JOINT ARCHITECTURAL BOARD/PLAN COMMISSION AGENDA
MONDAY, SEPTEMBER 18, 2023
6:30 PM
BOARD ROOM, MUNICIPAL BUILDING, 210 COTTONWOOD

Roll Call

Public Comments: Please be advised the Joint Architectural Board/Plan Commission will receive comments from the public related to any item(s) on the agenda for a three-minute time period per person, with time extensions per the Chairman's discretion.

1. Consideration of a motion to approve the Jt. Architectural Board/Plan Commission minutes of the August 21, 2023, meeting.

2. Plan Commission review and consideration of an Extraterritorial Certified Survey Map for the Mid-City property, N55 W29505 County Highway K, Hartland, WI 53029.

3. Architectural Board review and consideration of plans for an addition on the Kleczka property, 810 River Reserve Drive.

4. Plan Commission will conduct a preliminary review of Kwik Trip, a proposed PUD development ("Project") whose approval and rezoning are being sought by Kwik Trip on property tax key HAV0730950 located at Highway 83 & W. Capitol Drive. The Plan Commission will review:
   a. Proposed preliminary site and building plans;
   b. Proposed preliminary certified survey map;
   c. Proposed rezoning to B-2 in conjunction with a PUD Agreement for the Project;
   d. Proposed petition for a Planned Unit Development
   e. Proposed land use amendment and Resolution

5. Announcements: The following individuals will be given an opportunity to make announcements at the meeting in regard to (1) activities taken since the previous meeting on behalf of the community, (2) future municipal activities, and (3) communications received from citizens. It is not contemplated that these matters will be discussed or acted upon. The following individuals may provide announcements: Village President or individual Village Board members or Village Administrator or other Village Staff members.

6. Adjourn.

Ryan Bailey, Village Manager

A complete packet of meeting materials is normally available by 5:00pm on the Friday before the meeting on the Village website: www.villageofhartland.wi.gov (Government/Agendas and Minutes).

Notice: Please note that upon reasonable notice, efforts will be made to accommodate the needs of disabled individuals through appropriate aids and services. For additional information or to request this

service, contact Sandee Policello, Village Clerk, at 262-367-2714. The Municipal Building is handicap accessible.

To participate in the Village of Hartland "Zoom" meeting with video,
https://us02web.zoom.us/j/87195381141?pwd=NlFLYUJyekhrOWZMN3FQcEs3ZTAwQT09

To participate in the Village of Hartland "Zoom" meeting (audio only), please dial 1(312)626-6799.

The Meeting ID is 871 9538 1141 and the passcode is529832.

JOINT ARCHITECTURAL BOARD/PLAN COMMISSION MINUTES
MONDAY AUGUST 21, 2023
6:30 PM
BOARD ROOM
MUNICIPAL BUILDING, 210 COTTONWOOD AVE.

Present: Jeff Pfannerstill, Jeff Bierman, Ann Wallschlager, David de Courcy Bower, Tim Hallquist, Dino Xykis, and Chip Schneeberger.
Others Present: Matt Gralinski, Ben Nelson, Scott Hussinger, Ryan Amtmann, Clerk Policello and Deputy Clerk Bushey.
Excused: Dino Xykis.
Call to Order- 6:32 pm

Roll Call taken.

Public Comments: Please be advised the Joint Architectural Board/Plan Commission will receive comments from the public related to any item(s) on the agenda for a three-minute time period per person, with time extensions per the Chairman's discretion.
No Public Comments.

1. **Consideration of a motion to approve the Architectural Board/Plan Commission minutes from July 17, 2023-**

Motion (Wallschlager/Hallquist to approve the minutes for the July 17, 2023, meeting. Carried (6-0).

2. **Plan Commission review and consideration of an Extraterritorial Certified Survey Map for the Wankowski property, W293 N3112 Poplar Drive, Town of Delafield.**

It was stated this is an extraterritorial Certified Survey Map, and not a property that will come into Hartland. The Building Inspector and Village Engineer do not have a problem with it. Brief discussion on boundary adjustment.

Motion (Schneeberger/DeCourcy-Bower) to approve the Extraterritorial Certified Survey Map for the Wankowski property, W293 N3112 Poplar Drive, Town of Delafield, with proposed boundary adjustment. Carried (6-0).

3. **Plan Commission will conduct a review of Onyx Hotel, a proposed PUD development ("Project") whose approval and rezoning is being sought by James Kupfer on property tax key HAV0729116 located at 221 Cottonwood Avenue. The Plan Commission will review:**
   a. Proposed preliminary site and building plans for 39 room Hotel.
   b. Proposed plans for Amenities for the Project;
   c. Proposed rezoning from RS-5 to B-3 in conjunction with a PUD Agreement for the Project;
   d. Proposed petition for a Planned Unit Development.-

Agenda item pulled by developer.

4. Announcements-

President Pfannerstill welcomed the new clerk, Sandee Policello.

5. Adjourn

Motion (Schneeberger/Wallschlager) to adjourn. Carried (6-0).
Adjourned at 6:41 pm.

Respectfully submitted by

Recording Secretary,
Deidre Bushéy, Deputy Clerk

VILLAGE OF HARTLAND
PETITION FOR LAND DIVISION:

☒ **EXTRATERRITORIAL PLAT REVIEW - $100**

☐ **CSM (Certified Survey Map) + *$300 Professional Fee Deposit***

or

☐ **PRELIMINARY PLAT REVIEW + *$1,000 Professional Fee Deposit***

Up to Five Parcels - $150.00
Six to Fourteen Parcels - $300.00
Fifteen or More Parcels - $500.00

Reapplication for Approval of Any Preliminary Plat Requiring Review **$50.00 (Minimum)**
Reapplication for Previously Reviewed Plat **$10.00**

☐ **FINAL PLAT REVIEW**

$10.00 Plus $1.00 for Each Parcel Within the Final Plat
$10.00 for Reapplication of Any Final Plat Previously Reviewed

Date:	Fee Paid:
Date Filed:	Receipt No.:

1. Name: RJ Properties / Mid-City Sports - Joe Reutemann

   Address of Owner/Agent: N55 W29505 Cty Rd K
   Hartland, WI 53029

   Phone Number of Owner/Agent: 414-520-0303

2. Give complete legal description of property to be considered. (Attach a separate sheet with description and label sheet "Exhibit A").

3. State present use of property and intended use.
   Mid-City Sport - manufare and warehouse
   imprinted Apparel

Signature of Petitioner

N68 W34240 Cty Rd K Oconomowoc, WI 53066
Address

414-520-0303
Phone

NOTE:

a. Include a Plat Map in triplicate, drawn to a scale of not less than 100 ft. to the inch, showing the land in question, its location, the length and direction of each boundary thereof.

b. Include fee payable to **The Village of Hartland**

CSM fees + *$300 Professional Fee Deposit*
Or
Preliminary Plat Review Fees + *$1,000 Professional Fee Deposit*

Up to Five Parcels	**$150.00**
Six to Fourteen Parcels	**$300.00**
Fifteen or More Parcels	**$500.00**

Reapplication for Approval of Any Preliminary Plat Requiring Review	**$50.00 (Minimum)**
Reapplication for Previously Reviewed Plat	**$10.00**

Final Plat Review Fees:

$10.00 Plus $1.00 for Each Parcel Within the Final Plat
$10.00 for Reapplication of Any Final Plat Previously Reviewed

c. Mail or deliver request, in triplicate, to:

Village of Hartland
Village Clerk
210 Cottonwood Avenue
Hartland, WI 53029

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d. **Extraterritorial Plat Review Fee: $100**

Submit plat and $100 fee to:

Village of Hartland
Village Clerk
210 Cottonwood Avenue
Hartland, WI 53029

Paul Farrow
County Executive

Dale R. Shaver
Director

Waukesha County
Department of Parks and Land Use

TO:	Town of Merton Clerk
NOTICE OF:	Conditional Approval of Certified Survey Map
DATE OF REVIEW:	June 26, 2023
RE:	Certified Survey Map for: **Joe Reuteman** **File No. SCS-1485**
LOCATION:	**MRTT 0425.989:** Part of the NW ¼ of the NE ¼ of Section 35, T8N, R18E, Town of Merton. More specifically, the property is located at N55 W29505 CTH K. **MRTT 0425.983** Lot 1, CSM No. 6874, part of the NE ¼ and NW ¼ of Section 35, T8N, R18E, Town of Merton. More specifically, the property is located at N55 W29519 CTH K.
TAX KEY NO.'s:	MRTT 0425.989 and MRTT 0425.983
OWNERS:	Joe Reuteman Mid-City Properties, LLC N68 W34240 CTH K Oconomowoc, WI 53066
SURVEYOR:	Keith Kindred SEH, Inc. 501 Maple Avenue Delafield, WI 53018
DATE RECEIVED:	May 24, 2023
DATE OF CSM:	CSM is undated
APPLICABILITY:	The above subject Certified Survey Map has been reviewed by the staff of the Waukesha County Department of Parks and Land Use pursuant to the provisions of the Waukesha County Shoreland and Floodland Subdivision Control Ordinance as authorized by S.236.34 and S.236.45, Wisconsin Statutes.

REMARKS: Conditional Approval of this Certified Survey Map (CSM) is based on the following conditions being satisfied prior to the Director affixing his signature to the Final Certified Survey Map:

1. All easements, such as proposed or existing drainage ways, access, and utility easements shall be shown on the CSM.

2. The names of the unplatted landowners abutting the CSM shall be added to Sheet 1. There are 10 unplatted lots abutting the CSM.

3. The CSM revision date(s) shall be added to the CSM.

4. A note shall be added to the CSM stating "The required setback and offsets listed on this Certified Survey Map may be subject to modification based on the provisions of the Waukesha County Shoreland and Floodland Protection Ordinance."

5. The Conservancy Restrictions on Sheet 2 shall be replaced with the following restrictions:

   Those areas identified as a Floodplain Preservation Area on Page 1 of 6 of this Certified Survey Map shall be subject to the following restrictions:

   1. *Grading, filling and removal of topsoil or other earthen materials are prohibited, unless specifically authorized by the municipality in which this land is located and, if applicable, the Waukesha County Department of Parks and Land Use, the Wisconsin Department of Natural Resources and the Army Corps of Engineers.*

   2. *The removal or destruction of any vegetative cover, i.e., trees, shrubs, grasses, etc., is prohibited, with the exception that invasive, dead, diseased, or dying vegetation may be removed, at the discretion of the landowner, and with approval from the Waukesha County Department of Parks and Land Use-Planning and Zoning Division. Silvicultural thinning, upon the recommendation of a forester or naturalist and with approval from the Waukesha County Department of Parks and Land Use-Planning and Zoning Division, shall also be permitted.*

   3. *Grazing by domesticated animals, i.e., horses, cows, etc., is prohibited, unless grazing is conducted in order to manage invasive vegetation and approval is obtained by the Waukesha County Department of Parks and Land Use-Planning and Zoning Division.*

   4. *The introduction of plant material not indigenous to the existing environment is prohibited.*

   5. *Ponds are prohibited unless designed to enhance the natural environment. Ponds that may be permitted are subject to the approval of the municipality in which they are located and, if applicable, the Waukesha County Department of Parks and Land Use, the Wisconsin Department of Natural Resources and the Army Corps of Engineers.*

   6. *The construction of buildings is prohibited.*

6. The 3rd note on Sheet 2 shall reference the 500 yr. floodplain, not the 100 yr. floodplain; and 1% shall be changed to state 0.2%. If the elevation needs to be revised, please update that as well.

7. The Surveyor's Certificate shall also reference the Village of Hartland and Waukesha County.

8. The owner's name in the Owner's Certificate (twice) and Mortgagee signature block shall be spelled correctly as "Rueteman".

9. The word "dedicated" shall be added to the Owner's Certificate.

10. The Owner's Certificate shall also reference the Village of Hartland.

11. The CSM contains a documented archeological site. The Office of the State Archaeologist, which maintains state records for archaeological sites, is being copied on this correspondence and we urge the developer to communicate with the State Archaeologist to ensure that any proposed site grading and construction is not delayed by archeological resource issues and that the plat layout does not conflict with said resources. The Interim State Archaeologist, Amy Rosebrough, can be contacted at 608-264-6496, or at statearchaeologist@wisconsinhistory.org.

12. The road right of way shall be labeled, "100' wide Road Right of Way".

13. The surveyor's seal, signature, and date must appear on all sheets of the Final Certified Survey Map. The same revision date must be noted on all sheets of the Final Certified Survey Map. The CSM is currently undated.

14. The County zoning limits shall be relabeled as the "Waukesha County Shoreland and Floodland Protection Ordinance Jurisdictional Limits" on Sheet 1.

15. The dates in the signature blocks throughout the CSM shall be updated to reflect 2023.

16. On Sheet 6, the Village Board Extraterritorial Approval signature block should say "Village of Hartland" instead of "Town of Merton".

17. The existing access driveway shall be labeled on the CSM.

18. Access to CTH K shall be limited to the existing access driveway and the remainder of the frontage along CTH K shall be crosshatched on the CSM with a note stating this limitation.

19. **Please submit a revised Certified Survey Map for review and approval. Our office will contact you once we have reviewed the revised CSM and advise if your CSM has been approved. If and when approved, you may then contact the County Planning and Zoning Division Office to schedule an appointment for the County signature on the original copy of the Certified Survey Map provided by your surveyor.**

20. **Please be advised that the CSM, and its subsequent revisions, that are the subject of this review must be recorded with the Waukesha County Register of Deeds office within one (1) year of the date of this CSM Conditional Review Letter or the review is nullified and the applicant must resubmit documentation and payment for a new review.**

SIGNED:

Erica Anderson, Land Use Specialist
(262) 548-7790

REVIEWED AND APPROVED BY: *Sandra L. Scherer*

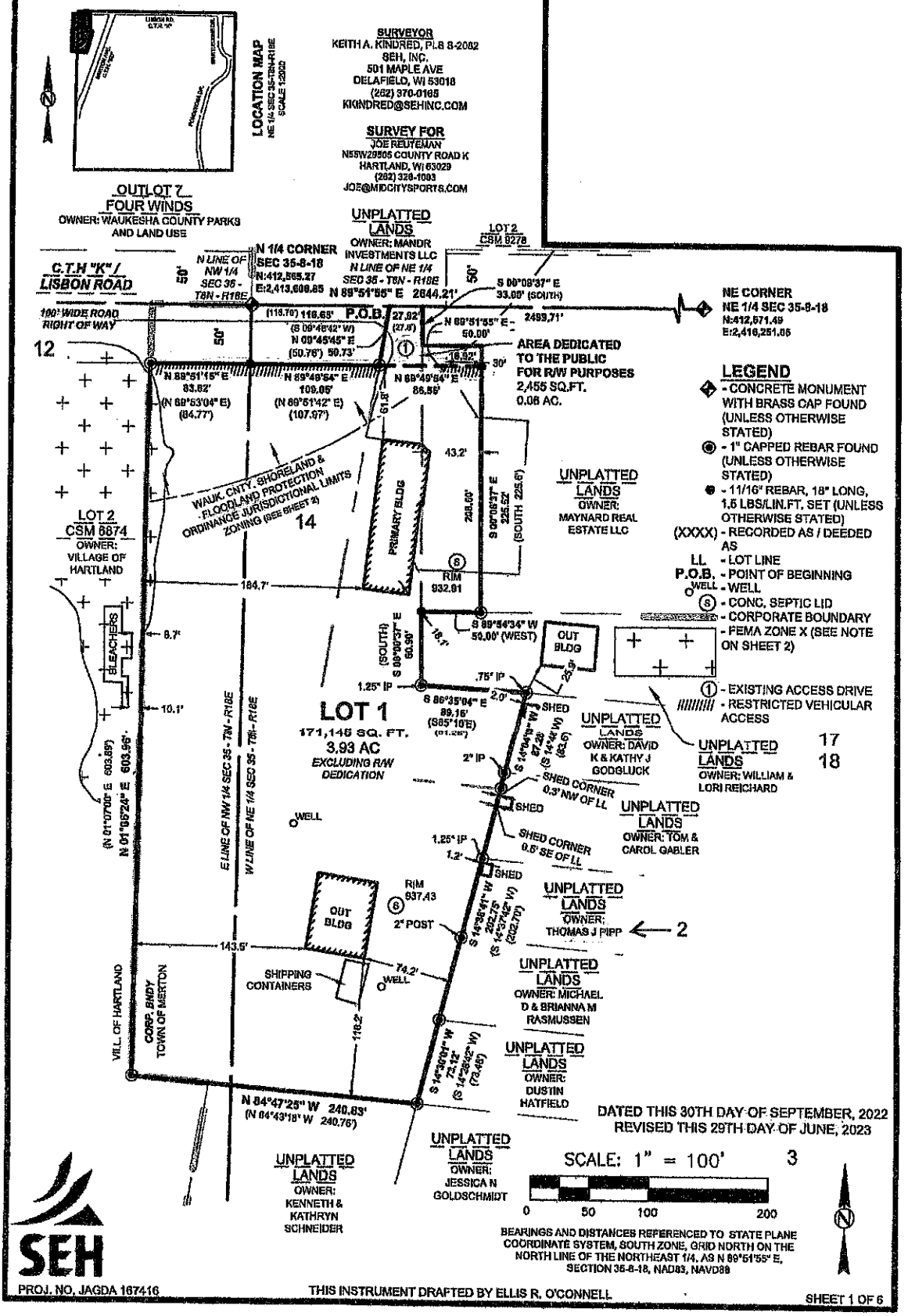
Sandy Scherer, Senior Planner

cc: Joe Reuteman, owner, joe@mid-citysports.com (via email only)
Keith Kindred, Surveyor, kkindred@sehinc.com (via email only)
Amy Rosebrough, Interim State Archaeologist, statearchaeologist@wisconsinhistory.org. (via email only)
Village of Hartland Clerk (via email only)
File

N:\PRKANDLU\Planning and Zoning\Certified Survey Maps\Project Files Incl Review Letters\Merton\1485 Reuteman\1485 Reuteman Review Letter mrt.docx

CERTIFIED SURVEY MAP NO. _____

ALL OF LOT 1 OF CSM 6874, AND LANDS BEING PART OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4, AND THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 OF SECTION 35, TOWNSHIP 8 NORTH, RANGE 18 EAST, TOWN OF MERTON, WAUKESHA COUNTY, WISCONSIN



DATED THIS 30TH DAY OF SEPTEMBER, 2022
REVISED THIS 29TH DAY OF JUNE, 2023

PROJ. NO. JAGDA 167416

THIS INSTRUMENT DRAFTED BY ELLIS R. O'CONNELL

CERTIFIED SURVEY MAP NO. _____

ALL OF LOT 1 OF CSM 6874, AND LANDS BEING PART OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4, AND THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 OF SECTION 35, TOWNSHIP 8 NORTH, RANGE 18 EAST, TOWN OF MERTON, WAUKESHA COUNTY, WISCONSIN

NOTES

- All existing drain tiles potentially damaged in creation of this CSM, shall be replaced to maintain proper drainage conveyance
- Waukesha County Shoreland Zoning shown on sheet 1, per Waukesha County G.I.S., lands zoned as B-2
- 0.2% annual chance of Flood Water Surface Elevation, Regulatory Elevation between cross section FR (919.5) and FS (921.5) per Flood Insurance Study (55133CV002C PG20), Published by FEMA dated 11/5/2014, Shown as FEMA Zone X on Sheet 1.
- All visible wells or septic systems within 50' of the boundary of this CSM are shown
- The required setback and offsets listed on this Certified Survey Map may be subject to modification based on the provisions of the Waukesha County Shoreland and Floodland Protection Ordinance
- Vehicular access to C.T.H. K shall be limited to the existing access driveway
- All easements known to surveyor are shown
- Prior to any grading, the land owner is strongly encouraged to contact the State Archeologist

CONSERVANCY AREA RESTRICTIONS

Those areas identified as a Floodplain Preservation Area on Page 1 of 6 of this Certified Survey Map shall be subject to the following restrictions:

- Grading, filling and removal of topsoil or other earthen materials are prohibited, unless specifically authorized by the municipality in which this land is located and, if applicable, the Waukesha County Department of Parks and Land Use, the Wisconsin Department of Natural Resources and the Army Corps of Engineers.
- The removal or destruction of any vegetative cover, i.e., trees, shrubs, grasses, etc., is prohibited, with the exception that invasive, dead, diseased, or dying vegetation may be removed, at the discretion of the landowner, and with approval from the Waukesha County Department of Parks and Land Use-Planning and Zoning Division. Silvicultural thinning, upon the recommendation of a forester or naturalist and with approval from the Waukesha County Department of Parks and Land Use-Planning and Zoning Division, shall also be permitted.
- Grazing by domesticated animals, i.e., horses, cows, etc., is prohibited, unless grazing is conducted in order to manage invasive vegetation and approval is obtained by the Waukesha County Department of Parks and Land Use-Planning and Zoning Division.
- The introduction of plant material not indigenous to the existing environment is prohibited.
- Ponds are prohibited unless designed to enhance the natural environment. Ponds that may be permitted are subject to the approval of the municipality in which they are located and, if applicable, the Waukesha County Department of Parks and Land Use, the Wisconsin Department of Natural Resources and the Army Corps of Engineers.
- The construction of buildings is prohibited.

SURVEYOR'S CERTIFICATE

I, Keith A. Kindred, Professional Land Surveyor hereby certify:

That by the direction of owner, Joe Reuteman, owner, I have surveyed, divided and mapped, all of Lot 1, of Certified Survey Map No. 6874, and lands being a part of the Northeast 1/4 of the Northwest 1/4, and the Northwest 1/4 of the Northeast 1/4, of Section 35, Township 8 North, Range 18 East, in the Town of Merton, Waukesha County, Wisconsin, more particularly described as follows:

Commencing at the North 1/4 corner of Section 35, Township 7 North, Range 18 East; thence North 89°51'55" East, along the North line of the Northeast 1/4 of said Section 35, 116.68 feet to the Point of Beginning; thence continuing along said North line, North 89°51'55" East, 27.82 feet; thence South 00°08'37" East, 33.00 feet; thence North 89°51'55" East, 50.00 feet; thence South 00°08'37" East, 225.52 feet; thence South 89°54'34" West, 50.00 feet; thence South 00°00'37" East, 60.90 feet; thence South 86°35'04" East, 89.16 feet; thence South 14°04'10" West, 87.28 feet to a point on the East line of Lot 1 of Certified Survey Map No. 6874; thence South 14°38'41" West along said East line, 202.75 feet; thence continuing along said East line, South 14°30'01" West, 73.12 feet to the Southeast corner of Lot 1 of Certified Survey Map No. 6874; thence North 84°47'25" West, along the South line of Said Lot 1, 240.83 feet to the West line of said Lot 1; thence North 01°06'24" East, along the West line of Said Lot 1, 603.96 feet to the South line of County Trunk Highway "K" / Lisbon Road; thence North 89°51'15" East along said South line, 83.82 feet; thence North 89°49'54" East, continuing along said South line, 109.05 feet; thence North 09°45'45" East, 50.73 feet to the Point of Beginning.

Said lands contain 173,600 square feet, 3.99 acres.

That I have made such survey, land division and plat by the direction of Joe Reuteman, owner of said lands.

That such survey is a correct representation of all the exterior boundaries of the lands surveyed and the division thereof made.

That I have fully complied with the provisions of Chapter 236.34 of the Wisconsin Statutes, The Town of Merton, the Village of Hartland and Waukesha County in surveying, dividing and mapping the same.

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Dated this 30th day of September, 2023.
Revised this 29th day of, 2023

SEH

Keith A. Kindred, PLS 2082

CERTIFIED SURVEY MAP NO. _____

ALL OF LOT 1 OF CSM 6874, AND LANDS BEING PART OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4, AND THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 OF SECTION 35, TOWNSHIP 8 NORTH, RANGE 18 EAST, TOWN OF MERTON, WAUKESHA COUNTY, WISCONSIN

BASEMENT RESTRICTION - GROUNDWATER

This Certified Survey Map is located in an area with mapped soils known to have seasonal high ground water. The Waukesha County Shoreland and Floodland Protection Ordinance currently requires that the lowest level of any principal building must be at an elevation that is at least one (1) foot higher than the highest seasonal ground water level, unless a variance from that requirement is obtained from the Waukesha County Board of Adjustment. Therefore, additional soil testing in the vicinity of any proposed principal building will be required to ensure compliance with this requirement regarding vertical separation distance from the highest seasonal groundwater level is modified by future amendment to the Waukesha County Shoreland and Floodland Protection Ordinance, the requirement at the time of construction shall apply. All ground separation requirements set forth by the Town of Merton must also be complied with.

OWNER'S CERTIFICATE

I, Joe Reuteman, as owner, hereby certify that I caused that land described on this Certified Survey Map to be surveyed, dedicated, divided and mapped as represented on the Certified Survey Map. I also certify that this Certified Survey Map is required by s.236.10 or s.236.12 to be submitted to the following for approval or objection: 9

1) Town of Merton
2) Village of Hartland 10
3) Waukesha County

Date:_____ Signed: _____

Joe Reuteman 8 - comments spell his name incorrectly, CSM is correct

STATE OF _____)
_____ COUNTY) SS

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

_____
Notary Public

_____ County, Wisconsin

My Commission Expires _____

SEH

DATED THIS 30TH DAY OF SEPTEMBER, 2022
REVISED THIS 29TH DAY OF JUNE, 2023

CERTIFIED SURVEY MAP NO. _____

ALL OF LOT 1 OF CSM 6874, AND LANDS BEING PART OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4, AND THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 OF SECTION 35, TOWNSHIP 8 NORTH, RANGE 18 EAST, TOWN OF MERTON, WAUKESHA COUNTY, WISCONSIN

CONSENT OF CORPORATE MORTGAGEE

_____, a corporation duly organized and existing under and by virtue of the laws of the State of _____ mortgagee of the above described land, does hereby consent to the surveying, dividing and mapping of the land described on this plat, and does hereby consent to the above certificate of Joe Reuteman. 8

IN WITNESS WHEREOF, said _____ has caused these presents to be signed by _____, its _____, and countersigned by _____, its _____ at _____, _____, and its corporate seal to be hereunto affixed this _____ day of _____, 20 _____.

_____ _____

_____ _____

STATE OF _____)
_____ COUNTY) SS)

Personally came before me this _____ day of _____, 20 _____, the above named _____, _____, and _____, _____ of the above named, to me known to be the persons who executed the foregoing instrument, and to me known to be such _____ and _____ of said corporation, and acknowledged that they executed the foregoing instrument as such officers as the deed of said corporation, by its authority.

(Notary Seal) _____

Notary Public, _____,

My commission expires_____.

SEH

DATED THIS 30TH DAY OF SEPTEMBER, 2022
REVISED THIS 29TH DAY OF JUNE, 2023

CERTIFIED SURVEY MAP NO. _____

ALL OF LOT 1 OF CSM 6874, AND LANDS BEING PART OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4, AND THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 OF SECTION 35, TOWNSHIP 8 NORTH, RANGE 18 EAST, TOWN OF MERTON, WAUKESHA COUNTY, WISCONSIN

TOWN OF MERTON - PLAN COMMISSION APPROVAL

Approved by the Plan Commission of the Town of Merton on this _____ day of _____, 2023.

_____ Date

_____ Tim Klink, Chairman

_____ Date

_____ Holly Class, Deputy Clerk of Secretary

TOWN OF MERTON - TOWN BOARD APPROVAL

Approved by the Town Board of the Town of Merton on this _____ day of _____, 2023.

_____ Date

_____ Donna Hann, Town Clerk

_____ Date

_____ Tim Klink, Town Chairman

WAUKESHA COUNTY DEPARTMENT OF PARKS AND LAND USE

The above, which has been filed for approval as required by Chapter 236 of the Wisconsin State Statues, is hereby approved on this _____ day of _____, 2023.

_____
Dale R. Shaver, Director

SEH

DATED THIS 30TH DAY OF SEPTEMBER, 2022
REVISED THIS 29TH DAY OF JUNE, 2023

CERTIFIED SURVEY MAP NO. _____

ALL OF LOT 1 OF CSM 6874, AND LANDS BEING PART OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4, AND THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 OF SECTION 35, TOWNSHIP 8 NORTH, RANGE 18 EAST, TOWN OF MERTON, WAUKESHA COUNTY, WISCONSIN

VILLAGE OF HARTLAND EXTRATERRITORIAL PLAN COMMISSION APPROVAL

Approved by the Plan Commission of the Village of Hartland, on this _____ day of _____, 2023.

_____ _____
Date Jeffrey Pfannerstill, Village President

_____ _____
Date Darlene Igl, Village Clerk

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VILLAGE OF HARTLAND EXTRATERRITORIAL VILLAGE BOARD APPROVAL

Approved by the Village Board of the Village of Hartland on this _____ day of _____, 2023.

_____ _____ _____
Date Jeffrey Pfannerstill, Village President

_____ _____ _____
Date Darlene Igl, Village Clerk

SEH

DATED THIS 30TH DAY OF SEPTEMBER, 2022
REVISED THIS 29TH DAY OF JUNE, 2023

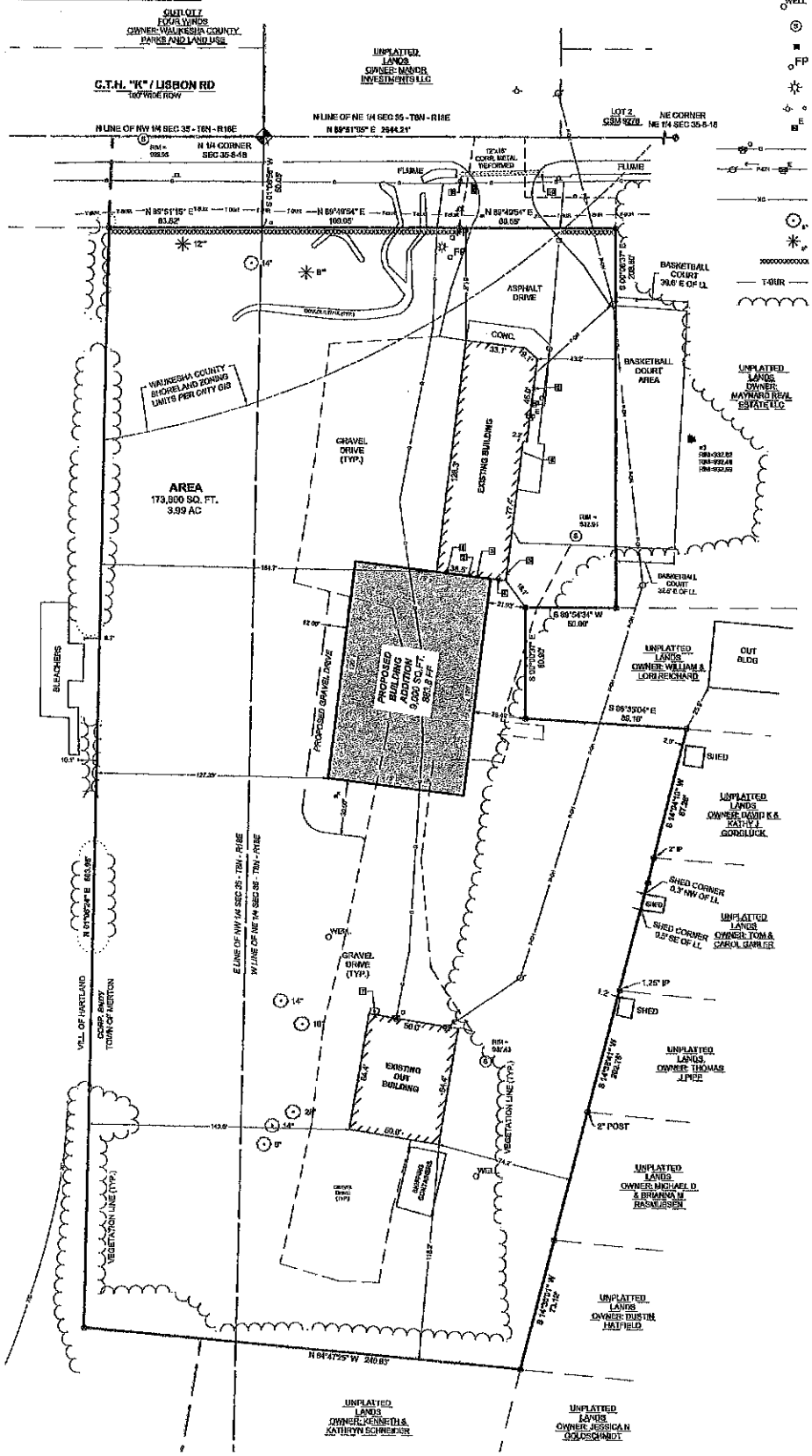
PLAT OF SURVEY

ALL OF LOT 1 OF CSM _____ BEING PART OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4, AND THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 OF SECTION 35, TOWNSHIP 8 NORTH, RANGE 18 EAST, TOWN OF MERTON, WAUKESHA COUNTY, WISCONSIN

POINT NO.	ELEV.	NOTE
1	933.85	OVERHEAD DOOR LEFT
2	933.62	OVERHEAD DOOR RIGHT
3	933.83	OVERHEAD DOOR LEFT
4	933.7	OVERHEAD DOOR RIGHT
5	933.71	ENTRANCE DOOR
6	934.24	ENTRANCE DOOR
7	935.52	ENTRANCE DOOR
8	934.30	ENTRANCE DOOR
9	932.13	INVERT ELEVATION
10	934.04	INVERT ELEVATION

LEGEND

- CONC MONUMENT WITH BRASS CAP FOUND (UNLESS OTHERWISE STATED)
- 1" IRON PIPE FOUND (UNLESS OTHERWISE STATED)
- MAIL BOX
- STREET SIGN
- WELL
- SANITARY MAN HOLE
- CATCH BASIN / INLET
- FLAG POLE
- LIGHT
- HYDRANT & CURBSTOP
- ELEQTRIC BOX
- UNDERGROUND GAS LINE & METER
- OVERHEAD POWER LINE, POWER POLE, GUY WIRE & METER
- CHAIN LINK FENCE LINE
- DECIDUOUS TREE W/ DIAMETER
- CONIFEROUS TREE W/ DIAMETER
- RESTRICTED VEHICULAR ACCESS
- BURIED TELEPHONE LINE
- VEGETATION DRIP EDGE



NOTE

- ANNOTATION SHOWN IN *ITALICS* INDICATE PROPOSED

SURVEYOR
KEITH A. KINDRED, PLS S-2082
SEH, INC.
501 MAPLE AVE
DELAFIELD, WI 53018
(262) 370-0165
KKINDRED@SEHINC.COM

SURVEY FOR
JOE REUTEMAN
N55W29605 COUNTY ROAD K
HARTLAND, WI
(262) 328-1063
JOE@MIDCITYSPORTS

BEARINGS AND DISTANCES REFERENCED TO STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, GRID NORTH ON THE NORTH LINE OF THE NORTHEAST 1/4, AS N 89°51'55" E, SECTION 35-8-18, NAD83, NAVD88

30 0 30 60 feet

ALL OF LOT 1 OF CSM _____ BEING PART OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4, AND THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 OF SECTION 35, TOWNSHIP 8 NORTH, RANGE 18 EAST, TOWN OF MERTON, WAUKESHA COUNTY, WISCONSIN

PLAT OF SURVEY

SEH

PATH: R:\CIVIL\MIDCITY\160164\9-SURVEY\92-CAD\10-CSM\MDCS 160164 SITE PLAN.DWG

SEH PROJECT: MDCS 160164
DRAWN BY: BRD
CHECKED BY: KAK

DAVID K & KATHY J GODGLUCK
REVOCABLE LIVING TRUST
W294N5553 MERTON AVE
HARTLAND, WI 53029-1249

KYLE BANKS AND KRISTIN BANKS
N56W29446 COUNTY ROAD K
HARTLAND, WI 53029-1104

MANDR INVESTMENTS LLC
N56W29410 WESTVIEW RD
HARTLAND, WI 53029-8912

MAYNARD REAL ESTATE LLC
W1250 FILMORE RD
RUBICON, WI 53078

MID-CITY PROPERTIES LLC
N68W34240 COUNTY ROAD K
OCONOMOWOC, WI 53066-1314

REUTEMAN/JENTGES PROPERTIES LLC
AND RUTH GEHRING
N68W34240 COUNTY ROAD K
OCONOMOWOC, WI 53066-1314

RICHARD WINKELMAN
N56W29410 WESTVIEW RD
HARTLAND, WI 53029-8912

THOMAS J PIPP
W294N5533 MERTON AVE
HARTLAND, WI 53029

TOM GABLER AND CAROL GABLER
W294N5543 MERTON AVE
HARTLAND, WI 53029

WILLIAM REICHARD AND LORI REICHARD
W355N4971 LAKEVIEW CT
OCONOMOWOC, WI 53066

Village of Hartland

DEPARTMENT OF BUILDING INSPECTION
APPLICATION FOR ARCHITECTURAL BOARD

Job Address 810 River Reserve				
Lot	Block	Subdivision	Key No. HAV	
Owner Dani Kleczka			Phone 262-893-4056	
Address		City	State	Zip
Contractor SJ Pope	Phone 414-861-4139	FAX	E-Mail Address SJPOPEDR@gmail.com	
Address W278 N2757 Rocky Point Rd		City Pewaukee	State WI	Zip 53072

The Architectural Board meets on the THIRD MONDAY of the Month at 7:00 p.m. in the Board Room of the Hartland Municipal Building located at 210 Cottonwood Avenue in the Village of Hartland.

The DEADLINE for filing is FIFTEEN WORKING DAYS PRIOR TO THE MEETING DATE at 4:30 p.m. All of the following information must be received prior to the deadline in order to be placed on the agenda.

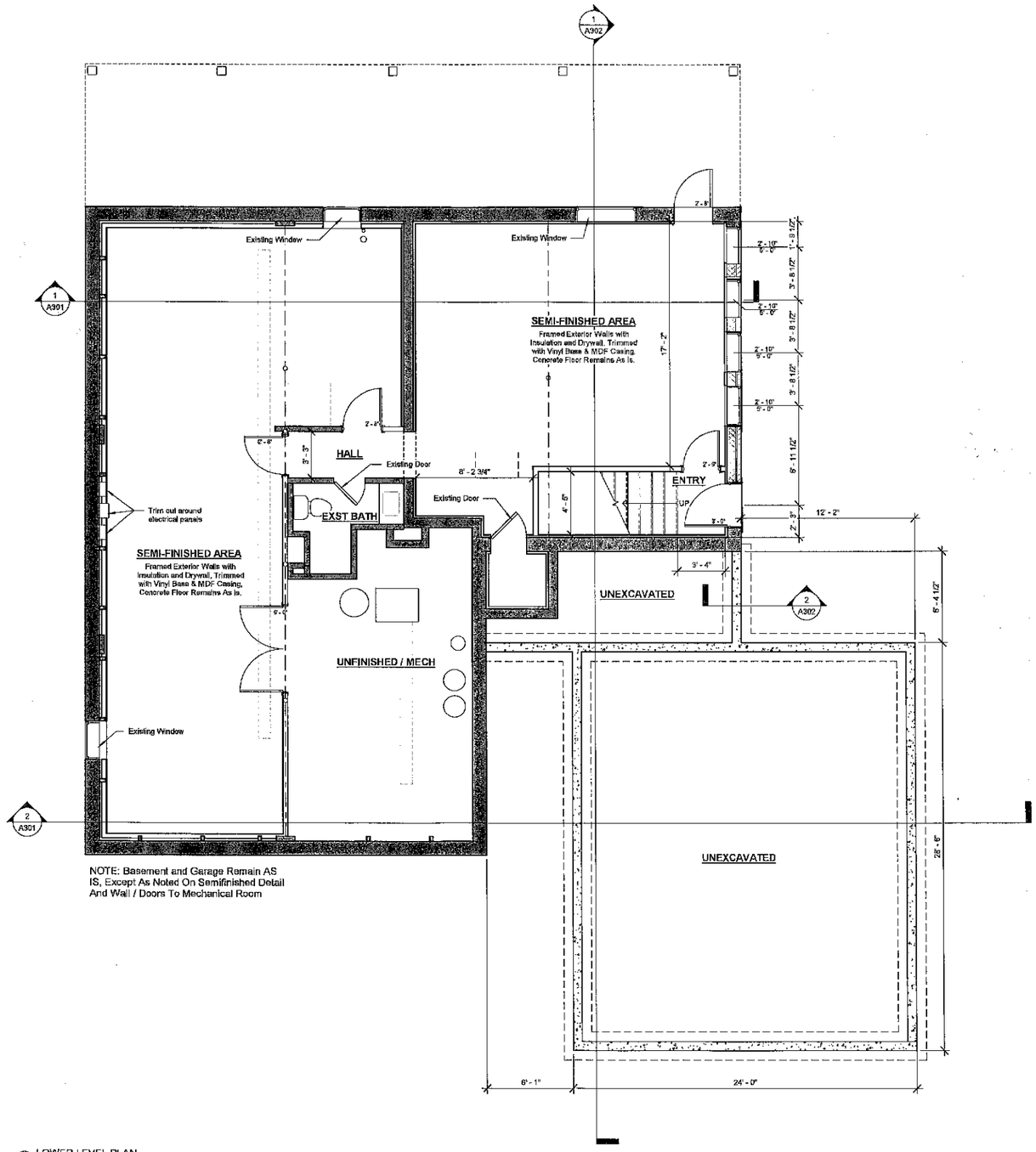
All applications for consideration by the Architectural Board are subject to the policies described in this document.

One & Two Family

- ☐ Four (4) bound sets of construction plans and application material and one (1) electronic copy of all submittals. One set of plans must be stamped "approved by the developer" if required.
- ☐ These plans may be reused to apply for the building permit. Building elevations are all that is necessary to obtain Architectural Board approval. Although it is recommended that complete construction plans along with other building permit application material be submitted in order to begin the permit process as soon as possible after the meeting.
- ☐ Elevations must show all sides of the structure and state the building materials and colors. Additions must be shown with the existing building.
- ☐ Four (4) site plans. These site plans must be detailed and dimensioned and may also be reused to apply for the building permit. One set of site plans must be stamped "approved by the developer" (if applicable).
- ☐ Three (3) plats of survey are required for new dwellings at the time of building permit application.

NOTE: Approval by the Architectural Board is not permission to begin construction; a building permit must first be obtained.

Date Applied: 9-5-23 Date of Meeting: 9/18/23 Item No. 3



NOTE: Basement and Garage Remain AS IS, Except As Noted On Semifinished Detail And Wall / Doors To Mechanical Room

1 LOWER LEVEL PLAN
1/4" = 1'-0"

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810 RIVER RESERVE
HARTLAND, WI

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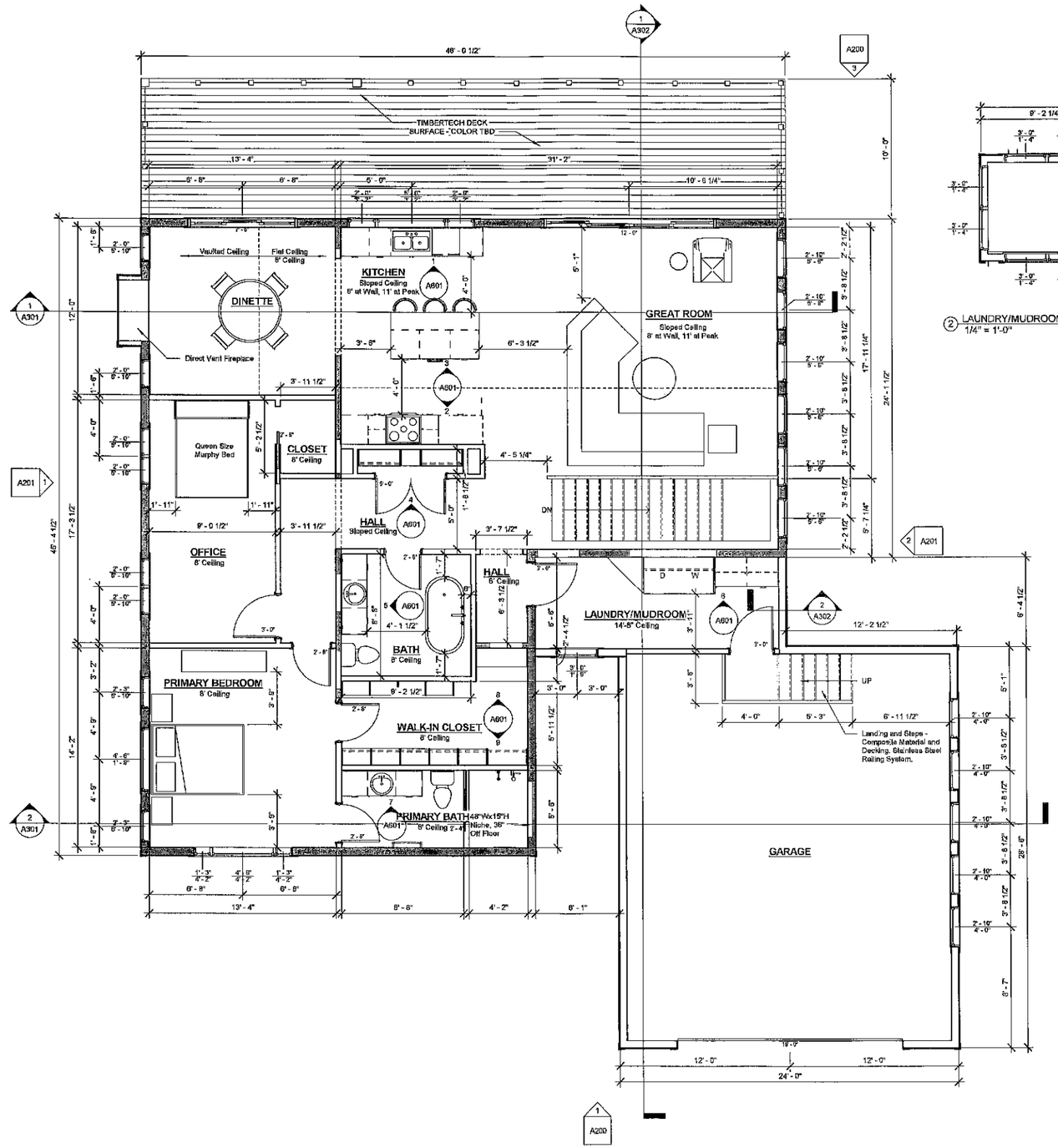
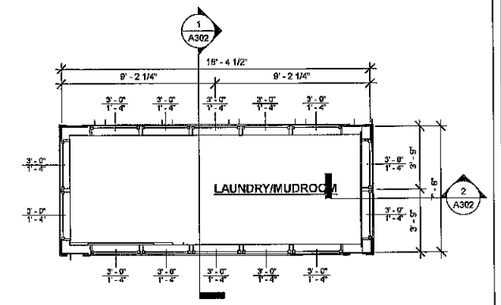
SHEET TITLE:
LOWER LEVEL PLAN

Drawing Scale:	1/4" = 1'-0"
Date:	08-20-2023
SHEET NO:	

A100



1 FIRST FLOOR
1/4" = 1'-0"



2 LAUNDRY/MUDROOM CLERESTORY
1/4" = 1'-0"

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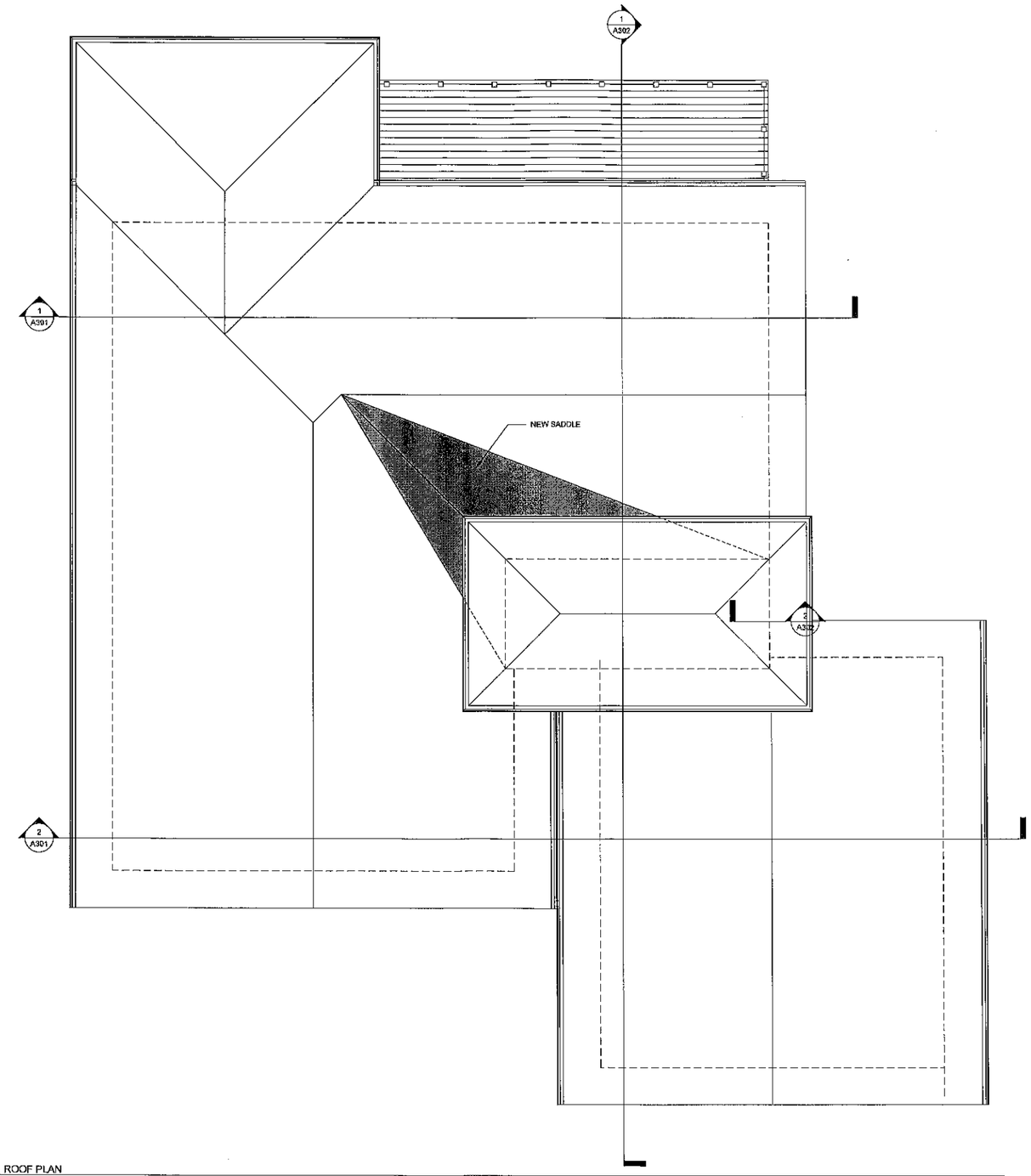
SHEET TITLE:
FIRST FLOOR PLAN

Drawing Scale:	1/4" = 1'-0"
Date:	08-20-2023
SHEET NO:	

A101



1 ROOF PLAN
1/4" = 1'-0"

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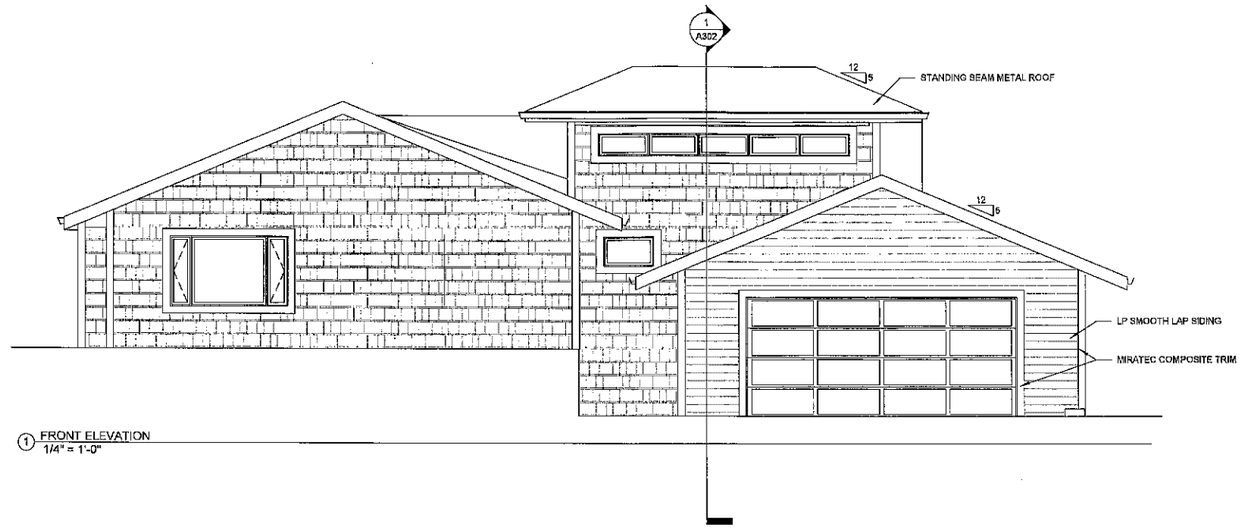
SHEET TITLE:

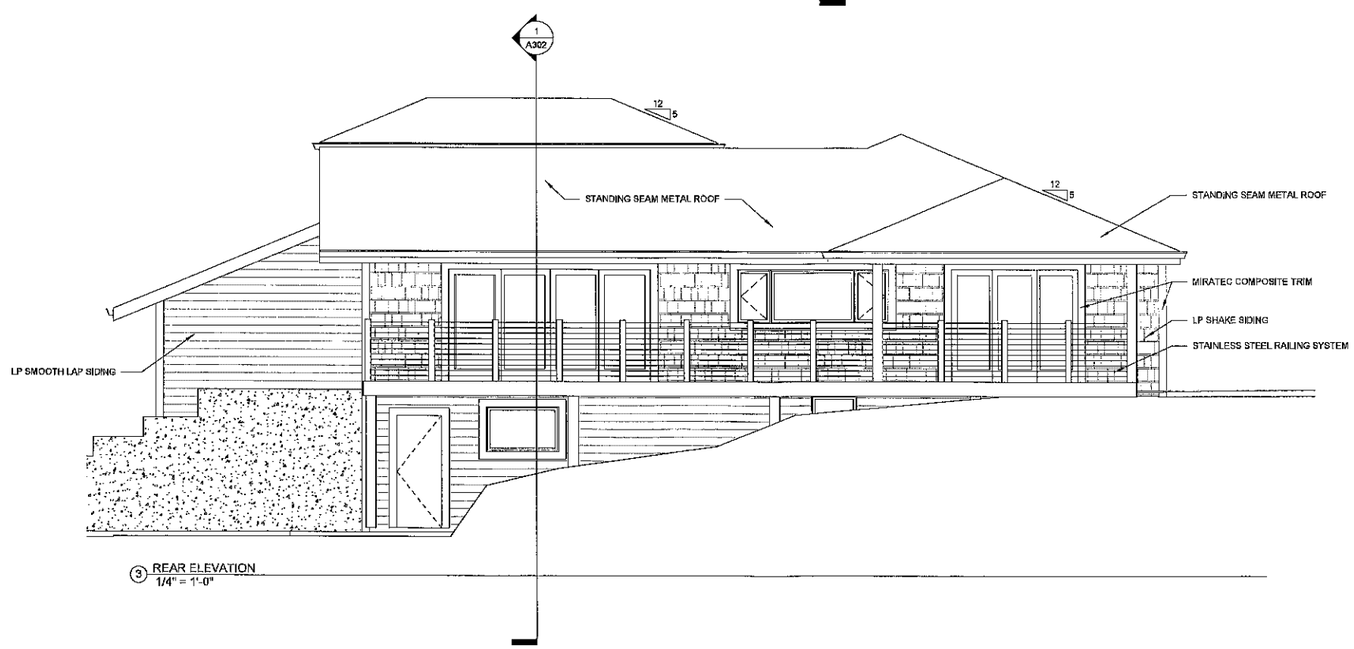
ROOF PLAN

Drawing Scale:	1/4" = 1'-0"
Date:	08-20-2023
SHEET NO:	

A102



1 FRONT ELEVATION
1/4" = 1'-0"



3 REAR ELEVATION
1/4" = 1'-0"

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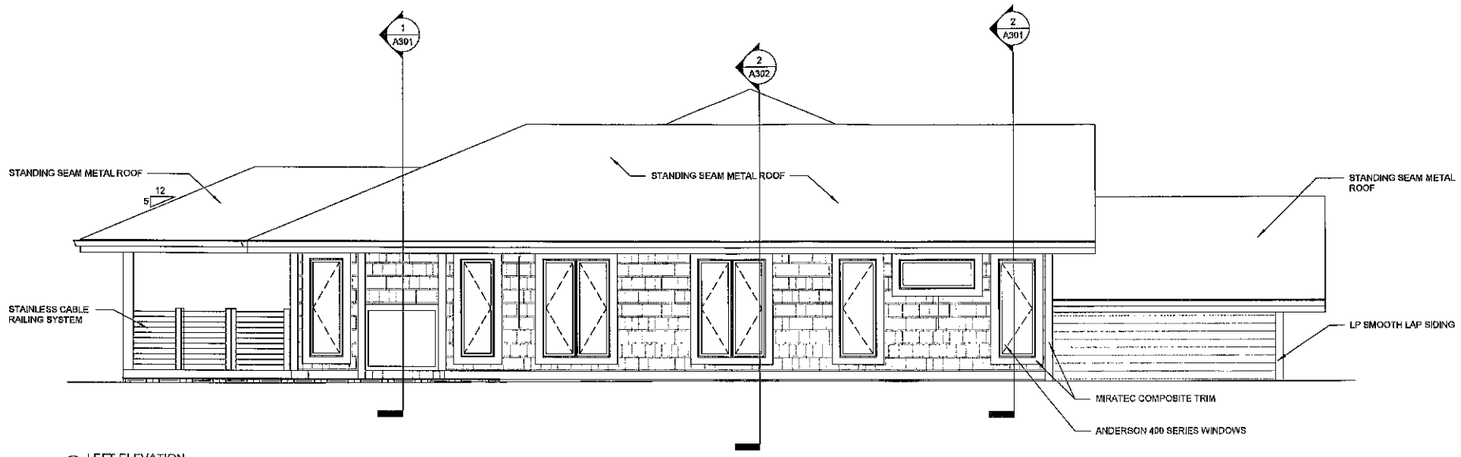
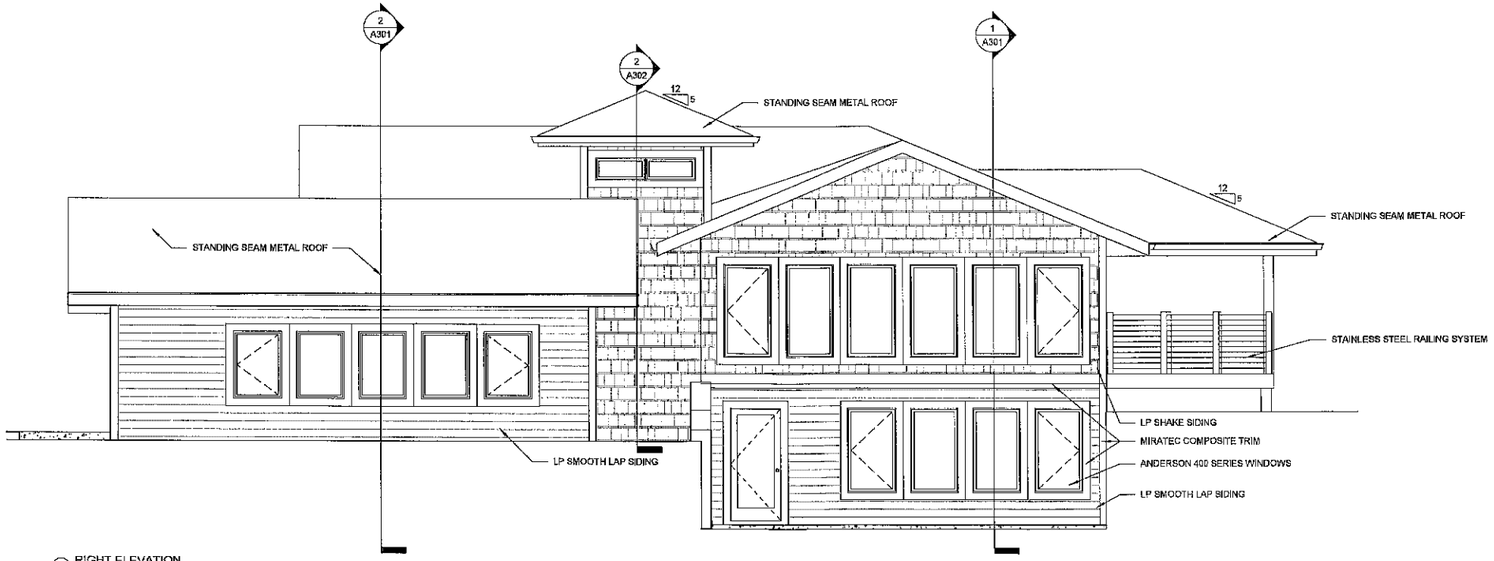
SHEET TITLE:
ELEVATIONS

Drawing Scale:	1/4" = 1'-0"
Date:	08-20-2023

SHEET NO:
A200



1 LEFT ELEVATION
1/4" = 1'-0"



2 RIGHT ELEVATION
1/4" = 1'-0"

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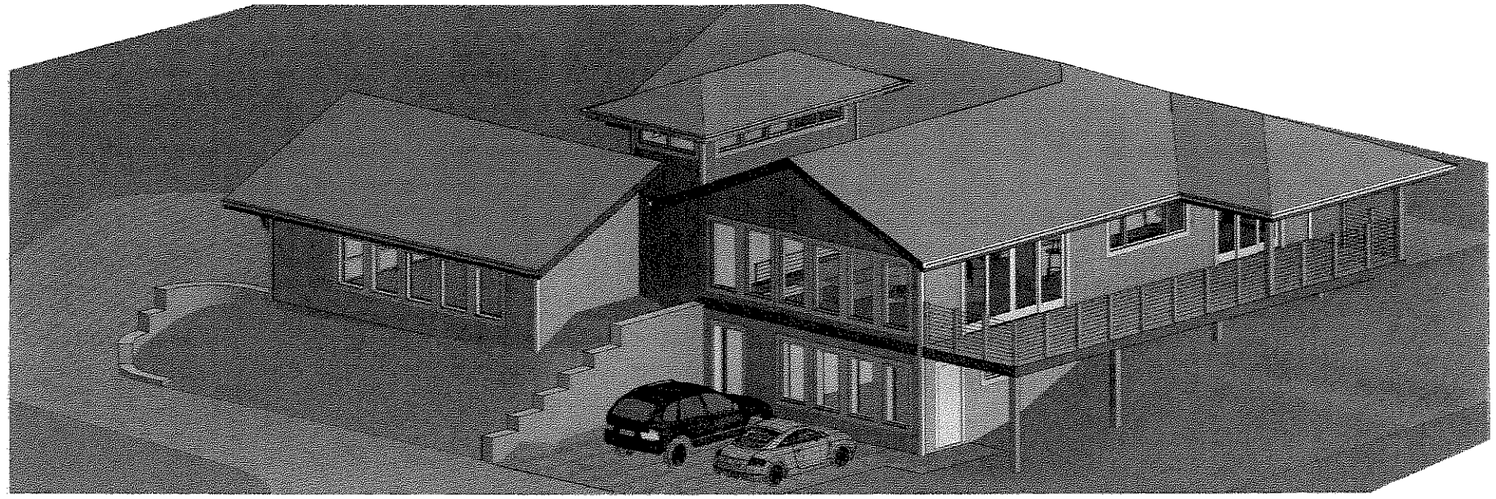
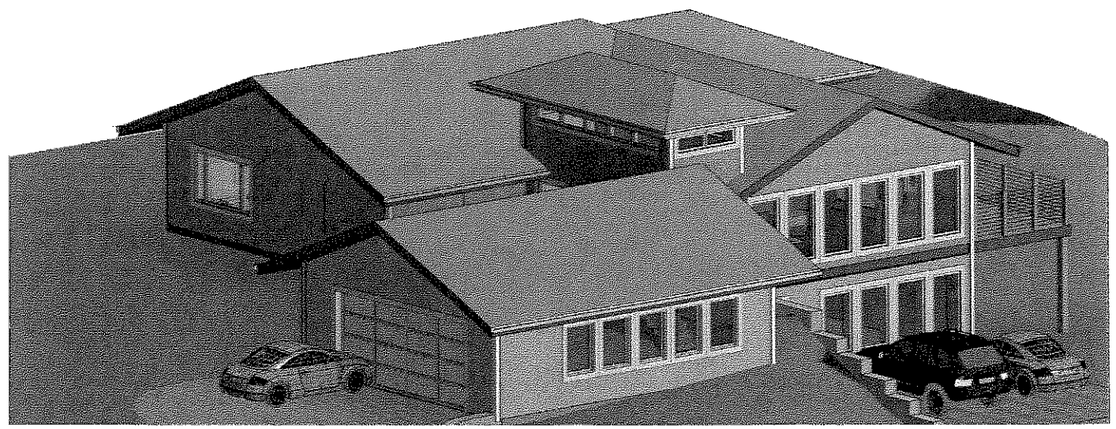
SHEET TITLE:
ELEVATIONS

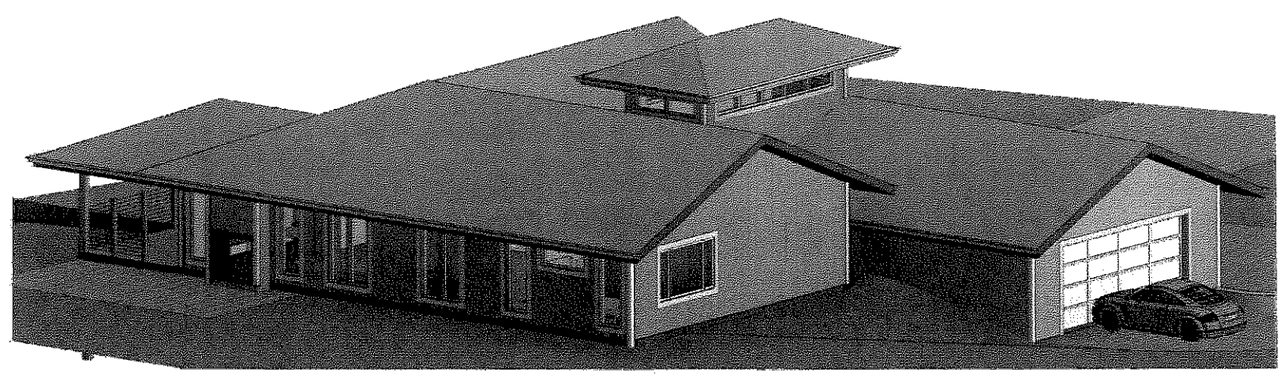
Drawing Scale: 1/4" = 1'-0"
Date: 08-20-2023
SHEET NO:
A201



1 EXTERIOR VIEW 1



2 EXTERIOR VIEW 2



3 EXTERIOR VIEW 3

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SHEET TITLE:

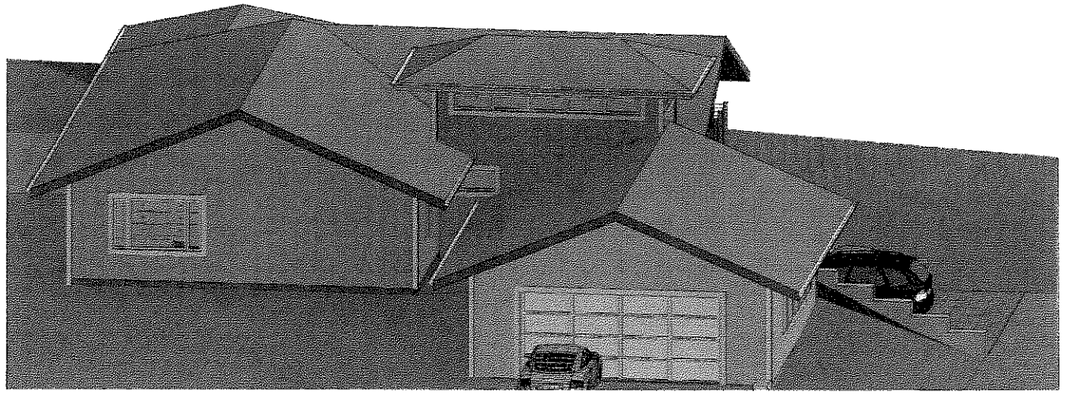
3D IMAGES

Drawing Scale:

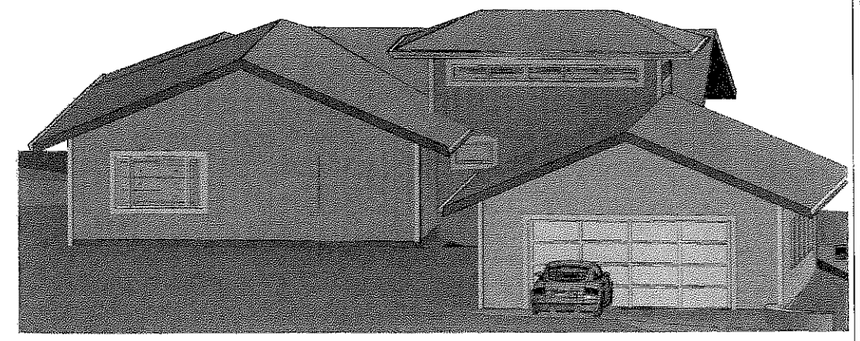
Date: 08-20-2023

SHEET NO:

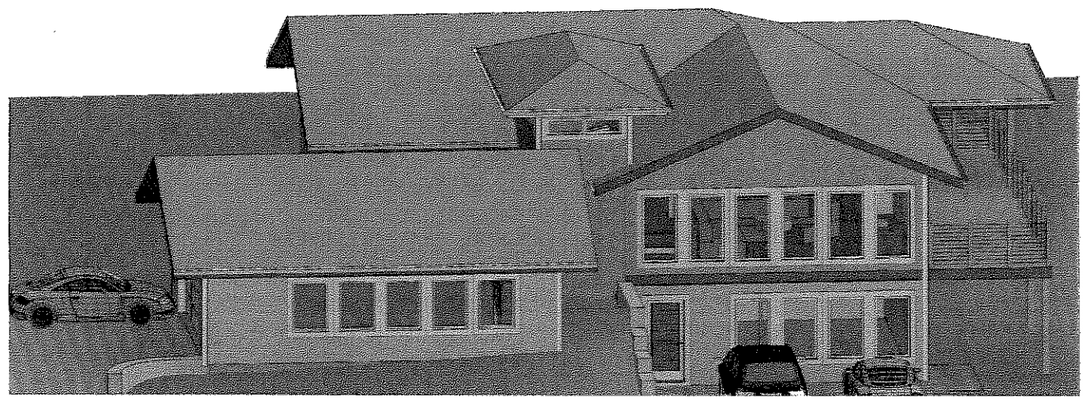
A202



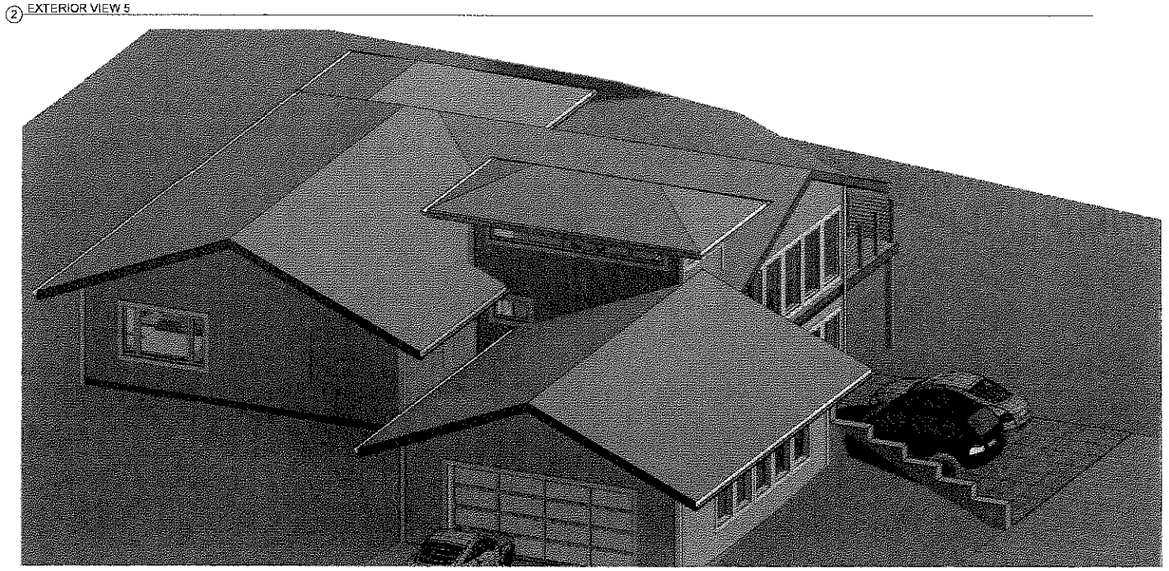
1 EXTERIOR VIEW 4



4 EXTERIOR VIEW 7



2 EXTERIOR VIEW 5



3 EXTERIOR VIEW 6

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SHEET TITLE:

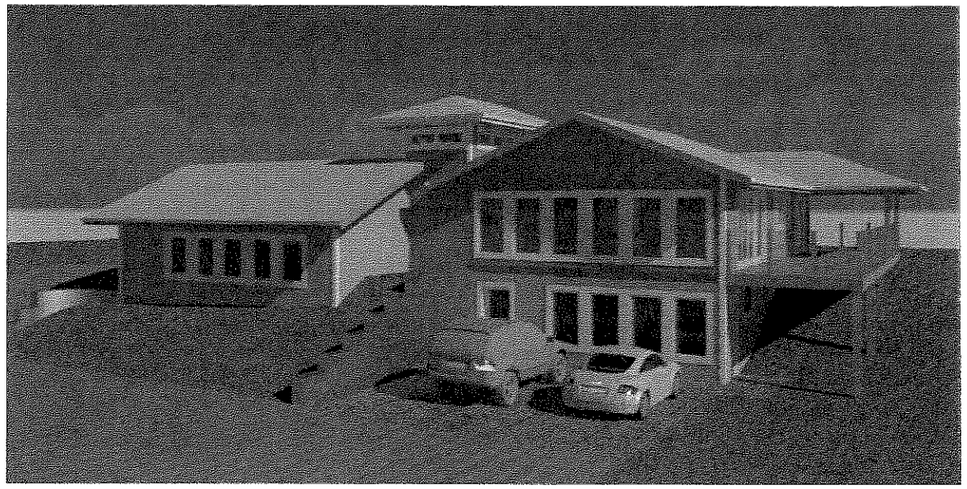
3D IMAGES

Drawing Scale:

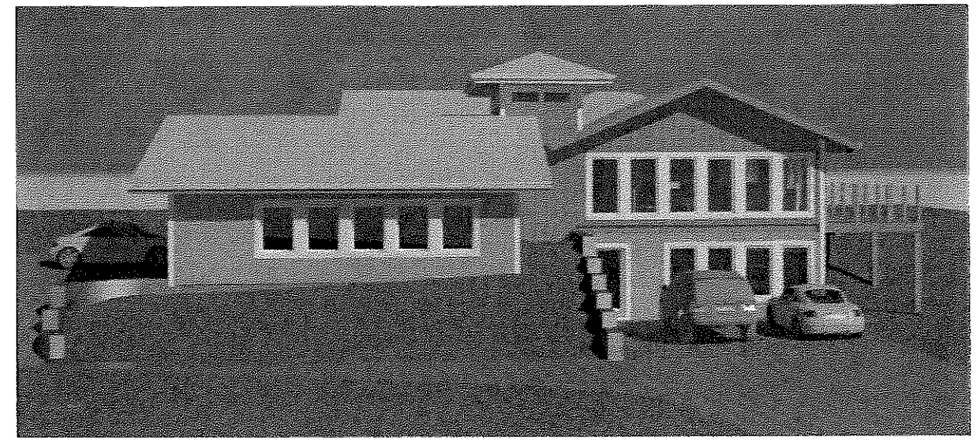
Date: 08-20-2023

SHEET NO:

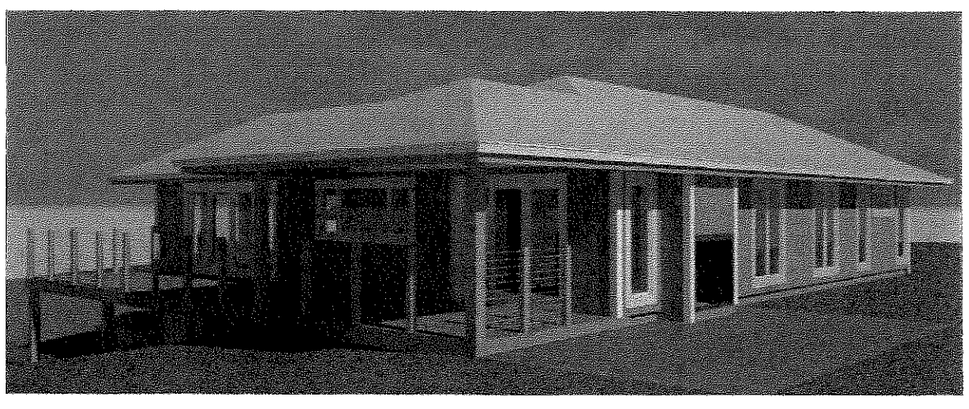
A203



1 3D View 1
12" = 1'-0"



4 3D View 4
12" = 1'-0"



3 3D View 3
12" = 1'-0"

2 3D View 2
12" = 1'-0"

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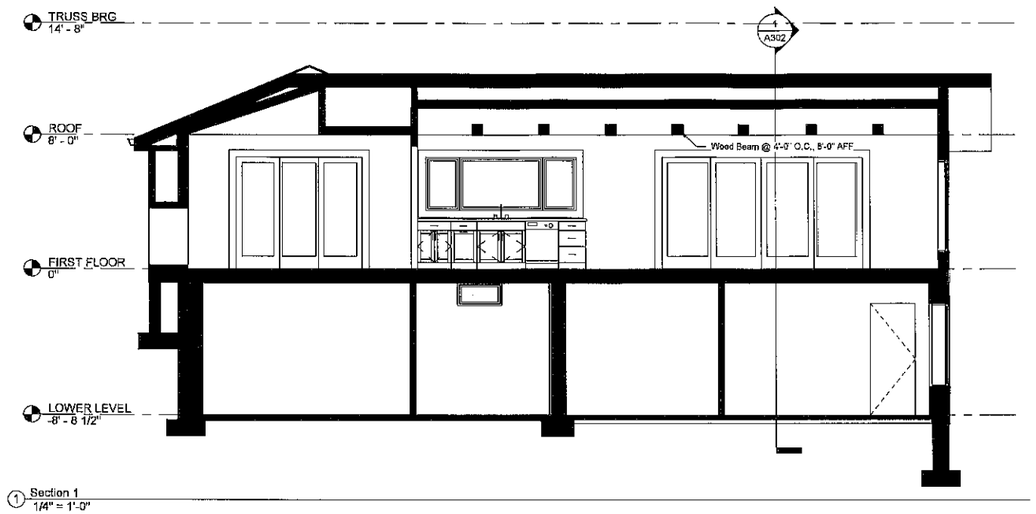
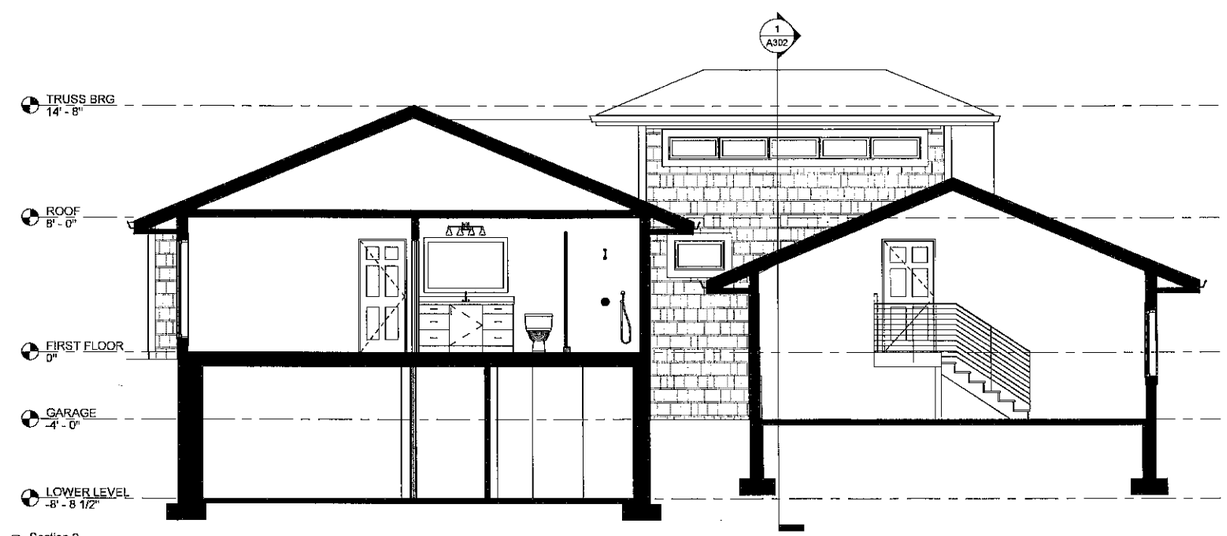
SHEET TITLE:
3D IMAGES

Drawing Scale:	12" = 1'-0"
Date:	08-20-2023
SHEET NO:	

A204



1 Section 1
1/4" = 1'-0"



2 Section 2
1/4" = 1'-0"

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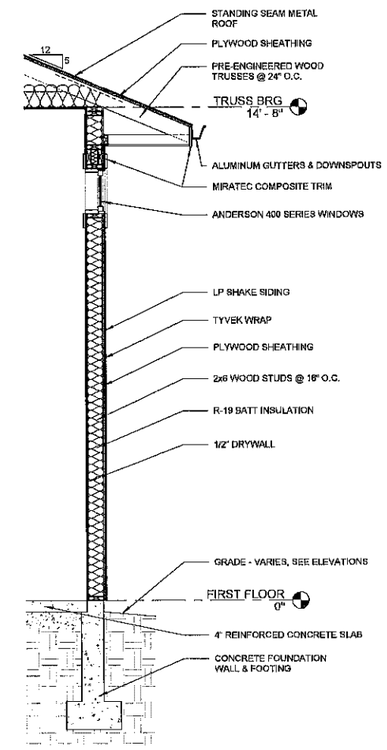
SHEET TITLE:
SECTIONS

Drawing Scale:	1/4" = 1'-0"
Date:	08-20-2023
SHEET NO:	

A301

1 Section 3
1/4" = 1'-0"



2 Wall Section
1/2" = 1'-0"

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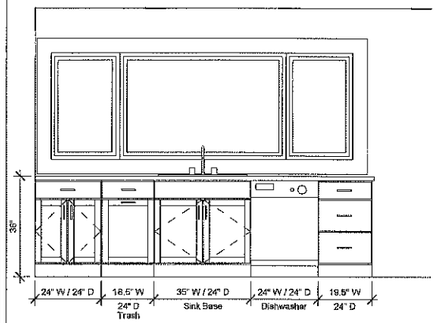
SHEET TITLE:

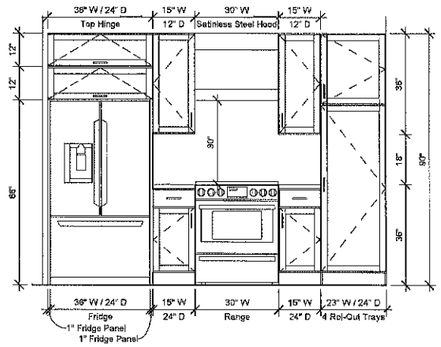
SECTIONS

Drawing Scale:	As Indicated
Date:	08-20-2023
SHEET NO:	

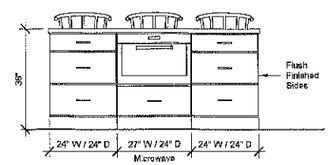
A302



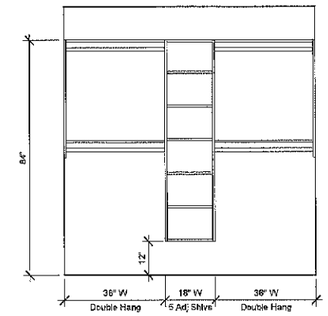
1 KITCHEN - SINK WALL
1/2" = 1'-0"



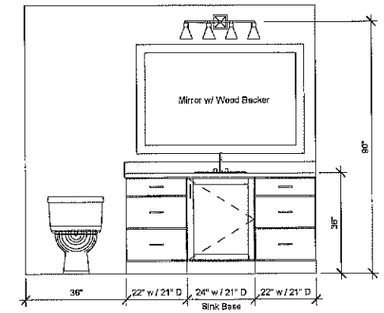
2 KITCHEN - FRIDGE WALL
1/2" = 1'-0"



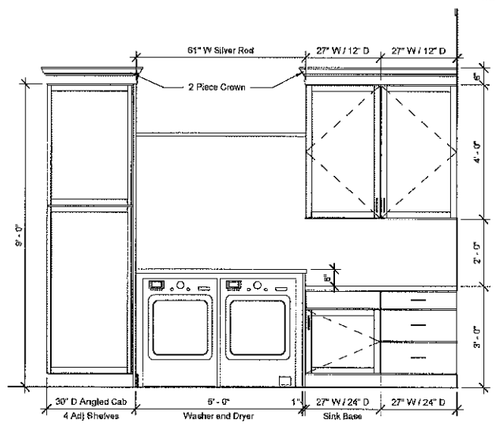
3 KITCHEN - ISLAND (FACING FRIDGE)
1/2" = 1'-0"



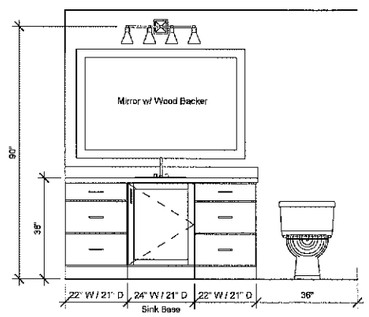
4 COAT CLOSET
1/2" = 1'-0"



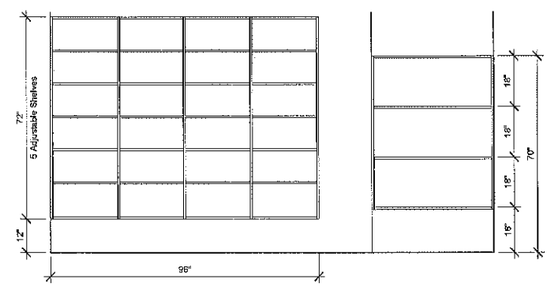
5 UPPER LEVEL - BATH
1/2" = 1'-0"



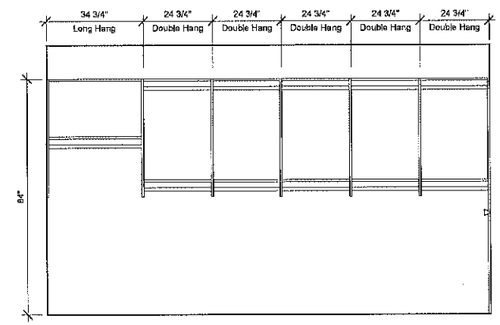
6 LAUNDRY/MUDROOM
1/2" = 1'-0"



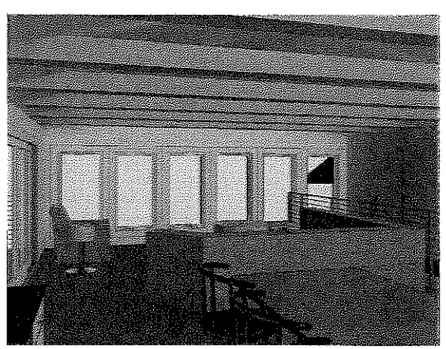
7 PRIMARY BATH
1/2" = 1'-0"



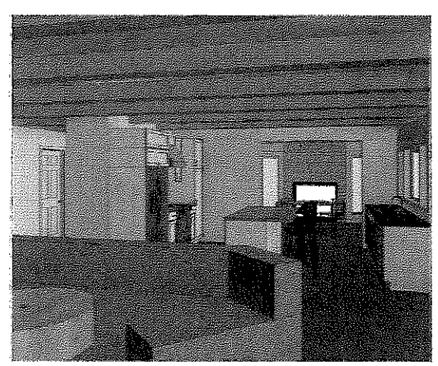
8 PRIMARY BDRM CLOSET 1
1/2" = 1'-0"



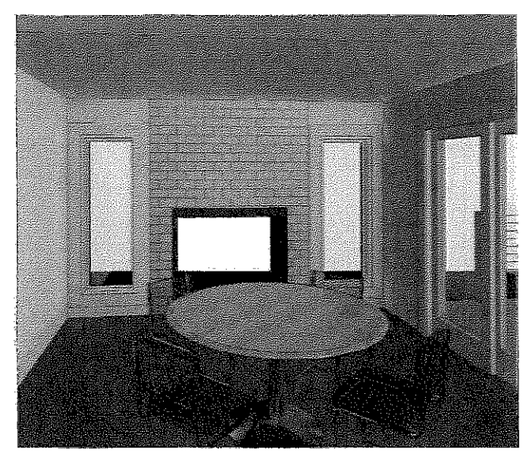
9 PRIMARY BDRM CLOSET 2
1/2" = 1'-0"



10 KITCHEN/GREAT ROOM - VIEW 1



11 KITCHEN/GREAT ROOM - VIEW 2



12 DINETTE

SJ POPE DESIGN & RENOVATIONS

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KLECZKA RESIDENCE

810 RIVER RESERVE
HARTLAND, WI

ALTHOUGH EVERY EFFORT HAS BEEN MADE IN PREPARING THESE PLANS AND CHECKING THEM FOR DIMENSIONAL, STRUCTURAL, AND GENERAL ACCURACY, THE CONTRACTOR AND SUB-CONTRACTORS MUST CHECK ALL DETAILS AND DIMENSIONS OF THEIR TRADE AND BE RESPONSIBLE FOR THE SAME.

