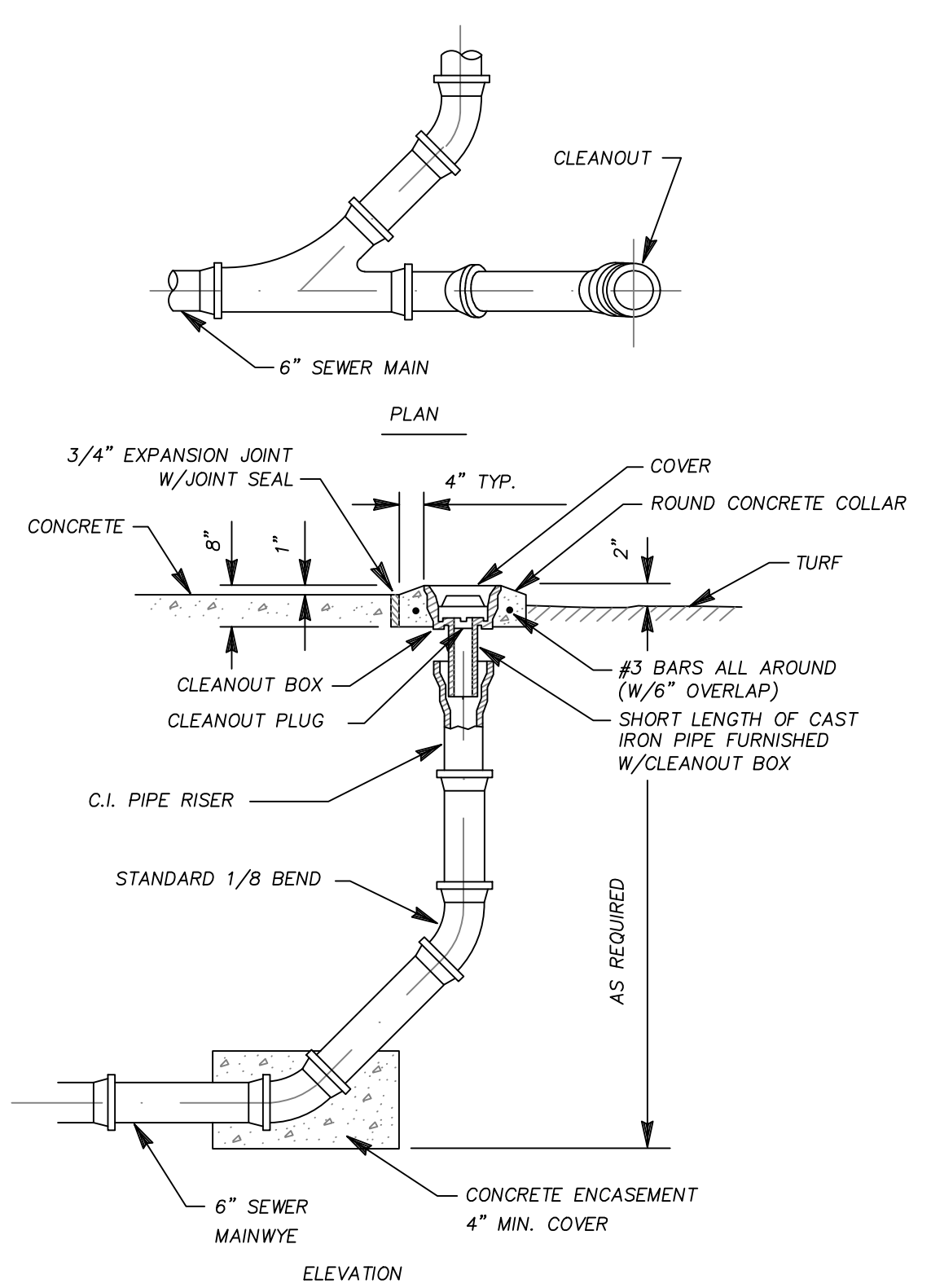


7
C 500
PIPE BEDDING DETAIL



- NOTES:**
- LATERAL CONTRACTION JOINTS SHALL BE PLACED AT INTERVALS OF NOT MORE THAN 15' NOR LESS THAN 6' IN LENGTH. THE JOINTS SHALL BE A MINIMUM OF 3" IN DEPTH. EXPANSION JOINTS SHALL BE PLACED TRANSVERSELY AT RADIUS POINTS ON CURVES OF RADIUS 200' OR LESS AND AT ANGLE POINTS, OR AS DIRECTED BY THE ENGINEER.
 - THE EXPANSION JOINT SHALL BE A ONE PIECE ASPHALTIC MATERIAL HAVING THE SAME DIMENSIONS AS CURB & GUTTER AT THAT STATION AND BE 1/2" THICK. IN ALL CASES, CONCRETE CURB & GUTTER SHALL BE PLACED ON THOROUGHLY COMPACTED CRUSHED STONE.

8
C 500
CONCRETE CURB DETAILS
NOT TO SCALE



9
C 500
STORM SEWER CLEANOUT

**Kwik
TRIP**

**Kwik
Star**

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**SNYDER
& ASSOCIATES**
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MADISON, WISCONSIN 53718
608-838-0444