SHEET TITLE:
MILLWORK AND ROOM VIEWS

Drawing Scale:	1/2" = 1'-0"
Date:	08-20-2023
SHEET NO:	

A601

MAP WAUKESHA county

810 River Reserve Drive

Legend

- DNR Wetlands < .25 Acre
- DNR Wetlands > .25 Acre
- Municipal Boundary_2K
- Parcel_Dimension_2K
- Note_Text_2K
- Lots_2K
  - Lot
  - Unit
  - General Common Element
  - Outlot
- SimultaneousConveyance
  - Assessor Plat
  - CSM
  - Condominium
  - Subdivision
- Cartoline_2K
  - EA-Easement_Line
  - PL-DA
  - PL-Extended_Tie_line
  - PL-Meander_Line
  - PL-Note
  - PL-Tie
  - PL-Tie_Line
  - <all other values>
- Railroad_2K

0 66.22 Feet

The information and depictions herein are for informational purposes and Waukesha County specifically disclaims accuracy in this reproduction and specifically admonishes and advises that if specific and precise accuracy is required, the same should be determined by procurement of certified maps, surveys, plats, Flood Insurance Studies, or other official means. Waukesha County will not be responsible for any damages which result from third party use of the information and depictions herein, or for use which ignores this warning.

Notes:

Printed: 8/14/2023

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SHEET TITLE:
GIS PLAN

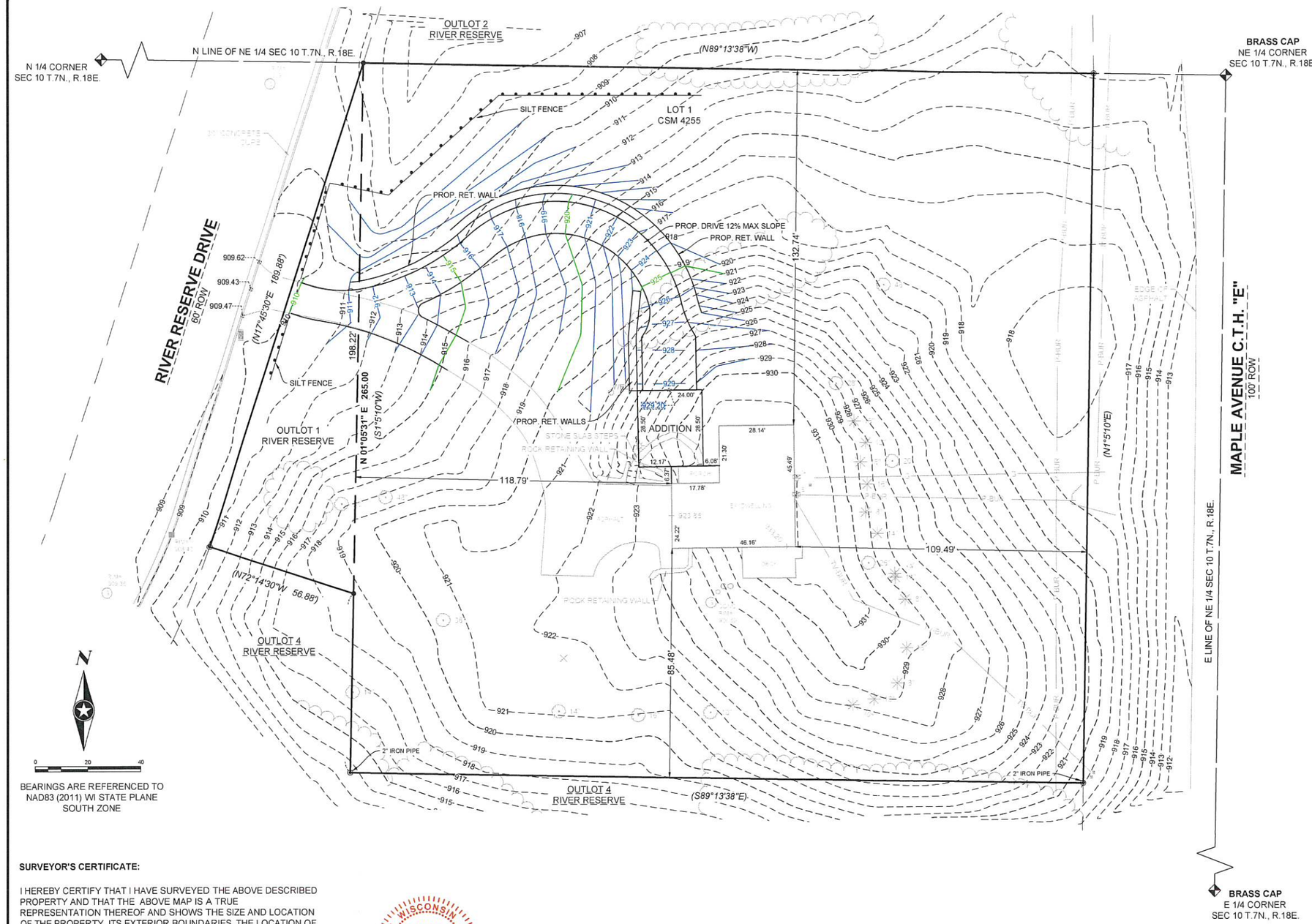
Drawing Scale: 1" = 30'-0"
Date: 08-20-2023
SHEET NO:
A900

PLAT OF SURVEY

BEING ALL OF LOT 1 OF CERTIFIED SURVEY MAP 4255, AND ALL OF OUTLOT 1 OF THE SUBDIVISION PLAT OF RIVER RESERVE, LOCATED IN THE NE 1/4 OF THE NE 1/4 OF SECTION 10 T.7N., R18E., IN THE VILLAGE OF HARTLAND, WAUKESHA COUNTY, WISCONSIN

SURVEYOR:
KEITH A. KINDRED, PLS S-2082
SEH
501 MAPLE AVE
DELAFIELD, WI 53018
(414) 949-8919
KKINDRED@SEHINC.COM

SURVEY FOR:
PETER POPE
4616 N. HEWITTS POINT ROAD
OCONOMOWOC, WI 53066



BEARINGS ARE REFERENCED TO NAD83 (2011) WI STATE PLANE SOUTH ZONE

LEGEND

- 11/16" O.D. REBAR, 18" LNGTH , WT. = 1.13 LBS./LIN. FT. SET (UNLESS OTHERWISE STATED)
- .75" IRON PIPE FOUND (UNLESS OTHERWISE STATED)
- SECTION MONUMENT FOUND AS DESCRIBED
- BM - BENCHMARK
- CATCH BASIN
- CO - CLEAN OUT
- CURB STOP
- CONIFEROUS TREE
- DECIDUOUS TREE
- E P-BUR E - BURIED ELECTRIC, BOX & METER
- FIRST FLOOR ELEVATION
- G G - GAS LINE & METER
- LIGHT
- MB - MAIL BOX
- S - SANITARY MANHOLE
- T-BUR T-BUR T - TELEPHONE LINE & PEDESTAL
- TV - TV PEDESTAL
- WELL - WELL
- VENT PIPE
- TREE LINE

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT I HAVE SURVEYED THE ABOVE DESCRIBED PROPERTY AND THAT THE ABOVE MAP IS A TRUE REPRESENTATION THEREOF AND SHOWS THE SIZE AND LOCATION OF THE PROPERTY, ITS EXTERIOR BOUNDARIES, THE LOCATION OF ALL VISIBLE STRUCTURES AND DIMENSIONS OF ALL PRINCIPAL BUILDINGS THEREON, BOUNDARY FENCES, APPARENT EASEMENTS, ROADWAYS, AND VISIBLE ENCROACHMENTS, IF ANY.

THIS SURVEY IS MADE FOR THE USE OF THE PRESENT OWNERS OF THE PROPERTY, AND ALSO THOSE WHO PURCHASE, MORTGAGE, OR GUARANTEE THE TITLE THERETO WITHIN ONE (1) YEAR FROM DATE HEREOF.

WISCONSIN
KEITH A. KINDRED
S-2082
OSHKOSH, WI
LAND SURVEYOR

AUGUST 30, 2023

SEH PROJECT: SJPOP 174522
DRAWN BY: KGB
CHECKED BY: KAK

PATH: X:\PT\S\SJPOP\174522\9-SURVEY\92-CAD\10-C3D\POS\SJPOP_174522_POS_GRD2.DWG

SEH

PLAT OF SURVEY

BEING ALL OF LOT 1 OF CERTIFIED SURVEY MAP 4255, AND ALL OF OUTLOT 1 OF THE SUBDIVISION PLAT OF RIVER RESERVE, LOCATED IN THE NE 1/4 OF THE NE 1/4 OF SECTION 10 T.7N., R18E., IN THE VILLAGE OF HARTLAND, WAUKESHA COUNTY, WISCONSIN

ALICIA QUINN
304 MANCHESTER LN
HARTLAND, WI 53029-2746

ANTHONY J SCHEFF AND MEGAN D SCHEFF
737 RIVER RESERVE DR
HARTLAND, WI 53029-2912

BENJAMIN M WAGNITZ
300 LINDENWOOD DR
HARTLAND, WI 53029-2749

BROUWER FAMILY REVOCABLE TRUST UTD 02/06/12
11638 SE 196TH ST
DUNNELLON, FL 34431-8732

CYNDEE L THRAVES AND RICHARD H THRAVES
302 LINDENWOOD DR UNIT 2
HARTLAND, WI 53029

DANIELLE KLECZKA
810 RIVER RESERVE DR
HARTLAND, WI 53029-2907

DATKA SERVICES LLC
9111 W 5 MILE RD
FRANKSVILLE, WI 53126-7907

DAVID L RASMUSSEN & RENEE J RASMUSSEN
306 MANCHESTER LN
HARTLAND, WI 53029-2746

DONNA M SOBCZAK REVOCABLE LIVING TRUST
356 MANCHESTER LN
HARTLAND, WI 53029-2746

EDWARD G ZOLINSKI JR & RHONDA L ZOLINSKI
882 RIVER RESERVE DR
HARTLAND, WI 53029

GARY SHIMEK AND MARY SHIMEK
354 MANCHESTER LN
HARTLAND, WI 53029-2746

GENEVIEVE SCUDDER
352 MANCHESTER LN
HARTLAND, WI 53029-2746

JAMES T JOYCE
350 MANCHESTER LN
HARTLAND, WI 53029

JOSHUA DAVISON AND KARI DAVISON
312 HARTRIDGE DR
HARTLAND, WI 53029-2404

MAPLE COURT OF HARTLAND LLC
N75W28587 STILLWATER CT
HARTLAND, WI 53029-8100

MARC WOLFGRAM AND TAMMARA WOLFGRAM
735 RIVER RESERVE DR
HARTLAND, WI 53029

MARK WIDMANN AND JOAN WIDMANN
884 RIVER RESERVE DR
HARTLAND, WI 53029

MONTE ROSE AND LYNN ROSE
PO BOX 611
HARTLAND, WI 53029

Ruekert·Mielke W233 N2080 Ridgeview Parkway, Waukesha, WI 53188-1020 262-542-5733

MEMO

TO: Ryan Bailey, Village Manager

FROM: Ryan Amtmann, Village Engineer

DATE: September 12, 2023

SUBJECT: Kwik Trip Development

BASIC INFORMATION	
Project Name	Kwik Trip
Applicant Name	Jeff Osgood/Troy Mleziva
Consulting Planner and/or Engineer	REI Engineering
Existing Zoning	Q-1 Quarry/Extractive
Requested Zoning	B-2
Address/Abbreviated Legal	Tax Key HAV 0730950
Comprehensive Land Map Designation	Utility

ADJACENT LAND USE/ZONING MATRIX		
Direction	***Land Use***	***Zoning***
North	Single-Family Residential Med Density (City of Delafield)	City of Delafield
South	Quarry	Q-1
East	Current Quarry/Pending Single-Family Residential Med Density	Current Q-1/Pending RS-5
West	STH 83	N/A

Background

Kwik Trip purchased a 5.38-acre piece of land from the Wisconsin Department of Transportation during 2022. Kwik Trip presented a concept plan to the Plan Commission (11/21/2022) and Village Board (12/12/2022) for a 12,000 square foot store, car wash and fueling canopies. The Plan Commission and Village Board both moved forward with the concept plan. Kwik Trip has been working over the last 8 months on the design of their site plans. Kwik trip has been coordinating with Three Leaf Development group and prepared a joint TIA that accounts for both the Kwik Trip and Quarry Redevelopment projects. More recently, the Kwik Trip and Quarry development teams facilitated a joint meeting with Village staff to discuss W. Capitol Drive roadway upgrades. Kwik Trip has submitted updated site plans for PC/Arch Board review on September 18, 2023.

The existing site is zoned Q-1, is 5.38 acres in size and currently is a vacant lot. This site is characterized as a new development.

Submitted Materials

Development group has submitted the following information:

1. Application for Plan Commission – dated 8/28/2023.
2. Architectural Board Application – dated 8/28/2023.
3. Petition for Land Division (CSM) – dated 8/28/2023.
4. Petition for Rezoning – dated 8/28/2023.
5. Petition for Conditional Use – dated 8/28/2023.
6. Cover Letter – Project Description & Narrative - dated 8/28/2023.
7. Preliminary CSM (4 pages), prepared by RA Smith – dated 11/29/2022.
8. Civil Plans (29 pages), prepared by REI – dated 8/17/2023.
9. Stormwater Management Plan (114 pages), prepared by REI – dated 8/18/2023.
10. Sign Plan (12 pages) – dated 8/30/23.
11. Landscape and Lighting (see Civil Plans)

Village Staff Comment

Village staff has met to review the applicant's submittal. The following are Village staffs' initial comments:

- Has Phase 1, 2 Environmental Review been completed? Provide copy to Village.
- Site plan indicates a lot area of 234,283 sq ft = 5.378 acres.
- Proposed impervious surface area of 105,272 sq ft = 44.93% of lot area.

B-2 Zoning

- 46-444(3) allows gasoline service stations as a conditional use in the B-1 District.
- 46-469(1) allows all B-1 conditional uses in the B-2 – as a conditional use.
- Minimum lot area is 20,000 sq ft within a minimum 5-acre B-2 district. OK
- Minimum lot width is 100ft. OK
- Maximum allowable building height is 45 feet. The proposed height is 20 feet. OK
- Maximum allowable FAR (floor area ratio) is 30%.
    - The total roofed area must be less than 70,284 sq ft. Appears to comply.
- Minimum setbacks: 30' ROW, 25'Rear, 10' Each Side. Building OK.
    - Fuel canopies must comply with minimum setbacks. Canopies OK.

Pylon Sign per 46-980(5):

- Maximum Height is 20 feet above grade.
    - Ground grade at proposed sign is elevation 997.
        - Maximum allowable height to top of sign is 997 + 20' = elevation 1017.
        - Proposed top of 30-foot-tall sign is 997 + 30' = elevation 1027.
- Maximum size is 35 sq ft. 135.9 sq ft proposed.
- Sign must be located at least 15 feet from any ROW. Proposed is 21 feet. OK.
- *Village sign code doesn't support proposed Kwik Trip pylon signage. Project and site are unique and might be better as a Planned Unit Development.*

Requires the following Village approvals:

- Architectural Review Board
- Plan Commission -Site and building plan review.
- CSM
- Rezone (to B-2)
- CUP
- PUD – if pylon sign of greater height of 20 feet or area of 35 sq ft is requested
- Future Land Use Amendment – from Utility to Commercial
- Village Erosion Control permit
- Village Storm Water permit
- Village Right-of-Way permit
- Village Building permit

W. Capitol Drive Roadway Improvements:

Three Leaf Development and Kwik Trip facilitated a call on Sept. 5, 2023, with Village staff to discuss the requirements for coordinated improvements on W. Capitol Drive. The author of the TIA was present on the call. The TIA was an abbreviated TIA which incorporate existing traffic patterns and volumes and added on top of that the addition of Kwik Trip and a 400-unit multi-family development in the Quarry. The actual proposed quarry development will have 267 units, so the TIA is conservative. The TIA does not include the addition of future growth.

The TIA warrant analysis for a left-turn lane into the south driveway for Kwik Trip shows a left-turn lane is not warranted. However, the TIA author stated that, "it is always safer, better and helpful" with the addition of a left turn lane. Village staff recommend that the addition of a left-turn lane into the Kwik Trip southerly driveway be installed.

The following is the scope of W. Capitol Drive improvements that Village staff have provided to Three Leaf Development and Kwik Trip:

- Would be best to have one engineering firm handle the design of updates to W. Capitol Drive and to coordinate between Kwik Trip and Three Leaf. Three Leaf will facilitate the design/improvements in coordination with Kwik Trip.
- 30-inch curb and gutter for both east and west side from Vettleson to Palmer.
- Right turn lane into Kwik Trip north entrance. This driveway shall be open to cars and trucks in and restricted to cars out. Grading is needed to establish a vision triangle.
- Left turn lane into Kwik Trip at south entrance in northbound direction. The southerly driveway shall be open to cars and trucks.
- Sidewalk on Quarry side from Vettleson to Palmer.
- Sidewalk on Kwik Trip side from Vettleson to south driveway.
- Cross walk with ADA compliant curb ramps at Vettleson on the north side of the intersection.
- Cross walk with ADA compliant curb ramps at Palmer on the south side of the intersection. Connect to the Kwik Trip internal sidewalk.
- Village desires push button actuated cross walk signs at both cross walks. (solar only or solar and electric?? TBD)

- Three street light poles desired: east side of W. Capitol at Vettleson and Palmer cross walks; west side of W. Capitol at Kwik Trip south entrance.

- Storm sewer main and inlets needed at proper spacing for 10-year storm event.

- Review layout for left turn lane into Kwik Trip. Does it make sense to have a left turn lane into Quarry driveway or extend the left turn lane into Kwik Trip into a Twiddle (two way left turn lane) if pavement width exists?

- "Pork chop" raised curb island needed at Vettleson/W Capitol intersection in eastbound direction.

- Preference will be to mill/overlay entire width of road and restripe for consistent look and reducing long-term maintenance.

- What is the impact of the W. Capitol Drive roadway improvements on the regional storm water management? With curb/gutter/storm inlets/main will the flow rates change significantly to the existing storm sewer along Vettleson? Is there a need for flow control near Vettleson/W. Capitol?

<u>CSM:</u>

- Preliminary CSM is drafted by RA Smith and dated November 29, 2022.

- Alta Survey is drafted by RA Smith and dated August 25, 2022.

- Three Leaf Development had its surveyor, Chaput Land Surveys, complete an Alta Survey (dated January 10, 2023) and draft CSM (dated June 15, 2023) for the quarry property adjacent to and east of W. Capitol Drive.

    - This information could be available to Kwik Trip's surveyor to review for any discrepancies along the W. Capitol Drive corridor as they finalize the CSM.

- The CSM calls out "variable width public R.O.W."

    - Where are the limits of Village of Hartland, State of Wisconsin and City of Delafield rights-of-way?

- On page 4, change the name of the Village Clerk to "Sandee Policello".

Civil Plans

Alta Survey (sheets 1-3):

- Where are the limits of Village of Hartland, State of Wisconsin, and City of Delafield rights-of-way? Show/label on the Alta Survey.

Demo Plan (SPO):

- Plan calls for the existing 18-inch storm sewer to be removed, as well as storm sewer along Vettleson Road. Doesn't the storm outfall go into the existing storm sewer westerly along Vettleson Road?

- Update to incorporate pending W. Capitol Drive roadway design.

Site Plan (SP1)

- Update to incorporate pending W. Capitol Drive roadway design.

- Incorporate sidewalk from cross walk at Palmer.

- Commercial driveway maximum width is 32 feet. 41-foot width proposed – needs Plan Commission approval.

- Is there any semi parking provided? Where, how many?

Grading Plan (SP2/SP2.1/SP2.1.2)

- Update to incorporate pending W. Capitol Drive roadway design.

- Show elevation information at center of STH 83 at W. Capitol drive and notate proposed pylon sign height from center line of highway and from proposed ground grade at sign.

- A proposed retaining wall exists with a maximum height of 16.5 feet. Provide details for retaining wall type, design, drainage and provide a railing along the top of the wall. Wall design needs to be stamped by a Wisconsin Licensed Structural Engineer.

- Pull contours into site to allow for vision along right turn lane into northerly driveway.

- Incorporate connection sidewalk to Palmer cross walk.

Utility Plan (SP4)

- Utilize 6-inch water service and connect to main with live tapping sleeve, flange by mechanical joint valve, stainless steel bolts.
- Show sizes of existing sanitary and water mains.
- Core drill existing sewer manhole and bench, install a Kor n Seal rubber boot.
- Where does the car wash drain to?

Erosion Control Plan (SWP1):

- Need more specificity regarding staging, phasing, grading, slope stabilization, diversion swales/berms, sediment basin. Based on the size of the side and steep slopes the sediment basin risks being blown out under a significant rain fall.
- Plan calls for 15-20 feet of fill to be removed from the site. Where will the material be hauled to?
- Downstream tributary is likely Bark River, not Pine Lake.
- All pond slopes shall be erosion matted.

Erosion Control Details (SWP2):

- In the contractor measures table include Sediment Berm and Stabilization of Slopes.

Photometric Site Plan (E1/E2)

- What is the impact of car and truck head lights shining towards the Quarry Development at the southerly entrance or at parking areas facing towards Quarry Development?
- Need minimum of three streetlights along W. Capitol Drive to illuminate cross walks at Vettleson, Palmer and the southerly driveway.

Signing:

- Need sign restricting truck traffic exits at northerly driveway.

Stormwater Management Plan

The stormwater management plan was prepared by REI and is dated August 18, 2023. This is a new development site of 5.38 acres in size. The project will have 4.68 acres of land disturbing activity.

The site must meet 80% TSS and 30% Phosphorus reductions as required in 76-7(C)(1)(a).

- Ryan A. still needs to complete the review of the storm water plan.
- Provided a stormwater management maintenance agreement.
    a. 76-7(C)(6)(a) Drainage easements shall be recorded on the property for all drainage ways and BMPs through the site to ensure that these are not blocked by structures.

RTA:rta

KWIK TRIP INC.

Store Engineering

FAX 608-793-6237

1626 Oak St., P.O. Box 2107
La Crosse, WI 54602

www.kwiktrip.com

Village of Hartland
Ryan Bailey
210 Cottonwood Ave
Hartland, WI 53029

August 28th, 2023

Architectural Board / Plan Commission / CSM / CUP / Rezone Applications

Mr. Bailey,

This letter is intended to accompany our submittal for our application to the Village of Hartland for the requested applications listed above for our proposed project located at STH 83 and West Capitol Drive.

Kwik Trip, Inc. is proposing the construction of a 12,167 S.F. convenience store w/ attached 2-Bay Carwash and an attached dumpster enclosure w/ separate Fueling and Diesel Canopies. I have submitted two full size copies along with a link to digital format as requested. I have included a check for $1650.00. This includes $300.00 PC Fee, 300.00 CSM Fee, $400.00 Rezone Fee with $200.00 deposit, and $150.00 CUP Fee with $300.00 Deposit. If there is anything additional needed, please don't hesitate to reach out to me any time.

The proposed method of operation for this development will be consistent with that for our existing convenience stores within the area. The requested hours of operation will be 24 hours for all uses. The type of products that will be sold will be similar to that of our existing stores: gasoline, in line diesel, E-85, Unleaded 88, groceries, bakery and dairy, hot and cold food and beverages, tobacco products, off-sale alcohol products, lotto, convenience store merchandise, ice, and propane. The outside merchandising of products is being requested next to the store (ice and propane) and miscellaneous merchandising under the gas canopy. The proposed store is projected to have between 28-35 full and part time employees, with 2-8 on staff at any given time.

The proposed architectural plan will consist of a brick facade with standing seam metal roof. The building and canopy fascia will tie in with franchise colors. The prototype building is larger than previous years building. We have expanded the retail floor area as well as kitchen and mechanical space all on the main level with no basement. The total estimated project costs are $2,500,000.

Kwik Trip would be happy to provide any additional information or answer any questions or concerns you may have with our submission. Please feel free to call me with any questions.

Sincerely,

Jeff Osgood – Sr. Development Manager - Store Engineering - Kwik Trip, Inc.
608-793-5547 - josgood@kwiktrip.com 1626 Oak St | P.O. Box 2107 | La Crosse, WI 54602

OUR MISSION

To serve our customers and community more effectively than anyone else by treating our customers, co-workers and suppliers as we, personally, would like to be treated, and to make a difference in someone's life.

VILLAGE OF HARTLAND
PETITION FOR LAND DIVISION:

☐ **EXTRATERRITORIAL PLAT REVIEW - $100**

☒ **CSM (Certified Survey Map) + *$300 Professional Fee Deposit***

or

☐ **PRELIMINARY PLAT REVIEW + *$1,000 Professional Fee Deposit***

Up to Five Parcels - $150.00
Six to Fourteen Parcels - $300.00
Fifteen or More Parcels - $500.00

Reapplication for Approval of Any Preliminary Plat Requiring Review **$50.00 (Minimum)**
Reapplication for Previously Reviewed Plat **$10.00**

☐ **FINAL PLAT REVIEW**

$10.00 Plus $1.00 for Each Parcel Within the Final Plat
$10.00 for Reapplication of Any Final Plat Previously Reviewed

Date: 08/28/2023	Fee Paid: $300
Date Filed:	Receipt No.: 248836

1. Name: KWIK TRIP, INC - JEFF OSGOOD

   Address of Owner/Agent: 1626 OAK ST LA CROSSE, WI 54602

   Phone Number of Owner/Agent: 608-793-5547 josgood@kwiktrip.com

2. Give complete legal description of property to be considered. (Attach a separate sheet with description and label sheet "Exhibit A").

3. State present use of property and intended use.

   CURRENTLY VACANT LAND

   RETAIL CONVENIENCE STORE W/ 2 BAY ATTACHED CARWASH (PROPOSED)

Signature of Petitioner

1626 OAK ST LA CROSSE, WI 54602
Address

608-793-5547
Phone

2007 Forms/Petition for Land Division
Revised 10/07

NOTE:

a. Include a Plat Map in triplicate, drawn to a scale of not less than 100 ft. to the inch, showing the land in question, its location, the length and direction of each boundary thereof.

b. Include fee payable to **The Village of Hartland**

CSM fees + *$300 Professional Fee Deposit*
Or
Preliminary Plat Review Fees + *$1,000 Professional Fee Deposit*

Up to Five Parcels	**$150.00**
Six to Fourteen Parcels	**$300.00**
Fifteen or More Parcels	**$500.00**

Reapplication for Approval of Any Preliminary Plat Requiring Review	**$50.00 (Minimum)**
Reapplication for Previously Reviewed Plat	**$10.00**

Final Plat Review Fees:

$10.00 Plus $1.00 for Each Parcel Within the Final Plat
$10.00 for Reapplication of Any Final Plat Previously Reviewed

c. Mail or deliver request, in triplicate, to:

Village of Hartland
Village Clerk
210 Cottonwood Avenue
Hartland, WI 53029

---

d. **Extraterritorial Plat Review Fee: $100**

Submit plat and $100 fee to:

Village of Hartland
Village Clerk
210 Cottonwood Avenue
Hartland, WI 53029

Hartland Plan Commission
Application Review Policies

All applicants and applications are subject to the following policies in order to be considered by the Plan Commission.

1. The deadline for filing any application is a minimum of fifteen (15) working days before the meeting.
2. All applicants are encouraged to communicate with or meet with either the Building and Zoning Official or the Village Administrator prior to submission of an application.
3. All requested or required information, including the application and appropriate fees, must be received prior to the deadline in order to be placed on the agenda. Village Staff has been directed to delay placement on the Plan Commission Agenda based on incomplete submittals.
4. Four (4) sets of bound site plans or application materials and one (1) electronic copy (PDF) of all application materials must be submitted by the deadline.
5. Applications that include site plans must depict the following existing and proposed information plus other information as appropriate or as requested:
    a. Complete dimensions (lot, building, setbacks, parking, drives, etc.)
    b. Scale and north arrow
    c. All structures (include building elevations and height)
    d. Drainage and grades (include design calculations for drainage)
    e. Storm Water Management Plan
    f. Utilities and easements (sewer, water, storm etc.)
    g. Calculation of lot coverage
    h. Parking stalls (stalls to be minimum 180 s.f., driving lanes minimum 24 ft. wide and 30 ft. maximum at street right-of-way, asphalt to be minimum 3 ft. from lot lines)
    i. Grading and erosion control
    j. Landscaping, including a Tree Protection Plan
    k. Exterior lighting details
    l. Exterior HVAC equipment location
    m. Dumpster location (screening required)
    n. Street right-of-way
    o. Miscellaneous items including, but not limited to, 100 year floodplain, wetland boundary, environmental corridor
6. Additional information may be requested by the Plan Commission or Staff.
7. The Applicant must complete and submit the required Professional Services Reimbursement Form along with any required deposit at the time of application.
8. The Applicant or a representative of Applicant able to make representations on behalf of the Applicant shall attend the meeting at which the matter will be discussed. Failure to have representation will result in tabling of the request to the next meeting.

Village of Hartland

PETITION FOR CONDITIONAL USE

☒ *$150 REVIEW FEE DUE AT TIME OF APPLICATION*
PLUS $300 PROFESSIONAL FEE DEPOSIT

Property Owner KWIK TRIP, INC	
Business Name SAME	
Business Owner SAME	
Address 1626 OAK ST. LACROSSE, WI 54602	
Contact Person JEFF OSGOOD	Phone 608-793-5547
Key No. HAV	Email josgood@kwiktrip.com

The Plan Commission meets on the third Monday of the month at 7:00 PM in the Village Board Room of the Hartland Municipal Building located at 210 Cottonwood Avenue, Hartland.

The deadline for filing is a minimum of fifteen (15) working days before the meeting.

All of the requested information must be received prior to the deadline in order to be placed on the agenda. Village Plan Review Staff has been directed to delay placement on the Plan Commission Agenda based on incomplete submittals.

State present use of property and basic information on the intended use:

CURRENTLY VACANT LAND

PROPOSED RETAIL CONVENIENCE STORE W/ ATTACHED 2 BAY CARWASH

Additional documents and materials must be submitted addressing the requirements described in Article IV of the Hartland Zoning Code regarding Conditional Uses.

All applications for consideration by the Plan Commission are subject to the policies described in this document.

Petitioner Signature Jeff W. Osgood	
Print Name JEFF OSGOOD	Date 08/28/2023

OFFICE USE ONLY:

Date Applied:	Date of Meeting: 9/18/23	Return Comments by:

Village of Hartland

PETITION FOR

☒ REZONING ☐ ZONING CODE AMENDMENT

$400 REVIEW FEE DUE AT TIME OF APPLICATION

PLUS $200 PROFESSIONAL FEE DEPOSIT

Property Owner KWIK TRIP, INC	
Property Address STH 183 + W. CAPITOL DRIVE	
Contact Person JEFF OSGOOD	Phone 608-793-5547
Key No: HAV	Email josgood@kwiktrip.com

The Plan Commission meets on the third Monday of the month at 7:00 PM in the Village Board Room of the Hartland Municipal Building located at 210 Cottonwood Avenue, Hartland.

The deadline for filing is a minimum of fifteen (15) working days before the meeting.

All of the requested information must be received prior to the deadline in order to be placed on the agenda. Village Plan Review Staff has been directed to delay placement on the Plan Commission Agenda based on incomplete submittals.

State zoning change desired:

State present use of property and intended use:

CURRENTLY VACANT LAND
PROPOSED RETAIL CONVENIENCE STORE W/ ATTACHED 2-BAY CARWASH

Include a Plat Map drawn to a scale of not less than 100 ft. to the inch, showing the land in question, its location, the length and directory of each boundary thereof, the location of existing buildings and uses of same on such lands. Also, show the proposed building and the plat plans and indicate setbacks and offsets from the lot line. Parking area should also be shown.

Petitioner Signature Jeffrey Osgood	
Print Name JEFF OSGOOD	Date 08/28/2023

OFFICE USE ONLY

Date Applied:	Fee Paid: 9/5/23	Meeting Date: 9/18/23

Village of Hartland

APPLICATION FOR PLAN COMMISSION
$300 REVIEW FEE DUE AT TIME OF APPLICATION

Project Description and Narrative: (attach additional sheet if necessary) SEE ATTACHED INFORMATIONAL LETTER			
Proposed Use NEW RETAIL CONVENIENCE STORE W 2-BAY CARWASH			
Project Location STH 83 + W CAPITOL DRIVE			
Project Name KWIK-TRIP 1283			
Owner KWIK-TRIP, INC - JEFF OSGOOD	Phone 608-793-5547		
Address 1626 OAK ST	City LA CROSSE	State WI	Zip 54602
Engineer/Architect REI ENGINEERING	Phone 715-679-2410	FAX	
Address 4080 N. 20TH AVE	City WAUSAU	State WI	Zip 54401
Contact Person JEFF OSGOOD	Phone 608-793-5547	FAX	E-mail josgood@kwiktrip.com

The Plan Commission meets on the third Monday of the Month at 7:00 PM in the Village Board Room of the Hartland Municipal Building located at 210 Cottonwood Avenue, Hartland.

The deadline for filing is a minimum of fifteen (15) <u>working</u> days before the meeting.

All of the requested information must be received prior to the deadline in order to be placed on the agenda. Village Plan Review Staff has been directed to delay placement on the Plan Commission Agenda based on incomplete submittals.

One (1) set of bound application materials and one (1) electronic copy of all materials must be submitted.

Applications that include site plans must depict the following existing and proposed information:

- Complete dimensions (lot, building, setbacks, parking, drives, etc.)
- Scale and north arrow
- All structures (include building elevations and height)
- Drainage and grades (include design calculations for drainage)
- Storm Water Management Plan
- Utilities and easements (sewer, water, storm etc.)
- Calculation of lot coverage
- Parking stalls (stalls to be minimum 180 s.f., driving lanes minimum 24 ft. wide and 30 ft. maximum at street right-of-way, asphalt to be minimum 3 ft. from lot lines)
- Grading and erosion control
- Landscaping, including a Tree Protection Plan
- Exterior lighting details
- Exterior HVAC equipment location
- Dumpster location (screening required)
- Street right-of-way
- Miscellaneous, 100 year floodplain, wetland boundary, environmental corridor

Additional information may be requested by the Plan Commission or Staff.

All applications for consideration by the Plan Commission are subject to the policies described in this document.

Hartland Plan Commission
Application Review Policies

All applicants and applications are subject to the following policies in order to be considered by the Plan Commission.

1. The deadline for filing any application is a minimum of fifteen (15) working days before the meeting.
2. All applicants are encouraged to communicate with or meet with either the Building and Zoning Official or the Village Administrator prior to submission of an application.
3. All requested or required information, including the application and appropriate fees, must be received prior to the deadline in order to be placed on the agenda. Village Staff has been directed to delay placement on the Plan Commission Agenda based on incomplete submittals.
4. One (1) sets of bound site plans or application materials and one (1) electronic copy (PDF) of all application materials must be submitted by the deadline.
5. Applications that include site plans must depict the following existing and proposed information plus other information as appropriate or as requested:
    a. Complete dimensions (lot, building, setbacks, parking, drives, etc.)
    b. Scale and north arrow
    c. All structures (include building elevations and height)
    d. Drainage and grades (include design calculations for drainage)
    e. Storm Water Management Plan
    f. Utilities and easements (sewer, water, storm etc.)
    g. Calculation of lot coverage
    h. Parking stalls (stalls to be minimum 180 s.f., driving lanes minimum 24 ft. wide and 30 ft. maximum at street right-of-way, asphalt to be minimum 3 ft. from lot lines)
    i. Grading and erosion control
    j. Landscaping, including a Tree Protection Plan
    k. Exterior lighting details
    l. Exterior HVAC equipment location
    m. Dumpster location (screening required)
    n. Street right-of-way
    o. Miscellaneous items including, but not limited to, 100 year floodplain, wetland boundary, environmental corridor
6. Additional information may be requested by the Plan Commission or Staff.
7. The Applicant must complete and submit the required Professional Services Reimbursement Form along with any required deposit at the time of application.
8. **The Applicant or a representative of Applicant able to make representations on behalf of the Applicant shall attend the meeting at which the matter will be discussed. Failure to have representation will result in tabling of the request to the next meeting.**

Village of Hartland

DEPARTMENT OF BUILDING INSPECTION
APPLICATION FOR ARCHITECTURAL BOARD

Job Address STH 83 + WEST CAPITOL DRIVE					
Lot	Block	Subdivision		Key No. HAV	
Owner KWIK TRIP, INC - JEFF OSGOOD		EMAIL j.osgood@kwiktrip.com		Phone 608-793-5547	
Address 1626 OAK ST		City LA CROSSE		State WI	Zip 54602
Contractor SAME AS OWNER	Phone		FAX	EMAIL	
Address		City		State	Zip

The Architectural Board meets on the THIRD MONDAY of the Month at 7:00 p.m. in the Board Room of the Hartland Municipal Building located at 210 Cottonwood Avenue in the Village of Hartland.

The DEADLINE for filing is FIFTEEN WORKING DAYS PRIOR TO THE MEETING DATE at 4:30 p.m. All of the following information must be received prior to the deadline in order to be placed on the agenda.

All applications for consideration by the Architectural Board are subject to the policies described in this document.

Commercial/Industrial/Multifamily:

- ☑ One (1) bound set of plans and application material and one (1) electronic copy of all submittals.
- ☑ Elevations must show all sides of the structure and state the building materials and colors. Additions must be shown with the existing building.

Signs:

- ☑ One (1) color rendering of the requested sign(s) and one (1) electronic copy of all submittals. Include colors and material type. Renderings are to be dimensioned and must show placement on building and height.
- ☑ Details (color picture) of all existing wall signs on the same building elevation. A photograph of the building with sign location shown is recommended.
- ☑ One (1) site plan with dimensions. Not required for wall signs or other signs attached to the building. One (1) set of lighting details. Include type, location, number and photometric plan.
- ☑ Submit Sign Permit Application

NOTE: Approval by the Architectural Board is not permission to begin construction; a building permit must first be obtained.

Date Applied:_____ Date of Meeting: 9/18/23 Item No. 4

Hartland Architectural Board
Application Review Policies

All applicants and applications are subject to the following policies in order to be considered by the Architectural Board.

1. The deadline for filing any application is a minimum of fifteen (15) working days before the meeting.
2. All applicants for building renovations are encouraged to communicate with or meet with the Building and Zoning Official and the Village Administrator prior to submission of an application.
3. Applications for signs within the boundaries of the Hartland Downtown Business Improvement District (BID) must be reviewed by the BID prior to the meeting with the Architectural Board.
4. All requested or required information, including the application and appropriate fees, must be received prior to the deadline in order to be placed on the agenda. Village Staff has been directed to delay placement on the Architectural Board Agenda based on incomplete submittals.
5. Applications shall include professional-level drawings of all elevations impacted by the proposed project showing the proposed conditions including location and depiction of requested signage.
6. Applications for signage on existing buildings should include a scale depiction of the sign on a current photograph of the existing building.
7. One (1) set of application materials and one (1) electronic copy (PDF) of all application materials must be submitted by the deadline.
8. Applications that include site plans must depict the following existing and proposed information plus other information as appropriate or as requested:
    a. Complete dimensions (lot, building, setbacks, parking, drives, etc.)
    b. Scale and north arrow
    c. All structures (include building elevations and height)
    d. Drainage and grades (include design calculations for drainage)
    e. Storm Water Management Plan
    f. Utilities and easements (sewer, water, storm etc.)
    g. Calculation of lot coverage
    h. Parking stalls (stalls to be minimum 180 s.f., driving lanes minimum 24 ft. wide and 30 ft. maximum at street right-of-way, asphalt to be minimum 3 ft. from lot lines)
    i. Grading and erosion control
    j. Landscaping, including a Tree Protection Plan
    k. Exterior lighting details
    l. Exterior HVAC equipment location
    m. Dumpster location (screening required)
    n. Street right-of-way
    o. Miscellaneous items including, but not limited to, 100 year floodplain, wetland boundary, environmental corridor
9. Additional information may be requested by the Architectural Board or Staff.
10. The Applicant must complete and submit the required Professional Services Reimbursement Form along with any required deposit at the time of application.
11. The Applicant or a representative of Applicant able to make representations on behalf of the Applicant shall attend the meeting at which the matter will be discussed. Failure to have representation will result in tabling of the request to the next meeting.

REVIEW PLANS FOR:

KWIK TRIP #1283

VILLAGE OF HARTLAND, WAUKESHA COUNTY, WISCONSIN

INDEX OF SHEETS

TI	TITLE SHEET
SP0	DEMO PLAN
SP1	SITE PLAN
SP1.1	SITE PLAN (KEYNOTES)
SP2	GRADING PLAN
SP2.1	GRADING PLAN DETAIL - WEST
SP2.1.2	GRADING PLAN DETAIL - EAST
SP2.2.1	GRADING PLAN SPOT DETAIL
SP2.2.2	CANOPY AND TANK GRADING DETAILS
SP2.3	ACCESSIBLE PLAN
SP3	STORM SEWER PLAN
SP4	UTILITY PLAN
SP4.1	UTILITY SPECS
SP5	SITE PLAN DETAILS
SP6	SITE PLAN DETAILS
SWP1	EROSION CONTROL PLAN
SWP2	EROSION CONTROL DETAILS
SWP3	EROSION CONTROL DETAILS
SWP4	EROSION CONTROL DETAILS
SP	TRUCK CIRCULATION
SP10-SP10.3	LANDSCAPE PLANS
E1	PHOTOMETRIC SITE PLAN
E2	PHOTOMETRIC RENDERING PLAN

TOTAL SHEETS = 26

LIST OF STANDARD ABBREVIATIONS

&	AND
AB	AUGER BORING
ADT	AVERAGE DAILY TRAFFIC
BC	BOTTOM OF CURB
BM	BENCHMARK
BOC	BACK OF CURB
BR	BOTTOM OF RAMP
BS	BOTTOM OF STEPS
BW	BOTTOM OF WALL
CB	CATCH BASIN
CMAC	CORRUGATED METAL ARCH CULVERT
CMBC	CORRUGATED METAL BOX CULVERT
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC.	CONCRETE
CPP	CORRUGATED PLASTIC PIPE
DGB	DENSE GRADED BASE
DIP	DUCTILE IRON PIPE
D/S	DOWNSTREAM
(E)	EAST
ELEV.	ELEVATION
EOG	EDGE OF GRAVEL
FFE	FINISHED FLOOR ELEVATION
FG	FINISH GRADE
F.O.	FIBER OPTIC
INL	INLET
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HMA	HOT MIX ASPHALT
HP	HIGH POINT
IE	INVERT ELEVATION
LF	LINEAL FEET
LP	LOW POINT
MEG	MATCH EXISTING GRADE
MH	MANHOLE
(N)	NORTH
(NE)	NORTHEAST
(NW)	NORTHWEST
OH	OVERHEAD
PC	POINT OF CURVATURE
P/L	PROPERTY LINE
PP	POWER POLE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE PIPE
RCB	REINFORCED CONCRETE BOX CULVERT
RCP	REINFORCED CONCRETE PIPE
RR	RAIL ROAD
R/W	RIGHT OF WAY
(S)	SOUTH
SAN	SANITARY SEWER
SB	SOIL BORING
SS	STORM SEWER
STM	STORM
(SW)	SOUTHWEST
TC	TOP OF CURB
TBR	TO BE REMOVED
TLE	TEMPORARY LIMITED EASEMENT
TNH	TOP NUT FIRE HYDRANT
TP	TEST PIT
TR	TOP OF RAMP
TYP.	TYPICAL
TS	TOP OF STEPS
TW	TOP OF WALL
U/S	UPSTREAM
VAR.	VARIES
(W)	WEST

LEGEND

- BENCHMARK
- 1" IRON BAR
- EXISTING MANHOLE
- EXISTING TELEPHONE MANHOLE
- EXISTING STORM SEWER MANHOLE
- EXISTING SANITARY SEWER MANHOLE
- EXISTING HYDRANT
- EXISTING WATER VALVE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING WATER SHUTOFF
- EXISTING DECIDUOUS TREE
- EXISTING CONIFEROUS TREE
- EXISTING GAS VALVE
- EXISTING CURB INLET
- EXISTING WELL
- TEST PIT LOCATION
- SBI SOIL BORING
- AC EXISTING AIR CONDITIONING UNIT
- GM EXISTING GAS METER
- EM EXISTING ELECTRIC METER
- EXISTING UTILITY PEDESTAL
- EXISTING RAILROAD TRACKS
- EXISTING TREE LINE
- EXISTING GUY POLE
- TV EXISTING CABLE TV
- FO EXISTING FIBER OPTIC CABLE
- G EXISTING UNDERGROUND GAS
- E EXISTING UNDERGROUND ELECTRIC
- T EXISTING UNDERGROUND TELEPHONE
- OH EXISTING OVERHEAD UTILITIES
- W EXISTING WATER MAIN
- SS EXISTING STORM SEWER
- SAN EXISTING SANITARY SEWER
- EXISTING PROPERTY LINE
- PROPOSED HANDICAP PARKING
- PROPOSED CURB STOP
- PROPOSED HYDRANT
- PROPOSED WATER VALVE
- SAN PROPOSED SANITARY SEWER
- SS PROPOSED STORM SEWER
- F.M. PROPOSED FORCE MAIN
- SAN. LAT. PROPOSED SANITARY SEWER LATERAL
- W.S. PROPOSED WATER LATERAL
- W PROPOSED WATER MAIN
- PS PROPOSED PUMP STATION
- MS PROPOSED SANITARY MANHOLE
- MS PROPOSED STORM MANHOLE
- PROPOSED CURB INLET
- PROPOSED CATCH BASIN
- CO PROPOSED CLEANOUT
- PROPOSED DRAINAGE FLOW
- 3% PROPOSED SLOPE
- PROPOSED CURB & GUTTER
- PROPOSED REJECT CURB & GUTTER
- PROPOSED MOUNTABLE CURB & GUTTER
- 1178 EXISTING GROUND CONTOUR(INTERVAL-1 FT.)
- 1180 PROPOSED GROUND CONTOUR(INTERVAL-1 FT.)
- 1256.50 PROPOSED SPOT ELEVATION (TOP OF CURB)
- 1256.00 PROPOSED SPOT ELEVATION (BOTTOM OF CURB)
- PROPOSED SILT FENCE
- PROPOSED INLET PROTECTION
- PROPOSED RIPRAP
- PROPOSED EROSION MAT
- PROPOSED SAWCUT
- PROPOSED DRAINAGE SWALE

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KWIK TRIP STORES

KWIK STAR STORES

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

REI
CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING
REI Engineering, INC.
4080 N. 20TH AVENUE
WAUSAU, WISCONSIN 54401
PHONE: 715.675.9784 FAX: 715.675.4060
EMAIL: MAIL@REIENGINEERING.COM

TITLE SHEET

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	NAP
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	T1

DRAWING FILE: Q:\10800 - 10899\10827 - KWIK TRIP #1283 - HARTLAND\DRAWING\PLANS\10827-KT TITLE PAGE.DWG LAYOUT: TITLE
PLOTTED: AUG 17, 2023 - 4:56PM PLOTTED BY: DAN

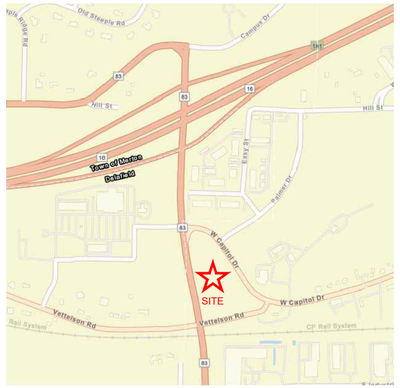
ALTA/NSPS LAND TITLE SURVEY
HARTLAND #1283

THAT PART OF THE NORTHWEST 1/4 OF SECTION 3, TOWNSHIP 7 NORTH, RANGE 18 EAST, IN THE VILLAGE OF HARTLAND, WAUKESHA COUNTY, WISCONSIN DESCRIBED AS FOLLOWS:

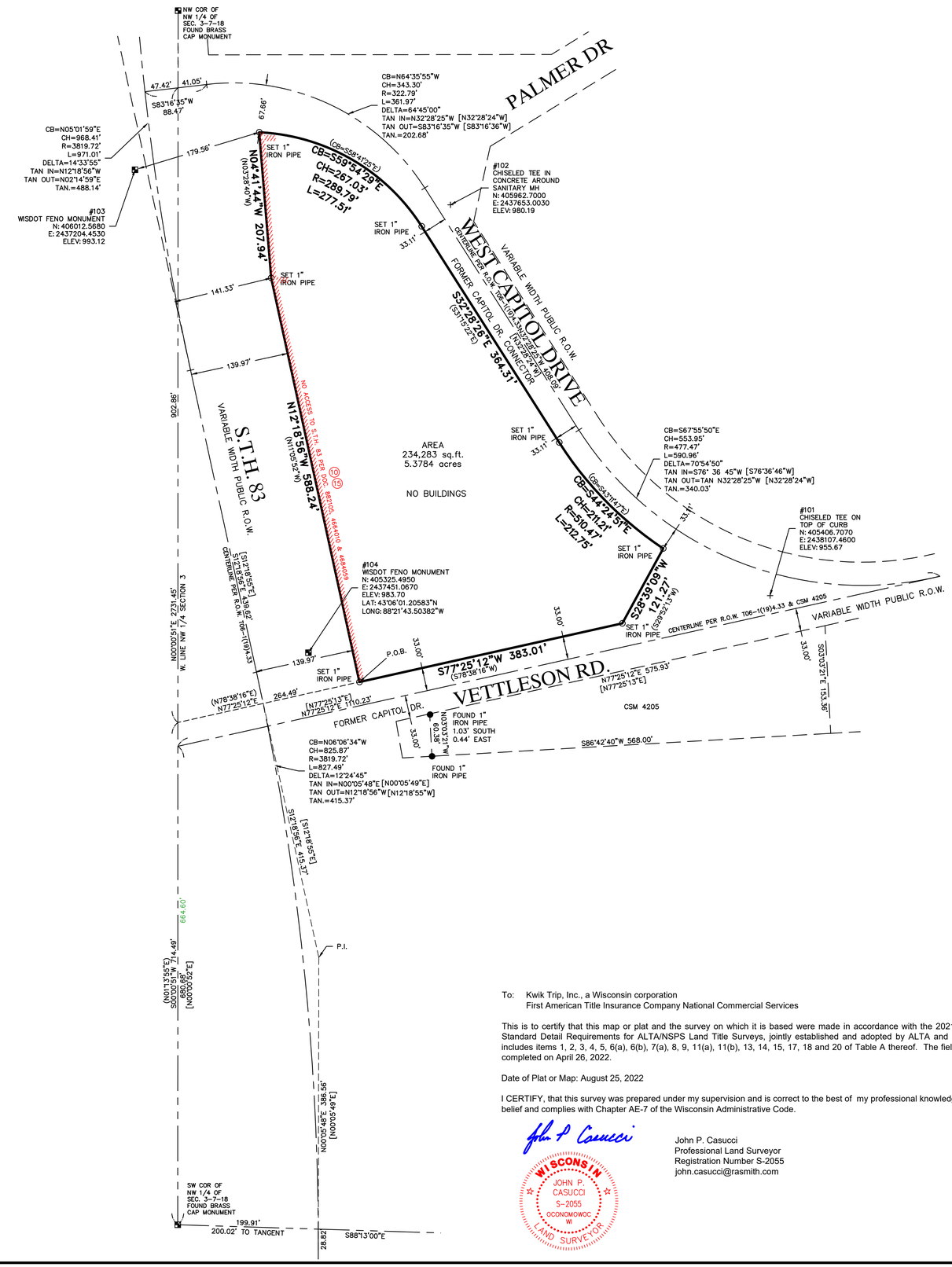
COMMENCE AT THE WEST 1/4 CORNER OF SAID SECTION 3; THENCE NORTH 01° 13' 55" EAST 714.49 FEET ALONG THE WEST LINE OF SAID SECTION; THENCE NORTH 78°38'16" EAST 264.49 FEET TO THE NORTHERLY LINE OF VETTELSON ROAD AND THE POINT OF BEGINNING; THENCE NORTH 11°05'52" WEST 588.24 FEET; THENCE NORTH 03°28'40" WEST 207.94 FEET TO A POINT ON A CURVE OF NORTHEASTERLY CONVEXITY, WHOSE RADIUS IS 289.79 FEET AND WHOSE CHORD BEARS SOUTH 58°41'25" EAST 267.03 FEET; THENCE SOUTHEASTERLY ALONG THE ARC OF SAID CURVE 277.51 FEET; THENCE SOUTH 31°15'22" EAST 364.31 FEET TO A POINT ON A CURVE OF SOUTHWESTERLY CONVEXITY, WHOSE RADIUS IS 510.47 FEET AND WHOSE CHORD BEARS SOUTH 43°11'47" EAST 211.21 FEET; THENCE SOUTHEASTERLY ALONG THE ARC OF SAID CURVE 212.75 FEET; THENCE SOUTH 29°52'13" WEST 121.27 FEET TO THE NORTHERLY LINE OF VETTELSON ROAD; THENCE SOUTH 78°38'16" WEST 383.01 FEET ALONG SAID NORTHERLY LINE TO THE POINT OF BEGINNING.

Prepared for: Kwik Trip, Inc.

Survey No. 168756-RMK



VICINITY MAP – NOT TO SCALE



GRAPHIC SCALE

40 0 40 80 160

1" = 80'

LEGEND

- BOLLARD
- SOIL BORING/MONITORING WELL
- FLAGPOLE
- MAILBOX
- SIGN
- AIR CONDITIONER
- CONTROL BOX
- TRAFFIC SIGNAL
- CABLE PEDESTAL
- POWER POLE
- GUY POLE
- GUY WIRE
- LIGHT POLE
- SPOT/YARD/PEDESTAL LIGHT
- HANDICAPPED PARKING
- PULL BOX
- ELECTRIC MANHOLE
- ELECTRIC PEDESTAL
- ELECTRIC METER
- ELECTRIC TRANSFORMER
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- UTILITY VAULT
- GAS VALVE
- GAS METER
- GAS WARNING SIGN
- STORM MANHOLE
- ROUND INLET
- SQUARE INLET
- STORM SEWER END SECTION
- SANITARY MANHOLE
- SANITARY CLEANOUT OR SEPTIC VENT
- SANITARY INTERCEPTOR MANHOLE
- MISCELLANEOUS MANHOLE
- IRRIGATION CONTROL BOX
- WATER VALVE
- HYDRANT
- WATER SERVICE CURB STOP
- WATER MANHOLE
- WELL
- WATER SURFACE
- WETLANDS FLAG
- MARSH
- CONIFEROUS TREE
- DECIDUOUS TREE
- SHRUB
- EDGE OF TREES
- S – SANITARY SEWER
- STO – STORM SEWER
- W – WATERMAIN
- G – MARKED GAS MAIN
- E – MARKED ELECTRIC
- OHW – OVERHEAD WIRES
- B – BUREAU ELEC. SERV.
- T – MARKED TELEPHONE
- TV – MARKED CABLE TV LINE
- FO – MARKED FIBER OPTIC
- 780 – INDICATES EXISTING CONTOUR ELEVATION
- × 780.55 – INDICATES EXISTING SPOT ELEVATION

DIGGERS HOTLINE 20221606180

THE UNDERGROUND UTILITY INFORMATION AS SHOWN HEREON IS BASED, IN PART, UPON INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED NOR CERTIFIED TO.

(P) INDICATES PIPE SIZES PER RECORD PLANS. OTHER PIPE SIZES ARE ESTIMATED. NO PIPE SIZES SHOULD BE RELIED UPON WITHOUT FURTHER VERIFICATION.

R.A.SMITH, INC. ASSUMES NO RESPONSIBILITY FOR DAMAGES, LIABILITY OR COSTS RESULTING FROM CHANGES OR ALTERATIONS MADE TO THIS PLAN WITHOUT THE EXPRESSED WRITTEN CONSENT OF R.A.SMITH, INC.

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A. Basis of Bearings
Bearings are based on the West line of the Northwest 1/4 of Section 3-7-18, which to bears North 00°00'51" East, State Plane Coordinate System, South Zone (NAD27).

B. Title Commitment
This survey was prepared based on First American Title Insurance Company title commitment number NCS-1114827-MAD, Revision No.1 (August 16, 2022), commitment date August 09, 2022 , which lists the following easements and/or restrictions from schedule B-II:

1-3, 5, 13, 8. Visible evidence shown, if any.

4, 6-7, 12, 14. Not survey related.

9. Utility Easement to Wisconsin Electric Power Company, dated April 11, 1955, recorded/filed April 23, 1955 in Volume 662, Page 593 as Document No. 414551. Lies within or crosses the surveyed property - it is a blanket easement - its location is not shown.

10. Matters in a document entitled "Deed", executed by and between Butler Line and Cement Company, a corporation duly organized and existing under and by virtue of the laws of the State of Wisconsin and State of Wisconsin, Department of Transportation, Division of Highways, recorded May 22, 1974 in Reel 079, Image 579 as Document No. 882105 of Official Records, including but not limited to covenants, conditions, restrictions, easements, assessments, liens and charges. Lies within or crosses the surveyed property - its location is shown.

11. Utility Easement to Wisconsin Electric Power Company, a public utility, dated November 25, 1974, recorded/filed April 29, 1975 in Reel 116, Image 1100 as Document No. 908937. Lies within or crosses the surveyed property - it is a blanket easement - its location is not shown.

15. Covenants, Conditions and Restrictions as set forth in Quit Claim Deed recorded in April 22, 2022 as Document No. 4664010. Correction Instrument recorded August 12, 2022 as Document No. 4684059. Lies within or crosses the surveyed property - its location is shown.

C. Flood Note
According to flood insurance rate map of the Village of Hartland, community panel number 55133C0176H, effective date of 11/05/2014, this site falls in zone X (areas determined to be outside the 0.2% annual chance floodplain).

D. Parking Spaces
There are no regular and no handicapped parking spaces marked on this site.

E. Elevations
Elevations refer to NGVD 1929 Datum. Starting benchmark - Southwest corner of the Southwest 1/4 of Section 3-7-18.
Found brass cap monument, elevation = 927.70

F. Municipal Zoning
The zoning information listed is taken from the Village of Hartland website - site is zoned Q-1, Quarry/Extractive District.

Sec. 46-626. - Building height. (See also section 46-926.)
No structure, building or parts of a building in the Q-1 district shall exceed 75 feet in height above the original land elevation of the parcel.

Sec. 46-627. - Yards. (See also section 46-926.)
Yard regulations in the Q-1 district shall be as follows:

(1)The extractive operation shall have a minimum yard of 200 feet from the right-of-way line of all highways, streets or roads and all exterior property lines.
(2)Uses accessory to the extractive operations such as offices, parking and unloading areas and stockpiles of materials shall be set back a minimum of 100 feet from the right-of-way line of all highways or roads and all property lines.
(3)Shore yard: See section 46-16.

G. Notes
As to table A item 11
Surveyor's responsibility to coordinate markings shall be limited to one marking request to 811 (national "call before you dig" number) based on the property address, as provided by the client.
Note to the client, insurer, and lender - With regard to Table A, item 11, information from the sources checked within will be combined with observed evidence of utilities pursuant to Section 5.E.iv. to develop a view of the underground utilities. However, lacking excavation, the exact location of underground features cannot be accurately, completely, and reliably depicted. In addition, in some jurisdictions, 811 or other similar utility locate requests from surveyors may be ignored or result in an incomplete response. As of the field date indicated below in certificate (most recent site visit/inspection), it appears some underground utilities were not marked. This affected the surveyor's assessment of the location of the utilities resulting in partial illustration and/or mapping per plan. Where additional or more detailed information is required, the client is advised that excavation may be necessary.

There are no proposed changes in street right of way lines, if such information is made available to the surveyor by the controlling jurisdiction observed in the process of conducting the fieldwork.

There is no visible evidence of recent street or sidewalk construction or repairs observed in the process of conducting the fieldwork.

Vettleson (Vettelson) Road spelling varies. Surveyor utilized street signs.

To: Kwik Trip, Inc., a Wisconsin corporation
First American Title Insurance Company National Commercial Services

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), 8, 9, 11(a), 11(b), 13, 14, 15, 17, 18 and 20 of Table A thereof. The fieldwork was completed on April 26, 2022.

Date of Plat or Map: August 25, 2022

I CERTIFY, that this survey was prepared under my supervision and is correct to the best of my professional knowledge and belief and complies with Chapter AE-7 of the Wisconsin Administrative Code.

John P. Casucci

WISCONSIN JOHN P. CASUCCI S-2055 OCONOMOWOC WI LAND SURVEYOR

John P. Casucci
Professional Land Surveyor
Registration Number S-2055
john.casucci@rasmith.com

raSmith
CREATIVITY BEYOND ENGINEERING
16745 W. Bluemound Road
Brookfield, WI 53005-5938
(262) 781-1000
rasmith.com

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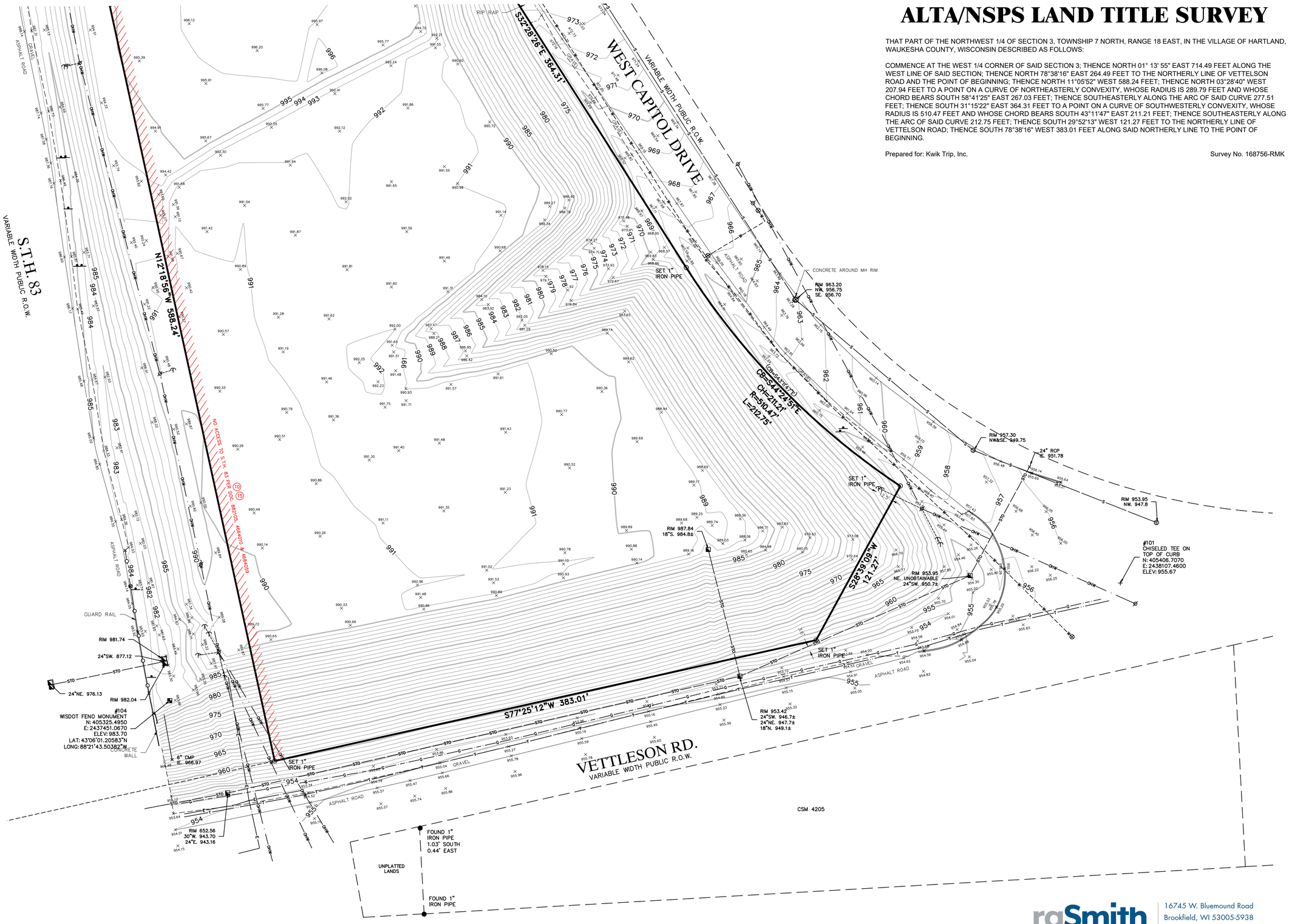
ALTA/NSPS LAND TITLE SURVEY

THAT PART OF THE NORTHWEST 1/4 OF SECTION 3, TOWNSHIP 7 NORTH, RANGE 18 EAST, IN THE VILLAGE OF HARTLAND, WAUKESHA COUNTY, WISCONSIN DESCRIBED AS FOLLOWS:

COMMENCE AT THE WEST 1/4 CORNER OF SAID SECTION 3; THENCE NORTH 01° 13' 55" EAST 714.49 FEET ALONG THE WEST LINE OF SAID SECTION; THENCE NORTH 78°38'16" EAST 264.49 FEET TO THE NORTHERLY LINE OF VETTELSON ROAD AND THE POINT OF BEGINNING; THENCE NORTH 11°05'52" WEST 588.24 FEET; THENCE NORTH 03°28'40" WEST 207.94 FEET TO A POINT ON A CURVE OF NORTHEASTERLY CONVEXITY, WHOSE RADIUS IS 289.79 FEET AND WHOSE CHORD BEARS SOUTH 58°41'25" EAST 267.03 FEET; THENCE SOUTHEASTERLY ALONG THE ARC OF SAID CURVE 277.51 FEET; THENCE SOUTH 31°15'22" EAST 364.31 FEET TO A POINT ON A CURVE OF SOUTHWESTERLY CONVEXITY, WHOSE RADIUS IS 510.47 FEET AND WHOSE CHORD BEARS SOUTH 43°11'47" EAST 211.21 FEET; THENCE SOUTHEASTERLY ALONG THE ARC OF SAID CURVE 212.75 FEET; THENCE SOUTH 29°52'13" WEST 121.27 FEET TO THE NORTHERLY LINE OF VETTELSON ROAD; THENCE SOUTH 78°38'16" WEST 383.01 FEET ALONG SAID NORTHERLY LINE TO THE POINT OF BEGINNING.

Prepared for: Kwik Trip, Inc.

Survey No. 168756-RMK



LEGEND

- BOLLARD
- SOIL BORING/MONITORING WELL
- FLAGPOLE
- MAILBOX
- SIGN
- AIR CONDITIONER
- CONTROL BOX
- TRAFFIC SIGNAL
- CABLE PEDESTAL
- POWER POLE
- GUY POLE
- GUY WIRE
- LIGHT POLE
- SPOT/YARD/PEDESTAL LIGHT
- HANDICAPPED PARKING
- PULL BOX
- ELECTRIC MANHOLE
- ELECTRIC PEDESTAL
- ELECTRIC METER
- ELECTRIC TRANSFORMER
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- UTILITY VAULT
- GAS VALVE
- GAS METER
- GAS WARNING SIGN
- STORM MANHOLE
- ROUND INLET
- SQUARE INLET
- STORM SEWER END SECTION
- SANITARY MANHOLE
- SANITARY CLEANOUT OR SEPTIC VENT
- SANITARY INTERCEPTOR MANHOLE
- MISCELLANEOUS MANHOLE
- IRRIGATION CONTROL BOX
- WATER VALVE
- HYDRANT
- WATER SERVICE CURB STOP
- WATER MANHOLE
- WELL
- WATER SURFACE
- WETLANDS FLAG
- MARSH
- CONIFEROUS TREE
- DECIDUOUS TREE
- SHRUB
- EDGE OF TREES
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- STO – STORM SEWER
- W – WATERMAIN
- G – MARKED GAS MAIN
- E – MARKED ELECTRIC
- OHW – OVERHEAD WIRES
- B – BUREAU ELEC. SERV.
- T – MARKED TELEPHONE
- TV – MARKED CABLE TV LINE
- FO – MARKED FIBER OPTIC
- 780 – INDICATES EXISTING CONTOUR ELEVATION
- × 780.55 – INDICATES EXISTING SPOT ELEVATION

THE UNDERGROUND UTILITY INFORMATION AS SHOWN HEREON IS BASED, IN PART, UPON INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED NOR CERTIFIED TO.

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ALTA/NSPS LAND TITLE SURVEY

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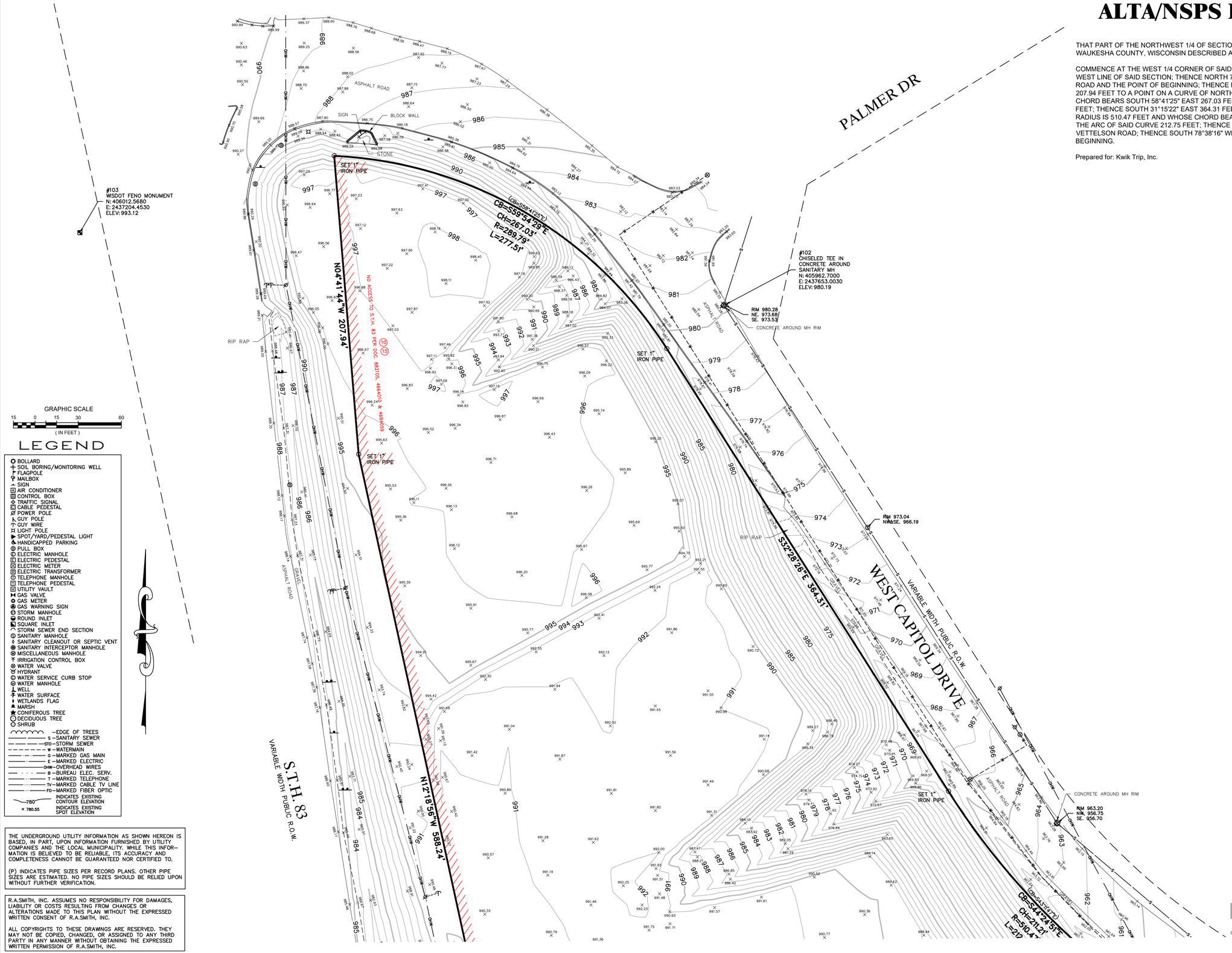

LEGEND

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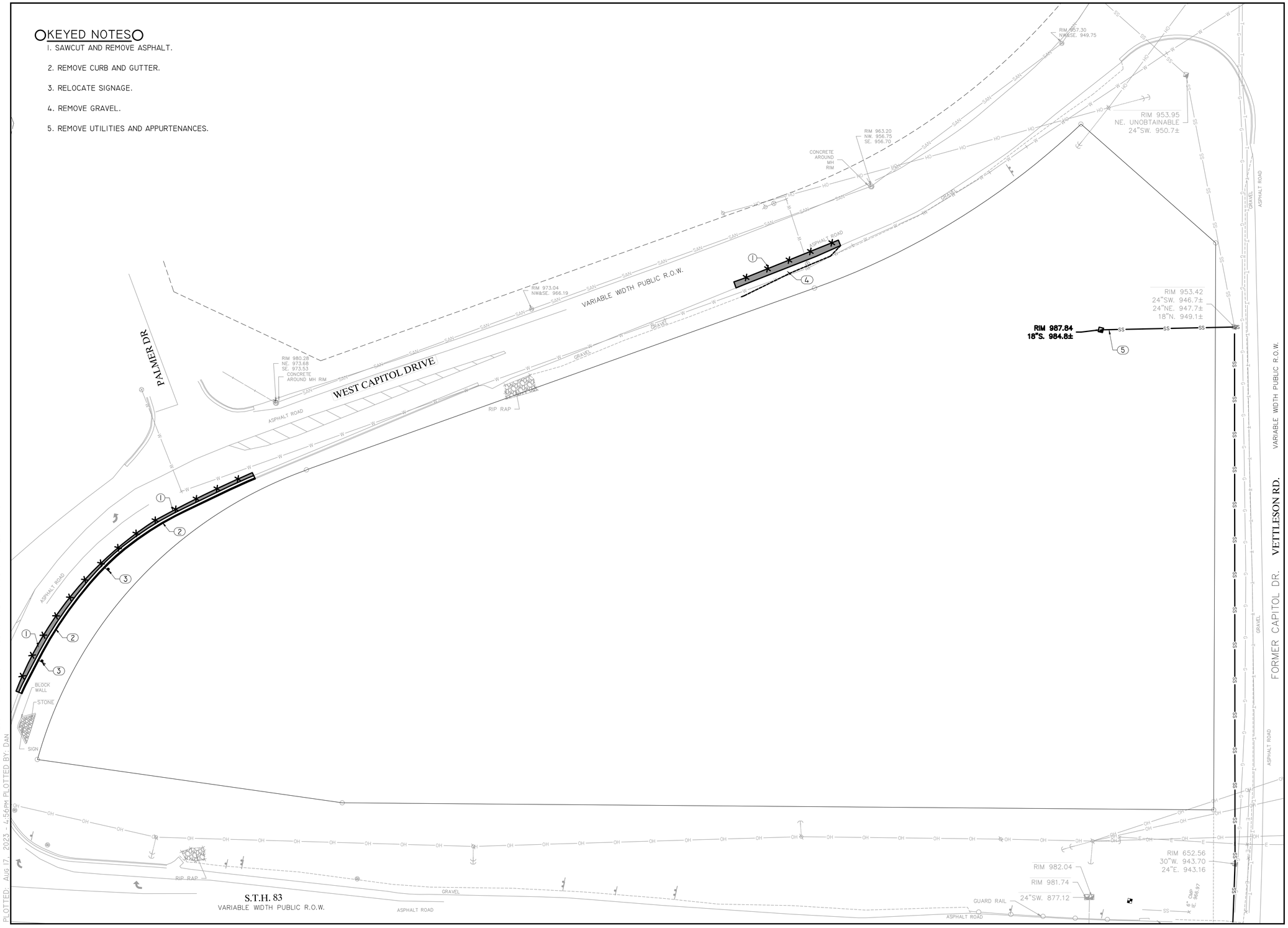
KEYED NOTES

1. SAWCUT AND REMOVE ASPHALT.
2. REMOVE CURB AND GUTTER.
3. RELOCATE SIGNAGE.
4. REMOVE GRAVEL.
5. REMOVE UTILITIES AND APPURTENANCES.



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PLOTTED: AUG 17, 2023 - 4:56PM PLOTTED BY: DAN

KWIK TRIP STORES

KWIK STAR STORES

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PH. (608) 781-8988
FAX (608) 781-8960

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4080 N. 20TH AVENUE
WAUSAU, WISCONSIN 54401
PHONE: 715.675.9784 FAX: 715.675.4060
EMAIL: MAIL@REIENGINEERING.COM

SCALE
0 30 60

DEMO PLAN

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	NAP
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SP0

LAYOUT NOTES:

1. PLAN PREPARED FROM AN ALTA/ACSM LAND TITLE SURVEY BY:
   R.A. SMITH, INC.
   262-781-1000
2. CURBS ARE DIMENSIONED TO BACK OF CURB.
3. CONVENIENCE STORE, AND ISLAND COMPLEXES ARE LOCATED FROM THE NORTHEASTERN MOST PROPERTY CORNER AND ALIGNED PARALLEL/PERPENDICULAR TO THE REFERENCE LINE LABELED S32°28'26.00"W, UNLESS OTHERWISE INDICATED ON THIS PLAN.
4. UNLESS SHOWN OTHERWISE ON THIS DRAWING, CONTRACTOR SHALL PROVIDE CONTROL JOINTS, CONSTRUCTION JOINTS, AND EXPANSION JOINTS IN SLAB ON GRADE, SIDEWALKS AND DRIVES.
   CONTROL JOINT MAXIMUM DISTANCE: WALKS- 8' O.C., ALL OTHERS- 15' O.C. SAW CUT CONTROL JOINTS MINIMUM ONE-QUARTER CONCRETE THICKNESS.
   EXPANSION JOINT MAXIMUM DISTANCE: WALKS- 24' O.C., ALL OTHERS- 40' O.C.
   DOWEL ALL EXPANSION JOINTS- MAXIMUM 24" O.C.
5. CONCRETE IN ISLAND COMPLEX SHALL BE SMOOTH FINISHED.
6. EXTERIOR CONCRETE SURFACES TO BE SEALED. CONCRETE SEALER:
   APR 15- OCT 31 USE: TK-26UV
   NOV 1- DEC 31 USE: TK-290
7. EXPANSION JOINTS SHALL BE DECK-O-FOAMED AND CAULKED WITH SLI.
8. DIAGONAL STRIPING LINES (HATCHING) IN THE "NO PARKING LOADING ZONE" AREA AND ANY OTHER AREA THAT IS HATCHED SHALL BE SPACED 5' ON CENTER.
9. LETTERING FOR ALL WORDING SUCH AS "NO PARKING LOADING ZONE" AND CARWASH SHOULD BE 12" TALL.
10. ALL DIAGONAL STRIPING SHALL BE ANGLED AS CLOSE TO 45° AS POSSIBLE.

SITE DATA:

ZONING DISTRICT: Q-1 (QUARRY/EXTRACTIVE)

TOTAL SITE AREA - EXISTING/PROPOSED: 234,283 SF

EX. IMPERVIOUS:	0 SF
EX. PERVIOUS:	234,283 SF
PARKING REQUIREMENTS	
PARKING REQUIRED	SERVICE STATION = 1 STALL PER 2 EMPLOYEES +1
PARKING PROVIDED	50 STALLS
BUILDING HEIGHTS	
CONVENIENCE STORE	20.0'
CANOPY	19.5'

BUILDING SETBACKS
FRONT: TBD
REAR: TBD
SIDE: TBD

PROPOSED LOT GREEN AREA:	129,011 SF	55%
PROPOSED HARD COVER:	105,272 SF	45%
PAVED AREA:	85,390 SF	36%
BUILDING ROOF AREA:	18,220 SF	8%
WATER FEATURE AREA:	12,000 SF	5%
CONVENIENCE STORE:	12,220 SF	
(FLOOR AREA) =	5,370 SF	

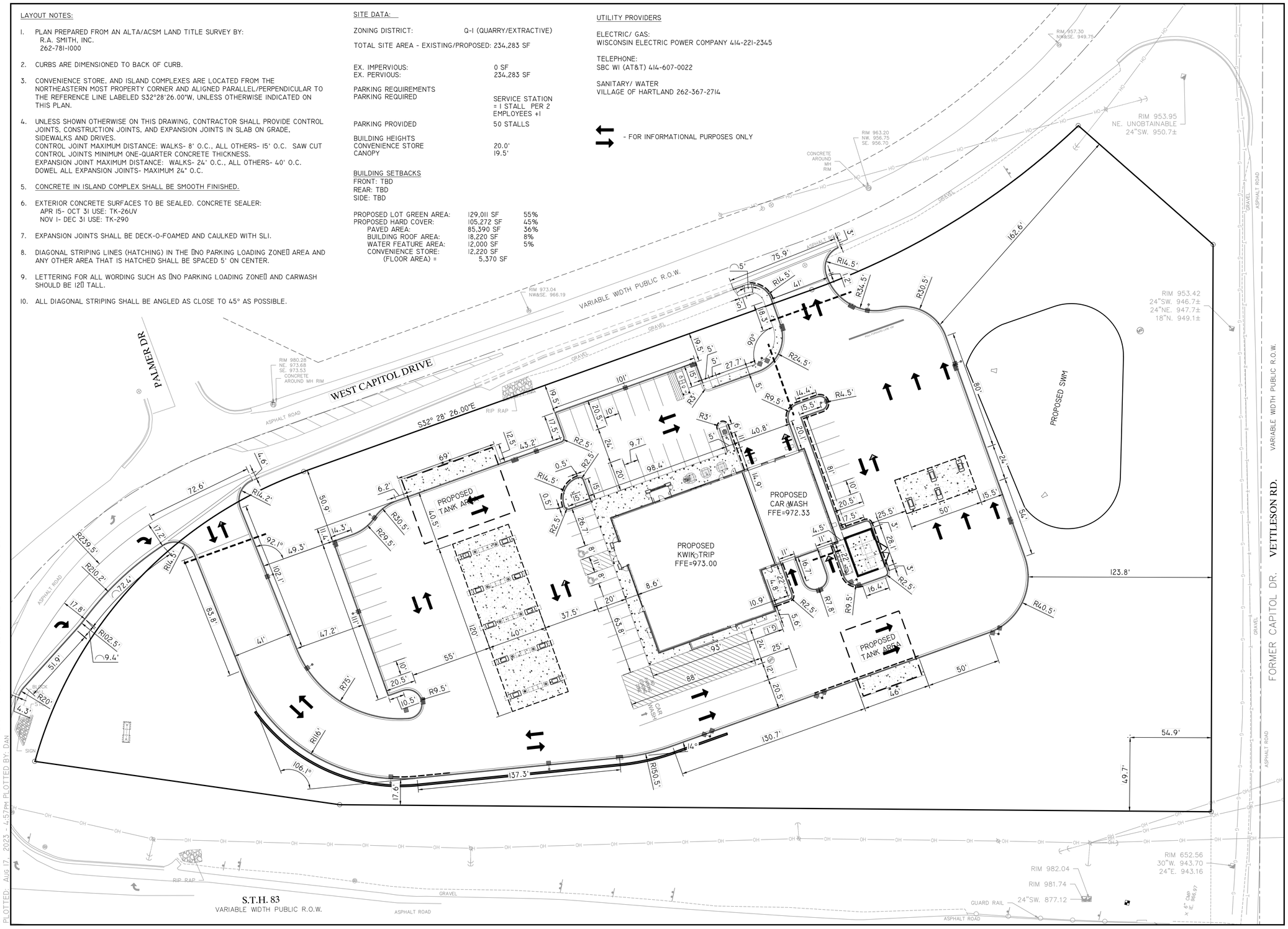
UTILITY PROVIDERS

ELECTRIC/ GAS:
WISCONSIN ELECTRIC POWER COMPANY 414-221-2345

TELEPHONE:
SBC WI (AT&T) 414-607-0022

SANITARY/ WATER
VILLAGE OF HARTLAND 262-367-2714

- FOR INFORMATIONAL PURPOSES ONLY



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EMAIL: MAIL@REIENGINEERING.COM

SCALE
0 30 60

SITE PLAN

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	NAP
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SP1

DRAWING FILE: Q:\0800 - 10899\0827 - KWIK TRIP #1283 - HARTLAND\DRAWING\PLANS\0827-SP1-SITE.DWG LAYOUT: SP1
PLOTTED: AUG 17, 2023 - 4:57PM PLOTTED BY: DAN

KEYED NOTES

2,700 SF — 1. ASPHALT PAVEMENT. SEE DETAIL 1/SP5.

6,200 SF — 2. 6" DEPTH (MIN.) CONCRETE SLAB-ON-GRADE WITH #3 REBAR, 3' O.C. CONCRETE SEALER: TK-26UV. SEE DETAIL 6/SP5.

67,950 SF — 3. 8" DEPTH (MIN.) CONCRETE SLAB-ON-GRADE WITH #4 REBAR, 4' O.C. CONCRETE SEALER: TK-26UV. SEE DETAIL 6/SP5.

1,750 SF — 4. 8" DEPTH CONCRETE APPROACH SIMILAR TO DETAIL 7/SP5.

4,800 SF — 5. 6" CONCRETE WALK. SEE DETAIL 2/SP5. CONCRETE SEALER: TK-26UV

129,000 SF
UNDISTURBED=30,150 SF — 6. LANDSCAPE AREA. SEE SHEET L1.

7. 30" CURB AND GUTTER, SEE DETAIL 8/SP5.

8. 18" CURB AND GUTTER, SEE DETAIL 9/SP5.

9. 18" REJECT CURB AND GUTTER, SEE DETAIL 9/SP5.

10. TRANSITION CURB & GUTTER. SEE DETAIL 4/SP5.

11. STANDARD CURB & GUTTER TERMINATION. SEE DETAIL 5/SP5.

12. TAPER CURB FROM FLUSH TO FULL HEIGHT OVER 6' LENGTH. SEE DETAIL 5A/SP5.

13. A.D.A. ACCESSIBLE PARKING SPACE WITH LOADING ZONE. PROVIDE APPROPRIATE STRIPING AND PAVEMENT MARKINGS. SEE SHEET SP2.3.

14. OFF-STREET PARKING STALLS
STRIPING - 4" WIDE STALL LINES, USE HIGH VISIBILITY YELLOW PAINT.
SPACES PROVIDED
(49) 10.0' x 20.0' (MIN.) GENERAL PARKING
(2) 8.0' x 20.0' ACCESSIBLE PARKING WITH
(1) 11.0' x 20.0' LOADING ZONE
(15) 15.0' x 70.0' TRAILER PARKING

15. EXTERNAL TRASH ENCLOSURE TO MATCH BUILDING. SEE ARCHITECTURAL DETAILS.

16. KWIK TRIP TRADEMARK SIGN SUBJECT TO SEPARATE REVIEW AND APPROVAL (VERIFY FINAL LOCATION WITH SIGN PERMIT)

17. 4" WIDE, HIGH VISIBILITY, PAVEMENT STRIPING, LANE MARKINGS AND TEXT. COLOR: HC MARKINGS- YELLOW, ALL OTHERS- YELLOW.

18A. SIDEWALK RAMP (12:1 SLOPE MAX). SEE DETAIL 12/SP5.

18B. SIDEWALK RAMP (12:1 SLOPE MAX). SEE DETAIL 13/SP5.

18C. SIDEWALK RAMP (12:1 SLOPE MAX). SEE DETAIL 14/SP5.

19. GAS TANK VENT AREA.

20. 30" HT., 6" DIA. CONCRETE FILLED PIPE BOLLARD INSTALLED AT EACH PARKING STALL ALONG BUILDING. SEE DETAIL 10/SP5.

21. 40'-0" x 120'-0" DISPENSER ISLAND CANOPY. VERIFY SIZE, PLACEMENT, COLUMN AND FOOTING SIZE WITH CANOPY AND STRUCTURAL PLANS. CANOPY GRAPHICS PER OWNER.

22. CONCRETE ISLANDS W/ 6" EXPOSURE WITH FUEL DISPENSERS. DISPENSER PER OWNER, 3'-6"x 6'-0".

23. 36" HT., 6" DIA. CONCRETE FILLED PIPE BOLLARD SIMILAR TO DETAIL 10/SP5.

24. OUTDOOR MERCHANDISING AREA.

25. UNDERGROUND FUEL STORAGE TANKS PER OWNER. PROVIDE PIPING AND VENTING PER OWNER'S SPECIFICATIONS. SEE DETAIL 1/SP6.

26. HC PVC BOLLARD SLEEVE PER OWNER. VAN ACCESS SIGNAGE AT 48" HT. STALL PARKING AT 60" HT. SEE SHEET SP2.3.

27. STORM STRUCTURE. SEE SHEET SP3 FOR FURTHER STORM SEWER INFORMATION.

28. LP CAGE.

29. 'FREE AIR' COMPRESSOR. PROVIDE SIGNAGE PER OWNER.

30. SITE AREA LIGHT WITH CONCRETE BASE. SEE DETAIL 11/SP5.

31. PVC IRRIGATION SLEEVE UNDER PAVEMENT. VERIFY W/ IRRIGATION PLAN FOR EXACT SIZE AND LOCATION BEFORE INSTALLATION. SEE DETAIL 3/SP5.

32. 24'-0" x 50'-0" DISPENSER ISLAND CANOPY. VERIFY SIZE, PLACEMENT, COLUMN AND FOOTING SIZE WITH CANOPY AND STRUCTURAL PLANS. CANOPY GRAPHICS PER OWNER.

33. BIKE RACK.

34. VACUUM. SEE DETAIL 15/SP5.

35. 18" EPOXY STOP BAR (YELLOW).

36. TRANSFORMER PAD.

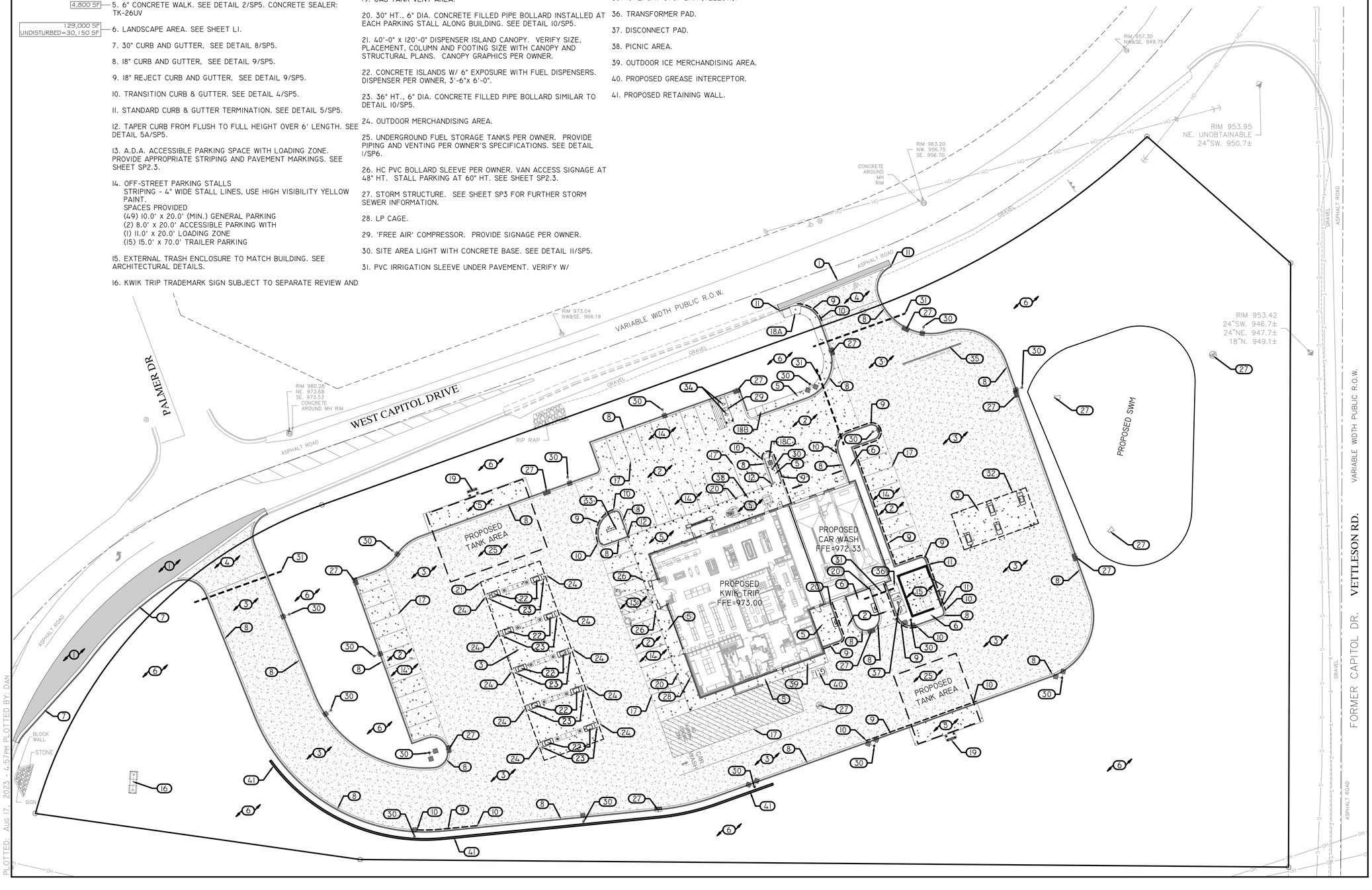
37. DISCONNECT PAD.

38. PICNIC AREA.

39. OUTDOOR ICE MERCHANDISING AREA.

40. PROPOSED GREASE INTERCEPTOR.

41. PROPOSED RETAINING WALL.



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SITE PLAN (KEYNOTES)

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
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SHEET	SP1.1

NOTE: CONTRACTOR TO OBTAIN RIGHT-OF-WAY EXCAVATION PERMIT PRIOR TO BEGINNING SITE WORK.
CALL DIGGERS HOTLINE @ 1-800-242-8511 AT LEAST 3 WORKING DAYS PRIOR TO EXCAVATING.

CONSTRUCTION NOTE:

COORDINATE WITH OWNER FOR POSSIBLE CONSTRUCTION FENCING AND GATE LOCATIONS AND APPROPRIATE SIGNAGE INSTALLATION.

NOTE:

- REFER TO OTHER PROJECT PLANS AND INFORMATION RELATED TO THIS PROJECT PRIOR TO BEGINNING ANY GRADING WORK.

- PLAN PREPARED FROM ALTA/ACSM LAND TITLE SURVEY BY:
  R.A. SMITH, INC.
  262.781.1000

- CONTRACTOR SHALL LOCATE ALL UTILITIES WHICH MAY AFFECT THIS WORK AND NOTIFY OWNER OF ANY CONFLICTS.

- CONTRACTOR SHALL VERIFY ALL EXISTING AND PROPOSED ELEVATIONS PRIOR TO START OF CONSTRUCTION. VERIFY CRITICAL ELEVATIONS TO ENSURE CONFORMANCE WITH GRADING PLAN, PARTICULARLY WITH WALK AND/ OR PAVEMENTS TO REMAIN. MEET EXISTING GRADES ALONG STREETS, PROPERTY LINES AND DRIVEWAY ENTRANCES. RESTORE ALL EXISTING PAVEMENTS THAT REMAIN TO THEIR ORIGINAL, IF NOT BETTER CONDITION. NOTIFY OWNER OF ANY CONFLICTS.

- AREAS NOT PAVED AND TO BE LANDSCAPED SHALL RECEIVE MINIMUM OF 4" DEPTH COMPACTED TOPSOIL.

- CONTRACTOR SHALL COORDINATE GRADING AND INSTALLATION OF DRIVES IN R.O.W. WITH APPROPRIATE GOVERNMENT AGENCIES. OBTAIN APPROPRIATE PERMITS FOR GRADING AND DRAINAGE IN ALL R.O.W.

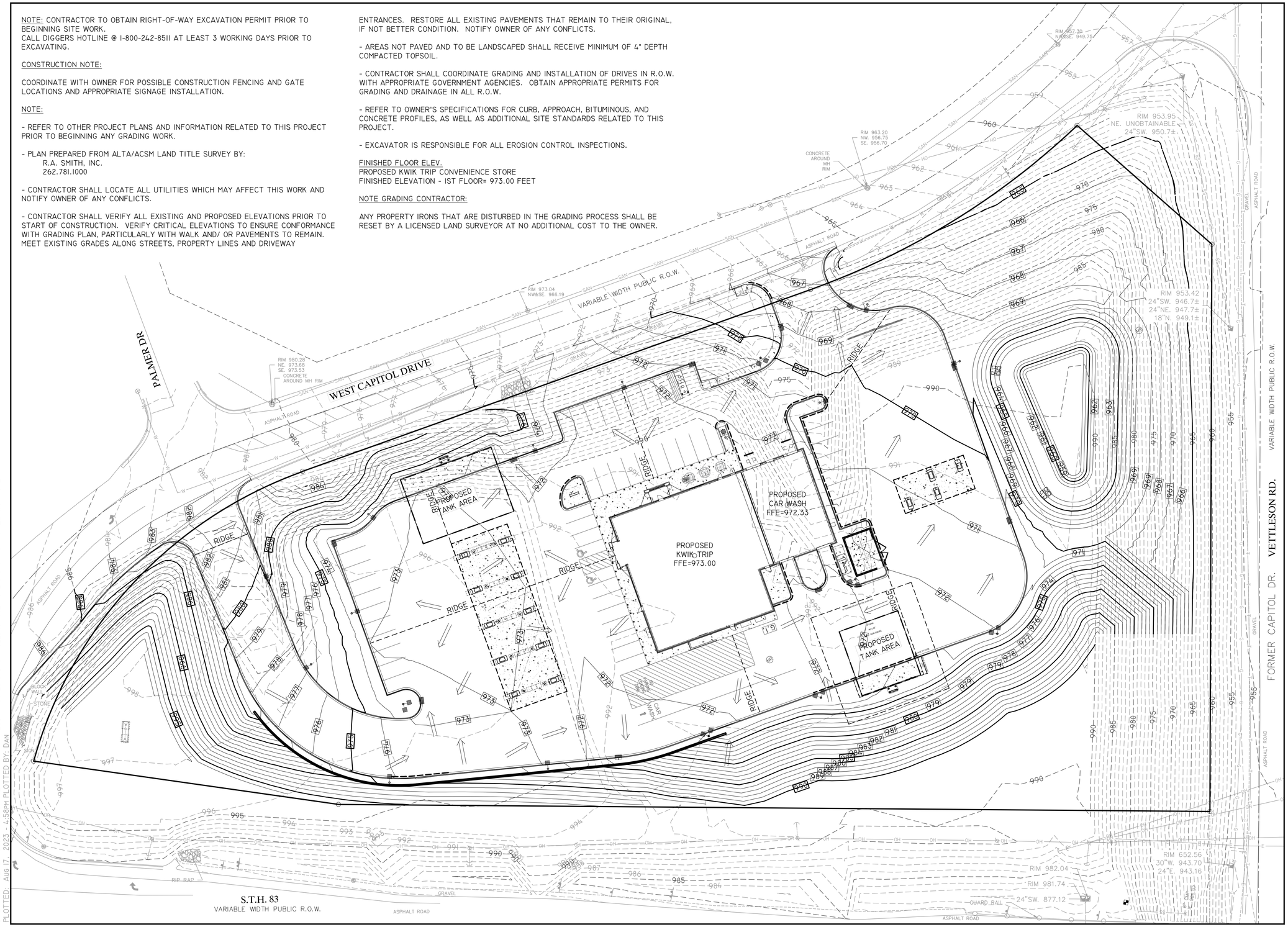
- REFER TO OWNER'S SPECIFICATIONS FOR CURB, APPROACH, BITUMINOUS, AND CONCRETE PROFILES, AS WELL AS ADDITIONAL SITE STANDARDS RELATED TO THIS PROJECT.

- EXCAVATOR IS RESPONSIBLE FOR ALL EROSION CONTROL INSPECTIONS.

FINISHED FLOOR ELEV.
PROPOSED KWIK TRIP CONVENIENCE STORE
FINISHED ELEVATION - 1ST FLOOR= 973.00 FEET

NOTE GRADING CONTRACTOR:

ANY PROPERTY IRONS THAT ARE DISTURBED IN THE GRADING PROCESS SHALL BE RESET BY A LICENSED LAND SURVEYOR AT NO ADDITIONAL COST TO THE OWNER.



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PLOTTED: Aug 17, 2023 - 4:58PM PLOTTED BY: DAN

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KWIK STAR STORES

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SCALE
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GRADING PLAN

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

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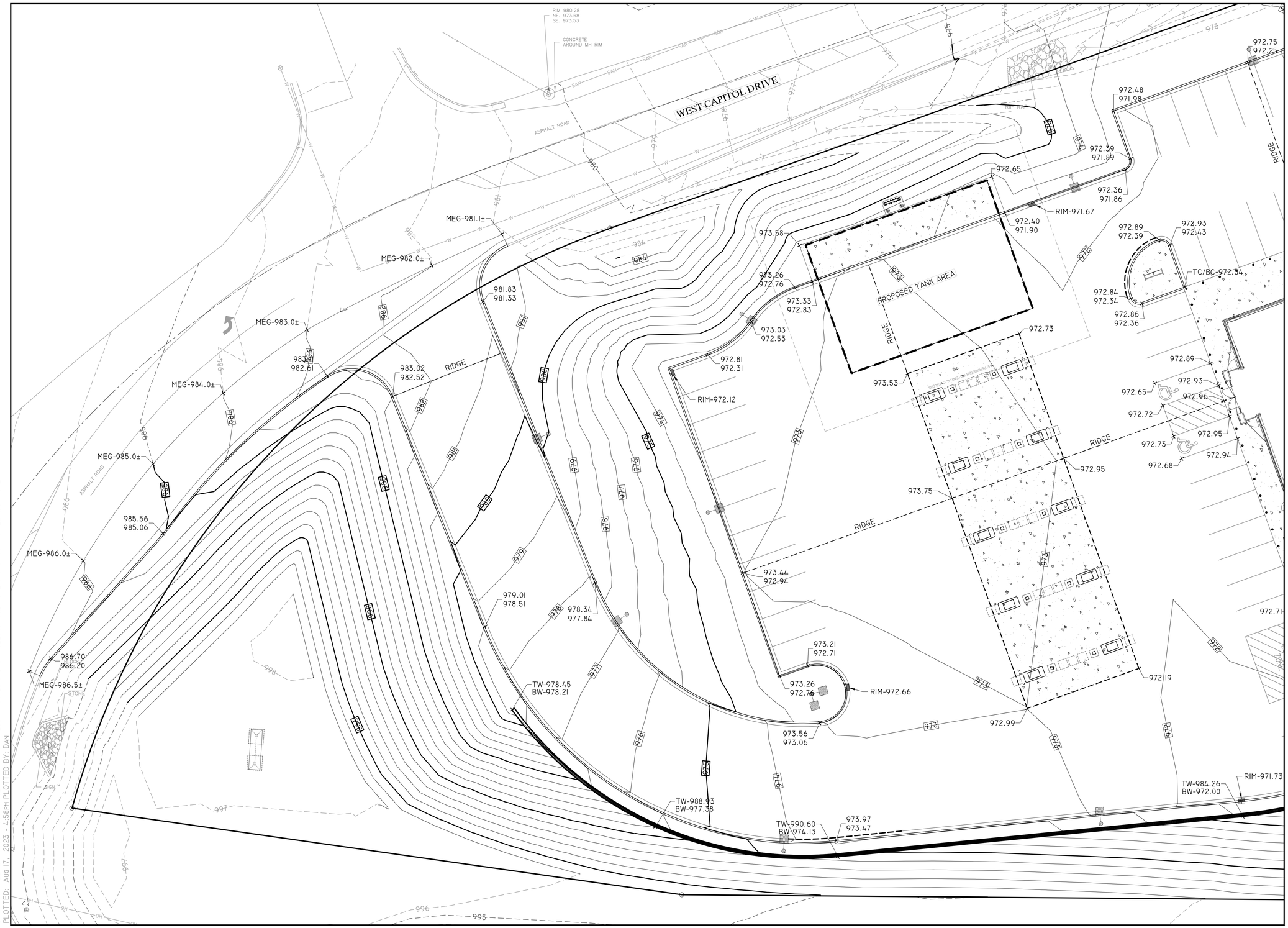
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SP2



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SCALE
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GRADING PLAN DETAIL - WEST

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
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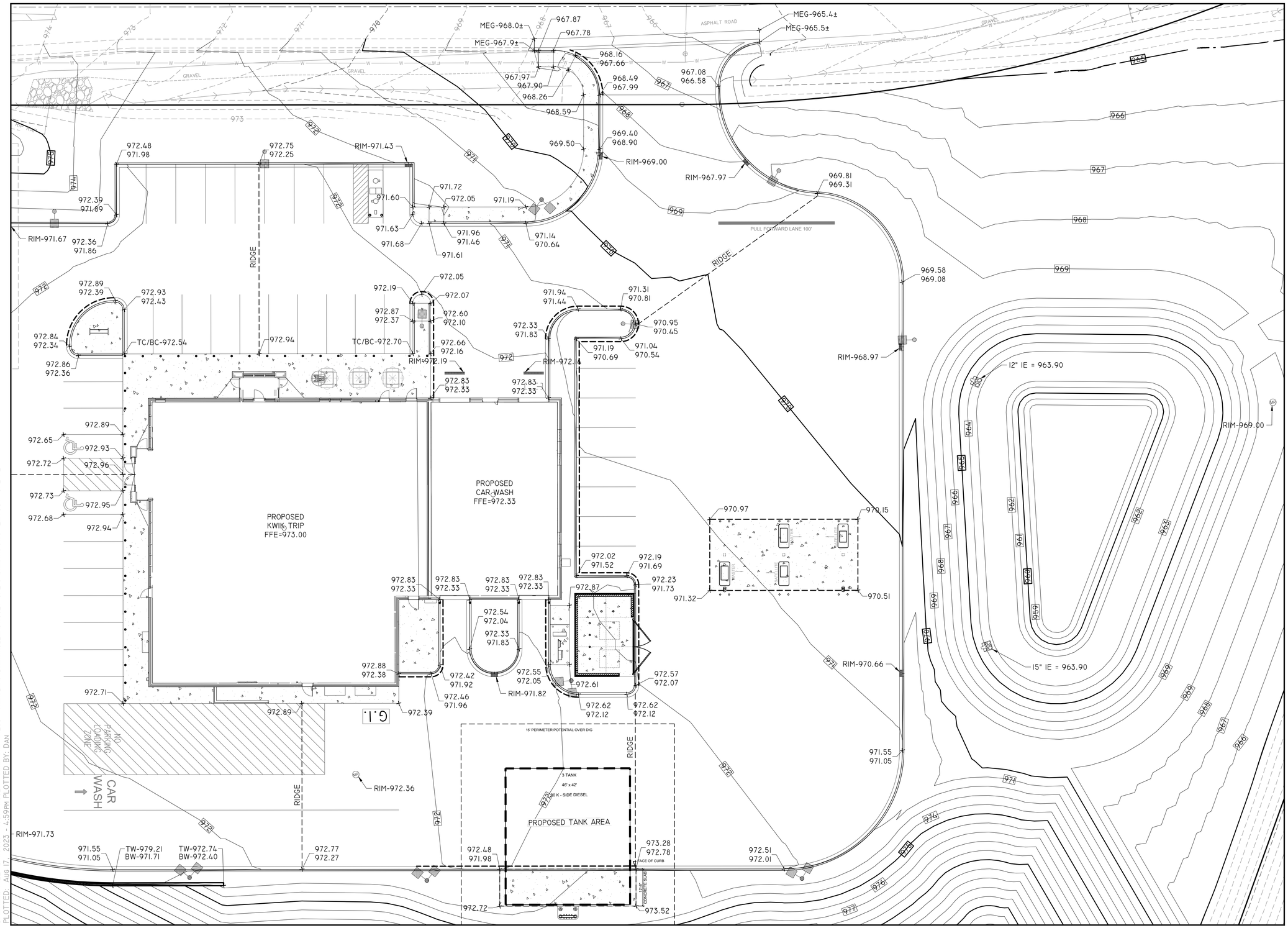
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SP2.1



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PLOTTED: Aug 17, 2023 - 4:59pm PLOTTED BY: DAN

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GRADING PLAN DETAIL - EAST

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

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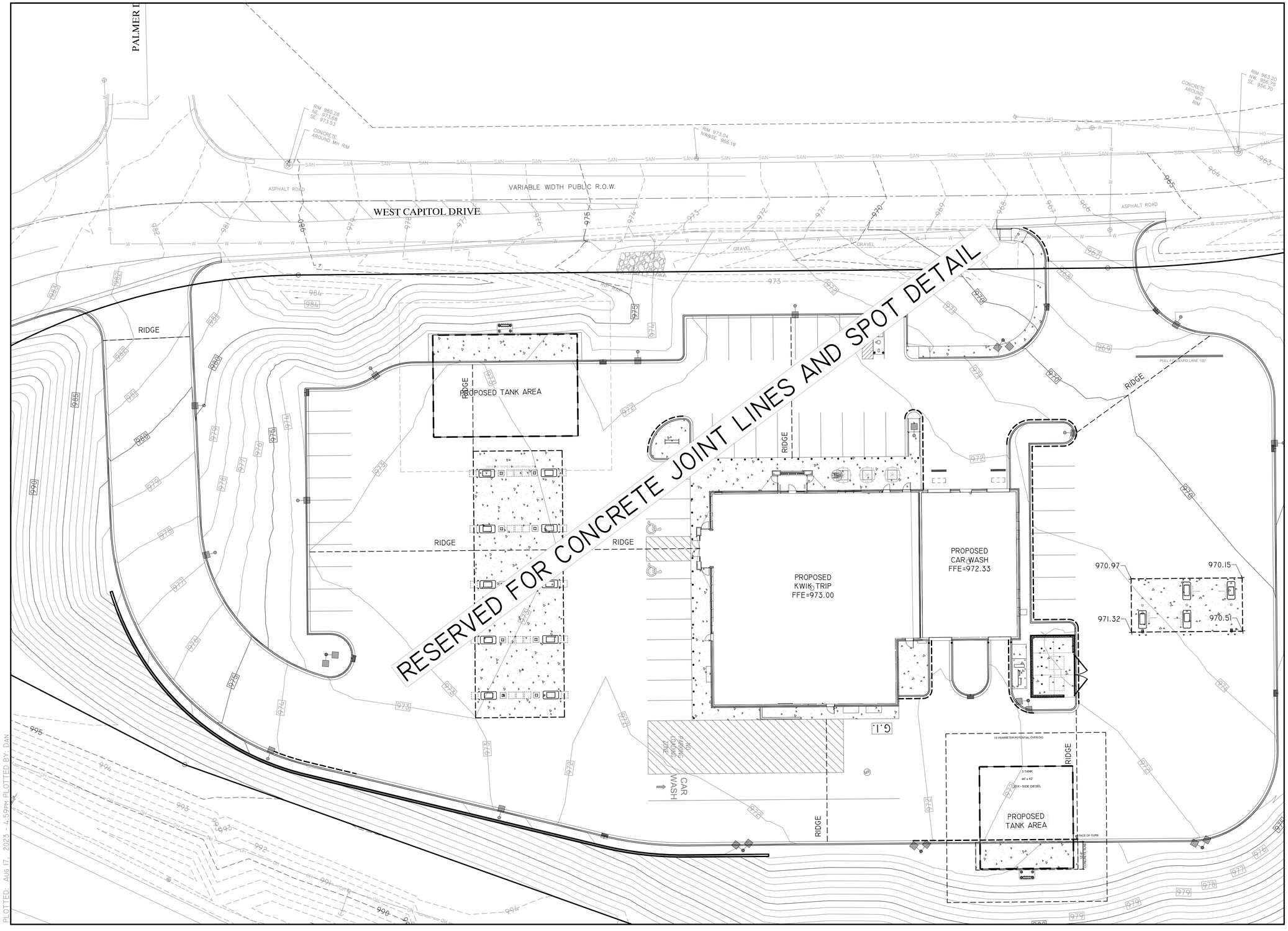
DRAWN BY	NAP
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SP2.1.2



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GRADING PLAN SPOT DETAIL

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

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SCALE	GRAPHIC
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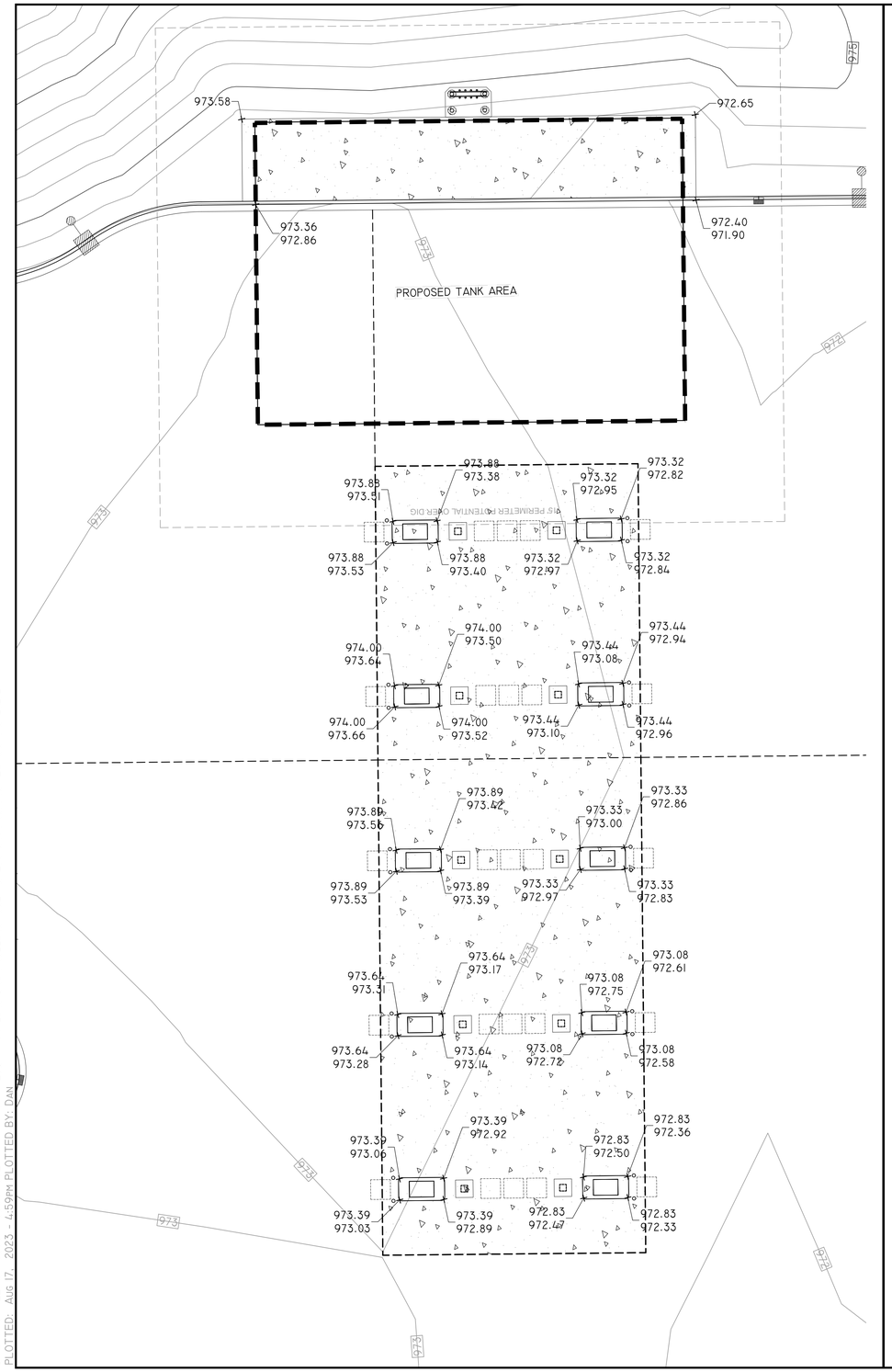
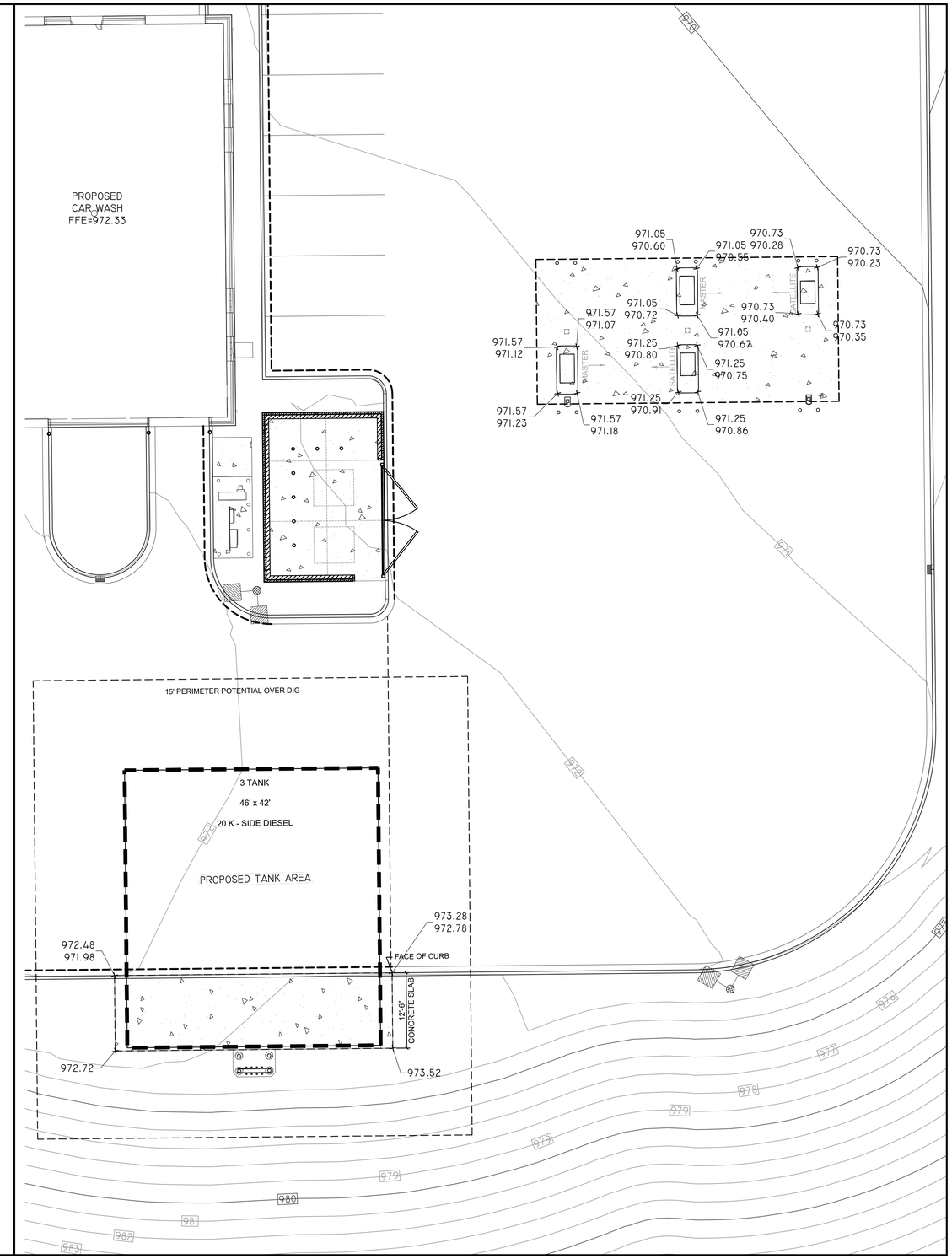
SHEET	SP2.2.1





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CANOPY AND TANK GRADING DETAILS

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

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SCALE	GRAPHIC
PROJ. NO.	10827
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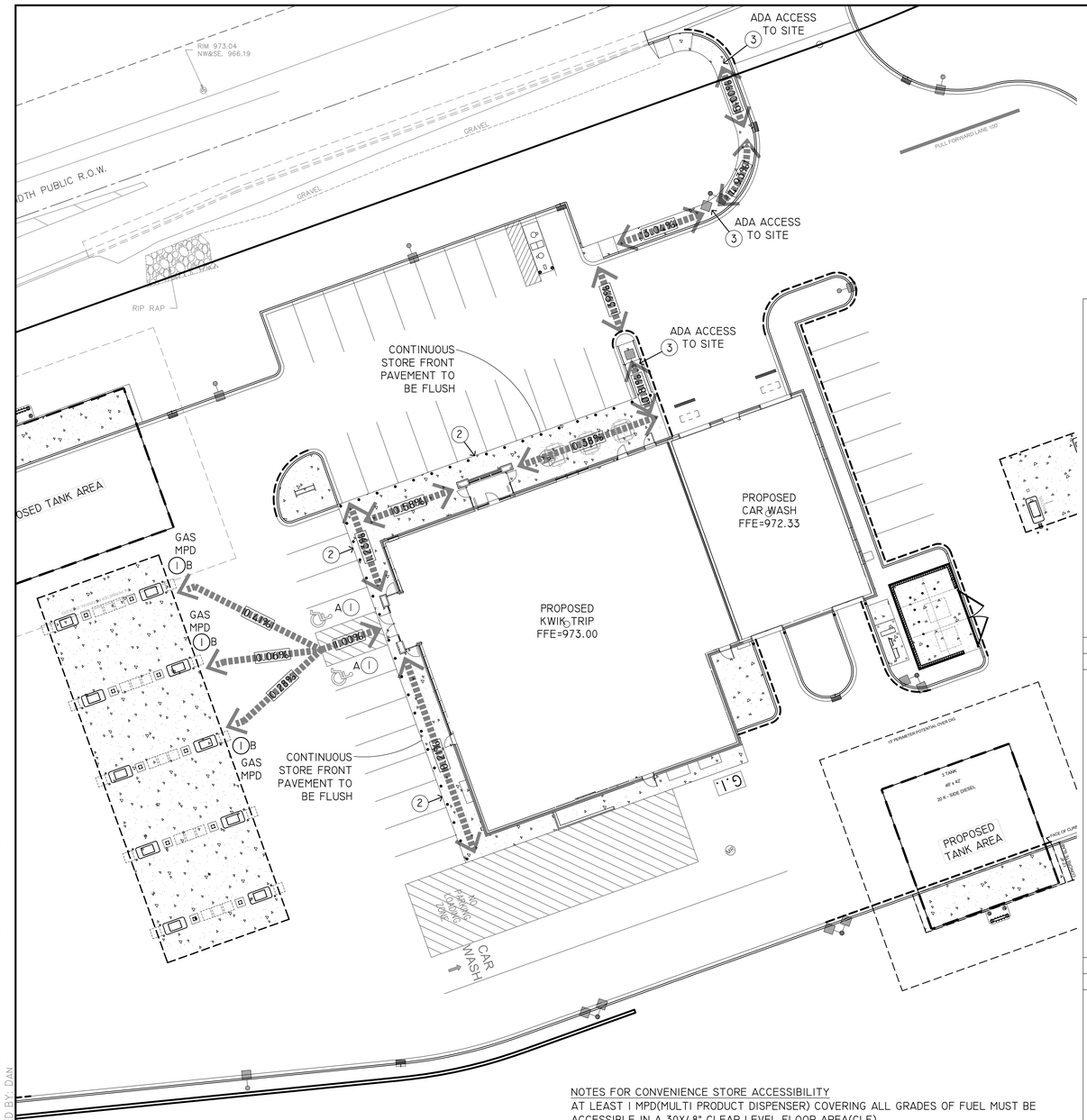
SHEET	SP2.2.2

DRAWING FILE: Q:\10800 - 10899\10827 - KWIK TRIP #1283 - HARTLAND\DRAWING\PLANS\10827-SP2.0-GRADING.DWG LAYOUT: SP2.2.2
PLOTTED: AUG 17, 2023 - 4:59PM PLOTTED BY: DAN



NOTES:

-REFER TO THE DOCUMENT FROM THE DEPARTMENT OF JUSTICE ON "2010 ADA STANDARDS FOR ACCESSIBLE DESIGN". CONTRACTOR SHALL REFERENCE CURRENT A.D.A. GUIDELINES AND LOCAL REGULATIONS FOR SITE ACCESSIBILITY. IN ALL CASES THE MINIMUM REQUIREMENTS SHALL BE PROVIDED ON SITE TO ENSURE COMPLIANCE TO ALL REGULATIONS.

- KWIK TRIP STANDARD ENTRANCE DOOR IS AUTOMATIC SLIDING DOOR SYSTEM DESIGNED TO COMPLY WITH ALL ACCESS CODES AND LAWS. ENTRANCE DOORS FOR ACCESSIBLE ROUTES WILL HAVE A MINIMUM CLEAR OPENING OF 32"

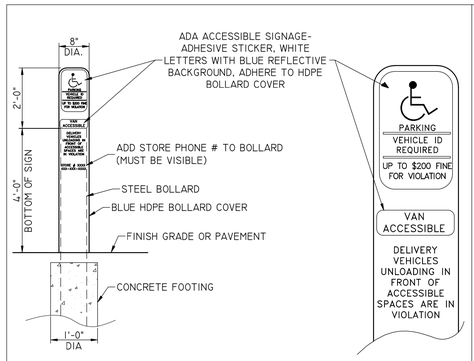
-STORE FRONTS WILL PROVIDE FLUSH PAVEMENTS ALONG ACCESSIBLE ROUTES WITH PROTECTIVE SECURITY BOLLARDS INDICATED AND SPACED BETWEEN PARKING SURFACES AND BUILDING WALK PER PLAN.

-NO OBJECTS OR DISPLAYS SHOULD PROTRUDE INTO THE MINIMUM CLEAR SPACE OF THE ACCESSIBLE ROUTES TO THE STORE ENTRANCE. THIS WILL INCLUDE SEASONAL DISPLAY VENDING AREAS AS WELL AS OTHER OUTDOOR STORAGE UNITS FOR PROPANE AND ICE, ETC.

-PER A.D.A GUIDELINES- CLEAR WIDTH OF ACCESSIBLE ROUTES SHALL BE 36" AND PERMITTED TO BE REDUCED TO 32" FOR A LENGTH OF 24".

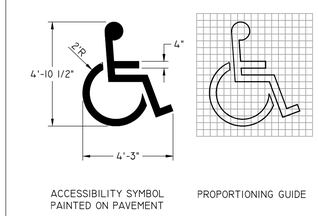
- ACCESS ISLES SERVING WHEEL CHAIR LIFTS OR CHAIR ACCESS FROM VEHICLES ARE REQUIRED TO BE NEARLY LEVEL IN ALL DIRECTIONS TO PROVIDE SAFE TRANSFER OF WHEELCHAIRS TO AND FROM VEHICLES. THE EXCEPTION WOULD BE FOR DRAINAGE. MAXIMUM SLOPE FOR THE ACCESS ISLE IS 1:48. NO CURB RAMPS SHALL BE A PART OF THE ACCESS ISLE.

-IDENTIFICATION SIGNS SHALL INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY WITH THE DESIGNATION OF 1 "VAN ACCESSIBLE' IN EVERY 8 ACCESSIBLE SPACES ON SITE.



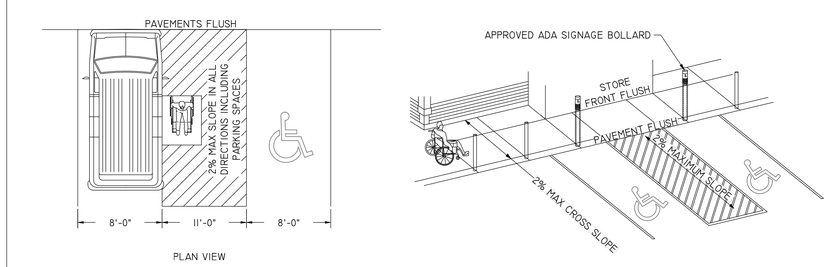
ADA BOLLARD SIGNAGE

NOT TO SCALE



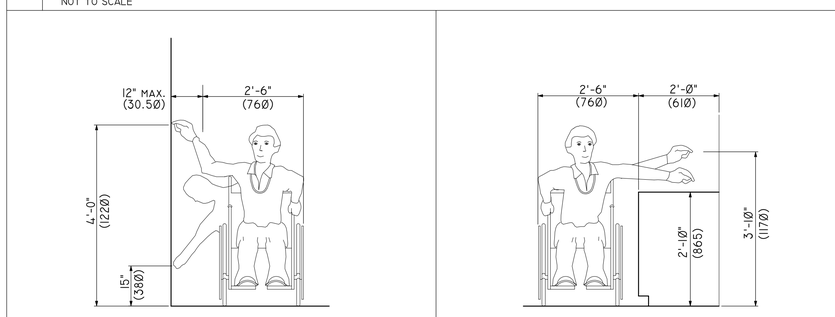
HANDICAP SYMBOL

NOT TO SCALE



VAN ACCESSIBLE PARKING

NOT TO SCALE



ACCESSIBLE REACH DIMENSIONS

NOT TO SCALE

PLAN KEYNOTES

1. ACCESSIBLE STALLS
   A. STRIPING - 4" WIDE STALL LINES, USE HIGH VISIBILITY BLUE PAINT.
   SPACES PROVIDED
   (2) 8'-0"X 20'-0" ACCESSIBLE PARKING WITH
   (1) 11'-0"X 20'-0" LOADING ZONE
   B. ACCESSIBLE FUELING POINT AND DISPENSER AND VALET. VALET AND KEY PAD ON PUMP SHALL CONFORM TO ADA REACH DIMENSIONS AS SHOWN IN DETAIL. SEE NOTES FOR CONVENIENCE STORE ACCESSIBILITY.

2. PAVEMENTS FLUSH FOR ACCESSIBILITY.

3. ACCESSIBLE ROUTE TO STORE.

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

NOTES FOR CONVENIENCE STORE ACCESSIBILITY
AT LEAST 1 MPD(MULTI PRODUCT DISPENSER) COVERING ALL GRADES OF FUEL MUST BE ACCESSIBLE IN A 30X48" CLEAR LEVEL FLOOR AREA(CLF).

ALL PUMP CONTROLS SHALL BE < 48"(2010 STANDARD). WINDOW WASHER, PAPER TOWEL DISPENSER, LITERATURE, FIRE EXTINGUISHER, EMERGENCY FUEL STOPS, ETC. BE ACCESSIBLE 30"X48" CLF SPACE AND WITHIN A FORWARD OR SIDE APPROACH REACH RANGE.

PROVIDE ISA(INDUSTRY STANDARD ARCHITECTURE) AT EACH ACCESSIBLE FUEL POSITION ON FACE OF PUMP.

PROVIDE ISA AT EACH ACCESSIBLE FUELING POSITION VISIBLE TO APPROACHING VEHICLES.

PROVIDE A SIGN AT EACH ACCESSIBLE FUELING POSITION WITH STORE TELEPHONE NUMBER, ADVISING AVAILABLE FUELING ASSISTANCE.

ANY PAY FUNCTION- I.E. AIR/VACUUM ETC. ARE REQUIRED TO HAVE AN ACCESSIBLE ROUTE TO STORE ENTRANCE. CONTROLS SHALL BE ACCESSIBLE 30"X48" CLF SPACE AND WITHIN A FORWARD OR SIDE APPROACH REACH RANGE.

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SCALE
0 20 40

ACCESSIBLE PLAN

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1.		

DRAWN BY	NAP
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SP2.3

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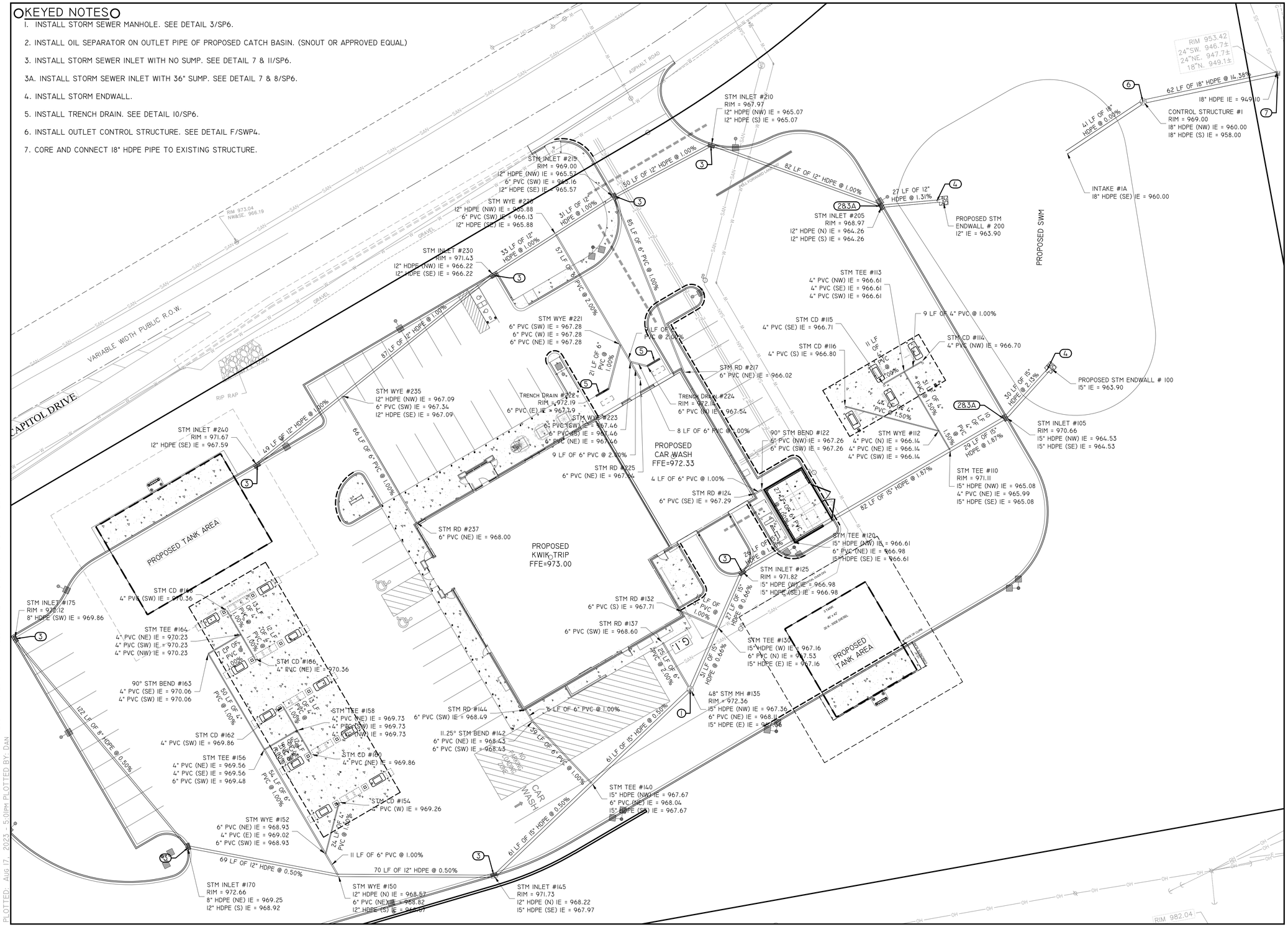
PLOTTED: Aug 17, 2023 - 5:00PM PLOTTED BY: DAN

KEYED NOTES

1. INSTALL STORM SEWER MANHOLE. SEE DETAIL 3/SP6.
2. INSTALL OIL SEPARATOR ON OUTLET PIPE OF PROPOSED CATCH BASIN. (SNOUT OR APPROVED EQUAL)
3. INSTALL STORM SEWER INLET WITH NO SUMP. SEE DETAIL 7 & 11/SP6.

3A. INSTALL STORM SEWER INLET WITH 36" SUMP. SEE DETAIL 7 & 8/SP6.

4. INSTALL STORM ENDWALL.
5. INSTALL TRENCH DRAIN. SEE DETAIL 10/SP6.
6. INSTALL OUTLET CONTROL STRUCTURE. SEE DETAIL F/SWP4.
7. CORE AND CONNECT 18" HDPE PIPE TO EXISTING STRUCTURE.



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STORM SEWER PLAN

CONVENIENCE STORE #1283

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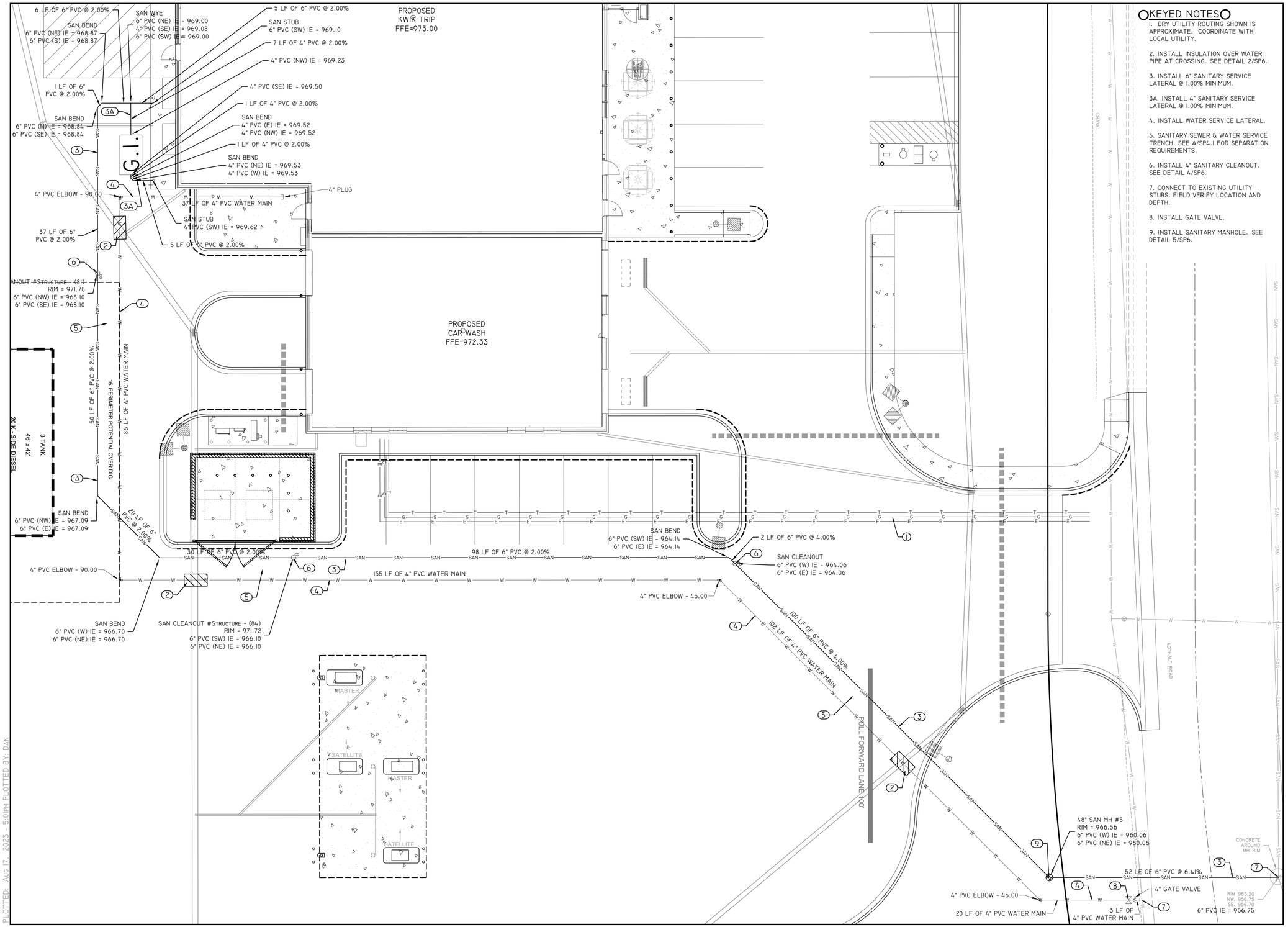
SHEET	SP3

DRAWING FILE: Q:\10800 - 10899\10827 - KWIK TRIP #1283 - HARTLAND\DRAWING\PLANS\10827-SP3-4-4.1-UTILITIES.DWG LAYOUT: SP3
PLOTTED: Aug 17, 2023 - 5:01pm PLOTTED BY: DAN



KEYED NOTES

1. DRY UTILITY ROUTING SHOWN IS APPROXIMATE. COORDINATE WITH LOCAL UTILITY.
2. INSTALL INSULATION OVER WATER PIPE AT CROSSING. SEE DETAIL 2/SP6.
3. INSTALL 6" SANITARY SERVICE LATERAL @ 1.00% MINIMUM.
3A. INSTALL 4" SANITARY SERVICE LATERAL @ 1.00% MINIMUM.
4. INSTALL WATER SERVICE LATERAL.
5. SANITARY SEWER & WATER SERVICE TRENCH. SEE A/SP4.1 FOR SEPARATION REQUIREMENTS.
6. INSTALL 4" SANITARY CLEANOUT. SEE DETAIL 4/SP6.
7. CONNECT TO EXISTING UTILITY STUBS. FIELD VERIFY LOCATION AND DEPTH.
8. INSTALL GATE VALVE.
9. INSTALL SANITARY MANHOLE. SEE DETAIL 5/SP6.

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UTILITY PLAN

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

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SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SP4

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PLOTTED: AUG 17, 2023 - 5:01PM PLOTTED BY: DAN

GENERAL :

1. COMPLY WITH THE WORK SAFETY PRACTICES SPECIFIED BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY REGULATIONS. OSHA PROHIBITS ENTRY INTO "CONFINED SPACES," SUCH AS MANHOLES AND INLETS (SEE 29 CFR SECTION 1910.146), WITHOUT UNDERTAKING CERTAIN SPECIFIC PRACTICES AND PROCEDURES. CONSTRUCTION SAFETY IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR, WHO IS ALSO SOLELY RESPONSIBLE FOR THE MEANS, METHODS, AND SEQUENCING OF THE CONSTRUCTION OPERATIONS.

2. EXISTING BOUNDARY, LOCATION, TOPOGRAPHIC, AND UTILITY INFORMATION SHOWN ON THIS PLAN IS FROM A FIELD SU RVEY BY R.A. SMITH, AUGUST 25 2022.

3. PERFORM ALL UTILITY WORK IN ACCORDANCE WITH STATE AND CITY REQUIREMENTS.

4. CONNECT TO EXISTING SANITARY SEWER MH'S BY CORE DRILLING. CONNECT TO EXISTING STORM SEWER MH'S BY EITHER SAWCUTTING OR CORE DRILLING. USE SAWS OR DRILLS THAT PROVIDE WATER TO THE BLADE. MEET ALL CITY STANDARDS AND SPECIFICATIONS FOR THE THE CONNECTION. RECONSTRUCT INVERTS AFTER INSTALLATION. USE WATER STOP GASKETS IN ORDER TO PROVIDE WATERTIGHT SEALS WHEN PENETRATING A STRUCTURE WALL WITH A PIPE. TAKE MEASUREMENTS BEFORE BEGINNING CONSTRUCTION TO ENSURE THAT SERVICE CONNECTIONS DO NOT CUT INTO MAINTENANCE ACCESS STRUCTURE JOINTS OR PIPE BARREL JOINTS.

5. PERFORM TRENCH EXCAVATIONS FOR ALL UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS OF O.S.H.A. 29 CFR, PART 1926, SUBPART P, "EXCAVATIONS AND TRENCHES." (WWW.OSHA.GOV)

6. COORDINATE BUILDING UTILITY CONNECTION LOCATIONS AT 5 FT. OUT FROM THE PROPOSED BUILDING WITH THE WITH THE INTERIOR PLUMBING CONTRACTOR PRIOR TO CONSTRUCTION. VERIFY WATER AND SEWER SERVICE LOCATIONS AND ELEVATIONS WITH THE MECHANICAL ENGINEER PRIOR TO CONSTRUCTION.

7. THE SUBSURFACE UTILITY INFORMATION SHOWN ON THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

8. THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN ARE FROM RECORD INFORMATION. THE ENGINEER DOES NOT GUARANTEE THAT ALL EXISTING UTILITIES ARE SHOWN OR, IF SHOWN, EXIST IN THE LOCATIONS INDICATED ON THE PLAN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THE FINAL VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UTILITIES (INCLUDING WATER AND SEWER LINES AND APPURTENANCES). NOTIFY THE ENGINEER OF ANY DISCREPANCIES.

9. CONTACT UTILITY COMPANIES FOR LOCATIONS OF ALL PUBLIC AND PRIVATE UTILITIES WITHIN THE WORK AREA PRIOR TO BEGINNING CONSTRUCTION. CONTACT DIGGER'S HOTLINE AT (414) 259-1181 IN THE MILWAUKEE METRO AREA, OR 1-800-242-8511 ELSEWHERE IN WISCONSIN FOR EXACT LOCATIONS OF EXISTING UTILITIES AT LEAST 72 HOURS (NOT INCLUDING WEEKENDS AND HOLIDAYS) BEFORE BEGINNING ANY CONSTRUCTION. OBTAIN TICKET NUMBER AND MEET WITH REPRESENTATIVES OF THE VARIOUS UTILITIES AT THE SITE. PROVIDE THE OWNER WITH THE TICKET NUMBER INFORMATION. DIGGER'S HOTLINE IS A FREE SERVICE THAT LOCATES MUNICIPAL AND UTILITY COMPANY LINES, BUT DOES NOT LOCATE PRIVATE UTILITY LINES. USE AN INDEPENDENT LOCATOR SERVICE OR OTHER MEANS IN ORDER TO OBTAIN LOCATIONS OF PRIVATE UTILITY LINES INCLUDING, BUT NOT LIMITED TO, UNDERGROUND ELECTRIC CABLES, TELEPHONE, TV, AND LAWN SPRINKLER LINES.

10. POTHOLE TO VERIFY THE POSITIONS OF EXISTING UNDERGROUND FACILITIES AT A SUFFICIENT NUMBER OF LOCATIONS IN ORDER TO ASSURE THAT NO CONFLICT WITH THE PROPOSED WORK EXISTS AND THAT SUFFICIENT CLEARANCE IS AVAILABLE.

11. WHERE EXISTING GAS, ELECTRIC, CABLE, OR TELEPHONE UTILITIES CONFLICT WITH THE WORK, COORDINATE THE ABANDONMENT, RELOCATION, OFFSET, OR SUPPORT OF THE EXISTING UTILITIES WITH THE APPROPRIATE LOCAL UTILITY COMPANIES. COORDINATE NEW GAS METER AND GAS LINE INSTALLATION, ELECTRIC METER AND ELECTRIC SERVICE INSTALLATION, CABLE SERVICE, AND TELEPHONE SERVICE INSTALLATION WITH THE LOCAL UTILITY COMPANIES.

12. ARRANGE FOR AND SECURE SUITABLE DISPOSAL AREAS OFF-SITE. DISPOSE OF ALL EXCESS SOIL, WASTE MATERIAL, DEBRIS, AND ALL MATERIALS NOT DESIGNATED FOR SALVAGE. WASTE MATERIAL AND DEBRIS INCLUDES TREES, STUMPS, PIPE, CONCRETE, ASPHALTIC CONCRETE, CANS, OR OTHER WASTE MATERIAL FROM THE CONSTRUCTION OPERATIONS. OBTAIN THE RIGHTS TO ANY WASTE AREA FOR DISPOSAL OF UNSUITABLE OR SURPLUS MATERIAL EITHER SHOWN OR NOT SHOWN ON THE PLANS. ALL WORK IN DISPOSING OF SUCH MATERIAL SHALL BE CONSIDERED INCIDENTAL TO THE WORK. ALL DISPOSAL MUST CONFORM TO APPLICABLE SOLID WASTE DISPOSAL PERMIT REGULATIONS. OBTAIN ALL NECESSARY PERMITS AT NO COST TO THE OWNER.

13. STRAIGHT LINE SAW-CUT EXISTING BITUMINOUS OR CONCRETE SURFACING AT THE PERIMETER OF PAVEMENT REMOVAL AREAS. USE SAWS THAT PROVIDE WATER TO THE BLADE. TACK, AND MATCH ALL CONNECTIONS TO EXISTING BITUMINOUS PAVEMENT.

14. RELOCATE OVERHEAD POWER, TELEPHONE, AND CABLE LINES AS REQUIRED.

15. ALL MATERIALS REQUIRED FOR THIS WORK SHALL BE NEW MATERIAL CONFORMING TO THE REQUIREMENTS FOR CLASS, KIND, GRADE, SIZE, QUALITY, AND OTHER DETAILS SPECIFIED HEREIN OR AS SHOWN ON THE PLANS. DO NOT USE RECYCLED OR SALVAGED AGGREGATE, ASPHALTIC PAVEMENT, CRUSHED CONCRETE, OR SCRAP SHINGLES. UNLESS OTHERWISE INDICATED, THE CONTRACTOR SHALL FURNISH ALL REQUIRED MATERIALS.