SITE PLAN DETAILS

CONVENIENCE STORE # 532

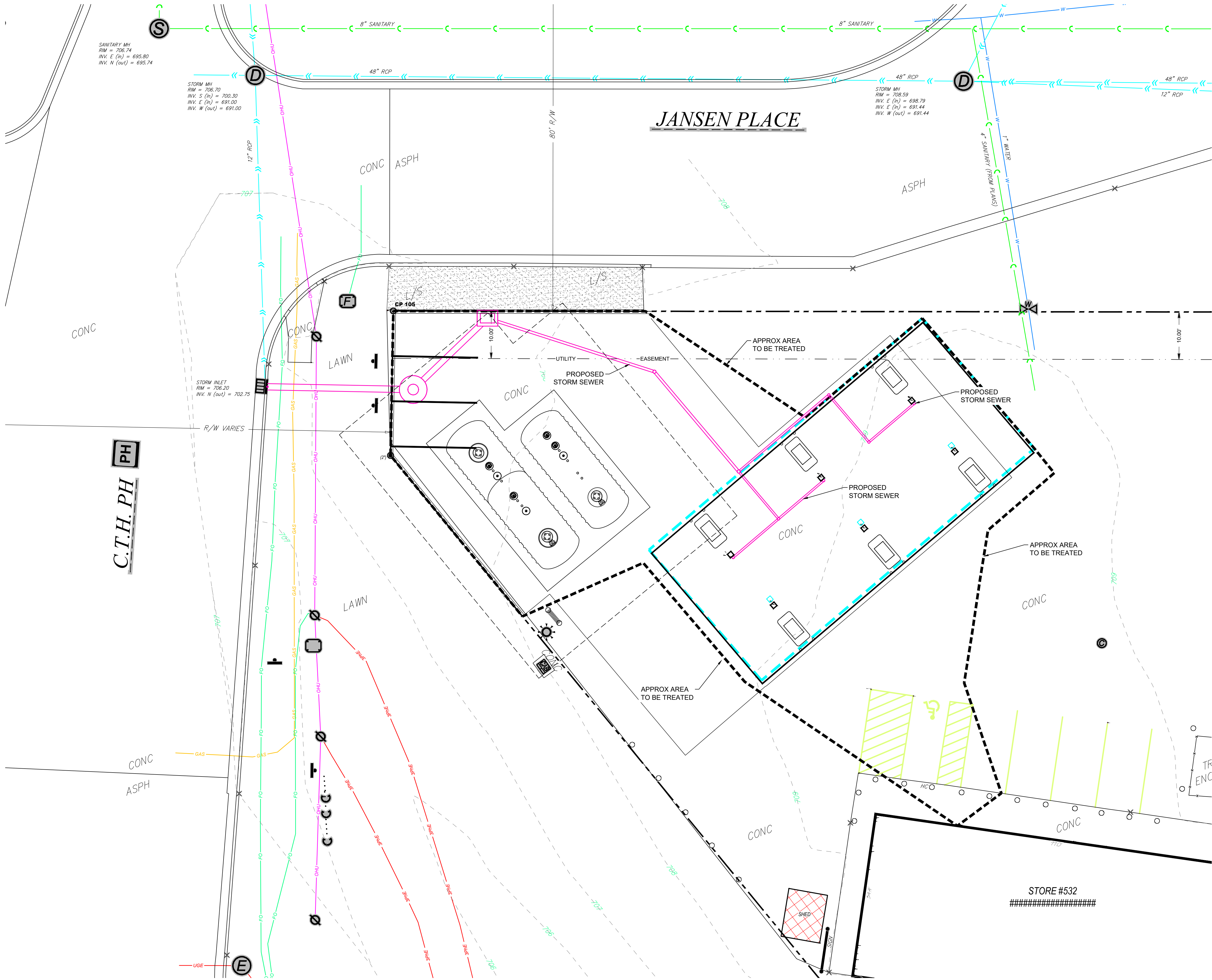
3525 STATE ROAD 157
LACROSSE, WI 54603

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DRAWN BY S. ANDERSON / M. WAHL
SCALE NOTED
PROJ. NO. 125.0123.30
DATE MARCH 14, 2025
SHEET C 500

APPENDIX A

WINSLAMM SEDIMENT REDUCTION CALCULATIONS



Kwik Trip

Kwik Star

KWIK TRIP, Inc.
P.O. BOX 2107
1626 OAK STREET
LA CROSSE, WI 54602-2107
PH. (608) 781-8988
FAX (608) 781-8960

SNYDER & ASSOCIATES
5010 VOGES ROAD
MADISON, WISCONSIN 53718
608-838-0444

AREA TO BE TREATED

CONVENIENCE STORE # 532

3525 STATE ROAD 157
LACROSSE, WI 54603

#	DATE	DESCRIPTION

DRAWN BY

S. ANDERSON / M. WAHL

SCALE

NOTED

PROJ. NO.

125.0123.30

DATE

JANUARY 24, 2025

SHEET

1 OF 1

01020

SCALE: 1" = 10'

PLOTTING NOTE: PLANS PLOTTED TO 11X17

SHEET SIZE ARE 1/2" SCALE - 1" = 20'

SLAMM DATA FILES FOR EXISTING DEVELOPMENT

Current File Data

SLAMM Data File Name:
V:\Projects\2025\125.0123.30\Design\StormwaterModels\125.01230.30 Pavement.mdb

Site Descript.:

Edit Seed:

Edit Rain File: C:\WinSLAMM Files\Rain Files\Wl_Multi_rain\Minneapolis MN\WisReg - Minneapolis MN Annual 1959.ran

Edit Start Date: ☒ Winter Season Range
Edit End Date: Start of Winter (mm/dd) End of Winter (mm/dd)

Edit Pollutant Probability Distribution File: C:\WinSLAMM Files\Wl_GEO03.ppd

Edit Runoff Coefficient File: C:\WinSLAMM Files\Wl_SL06 Dec06.rsvx

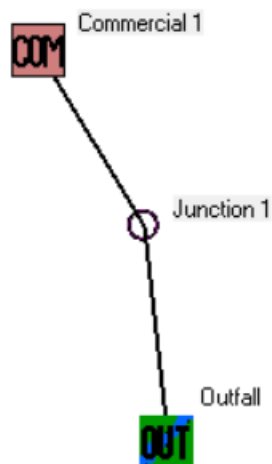
Edit Particulate Solids Concentration File: C:\WinSLAMM Files\Wl0.1\Wl_AVG01.pscx

Edit Street Delivery File (Select LU)
☒ Residential LU ☐ Other Urban LU
☐ Institutional LU ☐ Freeways
☐ Commercial LU
☐ Industrial LU

Edit Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv

☐ Use Cost Estimation Option

EXISTING SITE DIAGRAM



EXISTING SLAMM SOURCE AREA INPUTS

Land Use:					
Commercial 1					
Source Area #	Source Area	Area (acres)	Source Area Parameters	First Control Practice	Second Control Practice
	Roofs	0.062			
	Parking	0.097			
	Driveways/Sidewalks	0.000			
	Streets	0.000			
	Landscaped Areas	0.000			
	Other Areas	0.000			