16. RESTORE THE PUBLIC RIGHT-OF-WAY. REPLACE ANY CONCRETE CURB AND GUTTER, BITUMINOUS PAVEMENT, SIDEWALK, OR VEGETATIVE COVER DAMAGED BY THE CONSTRUCTION ACTIVITY. RESTORE DAMAGED TURF WITH SOD WITHIN THE PUBLIC RIGHT-OF-WAY. THE WORK AREA SHOWN IS GENERAL AND MAY NEED TO BE ADJUSTED IN THE FIELD.

17. WHEN SAWING OR DRILLING CONCRETE OR MASONRY, USE SAWS THAT PROVIDE WATER TO THE BLADE. DO NOT ALLOW THE SLURRY PRODUCED BY THIS PROCESS TO BE TRACKED OUTSIDE OF THE IMMEDIATE WORK AREA OR DISCHARGED INTO THE SEWER SYSTEM.

18. ADJUST ALL CURB STOPS, VALVE BOXES, MAINTENANCE HOLE CASTINGS, CATCH BASIN CASTINGS, CLEANOUT COVERS, AND SIMILAR ITEMS TO FINISHED GRADE.

19. INSTALL ALL PIPE WITH THE ASTM IDENTIFICATION NUMBERS ON THE TOP FOR INSPECTION. COMMENCE PIPE LAYING AT THE LOWEST POINT IN THE PROPOSED SEWER LINE. LAY THE PIPE WITH THE BELL END OR RECEIVING GROOVE END OF THE PIPE POINTING UPGRADE. WHEN CONNECTING TO AN EXISTING PIPE, UNCOVER THE EXISTING PIPE IN ORDER TO ALLOW ANY ADJUSTMENTS IN THE PROPOSED LINE AND GRADE BEFORE LAYING ANY PIPE.

20. OBTAIN AND PAY FOR ALL PERMITS, TESTS, INSPECTIONS, ETC. REQUIRED BY AGENCIES THAT HAVE JURISDICTION OVER THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR ALL BONDS, LETTERS OF CREDIT, OR CASH SURETIES RELATED TO THE WORK. EXECUTE AND INSPECT WORK IN ACCORDANCE WITH ALL LOCAL AND STATE CODES, RULES, ORDINANCES, OR REGULATIONS PERTAINING TO THE PARTICULAR TYPE OF WORK INVOLVED.

21. OBTAIN PERMITS FROM THE CITY FOR WORK IN THE PUBLIC RIGHT-OF-WAY.

22. CONSTRUCT SANITARY SEWER, WATERMAIN, AND STORM SEWER UTILITIES IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, SIXTH EDITION, OR THE LATEST REVISED EDITION.

23. TRACER WIRE: LOCATING REQUIREMENTS - A MEANS TO LOCATE BURIED UNDERGROUND EXTERIOR NON METALLIC SEWERS/MAINS MUST BE PROVIDED WITH TRACER WIRE OR OTHER METHODS IN ORDER TO BE LOCATED IN ACCORD WITH THE PROVISIONS OF THESE CODE SECTIONS AS PER 182.0715(2R) OF THE STATUTES.

24. INSTALL ALL PIPE WITH THE ASTM IDENTIFICATION NUMBERS ON THE TOP FOR INSPECTION. COMMENCE PIPE LAYING AT THE LOWEST POINT IN THE PROPOSED SEWER LINE. LAY THE PIPE WITH THE BELL END OR RECEIVING GROOVE END OF THE PIPE POINTING UPGRADE. WHEN CONNECTING TO AN EXISTING PIPE, UNCOVER THE EXISTING PIPE IN ORDER TO ALLOW ANY ADJUSTMENTS IN THE PROPOSED LINE AND GRADE BEFORE LAYING ANY PIPE. DO NOT LAY PIPES IN WATER OR WHEN THE TRENCH CONDITIONS ARE UNSUITABLE FOR SUCH WORK.

WATER DISTRIBUTION SYSTEM :

1. BRING ALL SITE UTILITIES TO 5' OUTSIDE OF THE BUILDING LINE WITH THE EXCEPTION OF THE WATER SERVICE. EXTEND WATER SERVICE INTO THE BUILDING AND UP TO THE FLANGE FOR THE WATER METER.

2. SEPARATION OF WATER AND SEWER: PROVIDE HORIZONTAL AND VERTICAL SEPARATIONS AS REQUIRED BY CODE. SEE DETAIL A/SP4.1.

3. WATERMAIN DEPTH: MAINTAIN 7.5 FEET OF COVER OVER THE TOP OF THE WATER LINES TO THE FINISHED GRADE. VERIFY ELEVATION OF PROPOSED AND EXISTING WATER LINES AT ALL UTILITY CROSSINGS. INSTALL THE WATER LINES AT GREATER DEPTHS IN ORDER TO CLEAR STORM SEWERS, SANITARY SEWERS, OR OTHER UTILITIES AS REQUIRED. INCLUDE COSTS TO LOWER WATER LINES IN THE BASE BID.

4. DISINFECTION: DISINFECT ALL COMPLETED WATERMAINS IN ACCORDANCE WITH AWWA STANDARD C651. IF THE TABLET OR CONTINUOUS FEED METHODS ARE USED, DISINFECT USING WITH WATER THAT CONTAINS AT LEAST 50 PPM OF AVAILABLE CHLORINE. DO NOT USE THE TABLET METHOD ON SOLVENT-WELDED PLASTIC OR ON SCREWED-JOINT STEEL PIPE BECAUSE OF THE DANGER OF FIRE OR EXPLOSION FROM THE REACTION OF THE JOINT COMPOUNDS WITH THE CALCIUM HYPOCHLORITE. RETAIN THE TREATED WATER IN THE PIPELINE FOR AT LEAST 24 HOURS. MEASURE THE CHLORINE RESIDUAL AT THE END OF THE 24 HOUR PERIOD. THE FREE CHLORINE RESIDUAL MUST BE AT LEAST 10 MG/L MEASURED AT ANY POINT IN THE LINE. MEASUREMENT OF THE CHLORINE CONCENTRATION AT REGULAR INTERVALS SHALL BE IN ACCORDANCE WITH STANDARD METHODS, AWWA M-12, OR USING APPROPRIATE CHLORINE TEST KITS.

5. TESTING: PRESSURE TEST AND PERFORM BACTERIOLOGICAL TESTS ON ALL WATER LINES UNDER THE SUPERVISION OF THE CITY PUBLIC WORKS DEPARTMENT. NOTIFY THE CITY AT LEAST 24 WORKING HOURS PRIOR TO ANY TESTING. PRESSURIZE THE WATERLINE TO 1034-KPA (150-PSI) GAUGE PRESSURE (MEASURED AT THE POINT OF LOWEST ELEVATION) BY MEANS OF A PUMP CONNECTED TO THE PIPE IN A SATISFACTORY MANNER. MAINTAIN THE TEST PRESSURE FOR A MINIMUM OF 2 HOURS. DO NOT ADD WATER TO THE WATERMAIN IN ORDER TO MAINTAIN THE REQUIRED PRESSURE DURING THE WATER MAIN PRESSURE TESTING. THE TEST SECTION OF PIPE IS ACCEPTABLE WITH A PRESSURE DROP OF 14 KPA (2 PSI) OR LESS.

6. USE MUELLER H 10300 OR FORD EM 2 7057, OR APPROVED EQUAL, AT ALL CURB STOP LOCATIONS. STATIONARY ROD IS REQUIRED ON ALL CURB STOPS.

7. BUILDING WATER SERVICES: WATER SERVICE PIPE SHALL MEET THE FOLLOWING SPECIFICATIONS AND BE APPROVED BY THE LOCAL GOVERNING AGENCY. 2.5 INCH OR LESS: HDPE PER ASTM D2737 SDR 9 OR TYPE K COPPER PER ASTM B - 88. 4 INCH OR GREATER: DIP PER AWWA C151 OR PVC PER AWWA C-900.

8. TRACER WIRE: LOCATING REQUIREMENTS - A MEANS TO LOCATE BURIED UNDERGROUND EXTERIOR NON METALLIC SEWERS/MAINS MUST BE PROVIDED WITH TRACER WIRE OR OTHER METHODS IN ORDER TO BE LOCATED IN ACCORD WITH THE PROVISIONS OF THE WISCONSIN STATUTES 182.0175(2R) AND THE WISCONSIN DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES SPS 382.30(11)(H).

STORM DRAINAGE :

1. UNLESS OTHERWISE INDICATED, USE REINFORCED, PRECAST, CONCRETE MAINTENANCE HOLES AND CATCH BASINS CONFORMING TO ASTM C478, FURNISHED WITH WATER STOP RUBBER GASKETS AND PRECAST BASES. JOINTS FOR ALL PRECAST MAINTENANCE HOLE SECTIONS SHALL HAVE CONFINED, RUBBER "O"-RING GASKETS IN ACCORDANCE WITH ASTM C923. THE INSIDE BARREL DIAMETER SHALL NOT BE LESS THAN 48 INCHES.

2. ALL JOINTS AND CONNECTIONS TO CATCH BASINS OR MANHOLES SHALL BE WATERTIGHT OR APPROVED CONNECTION. USE RESILIENT RUBBER SEALS, WATERSTOP GASKETS, OR APPROVED EQUAL. CEMENT MORTAR JOINTS ARE NOT ALLOWED UNLESS OTHERWISE PERMITTED BY LOCAL MUNICIPALITY.

3. INSTALL CATCH BASIN CASTINGS WITH SPECIFIED TOP ELEVATION AT THE FLOWLINE OF RIM.

4. PVC PIPE: USE SOLID-CORE, SDR-35, ASTM D3034 POLYVINYL CHLORIDE (PVC) PIPE FOR DESIGNATED PVC STORM SEWER SERVICES 4 TO 15-INCHES IN DIAMETER. USE SOLID-CORE, SDR-35, ASTM F679 POLYVINYL CHLORIDE (PVC) PIPE FOR DESIGNATED PVC STORM SEWER SERVICES 18 TO 27-INCHES IN DIAMETER. JOINTS FOR ALL STORM SEWER SHALL HAVE PUSH-ON JOINTS WITH ELASTOMERIC GASKETS. USE OF SOLVENT CEMENT JOINTS IS ALLOWED FOR BUILDING SERVICES. SOLVENT CEMENT JOINTS IN PVC PIPE MUST INCLUDE USE OF A PRIMER WHICH IS OF CONTRASTING COLOR TO THE PIPE AND CEMENT. PIPE WITH SOLVENT CEMENT JOINTS SHALL BE JOINED WITH PVC CEMENT CONFORMING TO ASTM D2564. LAY ALL PVC PIPE ON A CONTINUOUS GRANULAR BED. INSTALLATION MUST COMPLY WITH ASTM D2321.

5. TESTING: TEST ALL PORTIONS OF STORM SEWER THAT ARE WITHIN 10 FEET OF BUILDINGS, WITHIN 10 FEET OF BURIED WATER, LINES, WITHIN 50 FEET OF WATER WELLS, OR THAT PASS THROUGH SOIL OR WATER IDENTIFIED AS BEING CONTAMINATED. TEST ALL FLEXIBLE STORM SEWER LINES FOR DEFLECTION AFTER THE SEWER LINE HAS BEEN INSTALLED AND BACKFILL HAS BEEN IN PLACE FOR AT LEAST 30 DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF 5%. IF THE TEST FAILS, MAKE NECESSARY REPAIRS AND RETEST.

6. USE NEENAH R-1550A FRAME WITH 2050D GRATE ON ALL PROPOSED CATCH BASINS.

7. INSTALL DETECTABLE UNDERGROUND MARKING TAPE DIRECTLY ABOVE ALL PVC, POLYETHYLENE, AND OTHER NONCONDUCTIVE UNDERGROUND UTILITIES AT A DEPTH OF 457 MM (18 INCHES) BELOW FINISHED GRADE, UNLESS OTHERWISE INDICATED. BRING THE TAPE TO THE SURFACE AT VARIOUS LOCATIONS IN ORDER TO PROVIDE CONNECTION POINTS FOR LOCATING UNDERGROUND UTILITIES. INSTALL BLUE RHINO TRIVIEW FLEX TEST STATIONS, OR APPROVED EQUAL, WITH BLACK CAPS AT EACH SURFACE LOCATION.

8. TRACER WIRE: LOCATING REQUIREMENTS - A MEANS TO LOCATE BURIED UNDERGROUND EXTERIOR NON METALLIC SEWERS/MAINS MUST BE PROVIDED WITH TRACER WIRE OR OTHER METHODS IN ORDER TO BE LOCATED IN ACCORD WITH THE PROVISIONS OF THESE CODE SECTIONS AS PER 182.0715(2R) OF THE STATUTES.

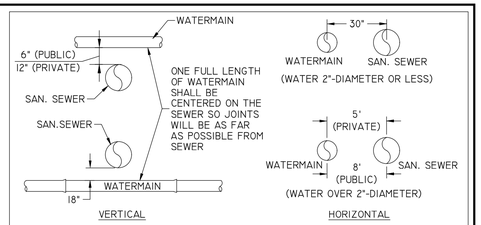
9. THE MINIMUM DEPTH OF COVER FOR BUILDING AND CANOPY ROOF DRAIN LEADERS WITHOUT INSULATION IS 5 FEET. INSULATE ROOF DRAIN LEADERS AT LOCATIONS WHERE THE DEPTH OF COVER IS LESS THAN 5 FEET. PROVIDE A MINIMUM INSULATION THICKNESS OF 2 INCHES. THE INSULATION MUST BE AT LEAST 4 FEET WIDE AND CENTERED ON THE PIPE. INSTALL THE INSULATION BOARDS 6 INCHES ABOVE THE TOPS OF THE PIPES ON MECHANICALLY COMPACTED AND LEVELED PIPE BEDDING MATERIAL. USE HIGH DENSITY, CLOSED CELL, RIGID BOARD MATERIAL EQUIVALENT TO DOW STYROFOAM HI-40 PLASTIC FOAM INSULATION.

10. CLEANOUTS: INSTALL CLEANOUTS ON ALL ROOF DRAINS IN ACCORDANCE WITH S.P.S 382.35 (3)(C)(1.). THE DISTANCE BETWEEN CLEANOUTS IN HORIZONTAL PIPING SHALL NOT EXCEED 100 FEET FOR PIPES 10-INCHES AND UNDER IN SIZE. CLEANOUTS SHALL BE OF THE SAME NOMINAL SIZE AS THE PIPES THEY SERVE OR 6-INCH DIAMETER MINIMUM FOR PIPES 6 INCHES IN DIAMETER OR GREATER. INSTALL A METER BOX FRAME AND SOLID LID (NEENAH R-1914-A, OR APPROVED EQUAL) OVER ALL CLEANOUTS.

11. INSTALL ALL PIPE WITH THE ASTM IDENTIFICATION NUMBERS ON THE TOP FOR INSPECTION. COMMENCE PIPE LAYING AT THE LOWEST POINT IN THE PROPOSED SEWER LINE. LAY THE PIPE WITH THE BELL END OR RECEIVING GROOVE END OF THE PIPE POINTING UPGRADE. WHEN CONNECTING TO AN EXISTING PIPE, UNCOVER THE EXISTING PIPE IN ORDER TO ALLOW ANY ADJUSTMENTS IN THE PROPOSED LINE AND GRADE BEFORE LAYING ANY PIPE. DO NOT LAY PIPES IN WATER OR WHEN THE TRENCH CONDITIONS ARE UNSUITABLE FOR SUCH WORK.

12. INSTALL STORM SEWER IN ACCORDANCE WITH SECTION 608 OF THE WISDOT STANDARD SPECIFICATIONS.

13. INSTALL CATCH BASINS, MANHOLES, AND INLETS IN ACCORDANCE WITH SECTION 611 OF THE WISDOT STANDARD SPECIFICATIONS.



NOTES:
1. WHEN THE ABOVE SEPARATIONS CANNOT BE MAINTAINED, THE ENGINEER MAY REQUIRE THE CONTRACTOR TO ENCASE THE SEWER IN CONCRETE.

2. NO PRIVATE WATER MAIN OR WATER SERVICE SHALL BE INSTALLED WITHIN 6" OF A STORM SEWER. PUBLIC WATER MAIN MUST MEET THE SAME HORIZONTAL AND VERTICAL SEPARATION DISTANCES AS REQUIRED FOR SANITARY SEWER.

A / SP4.1 SEWER / WATERMAIN SEPARATION DISTANCE
NTS

SANITARY SEWER :

1. PIPE: USE SOLID-CORE, SDR-35, ASTM D3034 (OR APPROVED EQUAL) POLYVINYL CHLORIDE (PVC) PLASTIC PIPE FOR ALL DESIGNATED PVC SANITARY SEWER SERVICES. JOINTS FOR ALL SANITARY SEWER SHALL HAVE PUSH-ON JOINTS WITH ELASTOMERIC GASKETS. USE OF SOLVENT CEMENT JOINTS IS ALLOWED FOR BUILDING SERVICES. SOLVENT CEMENT JOINTS IN PVC PIPE MUST INCLUDE USE OF A PRIMER WHICH IS OF CONTRASTING COLOR TO THE PIPE AND CEMENT. PIPE WITH SOLVENT CEMENT JOINTS SHALL BE JOINED WITH PVC CEMENT CONFORMING TO ASTM D2564. LAY ALL PVC PIPE ON A CONTINUOUS GRANULAR BED. INSTALLATION MUST COMPLY WITH ASTM D2321.

2. CLEANOUTS: INSTALL CLEANOUTS ON ALL SANITARY SEWER SERVICES. THE DISTANCE BETWEEN CLEANOUTS IN HORIZONTAL PIPING SHALL NOT EXCEED 100 FEET FOR PIPES 4-INCH AND OVER IN SIZE. CLEANOUTS SHALL BE OF THE SAME NOMINAL SIZE AS THE PIPES THEY SERVE OR 6-INCH DIAMETER MINIMUM FOR PIPES 6 INCHES IN DIAMETER OR GREATER. INCLUDE FROST SLEEVES AND CONCRETE FRAME AND PIPE SUPPORT. INSTALL A METER BOX FRAME AND SOLID LID (NEENAH R-1914-A, OR APPROVED EQUAL) OVER ALL CLEANOUTS.

3. TESTING: PRESSURE TEST ALL SANITARY SEWER LINES. TEST ALL FLEXIBLE SANITARY SEWER LINES FOR DEFLECTION AFTER THE SEWER LINE HAS BEEN INSTALLED AND BACKFILL HAS BEEN IN PLACE FOR AT LEAST 30 DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF 5%. IF THE TEST FAILS, MAKE NECESSARY REPAIRS AND RETEST.

4. UNLESS OTHERWISE INDICATED, USE REINFORCED, PRECAST, CONCRETE MAINTENANCE HOLES CONFORMING TO ASTM C478, FURNISHED WITH PRECAST BASES. SANITARY SEWER MAINTENANCE HOLES SHALL BE SUPPLIED WITH PRE-FORMED INVERTS AND FLEXIBLE NEOPRENE SLEEVE CONNECTIONS FOR ALL LATERAL LINES 375 MM (15 INCHES) IN DIAMETER OR LESS, UNLESS OTHERWISE INDICATED. JOINTS FOR ALL PRECAST MAINTENANCE HOLE SECTIONS SHALL HAVE CONFINED, RUBBER "O"-RING GASKETS IN ACCORDANCE WITH ASTM C923. THE INSIDE BARREL DIAMETER SHALL NOT BE LESS THAN 48 INCHES.

5. INSTALL FLEXIBLE WATERTIGHT OR APPROVED CONNECTION FRAME/CHIMNEY SEALS ON ALL SANITARY SEWER MAINTENANCE HOLES. USE EITHER MANUFACTURED MAINTENANCE HOLE FRAME/CHIMNEY SEALS OR ELASTOMERIC WATERPROOFING FRAME/CHIMNEY SEALS.

6. USE NEENAH FOUNDRY CO. R-1642 CASTING WITH SELF-SEALING, SOLID, TYPE B LID, OR APPROVED EQUAL, ON ALL SANITARY SEWER MAINTENANCE HOLES. COVERS SHALL BEAR THE "SANITARY SEWER" LABEL.

7. THE MINIMUM DEPTH OF COVER FOR SANITARY SEWER WITHOUT INSULATION IS 5 FEET. INSULATE SANITARY SEWER SERVICES AT LOCATIONS WHERE THE DEPTH OF COVER IS LESS THAN 5 FEET. PROVIDE A MINIMUM INSULATION THICKNESS OF 2 INCHES. THE INSULATION MUST BE AT LEAST 4 FEET WIDE AND CENTERED ON THE PIPE. INSTALL THE INSULATION BOARDS 6 INCHES ABOVE THE TOPS OF THE PIPES ON MECHANICALLY COMPACTED AND LEVELED PIPE BEDDING MATERIAL. USE HIGH DENSITY, CLOSED CELL, RIGID BOARD MATERIAL EQUIVALENT TO DOW STYROFOAM HI-40 PLASTIC FOAM INSULATION.

8. TRACER WIRE: LOCATING REQUIREMENTS - A MEANS TO LOCATE BURIED UNDERGROUND EXTERIOR NON METALLIC SEWERS/MAINS MUST BE PROVIDED WITH TRACER WIRE OR OTHER METHODS IN ORDER TO BE LOCATED IN ACCORD WITH THE PROVISIONS OF THE WISCONSIN STATUTES 182.0175(2R) AND THE WISCONSIN DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES SPS 82.30(11)(H).

HDPE REQUIREMENTS :

1. INSTALL DUAL-WALL, SMOOTH INTERIOR, CORRUGATED HIGH-DENSITY POLYETHYLENE (HDPE) PIPE AT LOCATIONS INDICATED ON THE PLAN.

2. DUAL-WALL, SMOOTH INTERIOR, CORRUGATED HIGH-DENSITY POLYETHYLENE (HDPE) PIPE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M252 FOR PIPE SIZES 4-INCH TO 10-INCH DIAMETER.

3. DUAL-WALL, SMOOTH INTERIOR, CORRUGATED HIGH-DENSITY POLYETHYLENE (HDPE) PIPE SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2306 FOR PIPE SIZES 12-INCH TO 60-INCH DIAMETER.

4. ALL FITTINGS MUST COMPLY WITH ASTM STANDARD D3212.

5. WATER-TIGHT JOINTS MUST BE USED AT ALL CONNECTIONS INCLUDING STRUCTURES.

6. LAY ALL HDPE PIPE ON A CONTINUOUS GRANULAR BED. INSTALLATION MUST COMPLY WITH ASTM D2321. ALL SECTIONS OF THE CORRUGATED HDPE PIPE SHALL BE COUPLED IN ORDER TO PROVIDE WATER TIGHT JOINTS.

7. PERFORM DEFLECTION TESTS ON ALL HDPE PIPE AFTER THE SEWER LINES HAVE BEEN INSTALLED AND BACKFILL HAS BEEN IN PLACE FOR AT LEAST 30 DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF 5%. IF THE TEST FAILS, MAKE NECESSARY REPAIRS AND PERFORM THE TEST AGAIN UNTIL ACCEPTABLE. SUPPLY THE MANDREL FOR DEFLECTION TESTING. IF THE DEFLECTION TEST IS TO BE RUN USING A RIGID BALL OR MANDREL, IT SHALL HAVE A DIAMETER EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE. THE BALL OR MANDREL SHALL BE CLEARLY STAMPED WITH THE DIAMETER. PERFORM THE TESTS WITHOUT MECHANICAL PULLING DEVICES.

KWIK TRIP™ STORES

KWIK STAR™ STORES

KWIK TRIP, Inc.
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EMAIL: MAIL@REIENGINEERING.COM

NO SCALE

UTILITY SPECS

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	NAP
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SP4.1

DRAWING FILE: Q:\10800 - 10899\10827 - KWIK TRIP #1283 - HARTLAND\DRAWING\PLANS\10827-SP3-4-4.1-UTILITIES.DWG LAYOUT: SP4.1
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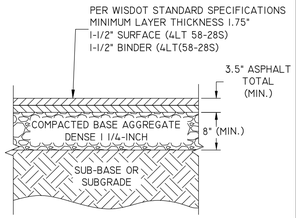
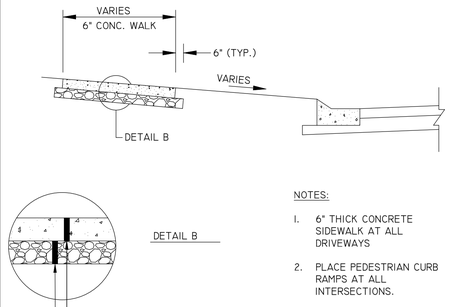


NOTE:
ASPHALT PAVEMENT SECTION SHOWN IS MINIMUM. MATCH IN KIND WITH EXISTING.

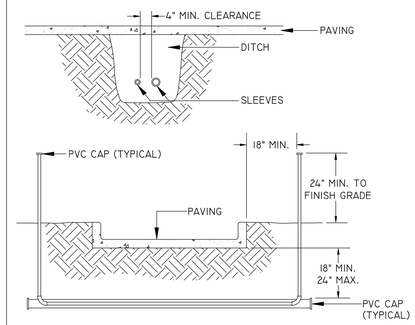
1 / SP5 ASPHALT PAVEMENT DETAIL
NOT TO SCALE



NOTES:

1. 6" THICK CONCRETE SIDEWALK AT ALL DRIVEWAYS
2. PLACE PEDESTRIAN CURB RAMPS AT ALL INTERSECTIONS.
3. PROVIDE EXPANSION JOINT MATERIAL AT MAX. 60 FOOT SPACING.
4. PROVIDE EXPANSION JOINT MATERIAL ALONG BOTH EDGES OF WALK, WHERE WALK IS CONTAINED BETWEEN FIXED OBJECTS.

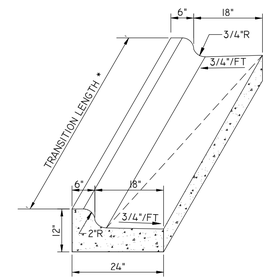
2 / SP5 CONCRETE WALK/ PAD DETAIL
NOT TO SCALE



NOTES:

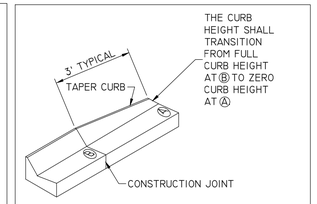
1. ALL PVC IRRIGATION SLEEVES TO BE SCH 40 PVC PIPE.
2. ALL JOINTS TO BE SOLVENT WELDED AND WATERTIGHT.
3. WHERE THERE IS MORE THAN ONE SLEEVE, EXTEND THE SMALLER SLEEVE TO 24-INCHES MINIMUM ABOVE FINISH GRADE.
4. MECHANICALLY TAMP BACKFILL TO 95% PROCTOR.

3 / SP5 TYPICAL SLEEVING DETAIL
NOT TO SCALE

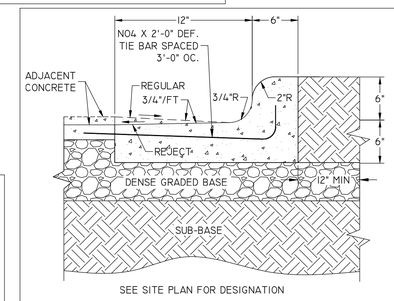


* TRANSITION LENGTH SHALL BE 12 LF ON TANGENTS GREATER THAN 18 LF, OR BETWEEN RADIUS POINTS ON TANGENTS LESS THAN 18 LF, OR BETWEEN RADIUS MID POINTS WHERE TANGENTS ARE LESS THAN 12 LF, OR ACROSS THE RADIUS/RADII WHERE TANGENTS ARE LESS THAN 2 LF.

4 / SP5 TRANSITION CURB & GUTTER DETAIL
NOT TO SCALE

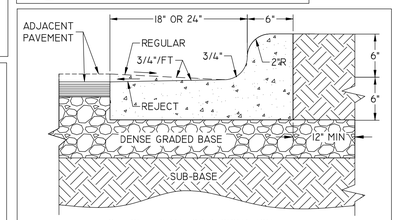


5 / SP5 STD CURB & GUTTER TERMINI DETAIL
NOT TO SCALE



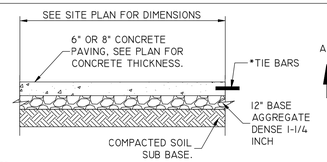
SEE SITE PLAN FOR DESIGNATION

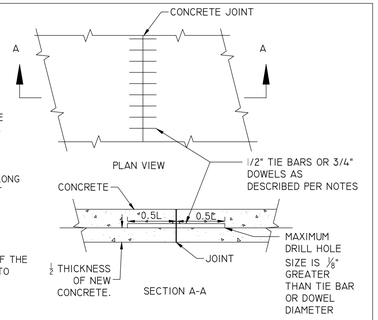
9 / SP5 18" CURB & GUTTER / 18" REJECT CURB & GUTTER DETAIL
NOT TO SCALE



SEE SITE PLAN FOR DESIGNATION

8 / SP5 24" OR 30" CURB & GUTTER DETAIL
NOT TO SCALE





NOTES:
* TIE BARS SHALL BE 24" IN LENGTH, PLACED MID-DEPTH 36" O.C. ALONG CURBING AND ALSO TO TIE EACH EXTERIOR PANEL TO THE ADJACENT INTERIOR PANEL.

**DOWELS SHALL BE 14" IN LENGTH, PLACED MID-DEPTH 24" O.C. AT CONSTRUCTION JOINTS

TIE BARS AND DOWELS SHALL CONFORM WITH SUBSECTION 505.2.6 OF THE STANDARD SPECIFICATIONS. EPOXY COAT TIE BARS IN ACCORDANCE TO SECTION 505.2.4 OF THE WISDOT STANDARD SPECIFICATIONS.

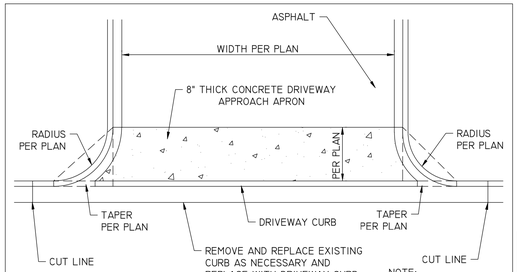
DOWELS SHALL BE FIXED ON ONE END AND GREASED ON THE OTHER

CONCRETE PANELS SHALL NOT BE GREATER THAN 15' IN LENGTH IN ANY DIRECTION AND CONTRACTION JOINTS SHALL BE TO A MINIMUM DEPTH OF 1/4 THE CONCRETE DEPTH

6" DEPTH (MIN.) CONCRETE SLAB-ON-GRADE WITH #3 REBAR, 3' O.C. IN BOTH DIRECTIONS, CONCRETE SEALER: TK-26UV

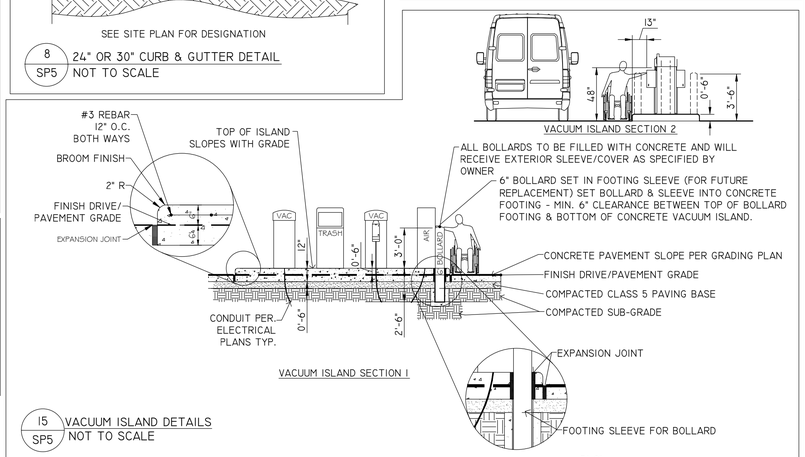
8" DEPTH (MIN.) CONCRETE SLAB-ON-GRADE WITH #4 REBAR, 4' O.C. IN BOTH DIRECTIONS, CONCRETE SEALER: TK-26UV

6 / SP5 CONCRETE PAVEMENT DETAIL
NOT TO SCALE

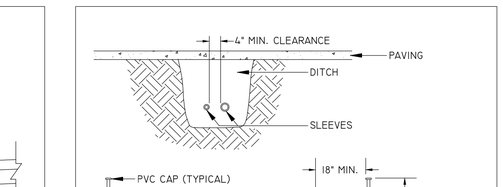


NOTE:
REFER TO SITE PLAN FOR RADIUS OR TAPER DESIGNATION

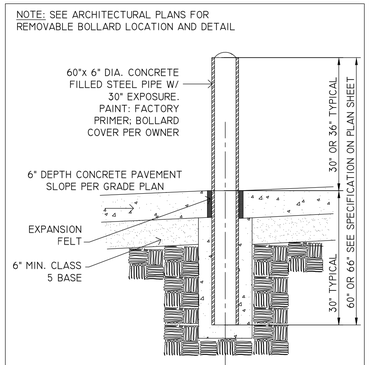
7 / SP5 CONCRETE APPROACH DETAIL
NOT TO SCALE



15 / SP5 VACUUM ISLAND DETAILS
NOT TO SCALE

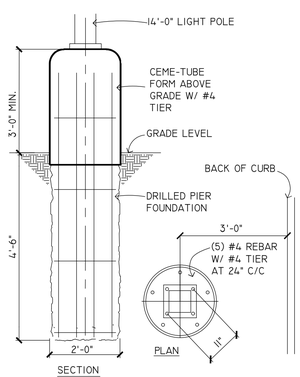


12 / SP5 SIDEWALK RAMP DETAIL
NOT TO SCALE

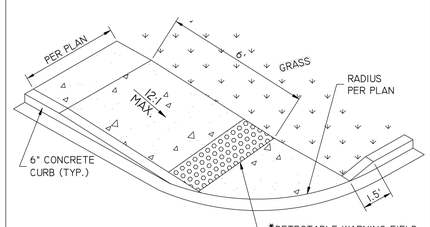


10 / SP5 6" PIPE BOLLARD DETAIL
NOT TO SCALE

NOTES:
1. BASE PLATE ILLUSTRATION MAY CHANGE WITHOUT NOTICE. DO NOT USE FOR SETTING ANCHOR BOLTS. CONSULT AREA LIGHT MANUFACTURER FOR BASE PLATE TEMPLATE, ANCHOR BOLT SIZE AND EMBEDMENT DEPTH.

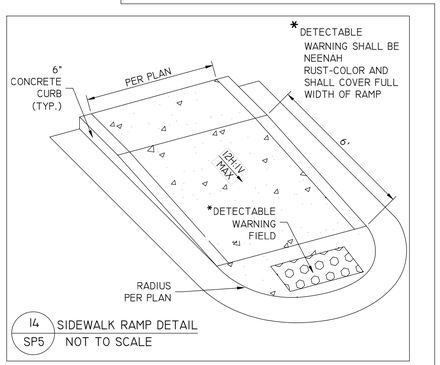


11 / SP5 ROUND AREA LIGHT FOUNDATION DETAIL
NOT TO SCALE

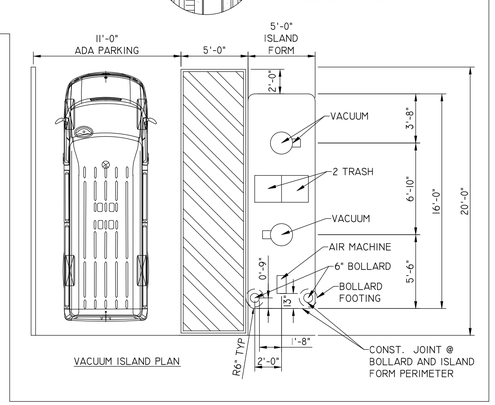


*DETECTABLE WARNING SHALL BE NEENAH RUST-COLOR AND SHALL COVER FULL WIDTH OF RAMP

13 / SP5 SIDEWALK RAMP DETAIL
NOT TO SCALE



14 / SP5 SIDEWALK RAMP DETAIL
NOT TO SCALE



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NO SCALE

SITE PLAN DETAILS

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

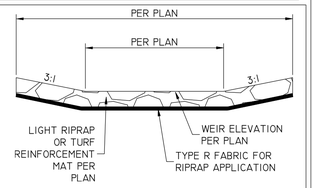
#	DATE	DESCRIPTION
1		

DRAWN BY	NAP
SCALE	NOT TO SCALE
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SP5

DRAWING FILE: Q:\10800 - 10899\10827 - KWIK TRIP #1283 - HARTLAND\DRAWING\PLANS\10827-SP5-6-SITE DETAILS.DWG LAYOUT: SP5
PLOTTED: Aug 17, 2023 - 5:02PM PLOTTED BY: DAN

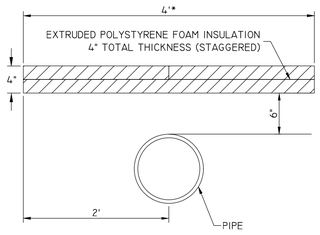
SEE PETROLEUM DETAILS

1 / SP6 STORAGE TANKS COMPLEX DETAIL
NOT TO SCALE



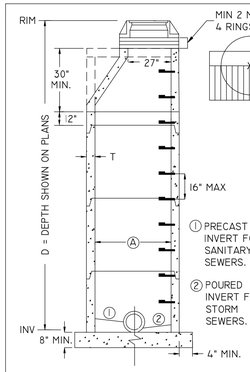
NOTE:
WEIRS TO USE PERMANENT TURF REINFORCEMENT MAT

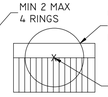
6 / SP6 OVERFLOW WEIR DETAIL
NOT TO SCALE



*WIDTH OF INSULATION SHALL INCREASE x FT. PER EVERY x FT. OF VERTICAL SEPARATION.

2 / SP6 PIPE INSULATION DETAIL
NOT TO SCALE





1 PRECAST INVERT FOR SANITARY SEWERS.

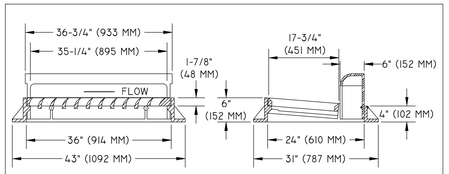
2 POURED INVERT FOR STORM SEWERS.

SPECIFICATIONS:
* MANUFACTURED TO ASTM C-478 SPECIFICATIONS
* CONCRETE STRENGTH - 4000 P.S.I.
* STEEL DESIGN IN ACCORDANCE WITH A.S.T.M. C-478 0.12 SQ.IN./FT.
* ALL REINFORCING DESIGNED FOR 1" MIN. COVER
* STEP - STEEL, PLASTIC COATED, 16" ON CENTER
* 6" ADJUSTMENT RINGS (2" THICK EACH RING)
* NEENAH #1550A-C FRAME AND LID FOR MANHOLE APPLICATION
* NEENAH #1550A FRAME WITH #2050 GRATE FOR CATCH BASIN APPLICATION
* NEENAH #3067-L FOR INLET APPLICATION

TYPE	DIAMETER Ⓐ	T
I	48"	5"
II	60"	6"
III	72"	8"
IV	27"	3 1/4"

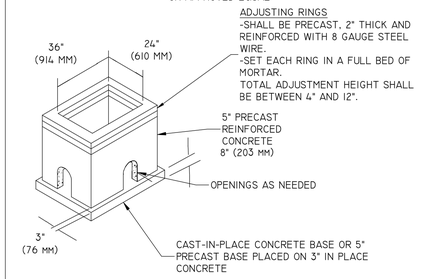
STEPS NEEDED WHEN D > 4'

3 / SP6 PRECAST REINFORCED CONC. MANHOLE DETAIL
NOT TO SCALE

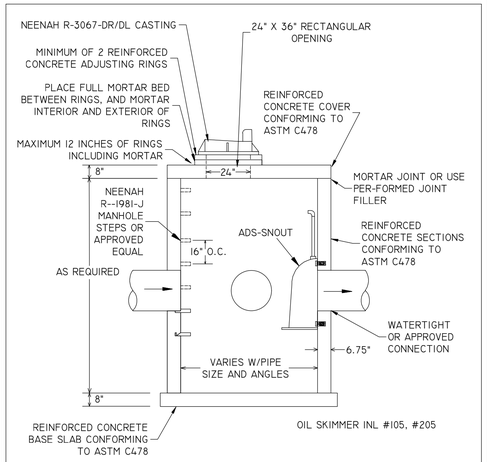


USE NEENAH R-3067 DR/DL CASTING OR APPROVED EQUAL

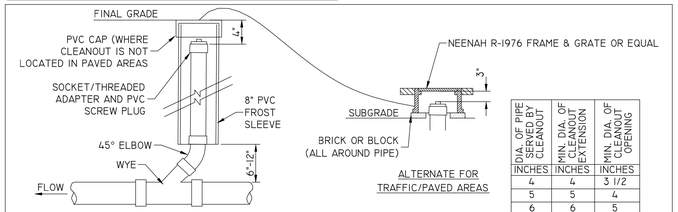
ADJUSTING RINGS
-SHALL BE PRECAST, 2" THICK AND REINFORCED WITH 8 GAUGE STEEL WIRE.
-SET EACH RING IN A FULL BED OF MORTAR.
TOTAL ADJUSTMENT HEIGHT SHALL BE BETWEEN 4" AND 12".



7 / SP6 24"x 36" CURB INLET AND CASTING DETAIL
NOT TO SCALE

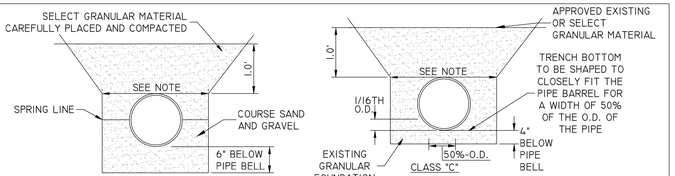


8 / SP6 STORM SEWER INLET WITH SUMP DETAIL
NOT TO SCALE



DIA. OF PIPE SERVED BY CLEANOUT	MIN. DIA. OF CLEANOUT EXTENSION	MIN. DIA. OF CLEANOUT OPENING
INCHES	INCHES	INCHES
4	4	3 1/2
5	5	4
6	6	5
8+	6	6

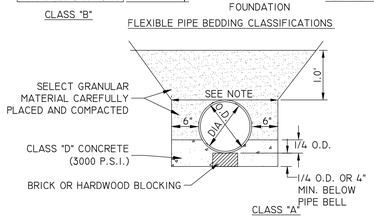
4 / SP6 SANITARY & STORM SEWER CLEANOUT CLEANOUT
NOT TO SCALE



CLASS "B"

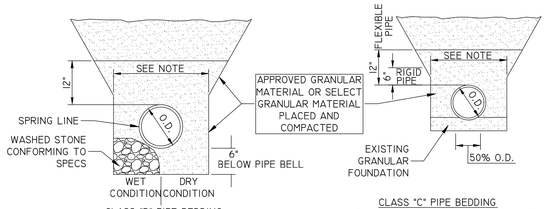
CLASS "C"

FLEXIBLE PIPE BEDDING CLASSIFICATIONS



CLASS "A"

NOTE: THE TRENCH WIDTH IS TO BE TAKEN AS THE HORIZONTAL DISTANCE AT THE OUTSIDE TOP OF THE PIPE. THE MAXIMUM ALLOWABLE WIDTH SHALL BE 1.) 3.0' GREATER THAN OUTSIDE DIA. FOR 36" OR LARGER PIPE 2.) 2.0' GREATER THAN OUTSIDE DIA. FOR PIPES LESS THAN 36" IN DIA.



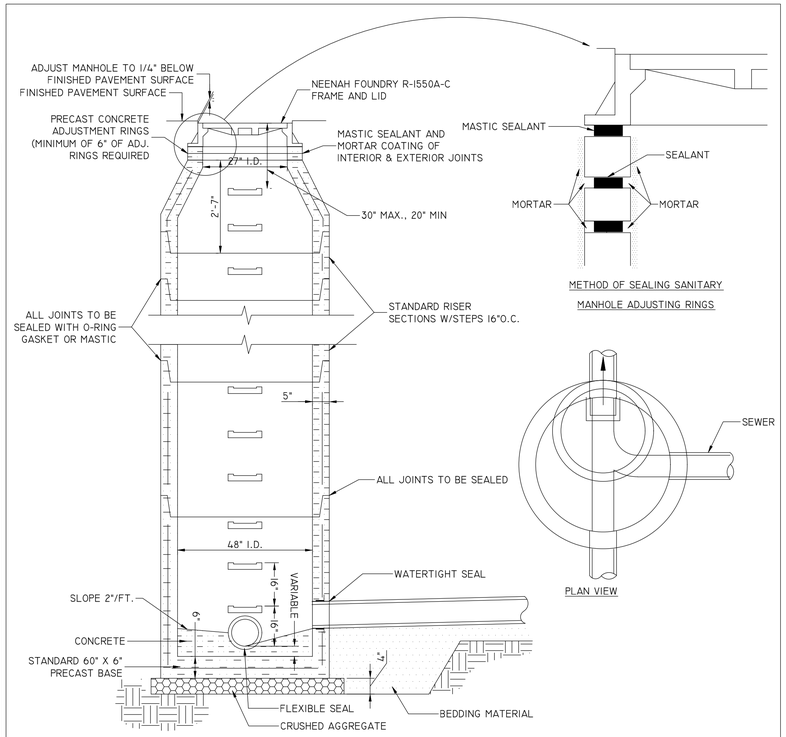
CLASS "B" PIPE BEDDING

CLASS "C" PIPE BEDDING
(WHEN APPROVED BY THE ENGINEER)

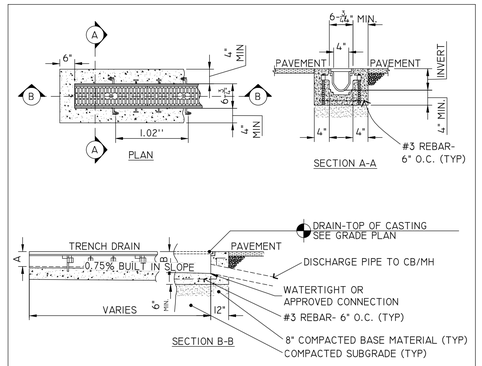
RIGID PIPE BEDDING CLASSIFICATIONS

ALTERNATE: WHERE THE ABOVE CONDITIONS ARE NOT SATISFIED, THE CONTRACTOR SHALL PLACE 4" OF GRANULAR BEDDING BENEATH THE PIPE AND EXTEND UP THE SIDE A DISTANCE OF 1/16TH THE O.D. OF THE PIPE

9 / SP6 PIPE BEDDING CLASSIFICATIONS DETAIL
NOT TO SCALE

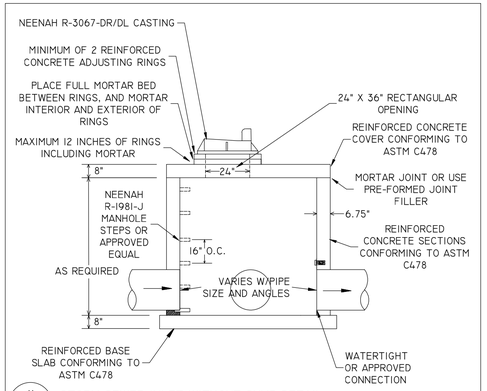


5 / SP6 SANITARY MANHOLE
NOT TO SCALE



TRENCH SHALL BE "PERMA-TRENCH Z 886 SYSTEM - SERIES 8606N

10 / SP6 Z 886 TRENCH DRAIN DETAIL
NOT TO SCALE



11 / SP6 STORM SEWER INLET WITHOUT SUMP DETAIL
NOT TO SCALE

KWIK TRIP STORES

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EMAIL: MAIL@REIENGINEERING.COM

NO SCALE

SITE PLAN DETAILS
CONVENIENCE STORE #1283
STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY NAP
SCALE NOT TO SCALE
PROJ. NO. 10827
DATE 8/17/23 - REVIEW DOCUMENTS
SHEET SP6

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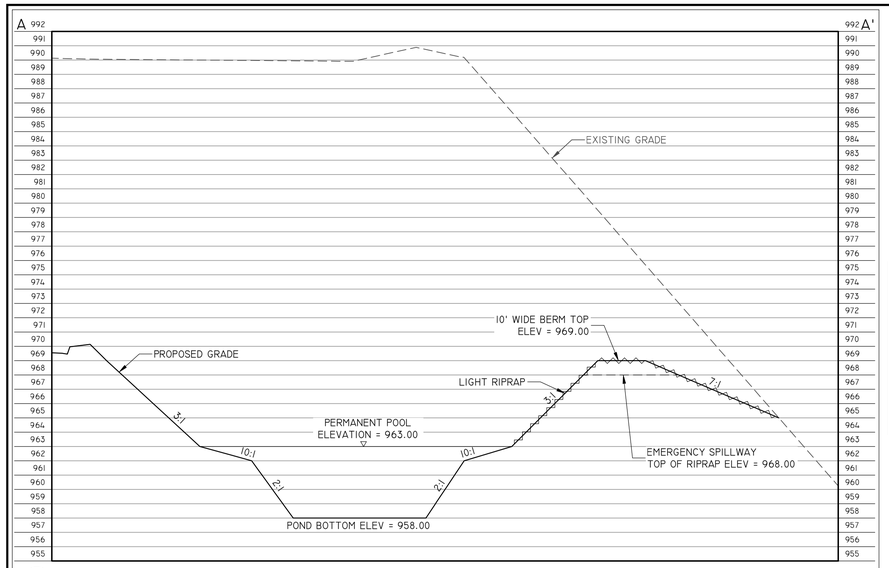


1 SWP1 WET DETENTION POND CROSS SECTION DETAIL
NTS

PROJECT DATA

PROJECT START DATE	APRIL 2024
PROJECT COMPLETION DATE	OCT 2024

SITE AREA DATA

PRE-CONSTRUCTION IMPERVIOUS AREA	0 SF
POST-CONSTRUCTION IMPERVIOUS AREA	105,272 SF
APPROX. AREA OF LAND DISTURBANCE	215,025 SF

SITE RUNOFF COEFFICIENT

PRE-CONSTRUCTION	61
POST-CONSTRUCTION	82

SOIL DATA

SURFACE SOIL	TOPSOIL
SUB-SURFACE SOIL	GRAVELLY
DEPTH OF GROUND WATER	UNKNOWN
DOWN-STREAM TRIBUTARY	PINE LAKE

ESTIMATED PRELIMINARY EROSION CONTROL QUANTITIES
(ACTUAL QUANTITIES SUBJECT TO CHANGE)

ITEM	QUANTITY
ROCK CONSTRUCTION ENTRANCE	400 SQ.YD.
INLET PROTECTION	10
EROSION CONTROL BLANKET	4,530 SQ.YD.
RIP RAP	5 CU. YD.
SILT FENCE	1,130 L.F.
DITCH CHECK	AS NEEDED
BIO ROLL/EROSION LOG	AS NEEDED

NOTE: FOR MAINTENANCE PURPOSES CONTRACTOR SHALL PROVIDE ALL SUFFICIENT QUANTITIES FOR REPAIR AND REPLACEMENT OF EROSION CONTROL DEVICES THROUGHOUT ALL PHASES OF THE PROJECTS CONSTRUCTION.

KEYED NOTES

1. TEMPORARY ROCK CONSTRUCTION ENTRANCE/EXIT. SEE DETAIL A/SWP3.

2. INSTALL SILT FENCE. SEE DETAIL D/SWP3.

3. PROVIDE INLET PROTECTION. REFER TO SWP2 FOR ACCEPTABLE PRODUCTS.

4. INSTALL LIGHT RIPRAP ON TYPE R GEOTEXTILE FABRIC. SEE DETAIL B/SWP3.

5. WET POND WITH TYPE A LINER TO SERVE AS SEDIMENT TRAP DURING CONSTRUCTION. SEE DETAILS A & B/SWP4.
SEDIMENT TRAP DETAILS
- TRAP BOTTOM ELEV. = 4.5' BELOW WEIR ELEV OR DEEPER
- TRAP TOP ELEV. = 969.00
- 6-FT WIDE WEIR ELEV. = 968.00

6. CONSTRUCT EMERGENCY OVERFLOW WEIR, WITH LIGHT RIPRAP ON TYPE R GEOTEXTILE FABRIC. SEE DETAIL 6/SP6.

SUGGESTED CONSTRUCTION SEQUENCE
- PROVIDE CONSTRUCTION ACCESS
- INSTALL SILT FENCE
- INSTALL INLET PROTECTION ON EXISTING STORM STRUCTURES
- SAWCUT AND REMOVE PAVEMENT, STRIP TOPSOIL, REMOVALS
- ROUGH GRADING
- INSTALL DIVERSIONS AND SEDIMENT TRAP
- CONSTRUCT BUILDING
- SITE UTILITY INSTALLATION
- INSTALL INLET AND CULVERT PROTECTION ON NEW STORM STRUCTURES
- FINISH GRADING
- CONSTRUCT BASE COURSE AND PAVEMENT
- INSTALL LAWN/ LANDSCAPE
- FLUSH STORM SEWER
- REMOVE EROSION CONTROL MEASURES ONLY AFTER ALL PAVEMENTS HAVE BEEN INSTALLED AND ALL SOILS HAVE BEEN STABILIZED

NOTES:

(A) CONTRACTOR SHALL ABIDE BY THE WDNR CONSERVATION PRACTICE STANDARDS FOR INSTALLATION AND MAINTENANCE OF EROSION CONTROL. REFER TO SWP4 FOR TECHNICAL STANDARDS EMPLOYED.

(B) CONTRACTOR SHALL PROVIDE CONCRETE WASHOUT AREAS ON-SITE. SEE DETAIL E/SWP4.

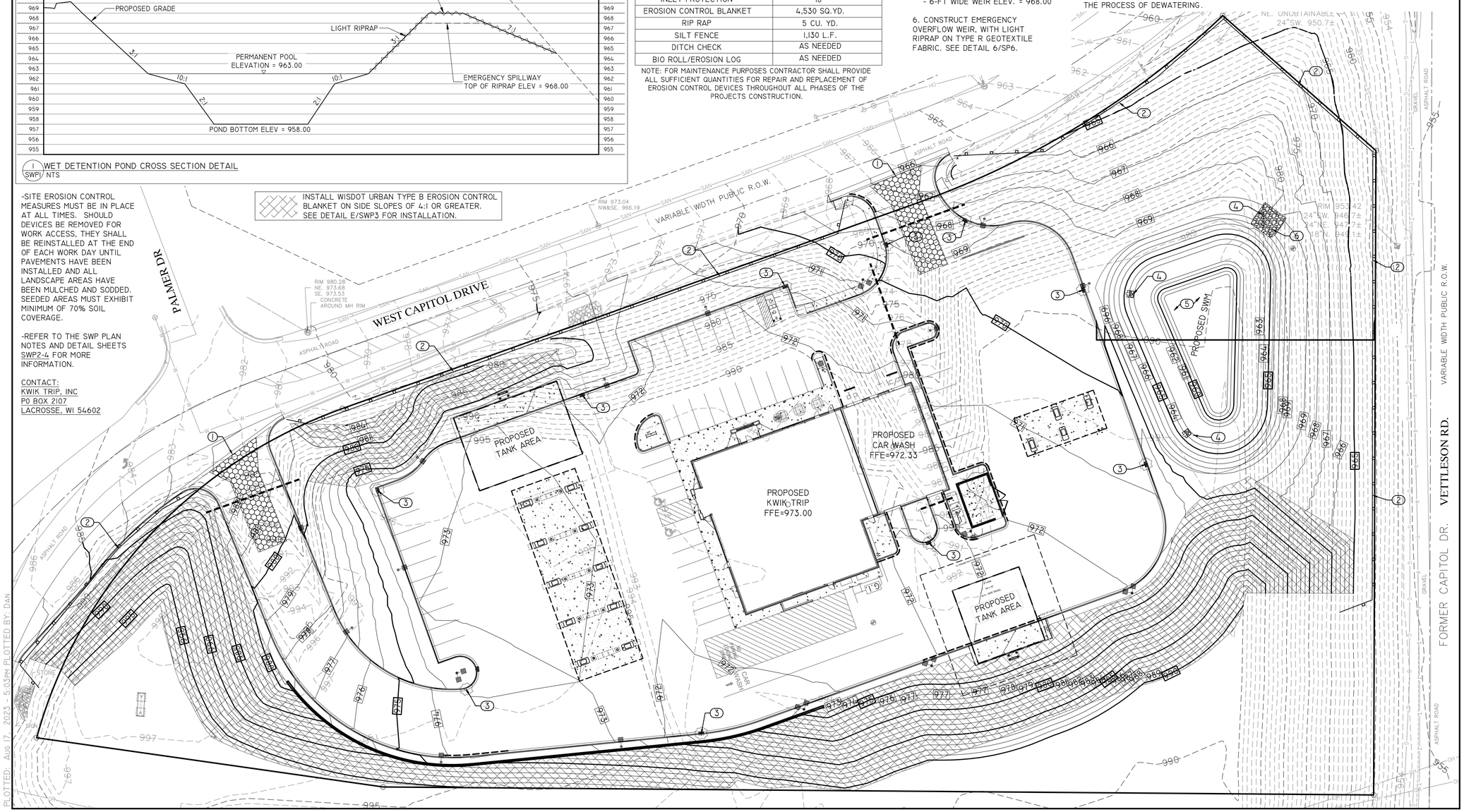
(C) DEWATERING BAGS SHALL BE READILY AVAILABLE AND SHALL BE USED AT ALL TIMES IN THE PROCESS OF DEWATERING.

-SITE EROSION CONTROL MEASURES MUST BE IN PLACE AT ALL TIMES. SHOULD DEVICES BE REMOVED FOR WORK ACCESS, THEY SHALL BE REINSTALLED AT THE END OF EACH WORK DAY UNTIL PAVEMENTS HAVE BEEN INSTALLED AND ALL LANDSCAPE AREAS HAVE BEEN MULCHED AND SODDED. SEEDED AREAS MUST EXHIBIT MINIMUM OF 70% SOIL COVERAGE.

-REFER TO THE SWP PLAN NOTES AND DETAIL SHEETS SWP2-4 FOR MORE INFORMATION.

CONTACT:
KWIK TRIP, INC
P0 BOX 2107
LACROSSE, WI 54602

INSTALL WISDOT URBAN TYPE B EROSION CONTROL BLANKET ON SIDE SLOPES OF 4:1 OR GREATER. SEE DETAIL E/SWP3 FOR INSTALLATION.



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SCALE
0 30 60

EROSION CONTROL PLAN

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	NAP
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SWP1

STORM WATER POLLUTION PREVENTION PLAN

POLLUTION PREVENTION PLAN
ALL CONTRACTORS / SUBCONTRACTORS SHALL CONDUCT THEIR OPERATIONS IN A MANNER THAT MINIMIZES EROSION AND PREVENTS SEDIMENTS FROM LEAVING THE PROJECT SITE. THE PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLIANCE AND IMPLEMENTATION OF THE POLLUTION PREVENTION PLAN (PPP) FOR THEIR ENTIRE CONTRACT. THE RESPONSIBILITY SHALL BE FURTHER SHARED WITH SUBCONTRACTORS WHOSE WORK IS A SOURCE OF POTENTIAL POLLUTION AS DEFINED IN THE PPP.

I. SITE DESCRIPTION
THIS POLLUTION PREVENTION PLAN IS FOR THE CONSTRUCTION OF THE KWIK TRIP CONVENIENCE STORE #1283 PROJECT. THE PROJECT IS LOCATED IN SECTION 3, TOWNSHIP 7N, RANGE 18E, VILLAGE OF HARTLAND, WAUKESHA COUNTY, WISCONSIN.

THIS PPP COVERS 4.68 ACRES WITH AN ESTIMATED 4.68 ACRES BEING DISTURBED THROUGH EXCAVATION, GRADING, AND PAVING. THE PORTION OF THE PPP COVERED BY THIS CONTRACT HAS 4.68 ACRES BEING DISTURBED.

THE PROJECT IS LOCATED IN AN AREA OF HOCHEIM LOAM (HMC2), THERESA SILT LOAM (THB). THE ESTIMATED CURVE NUMBER FOR THIS PPP AFTER CONSTRUCTION IS 82.

REFER TO PLANS: KWIK TRIP CONVENIENCE STORE #1283 FOR LOCATIONS OF TYPICAL SLOPES, DITCH GRADES, AND MAJOR STRUCTURAL AND NON-STRUCTURAL CONTROLS. A COPY OF THIS PLAN WILL BE ON FILE AT THE PROJECT ENGINEER'S OFFICE AND ON-SITE. RUNOFF FROM THIS WORK WILL OVERLAND FLOW THROUGH DETENTION POND, DITCHES, STORM SEWER TO PIKE LAKE.

THIS PROJECT IS NOT LOCATED WITHIN A 100-YEAR FLOODPLAIN.

POTENTIAL SOURCES OF POLLUTION:
SITE SOURCES OF POLLUTION GENERATED AS A RESULT OF THIS WORK RELATE TO SILTS AND SEDIMENT WHICH MAY BE TRANSPORTED AS A RESULT OF A STORM EVENT. HOWEVER, THIS PPP PROVIDES CONVEYANCE FOR OTHER (NON-PROJECT RELATED) OPERATIONS. THESE OTHER OPERATIONS HAVE STORM WATER RUNOFF, THE REGULATION OF WHICH IS BEYOND THE CONTROL OF THIS PPP. POTENTIALLY THIS RUNOFF CAN CONTAIN POLLUTANTS RELATED TO SITE-SPECIFIC LAND USES.
EXAMPLES ARE:

RURAL AGRICULTURAL ACTIVITIES:
RUNOFF FROM AGRICULTURAL LAND USE CAN POTENTIALLY CONTAIN CHEMICALS INCLUDING HERBICIDES, PESTICIDES, FUNGICIDES, AND FERTILIZERS.

CONSTRUCTION ACTIVITIES:
RUNOFF FROM CONSTRUCTION ACTIVITIES CAN POTENTIALLY CONTAIN FUELS, OILS, AND CHEMICALS FROM SPECIFIC CONSTRUCTION RELATED ACTIVITIES.

2. CONTROLS

INLET PROTECTION DEVICES SHALL BE PLACED AROUND INTAKES. SILT FENCE SHALL BE PLACED AT LOCATIONS WHERE RUNOFF CAN MOVE OFFSITE. VEGETATION IN AREAS NOT NEEDED FOR CONSTRUCTION SHALL BE PRESERVED. AS AREAS REACH THEIR FINAL GRADE, ADDITIONAL SILT FENCES, SILT BASINS, INTERCEPTING DITCHES, SOD FLUMES, LETDOWNS, BRIDGE END DRAINS, AND EARTH DIKES SHALL BE INSTALLED AS SPECIFIED IN THE PLANS AND / OR AS REQUIRED BY PROJECT ENGINEER. THIS MAY INCLUDE USING SILT FENCE AS DITCH CHECKS. TEMPORARY STABILIZING SHALL BE COMPLETED AS THE DISTURBED AREAS ARE CONSTRUCTED. IF CONSTRUCTION ACTIVITY IS NOT PLANNED TO OCCUR IN A DISTURBED AREA IMMEDIATELY, THE AREA SHALL BE STABILIZED BY TEMPORARY SEEDING OR MULCHING WITHIN 14 DAYS. OTHER STABILIZING METHODS SHALL BE USED OUTSIDE THE SEEDING PERIOD.

THIS WORK SHALL BE DONE IN ACCORDANCE WITH THE WISCONSIN TRANSPORTATION STANDARD SPECIFICATIONS. CONTRACTOR SHALL ALSO FOLLOW ALL REQUIREMENTS OF THE WAUKESHA COUNTY EROSION AND SEDIMENT CONTROL REGULATIONS.

AS THE WORK PROGRESSES, ADDITIONAL EROSION CONTROL ITEMS SUCH AS SOD FLUMES, DITCH CHECKS, ROCK OUTLET PROTECTION, AND LETDOWN STRUCTURES AND OTHER APPROPRIATE MEASURES SHALL BE INSTALLED BY THE CONTRACTOR AS DETERMINED BY THE ENGINEER AFTER FIELD INVESTIGATION. THE CONSTRUCTION WILL BE COMPLETED WITH THE ESTABLISHMENT OF PERMANENT PERENNIAL VEGETATION OF ALL DISTURBED AREAS BY THE CONTRACTOR.

3. OTHER CONTROLS

CONTRACTOR DISPOSAL OF UNUSED CONSTRUCTION MATERIALS AND CONSTRUCTION MATERIAL WASTE SHALL COMPLY WITH APPLICABLE STATE AND LOCAL WASTE DISPOSAL, SANITARY SEWER, OR SEPTIC SYSTEM REGULATIONS. IN THE EVENT OF A CONFLICT WITH OTHER GOVERNMENT LAWS, RULES, AND REGULATIONS, THE MORE RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.

MUD TRACK-OUT SHALL BE CLEANED OFF THE ROADWAY NIGHTLY AND BEFORE ANY RAINFALL EVENT. WATER MAY NOT BE USED TO CLEAN THE ROADWAY.

CONTRACTOR SHALL KEEP PERMIT, INSPECTION LOGS, SITE PLAN, AND OTHER PERMIT DATA ON SITE AT ALL TIMES. MATERIAL SHALL BE PLACED IN AN EASILY ACCESSIBLE MAILBOX THAT IS CLEARLY MARKED "SWPPP".

ALL FUELS AND OILS SHALL BE CONTAINED BY A SECONDARY CONTAINMENT BERM OR WITHIN A TRAILER.

ALL SILT FENCE AND INLET PROTECTION DEVICES AS SHOWN SHALL BE INSTALLED PRIOR TO COMMENCING CONSTRUCTION WHENEVER POSSIBLE.

A NOTICE OF DISCONTINUATION MUST BE FILED WITH THE WDNR ONCE VEGETATION HAS BEEN ESTABLISHED TO A MINIMUM COVERAGE OF 70%.

CONTRACTOR SHALL MARK ON THE INITIAL STORM WATER POLLUTION PREVENTION PLAN THE LOCATION OF STORAGE AREAS FOR FUELS AND OILS, PORTA-POTTY, DUMPSTER OR WASTE CONTAINMENT BINS, CONCRETE WAS OUT AREA, AND OTHER NECESSARY ITEMS.

ENTRANCES SHALL BE MAINTAINED TO CONTROL MUD TRACK-OUT FROM THE SITE.

THE STORMWATER POLLUTION PREVENTION PLAN SHALL BE UPDATED AS NECESSARY DURING CONSTRUCTION.

APPROVED STATE OF LOCAL PLANS:
DURING THE COURSE OF THIS CONSTRUCTION, IT IS POSSIBLE THAT SITUATIONS WILL ARISE WHERE UNKNOWN MATERIALS WILL BE ENCOUNTERED. WHEN SUCH SITUATIONS ARE ENCOUNTERED, THEY WILL BE HANDLED ACCORDING TO ALL FEDERAL, STATE, AND LOCAL REGULATIONS IN EFFECT AT THE TIME.

4. MAINTENANCE

THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL TEMPORARY EROSION CONTROL MEASURES IN PROPER WORKING ORDER, INCLUDING CLEANING, REPAIRING, OR REPLACING THEM THROUGHOUT THE CONTRACT PERIOD. CLEANING OF SILT CONTROL DEVICES SHALL BEGIN WHEN THE FEATURES HAVE LOST 50% OF THEIR CAPACITY.

5. INSPECTIONS

INSPECTIONS SHALL BE MADE JOINTLY BY THE CONTRACTOR AND THE CONTRACTING AUTHORITY EVERY SEVEN CALENDAR DAYS. THE CONTRACTOR SHALL IMMEDIATELY BEGIN CORRECTIVE ACTION ON ALL DEFICIENCIES FOUND. THE FINDINGS OF THIS INSPECTION SHALL BE RECORDED IN THE PROJECT DIARY. THIS PPP MAY BE REVISED BASED ON THE FINDING OF THE INSPECTION. THE CONTRACTOR SHALL IMPLEMENT ALL REVISIONS. ALL CORRECTIVE ACTIONS SHALL BE COMPLETED WITHIN 3 CALENDAR DAYS OF THE INSPECTION.

6. NON-STORM DISCHARGES

THIS INCLUDES SUBSURFACE DRAINS (I.E. FIELD TILE, SUBDRAINS), SLOPE DRAINS, AND BRIDGE END DRAINS. THE VELOCITY OF THE DISCHARGE FROM THESE FEATURES MAY BE CONTROLLED BY THE USE OF PATIO BLOCKS, CLASS A STONE, OR EROSION STONE.

7. SEQUENCE OF CONSTRUCTION ACTIVITIES

ALL EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO COMMENCING ANY CONSTRUCTION ON-SITE. FIRST, ALL NOTED REMOVALS SHALL BE COMPLETED. SECOND, GRADING CAN COMMENCE TO BRING SOIL TO FINAL GRADE.. NEXT, INSTALLATION OF UTILITIES AND PAVING SHALL BE COMPLETED. FINALLY, THE DISTURBED AREAS SHALL BE SEEDED, FERTILIZED, AND MULCHED AS SHOWN IN THE PLANS.

OWNER CERTIFICATION:

"I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."

NAME (PRINTED OR TYPED): _____

TITLE: _____

SIGNATURE: _____

DATE: _____

NAME OF COMPANY, IF APPLICABLE: _____

ADDRESS: _____

CITY, STATE, ZIP CODE: _____

TELEPHONE NUMBER: _____

ADDRESS OF THE SITE: _____

CONTRACTOR / SUBCONTRACTOR CERTIFICATION:

"I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE AS PART OF THIS CERTIFICATION. FURTHER, BY MY SIGNATURE, I UNDERSTAND THAT I AM BECOMING S CO-PERMITTEE, ALONG WITH THE OWNER(S) AND OTHER CONTRACTORS AND SUBCONTRACTORS SIGNING SUCH CERTIFICATIONS, TO THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES NPDES GENERAL PERMIT NO. 2 FOR "STORM WATER DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY FOR CONSTRUCTION ACTIVITIES" AT THE IDENTIFIED SITE. AS A CO-PERMITTEE, I UNDERSTAND THAT I, AND MY COMPANY, ARE LEGALLY REQUIRED UNDER THE CLEAN WATER ACT AND THE CODE OF WISCONSIN, TO ENSURE COMPLIANCE WITH THE TERMS AND CONDITIONS OF THE STORM WATER POLLUTION PREVENTION PLAN DEVELOPED UNDER THE NPDES PERMIT AND THE TERMS OF THE NPDES PERMIT."

NAME (PRINTED OR TYPED): _____

TITLE: _____

SIGNATURE: _____

DATE: _____

NAME OF CONTRACTING FIRM: _____

ADDRESS: _____

CITY, STATE, ZIP CODE: _____

TELEPHONE NUMBER: _____

ADDRESS OF THE SITE: _____

CONTRACTORS/SUBCONTRACTORS WHO WILL IMPLEMENT EACH EROSION CONTROL MEASURE:

SILT FENCE: CONTRACTOR (WITH ADDRESS AND TELEPHONE NUMBER)

_____

TOPSOIL BERM: CONTRACTOR (WITH ADDRESS AND TELEPHONE NUMBER)

_____

STABILIZED CONSTRUCTION ENTRANCE: CONTRACTOR (WITH ADDRESS AND TELEPHONE NUMBER)

_____

CONCRETE WASH-OUT AREA: CONTRACTOR (WITH ADDRESS AND TELEPHONE NUMBER)

_____

DUMPSTER: CONTRACTOR (WITH ADDRESS AND TELEPHONE NUMBER)

_____

PORT-A-POTTY: CONTRACTOR (WITH ADDRESS AND TELEPHONE NUMBER)

_____

INLET PROTECTION DEVICE: CONTRACTOR (WITH ADDRESS AND TELEPHONE NUMBER)

_____

KWIK TRIP™ STORES

KWIK STAR™ STORES

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

REI
CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING
REI Engineering, INC.
4080 N. 20TH AVENUE
WAUSAU, WISCONSIN 54401
PHONE: 715.675.9784 FAX: 715.675.4060
EMAIL: MAIL@REIENGINEERING.COM

NO SCALE

EROSION CONTROL DETAILS

CONVENIENCE STORE #1283

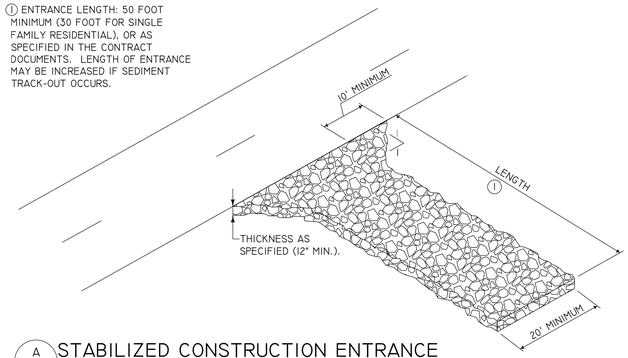
STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	NAP XXX
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SWP2

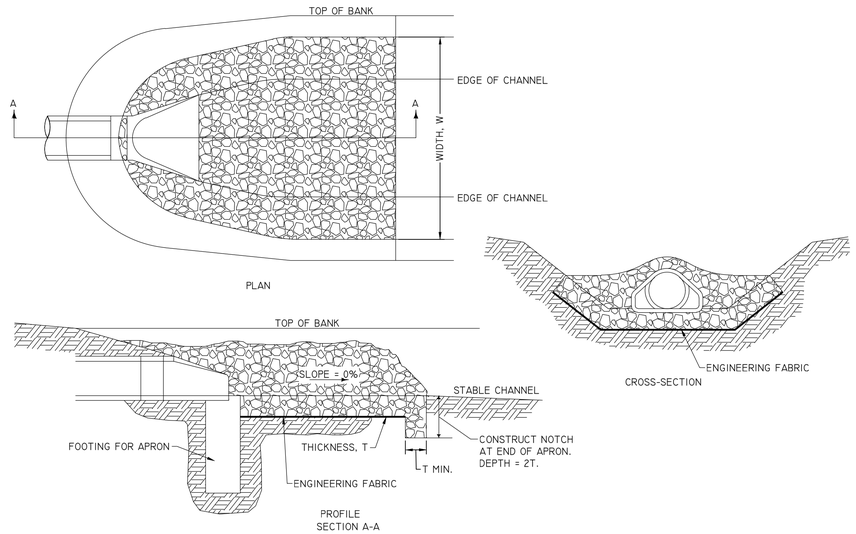
DRAWING FILE: Q:\10800 - 10899\10827 - KWIK TRIP #1283 - HARTLAND\DRAWING\PLANS\10827-SP8-SWP2-4-EC-DETAILS.DWG LAYOUT: SWP2
PLOTTED: Aug 17, 2023 - 5:03PM PLOTTED BY: DAN

① ENTRANCE LENGTH: 50 FOOT MINIMUM (30 FOOT FOR SINGLE FAMILY RESIDENTIAL), OR AS SPECIFIED IN THE CONTRACT DOCUMENTS. LENGTH OF ENTRANCE MAY BE INCREASED IF SEDIMENT TRACK-OUT OCCURS.



A / SWP3 STABILIZED CONSTRUCTION ENTRANCE

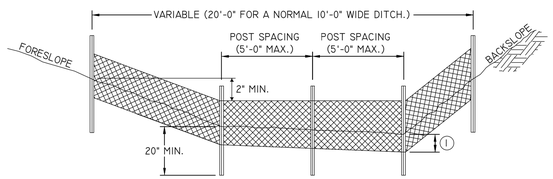
FOR CONSTRUCTION EGRESS POINTS
NTS



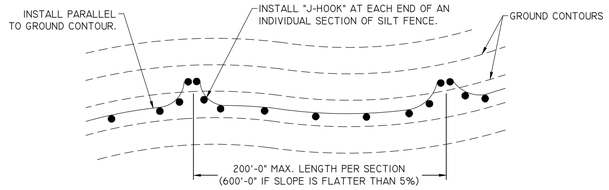
B / SWP3 RIP RAP APRON FOR PIPE OUTLET INTO CHANNEL

NTS

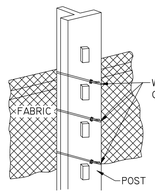
① INSERT 12 INCHES OF FABRIC A MINIMUM OF 6 INCHES DEEP (FABRIC MAY BE FOLDED BELOW THE GROUND LINE).



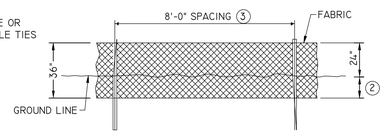
TYPICAL SILT FENCE DITCH CHECK



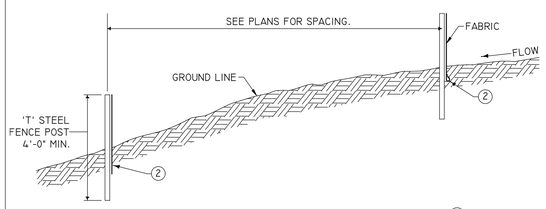
TYPICAL SILT FENCE INSTALLATION ON LONGITUDINAL SLOPES
(PLAN VIEW)



ATTACHMENT TO POST



DETAILS OF SILT FENCE ON LONGITUDINAL SLOPES



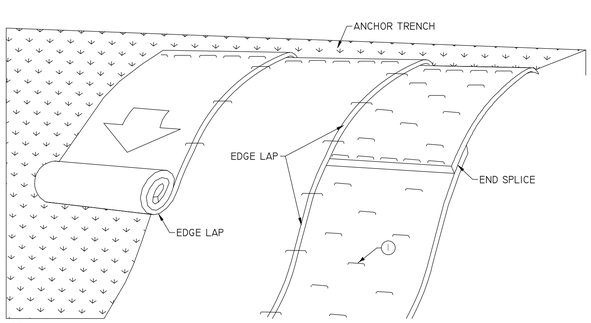
TYPICAL SILT FENCE INSTALLATION ON LONGITUDINAL SLOPES
(PROFILE VIEW)

② INSERT 12 INCHES OF FABRIC A MINIMUM OF 6 INCHES DEEP (FABRIC MAY BE FOLDED BELOW THE GROUND LINE).

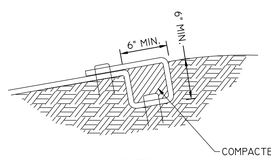
③ REDUCE POST SPACING TO 5'-0" AT WATER CONCENTRATION AREAS, OR AS REQUIRED TO ADEQUATELY SUPPORT FENCE.

D / SWP3 SILT FENCE

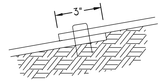
NTS



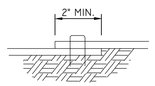
① SECURE BLANKET TO GROUND ACCORDING TO MANUFACTURER'S RECOMMENDED ANCHORING PATTERN AND MINIMUM SHOWN IN TABLE 1.



ANCHOR TRENCH
(12" MIN. ANCHOR SPACING)



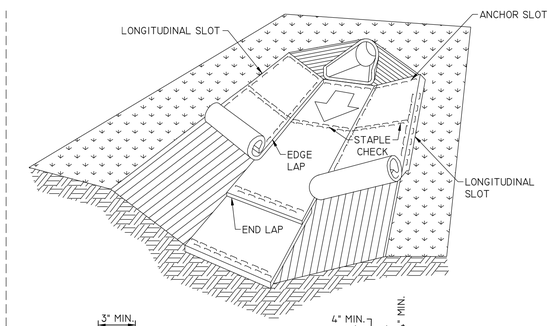
END SPLICE
(18" MIN. ANCHOR SPACING)

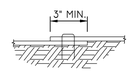


EDGE LAP
(4'-0" MIN. ANCHOR SPACING)

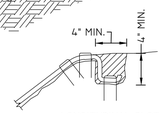
TABLE 1

MAX. SLOPE	MIN. ANCHORS
≤3:1	1.5/YD²
2:1	2/YD²
1:1	2.5/YD²

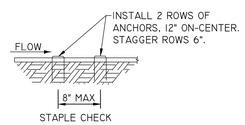




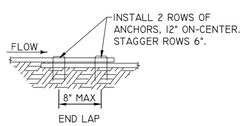
EDGE LAP
(4'-0" MAX. ANCHOR SPACING)



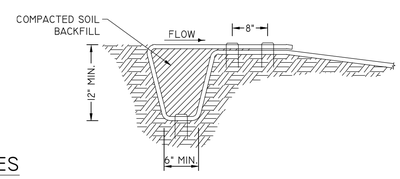
LONGITUDINAL SLOT
(3'-0" MAX. ANCHOR SPACING)



STAPLE CHECK



END LAP



ANCHOR SLOT
(1'-0" MAX. ANCHOR SPACING)

E / SWP3 ROLLED EROSION CONTROL (RECP) INSTALLATION ON SLOPES

NTS

ALL EROSION CONTROL MEASURES TO BE INSTALLED AND MAINTAINED PER WDNR STANDARDS
HTTP://DNR.WI.GOV/ORG/WATER/WM/NPS/STORMWATER/TECHSTDS.HTM

KWIK TRIP™ STORES

KWIK STAR™ STORES

KWIK TRIP, Inc.
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LA CROSSE, WI 54602-2107
PH. (608) 781-8988
FAX (608) 781-8960

REI
CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING
REI Engineering, INC.
4080 N. 20TH AVENUE
WAUSAU, WISCONSIN 54401
PHONE: 715.675.9784 FAX: 715.675.4060
EMAIL: MAIL@REIENGINEERING.COM

NO SCALE

EROSION CONTROL DETAILS

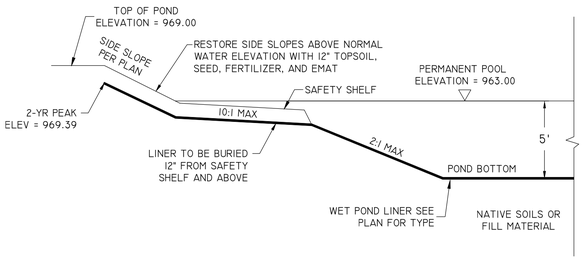
CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	NAP XXX
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SWP3

DRAWING FILE: Q:\10800 - 10899\10827 - KWIK TRIP #1283 - HARTLAND\DRAWING\PLANS\10827-SP8-SWP2-4-EC-DETAILS.DWG LAYOUT: SWP3
PLOTTED: Aug 17, 2023 - 5:04PM PLOTTED BY: DAN



GENERAL POND LINER SPECIFICATIONS

(REFER TO APPENDIX D OF WDNR TECHNICAL STANDARD 1001 FOR DETAILED SPECIFICATIONS)

*1. TYPE A LINER (ANY OF THE FOLLOWING)
- CLAY LINER: MINIMUM THICKNESS OF 2 FEET WITH AN IN-PLACE HYDRAULIC CONDUCTIVITY OF 1×10^{-7} CM/SEC OR LESS.
- HDPE: MINIMUM THICKNESS OF 60 MIL.
- GCL: GEOSYNTHETIC CLAY LINER PER NRCS SPECIFICATIONS OUTLINED IN APPENDIX D.

TYPE B LINER (ANY OF THE FOLLOWING)
- CLAY LINER: MINIMUM THICKNESS OF 2 FEET WITH AN IN-PLACE HYDRAULIC CONDUCTIVITY OF 1×10^{-6} CM/SEC OR LESS.
- HDPE: MINIMUM THICKNESS OF 40 MIL.
- PPL: MINIMUM THICKNESS OF 30 MIL.

TYPE C LINER (ANY OF THE FOLLOWING)
- SILT/CLAY LINER: MINIMUM THICKNESS OF 2 FEET
- HDPE: ANY THICKNESS
- PPL: MINIMUM THICKNESS OF 20 MIL
- PVC: MINIMUM THICKNESS OF 30 MIL
- EPDM: MINIMUM THICKNESS OF 45 MIL

NOTE:
1. SHOULD THE CONTRACTOR ENCOUNTER SEASONAL OR PERCHED GROUNDWATER DURING CONSTRUCTION OF THE POND AND IT'S LINER, CONTACT ENGINEER FOR UNDERDRAIN RECOMMENDATIONS.

2. MANUFACTURED LINERS SHALL BE PROVIDED WITH AIR-RELEASE VENTS TO PREVENT FLOATING.

3. CONTRACTOR TO PROVIDE POND LINER DOCUMENTATION TO OWNER PRIOR TO FINAL ACCEPTANCE.

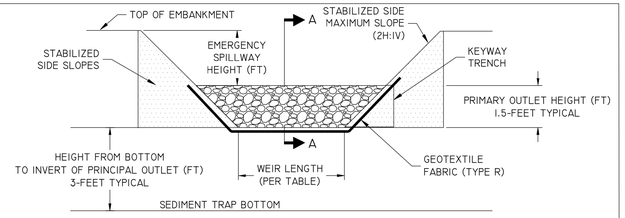
A / SWP4 WET POND LINER
NTS

NOTES:
1. SIDE SLOPES AND FACES OF EARTHEN EMBANKMENT AROUND OUTLET SHALL BE ARMORED WITH RIPRAP OR STABILIZED WITH EROSION MAT SUFFICIENT TO HANDLE FLOWS FROM THE 10-YEAR STORM.

2. STONE (SHORT DURATION): 3-6" WELL GRADED ANGULAR CLEAR STONE.

3. STONE (6+ MONTHS): COMBINATION OF LIGHT RIPRAP WITH 12"-THICK LAYER OF 1" ANGULAR CLEAR STONE.

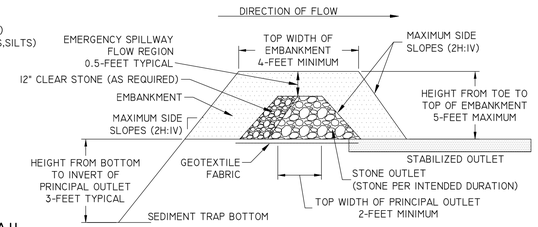
4. REFER TO WDNR TECH STD 1063 FOR ADDITIONAL INFORMATION.



CROSS-SECTION VIEW OF PRINCIPAL OUTLET

* AS = 625 X ADR (COARSE GRAINED SOILS + SANDS)
AS = 1560 X ADR (MEDIUM GRAINED SOILS + LOAMS,SILTS)
AS = 5300 X ADR (FINE GRAINED SOILS + CLAYS)

ADR (OC)	WEIR LENGTH (FT)
1	4
2	6
3	8
4	10
5	12



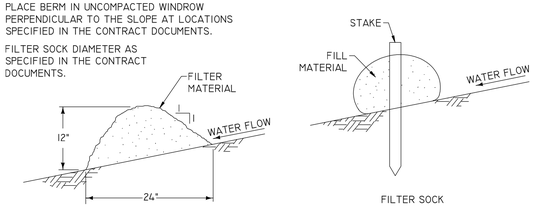
VIEW A-A OF PRINCIPAL OUTLET

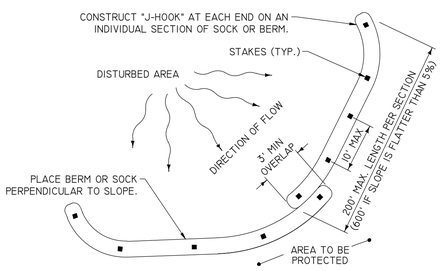
B / SWP4 SEDIMENT TRAP DETAIL
NTS

BERM SHOWN IS TYPICAL FOR SLOPES FLATTER THAN 3:1. FOR STEEPER SLOPES, INCREASE BERM SIZE AS DIRECTED BY THE ENGINEER.

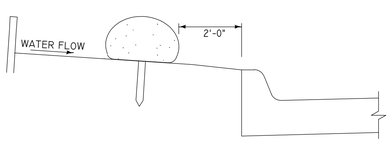
PLACE BERM IN UNCOMPACTED WINDROW PERPENDICULAR TO THE SLOPE AT LOCATIONS SPECIFIED IN THE CONTRACT DOCUMENTS.

FILTER SOCK DIAMETER AS SPECIFIED IN THE CONTRACT DOCUMENTS.





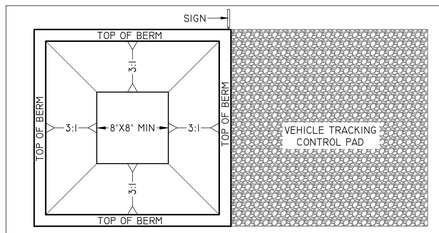
PLAN VIEW OF SLOPE
(FOR SEDIMENT AND SLOPE CONTROL)

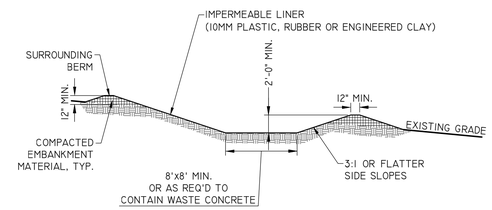


SECTION VIEW AT STREET
(FOR PERIMETER CONTROL ALONG STREET)

TYPICAL PLACEMENT OF BERM OR SOCK

C / SWP4 FILTER BERM AND FILTER SOCK
NTS

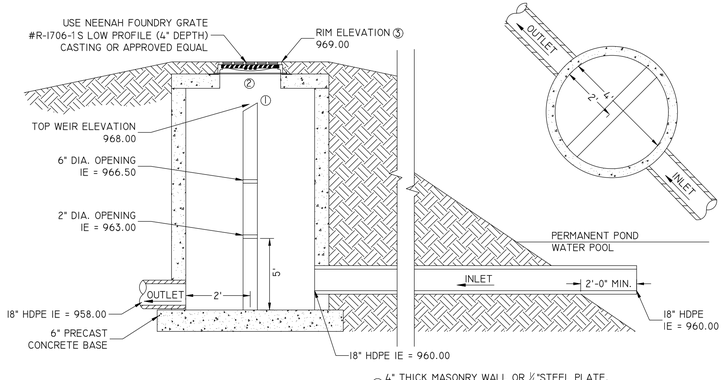




CONCRETE WASHOUT AREA INSTALLATION NOTES
1. SEE EROSION CONTROL PLAN FOR LOCATIONS OF CONCRETE WASHOUT AREA(S). TO BE PLACED A MIN. OF 50' FROM DRAINAGEWAYS, BODIES OF WATER, AND INLETS.)
2. THE CONCRETE WASHOUT AREA(S) SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
3. VEHICLE TRACKING CONTROL PAD IS REQ'D AT THE ACCESS POINT(S).
4. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA(S), AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREAS TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
5. EXCAVATED MATERIAL SHALL BE UTILIZED IN PERIMETER BERM CONSTRUCTION.

CONCRETE WASHOUT AREA MAINTENANCE NOTES
6. THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE
7. AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM SITE AND DISPOSED OF AT AN APPROVED WASTE SITE.
8. WHEN CONCRETE WASHOUT AREA(S) IS REMOVED, THE DISTURBED AREA SHALL BE STABILIZED PER SITE EROSION CONTROL MEASURES.
9. INSPECT WEEKLY AND DURING AND AFTER ALL STORM EVENTS. CLEAN-OUT OR COVER WASHOUT AREA PRIOR TO PREDICTED STORM EVENTS TO PREVENT OVER-FLOW.

E / SWP4 CONCRETE WASHOUT AREA
NTS



① 4" THICK MASONRY WALL OR ¼"STEEL PLATE. GROUT OR SEAL ALONG SIDES OF MANHOLE
② FORM OPENING IN TOP SLAB TO FIT CASTING
③ ADJUST GRADING AT THE OUTLET STRUCTURE TO COVER CASTING TO THE PROPOSED RIM ELEVATION

F / SWP4 OUTLET CONTROL STRUCTURE
NTS

KWIK TRIP™ STORES

KWIK STAR™ STORES

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EMAIL: MAIL@REIENGINEERING.COM

NO SCALE

EROSION CONTROL DETAILS

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

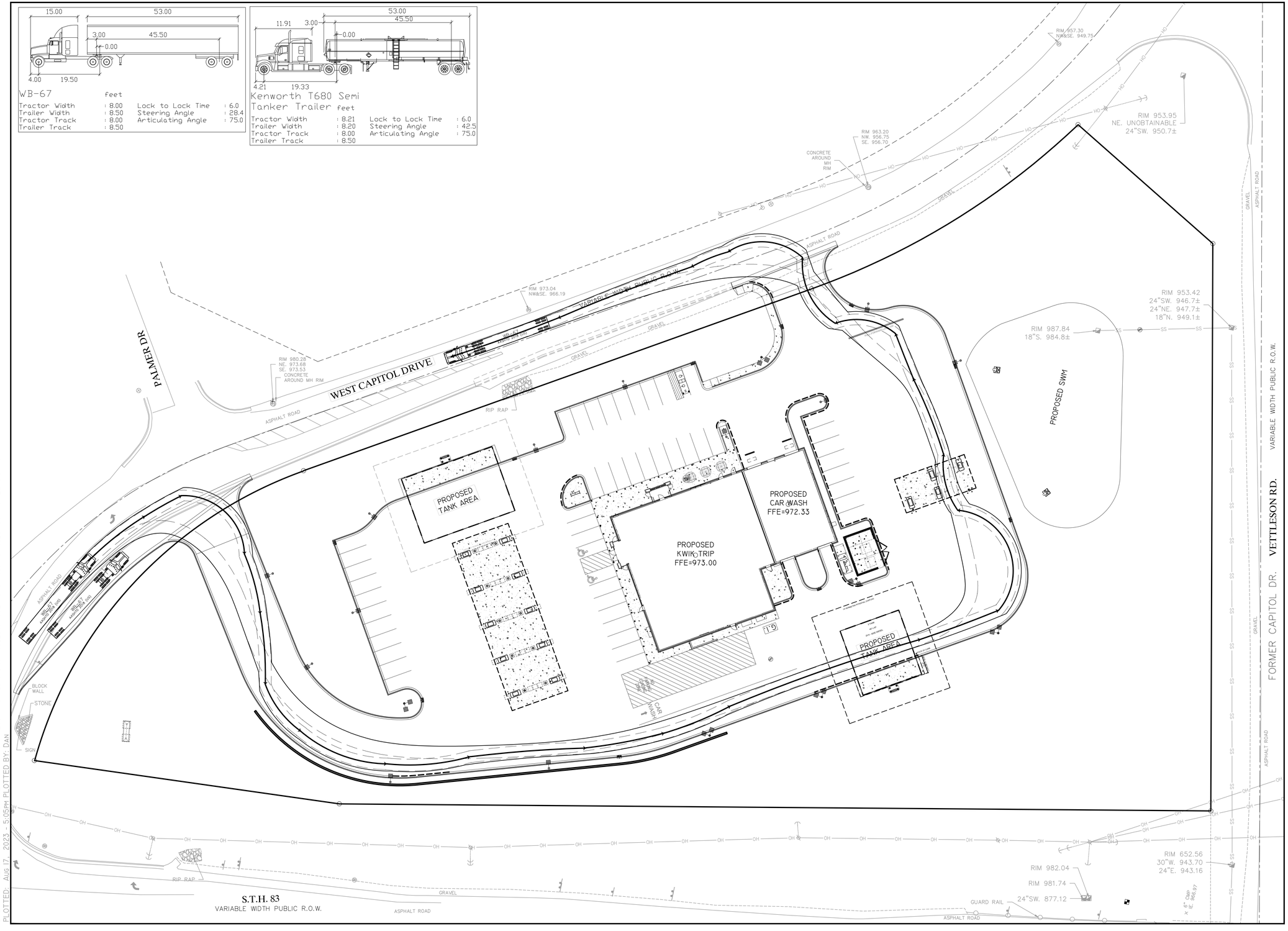
DRAWN BY	NAP XXX
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SWP4

WB-67 feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

Kenworth T680 Semi Tanker Trailer feet

Tractor Width	: 8.21	Lock to Lock Time	: 6.0
Trailer Width	: 8.20	Steering Angle	: 42.5
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		



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PLOTTED: Aug 17, 2023 - 5:05pm PLOTTED BY: DAN

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SCALE
0 30 60

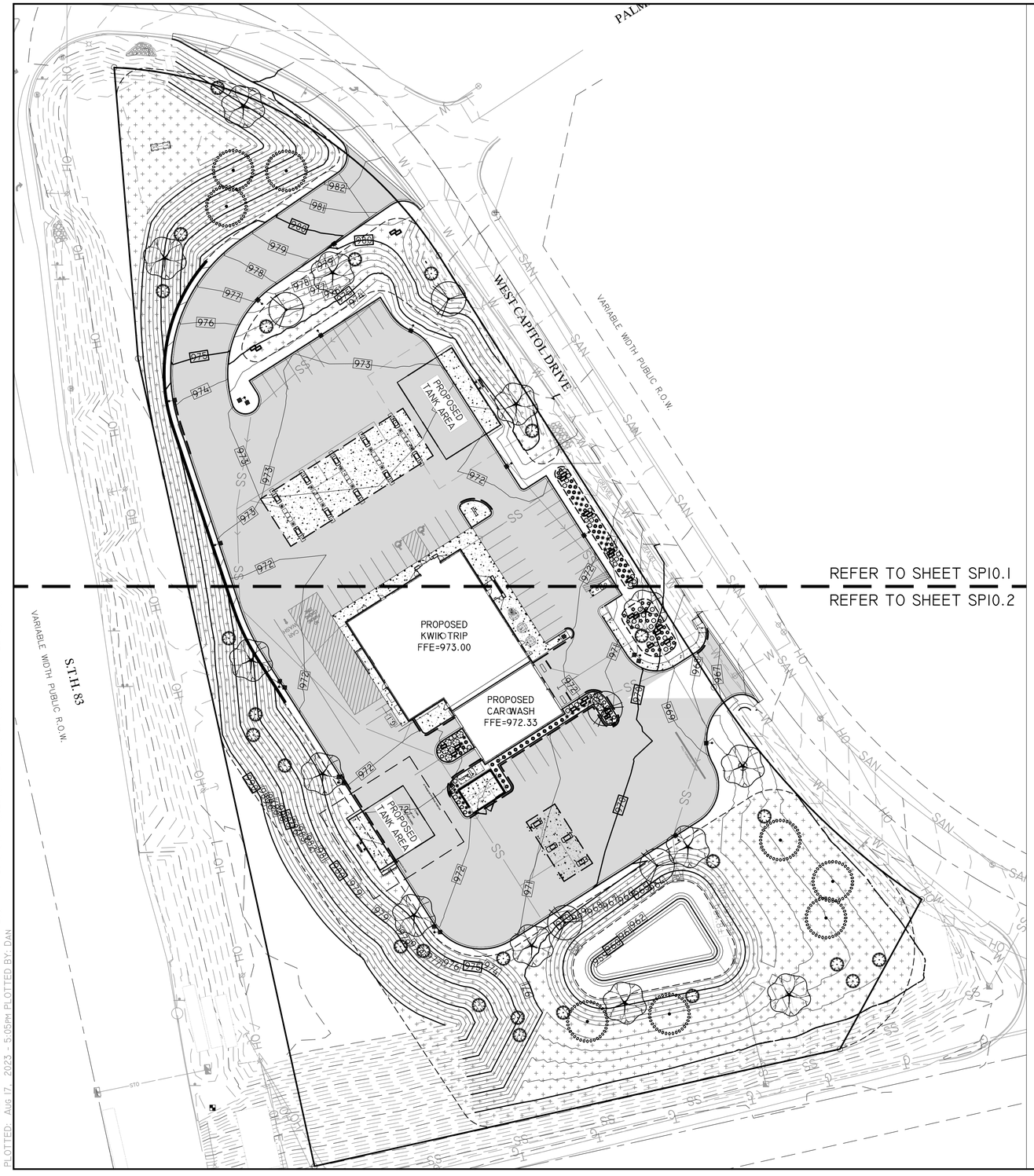
TRUCK CIRCULATION

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	NAP
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SP



GENERAL NOTES:

(A) LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR LOCATING & VERIFYING ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION, AND IS RESPONSIBLE FOR ANY DAMAGE TO THEM DURING CONSTRUCTION.

(B) CALL DIGGERS HOTLINE @ 811 OR 1-800-242-8511 AT LEAST 5 WORKING DAYS PRIOR TO DEMOLITION, EXCAVATION OR ANY CONSTRUCTION ACTIVITY.

(C) ALL PLANT MATERIAL SHALL BE GUARANTEED ONE (1) FULL YEAR UPON TOTAL COMPLETION OF PROJECT AND ACCEPTANCE BY OWNER, WITH A ONE TIME REPLACEMENT WARRANTY UPON REQUEST BY OWNER. WARRANTY EXPIRES AFTER FIRST FULL YEAR FOLLOWING PROJECT COMPLETION.

(D) LANDSCAPE CONTRACTOR SHALL VERIFY MINIMUM 6" TOPSOIL DEPTH FOR ALL AREAS TO BE SEEDED/SODDED THROUGHOUT PROJECT SITE. CONTRACTOR IS REQUIRED TO CORRECT ANY DEFICIENCIES PRIOR TO SEED/SOD. TOPSOIL SHALL BE CLEAN AND FREE OF STONES, WEEDS AND OTHER UNDESIRABLE DEBRIS.

(E) LANDSCAPE CONTRACTOR SHALL VERIFY MINIMUM 12" PLANTING SOIL DEPTH FOR ALL PROPOSED PLANTING BED AREAS THROUGHOUT THE PROJECT SITE. CONTRACTOR IS REQUIRED TO CORRECT ANY DEFICIENCIES PRIOR TO PLANT INSTALLATION. PLANTING SOIL & AREA SHALL BE CLEAN AND FREE OF STONES, WEEDS, CONCRETE WASTE AND OTHER UNDESIRABLE DEBRIS.

(F) LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR REPAIRING TOPSOIL AND SEEDING OR SODDING ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITY, INCLUDING ALL R.O.W. AND ADJACENT PROPERTIES.

(G) CONTRACTOR SHALL CLEAN ALL PAVEMENT AREAS AFTER LANDSCAPE CONSTRUCTION ACTIVITIES ARE COMPLETE AND APPROVED BY OWNER. *THIS TO BE DONE DAILY AS DEEMED NECESSARY BY MUNICIPALITY.

PLANT SCHEDULE

DECIDUOUS TREES	COMMON NAME	BOTANICAL NAME	SIZE	CONT.	QTY
	Fall Fiesta® Sugar Maple	Acer saccharum 'Bailsta'	1.5" Cal.	B&B	5
	Swamp White Oak	Quercus bicolor	1.5" Cal.	B&B	13
	Red Oak	Quercus rubra	1.5" Cal.	B&B	8
EVERGREEN TREES	**COMMON NAME**	**BOTANICAL NAME**	**SIZE**	**CONT.**	**QTY**
	White Spruce	Picea glauca	3` Ht.	Pot	25
EVERGREEN SHRUBS	**COMMON NAME**	**BOTANICAL NAME**	**SIZE**	**CONT.**	**QTY**
	Kallay Compact Pfitzer Juniper	Juniperus chinensis 'Kallays Compact'	3 gal.	Pot	10
PERENNIALS	**COMMON NAME**	**BOTANICAL NAME**	**SIZE**	**CONT.**	**QTY**
	Karl Foerster Feather Reed Grass	Calamagrostis x acutiflora 'Karl Foerster'	1 gal.	Pot	30
	Pale Purple Coneflower	Echinacea pallida	1 gal.	Pot	47
	Shenandoah Switch Grass	Panicum virgatum 'Shenandoah'	1 gal.	Pot	38
	Goldsturm Coneflower	Rudbeckia fulgida sullivantii 'Goldsturm'	1 gal.	Pot	11
	Prairie Dropseed	Sporobolus heterolepis	1 gal.	Pot	34

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N
SCALE
0 40 80

OVERALL LANDSCAPE PLAN

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY NAP
SCALE GRAPHIC
PROJ. NO. 10827
DATE 8/17/23 - REVIEW DOCUMENTS
SHEET SP10

DRAWING FILE: Q:\10800 - \10899\10827 - KWIK TRIP #1283 - HARTLAND\DRAWING\PLANS\10827-SP10-LANDSCAPING.DWG LAYOUT: SP10
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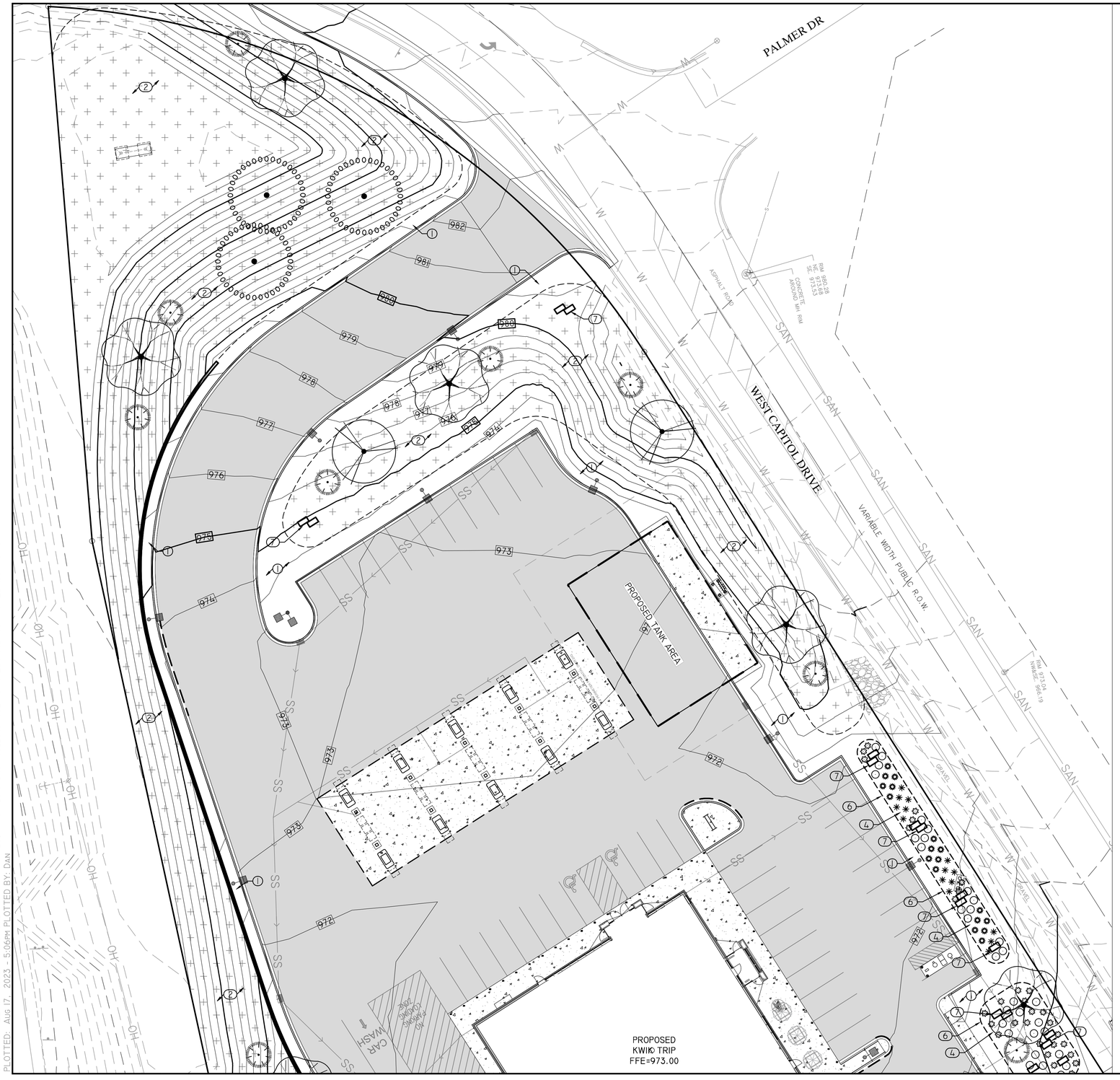

KEYED NOTES

1. SOD, *ALL AREAS NOTED ON PLAN & ALL DISTURBED AREAS DUE TO CONSTRUCTION ACTIVITY.

2. AGRECOL, SHORTGRASS PRAIRIE FOR DRY SOILS, APPLY GLYPHOSATE HERBICIDE TO AREA WHEN MAJORITY OF WEEDS ARE 2"-3" TALL. WAIT 10 DAYS THEN FINELY TILL THE SOIL ONLY 1"-2" DOWN AND PLANT IMMEDIATELY BY HAND BROADCASTING AT A RATE OF 11 LBS/ACRE. RAKE OR DRAG AREA LIGHTLY, COVERING THE SEED WITH ABOUT $\frac{1}{4}$" TO $\frac{1}{2}$" OF SOIL. ROLL AREA FIRMLY AFTER RAKING. MULCH PRAIRIE SEEDED AREAS LESS THAN 4:1 SLOPE WITH 1" OF WEED FREE STRAW MULCH. APPLY WISDOT NET-FREE CLASS I, URBAN TYPE B EROSION MAT ON SLOPING AREAS STEEPER THAN 4:1. *REFER TO AGRECOL'S "NATIVE SEEDING INSTRUCTIONS" ON THEIR WEBSITE FOR DETAILED INSTRUCTIONS/GUIDELINES FOR SUCCESSFUL SEED ESTABLISHMENT AND MANAGEMENT. (LINK BELOW)

   HTTPS://WWW.AGRECOL.COM/NATIVE-SEEDING-INSTRUCTIONS_EP_44.HTML

3. 6' DIAMETER WOOD MULCH TREE RING, 3"-4" DEPTH, DARK BROWN COLOR, *ALL TREES PLANTED WITHIN SOD AREAS.

4. SHREDDED HARDWOOD MULCH, 3"-4" DEPTH, DARK BROWN COLOR.

5. DECORATIVE STONE MULCH, 3"-4" ROUND COBBLES, 4"-5" DEPTH, WITH COMMERCIAL GRADE WEED BARRIER FABRIC UNDERLAYMENT.

6. SHOVEL CUT EDGE, 4"-5" DEPTH CLEAN CUT EDGE AROUND PLANTING BEDS WITHIN SOD AREAS.

7. ACCENT BOULDERS, (48" X 18" X 18") LIMESTONE BLOCKS/CUBES, PLAN SYMBOL:

PLANT SCHEDULE

DECIDUOUS TREES	COMMON NAME	BOTANICAL NAME
	Fall Fiesta® Sugar Maple	Acer saccharum 'Bailsta'
	Swamp White Oak	Quercus bicolor
	Red Oak	Quercus rubra
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	Prairie Dropseed	Sporobolus heterolepis

REFER TO SHEET SP10.3 FOR COMPLETE PLANT SCHEDULE, NOTES AND SPECIFICATIONS.

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N

SCALE
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LANDSCAPE PLAN
NORTH

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	NAP
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SP10.1

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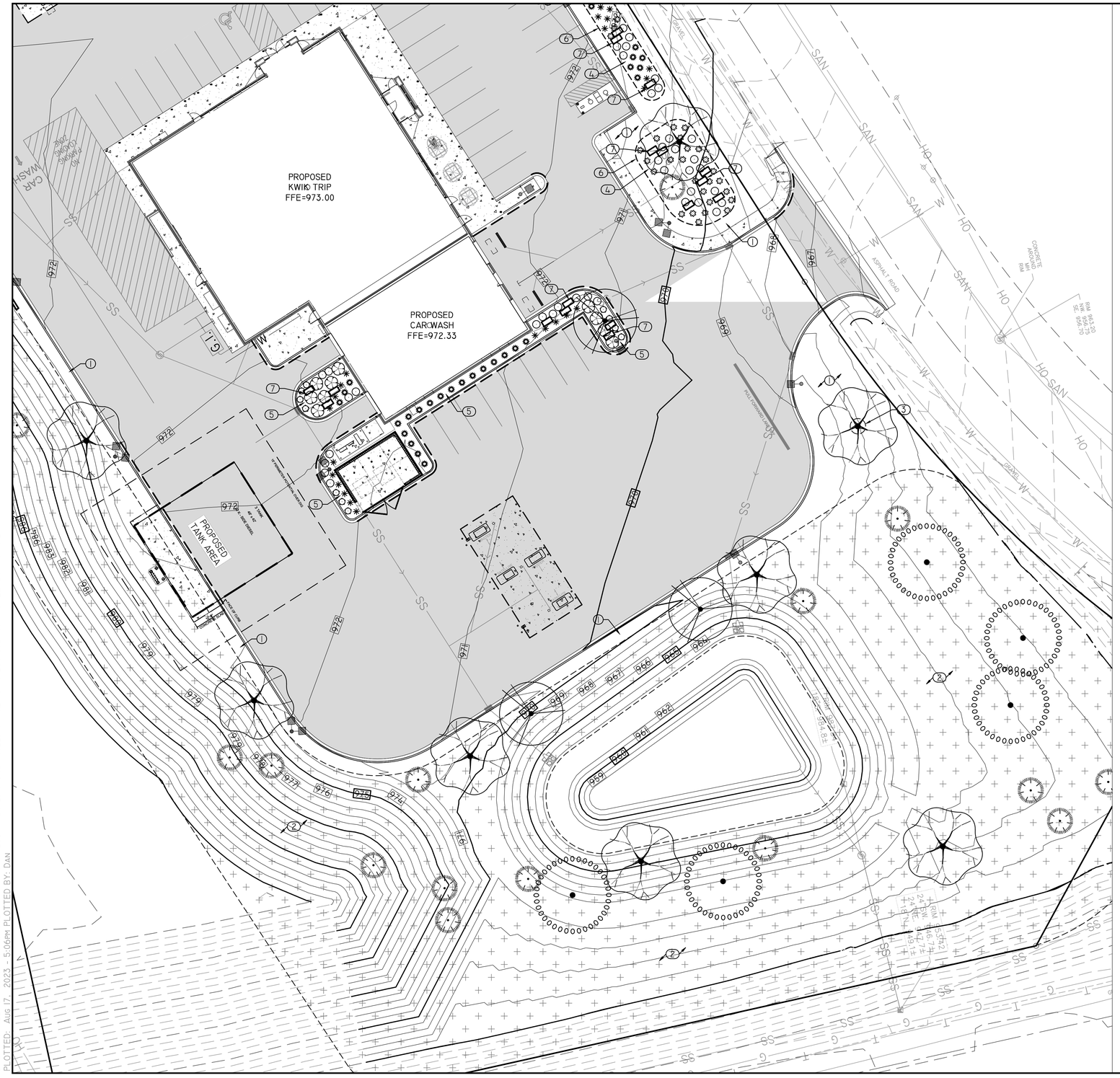
PLOTTED: Aug 17, 2023 - 5:06PM PLOTTED BY: DAN



KEYED NOTES

1. SOD, *ALL AREAS NOTED ON PLAN & ALL DISTURBED AREAS DUE TO CONSTRUCTION ACTIVITY.

2. AGRECOL, SHORTGRASS PRAIRIE FOR DRY SOILS, APPLY GLYPHOSATE HERBICIDE TO AREA WHEN MAJORITY OF WEEDS ARE 2"-3" TALL. WAIT 10 DAYS THEN FINELY TILL THE SOIL ONLY 1"-2" DOWN AND PLANT IMMEDIATELY BY HAND BROADCASTING AT A RATE OF 11 LBS/ACRE. RAKE OR DRAG AREA LIGHTLY, COVERING THE SEED WITH ABOUT $\frac{1}{4}$" TO $\frac{1}{2}$" OF SOIL. ROLL AREA FIRMLY AFTER RAKING. MULCH PRAIRIE SEEDED AREAS LESS THAN 4:1 SLOPE WITH 1" OF WEED FREE STRAW MULCH. APPLY WISDOT NET-FREE CLASS I, URBAN TYPE B EROSION MAT ON SLOPING AREAS STEEPER THAN 4:1. *REFER TO AGRECOL'S "NATIVE SEEDING INSTRUCTIONS" ON THEIR WEBSITE FOR DETAILED INSTRUCTIONS/GUIDELINES FOR SUCCESSFUL SEED ESTABLISHMENT AND MANAGEMENT. (LINK BELOW)

   HTTPS://WWW.AGRECOL.COM/NATIVE-SEEDING-INSTRUCTIONS_EP_44.HTML

3. 6' DIAMETER WOOD MULCH TREE RING, 3"-4" DEPTH, DARK BROWN COLOR, *ALL TREES PLANTED WITHIN SOD AREAS.

4. SHREDDED HARDWOOD MULCH, 3"-4" DEPTH, DARK BROWN COLOR.

5. DECORATIVE STONE MULCH, 3"-4" ROUND COBBLES, 4"-5" DEPTH, WITH COMMERCIAL GRADE WEED BARRIER FABRIC UNDERLAYMENT.

6. SHOVEL CUT EDGE, 4"-5" DEPTH CLEAN CUT EDGE AROUND PLANTING BEDS WITHIN SOD AREAS.

7. ACCENT BOULDERS, (48" X 18" X 18") LIMESTONE BLOCKS/CUBES, PLAN SYMBOL:

PLANT SCHEDULE

DECIDUOUS TREES	COMMON NAME	BOTANICAL NAME
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	Swamp White Oak	Quercus bicolor
	Red Oak	Quercus rubra
EVERGREEN TREES	**COMMON NAME**	**BOTANICAL NAME**
	White Spruce	Picea glauca
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PERENNIALS	**COMMON NAME**	**BOTANICAL NAME**
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	Pale Purple Coneflower	Echinacea pallida
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	Goldsturm Coneflower	Rudbeckia fulgida sullivantii 'Goldsturm'
	Prairie Dropseed	Sporobolus heterolepis

REFER TO SHEET SP10.3 FOR COMPLETE PLANT SCHEDULE, NOTES AND SPECIFICATIONS.

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N

SCALE
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LANDSCAPE PLAN SOUTH

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	NAP
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SP10.2

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PLOTTED: Aug 17, 2023 - 5:06PM PLOTTED BY: DAN

GENERAL NOTES:

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KEYED NOTES

1. SOD, *ALL AREAS NOTED ON PLAN & ALL DISTURBED AREAS DUE TO CONSTRUCTION ACTIVITY.

2. (90,000 SF TOTAL) AGRECOL, SHORTGRASS PRAIRIE FOR DRY SOILS, APPLY GLYPHOSATE HERBICIDE TO AREA WHEN MAJORITY OF WEEDS ARE 2"-3" TALL. WAIT 10 DAYS THEN FINELY TILL THE SOIL ONLY 1"-2" DOWN AND PLANT IMMEDIATELY BY HAND BROADCASTING AT A RATE OF 11 LBS/ACRE. RAKE OR DRAG AREA LIGHTLY, COVERING THE SEED WITH ABOUT $\frac{1}{4}$" TO $\frac{1}{2}$" OF SOIL. ROLL AREA FIRMLY AFTER RAKING. MULCH PRAIRIE SEEDED AREAS LESS THAN 4:1 SLOPE WITH 1" OF WEED FREE STRAW MULCH. APPLY WISDOT NET-FREE CLASS 1, URBAN TYPE B EROSION MAT ON SLOPING AREAS STEEPER THAN 4:1. *REFER TO AGRECOL'S "NATIVE SEEDING INSTRUCTIONS" ON THEIR WEBSITE FOR DETAILED INSTRUCTIONS/GUIDELINES FOR SUCCESSFUL SEED ESTABLISHMENT AND MANAGEMENT. (LINK BELOW)

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4. SHREDDED HARDWOOD MULCH, 3"-4" DEPTH, DARK BROWN COLOR.

5. DECORATIVE STONE MULCH, 3"-4" ROUND COBBLES, 4"-5" DEPTH, WITH COMMERCIAL GRADE WEED BARRIER FABRIC UNDERLAYMENT.

6. SHOVEL CUT EDGE, 4"-5" DEPTH CLEAN CUT EDGE AROUND PLANTING BEDS WITHIN SOD AREAS.

7. (25 EA TOTAL) ACCENT BOULDERS, (48" X 18" X 18") LIMESTONE BLOCKS/CUBES, PLAN SYMBOL:

PLANT SCHEDULE

DECIDUOUS TREES	COMMON NAME	BOTANICAL NAME	SIZE	CONT.	QTY
	Fall Fiesta® Sugar Maple	Acer saccharum 'Bailsta'	1.5" Cal.	B&B	5
	Swamp White Oak	Quercus bicolor	1.5" Cal.	B&B	13
	Red Oak	Quercus rubra	1.5" Cal.	B&B	8
EVERGREEN TREES	**COMMON NAME**	**BOTANICAL NAME**	**SIZE**	**CONT.**	**QTY**
	White Spruce	Picea glauca	3` Ht.	Pot	25
EVERGREEN SHRUBS	**COMMON NAME**	**BOTANICAL NAME**	**SIZE**	**CONT.**	**QTY**
	Kallay Compact Pfitzer Juniper	Juniperus chinensis 'Kallays Compact'	3 gal.	Pot	10
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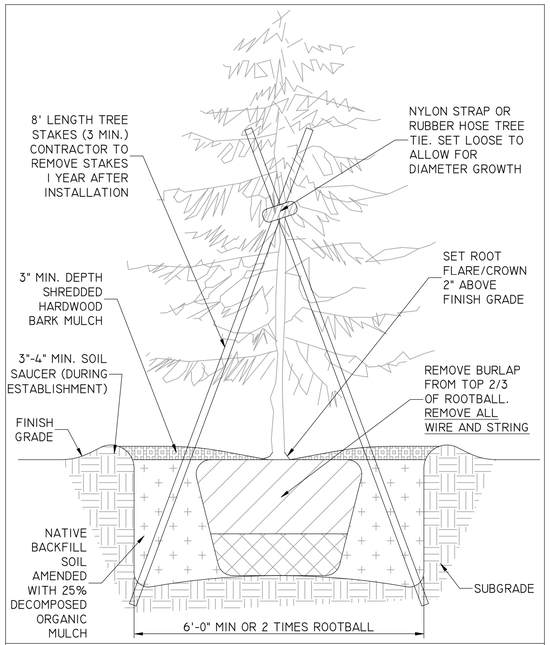
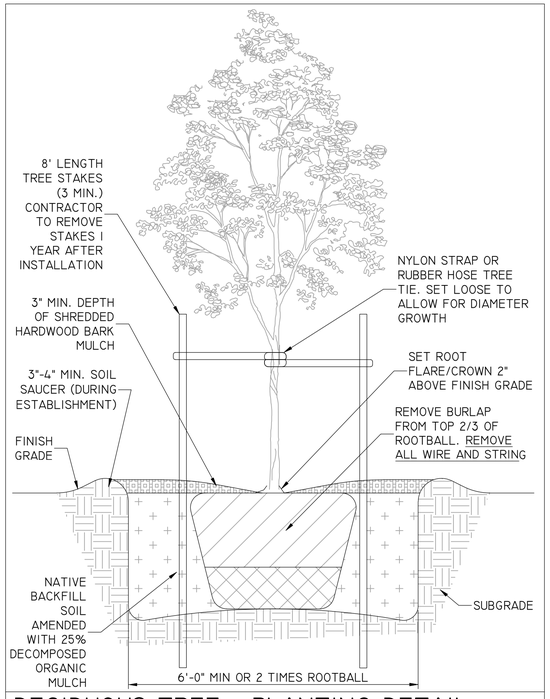
	Goldsturm Coneflower	Rudbeckia fulgida sullivantii 'Goldsturm'	1 gal.	Pot	11
	Prairie Dropseed	Sporobolus heterolepis	1 gal.	Pot	34



EVERGREEN TREE - PLANTING DETAIL



DECIDUOUS TREE - PLANTING DETAIL

KWIK TRIP STORES

KWIK STAR STORES

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

REI
CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING
REI Engineering, INC.
4080 N. 20TH AVENUE
WAUSAU, WISCONSIN 54401
PHONE: 715.675.9784 FAX: 715.675.4060
EMAIL: MAIL@REIENGINEERING.COM

LANDSCAPE NOTES, DETAILS & SPECIFICATIONS

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY NAP
SCALE GRAPHIC
PROJ. NO. 10827
DATE 8/17/23 - REVIEW DOCUMENTS
SHEET SP10.3

DRAWING FILE: Q:\10800 - 10899\10827 - KWIK TRIP #1283 - HARTLAND\DRAWING\PLANS\10827-SP10-LANDSCAPING.DWG LAYOUT: SP10.3
PLOTTED: AUG 17, 2023 - 5:06PM PLOTTED BY: DAN

LOT LIGHT ELEVATION DETAIL

NOT TO SCALE

FIXTURE SYMBOLS:

- LED LIGHT MOUNTED UNDER FUEL CANOPIES
- LED STRIP LIGHT MOUNTED IN GABLE
- RECESSED LED DOWNLIGHT
- POLE MOUNTED LED FIXTURE
- CAMERA

FIXTURE TYPES:

D20 - RECESSED LED DOWNLIGHT
GOTHAM EVO-35/30-8AR-WD-120-TRW

S7E - LED STRIP LIGHT MOUNTED IN GABLE LITHONIA
TZL1N-L96-10000LM-FST-MVOLT

CF - LSI LIGHTING: SCV-LED-23L-SCFT-UNV-DIM-50-WHT MOUNTED UNDER GAS CANOPY MOUNT FIXTURES WITH FORWARD THROW OPTIC AIMING IN DIRECTION OF ARROW.

C5 - LSI LIGHTING: SCV-LED-15L-SC-UNV-DIM-50-WHT MOUNTED UNDER GAS CANOPY

CFBK - LSI LIGHTING: SCV-LED-23L-SCFT-UNV-DIM-50-BLK MOUNTED UNDER DIESEL CANOPY MOUNT FIXTURES WITH FORWARD THROW OPTIC AIMING IN DIRECTION OF ARROW.

P13- LSI LIGHTING: MRS-LED-18L-SIL-3-UNV-50-70CRI-WHT

P13L- LSI LIGHTING: MRS-LED-18L-SIL-3-UNV-50-70CRI-WHT-IL

P1F- LSI LIGHTING: MRS-LED-18L-SIL-FT-UNV-50-70CRI-WHT

P1FL- LSI LIGHTING: MRS-LED-18L-SIL-FT-UNV-50-70CRI-WHT-IL

NOTE:

1. FOOTCANDLE LEVELS SHOWN ON THIS PLAN ARE CALCULATED AT GRADE LEVEL.

KEYED NOTES:

1. COORDINATE LOCATION AND MOUNTING HEIGHT OF SECURITY CAMERA WITH OWNER.
2. CONTRACTOR SHALL POLE MOUNT FIXTURE 2'-0" FROM BACK OF CURB TO EDGE OF POLE BASE.
3. CONTRACTOR SHALL POLE MOUNT FIXTURE 12'-0" FROM THE OVER DIG OF UNDERGROUND FUEL TANK TO EDGE OF POLE BASE.
4. CONTRACTOR SHALL POLE MOUNT FIXTURE 1'-0" FROM BACK OF SIDEWALK TO EDGE OF POLE BASE.
5. CONTRACTOR SHALL POLE MOUNT FIXTURE 9'-0" FROM BACK OF CURB TO EDGE OF POLE BASE.

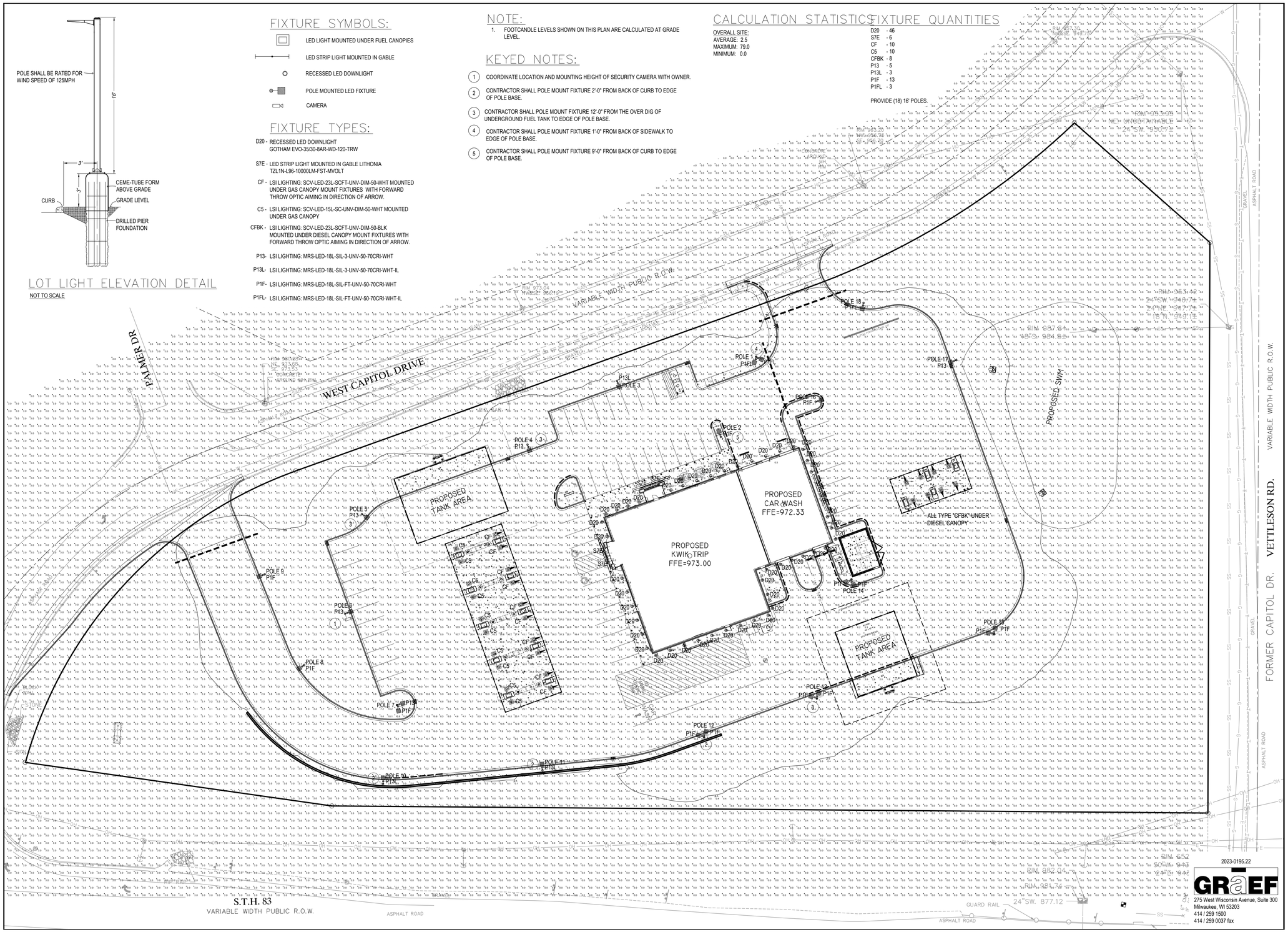
CALCULATION STATISTICS

OVERALL SITE:
AVERAGE: 2.5
MAXIMUM: 79.0
MINIMUM: 0.0

FIXTURE QUANTITIES

D20 - 46
S7E - 6
CF - 10
CS - 10
CFBK - 8
P13 - 5
P13L - 3
P1F - 13
P1FL - 3

PROVIDE (18) 16' POLES.



2023-0195.22

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N

SCALE
0 30 60

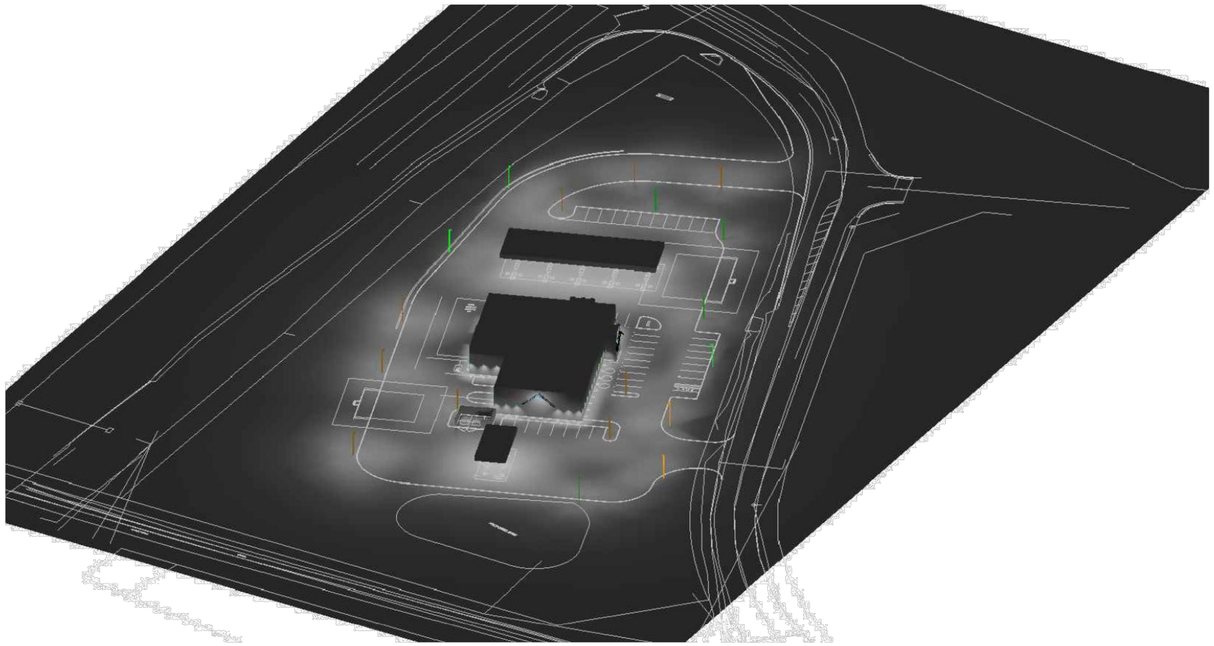
PHOTOMETRIC SITE PLAN

CONVENIENCE STORE #1283

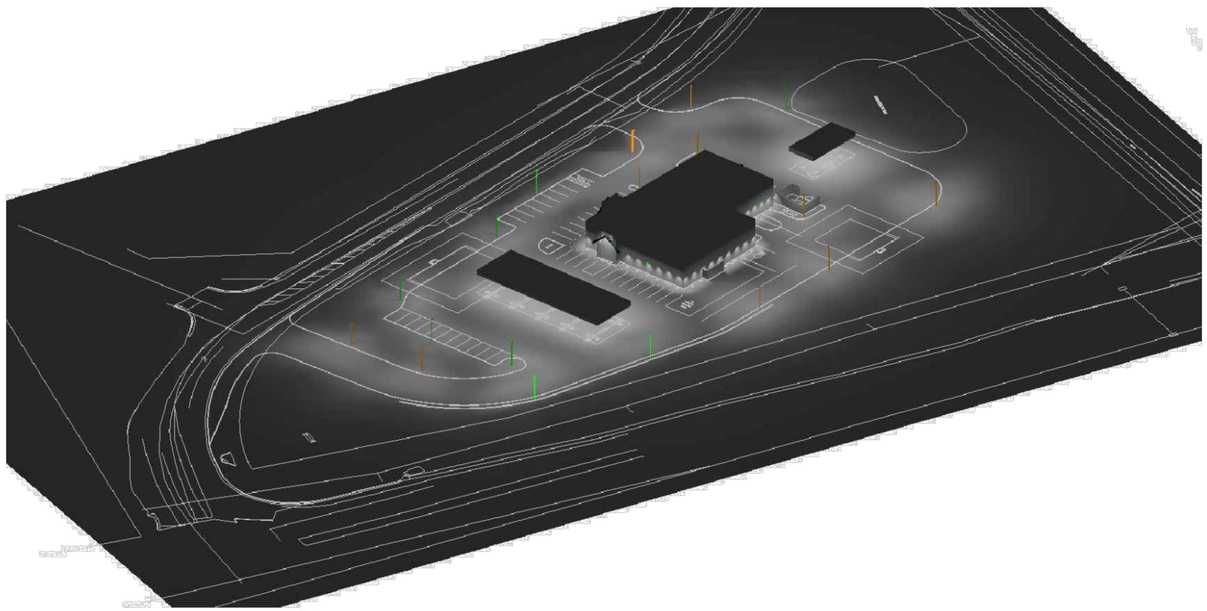
STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	XXX
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	E1



PHOTOMETRIC RENDERING PLAN
NOT TO SCALE



PHOTOMETRIC RENDERING PLAN
NOT TO SCALE

2023-0195.22

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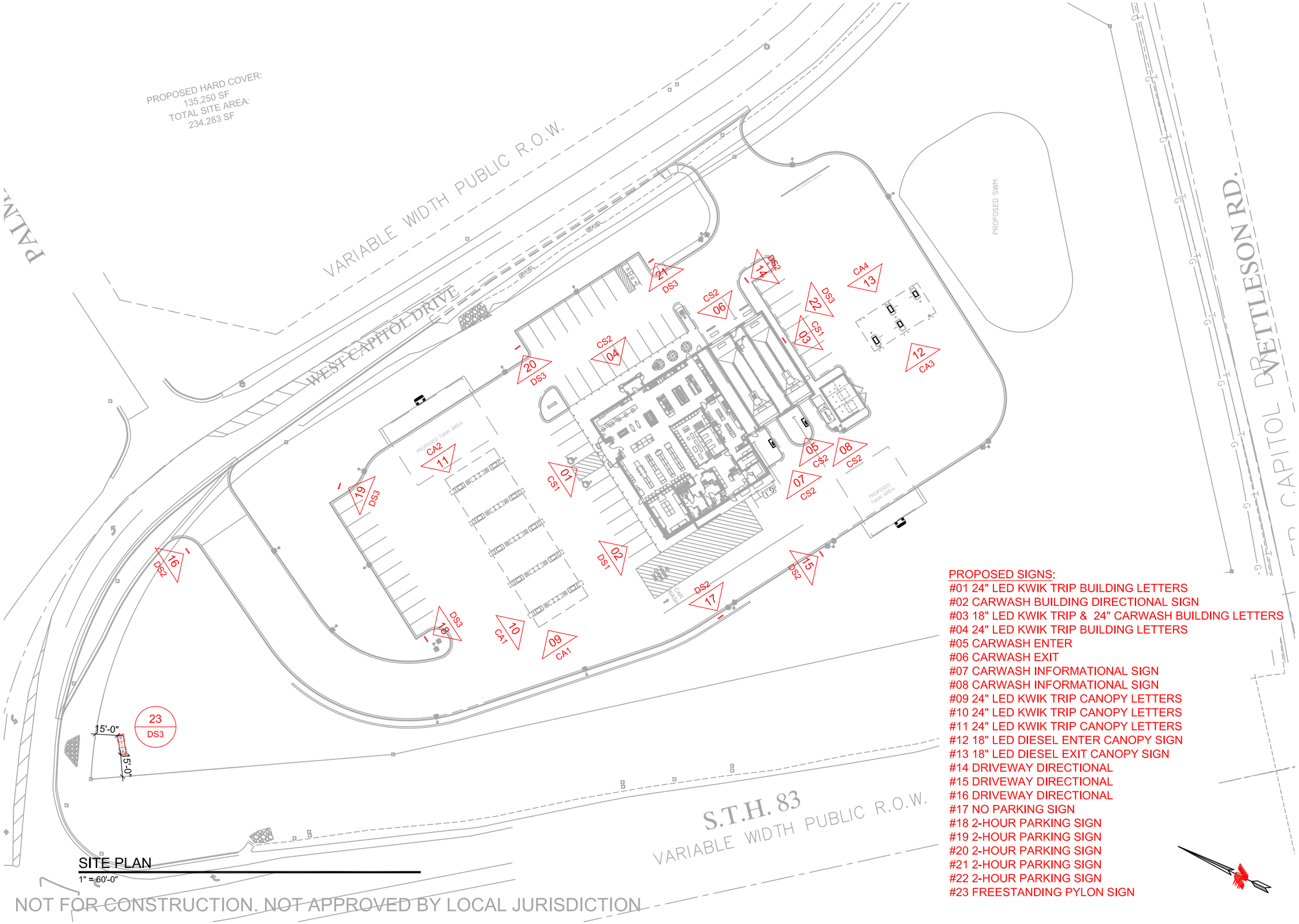
N

SCALE
0 ## ##

PHOTOMETRIC RENDERING PLAN
CONVENIENCE STORE #1283
STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	XXX
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	E2



SITE PLAN
1" = 60'-0"

NOT FOR CONSTRUCTION. NOT APPROVED BY LOCAL JURISDICTION

PROPOSED SIGNS:
#01 24" LED KWIK TRIP BUILDING LETTERS
#02 CARWASH BUILDING DIRECTIONAL SIGN
#03 18" LED KWIK TRIP & 24" CARWASH BUILDING LETTERS
#04 24" LED KWIK TRIP BUILDING LETTERS
#05 CARWASH ENTER
#06 CARWASH EXIT
#07 CARWASH INFORMATIONAL SIGN
#08 CARWASH INFORMATIONAL SIGN
#09 24" LED KWIK TRIP CANOPY LETTERS
#10 24" LED KWIK TRIP CANOPY LETTERS
#11 24" LED KWIK TRIP CANOPY LETTERS
#12 18" LED DIESEL ENTER CANOPY SIGN
#13 18" LED DIESEL EXIT CANOPY SIGN
#14 DRIVEWAY DIRECTIONAL
#15 DRIVEWAY DIRECTIONAL
#16 DRIVEWAY DIRECTIONAL
#17 NO PARKING SIGN
#18 2-HOUR PARKING SIGN
#19 2-HOUR PARKING SIGN
#20 2-HOUR PARKING SIGN
#21 2-HOUR PARKING SIGN
#22 2-HOUR PARKING SIGN
#23 FREESTANDING PYLON SIGN

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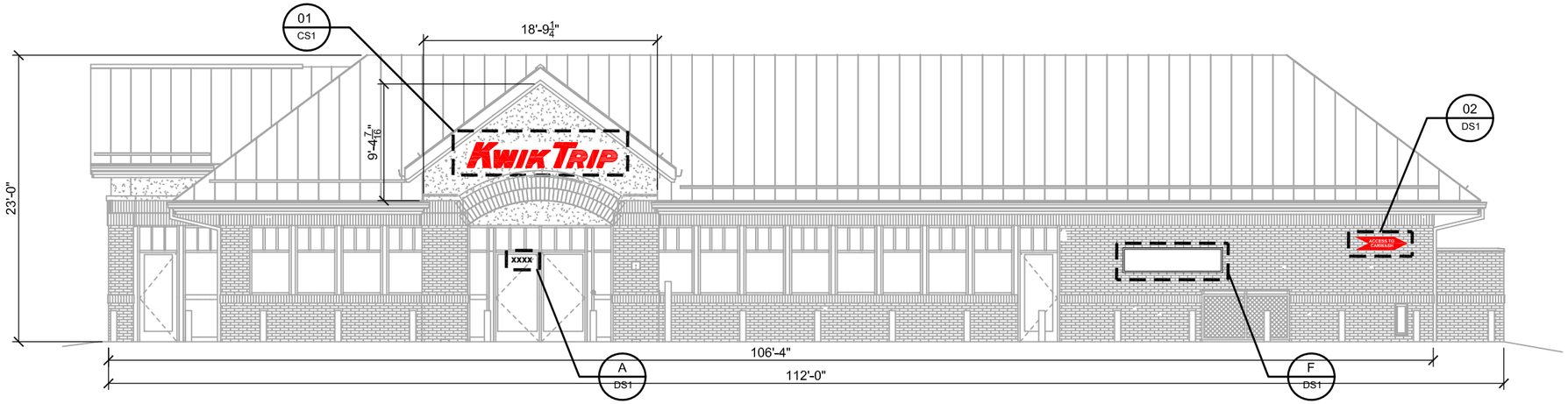
SITE PLAN

CONVENIENCE STORE #1283
w. 2 BAY CW & SIDE DIESEL

STH 83 AND W CAPITOL DRIVE
HARTLAND, WI

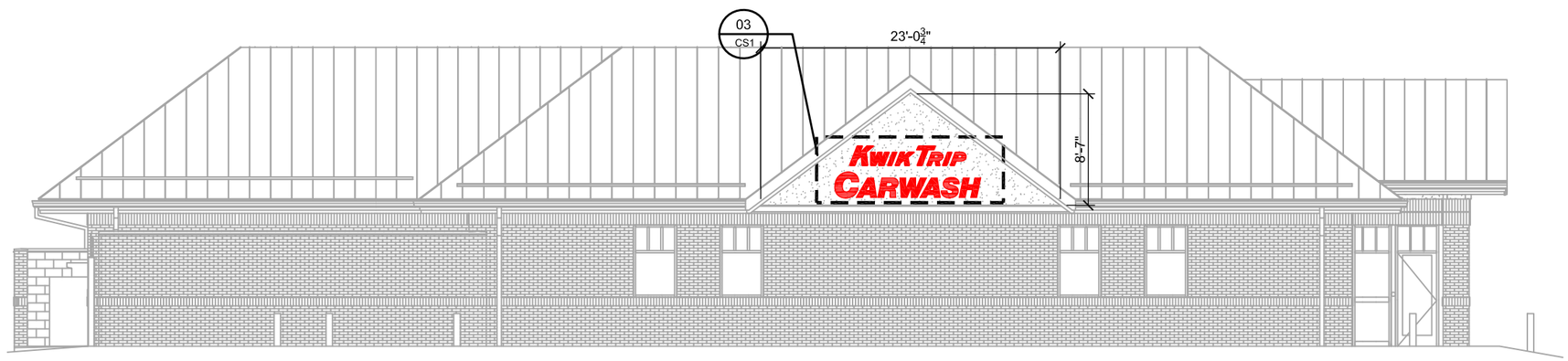
#	DATE	DESCRIPTION

DRAWN BY	KMK
SCALE	MULTIPLE
PROJ. NO.	0001
DATE	2023 08-28
SHEET	SP1



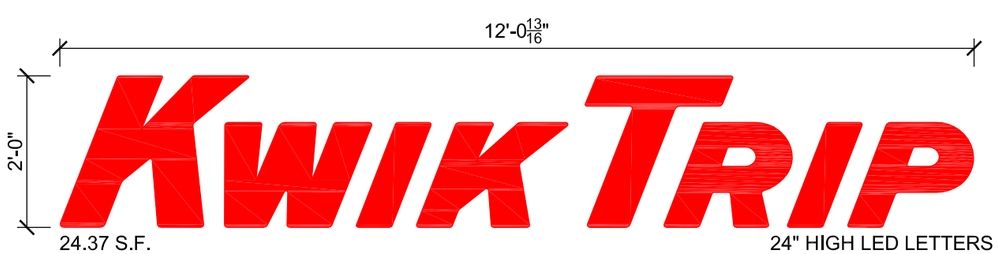
STORE ELEVATION

SCALE: 3/32" = 1'-0"



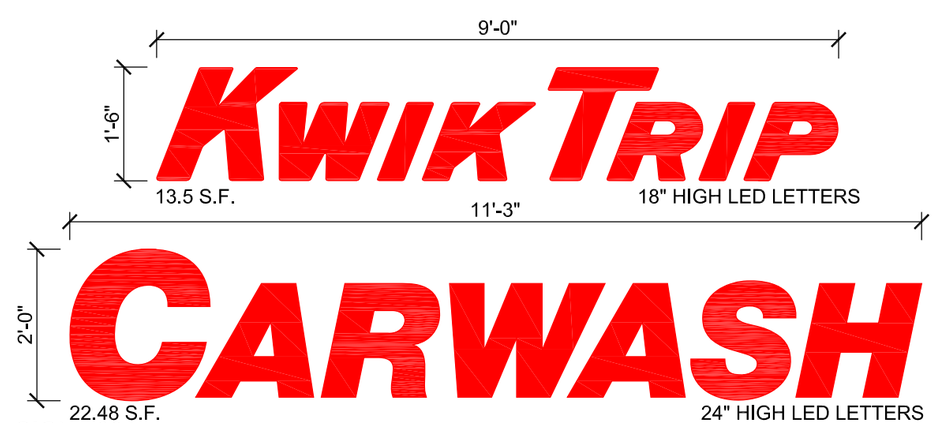
STORE ELEVATION

SCALE: 3/32" = 1'-0"



LOGO DETAIL - SIGN #01

SCALE: 1/2" = 1'-0"



LOGO DETAIL - SIGN #03

SCALE: 1/2" = 1'-0"

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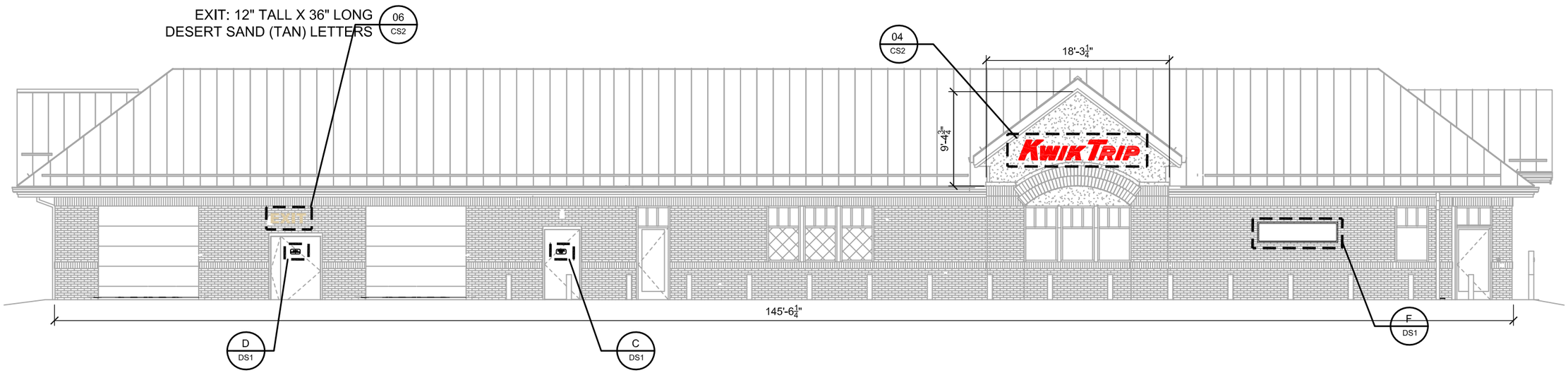
CONVENIENCE STORE SIGNAGE

CONVENIENCE STORE #1283
w. 2 BAY CW & SIDE DIESEL

STH 83 AND W CAPITOL DRIVE
HARTLAND, WI

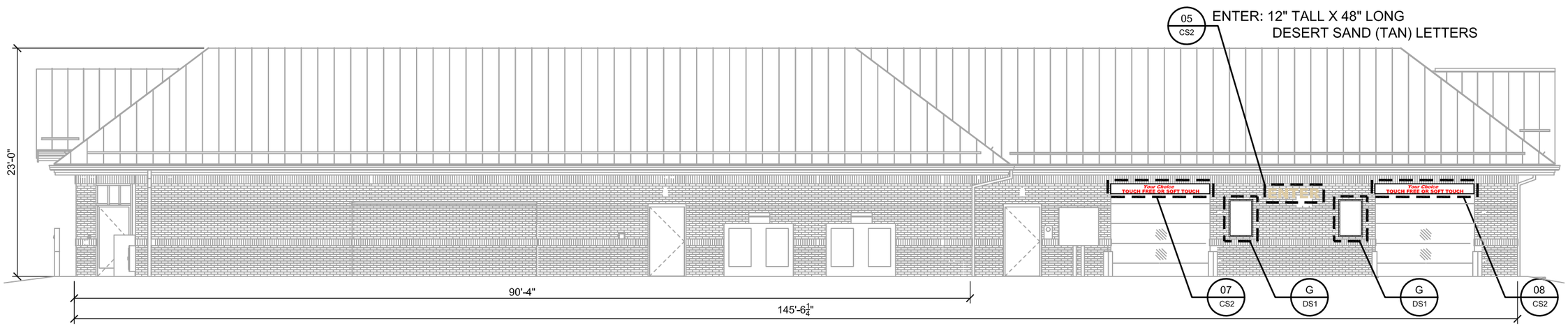
#	DATE	DESCRIPTION

DRAWN BY	KMK
SCALE	MULTIPLE
PROJ. NO.	0001
DATE	2023 08-28
SHEET	CS1



STORE ELEVATION

SCALE: 3/32" = 1'-0"



STORE ELEVATION

SCALE: 3/32" = 1'-0"

LOGO DETAIL - SIGN #04

SCALE: 1/2" = 1'-0"

Your Choice
TOUCH FREE OR SOFT TOUCH

NON-LIT INFORMATIONAL SIGN
RED VINYL ON WHITE ALUMINUM
1'-0"H X 10'-0"W = 10.0 SQ FT

INFORMATIONAL SIGN #07 & #08

SCALE: 1/2" = 1'-0"

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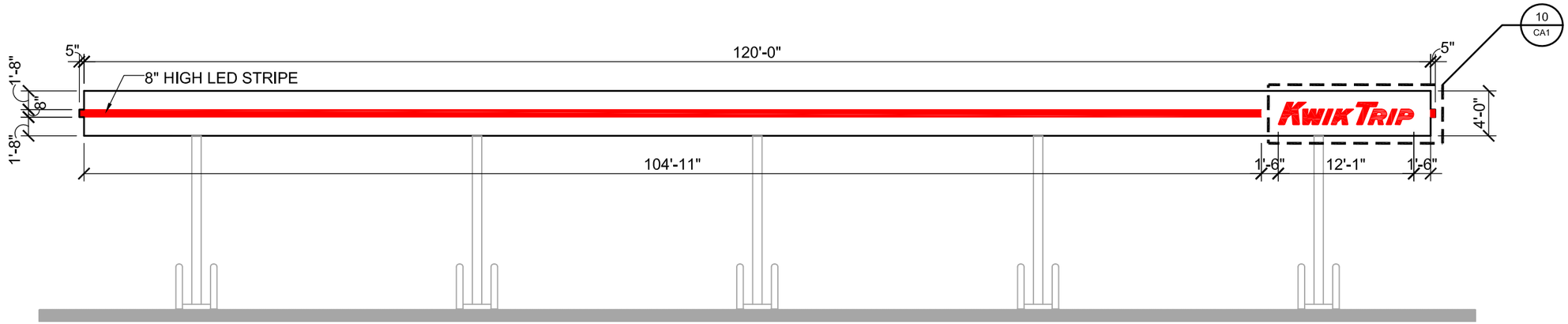
CONVENIENCE STORE SIGNAGE

CONVENIENCE STORE #1283
w. 2 BAY CW & SIDE DIESEL

STH 83 AND W CAPITOL DRIVE
HARTLAND, WI

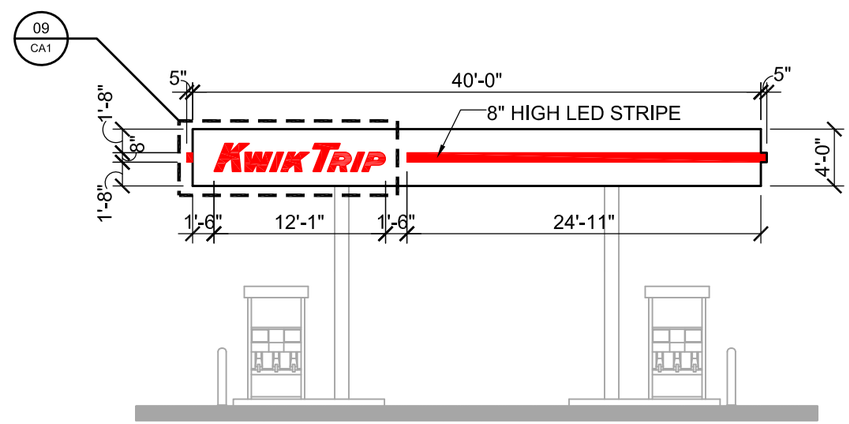
#	DATE	DESCRIPTION

DRAWN BY	KMK
SCALE	MULTIPLE
PROJ. NO.	0001
DATE	2023 08-28
SHEET	CS2



CANOPY ELEVATION

SCALE: 3/32" = 1'-0"



CANOPY ELEVATION

SCALE: 3/32" = 1'-0"

LOGO DETAIL - SIGNS #09 & #10

SCALE: 1/2" = 1'-0"

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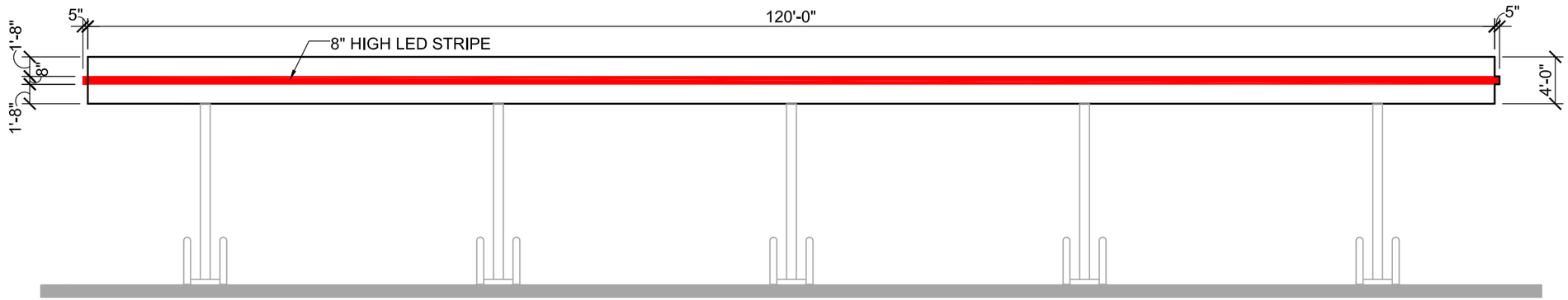
CANOPY SIGNAGE

CONVENIENCE STORE #1283
w. 2 BAY CW & SIDE DIESEL

STH 83 AND W CAPITOL DRIVE
HARTLAND, WI

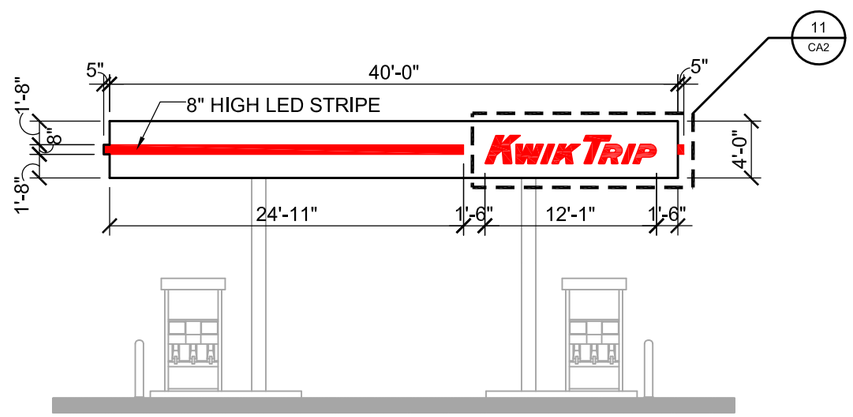
#	DATE	DESCRIPTION

DRAWN BY	KMK
SCALE	MULTIPLE
PROJ. NO.	0001
DATE	2023 08-28
SHEET	CA1



CANOPY ELEVATION

SCALE: 3/32" = 1'-0"



CANOPY ELEVATION

SCALE: 3/32" = 1'-0"

LOGO DETAIL - SIGN #11

SCALE: 1/2" = 1'-0"

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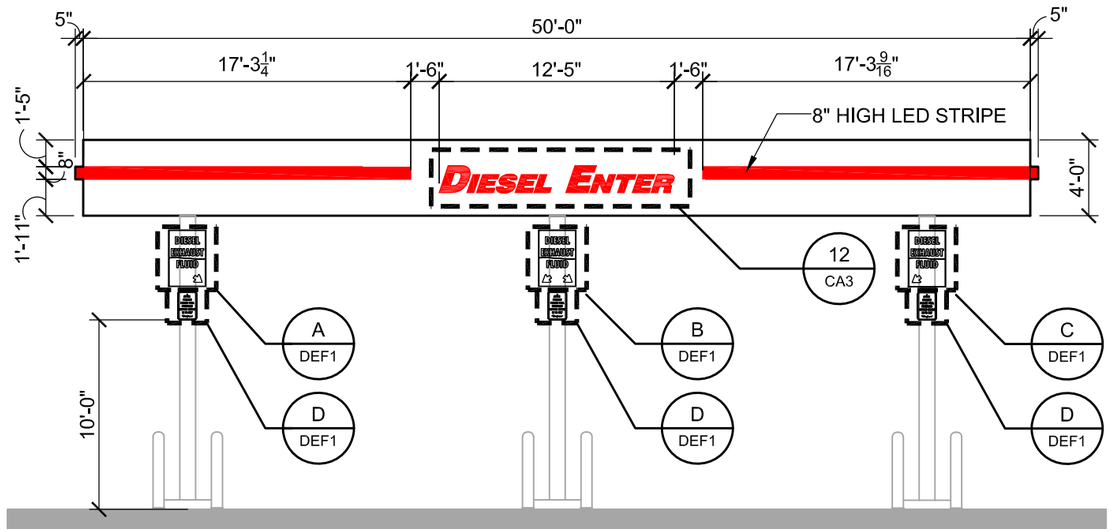
CANOPY SIGNAGE

CONVENIENCE STORE #1283
w. 2 BAY CW & SIDE DIESEL

STH 83 AND W CAPITOL DRIVE
HARTLAND, WI

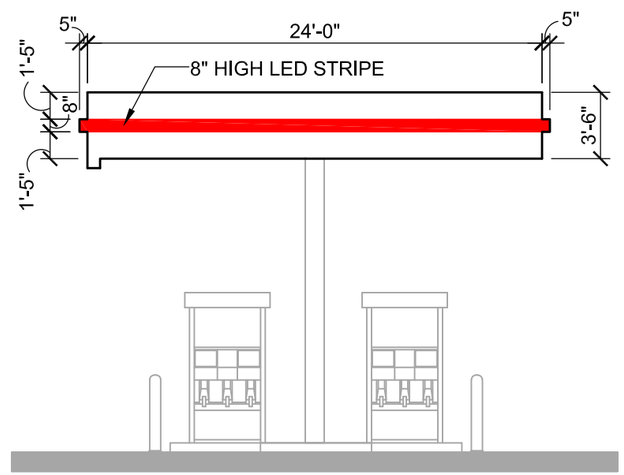
#	DATE	DESCRIPTION

DRAWN BY	KMK
SCALE	MULTIPLE
PROJ. NO.	0001
DATE	2023 08-28
SHEET	CA2



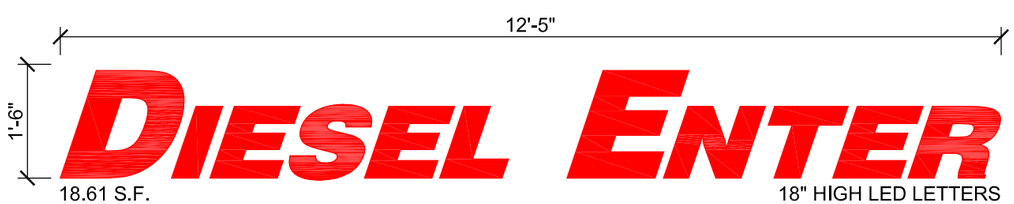
CANOPY ELEVATION

SCALE: 1/8" = 1'-0"



CANOPY ELEVATION

SCALE: 1/8" = 1'-0"



LOGO DETAIL - SIGN #12

SCALE: 1/2" = 1'-0"

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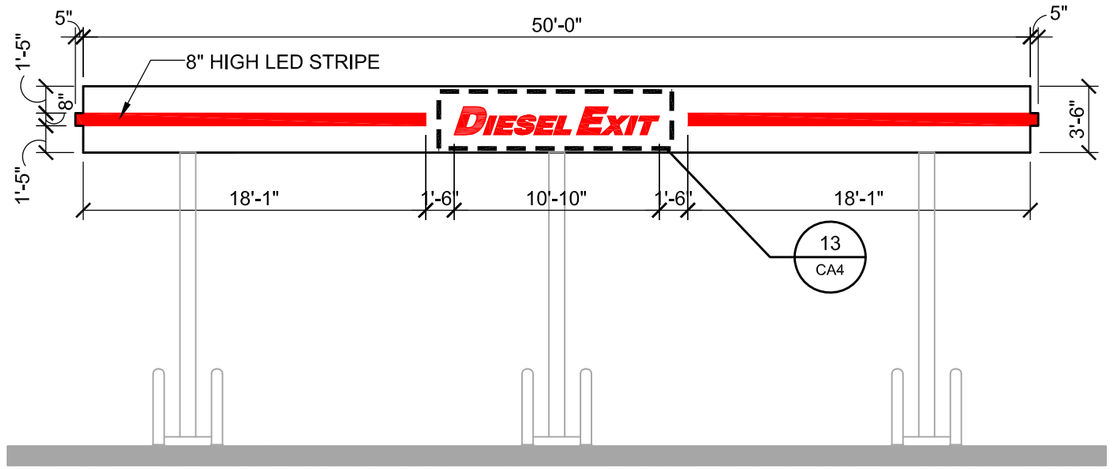
CANOPY SIGNAGE

CONVENIENCE STORE #1283
w. 2 BAY CW & SIDE DIESEL

STH 83 AND W CAPITOL DRIVE
HARTLAND, WI

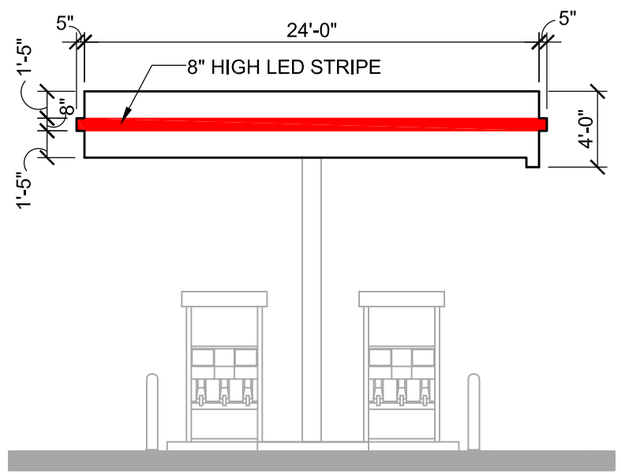
#	DATE	DESCRIPTION

DRAWN BY	KMK
SCALE	MULTIPLE
PROJ. NO.	0001
DATE	2023 08-28
SHEET	CA3



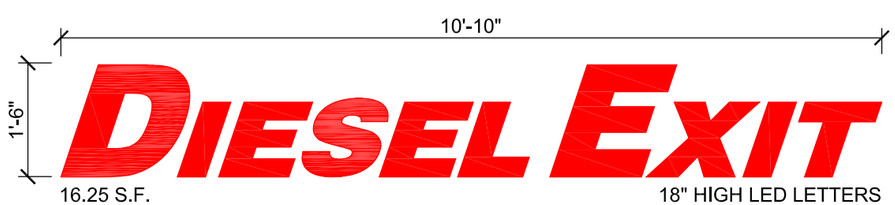
CANOPY ELEVATION

SCALE: 1/8" = 1'-0"



CANOPY ELEVATION

SCALE: 1/8" = 1'-0"



LOGO DETAIL - SIGN #13

SCALE: 1/2" = 1'-0"

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CANOPY SIGNAGE

CONVENIENCE STORE #1283
w. 2 BAY CW & SIDE DIESEL

STH 83 AND W CAPITOL DRIVE
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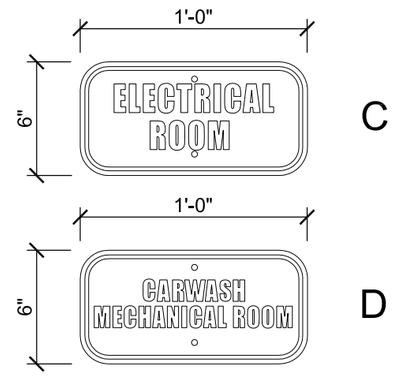
SHEET	CA4

5" WHITE VINYL ADDRESS LETTERS
ON GLASS DOOR AS SHOWN ABOVE
(VERIFY ACTUAL NUMBERS WITH PROJECT MANAGER)

ADDRESS SIGN A

SCALE: 3/4" = 1'-0"



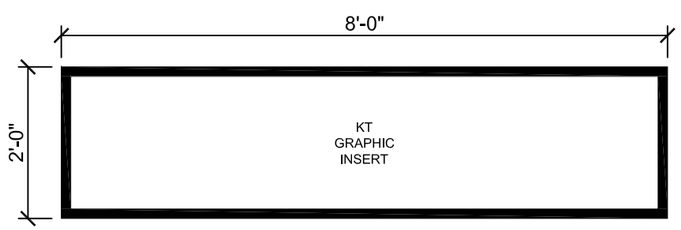
INFORMATIONAL SIGNS C & D

SCALE: 1 1/2" = 1'-0"

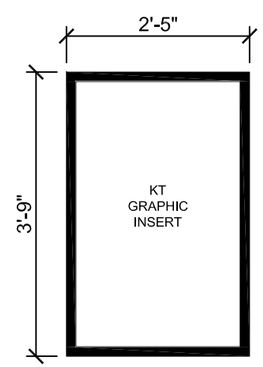
GENERAL SPECIFICATIONS

ROOM SIGNS
Qty: 3 total (different copy on each)
Size: per art
Material: white sign blank
Finish: cut vinyl

Install along with various signs for same site, crew to give to KT trim guys to install.