EXISTING SITE OUTPUT DATA

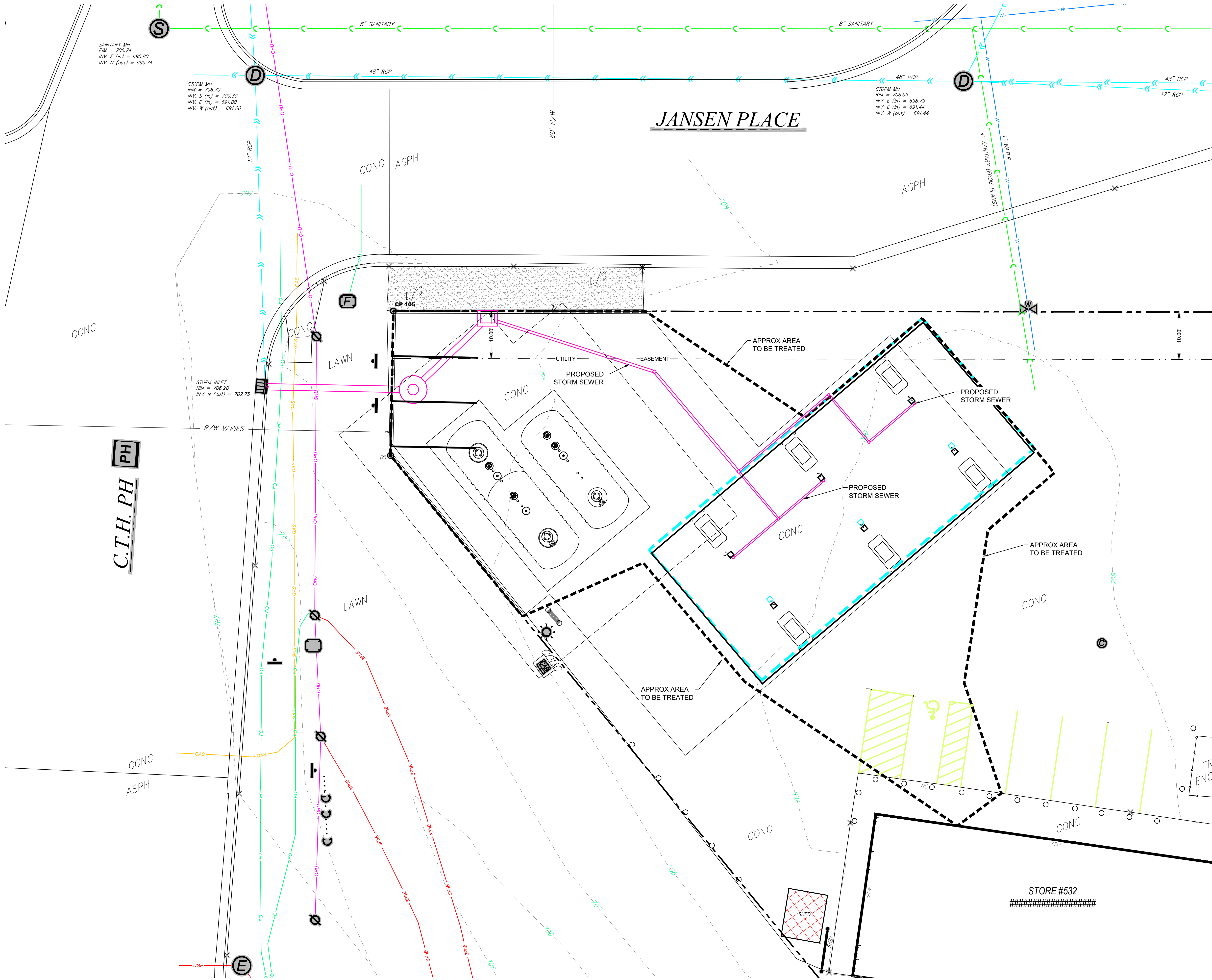
Land Uses	Junctions	Control Practices	Outfalls																			
<p>File Name:</p> <div style="border: 1px solid black; padding: 2px;">V:\Projects\2025\125.0123.30\Design\StormwaterModels\125.01230.30 Pavement.mdb</div>																						
Outfall Output Summary																						
	Runoff Volume (cu. ft.)	Percent Runoff Reduction	Runoff Coefficient (Rv)																			
Total of All Land Uses without Controls	9965		0.64																			
Outfall Total with Controls	9964	0.01 %	0.64																			
<hr/>																						
Current File Output: Annualized Total After Outfall Controls	10103	Years in Model Run:	0.99																			
<hr/>																						
<div style="display: flex; justify-content: space-between;"> <div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">Print Output Summary to .csv File</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">Print Output Summary to Text File</div> <div style="border: 1px solid black; padding: 2px;">Print Output Summary to Printer</div> </div> <div> <p>Total Area Modeled (ac)</p> <div style="border: 1px solid black; padding: 2px; width: 100px; text-align: center;">0.159</div> </div> </div>																						
Total Control Practice Costs <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Capital Cost</td> <td style="border: 1px solid black; text-align: center;">N/A</td> </tr> <tr> <td>Land Cost</td> <td style="border: 1px solid black; text-align: center;">N/A</td> </tr> <tr> <td>Annual Maintenance Cost</td> <td style="border: 1px solid black; text-align: center;">N/A</td> </tr> <tr> <td>Present Value of All Costs</td> <td style="border: 1px solid black; text-align: center;">N/A</td> </tr> <tr> <td>Annualized Value of All Costs</td> <td style="border: 1px solid black; text-align: center;">N/A</td> </tr> </table>		Capital Cost	N/A	Land Cost	N/A	Annual Maintenance Cost	N/A	Present Value of All Costs	N/A	Annualized Value of All Costs	N/A	<div style="text-align: center;"> <p>Receiving Water Impacts Due To Stormwater Runoff</p> <p>(Cw/P Impervious Cover Model)</p> </div> <table style="width: 100%; border-collapse: collapse;"> <tr> <td></td> <td>Calculated Rv</td> <td>Approximate Urban Stream Classification</td> </tr> <tr> <td>Without Controls</td> <td style="border: 1px solid black; text-align: center;">0.64</td> <td style="border: 1px solid black; text-align: center;">Poor</td> </tr> <tr> <td>With Controls</td> <td style="border: 1px solid black; text-align: center;">0.64</td> <td style="border: 1px solid black; text-align: center;">Poor</td> </tr> </table>			Calculated Rv	Approximate Urban Stream Classification	Without Controls	0.64	Poor	With Controls	0.64	Poor
Capital Cost	N/A																					
Land Cost	N/A																					
Annual Maintenance Cost	N/A																					
Present Value of All Costs	N/A																					
Annualized Value of All Costs	N/A																					
	Calculated Rv	Approximate Urban Stream Classification																				
Without Controls	0.64	Poor																				
With Controls	0.64	Poor																				