"SIGN F"
BLACK ALUMINUM FRAME



"SIGN G"
BLACK ALUMINUM
FRAME

INFORMATIONAL SIGNS F & G

SCALE: 1/2" = 1'-0"

NON-LIT DIRECTIONAL SIGN
WHITE VINYL ON RED ALUMINUM
1'-0"H X 4'-0"W = 4.0 SQ FT

DIRECTIONAL SIGN #02

SCALE: 3/4" = 1'-0"

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DIRECTIONAL SIGNAGE

CONVENIENCE STORE #1283
w. 2 BAY CW & SIDE DIESEL

STH 83 AND W CAPITOL DRIVE
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PROJ. NO.	0001
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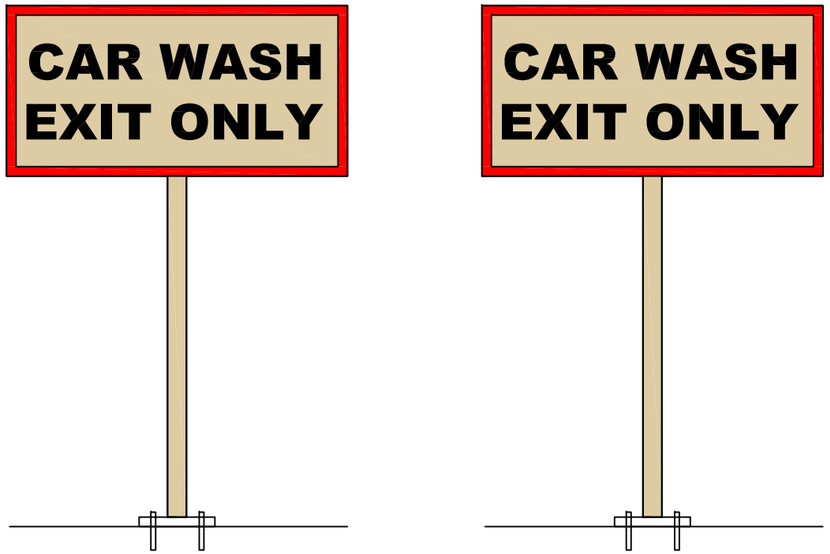
SHEET	DS1

DOUBLE SIDED DIRECTIONAL SIGN

SOUTH SIDE | NORTH SIDE



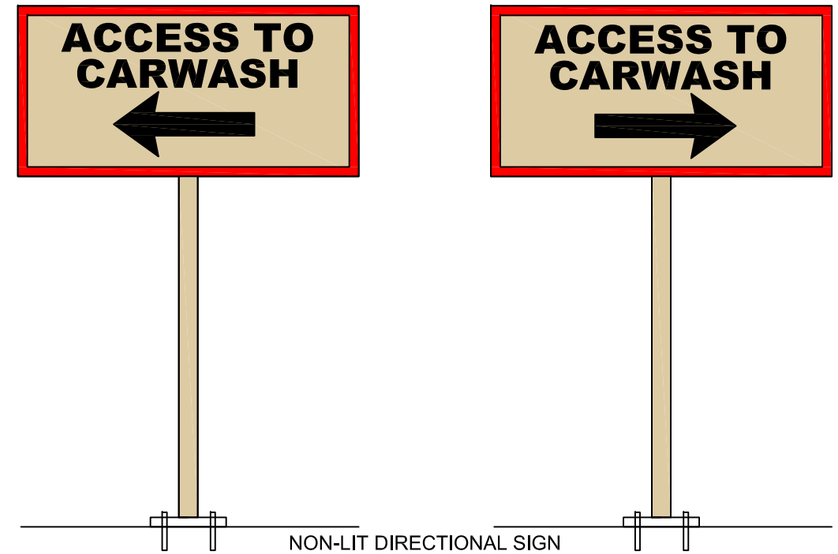
NON-LIT DIRECTIONAL SIGN
RED & BLACK VINYL ON LIGHT BEIGE ALUMINUM
1'-6"H X 3'-0"W X 4'-6"T= 4.50 SQ FT

DIRECTIONAL SIGN #14

SCALE: 3/4" = 1'-0"

DOUBLE SIDED DIRECTIONAL SIGN

NORTH SIDE | SOUTH SIDE



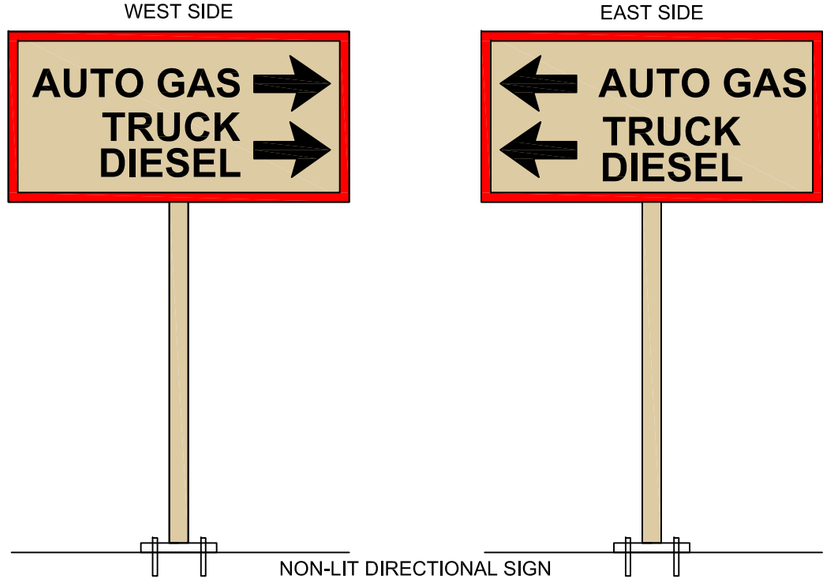
NON-LIT DIRECTIONAL SIGN
RED & BLACK VINYL ON LIGHT BEIGE ALUMINUM
1'-6"H X 3'-0"W X 4'-6"T= 4.50 SQ FT

DIRECTIONAL SIGN #15

SCALE: 3/4" = 1'-0"

DOUBLE SIDED DIRECTIONAL SIGN

WEST SIDE | EAST SIDE



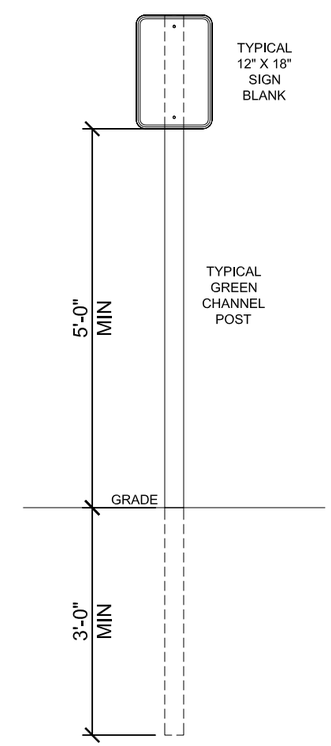
NON-LIT DIRECTIONAL SIGN
RED & BLACK VINYL ON LIGHT BEIGE ALUMINUM
1'-6"H X 3'-0"W X 4'-6"T= 4.50 SQ FT

DIRECTIONAL SIGN #16

SCALE: 3/4" = 1'-0"

SINGLE SIDED SIGN

12" X 18" ALUMINUM SIGN
QTY: 1



NO PARKING SIGN #17

SCALE: 1/2" = 1'-0"

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DIRECTIONAL SIGNAGE

CONVENIENCE STORE #1283
w. 2 BAY CW & SIDE DIESEL

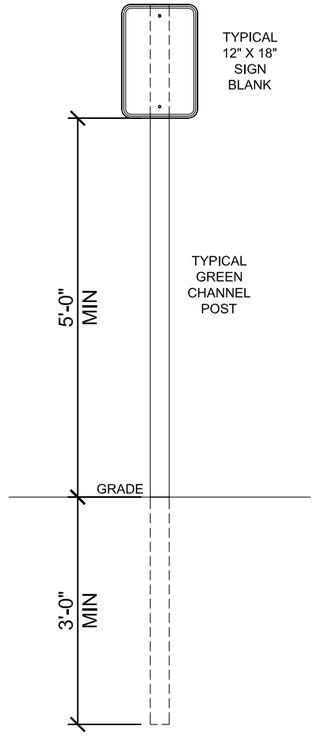
STH 83 AND W CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION

DRAWN BY	KMK
SCALE	MULTIPLE
PROJ. NO.	0001
DATE	2023 08-28
SHEET	DS2

SINGLE SIDED SIGN

12" X 18" ALUMINUM SIGN
QTY: 5



2 HOUR PARKING SIGN #18, #19, #20, #21 & #22

SCALE: 1/2" = 1'-0"

#23 KWIK TRIP FREESTANDING PYLON SIGN

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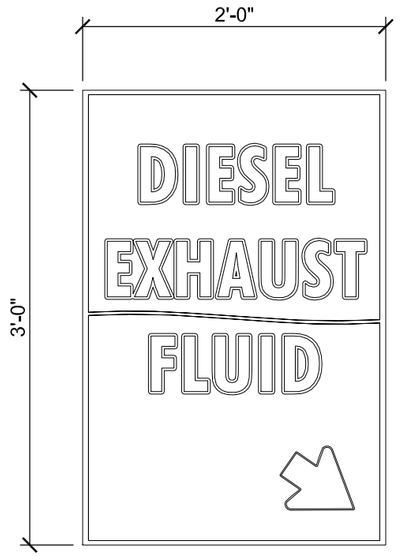
DIRECTIONAL SIGNAGE

CONVENIENCE STORE #1283
w. 2 BAY CW & SIDE DIESEL

STH 83 AND W CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION

DRAWN BY	KMK
SCALE	MULTIPLE
PROJ. NO.	0001
DATE	2023 08-28
SHEET	DS3



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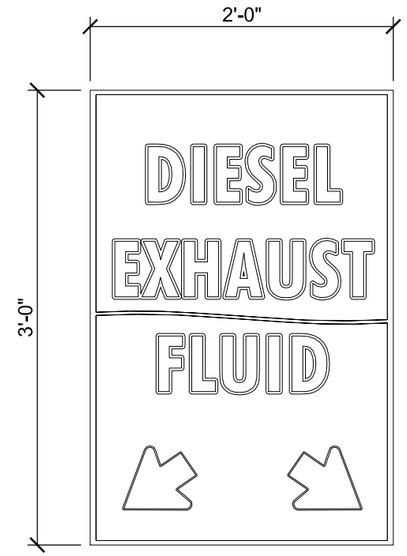

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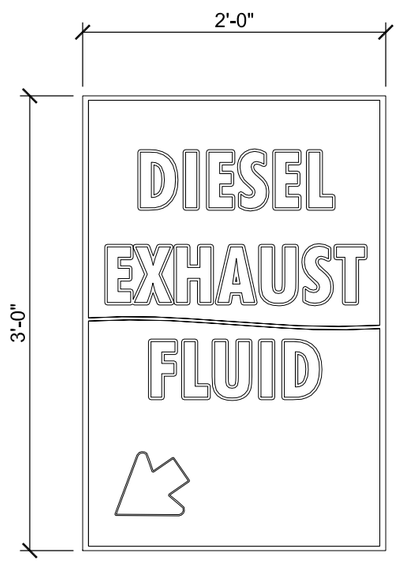

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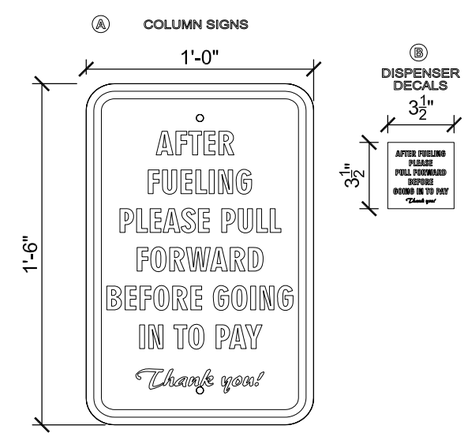

PULL AHEAD SIGN D

SCALE: 1 1/2" = 1'-0"

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DEF / DSL SIGNAGE

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HARTLAND, WI

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DATE	2023 08-28
SHEET	DEF1

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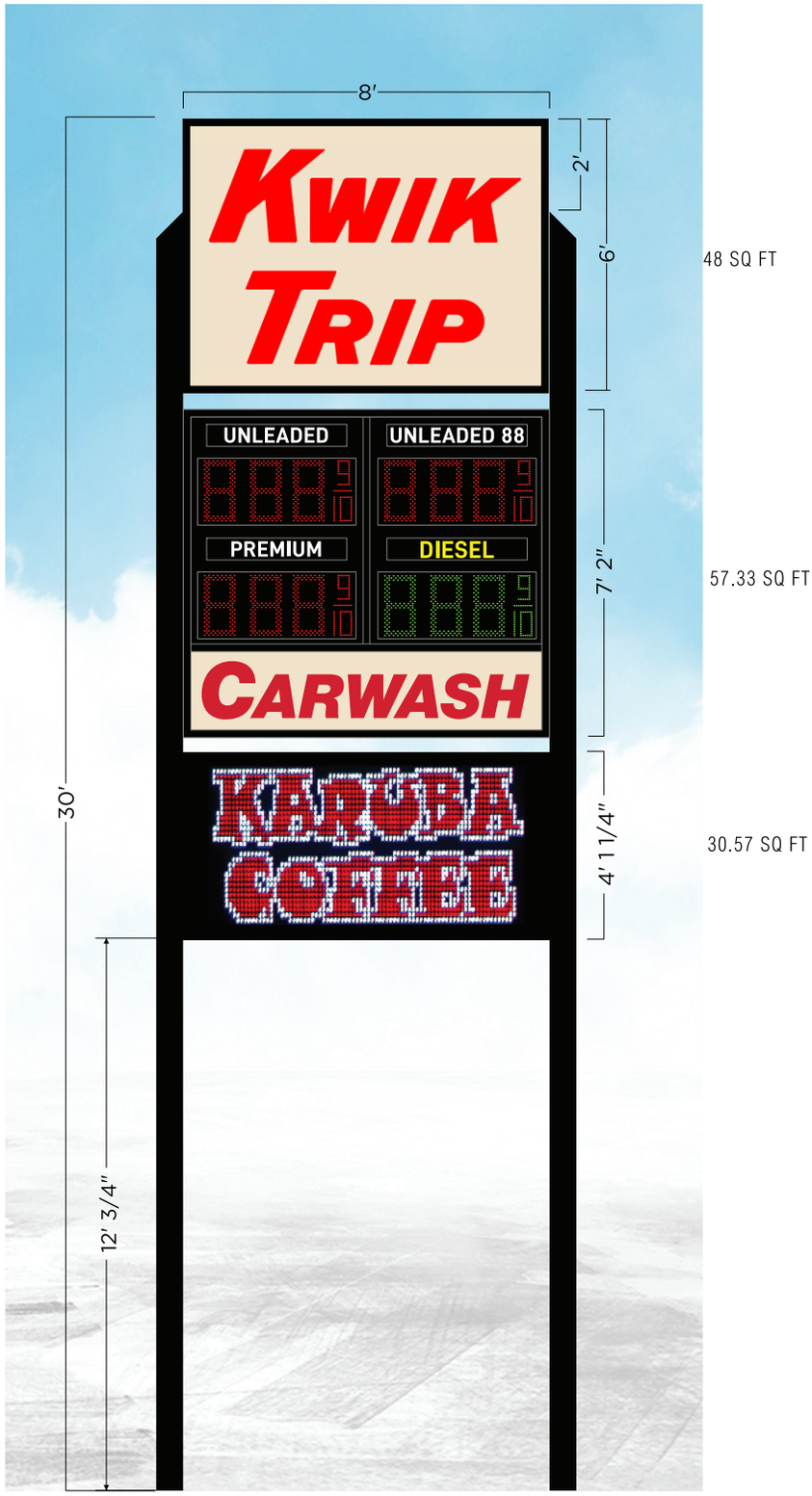

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Fax: 641-752-6968

PROJECT
KWIK TRIP

LOCATION
HARTLAND, WI

REP. SARAH
DESIGNER HMF
SKETCH # 7-18-23
ORDER #

SCALE 1/4"=1'0"
FILE
PRINT FILE /
REVISION(S)

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FRONT LEFT VIEW

FRONT RIGHT VIEW

REAR RIGHT VIEW

REAR LEFT VIEW

FRONT ELEVATION

Kwik Trip

Kwik Star

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EXTERIOR ELEVATIONS
GEN 3 LEFT HAND with 2 Bay Carwash

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KWIK STAR

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10 MPD

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DIESEL

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CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

Stormwater Management Plan

Kwik Trip Store #1283
State Highway 83 & West Capitol Drive
Village of Hartland
Waukesha County, WI

REI# 10827

COMPREHENSIVE SERVICES WITH PRACTICAL SOLUTIONS

Stormwater Management Plan For:

Kwik Trip Store #1283
State Highway 83 & West Capitol Drive
Village of Hartland
Waukesha County, WI

REI# 10827

Prepared For:
Kwik Trip, Inc.
1626 Oak Street
La Crosse, WI 54602

8/18/2023

Table of Contents:

0.0 Executive Summary
1.0 Introduction and Overview of the Proposed Project
2.0 Site Soils Evaluation
3.0 Water Quality
4.0 Peak Flow Reduction
5.0 Infiltration Performance
6.0 Protective Area Setbacks
7.0 Erosion Control Plan
8.0 Long Term Maintenance
9.0 References

LIST OF FIGURES

Construction Plans:	26 Sheets
Sheet STM-1 (Appendix 3):	Water Quality Watershed Areas
Sheet STM-2 (Appendix 4):	Pre-Development Watershed Areas
Sheet STM-3 (Appendix 5):	Post-Development Watershed Areas

LIST OF APPENDICES

Appendix 1	NR 151 Post Construction Standards
Appendix 2	Site Soils Information
Appendix 3	Water Quality Calculations & WinSLAMM Inputs
Appendix 4	Pre-Development Conditions Peak Flow Analysis
Appendix 5	Post-Development Conditions Peak Flow Analysis
Appendix 6	USLE Map & Calculations
Appendix 7	Storm Water Management Maintenance Schedule and Procedures

Executive Summary

The proposed project consists of constructing a new Kwik Trip convenience store with car wash, vehicle fueling, parking and driving surfaces, and miscellaneous other amenities. The development will occur on a 5.38-acre property located at the southwest quadrant of State Highway 83 and West Capitol Drive within the Village of Hartland, Waukesha County. Land disturbance associated with the project is estimated at 4.7 acres. The project site is a new development and is subject to the post-construction stormwater requirements for a new development site found within NR 151.121 - NR 151.126. The development will also require compliance defined within the *Village of Hartland Stormwater Ordinance* [1].

The area of land disturbance within the property limits was used in analyzing the site for post-construction land disturbance. Stormwater Management requirements will be achieved utilizing overland flow coupled with a storm sewer conveyance system that routes stormwater runoff to a wet detention pond. The stormwater management facilities treat and detain the stormwater runoff prior to discharging it into the municipal storm sewer system. Due to steeper grades of the existing fill site, the backslope of the proposed wet detention pond is designed with a more gradual grade leading to larger area of undetained greenspace. This will lead to a small exceedance of peak flow during the post-development 10-year storm event when compared to the 2-year storm event of the pre-development condition. The exceedance is minimal and within the nearest cubic foot per second (cfs). Furthermore, having a gentler slope on the backslope of the pond would create a safer situation. For these sited reasons, REI's professional opinion is that the site meets the Village's peak flow requirements to the maximum extent practical.

Additional detail relative to the stormwater management system design can be found within the report, appendices, stormwater figures, and plan set.

1.0 Introduction and Overview of the Proposed Project

Project Owner: Kwik Trip, Inc.

Project Location: Southeast quadrant of State Highway 83 and West Capitol Drive
Northwest 1/4, Section 3, T7N, R18E

Project City: Village of Hartland

Project County/State: Waukesha County, WI

Property Area: 5.38 Acres

Area of Land Disturbance: 4.68 Acres

Existing Site Description: The existing site is a historic fill property with the raised portion gently slopingin all directions. The site then slopes steeply in all directions from the raised portion back to adjecent public streets. Current cover vegetation consists of grassland with scattered trees.

Proposed Development: The proposed project involves lowering the existing filled site about 15 to 20 feet on average to accomodate constructing a new Kwik Trip convenience store with car wash, vehicle fueling, parking and driving surfaces, and miscellaneous other amenities. Runoff of the majority of the proposed development will be conveyed to a wet detention pond, which will provide stormwater management for the site.

WDNR Compliance: Wisconsin Administrative Code ch. NR 151 and NR 216

Development Classification: New Development
(Refer to Appendix 1 for NR 151 post-construction performance standards)

Local Compliance: Village of Hartland

Anticipated Construction Start Date: April 24, 2024

2.0 Site Soils Evaluation

Additional data regarding the site soils can be found in **Appendix 2** of this report.

Table 1A
Soils Summary per the *Web Soil Survey*[2]

Soil Type	USGS Classification	Infiltration Rate (in/hr)	Hydro Group	Water Table	Bedrock Depth
GP	Gravel Pit	-	-	-	-

note: Hydrologic Soil Group (HSG) B was used in the stormwater analysis

Table 1B
Soils Summary per Onsite Exploration

Boring/Test Pit #	Stormwater Facility	Stormwater Facility Bottom Elv	Infiltration Rate (in/hr)	Water Table Elv	Bedrock Elv
7, 8	Wet Detention Pond	958.00	-	-	-

note: infiltration rate is based off of the limiting soil layer

3.0 Water Quality

Calculation Reference: Appendix 3

Figure Reference: STM-1

Software: WinSLAMM Version 10.5.0

Rainfall: Milwaukee, 1969 (March 28 - December 6)

Table 2
Water Quality Device Summary

Water Quality Device	Permanent Pool Area (sf)	Storage Depth (in)	Control Structure
Wet Detention Pond	6,604	72	Manhole with weir plate having a primary 2"-dia. orifice and a secondary 6"-dia. orifice

Table 3A
Total Suspended Solids (TSS) Removal Summary

Development Type	Required (% of No Control)	TSS Generated (lbs)	TSS Leaving Site (lbs)	% TSS Removed
New Development	80	1,624	257.1	84.17%

Total Phosphorous (TP) Removal Summary

Development Type	Required (% of No Control)	TP Generated (lbs)	TP Leaving Site (lbs)	% TP Removed
New Development	30	5.138	1.816	64.66%

4.0 Peak Flow Reduction

Pre-development Runoff Calculation Reference: Appendix 4

Pre-development Runoff Figure Reference: STM-2

Post-development Runoff Calculation Reference: Appendix 5

Post-development Runoff Figure Reference: STM-3

Software: HydroCAD Version 10.20-3c

Rainfall Reference: NRCS Rainfall Distributions and 24-hour Duration Rainfall Depths for each Wisconsin County[3]

Rainfall Distribution: MSE 3

State Stormwater Requirements (WDNR) Developed condition shall not exceed the Pre-Developed condition for the 1-yr and 2-yr rainfall events and pass the 100-yr safely

Local Stormwater Requirements (Village of Hartland) For new development, the post-developed peak runoff rates of the 10-year, 24 hour storm event must be maintained or reduced to the pre-developed rates for the 2-year 24 hour storm event and the post-developed peak runoff rates of the 100-year, 24 hour storm event must be maintained or reduced to the pre-developed rates for the 10-year, 24 hour storm event. Safe overland conveyance must be provided for all storm events up to the 100-year design storm.

Stormwater Device Summary: Refer to Table 2

Table 4
Peak Flow Summary

Development Condition	1-yr Storm Peak Flow	2-yr Storm Peak Flow	10-yr Storm Peak Flow	100-yr Storm Peak Flow
Pre-Development	0.41	0.84	3.65	12.67
Post-Development	0.39	0.54	1.31	3.59

note: peak flow units are in cfs

Table 5 summarizes the results of the maximum water surface elevation in each pond
Infiltration rates for each device (if applicable) were ignored for this analysis

Calculation Reference: Appendix 5

Figure Reference: STM-3

Table 5
100-year Peak Water Elevation

Stormwater Device	100-Year Peak Elevation	Top of Pond Elevation	Overflow Elevation
Wet Detention Pond	967.92	969.00	968.00

5.0 Infiltration Performance

Since the project site will be used for fueling and vehicle maintenance, it qualifies for the infiltration exemption as found within NR 151.124 (3) (a) 3. The *Village of Hartland Stormwater Ordinance* [1] also includes a similar infiltration exemption for fueling and vehicle maintenance.

6.0 Protective Area Setbacks

There are no natural features located near the proposed project improvements that require special consideration for this project.

7.0 Erosion Control Plan

An erosion control plan, and associated details, were developed for the proposed construction and are included within the construction plan set. The site contractor will be responsible for implementing and maintaining the erosion control measures throughout construction until they may be removed following site stabilization.

Plan Sheet Reference: Sheets SWP1-SWP4

A Soil Loss & Sediment Discharge Calculation Tool (USLE) and accompanying Figure were completed to assure WDNR erosion control compliance and is included within **Appendix 6.**

8.0 Long Term Maintenance

Inspection and routine maintenance of the proposed structural and non-structural stormwater best-management practices will be required to ensure they continue to function following completion of the construction project. A maintenance schedule has been prepared and is included within **Appendix 7**. It will be the landowner's respsonsibility to document the inspections and ensure any followup action is completed in a timely manner.

9.0 References

1) Village of Hartland Stormwater Ordinance. Village of Hartland Ordinance No. 844-17. An Ordinance to Amend Chapter 76 of the Village of Hartland Municipal Code Pertaining to Stormwater Management. October 9, 2017.

2) Web Soil Survey of Waukesha County, Wisconsin. United States Department of Agriculture. Soil Conservation Service. **http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx.**

3) NRCS Rainfall Distributions and 24-hour Duration Rainfall Depths for each Wisconsin County. National Engineering Handbook (NEH) Part 650. Chapter 2. Appendix 1. United States Department of Agriculture.

INDEX OF SHEETS

TI	TITLE SHEET
SP0	DEMO PLAN
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SP1.1	SITE PLAN (KEYNOTES)
SP2	GRADING PLAN
SP2.1	GRADING PLAN DETAIL - WEST
SP2.1.2	GRADING PLAN DETAIL - EAST
SP2.2.1	GRADING PLAN SPOT DETAIL
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SP4	UTILITY PLAN
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SWP4	EROSION CONTROL DETAILS
SP	TRUCK CIRCULATION
SP10-SP10.3	LANDSCAPE PLANS
E1	PHOTOMETRIC SITE PLAN
E2	PHOTOMETRIC RENDERING PLAN

TOTAL SHEETS = 26

LIST OF STANDARD ABBREVIATIONS

&	AND
AB	AUGER BORING
ADT	AVERAGE DAILY TRAFFIC
BC	BOTTOM OF CURB
BM	BENCHMARK
BOC	BACK OF CURB
BR	BOTTOM OF RAMP
BS	BOTTOM OF STEPS
BW	BOTTOM OF WALL
CB	CATCH BASIN
CMAC	CORRUGATED METAL ARCH CULVERT
CMBC	CORRUGATED METAL BOX CULVERT
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC.	CONCRETE
CPP	CORRUGATED PLASTIC PIPE
DGB	DENSE GRADED BASE
DIP	DUCTILE IRON PIPE
D/S	DOWNSTREAM
(E)	EAST
ELEV.	ELEVATION
EOG	EDGE OF GRAVEL
FFE	FINISHED FLOOR ELEVATION
FG	FINISH GRADE
F.O.	FIBER OPTIC
INL	INLET
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HMA	HOT MIX ASPHALT
HP	HIGH POINT
IE	INVERT ELEVATION
LF	LINEAL FEET
LP	LOW POINT
MEG	MATCH EXISTING GRADE
MH	MANHOLE
(N)	NORTH
(NE)	NORTHEAST
(NW)	NORTHWEST
OH	OVERHEAD
PC	POINT OF CURVATURE
P/L	PROPERTY LINE
PP	POWER POLE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE PIPE
RCB	REINFORCED CONCRETE BOX CULVERT
RCP	REINFORCED CONCRETE PIPE
RR	RAIL ROAD
R/W	RIGHT OF WAY
(S)	SOUTH
SAN	SANITARY SEWER
SB	SOIL BORING
SS	STORM SEWER
STM	STORM
(SW)	SOUTHWEST
TC	TOP OF CURB
TBR	TO BE REMOVED
TLE	TEMPORARY LIMITED EASEMENT
TNH	TOP NUT FIRE HYDRANT
TP	TEST PIT
TR	TOP OF RAMP
TYP.	TYPICAL
TS	TOP OF STEPS
TW	TOP OF WALL
U/S	UPSTREAM
VAR.	VARIES
(W)	WEST

REVIEW PLANS FOR:

KWIK TRIP #1283

VILLAGE OF HARTLAND, WAUKESHA COUNTY, WISCONSIN

LEGEND

- BENCHMARK
- 1" IRON BAR
- EXISTING MANHOLE
- EXISTING TELEPHONE MANHOLE
- EXISTING STORM SEWER MANHOLE
- EXISTING SANITARY SEWER MANHOLE
- EXISTING HYDRANT
- EXISTING WATER VALVE
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING WATER SHUTOFF
- EXISTING DECIDUOUS TREE
- EXISTING CONIFEROUS TREE
- EXISTING GAS VALVE
- EXISTING CURB INLET
- EXISTING WELL
- TEST PIT LOCATION
- SBI SOIL BORING
- AC EXISTING AIR CONDITIONING UNIT
- GM EXISTING GAS METER
- EM EXISTING ELECTRIC METER
- EXISTING UTILITY PEDESTAL
- EXISTING RAILROAD TRACKS
- EXISTING TREE LINE
- EXISTING GUY POLE
- TV EXISTING CABLE TV
- FO EXISTING FIBER OPTIC CABLE
- G EXISTING UNDERGROUND GAS
- E EXISTING UNDERGROUND ELECTRIC
- T EXISTING UNDERGROUND TELEPHONE
- OH EXISTING OVERHEAD UTILITIES
- W EXISTING WATER MAIN
- SS EXISTING STORM SEWER
- SAN EXISTING SANITARY SEWER
- EXISTING PROPERTY LINE
- PROPOSED HANDICAP PARKING
- PROPOSED CURB STOP
- PROPOSED HYDRANT
- WV PROPOSED WATER VALVE
- SAN PROPOSED SANITARY SEWER
- SS PROPOSED STORM SEWER
- F.M. PROPOSED FORCE MAIN
- SAN. LAT. PROPOSED SANITARY SEWER LATERAL
- W.S. PROPOSED WATER LATERAL
- W PROPOSED WATER MAIN
- PS PROPOSED PUMP STATION
- MS PROPOSED SANITARY MANHOLE
- MS PROPOSED STORM MANHOLE
- PROPOSED CURB INLET
- PROPOSED CATCH BASIN
- CO PROPOSED CLEANOUT
- PROPOSED DRAINAGE FLOW
- 3% PROPOSED SLOPE
- PROPOSED CURB & GUTTER
- PROPOSED REJECT CURB & GUTTER
- PROPOSED MOUNTABLE CURB & GUTTER
- 1178 EXISTING GROUND CONTOUR(INTERVAL-1 FT.)
- 1180 PROPOSED GROUND CONTOUR(INTERVAL-1 FT.)
- 1256.50 PROPOSED SPOT ELEVATION (TOP OF CURB)
- 1256.00 PROPOSED SPOT ELEVATION (BOTTOM OF CURB)
- PROPOSED SILT FENCE
- PROPOSED INLET PROTECTION
- PROPOSED RIPRAP
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- PROPOSED SAWCUT
- PROPOSED DRAINAGE SWALE

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EMAIL: MAIL@REIENGINEERING.COM

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3. RELOCATE SIGNAGE.
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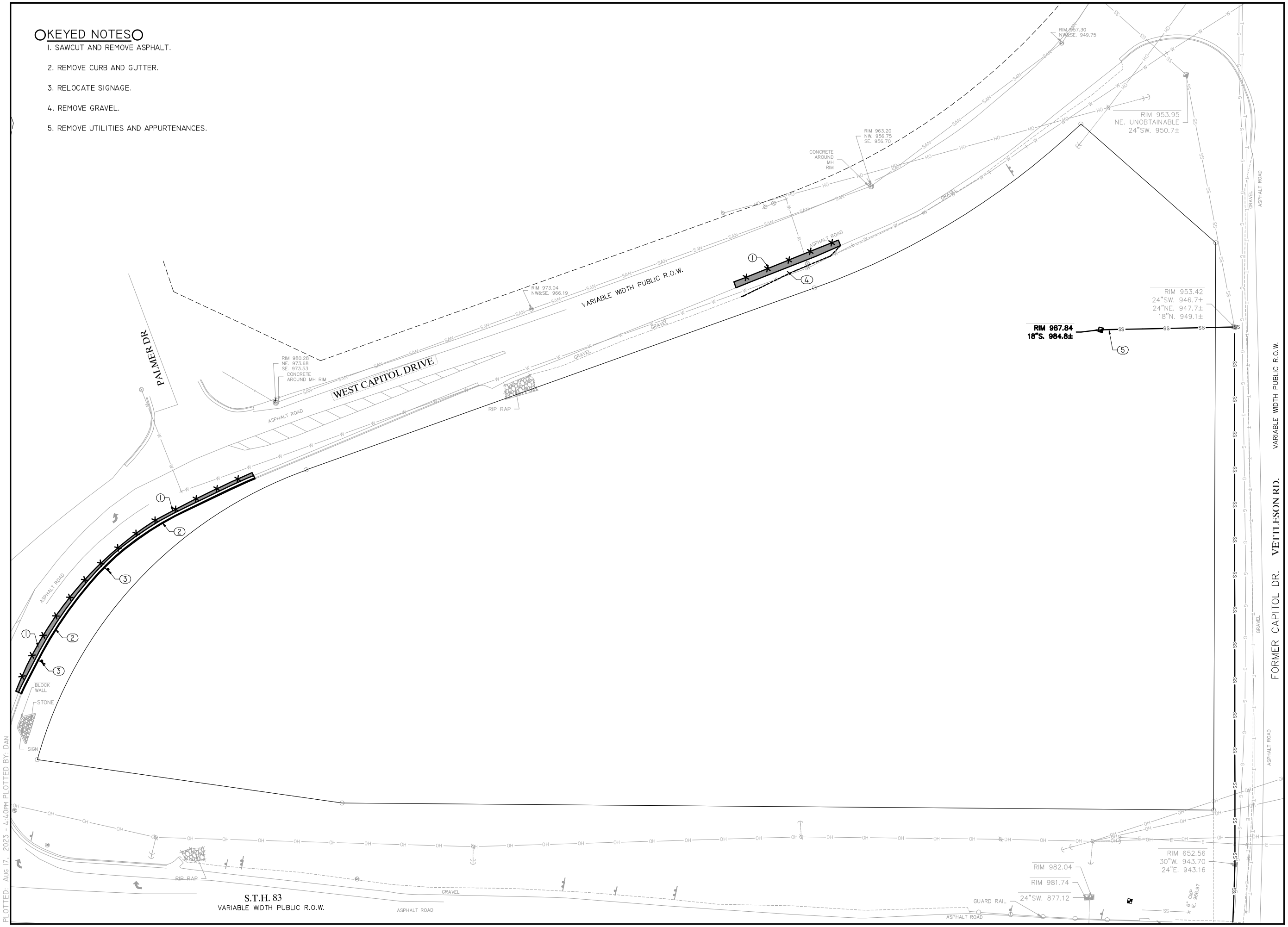

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DEMO PLAN

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
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   262-781-1000
2. CURBS ARE DIMENSIONED TO BACK OF CURB.
3. CONVENIENCE STORE, AND ISLAND COMPLEXES ARE LOCATED FROM THE NORTHEASTERN MOST PROPERTY CORNER AND ALIGNED PARALLEL/PERPENDICULAR TO THE REFERENCE LINE LABELED S32°28'26.00"W, UNLESS OTHERWISE INDICATED ON THIS PLAN.
4. UNLESS SHOWN OTHERWISE ON THIS DRAWING, CONTRACTOR SHALL PROVIDE CONTROL JOINTS, CONSTRUCTION JOINTS, AND EXPANSION JOINTS IN SLAB ON GRADE, SIDEWALKS AND DRIVES.
   CONTROL JOINT MAXIMUM DISTANCE: WALKS- 8' O.C., ALL OTHERS- 15' O.C. SAW CUT CONTROL JOINTS MINIMUM ONE-QUARTER CONCRETE THICKNESS.
   EXPANSION JOINT MAXIMUM DISTANCE: WALKS- 24' O.C., ALL OTHERS- 40' O.C.
   DOWEL ALL EXPANSION JOINTS- MAXIMUM 24" O.C.
5. CONCRETE IN ISLAND COMPLEX SHALL BE SMOOTH FINISHED.
6. EXTERIOR CONCRETE SURFACES TO BE SEALED. CONCRETE SEALER:
   APR 15- OCT 31 USE: TK-26UV
   NOV 1- DEC 31 USE: TK-290
7. EXPANSION JOINTS SHALL BE DECK-O-FOAMED AND CAULKED WITH SLI.
8. DIAGONAL STRIPING LINES (HATCHING) IN THE "NO PARKING LOADING ZONE" AREA AND ANY OTHER AREA THAT IS HATCHED SHALL BE SPACED 5' ON CENTER.
9. LETTERING FOR ALL WORDING SUCH AS "NO PARKING LOADING ZONE" AND CARWASH SHOULD BE 12" TALL.
10. ALL DIAGONAL STRIPING SHALL BE ANGLED AS CLOSE TO 45° AS POSSIBLE.

SITE DATA:

ZONING DISTRICT: Q-1 (QUARRY/EXTRACTIVE)

TOTAL SITE AREA - EXISTING/PROPOSED: 234,283 SF

EX. IMPERVIOUS:	0 SF
EX. PERVIOUS:	234,283 SF
PARKING REQUIREMENTS	
PARKING REQUIRED	SERVICE STATION = 1 STALL PER 2 EMPLOYEES +1
PARKING PROVIDED	50 STALLS
BUILDING HEIGHTS	
CONVENIENCE STORE	20.0'
CANOPY	19.5'

BUILDING SETBACKS
FRONT: TBD
REAR: TBD
SIDE: TBD

PROPOSED LOT GREEN AREA:	129,011 SF	55%
PROPOSED HARD COVER:	105,272 SF	45%
PAVED AREA:	85,390 SF	36%
BUILDING ROOF AREA:	18,220 SF	8%
WATER FEATURE AREA:	12,000 SF	5%
CONVENIENCE STORE:	12,220 SF	
(FLOOR AREA) =	5,370 SF	

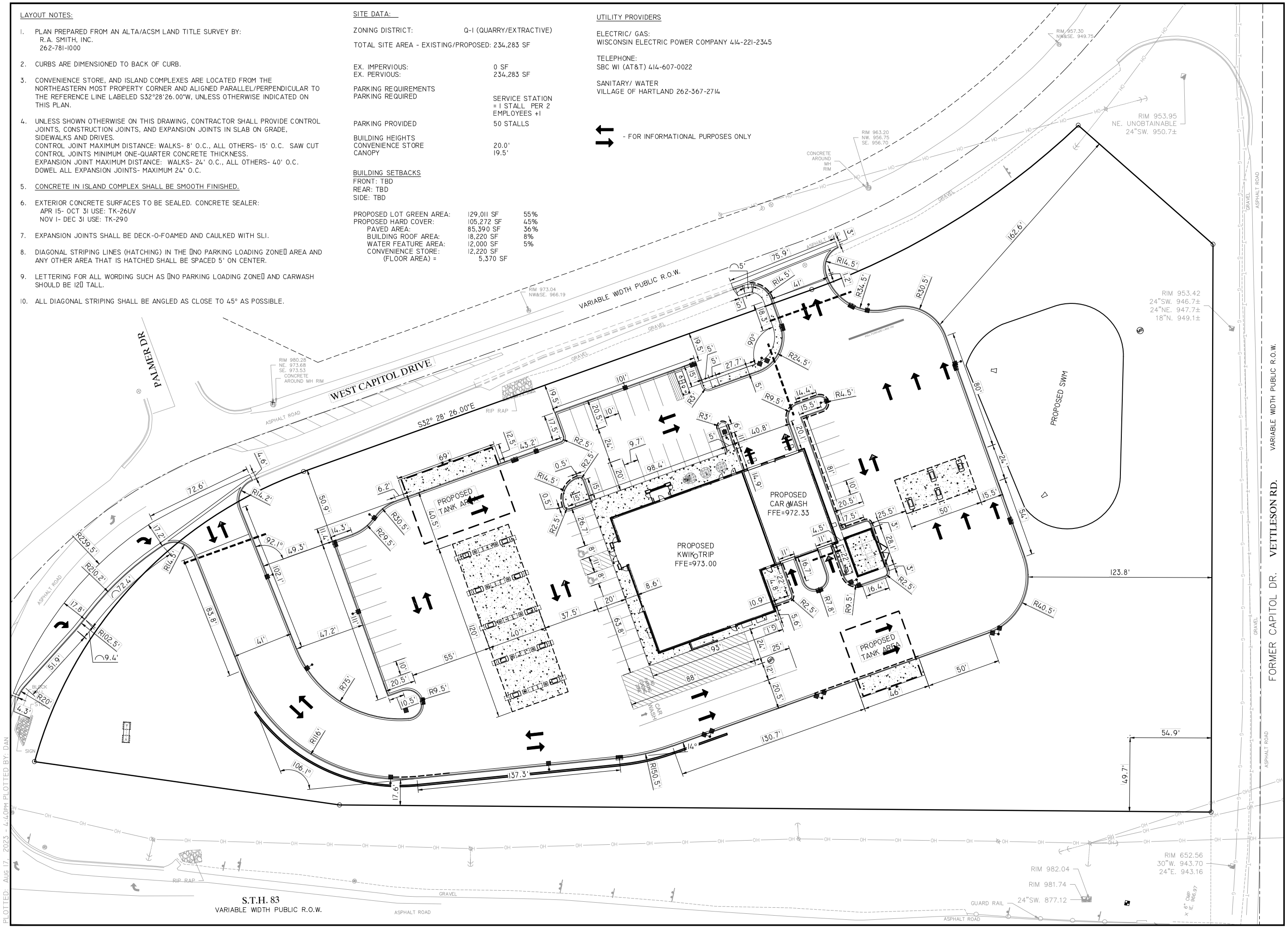
UTILITY PROVIDERS

ELECTRIC/ GAS:
WISCONSIN ELECTRIC POWER COMPANY 414-221-2345

TELEPHONE:
SBC WI (AT&T) 414-607-0022

SANITARY/ WATER
VILLAGE OF HARTLAND 262-367-2714

- FOR INFORMATIONAL PURPOSES ONLY



KWIK TRIP STORES

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EMAIL: MAIL@REIENGINEERING.COM

SCALE
0 30 60

SITE PLAN
CONVENIENCE STORE #1283
STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	NAP
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SP1

DRAWING FILE: Q:\10800 - 10899\10827 - KWIK TRIP #1283 - HARTLAND\DRAWING\PLANS\10827-SPI-SITE.DWG LAYOUT: SPI
PLOTTED: AUG 17, 2023 - 4:40PM PLOTTED BY: DAN

KEYED NOTES

2,700 SF — 1. ASPHALT PAVEMENT. SEE DETAIL 1/SP5.

16,200 SF — 2. 6" DEPTH (MIN.) CONCRETE SLAB-ON-GRADE WITH #3 REBAR, 3' O.C. CONCRETE SEALER: TK-26UV. SEE DETAIL 6/SP5.

67,950 SF — 3. 8" DEPTH (MIN.) CONCRETE SLAB-ON-GRADE WITH #4 REBAR, 4' O.C. CONCRETE SEALER: TK-26UV. SEE DETAIL 6/SP5.

1,750 SF — 4. 8" DEPTH CONCRETE APPROACH SIMILAR TO DETAIL 7/SP5.

4,800 SF — 5. 6" CONCRETE WALK. SEE DETAIL 2/SP5. CONCRETE SEALER: TK-26UV

129,000 SF
UNDISTURBED=30,150 SF — 6. LANDSCAPE AREA. SEE SHEET L1.

7. 30" CURB AND GUTTER, SEE DETAIL 8/SP5.

8. 18" CURB AND GUTTER, SEE DETAIL 9/SP5.

9. 18" REJECT CURB AND GUTTER, SEE DETAIL 9/SP5.

10. TRANSITION CURB & GUTTER. SEE DETAIL 4/SP5.

11. STANDARD CURB & GUTTER TERMINATION. SEE DETAIL 5/SP5.

12. TAPER CURB FROM FLUSH TO FULL HEIGHT OVER 6' LENGTH. SEE DETAIL 5A/SP5.

13. A.D.A. ACCESSIBLE PARKING SPACE WITH LOADING ZONE. PROVIDE APPROPRIATE STRIPING AND PAVEMENT MARKINGS. SEE SHEET SP2.3.

14. OFF-STREET PARKING STALLS
STRIPING - 4" WIDE STALL LINES, USE HIGH VISIBILITY YELLOW PAINT.
SPACES PROVIDED
(49) 10.0' x 20.0' (MIN.) GENERAL PARKING
(2) 8.0' x 20.0' ACCESSIBLE PARKING WITH
(1) 11.0' x 20.0' LOADING ZONE
(15) 15.0' x 70.0' TRAILER PARKING

15. EXTERNAL TRASH ENCLOSURE TO MATCH BUILDING. SEE ARCHITECTURAL DETAILS.

16. KWIK TRIP TRADEMARK SIGN SUBJECT TO SEPARATE REVIEW AND APPROVAL (VERIFY FINAL LOCATION WITH SIGN PERMIT)

17. 4" WIDE, HIGH VISIBILITY, PAVEMENT STRIPING, LANE MARKINGS AND TEXT. COLOR: HC MARKINGS- YELLOW, ALL OTHERS- YELLOW.

18A. SIDEWALK RAMP (12:1 SLOPE MAX). SEE DETAIL 12/SP5.

18B. SIDEWALK RAMP (12:1 SLOPE MAX). SEE DETAIL 13/SP5.

18C. SIDEWALK RAMP (12:1 SLOPE MAX). SEE DETAIL 14/SP5.

19. GAS TANK VENT AREA.

20. 30" HT., 6" DIA. CONCRETE FILLED PIPE BOLLARD INSTALLED AT EACH PARKING STALL ALONG BUILDING. SEE DETAIL 10/SP5.

21. 40'-0" x 120'-0" DISPENSER ISLAND CANOPY. VERIFY SIZE, PLACEMENT, COLUMN AND FOOTING SIZE WITH CANOPY AND STRUCTURAL PLANS. CANOPY GRAPHICS PER OWNER.

22. CONCRETE ISLANDS W/ 6" EXPOSURE WITH FUEL DISPENSERS. DISPENSER PER OWNER, 3'-6"x 6'-0".

23. 36" HT., 6" DIA. CONCRETE FILLED PIPE BOLLARD SIMILAR TO DETAIL 10/SP5.

24. OUTDOOR MERCHANDISING AREA.

25. UNDERGROUND FUEL STORAGE TANKS PER OWNER. PROVIDE PIPING AND VENTING PER OWNER'S SPECIFICATIONS. SEE DETAIL 1/SP6.

26. HC PVC BOLLARD SLEEVE PER OWNER. VAN ACCESS SIGNAGE AT 48" HT. STALL PARKING AT 60" HT. SEE SHEET SP2.3.

27. STORM STRUCTURE. SEE SHEET SP3 FOR FURTHER STORM SEWER INFORMATION.

28. LP CAGE.

29. 'FREE AIR' COMPRESSOR. PROVIDE SIGNAGE PER OWNER.

30. SITE AREA LIGHT WITH CONCRETE BASE. SEE DETAIL 11/SP5.

31. PVC IRRIGATION SLEEVE UNDER PAVEMENT. VERIFY W/ IRRIGATION PLAN FOR EXACT SIZE AND LOCATION BEFORE INSTALLATION. SEE DETAIL 3/SP5.

32. 24'-0" x 50'-0" DISPENSER ISLAND CANOPY. VERIFY SIZE, PLACEMENT, COLUMN AND FOOTING SIZE WITH CANOPY AND STRUCTURAL PLANS. CANOPY GRAPHICS PER OWNER.

33. BIKE RACK.

34. VACUUM. SEE DETAIL 15/SP5.

35. 18" EPOXY STOP BAR (YELLOW).

36. TRANSFORMER PAD.

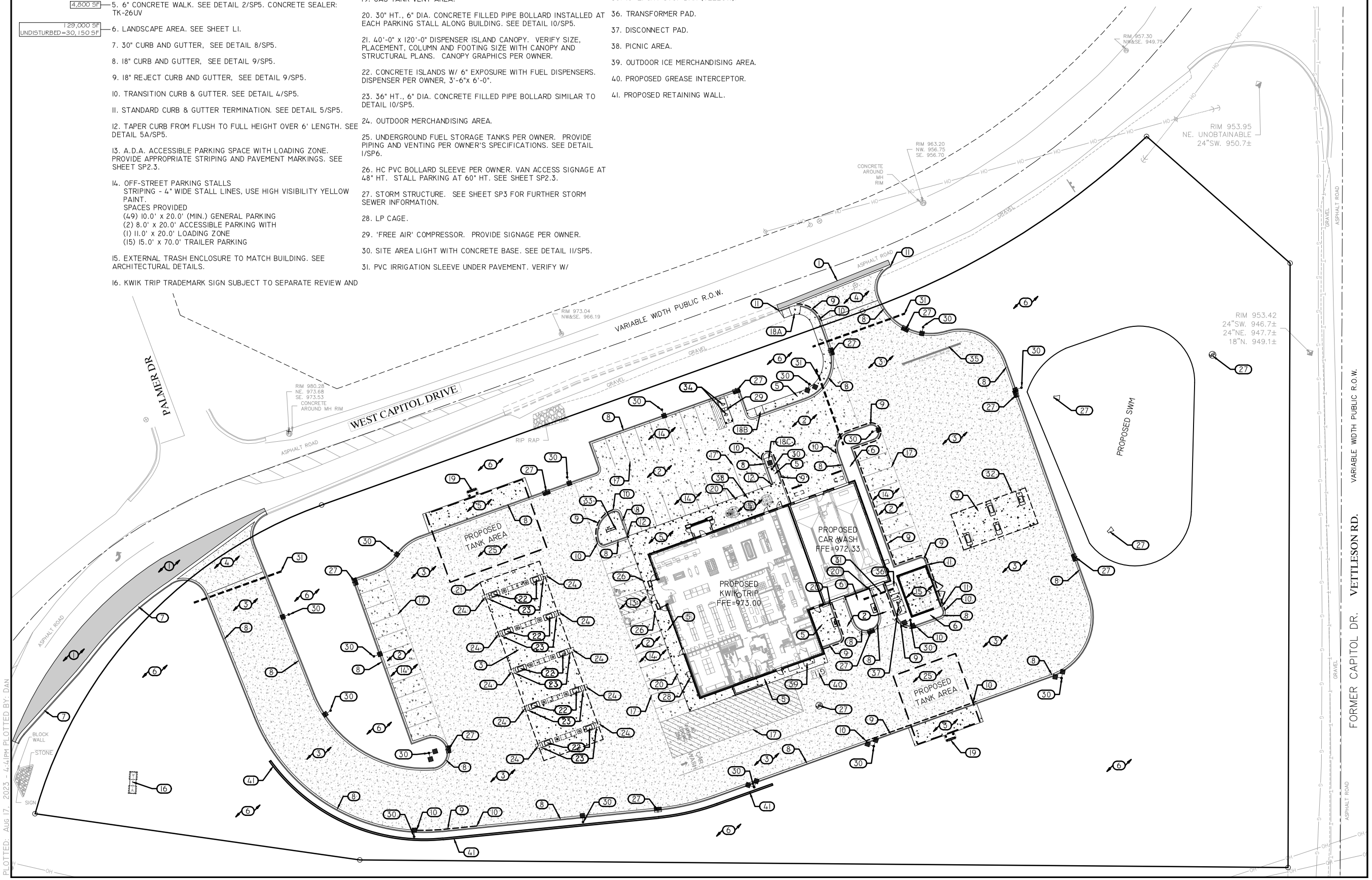
37. DISCONNECT PAD.

38. PICNIC AREA.

39. OUTDOOR ICE MERCHANDISING AREA.

40. PROPOSED GREASE INTERCEPTOR.

41. PROPOSED RETAINING WALL.



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PLOTTED: Aug 17, 2023 - 4:41pm PLOTTED BY: DAN

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SCALE
0 30 60

SITE PLAN (KEYNOTES)

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	NAP
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SP1.1

NOTE: CONTRACTOR TO OBTAIN RIGHT-OF-WAY EXCAVATION PERMIT PRIOR TO BEGINNING SITE WORK.
CALL DIGGERS HOTLINE @ 1-800-242-8511 AT LEAST 3 WORKING DAYS PRIOR TO EXCAVATING.

CONSTRUCTION NOTE:

COORDINATE WITH OWNER FOR POSSIBLE CONSTRUCTION FENCING AND GATE LOCATIONS AND APPROPRIATE SIGNAGE INSTALLATION.

NOTE:

- REFER TO OTHER PROJECT PLANS AND INFORMATION RELATED TO THIS PROJECT PRIOR TO BEGINNING ANY GRADING WORK.

- PLAN PREPARED FROM ALTA/ACSM LAND TITLE SURVEY BY:
  R.A. SMITH, INC.
  262.781.1000

- CONTRACTOR SHALL LOCATE ALL UTILITIES WHICH MAY AFFECT THIS WORK AND NOTIFY OWNER OF ANY CONFLICTS.

- CONTRACTOR SHALL VERIFY ALL EXISTING AND PROPOSED ELEVATIONS PRIOR TO START OF CONSTRUCTION. VERIFY CRITICAL ELEVATIONS TO ENSURE CONFORMANCE WITH GRADING PLAN, PARTICULARLY WITH WALK AND/ OR PAVEMENTS TO REMAIN. MEET EXISTING GRADES ALONG STREETS, PROPERTY LINES AND DRIVEWAY ENTRANCES. RESTORE ALL EXISTING PAVEMENTS THAT REMAIN TO THEIR ORIGINAL, IF NOT BETTER CONDITION. NOTIFY OWNER OF ANY CONFLICTS.

- AREAS NOT PAVED AND TO BE LANDSCAPED SHALL RECEIVE MINIMUM OF 4" DEPTH COMPACTED TOPSOIL.

- CONTRACTOR SHALL COORDINATE GRADING AND INSTALLATION OF DRIVES IN R.O.W. WITH APPROPRIATE GOVERNMENT AGENCIES. OBTAIN APPROPRIATE PERMITS FOR GRADING AND DRAINAGE IN ALL R.O.W.

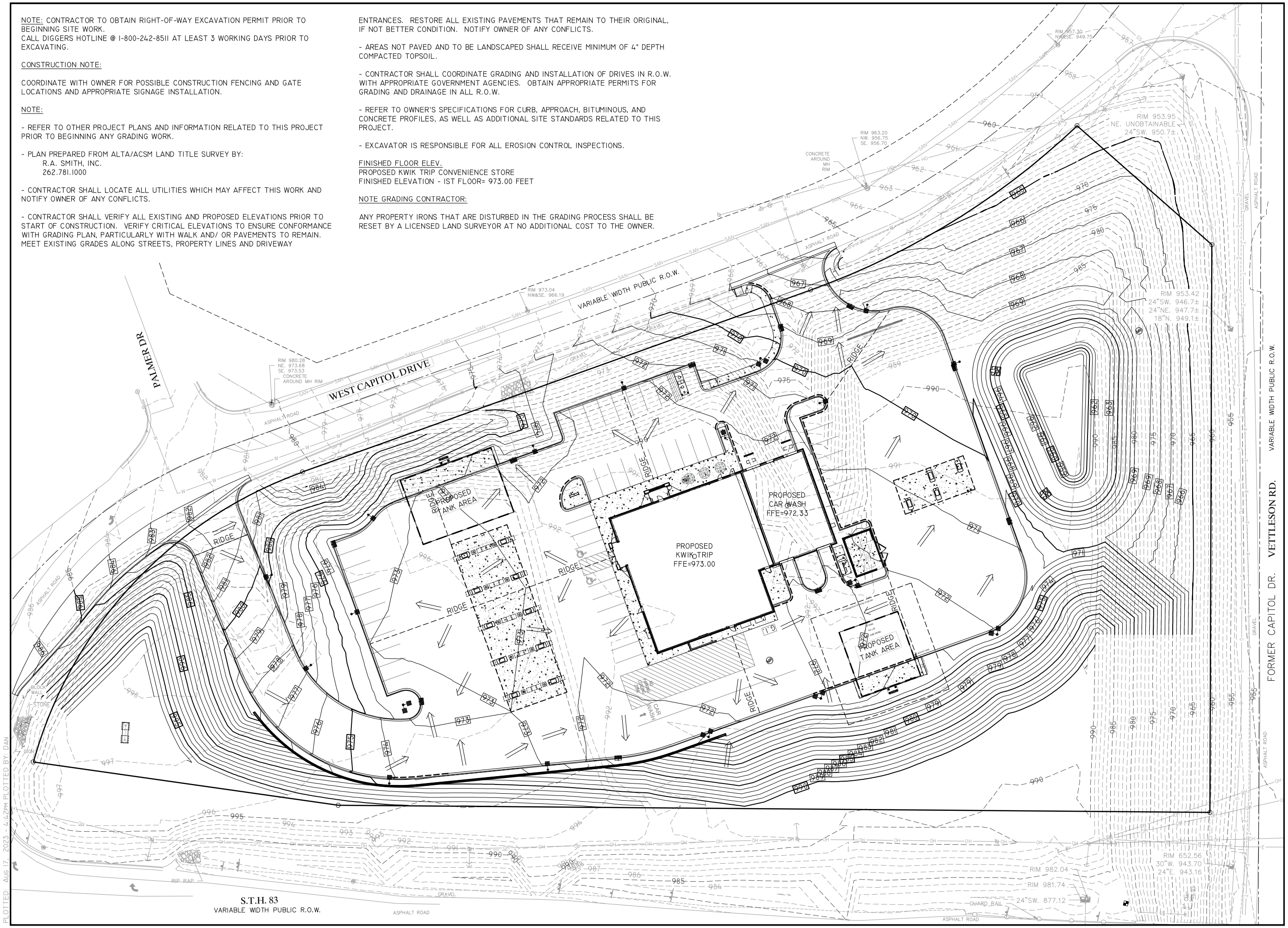
- REFER TO OWNER'S SPECIFICATIONS FOR CURB, APPROACH, BITUMINOUS, AND CONCRETE PROFILES, AS WELL AS ADDITIONAL SITE STANDARDS RELATED TO THIS PROJECT.

- EXCAVATOR IS RESPONSIBLE FOR ALL EROSION CONTROL INSPECTIONS.

FINISHED FLOOR ELEV.
PROPOSED KWIK TRIP CONVENIENCE STORE
FINISHED ELEVATION - 1ST FLOOR= 973.00 FEET

NOTE GRADING CONTRACTOR:

ANY PROPERTY IRONS THAT ARE DISTURBED IN THE GRADING PROCESS SHALL BE RESET BY A LICENSED LAND SURVEYOR AT NO ADDITIONAL COST TO THE OWNER.



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EMAIL: MAIL@REIENGINEERING.COM

SCALE
0 30 60

GRADING PLAN

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	NAP
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SP2

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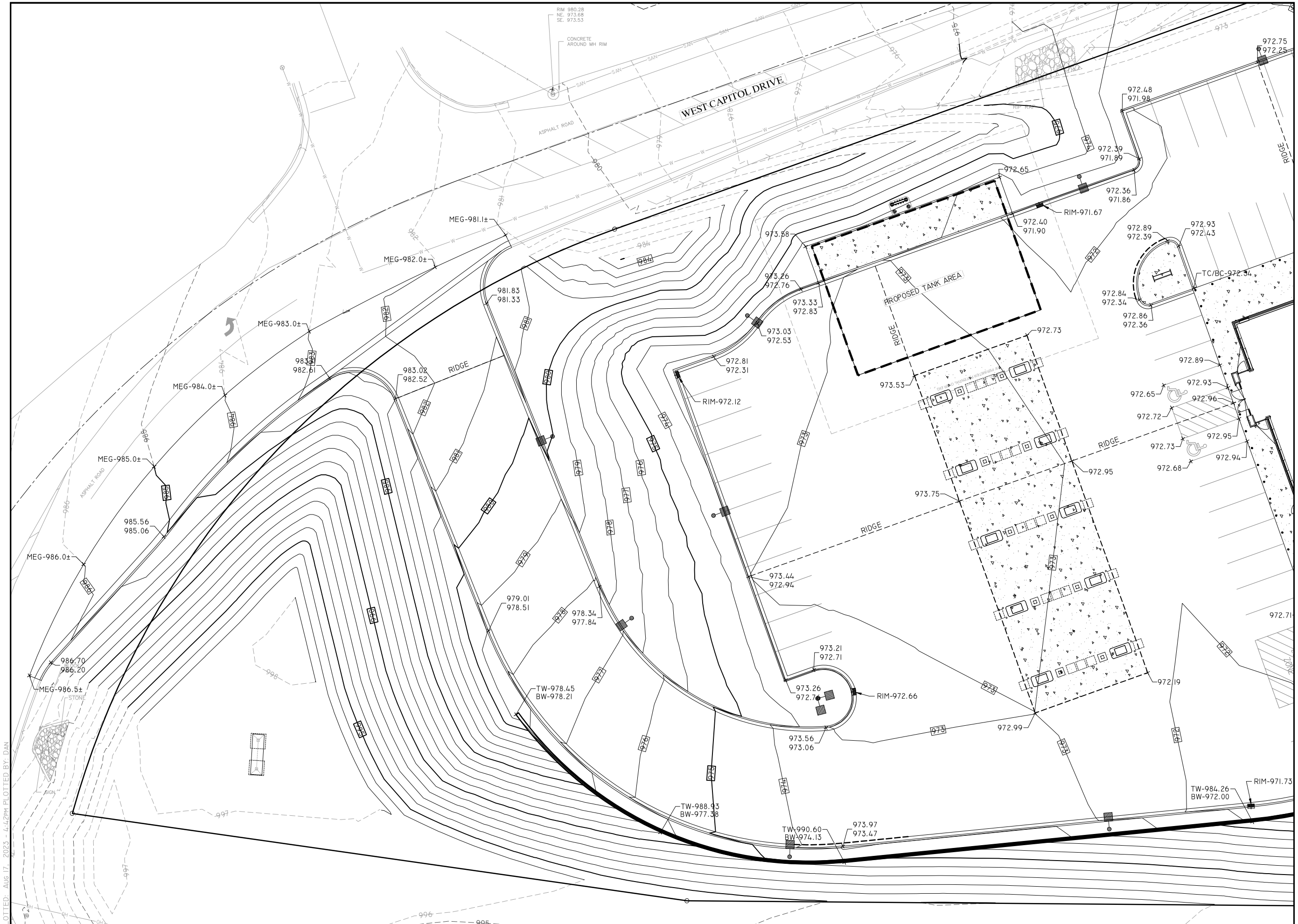

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SCALE
0 15 30

GRADING PLAN DETAIL - WEST

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

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SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SP2.1

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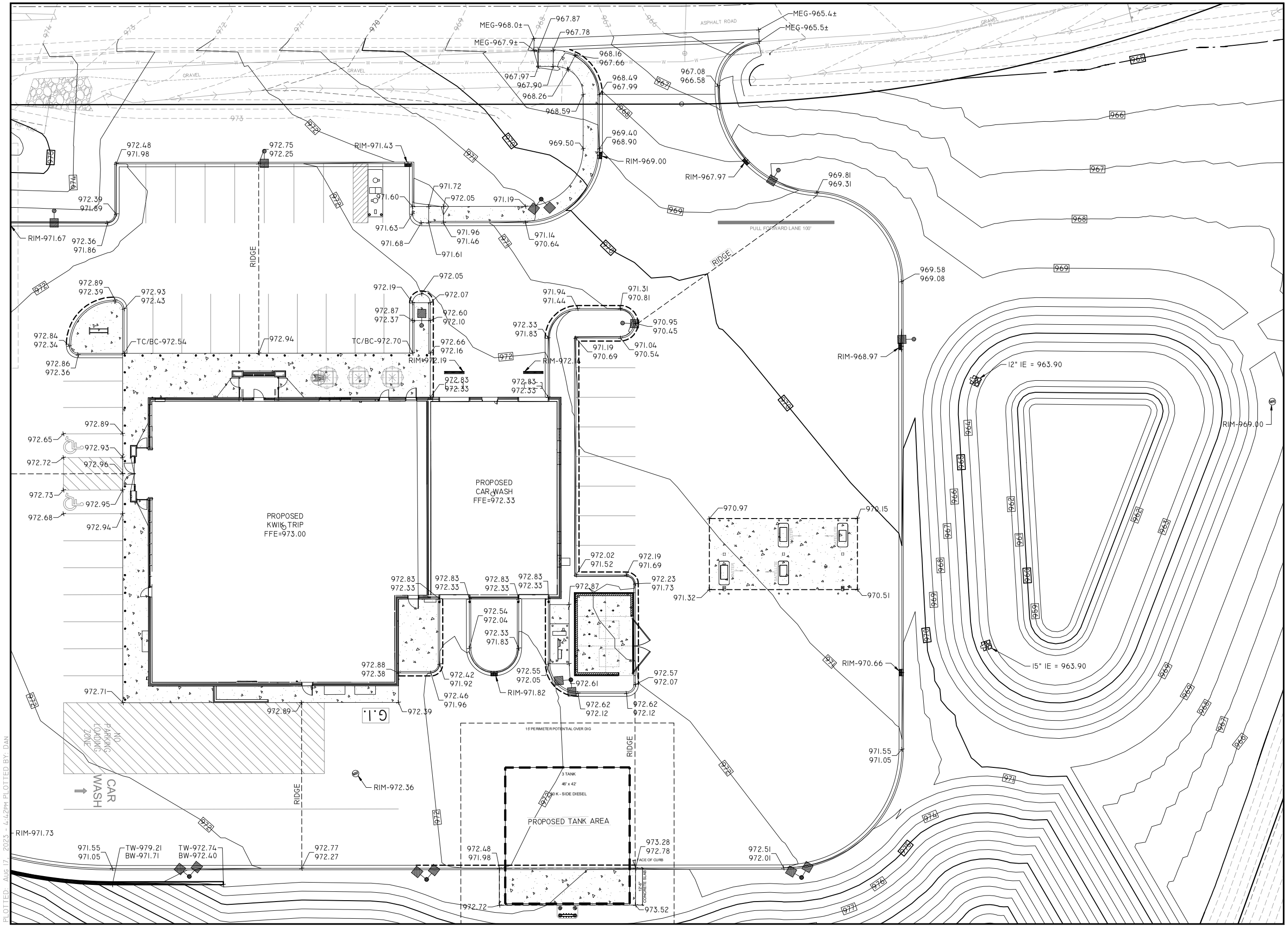

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SCALE
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GRADING PLAN DETAIL - EAST

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
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SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SP2.1.2

DRAWING FILE: Q:\10800 - 10899\10827 - KWIK TRIP #1283 - HARTLAND\DRAWING\PLANS\10827-SP2.0-GRADING.DWG LAYOUT: SP2.1.2
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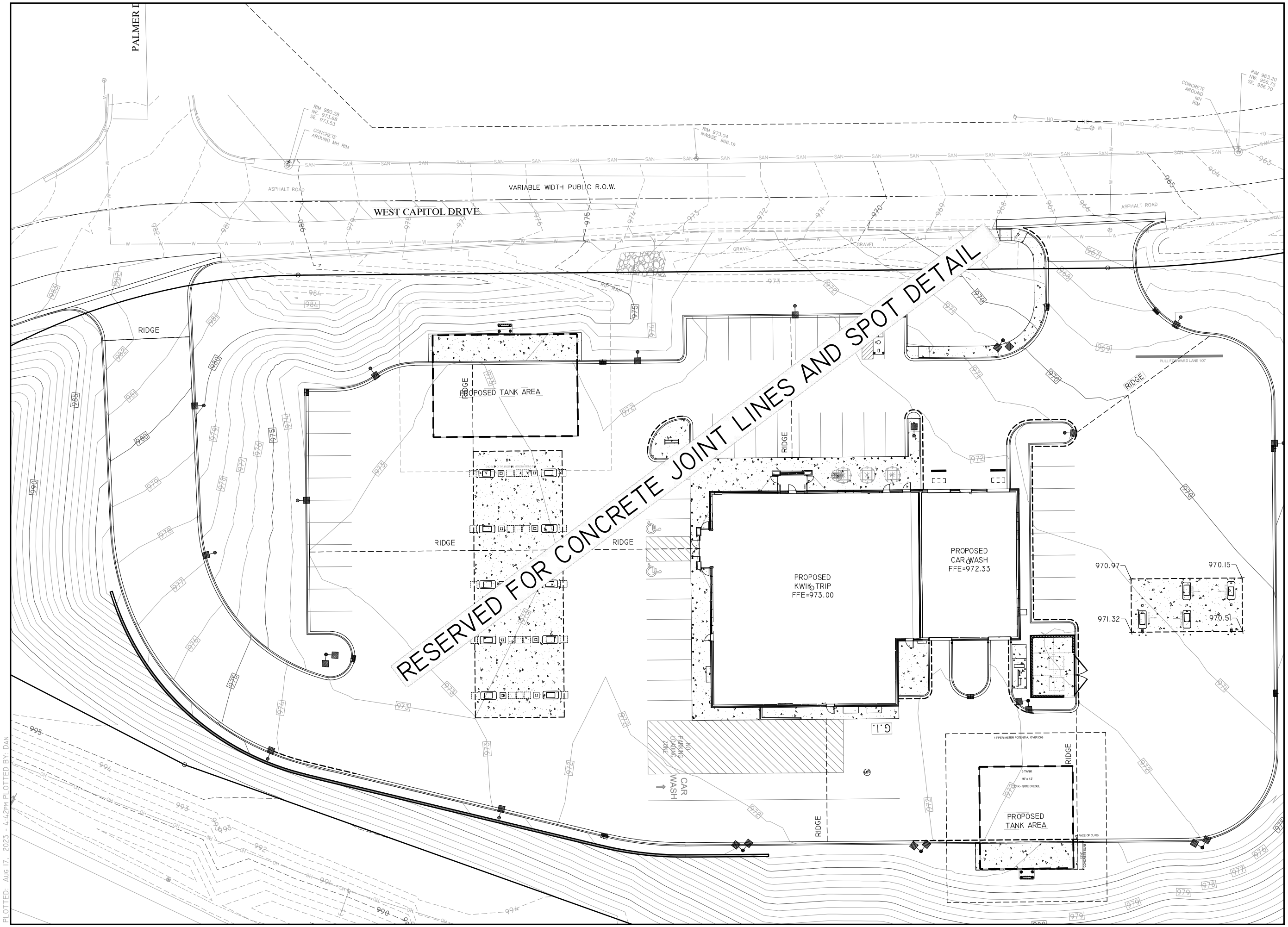

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SCALE
0 20 40

GRADING PLAN SPOT DETAIL

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	NAP
SCALE	GRAPHIC
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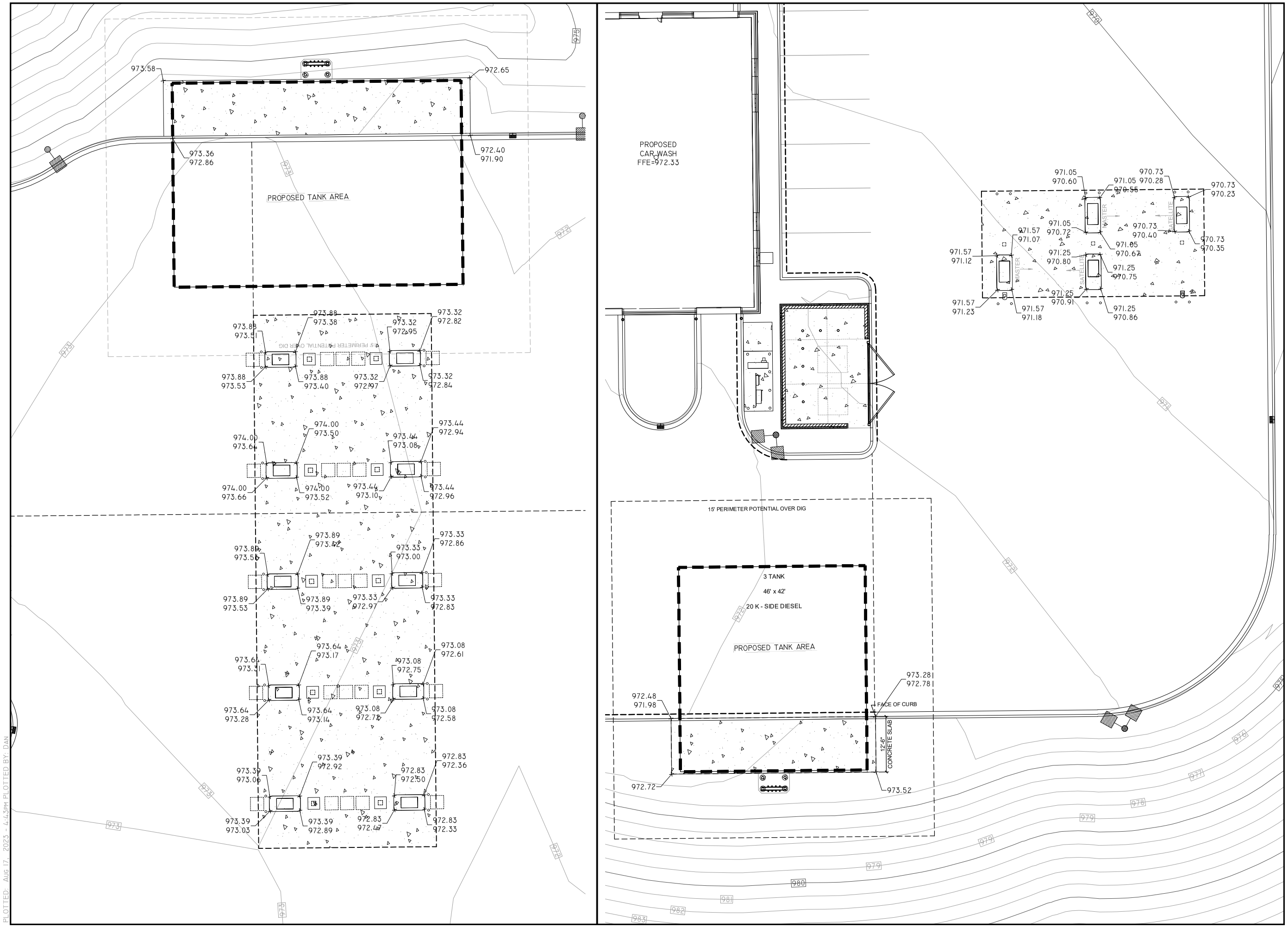
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SP2.2.1



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SCALE
0 10 20

CANOPY AND TANK GRADING DETAILS

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
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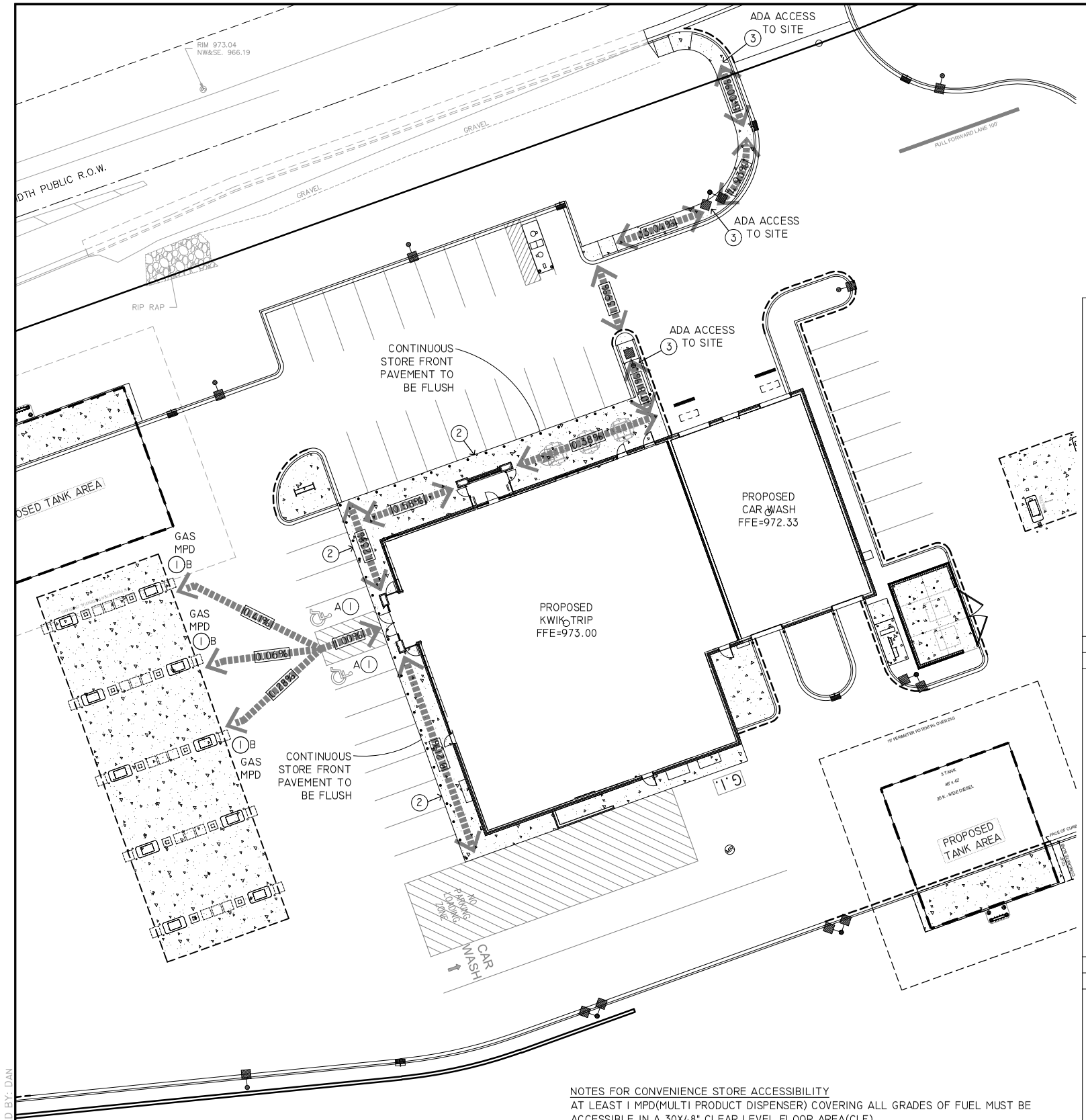


NOTES:

-REFER TO THE DOCUMENT FROM THE DEPARTMENT OF JUSTICE ON "2010 ADA STANDARDS FOR ACCESSIBLE DESIGN". CONTRACTOR SHALL REFERENCE CURRENT A.D.A. GUIDELINES AND LOCAL REGULATIONS FOR SITE ACCESSIBILITY. IN ALL CASES THE MINIMUM REQUIREMENTS SHALL BE PROVIDED ON SITE TO ENSURE COMPLIANCE TO ALL REGULATIONS.

- KWIK TRIP STANDARD ENTRANCE DOOR IS AUTOMATIC SLIDING DOOR SYSTEM DESIGNED TO COMPLY WITH ALL ACCESS CODES AND LAWS. ENTRANCE DOORS FOR ACCESSIBLE ROUTES WILL HAVE A MINIMUM CLEAR OPENING OF 32"

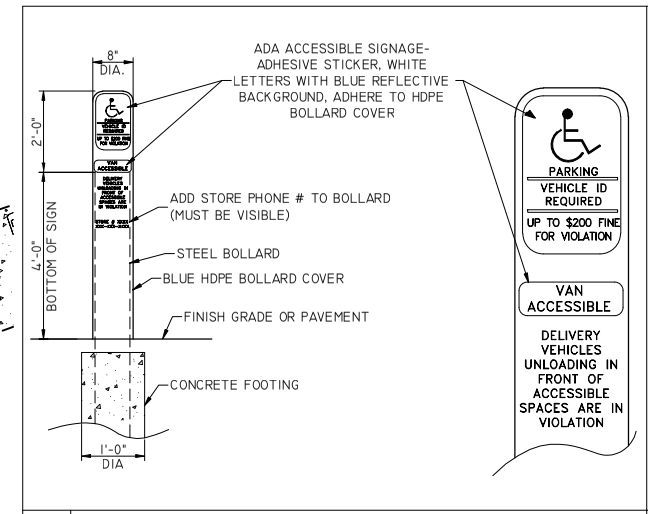
-STORE FRONTS WILL PROVIDE FLUSH PAVEMENTS ALONG ACCESSIBLE ROUTES WITH PROTECTIVE SECURITY BOLLARDS INDICATED AND SPACED BETWEEN PARKING SURFACES AND BUILDING WALK PER PLAN.

-NO OBJECTS OR DISPLAYS SHOULD PROTRUDE INTO THE MINIMUM CLEAR SPACE OF THE ACCESSIBLE ROUTES TO THE STORE ENTRANCE. THIS WILL INCLUDE SEASONAL DISPLAY VENDING AREAS AS WELL AS OTHER OUTDOOR STORAGE UNITS FOR PROPANE AND ICE, ETC.

-PER A.D.A GUIDELINES- CLEAR WIDTH OF ACCESSIBLE ROUTES SHALL BE 36" AND PERMITTED TO BE REDUCED TO 32" FOR A LENGTH OF 24".

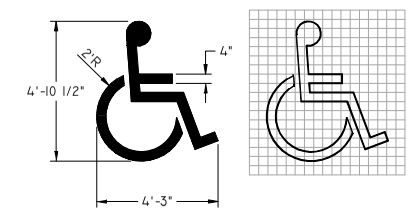
- ACCESS ISLES SERVING WHEEL CHAIR LIFTS OR CHAIR ACCESS FROM VEHICLES ARE REQUIRED TO BE NEARLY LEVEL IN ALL DIRECTIONS TO PROVIDE SAFE TRANSFER OF WHEELCHAIRS TO AND FROM VEHICLES. THE EXCEPTION WOULD BE FOR DRAINAGE. MAXIMUM SLOPE FOR THE ACCESS ISLE IS 1:48. NO CURB RAMPS SHALL BE A PART OF THE ACCESS ISLE.

-IDENTIFICATION SIGNS SHALL INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY WITH THE DESIGNATION OF 1 "VAN ACCESSIBLE" IN EVERY 8 ACCESSIBLE SPACES ON SITE.



ADA BOLLARD SIGNAGE

NOT TO SCALE



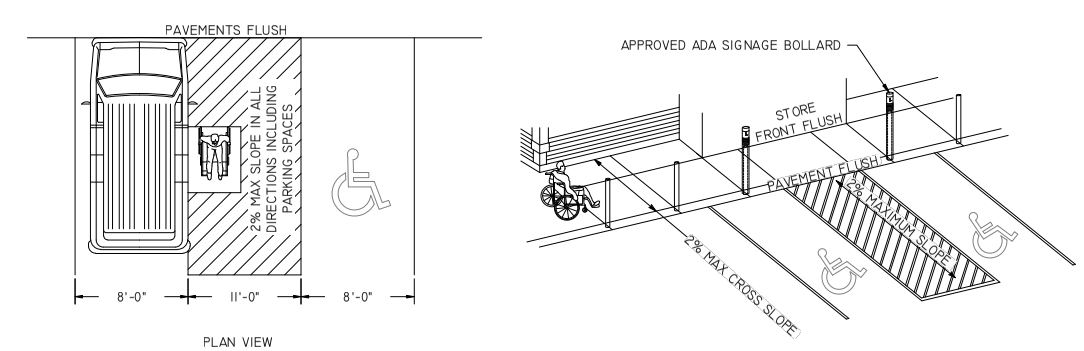
ACCESSIBILITY SYMBOL PAINTED ON PAVEMENT

PROPORTIONING GUIDE

* TO BE YELLOW IN COLOR, UNLESS OTHERWISE SPECIFIED.

HANDICAP SYMBOL

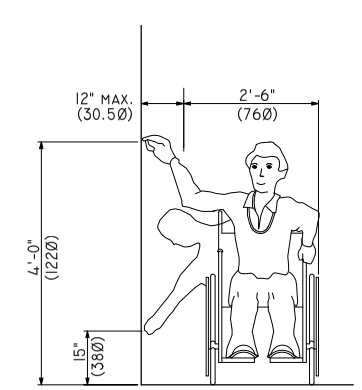
NOT TO SCALE



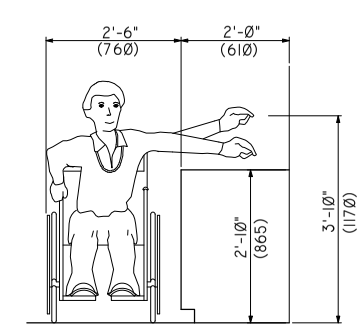
PLAN VIEW

VAN ACCESSIBLE PARKING

NOT TO SCALE



HIGH AND LOW - SIDE REACH LIMITS



MAXIMUM SIDE REACH OVER OBSTRUCTION

ACCESSIBLE REACH DIMENSIONS

NOT TO SCALE

PLAN KEYNOTES

1. ACCESSIBLE STALLS
   A. STRIPING - 4" WIDE STALL LINES, USE HIGH VISIBILITY BLUE PAINT.
   SPACES PROVIDED
   (2) 8'-0"X 20'-0" ACCESSIBLE PARKING WITH
   (1) 11'-0"X 20'-0" LOADING ZONE
   B. ACCESSIBLE FUELING POINT AND DISPENSER AND VALET. VALET AND KEY PAD ON PUMP SHALL CONFORM TO ADA REACH DIMENSIONS AS SHOWN IN DETAIL. SEE NOTES FOR CONVENIENCE STORE ACCESSIBILITY.
2. PAVEMENTS FLUSH FOR ACCESSIBILITY.
3. ACCESSIBLE ROUTE TO STORE.

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

NOTES FOR CONVENIENCE STORE ACCESSIBILITY

AT LEAST 1 MPD(MULTI PRODUCT DISPENSER) COVERING ALL GRADES OF FUEL MUST BE ACCESSIBLE IN A 30X48" CLEAR LEVEL FLOOR AREA(CLF).

ALL PUMP CONTROLS SHALL BE < 48"(2010 STANDARD). WINDOW WASHER, PAPER TOWEL DISPENSER, LITERATURE, FIRE EXTINGUISHER, EMERGENCY FUEL STOPS, ETC. BE ACCESSIBLE 30"X48" CLF SPACE AND WITHIN A FORWARD OR SIDE APPROACH REACH RANGE.

PROVIDE ISA(INDUSTRY STANDARD ARCHITECTURE) AT EACH ACCESSIBLE FUEL POSITION ON FACE OF PUMP.

PROVIDE ISA AT EACH ACCESSIBLE FUELING POSITION VISIBLE TO APPROACHING VEHICLES.

PROVIDE A SIGN AT EACH ACCESSIBLE FUELING POSITION WITH STORE TELEPHONE NUMBER, ADVISING AVAILABLE FUELING ASSISTANCE.

ANY PAY FUNCTION- I.E. AIR/VACUUM ETC. ARE REQUIRED TO HAVE AN ACCESSIBLE ROUTE TO STORE ENTRANCE. CONTROLS SHALL BE ACCESSIBLE 30"X48" CLF SPACE AND WITHIN A FORWARD OR SIDE APPROACH REACH RANGE.

KWIK TRIP STORES

KWIK STAR STORES

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LA CROSSE, WI 54602-2107
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FAX (608) 781-8960

REI
CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING
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WAUSAU, WISCONSIN 54401
PHONE: 715.675.9784 FAX: 715.675.4060
EMAIL: MAIL@REIENGINEERING.COM

SCALE
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ACCESSIBLE PLAN

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY NAP
SCALE GRAPHIC
PROJ. NO. 10827
DATE 8/17/23 - REVIEW DOCUMENTS
SHEET SP2.3

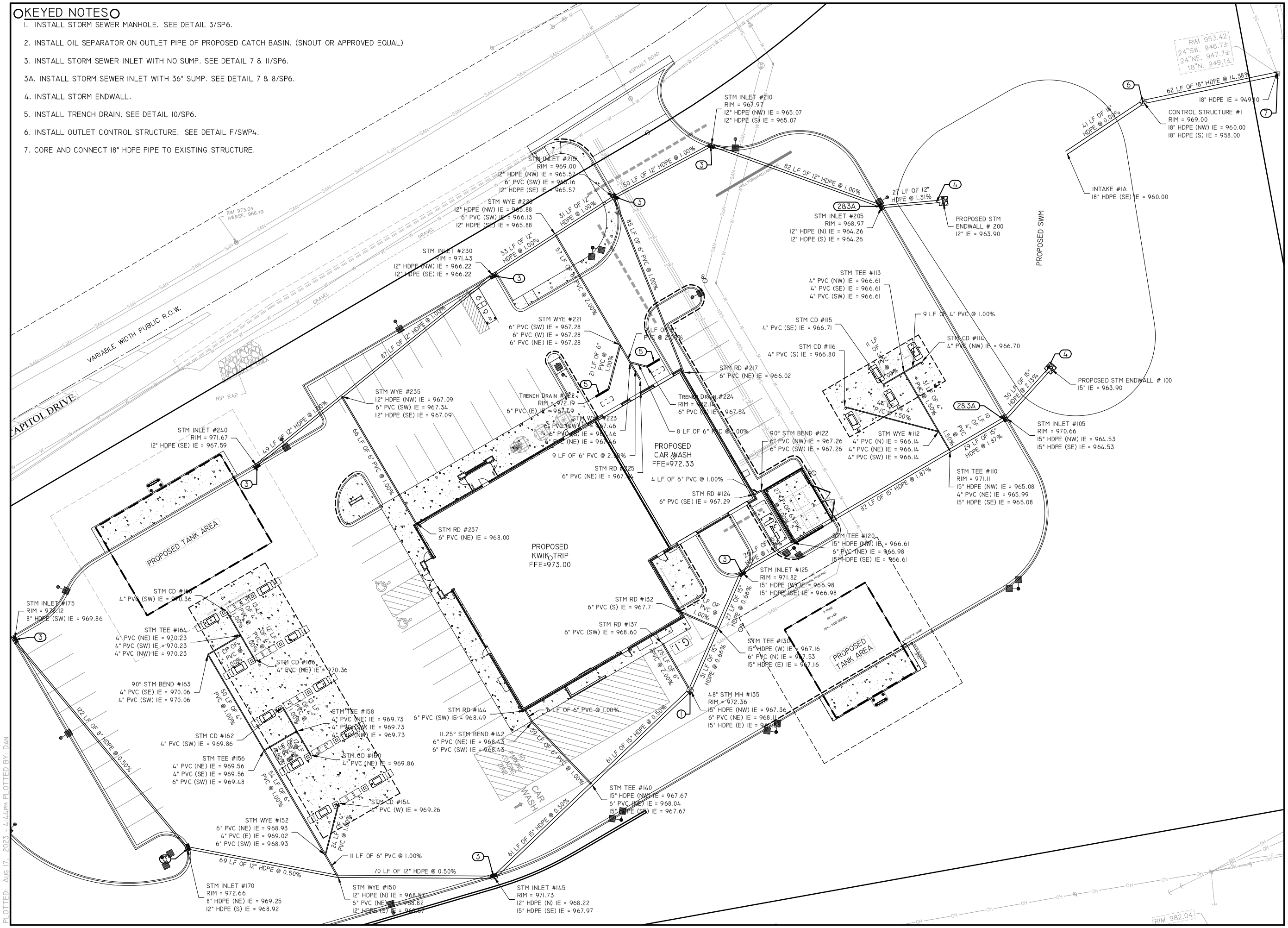
DRAWING FILE: Q:\10800 - 10899\10827 - KWIK TRIP #1283 - HARTLAND\DRAWING\PLANS\10827-SP2.3-ACCESSIBLE.DWG LAYOUT: SP2.3
PLOTTED: AUG 17, 2023 - 4:43PM PLOTTED BY: DAN

KEYED NOTES

1. INSTALL STORM SEWER MANHOLE. SEE DETAIL 3/SP6.
2. INSTALL OIL SEPARATOR ON OUTLET PIPE OF PROPOSED CATCH BASIN. (SNOUT OR APPROVED EQUAL)
3. INSTALL STORM SEWER INLET WITH NO SUMP. SEE DETAIL 7 & 11/SP6.

3A. INSTALL STORM SEWER INLET WITH 36" SUMP. SEE DETAIL 7 & 8/SP6.

4. INSTALL STORM ENDWALL.
5. INSTALL TRENCH DRAIN. SEE DETAIL 10/SP6.
6. INSTALL OUTLET CONTROL STRUCTURE. SEE DETAIL F/SWP4.
7. CORE AND CONNECT 18" HDPE PIPE TO EXISTING STRUCTURE.



DRAWING FILE: Q:\10800 - 10899\10827 - KWIK TRIP #1283 - HARTLAND\DRAWING\PLANS\10827-SP3-4-4.1-UTILITIES.DWG LAYOUT: SP3
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STORM SEWER PLAN

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
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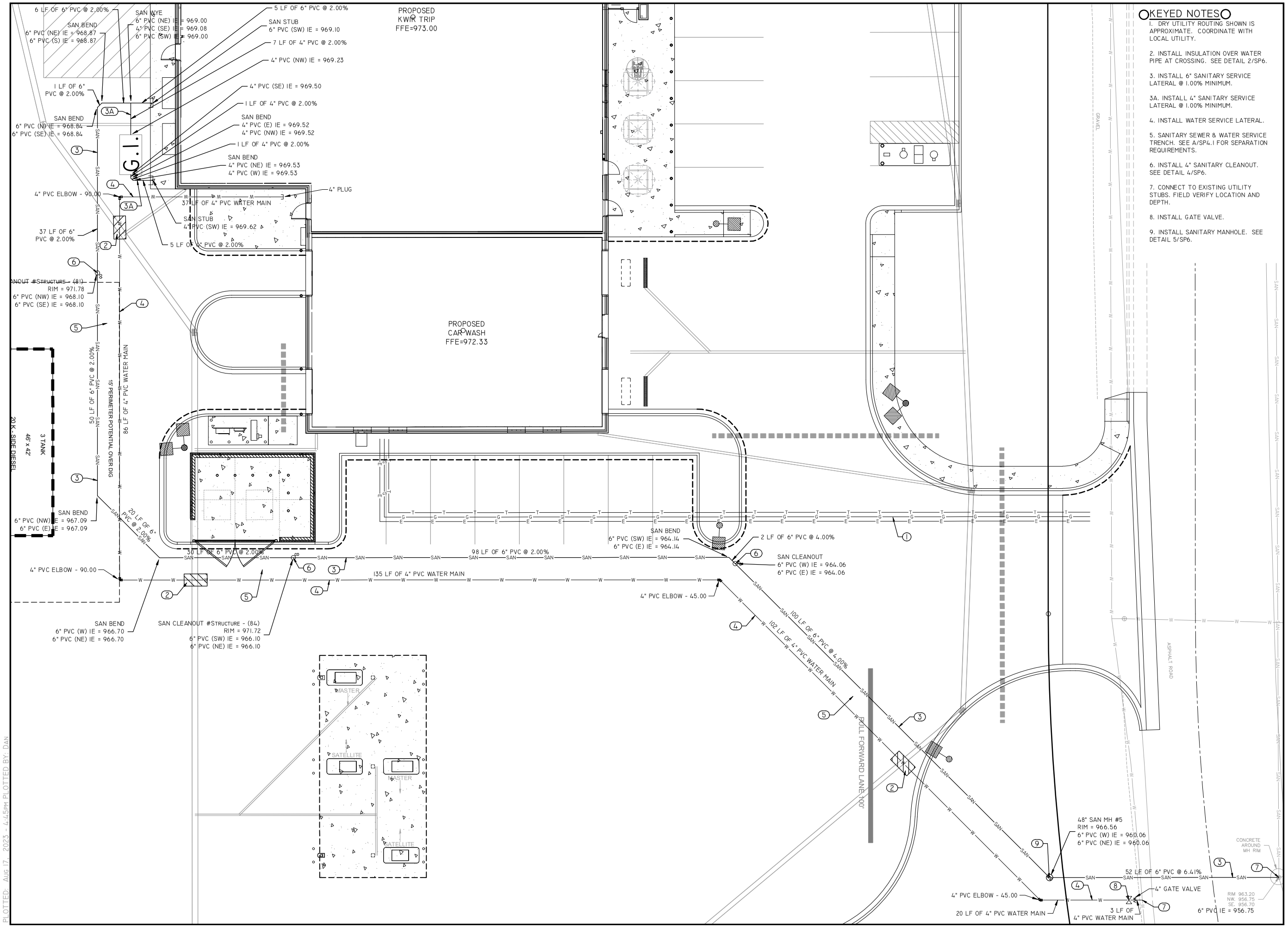
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SP3



KEYED NOTES

1. DRY UTILITY ROUTING SHOWN IS APPROXIMATE. COORDINATE WITH LOCAL UTILITY.
2. INSTALL INSULATION OVER WATER PIPE AT CROSSING. SEE DETAIL 2/SP6.
3. INSTALL 6" SANITARY SERVICE LATERAL @ 1.00% MINIMUM.
3A. INSTALL 4" SANITARY SERVICE LATERAL @ 1.00% MINIMUM.
4. INSTALL WATER SERVICE LATERAL.
5. SANITARY SEWER & WATER SERVICE TRENCH. SEE A/SP4.1 FOR SEPARATION REQUIREMENTS.
6. INSTALL 4" SANITARY CLEANOUT. SEE DETAIL 4/SP6.
7. CONNECT TO EXISTING UTILITY STUBS. FIELD VERIFY LOCATION AND DEPTH.
8. INSTALL GATE VALVE.
9. INSTALL SANITARY MANHOLE. SEE DETAIL 5/SP6.

KWIK TRIP™ STORES

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UTILITY PLAN

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
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SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SP4

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PLOTTED: AUG 17, 2023 - 4:45PM PLOTTED BY: DAN

GENERAL :

1. COMPLY WITH THE WORK SAFETY PRACTICES SPECIFIED BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY REGULATIONS. OSHA PROHIBITS ENTRY INTO "CONFINED SPACES," SUCH AS MANHOLES AND INLETS (SEE 29 CFR SECTION 1910.146), WITHOUT UNDERTAKING CERTAIN SPECIFIC PRACTICES AND PROCEDURES. CONSTRUCTION SAFETY IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR, WHO IS ALSO SOLELY RESPONSIBLE FOR THE MEANS, METHODS, AND SEQUENCING OF THE CONSTRUCTION OPERATIONS.

2. EXISTING BOUNDARY, LOCATION, TOPOGRAPHIC, AND UTILITY INFORMATION SHOWN ON THIS PLAN IS FROM A FIELD SU RVEY BY R.A. SMITH, AUGUST 25 2022.

3. PERFORM ALL UTILITY WORK IN ACCORDANCE WITH STATE AND CITY REQUIREMENTS.

4. CONNECT TO EXISTING SANITARY SEWER MH'S BY CORE DRILLING. CONNECT TO EXISTING STORM SEWER MH'S BY EITHER SAWCUTTING OR CORE DRILLING. USE SAWS OR DRILLS THAT PROVIDE WATER TO THE BLADE. MEET ALL CITY STANDARDS AND SPECIFICATIONS FOR THE THE CONNECTION. RECONSTRUCT INVERTS AFTER INSTALLATION. USE WATER STOP GASKETS IN ORDER TO PROVIDE WATERTIGHT SEALS WHEN PENETRATING A STRUCTURE WALL WITH A PIPE. TAKE MEASUREMENTS BEFORE BEGINNING CONSTRUCTION TO ENSURE THAT SERVICE CONNECTIONS DO NOT CUT INTO MAINTENANCE ACCESS STRUCTURE JOINTS OR PIPE BARREL JOINTS.

5. PERFORM TRENCH EXCAVATIONS FOR ALL UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS OF O.S.H.A. 29 CFR, PART 1926, SUBPART P, "EXCAVATIONS AND TRENCHES." (WWW.OSHA.GOV)

6. COORDINATE BUILDING UTILITY CONNECTION LOCATIONS AT 5 FT. OUT FROM THE PROPOSED BUILDING WITH THE WITH THE INTERIOR PLUMBING CONTRACTOR PRIOR TO CONSTRUCTION. VERIFY WATER AND SEWER SERVICE LOCATIONS AND ELEVATIONS WITH THE MECHANICAL ENGINEER PRIOR TO CONSTRUCTION.

7. THE SUBSURFACE UTILITY INFORMATION SHOWN ON THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

8. THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN ARE FROM RECORD INFORMATION. THE ENGINEER DOES NOT GUARANTEE THAT ALL EXISTING UTILITIES ARE SHOWN OR, IF SHOWN, EXIST IN THE LOCATIONS INDICATED ON THE PLAN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THE FINAL VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UTILITIES (INCLUDING WATER AND SEWER LINES AND APPURTENANCES). NOTIFY THE ENGINEER OF ANY DISCREPANCIES.

9. CONTACT UTILITY COMPANIES FOR LOCATIONS OF ALL PUBLIC AND PRIVATE UTILITIES WITHIN THE WORK AREA PRIOR TO BEGINNING CONSTRUCTION. CONTACT DIGGER'S HOTLINE AT (414) 259-1181 IN THE MILWAUKEE METRO AREA, OR 1-800-242-8511 ELSEWHERE IN WISCONSIN FOR EXACT LOCATIONS OF EXISTING UTILITIES AT LEAST 72 HOURS (NOT INCLUDING WEEKENDS AND HOLIDAYS) BEFORE BEGINNING ANY CONSTRUCTION. OBTAIN TICKET NUMBER AND MEET WITH REPRESENTATIVES OF THE VARIOUS UTILITIES AT THE SITE. PROVIDE THE OWNER WITH THE TICKET NUMBER INFORMATION. DIGGER'S HOTLINE IS A FREE SERVICE THAT LOCATES MUNICIPAL AND UTILITY COMPANY LINES, BUT DOES NOT LOCATE PRIVATE UTILITY LINES. USE AN INDEPENDENT LOCATOR SERVICE OR OTHER MEANS IN ORDER TO OBTAIN LOCATIONS OF PRIVATE UTILITY LINES INCLUDING, BUT NOT LIMITED TO, UNDERGROUND ELECTRIC CABLES, TELEPHONE, TV, AND LAWN SPRINKLER LINES.

10. POTHOLE TO VERIFY THE POSITIONS OF EXISTING UNDERGROUND FACILITIES AT A SUFFICIENT NUMBER OF LOCATIONS IN ORDER TO ASSURE THAT NO CONFLICT WITH THE PROPOSED WORK EXISTS AND THAT SUFFICIENT CLEARANCE IS AVAILABLE.

11. WHERE EXISTING GAS, ELECTRIC, CABLE, OR TELEPHONE UTILITIES CONFLICT WITH THE WORK, COORDINATE THE ABANDONMENT, RELOCATION, OFFSET, OR SUPPORT OF THE EXISTING UTILITIES WITH THE APPROPRIATE LOCAL UTILITY COMPANIES. COORDINATE NEW GAS METER AND GAS LINE INSTALLATION, ELECTRIC METER AND ELECTRIC SERVICE INSTALLATION, CABLE SERVICE, AND TELEPHONE SERVICE INSTALLATION WITH THE LOCAL UTILITY COMPANIES.

12. ARRANGE FOR AND SECURE SUITABLE DISPOSAL AREAS OFF-SITE. DISPOSE OF ALL EXCESS SOIL, WASTE MATERIAL, DEBRIS, AND ALL MATERIALS NOT DESIGNATED FOR SALVAGE. WASTE MATERIAL AND DEBRIS INCLUDES TREES, STUMPS, PIPE, CONCRETE, ASPHALTIC CONCRETE, CANS, OR OTHER WASTE MATERIAL FROM THE CONSTRUCTION OPERATIONS. OBTAIN THE RIGHTS TO ANY WASTE AREA FOR DISPOSAL OF UNSUITABLE OR SURPLUS MATERIAL EITHER SHOWN OR NOT SHOWN ON THE PLANS. ALL WORK IN DISPOSING OF SUCH MATERIAL SHALL BE CONSIDERED INCIDENTAL TO THE WORK. ALL DISPOSAL MUST CONFORM TO APPLICABLE SOLID WASTE DISPOSAL PERMIT REGULATIONS. OBTAIN ALL NECESSARY PERMITS AT NO COST TO THE OWNER.

13. STRAIGHT LINE SAW-CUT EXISTING BITUMINOUS OR CONCRETE SURFACING AT THE PERIMETER OF PAVEMENT REMOVAL AREAS. USE SAWS THAT PROVIDE WATER TO THE BLADE. TACK, AND MATCH ALL CONNECTIONS TO EXISTING BITUMINOUS PAVEMENT.

14. RELOCATE OVERHEAD POWER, TELEPHONE, AND CABLE LINES AS REQUIRED.

15. ALL MATERIALS REQUIRED FOR THIS WORK SHALL BE NEW MATERIAL CONFORMING TO THE REQUIREMENTS FOR CLASS, KIND, GRADE, SIZE, QUALITY, AND OTHER DETAILS SPECIFIED HEREIN OR AS SHOWN ON THE PLANS. DO NOT USE RECYCLED OR SALVAGED AGGREGATE, ASPHALTIC PAVEMENT, CRUSHED CONCRETE, OR SCRAP SHINGLES. UNLESS OTHERWISE INDICATED, THE CONTRACTOR SHALL FURNISH ALL REQUIRED MATERIALS.

16. RESTORE THE PUBLIC RIGHT-OF-WAY. REPLACE ANY CONCRETE CURB AND GUTTER, BITUMINOUS PAVEMENT, SIDEWALK, OR VEGETATIVE COVER DAMAGED BY THE CONSTRUCTION ACTIVITY. RESTORE DAMAGED TURF WITH SOD WITHIN THE PUBLIC RIGHT-OF-WAY. THE WORK AREA SHOWN IS GENERAL AND MAY NEED TO BE ADJUSTED IN THE FIELD.

17. WHEN SAWING OR DRILLING CONCRETE OR MASONRY, USE SAWS THAT PROVIDE WATER TO THE BLADE. DO NOT ALLOW THE SLURRY PRODUCED BY THIS PROCESS TO BE TRACKED OUTSIDE OF THE IMMEDIATE WORK AREA OR DISCHARGED INTO THE SEWER SYSTEM.

18. ADJUST ALL CURB STOPS, VALVE BOXES, MAINTENANCE HOLE CASTINGS, CATCH BASIN CASTINGS, CLEANOUT COVERS, AND SIMILAR ITEMS TO FINISHED GRADE.

19. INSTALL ALL PIPE WITH THE ASTM IDENTIFICATION NUMBERS ON THE TOP FOR INSPECTION. COMMENCE PIPE LAYING AT THE LOWEST POINT IN THE PROPOSED SEWER LINE. LAY THE PIPE WITH THE BELL END OR RECEIVING GROOVE END OF THE PIPE POINTING UPGRADE. WHEN CONNECTING TO AN EXISTING PIPE, UNCOVER THE EXISTING PIPE IN ORDER TO ALLOW ANY ADJUSTMENTS IN THE PROPOSED LINE AND GRADE BEFORE LAYING ANY PIPE.

20. OBTAIN AND PAY FOR ALL PERMITS, TESTS, INSPECTIONS, ETC. REQUIRED BY AGENCIES THAT HAVE JURISDICTION OVER THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR ALL BONDS, LETTERS OF CREDIT, OR CASH SURETIES RELATED TO THE WORK. EXECUTE AND INSPECT WORK IN ACCORDANCE WITH ALL LOCAL AND STATE CODES, RULES, ORDINANCES, OR REGULATIONS PERTAINING TO THE PARTICULAR TYPE OF WORK INVOLVED.

21. OBTAIN PERMITS FROM THE CITY FOR WORK IN THE PUBLIC RIGHT-OF-WAY.

22. CONSTRUCT SANITARY SEWER, WATERMAIN, AND STORM SEWER UTILITIES IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, SIXTH EDITION, OR THE LATEST REVISED EDITION.

23. TRACER WIRE: LOCATING REQUIREMENTS - A MEANS TO LOCATE BURIED UNDERGROUND EXTERIOR NON METALLIC SEWERS/MAINS MUST BE PROVIDED WITH TRACER WIRE OR OTHER METHODS IN ORDER TO BE LOCATED IN ACCORD WITH THE PROVISIONS OF THESE CODE SECTIONS AS PER 182.0715(2R) OF THE STATUTES.

24. INSTALL ALL PIPE WITH THE ASTM IDENTIFICATION NUMBERS ON THE TOP FOR INSPECTION. COMMENCE PIPE LAYING AT THE LOWEST POINT IN THE PROPOSED SEWER LINE. LAY THE PIPE WITH THE BELL END OR RECEIVING GROOVE END OF THE PIPE POINTING UPGRADE. WHEN CONNECTING TO AN EXISTING PIPE, UNCOVER THE EXISTING PIPE IN ORDER TO ALLOW ANY ADJUSTMENTS IN THE PROPOSED LINE AND GRADE BEFORE LAYING ANY PIPE. DO NOT LAY PIPES IN WATER OR WHEN THE TRENCH CONDITIONS ARE UNSUITABLE FOR SUCH WORK.

WATER DISTRIBUTION SYSTEM :

1. BRING ALL SITE UTILITIES TO 5' OUTSIDE OF THE BUILDING LINE WITH THE EXCEPTION OF THE WATER SERVICE. EXTEND WATER SERVICE INTO THE BUILDING AND UP TO THE FLANGE FOR THE WATER METER.

2. SEPARATION OF WATER AND SEWER: PROVIDE HORIZONTAL AND VERTICAL SEPARATIONS AS REQUIRED BY CODE. SEE DETAIL A/SP4.1.

3. WATERMAIN DEPTH: MAINTAIN 7.5 FEET OF COVER OVER THE TOP OF THE WATER LINES TO THE FINISHED GRADE. VERIFY ELEVATION OF PROPOSED AND EXISTING WATER LINES AT ALL UTILITY CROSSINGS. INSTALL THE WATER LINES AT GREATER DEPTHS IN ORDER TO CLEAR STORM SEWERS, SANITARY SEWERS, OR OTHER UTILITIES AS REQUIRED. INCLUDE COSTS TO LOWER WATER LINES IN THE BASE BID.

4. DISINFECTION: DISINFECT ALL COMPLETED WATERMAINS IN ACCORDANCE WITH AWWA STANDARD C651. IF THE TABLET OR CONTINUOUS FEED METHODS ARE USED, DISINFECT USING WITH WATER THAT CONTAINS AT LEAST 50 PPM OF AVAILABLE CHLORINE. DO NOT USE THE TABLET METHOD ON SOLVENT-WELDED PLASTIC OR ON SCREWED-JOINT STEEL PIPE BECAUSE OF THE DANGER OF FIRE OR EXPLOSION FROM THE REACTION OF THE JOINT COMPOUNDS WITH THE CALCIUM HYPOCHLORITE. RETAIN THE TREATED WATER IN THE PIPELINE FOR AT LEAST 24 HOURS. MEASURE THE CHLORINE RESIDUAL AT THE END OF THE 24 HOUR PERIOD. THE FREE CHLORINE RESIDUAL MUST BE AT LEAST 10 MG/L MEASURED AT ANY POINT IN THE LINE. MEASUREMENT OF THE CHLORINE CONCENTRATION AT REGULAR INTERVALS SHALL BE IN ACCORDANCE WITH STANDARD METHODS, AWWA M-12, OR USING APPROPRIATE CHLORINE TEST KITS.

5. TESTING: PRESSURE TEST AND PERFORM BACTERIOLOGICAL TESTS ON ALL WATER LINES UNDER THE SUPERVISION OF THE CITY PUBLIC WORKS DEPARTMENT. NOTIFY THE CITY AT LEAST 24 WORKING HOURS PRIOR TO ANY TESTING. PRESSURIZE THE WATERLINE TO 1034-KPA (150-PSI) GAUGE PRESSURE (MEASURED AT THE POINT OF LOWEST ELEVATION) BY MEANS OF A PUMP CONNECTED TO THE PIPE IN A SATISFACTORY MANNER. MAINTAIN THE TEST PRESSURE FOR A MINIMUM OF 2 HOURS. DO NOT ADD WATER TO THE WATERMAIN IN ORDER TO MAINTAIN THE REQUIRED PRESSURE DURING THE WATER MAIN PRESSURE TESTING. THE TEST SECTION OF PIPE IS ACCEPTABLE WITH A PRESSURE DROP OF 14 KPA (2 PSI) OR LESS.

6. USE MUELLER H 10300 OR FORD EM 2 7057, OR APPROVED EQUAL, AT ALL CURB STOP LOCATIONS. STATIONARY ROD IS REQUIRED ON ALL CURB STOPS.

7. BUILDING WATER SERVICES: WATER SERVICE PIPE SHALL MEET THE FOLLOWING SPECIFICATIONS AND BE APPROVED BY THE LOCAL GOVERNING AGENCY. 2.5 INCH OR LESS: HDPE PER ASTM D2737 SDR 9 OR TYPE K COPPER PER ASTM B - 88. 4 INCH OR GREATER: DIP PER AWWA C151 OR PVC PER AWWA C-900.

8. TRACER WIRE: LOCATING REQUIREMENTS - A MEANS TO LOCATE BURIED UNDERGROUND EXTERIOR NON METALLIC SEWERS/MAINS MUST BE PROVIDED WITH TRACER WIRE OR OTHER METHODS IN ORDER TO BE LOCATED IN ACCORD WITH THE PROVISIONS OF THE WISCONSIN STATUTES 182.0175(2R) AND THE WISCONSIN DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES SPS 382.30(11)(H).

STORM DRAINAGE :

1. UNLESS OTHERWISE INDICATED, USE REINFORCED, PRECAST, CONCRETE MAINTENANCE HOLES AND CATCH BASINS CONFORMING TO ASTM C478, FURNISHED WITH WATER STOP RUBBER GASKETS AND PRECAST BASES. JOINTS FOR ALL PRECAST MAINTENANCE HOLE SECTIONS SHALL HAVE CONFINED, RUBBER "O"-RING GASKETS IN ACCORDANCE WITH ASTM C923. THE INSIDE BARREL DIAMETER SHALL NOT BE LESS THAN 48 INCHES.

2. ALL JOINTS AND CONNECTIONS TO CATCH BASINS OR MANHOLES SHALL BE WATERTIGHT OR APPROVED CONNECTION. USE RESILIENT RUBBER SEALS, WATERSTOP GASKETS, OR APPROVED EQUAL. CEMENT MORTAR JOINTS ARE NOT ALLOWED UNLESS OTHERWISE PERMITTED BY LOCAL MUNICIPALITY.

3. INSTALL CATCH BASIN CASTINGS WITH SPECIFIED TOP ELEVATION AT THE FLOWLINE OF RIM.

4. PVC PIPE: USE SOLID-CORE, SDR-35, ASTM D3034 POLYVINYL CHLORIDE (PVC) PIPE FOR DESIGNATED PVC STORM SEWER SERVICES 4 TO 15-INCHES IN DIAMETER. USE SOLID-CORE, SDR-35, ASTM F679 POLYVINYL CHLORIDE (PVC) PIPE FOR DESIGNATED PVC STORM SEWER SERVICES 18 TO 27-INCHES IN DIAMETER. JOINTS FOR ALL STORM SEWER SHALL HAVE PUSH-ON JOINTS WITH ELASTOMERIC GASKETS. USE OF SOLVENT CEMENT JOINTS IS ALLOWED FOR BUILDING SERVICES. SOLVENT CEMENT JOINTS IN PVC PIPE MUST INCLUDE USE OF A PRIMER WHICH IS OF CONTRASTING COLOR TO THE PIPE AND CEMENT. PIPE WITH SOLVENT CEMENT JOINTS SHALL BE JOINED WITH PVC CEMENT CONFORMING TO ASTM D2564. LAY ALL PVC PIPE ON A CONTINUOUS GRANULAR BED. INSTALLATION MUST COMPLY WITH ASTM D2321.

5. TESTING: TEST ALL PORTIONS OF STORM SEWER THAT ARE WITHIN 10 FEET OF BUILDINGS, WITHIN 10 FEET OF BURIED WATER, LINES, WITHIN 50 FEET OF WATER WELLS, OR THAT PASS THROUGH SOIL OR WATER IDENTIFIED AS BEING CONTAMINATED. TEST ALL FLEXIBLE STORM SEWER LINES FOR DEFLECTION AFTER THE SEWER LINE HAS BEEN INSTALLED AND BACKFILL HAS BEEN IN PLACE FOR AT LEAST 30 DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF 5%. IF THE TEST FAILS, MAKE NECESSARY REPAIRS AND RETEST.

6. USE NEENAH R-1550A FRAME WITH 2050D GRATE ON ALL PROPOSED CATCH BASINS.

7. INSTALL DETECTABLE UNDERGROUND MARKING TAPE DIRECTLY ABOVE ALL PVC, POLYETHYLENE, AND OTHER NONCONDUCTIVE UNDERGROUND UTILITIES AT A DEPTH OF 457 MM (18 INCHES) BELOW FINISHED GRADE, UNLESS OTHERWISE INDICATED. BRING THE TAPE TO THE SURFACE AT VARIOUS LOCATIONS IN ORDER TO PROVIDE CONNECTION POINTS FOR LOCATING UNDERGROUND UTILITIES. INSTALL BLUE RHINO TRIVIEW FLEX TEST STATIONS, OR APPROVED EQUAL, WITH BLACK CAPS AT EACH SURFACE LOCATION.

8. TRACER WIRE: LOCATING REQUIREMENTS - A MEANS TO LOCATE BURIED UNDERGROUND EXTERIOR NON METALLIC SEWERS/MAINS MUST BE PROVIDED WITH TRACER WIRE OR OTHER METHODS IN ORDER TO BE LOCATED IN ACCORD WITH THE PROVISIONS OF THESE CODE SECTIONS AS PER 182.0715(2R) OF THE STATUTES.

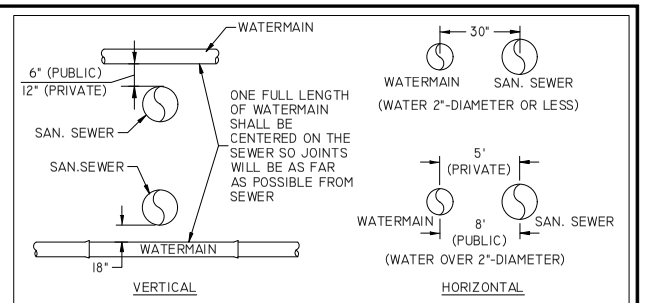
9. THE MINIMUM DEPTH OF COVER FOR BUILDING AND CANOPY ROOF DRAIN LEADERS WITHOUT INSULATION IS 5 FEET. INSULATE ROOF DRAIN LEADERS AT LOCATIONS WHERE THE DEPTH OF COVER IS LESS THAN 5 FEET. PROVIDE A MINIMUM INSULATION THICKNESS OF 2 INCHES. THE INSULATION MUST BE AT LEAST 4 FEET WIDE AND CENTERED ON THE PIPE. INSTALL THE INSULATION BOARDS 6 INCHES ABOVE THE TOPS OF THE PIPES ON MECHANICALLY COMPACTED AND LEVELED PIPE BEDDING MATERIAL. USE HIGH DENSITY, CLOSED CELL, RIGID BOARD MATERIAL EQUIVALENT TO DOW STYROFOAM HI-40 PLASTIC FOAM INSULATION.

10. CLEANOUTS: INSTALL CLEANOUTS ON ALL ROOF DRAINS IN ACCORDANCE WITH S.P.S 382.35 (3)(C)(1.). THE DISTANCE BETWEEN CLEANOUTS IN HORIZONTAL PIPING SHALL NOT EXCEED 100 FEET FOR PIPES 10-INCHES AND UNDER IN SIZE. CLEANOUTS SHALL BE OF THE SAME NOMINAL SIZE AS THE PIPES THEY SERVE OR 6-INCH DIAMETER MINIMUM FOR PIPES 6 INCHES IN DIAMETER OR GREATER. INSTALL A METER BOX FRAME AND SOLID LID (NEENAH R-1914-A, OR APPROVED EQUAL) OVER ALL CLEANOUTS.

11. INSTALL ALL PIPE WITH THE ASTM IDENTIFICATION NUMBERS ON THE TOP FOR INSPECTION. COMMENCE PIPE LAYING AT THE LOWEST POINT IN THE PROPOSED SEWER LINE. LAY THE PIPE WITH THE BELL END OR RECEIVING GROOVE END OF THE PIPE POINTING UPGRADE. WHEN CONNECTING TO AN EXISTING PIPE, UNCOVER THE EXISTING PIPE IN ORDER TO ALLOW ANY ADJUSTMENTS IN THE PROPOSED LINE AND GRADE BEFORE LAYING ANY PIPE. DO NOT LAY PIPES IN WATER OR WHEN THE TRENCH CONDITIONS ARE UNSUITABLE FOR SUCH WORK.

12. INSTALL STORM SEWER IN ACCORDANCE WITH SECTION 608 OF THE WISDOT STANDARD SPECIFICATIONS.

13. INSTALL CATCH BASINS, MANHOLES, AND INLETS IN ACCORDANCE WITH SECTION 611 OF THE WISDOT STANDARD SPECIFICATIONS.



NOTES:
1. WHEN THE ABOVE SEPARATIONS CANNOT BE MAINTAINED, THE ENGINEER MAY REQUIRE THE CONTRACTOR TO ENCASE THE SEWER IN CONCRETE.

2. NO PRIVATE WATER MAIN OR WATER SERVICE SHALL BE INSTALLED WITHIN 6" OF A STORM SEWER. PUBLIC WATER MAIN MUST MEET THE SAME HORIZONTAL AND VERTICAL SEPARATION DISTANCES AS REQUIRED FOR SANITARY SEWER.

A / SP4.1 SEWER / WATERMAIN SEPARATION DISTANCE
NTS

SANITARY SEWER :

1. PIPE: USE SOLID-CORE, SDR-35, ASTM D3034 (OR APPROVED EQUAL) POLYVINYL CHLORIDE (PVC) PLASTIC PIPE FOR ALL DESIGNATED PVC SANITARY SEWER SERVICES. JOINTS FOR ALL SANITARY SEWER SHALL HAVE PUSH-ON JOINTS WITH ELASTOMERIC GASKETS. USE OF SOLVENT CEMENT JOINTS IS ALLOWED FOR BUILDING SERVICES. SOLVENT CEMENT JOINTS IN PVC PIPE MUST INCLUDE USE OF A PRIMER WHICH IS OF CONTRASTING COLOR TO THE PIPE AND CEMENT. PIPE WITH SOLVENT CEMENT JOINTS SHALL BE JOINED WITH PVC CEMENT CONFORMING TO ASTM D2564. LAY ALL PVC PIPE ON A CONTINUOUS GRANULAR BED. INSTALLATION MUST COMPLY WITH ASTM D2321.

2. CLEANOUTS: INSTALL CLEANOUTS ON ALL SANITARY SEWER SERVICES. THE DISTANCE BETWEEN CLEANOUTS IN HORIZONTAL PIPING SHALL NOT EXCEED 100 FEET FOR PIPES 4-INCH AND OVER IN SIZE. CLEANOUTS SHALL BE OF THE SAME NOMINAL SIZE AS THE PIPES THEY SERVE OR 6-INCH DIAMETER MINIMUM FOR PIPES 6 INCHES IN DIAMETER OR GREATER. INCLUDE FROST SLEEVES AND CONCRETE FRAME AND PIPE SUPPORT. INSTALL A METER BOX FRAME AND SOLID LID (NEENAH R-1914-A, OR APPROVED EQUAL) OVER ALL CLEANOUTS.

3. TESTING: PRESSURE TEST ALL SANITARY SEWER LINES. TEST ALL FLEXIBLE SANITARY SEWER LINES FOR DEFLECTION AFTER THE SEWER LINE HAS BEEN INSTALLED AND BACKFILL HAS BEEN IN PLACE FOR AT LEAST 30 DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF 5%. IF THE TEST FAILS, MAKE NECESSARY REPAIRS AND RETEST.

4. UNLESS OTHERWISE INDICATED, USE REINFORCED, PRECAST, CONCRETE MAINTENANCE HOLES CONFORMING TO ASTM C478, FURNISHED WITH PRECAST BASES. SANITARY SEWER MAINTENANCE HOLES SHALL BE SUPPLIED WITH PRE-FORMED INVERTS AND FLEXIBLE NEOPRENE SLEEVE CONNECTIONS FOR ALL LATERAL LINES 375 MM (15 INCHES) IN DIAMETER OR LESS, UNLESS OTHERWISE INDICATED. JOINTS FOR ALL PRECAST MAINTENANCE HOLE SECTIONS SHALL HAVE CONFINED, RUBBER "O"-RING GASKETS IN ACCORDANCE WITH ASTM C923. THE INSIDE BARREL DIAMETER SHALL NOT BE LESS THAN 48 INCHES.

5. INSTALL FLEXIBLE WATERTIGHT OR APPROVED CONNECTION FRAME/CHIMNEY SEALS ON ALL SANITARY SEWER MAINTENANCE HOLES. USE EITHER MANUFACTURED MAINTENANCE HOLE FRAME/CHIMNEY SEALS OR ELASTOMERIC WATERPROOFING FRAME/CHIMNEY SEALS.

6. USE NEENAH FOUNDRY CO. R-1642 CASTING WITH SELF-SEALING, SOLID, TYPE B LID, OR APPROVED EQUAL, ON ALL SANITARY SEWER MAINTENANCE HOLES. COVERS SHALL BEAR THE "SANITARY SEWER" LABEL.

7. THE MINIMUM DEPTH OF COVER FOR SANITARY SEWER WITHOUT INSULATION IS 5 FEET. INSULATE SANITARY SEWER SERVICES AT LOCATIONS WHERE THE DEPTH OF COVER IS LESS THAN 5 FEET. PROVIDE A MINIMUM INSULATION THICKNESS OF 2 INCHES. THE INSULATION MUST BE AT LEAST 4 FEET WIDE AND CENTERED ON THE PIPE. INSTALL THE INSULATION BOARDS 6 INCHES ABOVE THE TOPS OF THE PIPES ON MECHANICALLY COMPACTED AND LEVELED PIPE BEDDING MATERIAL. USE HIGH DENSITY, CLOSED CELL, RIGID BOARD MATERIAL EQUIVALENT TO DOW STYROFOAM HI-40 PLASTIC FOAM INSULATION.

8. TRACER WIRE: LOCATING REQUIREMENTS - A MEANS TO LOCATE BURIED UNDERGROUND EXTERIOR NON METALLIC SEWERS/MAINS MUST BE PROVIDED WITH TRACER WIRE OR OTHER METHODS IN ORDER TO BE LOCATED IN ACCORD WITH THE PROVISIONS OF THE WISCONSIN STATUTES 182.0175(2R) AND THE WISCONSIN DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES SPS 82.30(11)(H).

HDPE REQUIREMENTS :

1. INSTALL DUAL-WALL, SMOOTH INTERIOR, CORRUGATED HIGH-DENSITY POLYETHYLENE (HDPE) PIPE AT LOCATIONS INDICATED ON THE PLAN.

2. DUAL-WALL, SMOOTH INTERIOR, CORRUGATED HIGH-DENSITY POLYETHYLENE (HDPE) PIPE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M252 FOR PIPE SIZES 4-INCH TO 10-INCH DIAMETER.

3. DUAL-WALL, SMOOTH INTERIOR, CORRUGATED HIGH-DENSITY POLYETHYLENE (HDPE) PIPE SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2306 FOR PIPE SIZES 12-INCH TO 60-INCH DIAMETER.

4. ALL FITTINGS MUST COMPLY WITH ASTM STANDARD D3212.

5. WATER-TIGHT JOINTS MUST BE USED AT ALL CONNECTIONS INCLUDING STRUCTURES.

6. LAY ALL HDPE PIPE ON A CONTINUOUS GRANULAR BED. INSTALLATION MUST COMPLY WITH ASTM D2321. ALL SECTIONS OF THE CORRUGATED HDPE PIPE SHALL BE COUPLED IN ORDER TO PROVIDE WATER TIGHT JOINTS.

7. PERFORM DEFLECTION TESTS ON ALL HDPE PIPE AFTER THE SEWER LINES HAVE BEEN INSTALLED AND BACKFILL HAS BEEN IN PLACE FOR AT LEAST 30 DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF 5%. IF THE TEST FAILS, MAKE NECESSARY REPAIRS AND PERFORM THE TEST AGAIN UNTIL ACCEPTABLE. SUPPLY THE MANDREL FOR DEFLECTION TESTING. IF THE DEFLECTION TEST IS TO BE RUN USING A RIGID BALL OR MANDREL, IT SHALL HAVE A DIAMETER EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE. THE BALL OR MANDREL SHALL BE CLEARLY STAMPED WITH THE DIAMETER. PERFORM THE TESTS WITHOUT MECHANICAL PULLING DEVICES.

KWIK TRIP™ STORES

KWIK STAR™ STORES

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WAUSAU, WISCONSIN 54401
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NO SCALE

UTILITY SPECS

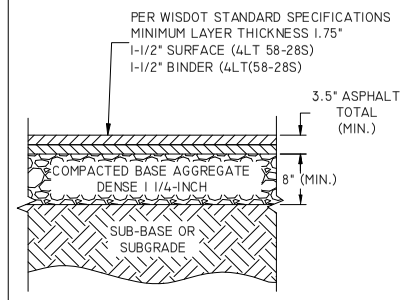
CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

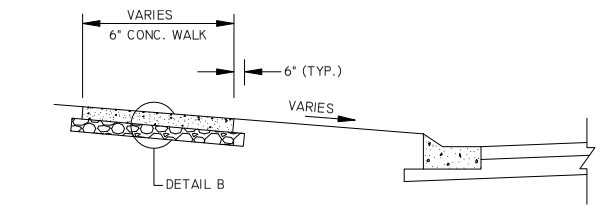
DRAWN BY NAP
SCALE GRAPHIC
PROJ. NO. 10827
DATE 8/17/23 - REVIEW DOCUMENTS
SHEET SP4.1

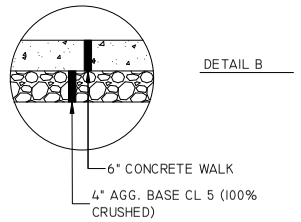
DRAWING FILE: Q:\10800 - 10899\0827 - KWIK TRIP #1283 - HARTLAND\DRAWING\PLANS\0827-SP3-4-4.1-UTILITIES.DWG LAYOUT: SP4.1
PLOTTED: AUG 17, 2023 - 4:45PM PLOTTED BY: DAN



NOTE:
ASPHALT PAVEMENT SECTION SHOWN IS MINIMUM. MATCH IN KIND WITH EXISTING.

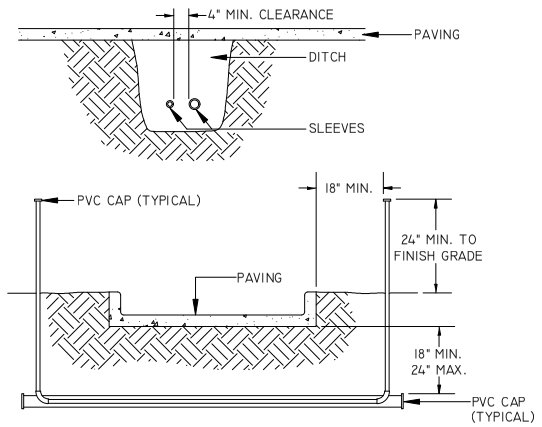
1 / SP5 ASPHALT PAVEMENT DETAIL
NOT TO SCALE





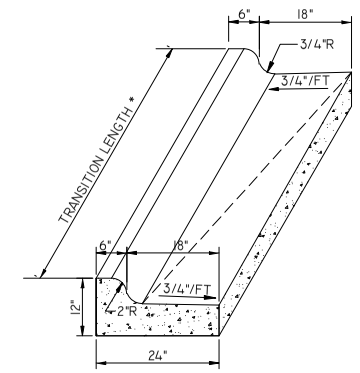
NOTES:
1. 6" THICK CONCRETE SIDEWALK AT ALL DRIVEWAYS
2. PLACE PEDESTRIAN CURB RAMPS AT ALL INTERSECTIONS.
3. PROVIDE EXPANSION JOINT MATERIAL AT MAX. 60 FOOT SPACING.
4. PROVIDE EXPANSION JOINT MATERIAL ALONG BOTH EDGES OF WALK, WHERE WALK IS CONTAINED BETWEEN FIXED OBJECTS.

2 / SP5 CONCRETE WALK/ PAD DETAIL
NOT TO SCALE



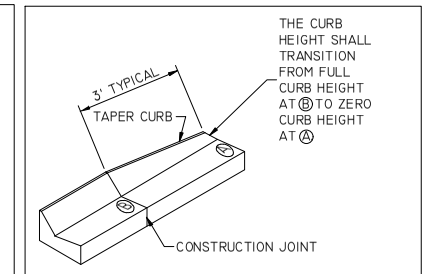
NOTES:
1. ALL PVC IRRIGATION SLEEVES TO BE SCH 40 PVC PIPE.
2. ALL JOINTS TO BE SOLVENT WELDED AND WATERTIGHT.
3. WHERE THERE IS MORE THAN ONE SLEEVE, EXTEND THE SMALLER SLEEVE TO 24-INCHES MINIMUM ABOVE FINISH GRADE.
4. MECHANICALLY TAMP BACKFILL TO 95% PROCTOR.

3 / SP5 TYPICAL SLEEVING DETAIL
NOT TO SCALE

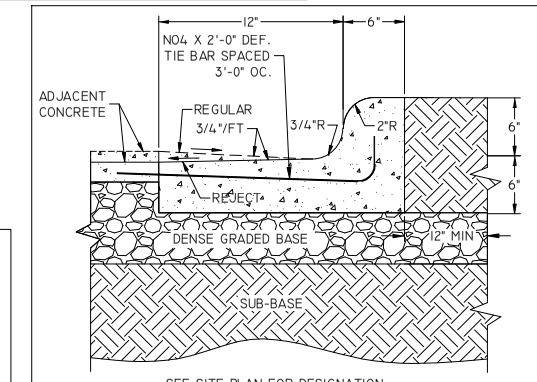


* TRANSITION LENGTH SHALL BE 12 LF ON TANGENTS GREATER THAN 18 LF, OR BETWEEN RADIUS POINTS ON TANGENTS LESS THAN 18 LF, OR BETWEEN RADIUS MID POINTS WHERE TANGENTS ARE LESS THAN 12 LF, OR ACROSS THE RADIUS/RADII WHERE TANGENTS ARE LESS THAN 2 LF.

4 / SP5 TRANSITION CURB & GUTTER DETAIL
NOT TO SCALE

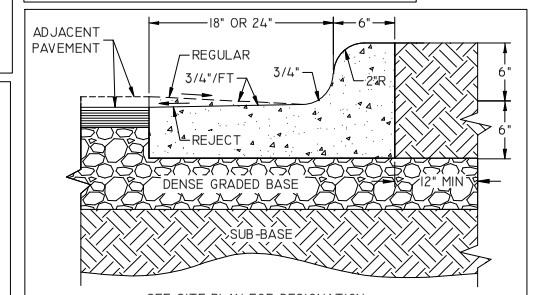


5 / SP5 STD CURB & GUTTER TERMINI DETAIL
NOT TO SCALE



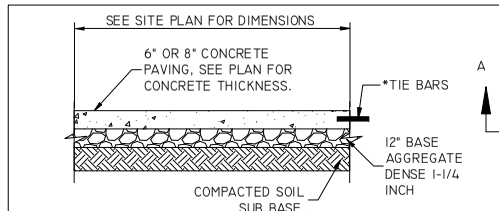
SEE SITE PLAN FOR DESIGNATION

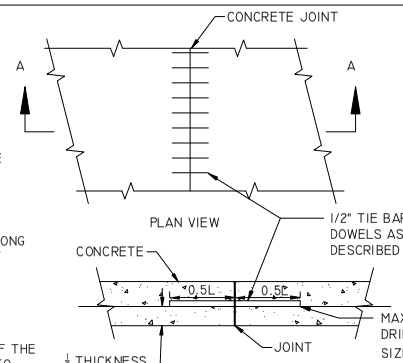
9 / SP5 18" CURB & GUTTER / 18" REJECT CURB & GUTTER DETAIL
NOT TO SCALE



SEE SITE PLAN FOR DESIGNATION

8 / SP5 24" OR 30" CURB & GUTTER DETAIL
NOT TO SCALE





NOTES:
* TIE BARS SHALL BE 24" IN LENGTH, PLACED MID-DEPTH 36" O.C. ALONG CURBING AND ALSO TO TIE EACH EXTERIOR PANEL TO THE ADJACENT INTERIOR PANEL.

**DOWELS SHALL BE 14" IN LENGTH, PLACED MID-DEPTH 24" O.C. AT CONSTRUCTION JOINTS

TIE BARS AND DOWELS SHALL CONFORM WITH SUBSECTION 505.2.6 OF THE STANDARD SPECIFICATIONS. EPOXY COAT TIE BARS IN ACCORDANCE TO SECTION 505.2.4 OF THE WISDOT STANDARD SPECIFICATIONS.

DOWELS SHALL BE FIXED ON ONE END AND GREASED ON THE OTHER

CONCRETE PANELS SHALL NOT BE GREATER THAN 15' IN LENGTH IN ANY DIRECTION AND CONTRACTION JOINTS SHALL BE TO A MINIMUM DEPTH OF 1/4 THE CONCRETE DEPTH

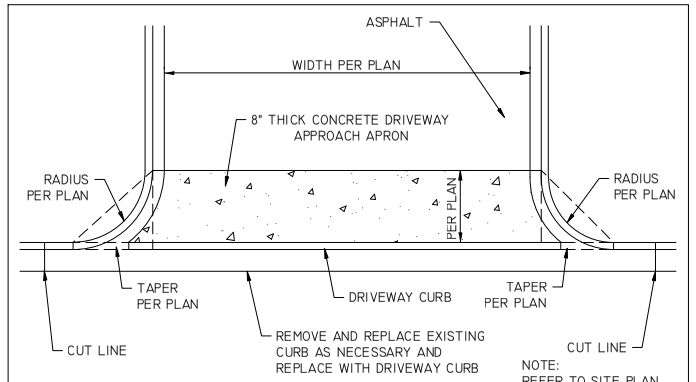
6" DEPTH (MIN.) CONCRETE SLAB-ON-GRADE WITH #3 REBAR, 3' O.C. IN BOTH DIRECTIONS, CONCRETE SEALER: TK-26UV

8" DEPTH (MIN.) CONCRETE SLAB-ON-GRADE WITH #4 REBAR, 4' O.C. IN BOTH DIRECTIONS, CONCRETE SEALER: TK-26UV

NOTES:
BASE AGGREGATE TO EXTEND 12" BEYOND BACK OF CURB OR EDGE OF PAVEMENT.

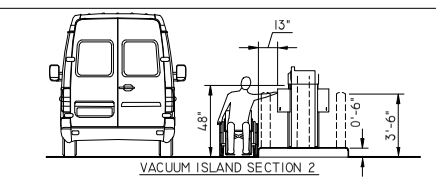
CONCRETE PAVEMENT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI AND AN AIR CONTENT OF 6% +/- 1.5%

6 / SP5 CONCRETE PAVEMENT DETAIL
NOT TO SCALE

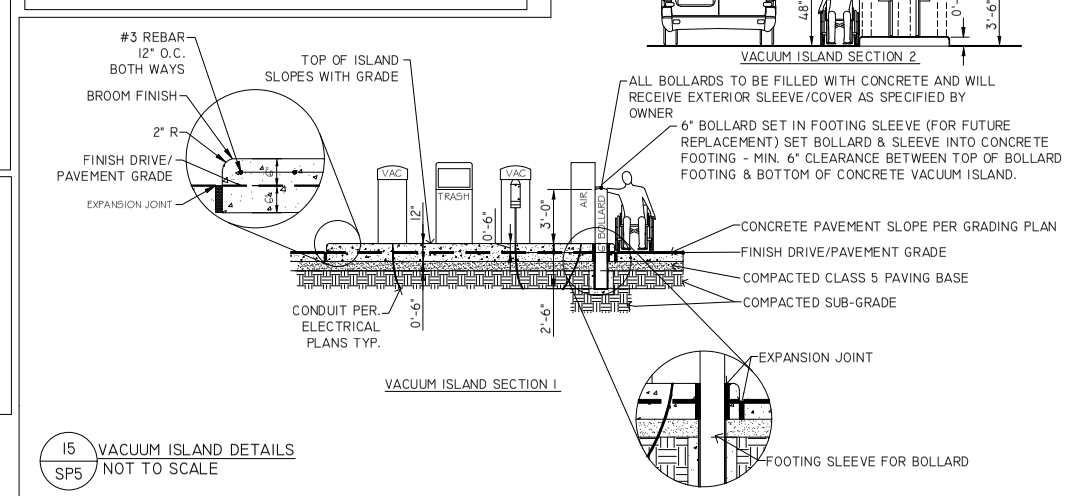


NOTE:
REFER TO SITE PLAN FOR RADIUS OR TAPER DESIGNATION

7 / SP5 CONCRETE APPROACH DETAIL
NOT TO SCALE

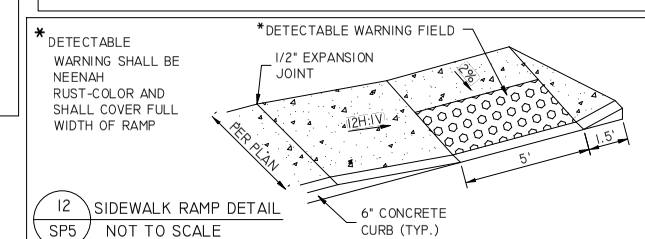


VACUUM ISLAND SECTION 2



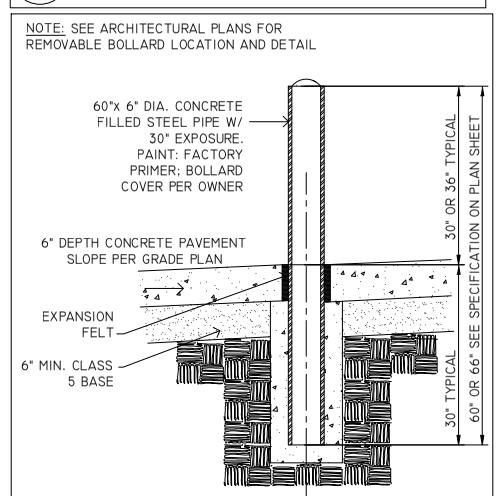
VACUUM ISLAND SECTION 1

15 / SP5 VACUUM ISLAND DETAILS
NOT TO SCALE

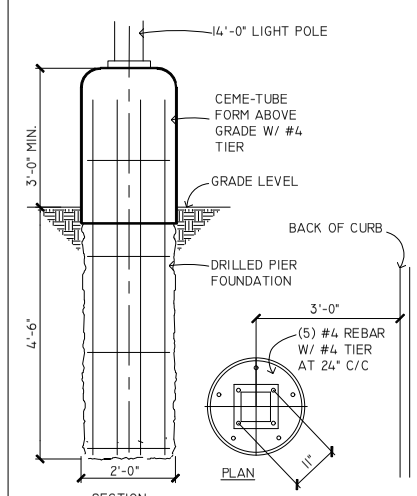


12 / SP5 SIDEWALK RAMP DETAIL
NOT TO SCALE

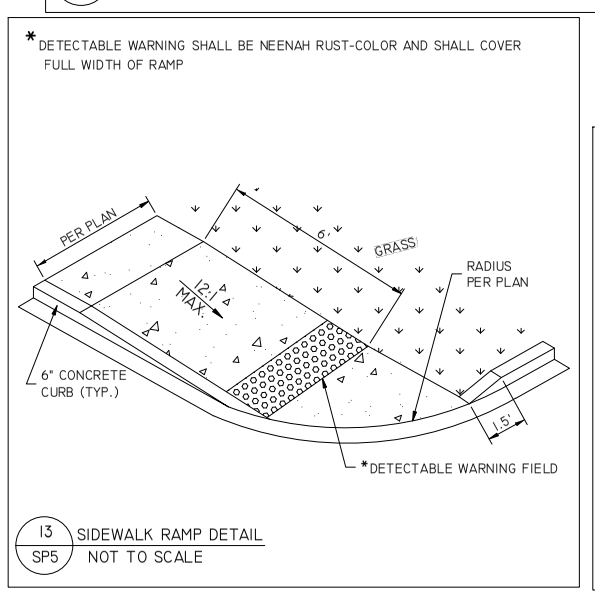
NOTES:
1. BASE PLATE ILLUSTRATION MAY CHANGE WITHOUT NOTICE. DO NOT USE FOR SETTING ANCHOR BOLTS. CONSULT AREA LIGHT MANUFACTURER FOR BASE PLATE TEMPLATE, ANCHOR BOLT SIZE AND EMBEDMENT DEPTH.



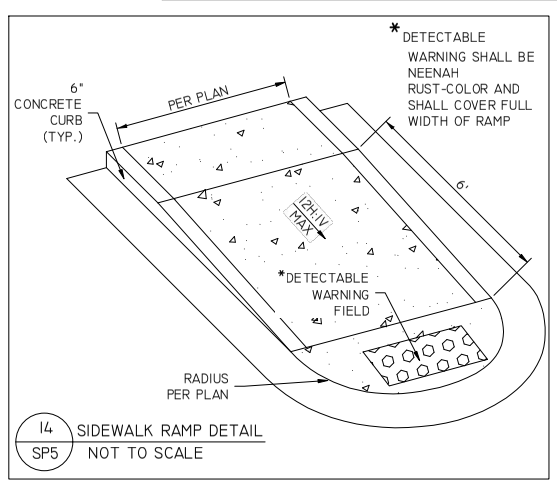
10 / SP5 6" PIPE BOLLARD DETAIL
NOT TO SCALE



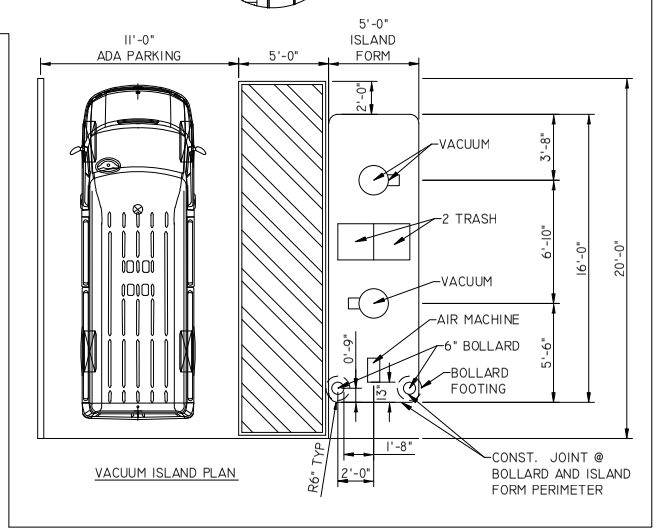
11 / SP5 ROUND AREA LIGHT FOUNDATION DETAIL
NOT TO SCALE



13 / SP5 SIDEWALK RAMP DETAIL
NOT TO SCALE



14 / SP5 SIDEWALK RAMP DETAIL
NOT TO SCALE



VACUUM ISLAND PLAN

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KWIK STAR STORES

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PHONE: 715.675.9784 FAX: 715.675.4060
EMAIL: MAIL@REIENGINEERING.COM

NO SCALE

SITE PLAN DETAILS

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

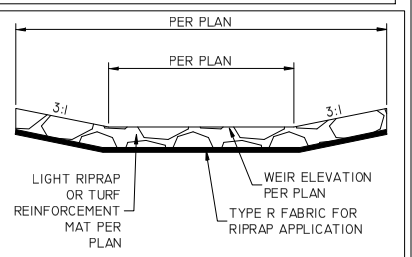
#	DATE	DESCRIPTION
1		

DRAWN BY	NAP
SCALE	NOT TO SCALE
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SP5

DRAWING FILE: Q:\10800 - 10899\10827 - KWIK TRIP #1283 - HARTLAND\DRAWING\PLANS\10827-SP5-6-SITE DETAILS.DWG LAYOUT: SP5
PLOTTED: AUG 17, 2023 - 4:45PM PLOTTED BY: DAN

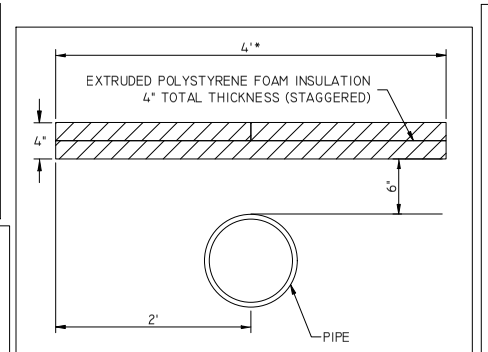
SEE PETROLEUM DETAILS

1 / SP6 STORAGE TANKS COMPLEX DETAIL
NOT TO SCALE



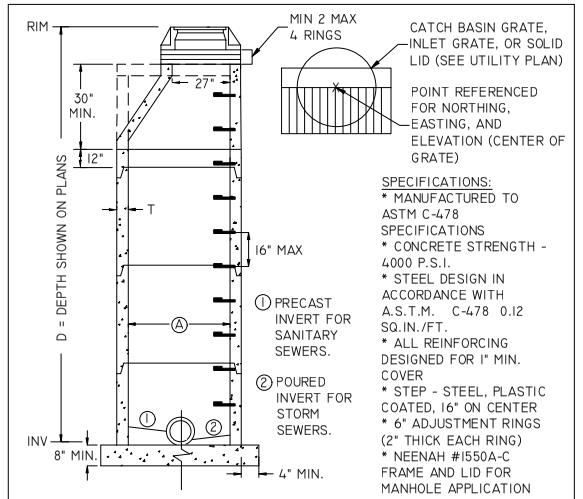
6 / SP6 OVERFLOW WEIR DETAIL
NOT TO SCALE

NOTE:
WEIRS TO USE PERMANENT TURF REINFORCEMENT MAT



*WIDTH OF INSULATION SHALL INCREASE x FT. PER EVERY x FT. OF VERTICAL SEPARATION.