Data file name: V:\Projects\2025\125.0123.30\Design\StormwaterModels\125.01230.30
 Pavement.mdb
 WinSLAMM Version 10.5.0
 Rain file name: C:\WinSLAMM Files\Rain Files\WI_Multi_rain\Minneapolis MN\WisReg -
 Minneapolis MN Annual 1959.ran
 Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
 Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
 Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban
 Dec06.std
 Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust
 Dec06.std
 Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust
 Dec06.std
 Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust
 Dec06.std
 Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban
 Dec06.std
 Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
 Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass
 Balance: False
 Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppd
 Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source
 Area PSD Files.csv
 Cost Data file name:
 If Other Device Pollutant Load Reduction Values = 1, Off-site Pollutant Loads are
 Removed from Pollutant Load % Reduction calculations
 Seed for random number generator: -42
 Study period starting date: 01/02/59 Study period ending date: 12/28/59
 Start of Winter Season: 11/03 End of Winter Season: 03/13
 Date: 01-27-2025 Time: 06:44:00
 Site information:

 LU# 1 - Commercial: Commercial 1 Total area (ac): 0.159
 1 - Roofs 1: 0.062 ac. Flat Connected Source Area PSD File:
 C:\WinSLAMM Files\NURP.cpz
 13 - Paved Parking 1: 0.097 ac. Connected Source Area PSD File:
 C:\WinSLAMM Files\NURP.cpz

APPENDIX B

SAFFLE BAFFLE REPORT UPSTREAM TECHNOLOGIES



Kwik Trip

Kwik Star

KWIK TRIP, Inc.
P.O. BOX 2107
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AREA TO BE TREATED

CONVENIENCE STORE # 532

3525 STATE ROAD 157
LACROSSE, WI 54603

#	DATE	DESCRIPTION

DRAWN BY

S. ANDERSON / M. WAHL

SCALE

NOTED

PROJ. NO.

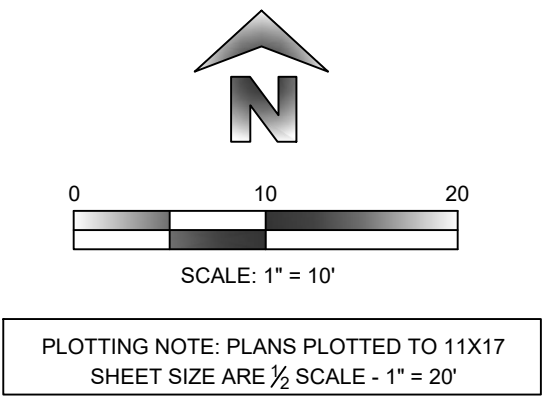
125.0123.30

DATE

JANUARY 24, 2025

SHEET

1 OF 1





5201 East River Road, Suite 303
Fridley, MN 55421
January 30, 2025

Louis Olson
Snyder & Associates
5010 Voges Road
Madison, WI 53718

RE: SAFL Baffle Sediment Removal for Kwik Trip Store #537

Mr. Olson:

This letter discusses the sediment removal efficiency for one proposed sump manhole with a SAFL Baffle, for Kwik Trip Store #537 in Lacrosse, Wisconsin. This analysis was performed using SHSAM software by Barr Engineering.

Recommended Sump Sizes

The following tables provide the sediment removal efficiencies for various sump sizes at the structure. The recommended size is highlighted in yellow. The sediment removal efficiency for this SAFL Baffle structure is 86.9%, which meets the project requirement of 80% TSS removal

The storm sewer profile drawings you provided are attached to this letter. This drawing shows the location of the structure, along with pipe sizes and elevations. The attached shop drawing shows the SAFL Baffle installation.

SAFL Baffle Structure

<i>Sump Diameter (feet)</i>	<i>Sump Depth (feet)</i>	<i>Sediment Removal Efficiency (%)</i>
4	4	86.9
5	5	90.0
6	3	87.9
6	6	91.9
8	6	93.1
10	6	93.8

Inputs to SHSAM Software

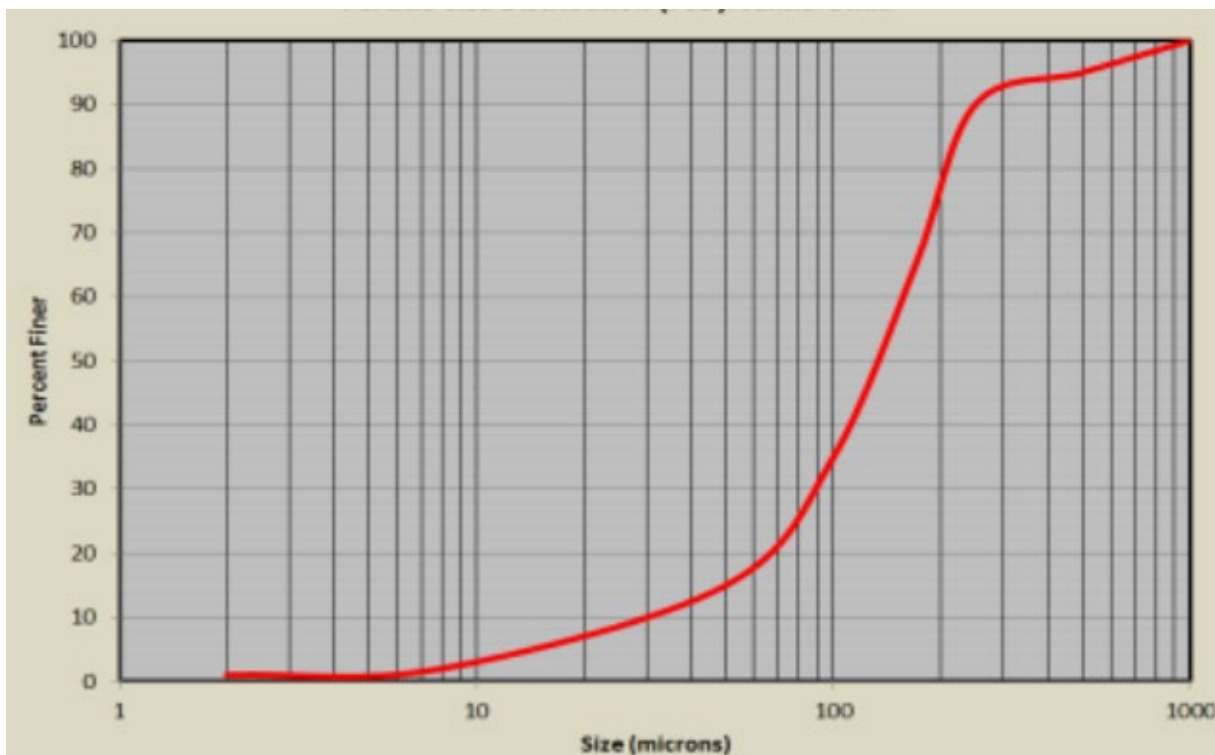
The SHSAM software used for this analysis was developed by Barr Engineering in Minneapolis and is based on data from several years of testing at the University of Minnesota's St. Anthony Falls Laboratory. It is available free of charge at the following website:

The inputs used for the analysis on this project are summarized in the following table:

<i>Structure</i>	<i>Drain Area (acres)</i>	<i>Percent Impervious Area</i>	<i>Inlet Pipe Diameter (inches)</i>	<i>Hydraulic Length (feet)</i>	<i>Average Slope (%)</i>	<i>Curve Number (pervious area)</i>
SAFL Baffle Structure	0.138	100	12	140	1.0	70

The analysis used NOAA 15-minute precipitation files from a weather station in Chippewa Falls, Wisconsin. The precipitation data was continuous from 1972 to 2007. Sediment concentration was set at 250 mg/L. SHSAM software uses a continuous rainfall model to calculate sediment removal efficiency for each storm event in the analysis period. It then calculates an average annual sediment removal efficiency over the entire period.

Sediment removal efficiencies were calculated using a particle size distribution from a study of sediment captured in catch basin sumps in parking lots and along streets. A plot of the sediment particle size distribution is on Page 3. The sediment removal efficiency was calculated for this particle size distribution, and this is reported in the table on Page 1.



Sediment Particle Size Distribution

Maintenance

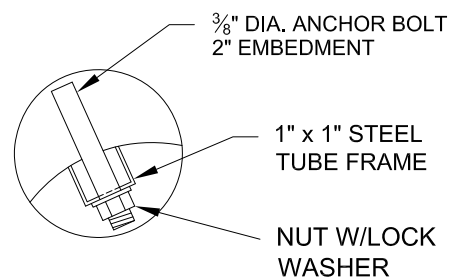
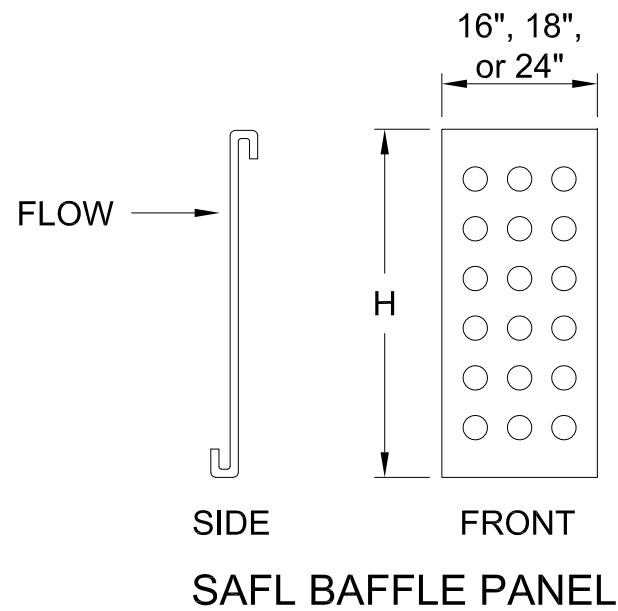
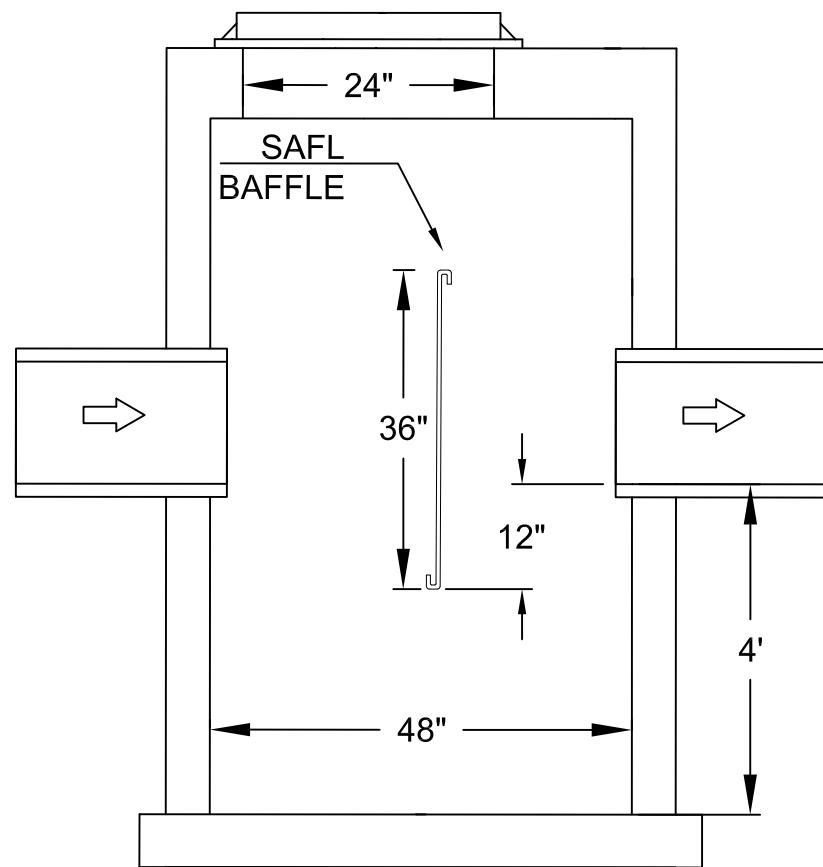
Maintenance of the SAFL Baffle consists of a visual inspection of the SAFL Baffle to ensure that no parts have become loose or damaged. Also, check the depth of sediment within the sump. If the top of the sediment is within 12 inches of the bottom of the SAFL Baffle, remove the sediment from the sump with a vacuum truck. Use the high-pressure washer on the vacuum truck to knock off any leaves or other debris that is stuck to the SAFL Baffle. The analysis for this site indicates that the sump will fill with sediment twice per year.

Please call me at 651-237-5123 if you have any questions about these recommendations or how the analysis was performed.

Sincerely,

A handwritten signature in black ink that reads "Arthur Schwidder". The script is cursive and fluid, with the first name "Arthur" and last name "Schwidder" clearly distinguishable.

A.J. Schwidder, PE
Upstream Technologies Inc.

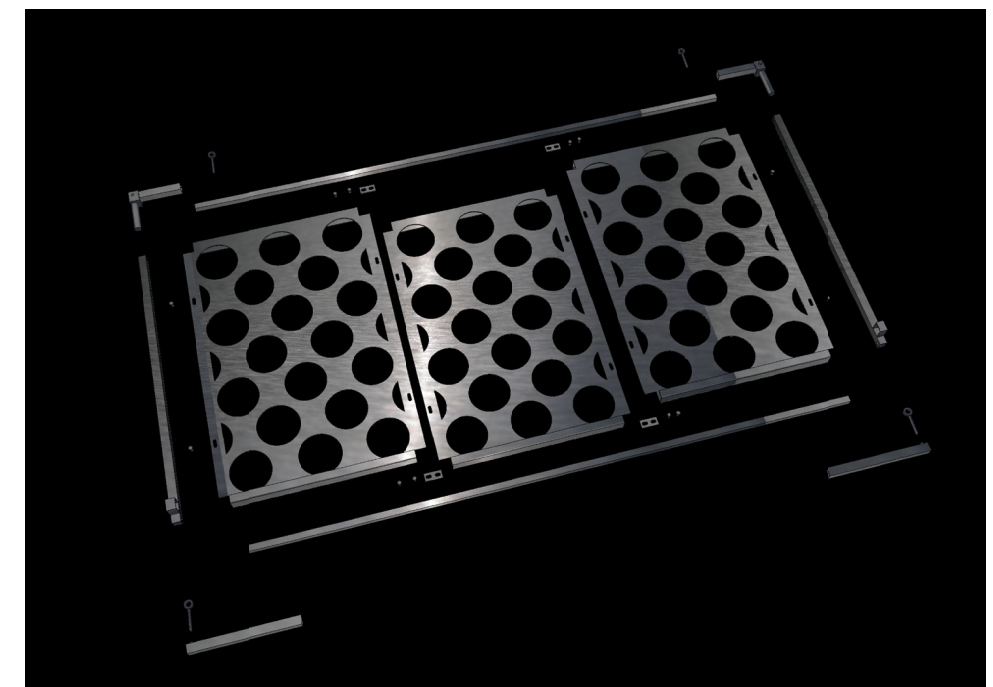


SAFL BAFFLE ATTACHMENT

BOLT DETAIL

NOTES:

- 1) CONTRACTOR MUST VERIFY LOCATION OF CASTING AND STEPS PRIOR TO INSTALLATION OF STRUCTURE.
- 2) THIS GENERIC DETAIL DOES NOT ENCOMPASS THE SIZING, FIT, AND APPLICABILITY OF THE SAFL BAFFLE FOR THIS SPECIFIC PROJECT. IT IS THE ULTIMATE RESPONSIBILITY OF THE DESIGN ENGINEER TO ASSURE THAT THE DESIGN IS IN COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. THE SAFL BAFFLE IS A PATENTED TECHNOLOGY OF UPSTREAM TECHNOLOGIES, INC. UPSTREAM TECHNOLOGIES DOES NOT APPROVE PLANS, SIZING, OR SYSTEM DESIGNS.



STRUCTURE ID: WATER QUALITY STRUCTRE

SAFL Baffle Installation: MOUNT BAFFLE AS CLOSE TO THE CENTER OF THE MANHOLE AND AS PERPENDICULAR AS POSSIBLE TO THE FLOW FROM THE INLET PIPE. ROTATE UP TO 45 DEGREES AS NEEDED.

Structure Diameter (W) = 48 inches

TOC is 707.10'

Inlet Pipe is 12" at Invert Elevation 703.13'

Outlet Pipe is 12" at Invert Elevation 703.13'

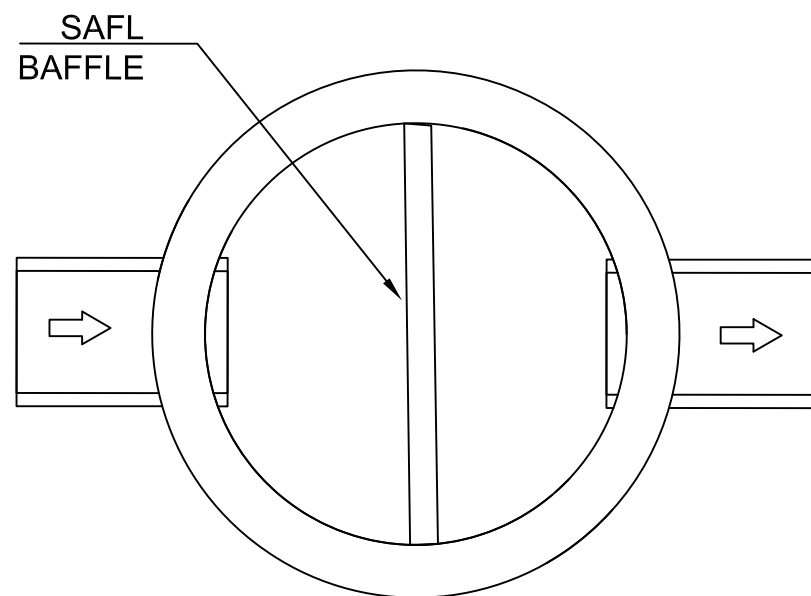
SAFL Baffle bottom Elevation = 702.13' (12" below Outlet pipe invert)

Sump = 4'

SAFL Baffle Width (W) = 48 inches

SAFL Baffle Height (H) = 36 inches

Width of SAFL Baffle is adjustable from 42 inches to 48 inches



SAFL BAFFLE INSTALLATION

DETAIL (TYP)

PROJECT NAME: KWIK TRIP STORE #532. LACROSSE, WI.

SAFL BAFFLE STANDARD DETAIL
UPSTREAM TECHNOLOGIES INC.
5201 EAST RIVER ROAD, STE. 303
FRIDLEY, MN 55412
651.237.5123



APPENDIX C

STORMWATER MAINTENANCE PROVISIONS

DECLARATION OF CONDITIONS, COVENANTS AND RESTRICTIONS
FOR MAINTENANCE OF STORMWATER MANAGEMENT MEASURES

RECITALS:

- A. KT Real Estate Holding LLC, a Delaware limited liability company, is the owner of 3525 State Road 157, more particularly described on Exhibit A attached hereto (“Property”).
- B. Owner desires to construct buildings and/or parking facilities on the Property in accordance with certain plans and specifications approved by the City.
- C. The City requires Owner to record this Declaration regarding maintenance of stormwater management measures to be located on the Property. Owner agrees to maintain the stormwater management measures and to grant to the City the rights set forth below.

NOW, THEREFORE, in consideration of the declarations herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the owner agrees as follows:

- 1. Maintenance. Owner and its successors and assigns shall be responsible to repair and maintain the stormwater management measures located on the Property in good condition and in working order and such that the measures comply with the approved plans on file with the City Engineer. Said maintenance shall be at the Owner’s sole cost and expense. Owner will conduct such maintenance or repair work in accordance with all applicable laws, codes, regulations, and similar requirements, and pursuant to the Maintenance Provisions attached hereto as Exhibit B.
- 2. Easement to City. If Owner fails to maintain the stormwater management measures as required in Section 1, then City shall have the right, after providing Owner with written notice of the maintenance issue (“Maintenance Notice”) and thirty (30) days to comply with the City’s maintenance request, to enter the Property in order to conduct the maintenance specified in the Maintenance Notice. City will conduct such maintenance work in accordance with all applicable laws, codes, regulations, and similar requirements and will not unreasonably interfere with Owner’s use of the Property. All costs and expenses incurred by the City in conducting such maintenance may be charged to the owner of the Property by placing the amount on the tax roll for the Property as a special charge in accordance with Section 66.0627, Wis. Stats.
- 3. Term/Termination. The term of this Agreement shall commence on the date that this Agreement is filed of record with the Register of Deeds Office for La Crosse County, Wisconsin, and except as otherwise herein specifically provided, shall continue in perpetuity. Notwithstanding the foregoing, this Agreement may be terminated by recording with the Register of Deeds Office for La Crosse County, Wisconsin, a written instrument of termination signed by the City and all of the then-owners of the Property.
- 4. Miscellaneous.
 - (a) Notices. Any notice, request or demand required or permitted under this Agreement shall be in writing and shall be deemed given when personally served or three (3) days after the same has been deposited with the United States Post Office, registered or certified mail, return receipt requested, postage prepaid and addressed as follows:

If to Owner:

Kwik Trip, Inc. (624)
1626 Oak Street
La Crosse, WI 54602

If to City:

City of La Crosse
Engineering Department
400 La Crosse Street
La Crosse, WI 54601
Attention: City Engineer

Any party may change its address for the receipt of notice by written notice to the other.
 - (b) Governing Law. This Agreement shall be governed and construed in accordance with the laws of the State of Wisconsin.
 - (c) Amendments or Further Agreements to be in Writing. This Agreement may not be modified in whole or in part unless such agreement is in writing and signed by all parties bound hereby.
 - (d) Covenants Running with the Land. All of the easements, restrictions, covenants and agreements set forth in this Agreement are intended to be and shall be construed as covenants running with the land, binding upon, inuring to the benefit of, and enforceable by the parties hereto and their respective successors and assigns.
 - (e) Partial Invalidity. If any provisions, or portions thereof, of this Agreement or the application thereof to any person or circumstance shall, to any extent, be invalid or unenforceable, the remainder of this Agreement, or the application of such provision, or portion thereof, to any other persons or circumstances shall not be affected thereby and each provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

This space is reserved for recording data

Return to:

City of La Crosse
Engineering Department
400 La Crosse Street
La Crosse, Wisconsin 54601

Tax Parcel No.: 17-10520-10

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20____.

STATE OF WISCONSIN)
COUNTY OF LA CROSSE) SS

Personally came before me this _____ day of _____, 20____, the above named _____, to me known to be the person(s) who executed the foregoing instrument and acknowledged the same.

NOTARY PUBLIC

My Commission Expires:_____

Drafted by: City of La Crosse
 Engineering Department
 400 La Crosse Street
 La Crosse, Wisconsin 54601

EXHIBIT A
Legal Description

PARCEL A

(As per Quit Claim Deed Doc. No. 1515780)

Lot 1 of Sisbro Addition, City of La Crosse, La Crosse County, Wisconsin.

Also located in the northwest ¼ of Section 15, T 16N, R 7W, all in the City of La Crosse, La Crosse County, Wisconsin.

EXHIBIT B

Maintenance Provisions

Storm Sewer System

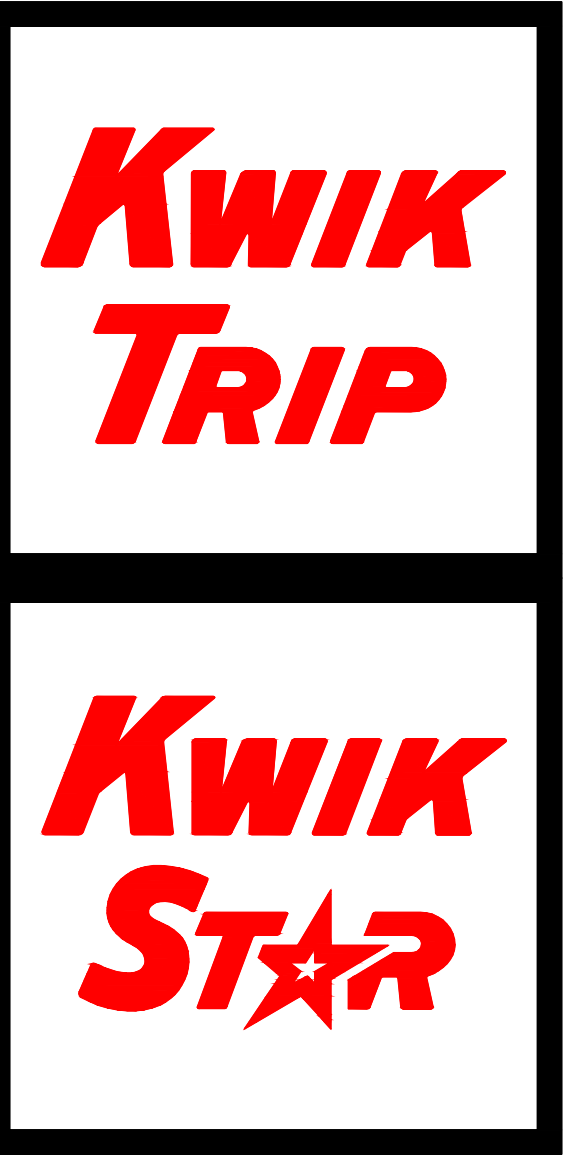
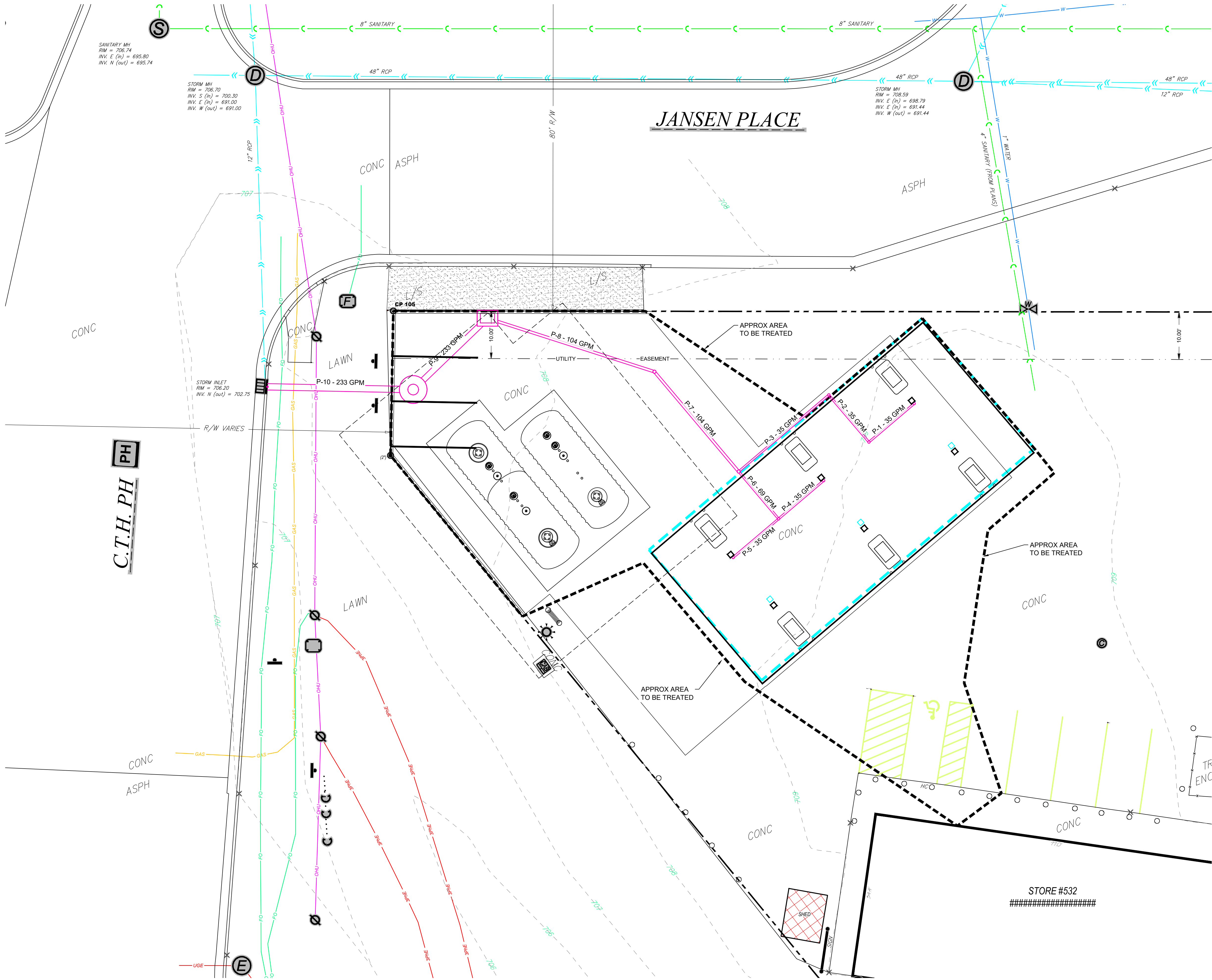
- The owner shall maintain all components of the storm sewer system located onsite.
- Installation and maintenance shall be in accordance with the manufacturer's guidelines. Any alterations to the approved storm sewer shall be approved by the City Engineer.
- At a minimum, the storm sewer system shall be inspected annually and cleaned as needed to maintain design capacity.
- Owner shall maintain records of inspections, cleaning, and replacement of the storm sewer system.

SAFFLE BAFFLE SYSTEM

- Maintenance of the SAFL Baffle shall consist of removing the captured sediment from the sump twice per year, using a vacuum truck.
- Use the high-pressure washer on the vacuum truck to knock off any leaves or other debris that is stuck to the SAFL Baffle.
- Remove the accumulated sediment when the top of the sediment is 12 inches below the bottom of the SAFL Baffle.
- Dispose of removed sediment per local regulations.

APPENDIX D

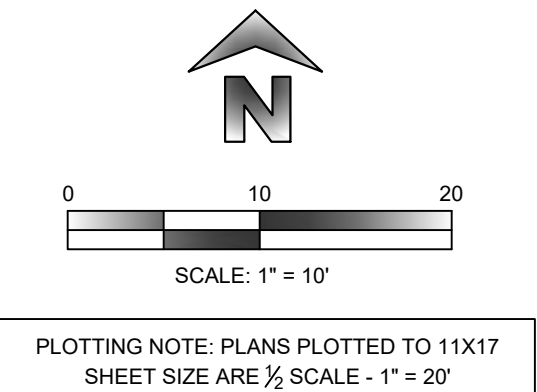
STORM SEWER PIPE SIZING



KWIK TRIP, Inc.
P.O. BOX 2107
1626 OAK STREET
LA CROSSE, WI 54602-2107
PH. (608) 781-8988
FAX (608) 781-8960



PIPE SIZING		CONVENIENCE STORE # 532
		3525 STATE ROAD 157 LACROSSE, WI 54603
#	DATE	DESCRIPTION
DRAWN BY		S. ANDERSON / M. WAHL
SCALE		NOTED
PROJ. NO.		125.0123.30
DATE		JANUARY 24, 2025
SHEET		1 OF 1



Department of Commerce Storm Sewer Sizing - 10 year

Project: Kwik Trip Store #532 - LaCrosse

FN: 125.0123.30

Date: 5/14/2025

Rev:

[illegible]