2 / SP6 PIPE INSULATION DETAIL
NOT TO SCALE

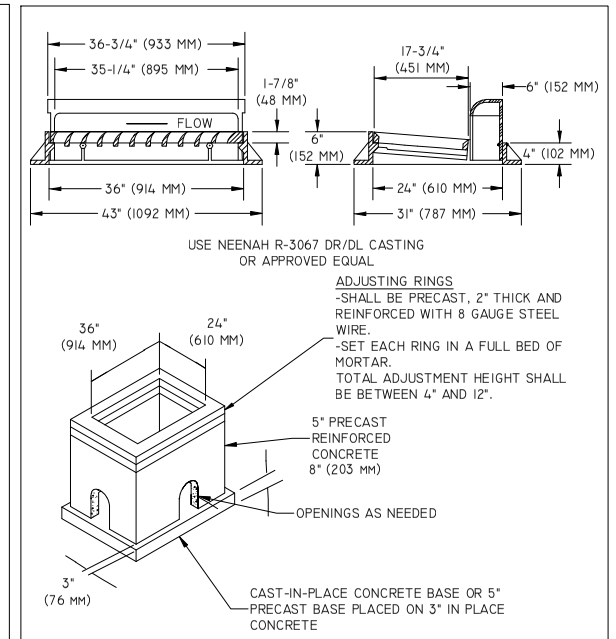


SPECIFICATIONS:
* MANUFACTURED TO ASTM C-478 SPECIFICATIONS
* CONCRETE STRENGTH - 4000 P.S.I.
* STEEL DESIGN IN ACCORDANCE WITH A.S.T.M. C-478 0.12 SQ.IN./FT.
* ALL REINFORCING DESIGNED FOR 1" MIN. COVER
* STEP - STEEL, PLASTIC COATED, 16" ON CENTER
* 6" ADJUSTMENT RINGS (2" THICK EACH RING)
* NEENAH #1550A-C FRAME AND LID FOR MANHOLE APPLICATION
* NEENAH #1550A FRAME WITH #2050 GRATE FOR CATCH BASIN APPLICATION
* NEENAH #3067-L FOR INLET APPLICATION

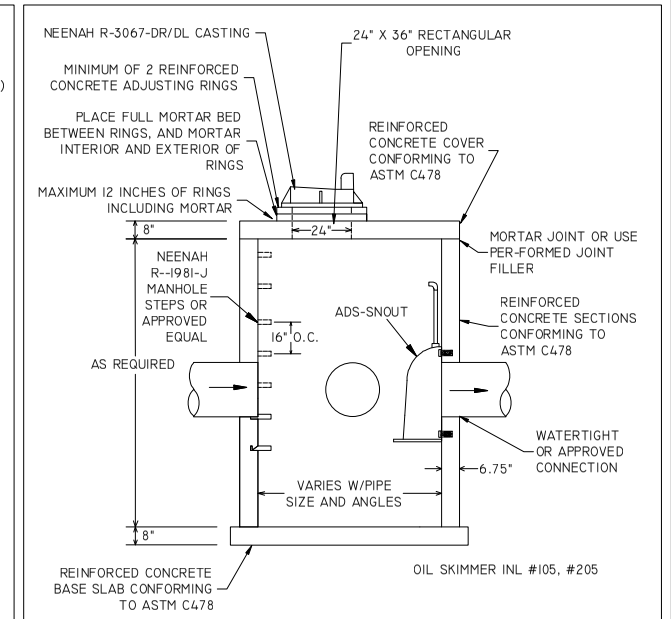
TYPE	DIAMETER Ⓐ	T
I	48"	5"
II	60"	6"
III	72"	8"
IV	27"	3 1/4"

STEPS NEEDED WHEN D > 4'

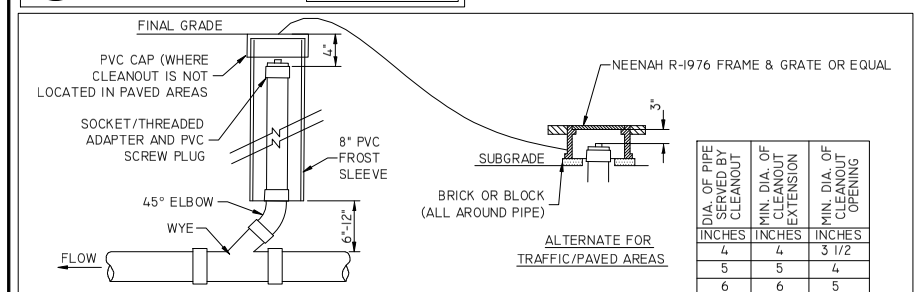
3 / SP6 PRECAST REINFORCED CONC. MANHOLE DETAIL
NOT TO SCALE



7 / SP6 24"x 36" CURB INLET AND CASTING DETAIL
NOT TO SCALE

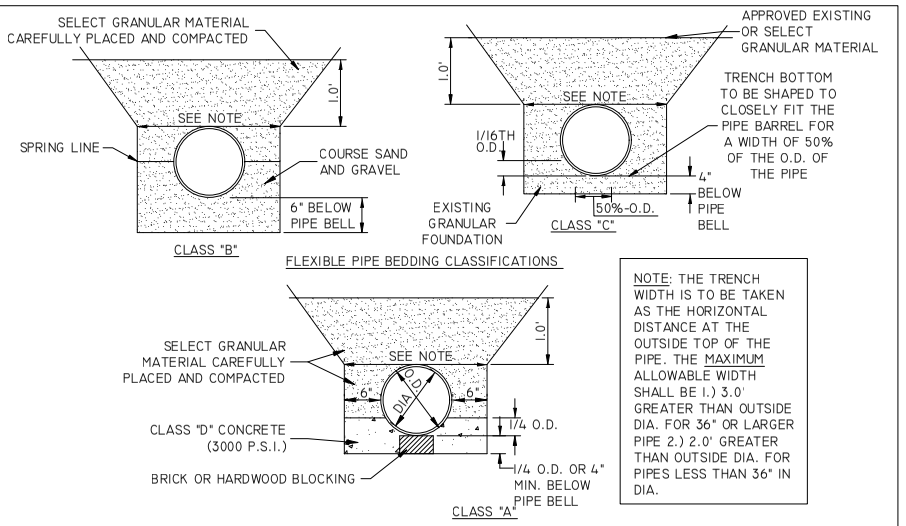


8 / SP6 STORM SEWER INLET WITH SUMP DETAIL
NOT TO SCALE

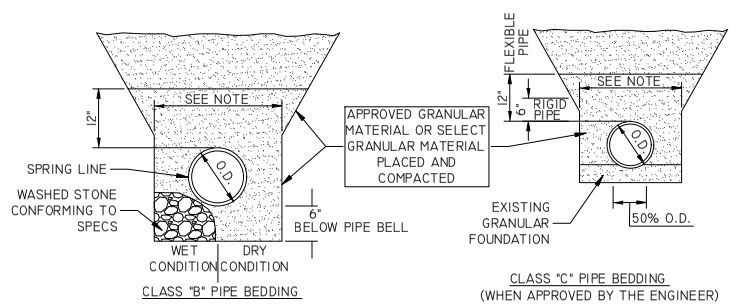


DIA. OF PIPE SERVED BY CLEANOUT	MIN. DIA. OF CLEANOUT EXTENSION	MIN. DIA. OF CLEANOUT OPENING
INCHES	INCHES	INCHES
4	4	3 1/2
5	5	4
6	6	5
8+	6	6

4 / SP6 SANITARY & STORM SEWER CLEANOUT CLEANOUT
NOT TO SCALE



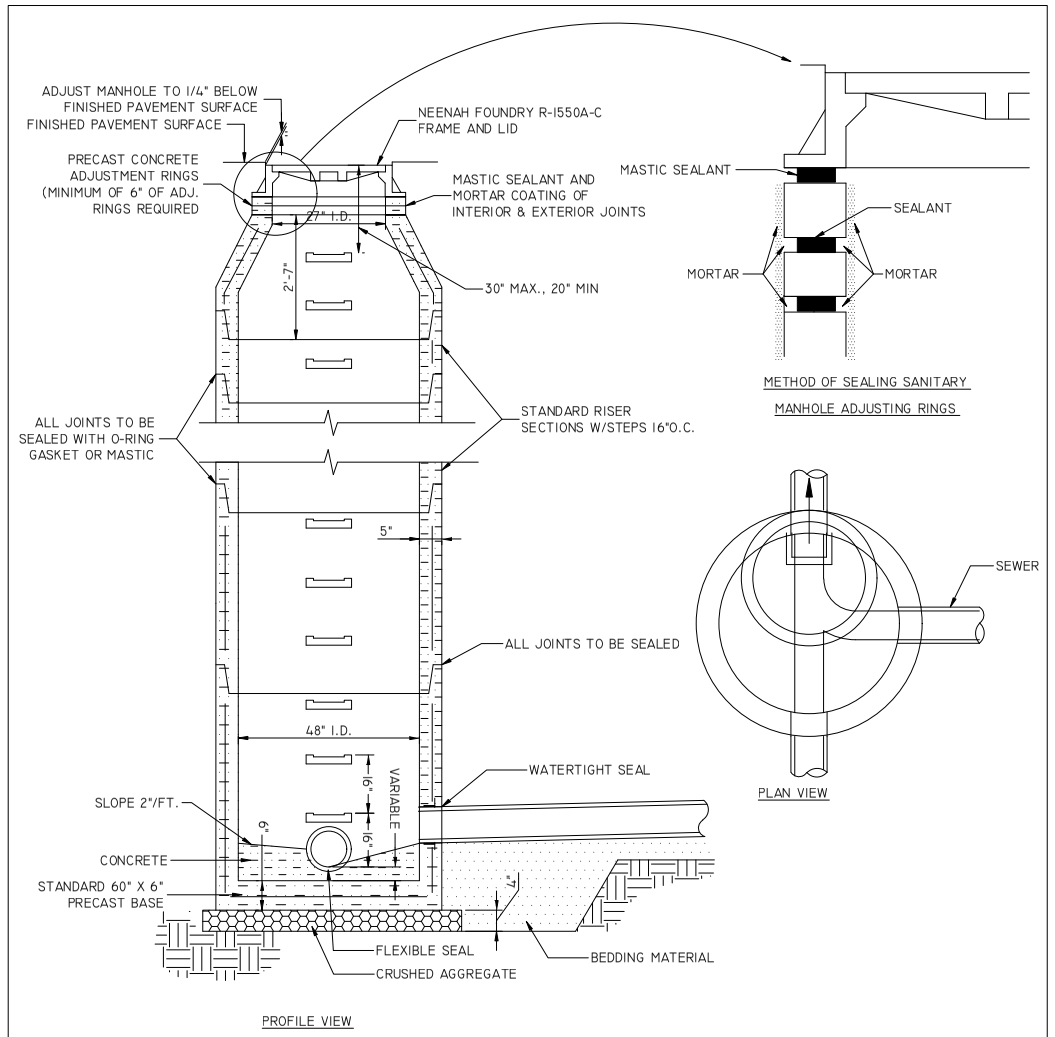
NOTE: THE TRENCH WIDTH IS TO BE TAKEN AS THE HORIZONTAL DISTANCE AT THE OUTSIDE TOP OF THE PIPE. THE MAXIMUM ALLOWABLE WIDTH SHALL BE 1.) 3.0' GREATER THAN OUTSIDE DIA. FOR 36" OR LARGER PIPE 2.) 2.0' GREATER THAN OUTSIDE DIA. FOR PIPES LESS THAN 36" IN DIA.



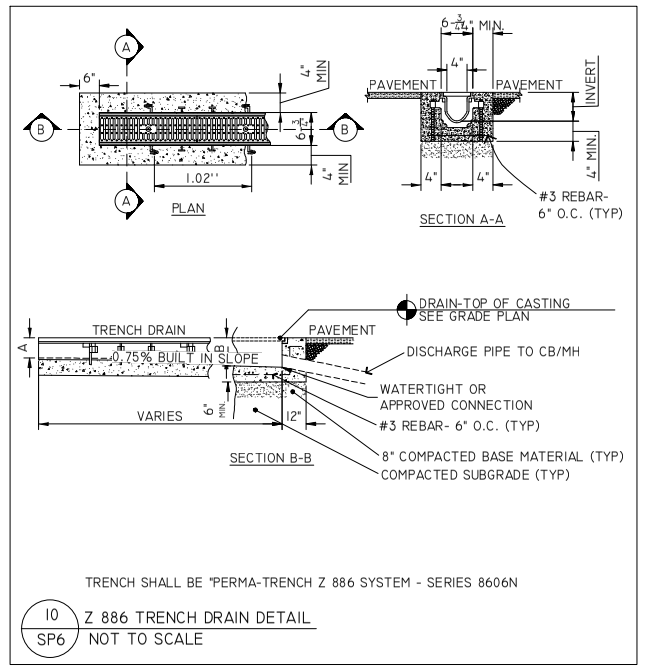
RIGID PIPE BEDDING CLASSIFICATIONS

ALTERNATE: WHERE THE ABOVE CONDITIONS ARE NOT SATISFIED, THE CONTRACTOR SHALL PLACE 4" OF GRANULAR BEDDING BENEATH THE PIPE AND EXTEND UP THE SIDE A DISTANCE OF 1/16TH THE O.D. OF THE PIPE

9 / SP6 PIPE BEDDING CLASSIFICATIONS DETAIL
NOT TO SCALE

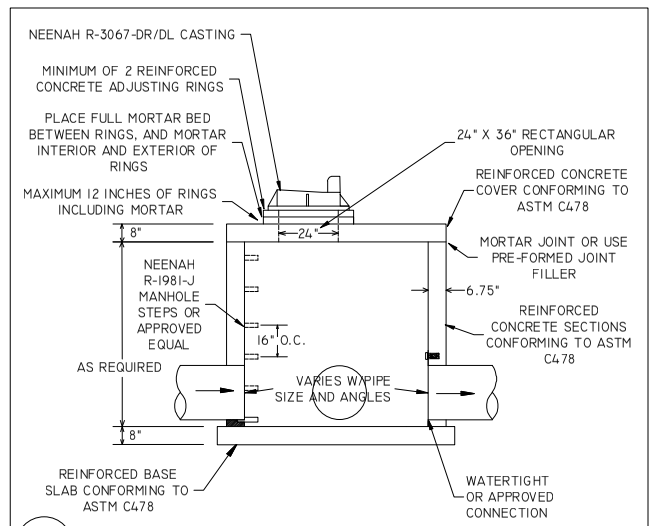


5 / SP6 SANITARY MANHOLE
NOT TO SCALE



TRENCH SHALL BE "PERMA-TRENCH Z 886 SYSTEM - SERIES 8606N

10 / SP6 Z 886 TRENCH DRAIN DETAIL
NOT TO SCALE



11 / SP6 STORM SEWER INLET WITHOUT SUMP DETAIL
NOT TO SCALE

KWIK TRIP STORES

KWIK STAR STORES

KWIK TRIP, Inc.
P.O. BOX 2107
1626 OAK STREET
LA CROSSE, WI 54602-2107
PH. (608) 781-8988
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REI Engineering, INC.
4080 N. 20TH AVENUE
WAUSAU, WISCONSIN 54401
PHONE: 715.675.9784 FAX: 715.675.4060
EMAIL: MAIL@REIENGINEERING.COM

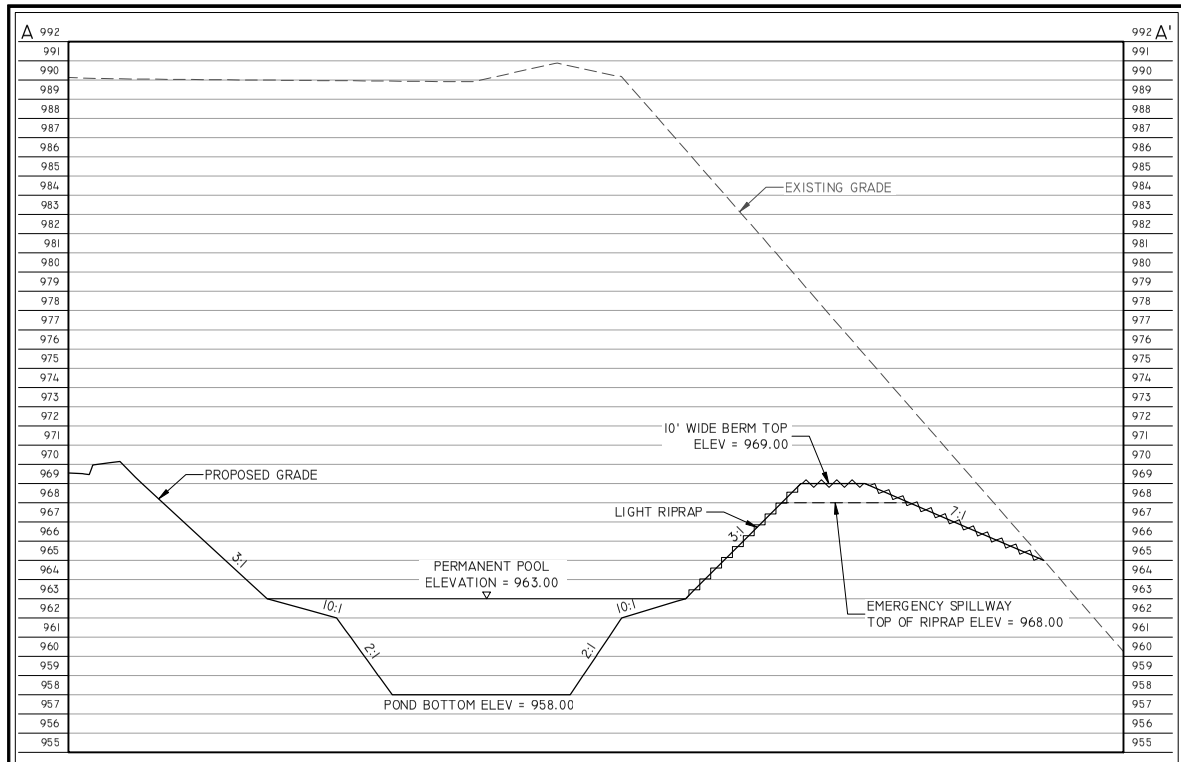
NO SCALE

SITE PLAN DETAILS
CONVENIENCE STORE #1283
STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY NAP
SCALE NOT TO SCALE
PROJ. NO. 10827
DATE 8/17/23 - REVIEW DOCUMENTS
SHEET SP6

DRAWING FILE: Q:\10800 - 10899\10827 - KWIK TRIP #1283 - HARTLAND\DRAWING\PLANS\10827-SP5-6-SITE DETAILS.DWG LAYOUT: SP6
PLOTTED: AUG 17, 2023 - 4:46PM PLOTTED BY: DAN



1 SWP1 WET DETENTION POND CROSS SECTION DETAIL
NTS

PROJECT DATA

PROJECT START DATE	APRIL 2024
PROJECT COMPLETION DATE	OCT 2024

SITE AREA DATA

PRE-CONSTRUCTION IMPERVIOUS AREA	0 SF
POST-CONSTRUCTION IMPERVIOUS AREA	105,272 SF
APPROX. AREA OF LAND DISTURBANCE	215,025 SF

SITE RUNOFF COEFFICIENT

PRE-CONSTRUCTION	61
POST-CONSTRUCTION	82

SOIL DATA

SURFACE SOIL	TOPSOIL
SUB-SURFACE SOIL	GRAVELLY
DEPTH OF GROUND WATER	UNKNOWN
DOWN-STREAM TRIBUTARY	PINE LAKE

ESTIMATED PRELIMINARY EROSION CONTROL QUANTITIES
(ACTUAL QUANTITIES SUBJECT TO CHANGE)

ITEM	QUANTITY
ROCK CONSTRUCTION ENTRANCE	400 SQ.YD.
INLET PROTECTION	10
EROSION CONTROL BLANKET	4,530 SQ.YD.
RIP RAP	5 CU. YD.
SILT FENCE	1,130 L.F.
DITCH CHECK	AS NEEDED
BIO ROLL/EROSION LOG	AS NEEDED

NOTE: FOR MAINTENANCE PURPOSES CONTRACTOR SHALL PROVIDE ALL SUFFICIENT QUANTITIES FOR REPAIR AND REPLACEMENT OF EROSION CONTROL DEVICES THROUGHOUT ALL PHASES OF THE PROJECTS CONSTRUCTION.

OKEYED NOTESO

1. TEMPORARY ROCK CONSTRUCTION ENTRANCE/EXIT. SEE DETAIL A/SWP3.

2. INSTALL SILT FENCE. SEE DETAIL D/SWP3.

3. PROVIDE INLET PROTECTION. REFER TO SWP2 FOR ACCEPTABLE PRODUCTS.

4. INSTALL LIGHT RIPRAP ON TYPE R GEOTEXTILE FABRIC. SEE DETAIL B/SWP3.

5. WET POND WITH TYPE A LINER TO SERVE AS SEDIMENT TRAP DURING CONSTRUCTION. SEE DETAILS A & B/SWP4.
SEDIMENT TRAP DETAILS
- TRAP BOTTOM ELEV. = 4.5' BELOW WEIR ELEV OR DEEPER
- TRAP TOP ELEV. = 969.00
- 6-FT WIDE WEIR ELEV. = 968.00

6. CONSTRUCT EMERGENCY OVERFLOW WEIR, WITH LIGHT RIPRAP ON TYPE R GEOTEXTILE FABRIC. SEE DETAIL 6/SP6.

SUGGESTED CONSTRUCTION SEQUENCE
- PROVIDE CONSTRUCTION ACCESS
- INSTALL SILT FENCE
- INSTALL INLET PROTECTION ON EXISTING STORM STRUCTURES
- SAWCUT AND REMOVE PAVEMENT, STRIP TOPSOIL, REMOVALS
- ROUGH GRADING
- INSTALL DIVERSIONS AND SEDIMENT TRAP
- CONSTRUCT BUILDING
- SITE UTILITY INSTALLATION
- INSTALL INLET AND CULVERT PROTECTION ON NEW STORM STRUCTURES
- FINISH GRADING
- CONSTRUCT BASE COURSE AND PAVEMENT
- INSTALL LAWN/ LANDSCAPE
- FLUSH STORM SEWER
- REMOVE EROSION CONTROL MEASURES ONLY AFTER ALL PAVEMENTS HAVE BEEN INSTALLED AND ALL SOILS HAVE BEEN STABILIZED

NOTES:

(A) CONTRACTOR SHALL ABIDE BY THE WDNR CONSERVATION PRACTICE STANDARDS FOR INSTALLATION AND MAINTENANCE OF EROSION CONTROL. REFER TO SWP4 FOR TECHNICAL STANDARDS EMPLOYED.

(B) CONTRACTOR SHALL PROVIDE CONCRETE WASHOUT AREAS ON-SITE. SEE DETAIL E/SWP4.

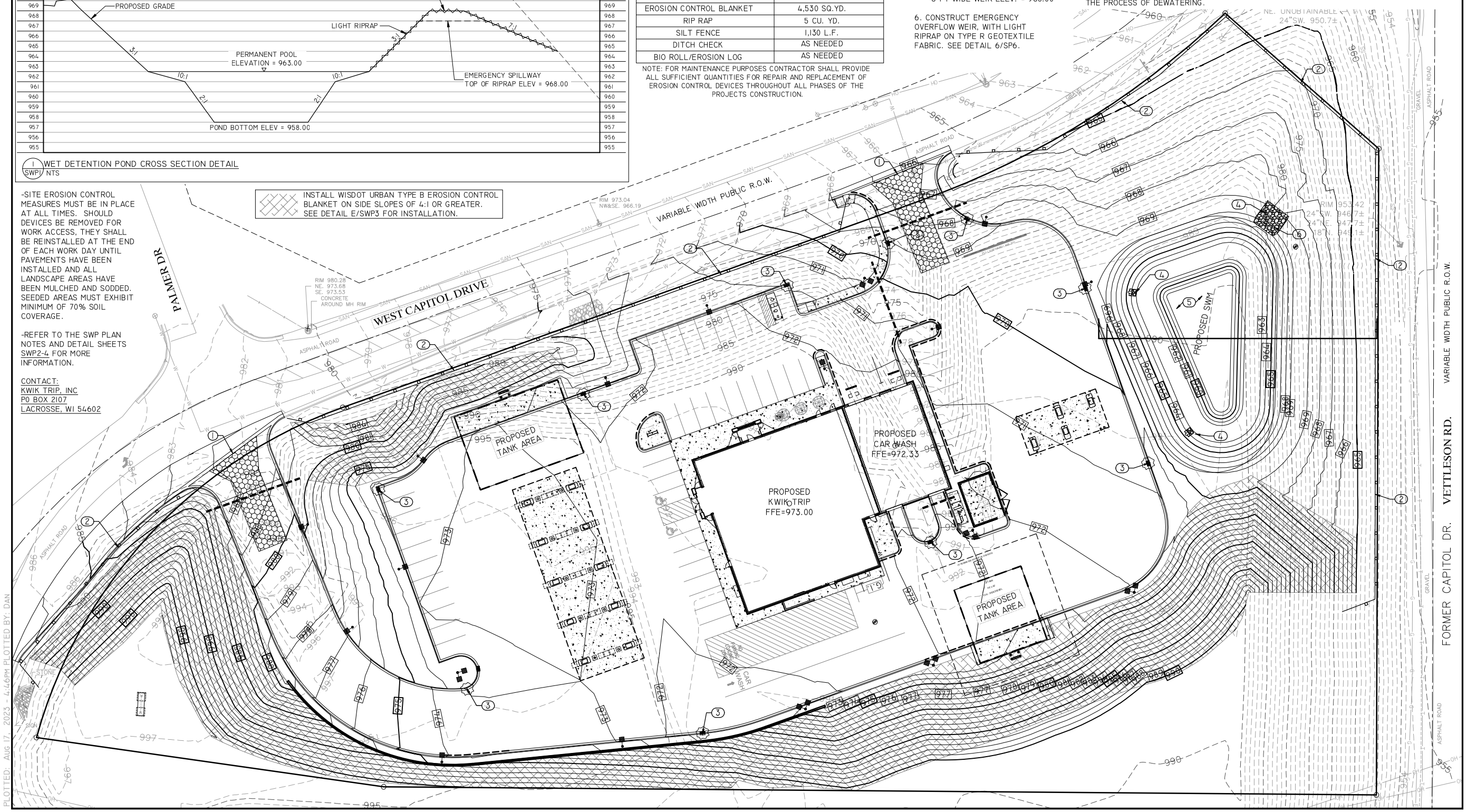
(C) DEWATERING BAGS SHALL BE READILY AVAILABLE AND SHALL BE USED AT ALL TIMES IN THE PROCESS OF DEWATERING.

-SITE EROSION CONTROL MEASURES MUST BE IN PLACE AT ALL TIMES. SHOULD DEVICES BE REMOVED FOR WORK ACCESS, THEY SHALL BE REINSTALLED AT THE END OF EACH WORK DAY UNTIL PAVEMENTS HAVE BEEN INSTALLED AND ALL LANDSCAPE AREAS HAVE BEEN MULCHED AND SODDED. SEEDED AREAS MUST EXHIBIT MINIMUM OF 70% SOIL COVERAGE.

-REFER TO THE SWP PLAN NOTES AND DETAIL SHEETS SWP2-4 FOR MORE INFORMATION.

CONTACT:
KWIK TRIP, INC
P0 BOX 2107
LACROSSE, WI 54602

INSTALL WISDOT URBAN TYPE B EROSION CONTROL BLANKET ON SIDE SLOPES OF 4:1 OR GREATER. SEE DETAIL E/SWP3 FOR INSTALLATION.



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REI Engineering, INC.
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WAUSAU, WISCONSIN 54401
PHONE: 715.675.9784 FAX: 715.675.4060
EMAIL: MAIL@REIENGINEERING.COM

SCALE
0 30 60

EROSION CONTROL PLAN

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	NAP
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SWP1

DRAWING FILE: Q:\10800 - 10899\10827 - KWIK TRIP #1283 - HARTLAND\DRAWING\PLANS\10827-SP7-SWPI-EC.DWG LAYOUT: SWPI
PLOTTED: AUG 17, 2023 - 4:46PM PLOTTED BY: DAN

STORM WATER POLLUTION PREVENTION PLAN

POLLUTION PREVENTION PLAN
ALL CONTRACTORS / SUBCONTRACTORS SHALL CONDUCT THEIR OPERATIONS IN A MANNER THAT MINIMIZES EROSION AND PREVENTS SEDIMENTS FROM LEAVING THE PROJECT SITE. THE PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLIANCE AND IMPLEMENTATION OF THE POLLUTION PREVENTION PLAN (PPP) FOR THEIR ENTIRE CONTRACT. THE RESPONSIBILITY SHALL BE FURTHER SHARED WITH SUBCONTRACTORS WHOSE WORK IS A SOURCE OF POTENTIAL POLLUTION AS DEFINED IN THE PPP.

I. SITE DESCRIPTION
THIS POLLUTION PREVENTION PLAN IS FOR THE CONSTRUCTION OF THE KWIK TRIP CONVENIENCE STORE #1283 PROJECT. THE PROJECT IS LOCATED IN SECTION 3, TOWNSHIP 7N, RANGE 18E, VILLAGE OF HARTLAND, WAUKESHA COUNTY, WISCONSIN.

THIS PPP COVERS 4.68 ACRES WITH AN ESTIMATED 4.68 ACRES BEING DISTURBED THROUGH EXCAVATION, GRADING, AND PAVING. THE PORTION OF THE PPP COVERED BY THIS CONTRACT HAS 4.68 ACRES BEING DISTURBED.

THE PROJECT IS LOCATED IN AN AREA OF HOCHEIM LOAM (HmC2), THERESA SILT LOAM (ThB). THE ESTIMATED CURVE NUMBER FOR THIS PPP AFTER CONSTRUCTION IS 82.

REFER TO PLANS: KWIK TRIP CONVENIENCE STORE #1283 FOR LOCATIONS OF TYPICAL SLOPES, DITCH GRADES, AND MAJOR STRUCTURAL AND NON-STRUCTURAL CONTROLS. A COPY OF THIS PLAN WILL BE ON FILE AT THE PROJECT ENGINEER'S OFFICE AND ON-SITE. RUNOFF FROM THIS WORK WILL OVERLAND FLOW THROUGH DETENTION POND, DITCHES, STORM SEWER TO PIKE LAKE.

THIS PROJECT IS NOT LOCATED WITHIN A 100-YEAR FLOODPLAIN.

POTENTIAL SOURCES OF POLLUTION:
SITE SOURCES OF POLLUTION GENERATED AS A RESULT OF THIS WORK RELATE TO SILTS AND SEDIMENT WHICH MAY BE TRANSPORTED AS A RESULT OF A STORM EVENT. HOWEVER, THIS PPP PROVIDES CONVEYANCE FOR OTHER (NON-PROJECT RELATED) OPERATIONS. THESE OTHER OPERATIONS HAVE STORM WATER RUNOFF, THE REGULATION OF WHICH IS BEYOND THE CONTROL OF THIS PPP. POTENTIALLY THIS RUNOFF CAN CONTAIN POLLUTANTS RELATED TO SITE-SPECIFIC LAND USES.
EXAMPLES ARE:

RURAL AGRICULTURAL ACTIVITIES:
RUNOFF FROM AGRICULTURAL LAND USE CAN POTENTIALLY CONTAIN CHEMICALS INCLUDING HERBICIDES, PESTICIDES, FUNGICIDES, AND FERTILIZERS.

CONSTRUCTION ACTIVITIES:
RUNOFF FROM CONSTRUCTION ACTIVITIES CAN POTENTIALLY CONTAIN FUELS, OILS, AND CHEMICALS FROM SPECIFIC CONSTRUCTION RELATED ACTIVITIES.

2. CONTROLS

INLET PROTECTION DEVICES SHALL BE PLACED AROUND INTAKES. SILT FENCE SHALL BE PLACED AT LOCATIONS WHERE RUNOFF CAN MOVE OFFSITE. VEGETATION IN AREAS NOT NEEDED FOR CONSTRUCTION SHALL BE PRESERVED. AS AREAS REACH THEIR FINAL GRADE, ADDITIONAL SILT FENCES, SILT BASINS, INTERCEPTING DITCHES, SOD FLUMES, LETDOWNS, BRIDGE END DRAINS, AND EARTH DIKES SHALL BE INSTALLED AS SPECIFIED IN THE PLANS AND / OR AS REQUIRED BY PROJECT ENGINEER. THIS MAY INCLUDE USING SILT FENCE AS DITCH CHECKS. TEMPORARY STABILIZING SHALL BE COMPLETED AS THE DISTURBED AREAS ARE CONSTRUCTED. IF CONSTRUCTION ACTIVITY IS NOT PLANNED TO OCCUR IN A DISTURBED AREA IMMEDIATELY, THE AREA SHALL BE STABILIZED BY TEMPORARY SEEDING OR MULCHING WITHIN 14 DAYS. OTHER STABILIZING METHODS SHALL BE USED OUTSIDE THE SEEDING PERIOD.

THIS WORK SHALL BE DONE IN ACCORDANCE WITH THE WISCONSIN TRANSPORTATION STANDARD SPECIFICATIONS. CONTRACTOR SHALL ALSO FOLLOW ALL REQUIREMENTS OF THE WAUKESHA COUNTY EROSION AND SEDIMENT CONTROL REGULATIONS.

AS THE WORK PROGRESSES, ADDITIONAL EROSION CONTROL ITEMS SUCH AS SOD FLUMES, DITCH CHECKS, ROCK OUTLET PROTECTION, AND LETDOWN STRUCTURES AND OTHER APPROPRIATE MEASURES SHALL BE INSTALLED BY THE CONTRACTOR AS DETERMINED BY THE ENGINEER AFTER FIELD INVESTIGATION. THE CONSTRUCTION WILL BE COMPLETED WITH THE ESTABLISHMENT OF PERMANENT PERENNIAL VEGETATION OF ALL DISTURBED AREAS BY THE CONTRACTOR.

3. OTHER CONTROLS

CONTRACTOR DISPOSAL OF UNUSED CONSTRUCTION MATERIALS AND CONSTRUCTION MATERIAL WASTE SHALL COMPLY WITH APPLICABLE STATE AND LOCAL WASTE DISPOSAL, SANITARY SEWER, OR SEPTIC SYSTEM REGULATIONS. IN THE EVENT OF A CONFLICT WITH OTHER GOVERNMENT LAWS, RULES, AND REGULATIONS, THE MORE RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.

MUD TRACK-OUT SHALL BE CLEANED OFF THE ROADWAY NIGHTLY AND BEFORE ANY RAINFALL EVENT. WATER MAY NOT BE USED TO CLEAN THE ROADWAY.

CONTRACTOR SHALL KEEP PERMIT, INSPECTION LOGS, SITE PLAN, AND OTHER PERMIT DATA ON SITE AT ALL TIMES. MATERIAL SHALL BE PLACED IN AN EASILY ACCESSIBLE MAILBOX THAT IS CLEARLY MARKED "SWPPP".

ALL FUELS AND OILS SHALL BE CONTAINED BY A SECONDARY CONTAINMENT BERM OR WITHIN A TRAILER.

ALL SILT FENCE AND INLET PROTECTION DEVICES AS SHOWN SHALL BE INSTALLED PRIOR TO COMMENCING CONSTRUCTION WHENEVER POSSIBLE.

A NOTICE OF DISCONTINUATION MUST BE FILED WITH THE WDNR ONCE VEGETATION HAS BEEN ESTABLISHED TO A MINIMUM COVERAGE OF 70%.

CONTRACTOR SHALL MARK ON THE INITIAL STORM WATER POLLUTION PREVENTION PLAN THE LOCATION OF STORAGE AREAS FOR FUELS AND OILS, PORTA-POTTY, DUMPSTER OR WASTE CONTAINMENT BINS, CONCRETE WAS OUT AREA, AND OTHER NECESSARY ITEMS.

ENTRANCES SHALL BE MAINTAINED TO CONTROL MUD TRACK-OUT FROM THE SITE.

THE STORMWATER POLLUTION PREVENTION PLAN SHALL BE UPDATED AS NECESSARY DURING CONSTRUCTION.

APPROVED STATE OF LOCAL PLANS:
DURING THE COURSE OF THIS CONSTRUCTION, IT IS POSSIBLE THAT SITUATIONS WILL ARISE WHERE UNKNOWN MATERIALS WILL BE ENCOUNTERED. WHEN SUCH SITUATIONS ARE ENCOUNTERED, THEY WILL BE HANDLED ACCORDING TO ALL FEDERAL, STATE, AND LOCAL REGULATIONS IN EFFECT AT THE TIME.

4. MAINTENANCE

THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL TEMPORARY EROSION CONTROL MEASURES IN PROPER WORKING ORDER, INCLUDING CLEANING, REPAIRING, OR REPLACING THEM THROUGHOUT THE CONTRACT PERIOD. CLEANING OF SILT CONTROL DEVICES SHALL BEGIN WHEN THE FEATURES HAVE LOST 50% OF THEIR CAPACITY.

5. INSPECTIONS

INSPECTIONS SHALL BE MADE JOINTLY BY THE CONTRACTOR AND THE CONTRACTING AUTHORITY EVERY SEVEN CALENDAR DAYS. THE CONTRACTOR SHALL IMMEDIATELY BEGIN CORRECTIVE ACTION ON ALL DEFICIENCIES FOUND. THE FINDINGS OF THIS INSPECTION SHALL BE RECORDED IN THE PROJECT DIARY. THIS PPP MAY BE REVISED BASED ON THE FINDING OF THE INSPECTION. THE CONTRACTOR SHALL IMPLEMENT ALL REVISIONS. ALL CORRECTIVE ACTIONS SHALL BE COMPLETED WITHIN 3 CALENDAR DAYS OF THE INSPECTION.

6. NON-STORM DISCHARGES

THIS INCLUDES SUBSURFACE DRAINS (I.E. FIELD TILE, SUBDRAINS), SLOPE DRAINS, AND BRIDGE END DRAINS. THE VELOCITY OF THE DISCHARGE FROM THESE FEATURES MAY BE CONTROLLED BY THE USE OF PATIO BLOCKS, CLASS A STONE, OR EROSION STONE.

7. SEQUENCE OF CONSTRUCTION ACTIVITIES

ALL EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO COMMENCING ANY CONSTRUCTION ON-SITE. FIRST, ALL NOTED REMOVALS SHALL BE COMPLETED. SECOND, GRADING CAN COMMENCE TO BRING SOIL TO FINAL GRADE.. NEXT, INSTALLATION OF UTILITIES AND PAVING SHALL BE COMPLETED. FINALLY, THE DISTURBED AREAS SHALL BE SEEDED, FERTILIZED, AND MULCHED AS SHOWN IN THE PLANS.

OWNER CERTIFICATION:

"I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."

NAME (PRINTED OR TYPED): _____

TITLE: _____

SIGNATURE: _____

DATE: _____

NAME OF COMPANY, IF APPLICABLE: _____

ADDRESS: _____

CITY, STATE, ZIP CODE: _____

TELEPHONE NUMBER: _____

ADDRESS OF THE SITE: _____

CONTRACTOR / SUBCONTRACTOR CERTIFICATION:

"I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE AS PART OF THIS CERTIFICATION. FURTHER, BY MY SIGNATURE, I UNDERSTAND THAT I AM BECOMING S CO-PERMITTEE, ALONG WITH THE OWNER(S) AND OTHER CONTRACTORS AND SUBCONTRACTORS SIGNING SUCH CERTIFICATIONS, TO THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES NPDES GENERAL PERMIT NO. 2 FOR "STORM WATER DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY FOR CONSTRUCTION ACTIVITIES" AT THE IDENTIFIED SITE. AS A CO-PERMITTEE, I UNDERSTAND THAT I, AND MY COMPANY, ARE LEGALLY REQUIRED UNDER THE CLEAN WATER ACT AND THE CODE OF WISCONSIN, TO ENSURE COMPLIANCE WITH THE TERMS AND CONDITIONS OF THE STORM WATER POLLUTION PREVENTION PLAN DEVELOPED UNDER THE NPDES PERMIT AND THE TERMS OF THE NPDES PERMIT."

NAME (PRINTED OR TYPED): _____

TITLE: _____

SIGNATURE: _____

DATE: _____

NAME OF CONTRACTING FIRM: _____

ADDRESS: _____

CITY, STATE, ZIP CODE: _____

TELEPHONE NUMBER: _____

ADDRESS OF THE SITE: _____

CONTRACTORS/SUBCONTRACTORS WHO WILL IMPLEMENT EACH EROSION CONTROL MEASURE:

SILT FENCE: CONTRACTOR (WITH ADDRESS AND TELEPHONE NUMBER)

_____

TOPSOIL BERM: CONTRACTOR (WITH ADDRESS AND TELEPHONE NUMBER)

_____

STABILIZED CONSTRUCTION ENTRANCE: CONTRACTOR (WITH ADDRESS AND TELEPHONE NUMBER)

_____

CONCRETE WASH-OUT AREA: CONTRACTOR (WITH ADDRESS AND TELEPHONE NUMBER)

_____

DUMPSTER: CONTRACTOR (WITH ADDRESS AND TELEPHONE NUMBER)

_____

PORT-A-POTTY: CONTRACTOR (WITH ADDRESS AND TELEPHONE NUMBER)

_____

INLET PROTECTION DEVICE: CONTRACTOR (WITH ADDRESS AND TELEPHONE NUMBER)

_____

KWIK TRIP™ STORES

KWIK STAR™ STORES

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EMAIL: MAIL@REIENGINEERING.COM

NO SCALE

EROSION CONTROL DETAILS

CONVENIENCE STORE #1283

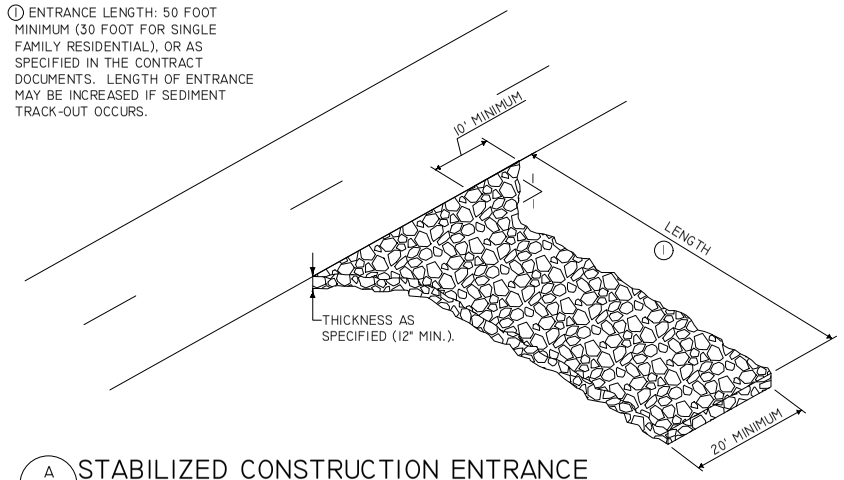
STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	NAP XXX
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SWP2

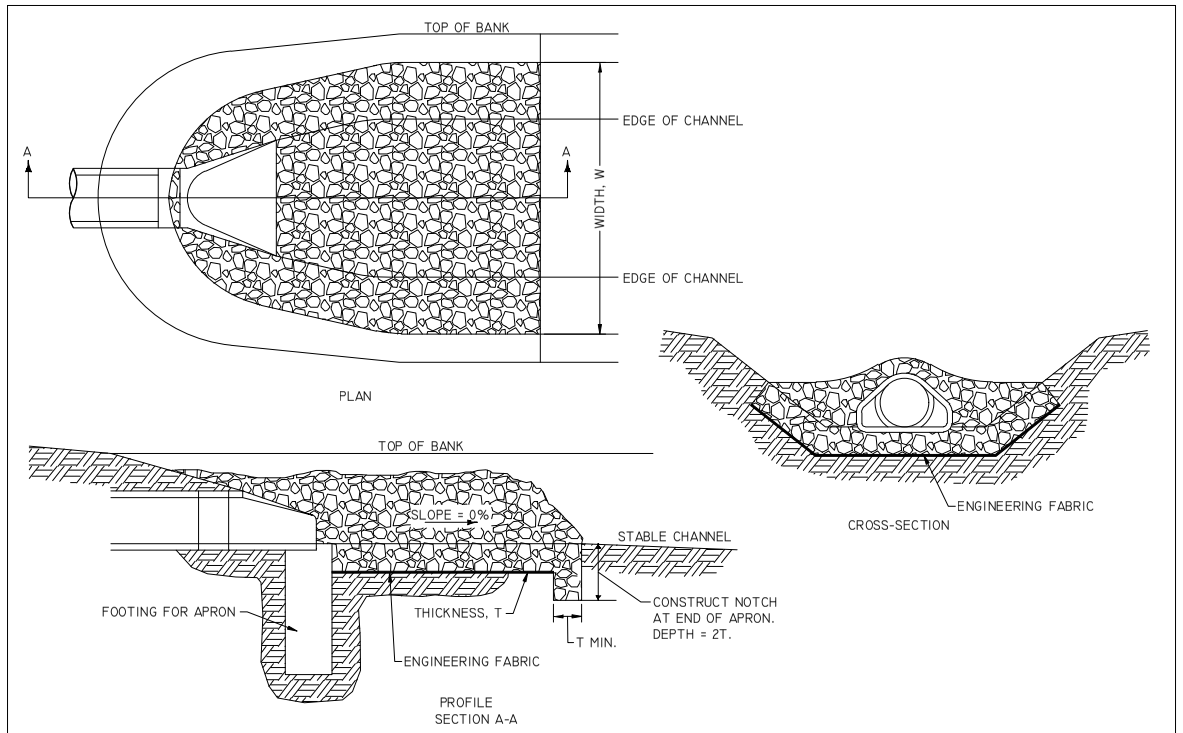
DRAWING FILE: Q:\10800 - 10899\10827 - KWIK TRIP #1283 - HARTLAND\DRAWING\PLANS\10827-SP8-SWP2-4-EC-DETAILS.DWG LAYOUT: SWP2
PLOTTED: AUG 17, 2023 - 4:47PM PLOTTED BY: DAN

① ENTRANCE LENGTH: 50 FOOT MINIMUM (30 FOOT FOR SINGLE FAMILY RESIDENTIAL), OR AS SPECIFIED IN THE CONTRACT DOCUMENTS. LENGTH OF ENTRANCE MAY BE INCREASED IF SEDIMENT TRACK-OUT OCCURS.



A SWP3 STABILIZED CONSTRUCTION ENTRANCE

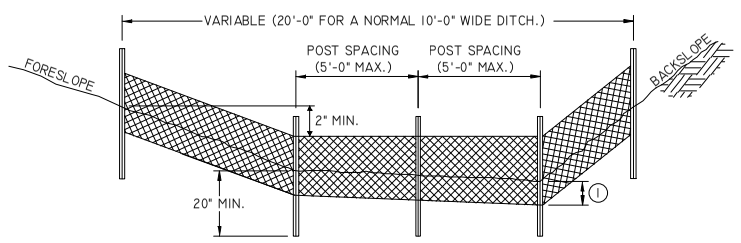
FOR CONSTRUCTION EGRESS POINTS
NTS



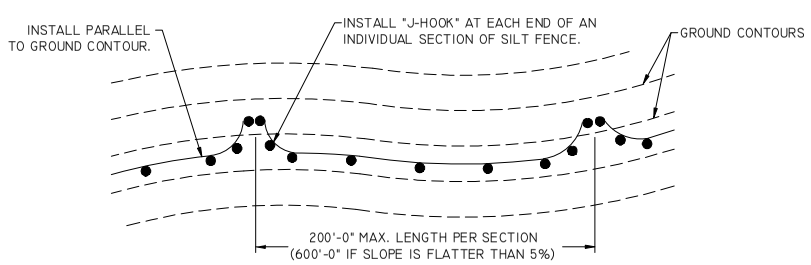
B SWP3 RIP RAP APRON FOR PIPE OUTLET INTO CHANNEL

NTS

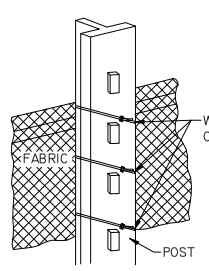
① INSERT 12 INCHES OF FABRIC A MINIMUM OF 6 INCHES DEEP (FABRIC MAY BE FOLDED BELOW THE GROUND LINE).



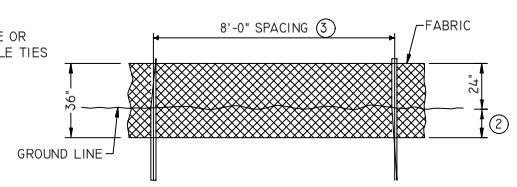
TYPICAL SILT FENCE DITCH CHECK



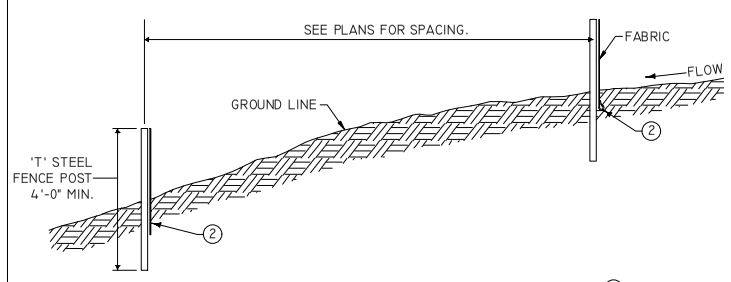
TYPICAL SILT FENCE INSTALLATION ON LONGITUDINAL SLOPES (PLAN VIEW)



ATTACHMENT TO POST



DETAILS OF SILT FENCE ON LONGITUDINAL SLOPES



TYPICAL SILT FENCE INSTALLATION ON LONGITUDINAL SLOPES (PROFILE VIEW)

② INSERT 12 INCHES OF FABRIC A MINIMUM OF 6 INCHES DEEP (FABRIC MAY BE FOLDED BELOW THE GROUND LINE).

③ REDUCE POST SPACING TO 5'-0" AT WATER CONCENTRATION AREAS, OR AS REQUIRED TO ADEQUATELY SUPPORT FENCE.

D SWP3 SILT FENCE

NTS

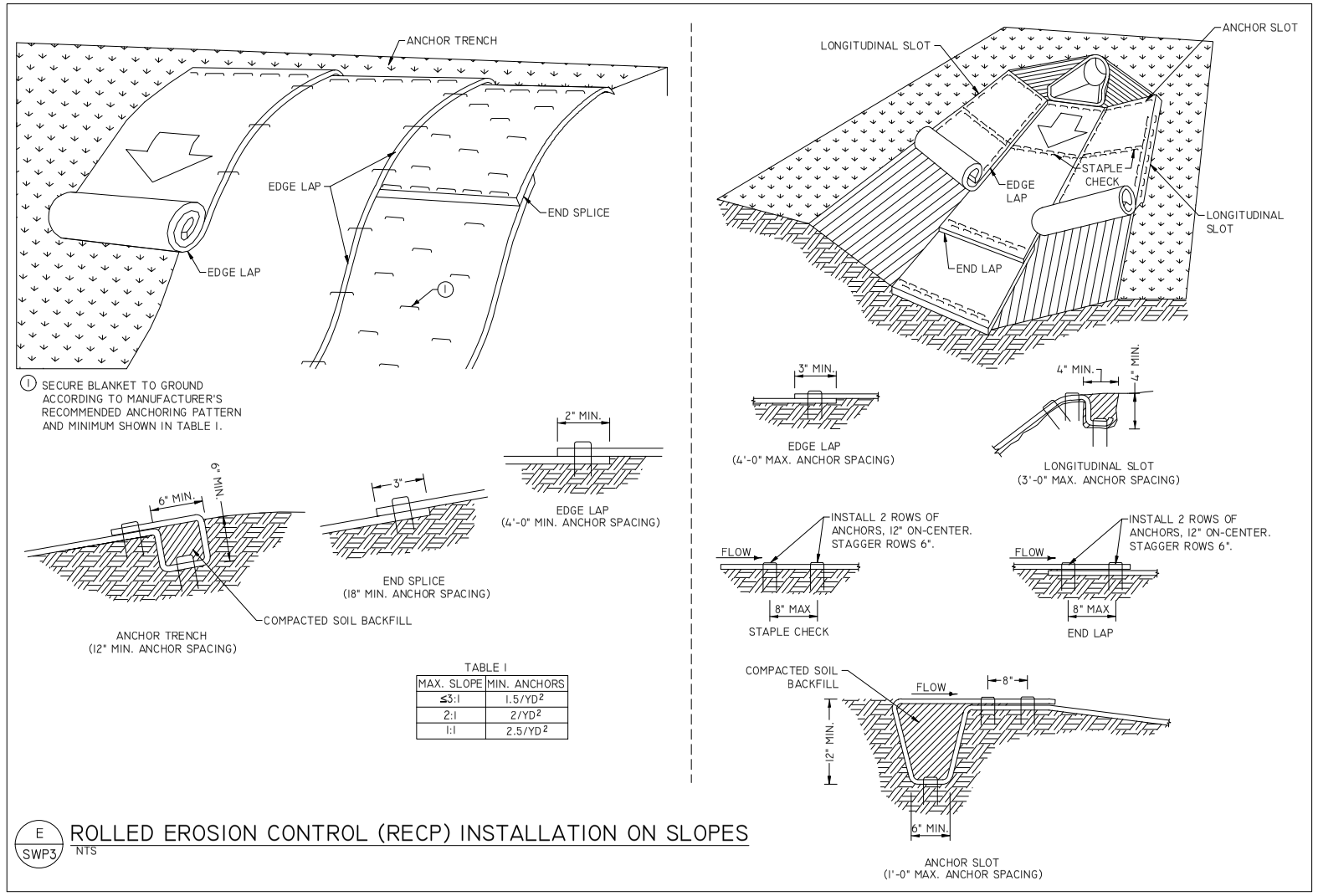


TABLE I

MAX. SLOPE	MIN. ANCHORS
≤3:1	1.5/YD²
2:1	2/YD²
1:1	2.5/YD²

E SWP3 ROLLED EROSION CONTROL (RECP) INSTALLATION ON SLOPES

NTS

ALL EROSION CONTROL MEASURES TO BE INSTALLED AND MAINTAINED PER WDNR STANDARDS
HTTP://DNR.WI.GOV/ORG/WATER/WM/NPS/STORMWATER/TECHSTDS.HTM

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PHONE: 715.675.9784 FAX: 715.675.4060
EMAIL: MAIL@REIENGINEERING.COM

NO SCALE

EROSION CONTROL DETAILS

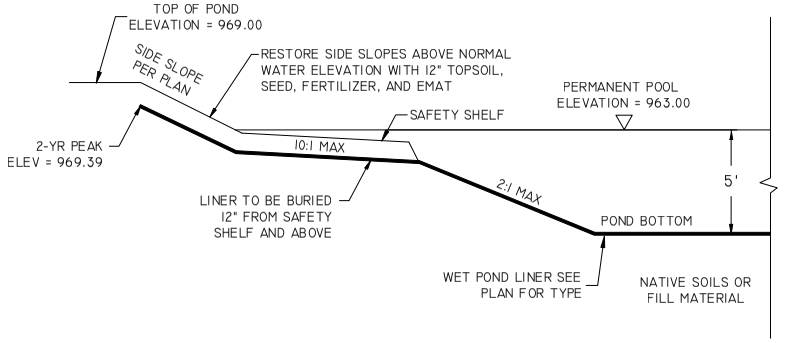
CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	NAP XXX
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SWP3

DRAWING FILE: Q:\10800 - 10899\10827 - KWIK TRIP #1283 - HARTLAND\DRAWING\PLANS\10827-SP8-SWP2-4-EC-DETAILS.DWG LAYOUT: SWP3
PLOTTED: AUG 17, 2023 - 4:47PM PLOTTED BY: DAN



GENERAL POND LINER SPECIFICATIONS
(REFER TO APPENDIX D OF WDNR TECHNICAL STANDARD 1001 FOR DETAILED SPECIFICATIONS)

*1. TYPE A LINER (ANY OF THE FOLLOWING)
- CLAY LINER: MINIMUM THICKNESS OF 2 FEET WITH AN IN-PLACE HYDRAULIC CONDUCTIVITY OF 1×10^{-7} CM/SEC OR LESS.
- HDPE: MINIMUM THICKNESS OF 60 MIL.
- GCL: GEOSYNTHETIC CLAY LINER PER NRCS SPECIFICATIONS OUTLINED IN APPENDIX D.

TYPE B LINER (ANY OF THE FOLLOWING)
- CLAY LINER: MINIMUM THICKNESS OF 2 FEET WITH AN IN-PLACE HYDRAULIC CONDUCTIVITY OF 1×10^{-6} CM/SEC OR LESS.
- HDPE: MINIMUM THICKNESS OF 40 MIL.
- PPL: MINIMUM THICKNESS OF 30 MIL.

TYPE C LINER (ANY OF THE FOLLOWING)
- SILT/CLAY LINER: MINIMUM THICKNESS OF 2 FEET
- HDPE: ANY THICKNESS
- PPL: MINIMUM THICKNESS OF 20 MIL
- PVC: MINIMUM THICKNESS OF 30 MIL
- EPDM: MINIMUM THICKNESS OF 45 MIL

NOTE:
1. SHOULD THE CONTRACTOR ENCOUNTER SEASONAL OR PERCHED GROUNDWATER DURING CONSTRUCTION OF THE POND AND IT'S LINER, CONTACT ENGINEER FOR UNDERDRAIN RECOMMENDATIONS.

2. MANUFACTURED LINERS SHALL BE PROVIDED WITH AIR-RELEASE VENTS TO PREVENT FLOATING.

3. CONTRACTOR TO PROVIDE POND LINER DOCUMENTATION TO OWNER PRIOR TO FINAL ACCEPTANCE.

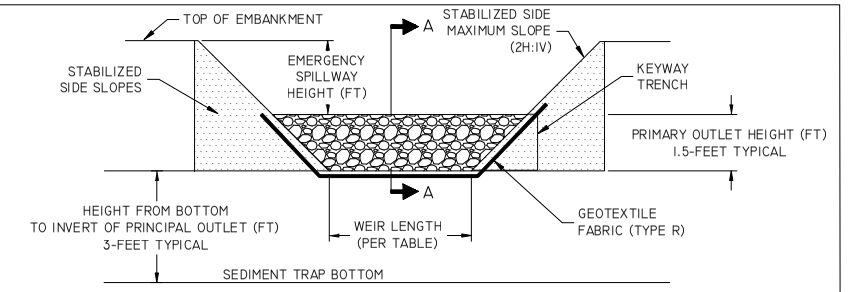
A / SWP4 WET POND LINER
NTS

NOTES:
1. SIDE SLOPES AND FACES OF EARTHEN EMBANKMENT AROUND OUTLET SHALL BE ARMORED WITH RIPRAP OR STABILIZED WITH EROSION MAT SUFFICIENT TO HANDLE FLOWS FROM THE 10-YEAR STORM.

2. STONE (SHORT DURATION): 3-6" WELL GRADED ANGULAR CLEAR STONE.

3. STONE (6+ MONTHS): COMBINATION OF LIGHT RIPRAP WITH 12"-THICK LAYER OF 1" ANGULAR CLEAR STONE.

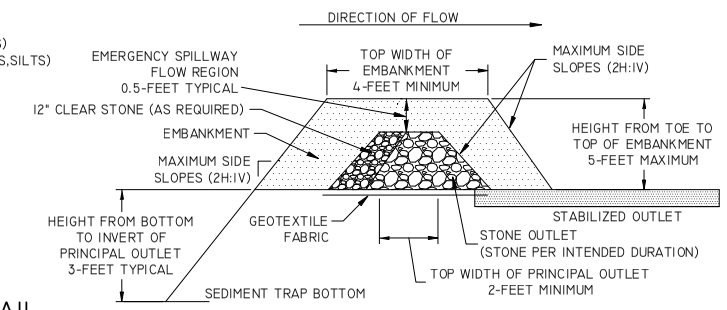
4. REFER TO WDNR TECH STD 1063 FOR ADDITIONAL INFORMATION.



CROSS-SECTION VIEW OF PRINCIPAL OUTLET

* AS = 625 X ADR (COARSE GRAINED SOILS + SANDS)
AS = 1560 X ADR (MEDIUM GRAINED SOILS + LOAMS,SILTS)
AS = 5300 X ADR (FINE GRAINED SOILS + CLAYS)

ADR (OC)	WEIR LENGTH (FT)
1	4
2	6
3	8
4	10
5	12



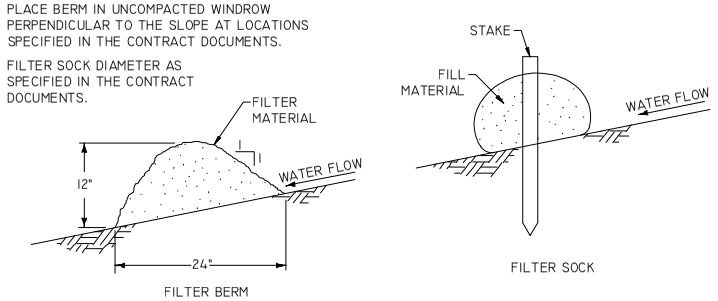
VIEW A-A OF PRINCIPAL OUTLET

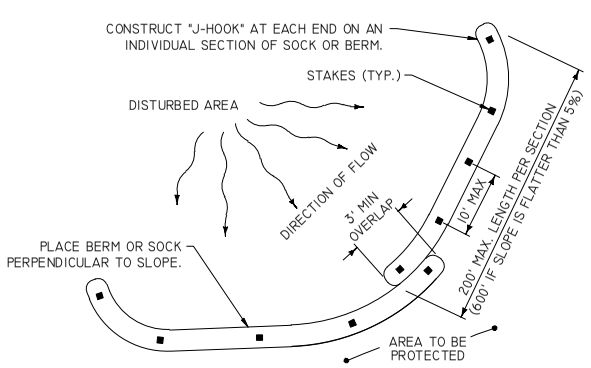
B / SWP4 SEDIMENT TRAP DETAIL
NTS

BERM SHOWN IS TYPICAL FOR SLOPES FLATTER THAN 3:1. FOR STEEPER SLOPES, INCREASE BERM SIZE AS DIRECTED BY THE ENGINEER.

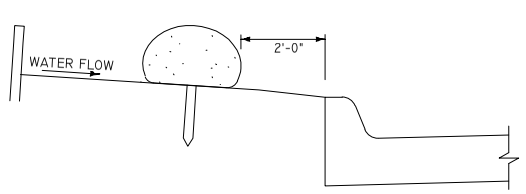
PLACE BERM IN UNCOMPACTED WINDROW PERPENDICULAR TO THE SLOPE AT LOCATIONS SPECIFIED IN THE CONTRACT DOCUMENTS.

FILTER SOCK DIAMETER AS SPECIFIED IN THE CONTRACT DOCUMENTS.





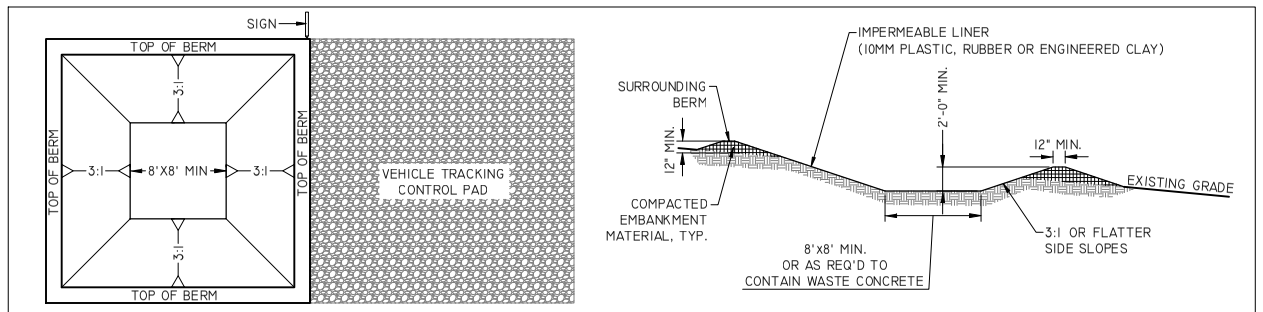
PLAN VIEW OF SLOPE
(FOR SEDIMENT AND SLOPE CONTROL)



SECTION VIEW AT STREET
(FOR PERIMETER CONTROL ALONG STREET)

TYPICAL PLACEMENT OF BERM OR SOCK

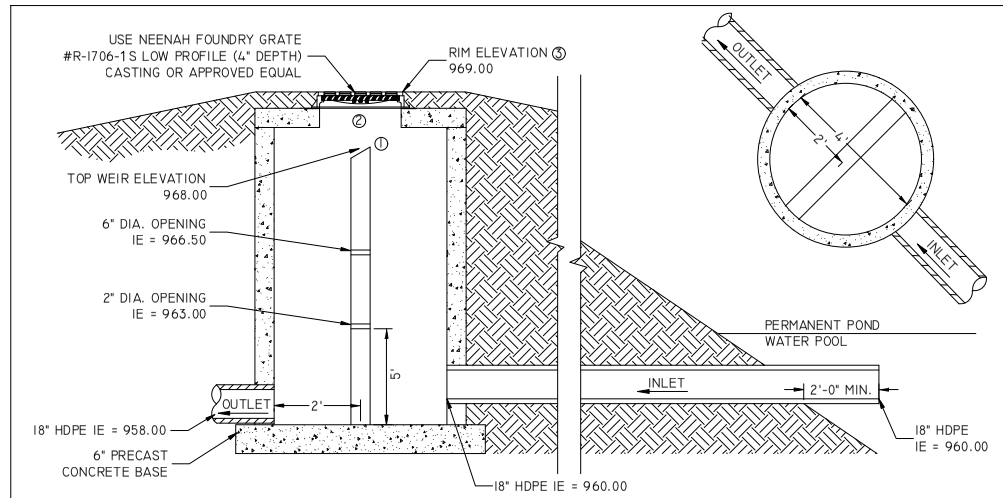
C / SWP4 FILTER BERM AND FILTER SOCK
NTS



CONCRETE WASHOUT AREA INSTALLATION NOTES
1. SEE EROSION CONTROL PLAN FOR LOCATIONS OF CONCRETE WASHOUT AREA(S). TO BE PLACED A MIN. OF 50' FROM DRAINAGEWAYS, BODIES OF WATER, AND INLETS.)
2. THE CONCRETE WASHOUT AREA(S) SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
3. VEHICLE TRACKING CONTROL PAD IS REQ'D AT THE ACCESS POINT(S).
4. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA(S), AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREAS TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
5. EXCAVATED MATERIAL SHALL BE UTILIZED IN PERIMETER BERM CONSTRUCTION.

CONCRETE WASHOUT AREA MAINTENANCE NOTES
6. THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE
7. AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM SITE AND DISPOSED OF AT AN APPROVED WASTE SITE.
8. WHEN CONCRETE WASHOUT AREA(S) IS REMOVED, THE DISTURBED AREA SHALL BE STABILIZED PER SITE EROSION CONTROL MEASURES.
9. INSPECT WEEKLY AND DURING AND AFTER ALL STORM EVENTS. CLEAN-OUT OR COVER WASHOUT AREA PRIOR TO PREDICTED STORM EVENTS TO PREVENT OVER-FLOW.

E / SWP4 CONCRETE WASHOUT AREA
NTS



① 4" THICK MASONRY WALL OR ¼"STEEL PLATE. GROUT OR SEAL ALONG SIDES OF MANHOLE
② FORM OPENING IN TOP SLAB TO FIT CASTING
③ ADJUST GRADING AT THE OUTLET STRUCTURE TO COVER CASTING TO THE PROPOSED RIM ELEVATION

F / SWP4 OUTLET CONTROL STRUCTURE
NTS

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NO SCALE

EROSION CONTROL DETAILS
CONVENIENCE STORE #1283
STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

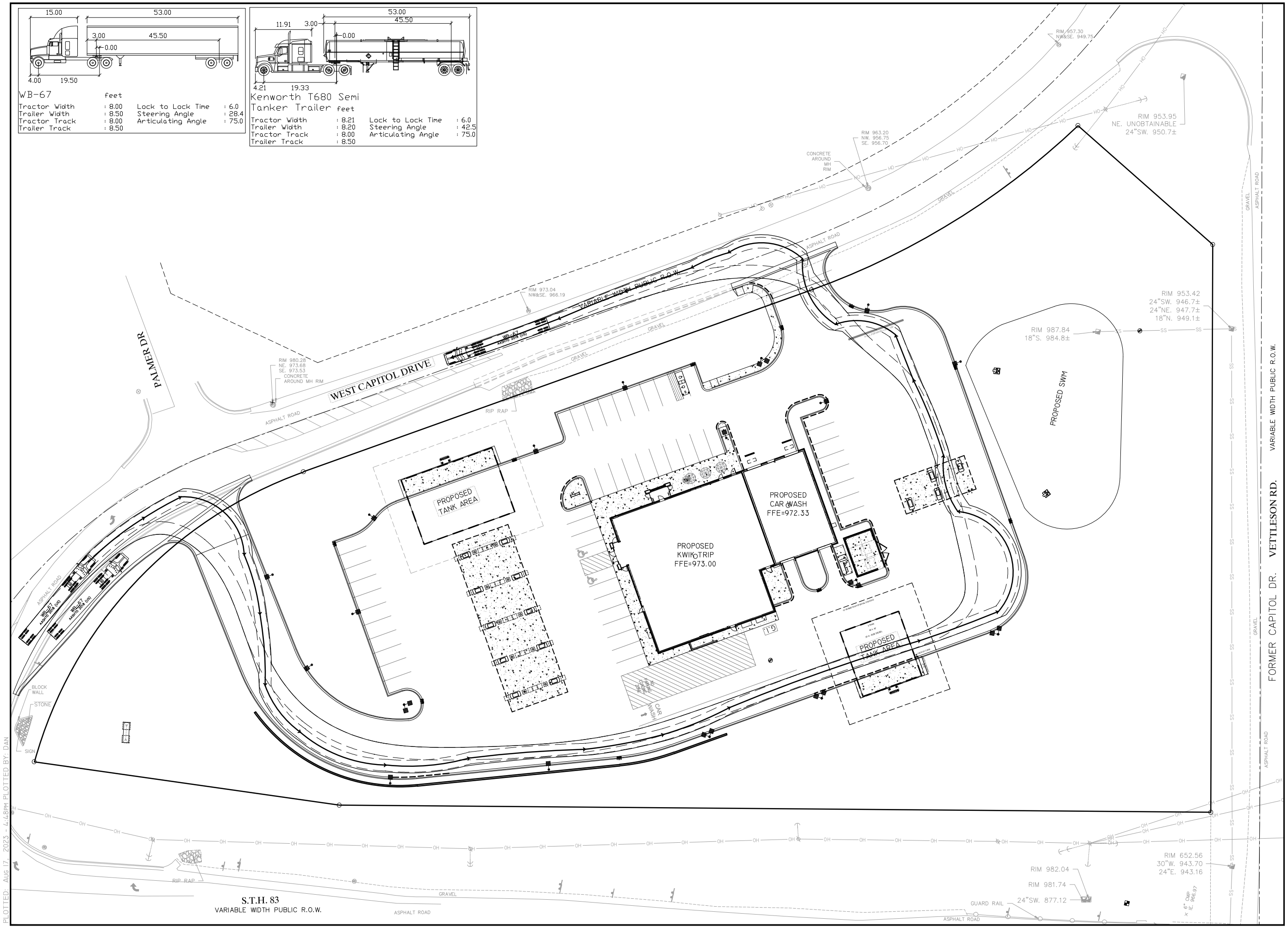
DRAWN BY	NAP XXX
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SWP4

WB-67 feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

Kenworth T680 Semi Tanker Trailer feet

Tractor Width	: 8.21	Lock to Lock Time	: 6.0
Trailer Width	: 8.20	Steering Angle	: 42.5
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		



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TRUCK CIRCULATION

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

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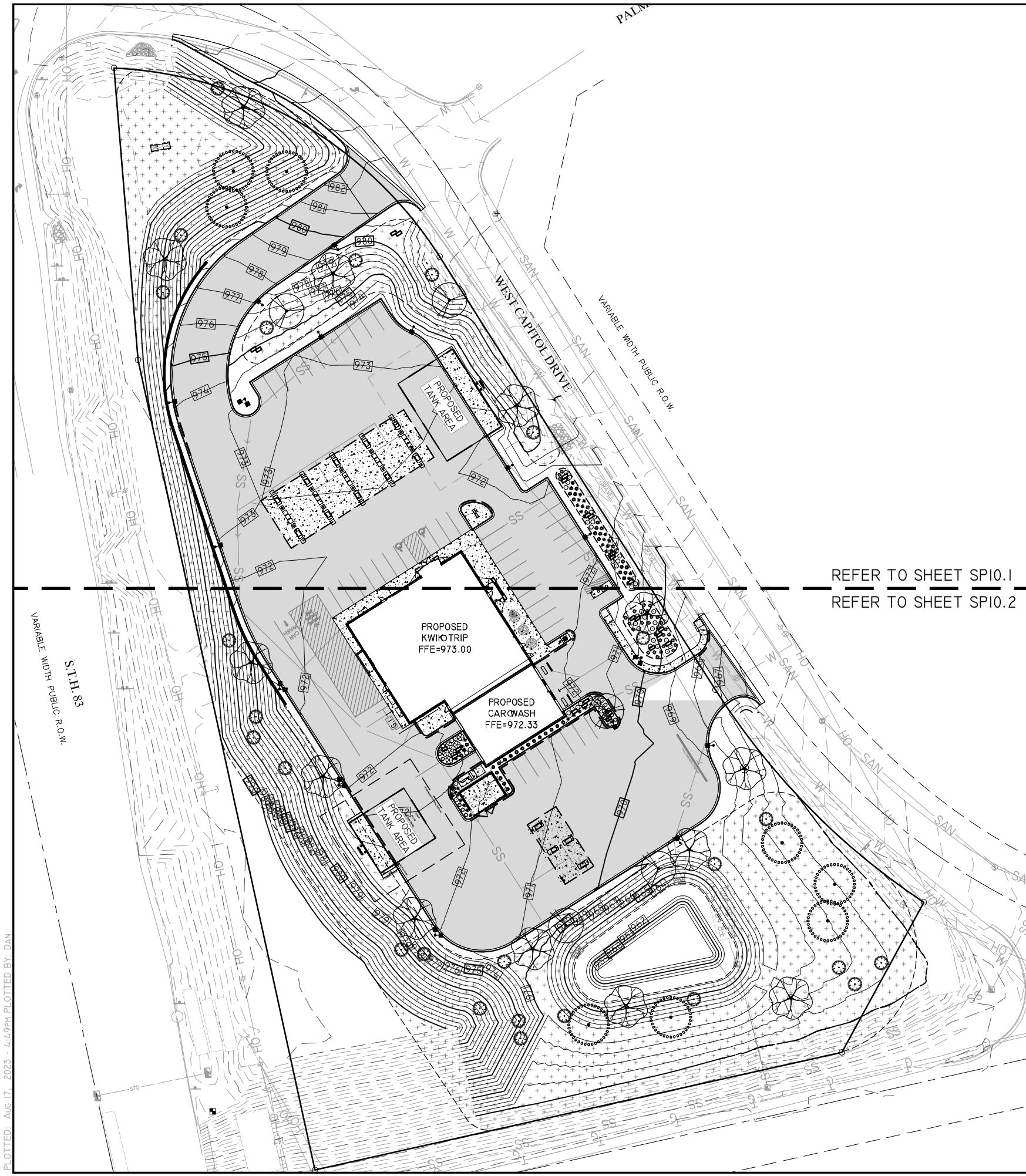
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SP



GENERAL NOTES:

(A) LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR LOCATING & VERIFYING ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION, AND IS RESPONSIBLE FOR ANY DAMAGE TO THEM DURING CONSTRUCTION.

(B) CALL DIGGERS HOTLINE @ 811 OR 1-800-242-8511 AT LEAST 5 WORKING DAYS PRIOR TO DEMOLITION, EXCAVATION OR ANY CONSTRUCTION ACTIVITY.

(C) ALL PLANT MATERIAL SHALL BE GUARANTEED ONE (1) FULL YEAR UPON TOTAL COMPLETION OF PROJECT AND ACCEPTANCE BY OWNER, WITH A ONE TIME REPLACEMENT WARRANTY UPON REQUEST BY OWNER. WARRANTY EXPIRES AFTER FIRST FULL YEAR FOLLOWING PROJECT COMPLETION.

(D) LANDSCAPE CONTRACTOR SHALL VERIFY MINIMUM 6" TOPSOIL DEPTH FOR ALL AREAS TO BE SEEDED/SODDED THROUGHOUT PROJECT SITE. CONTRACTOR IS REQUIRED TO CORRECT ANY DEFICIENCIES PRIOR TO SEED/SOD. TOPSOIL SHALL BE CLEAN AND FREE OF STONES, WEEDS AND OTHER UNDESIRABLE DEBRIS.

(E) LANDSCAPE CONTRACTOR SHALL VERIFY MINIMUM 12" PLANTING SOIL DEPTH FOR ALL PROPOSED PLANTING BED AREAS THROUGHOUT THE PROJECT SITE. CONTRACTOR IS REQUIRED TO CORRECT ANY DEFICIENCIES PRIOR TO PLANT INSTALLATION. PLANTING SOIL & AREA SHALL BE CLEAN AND FREE OF STONES, WEEDS, CONCRETE WASTE AND OTHER UNDESIRABLE DEBRIS.

(F) LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR REPAIRING TOPSOIL AND SEEDING OR SODDING ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITY, INCLUDING ALL R.O.W. AND ADJACENT PROPERTIES.

(G) CONTRACTOR SHALL CLEAN ALL PAVEMENT AREAS AFTER LANDSCAPE CONSTRUCTION ACTIVITIES ARE COMPLETE AND APPROVED BY OWNER. *THIS TO BE DONE DAILY AS DEEMED NECESSARY BY MUNICIPALITY.

PLANT SCHEDULE

DECIDUOUS TREES	COMMON NAME	BOTANICAL NAME	SIZE	CONT.	QTY
	Fall Fiesta® Sugar Maple	Acer saccharum 'Bailsta'	1.5" Cal.	B&B	5
	Swamp White Oak	Quercus bicolor	1.5" Cal.	B&B	13
	Red Oak	Quercus rubra	1.5" Cal.	B&B	8
EVERGREEN TREES	**COMMON NAME**	**BOTANICAL NAME**	**SIZE**	**CONT.**	**QTY**
	White Spruce	Picea glauca	3` Ht.	Pot	25
EVERGREEN SHRUBS	**COMMON NAME**	**BOTANICAL NAME**	**SIZE**	**CONT.**	**QTY**
	Kallay Compact Pfitzer Juniper	Juniperus chinensis 'Kallays Compact'	3 gal.	Pot	10
PERENNIALS	**COMMON NAME**	**BOTANICAL NAME**	**SIZE**	**CONT.**	**QTY**
	Karl Foerster Feather Reed Grass	Calamagrostis x acutiflora 'Karl Foerster'	1 gal.	Pot	30
	Pale Purple Coneflower	Echinacea pallida	1 gal.	Pot	47
	Shenandoah Switch Grass	Panicum virgatum 'Shenandoah'	1 gal.	Pot	38
	Goldsturm Coneflower	Rudbeckia fulgida sullivantii 'Goldsturm'	1 gal.	Pot	11
	Prairie Dropseed	Sporobolus heterolepis	1 gal.	Pot	34

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N

SCALE
0 40 80

OVERALL LANDSCAPE PLAN

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY NAP
SCALE GRAPHIC
PROJ. NO. 10827
DATE 8/17/23 - REVIEW DOCUMENTS
SHEET SP10

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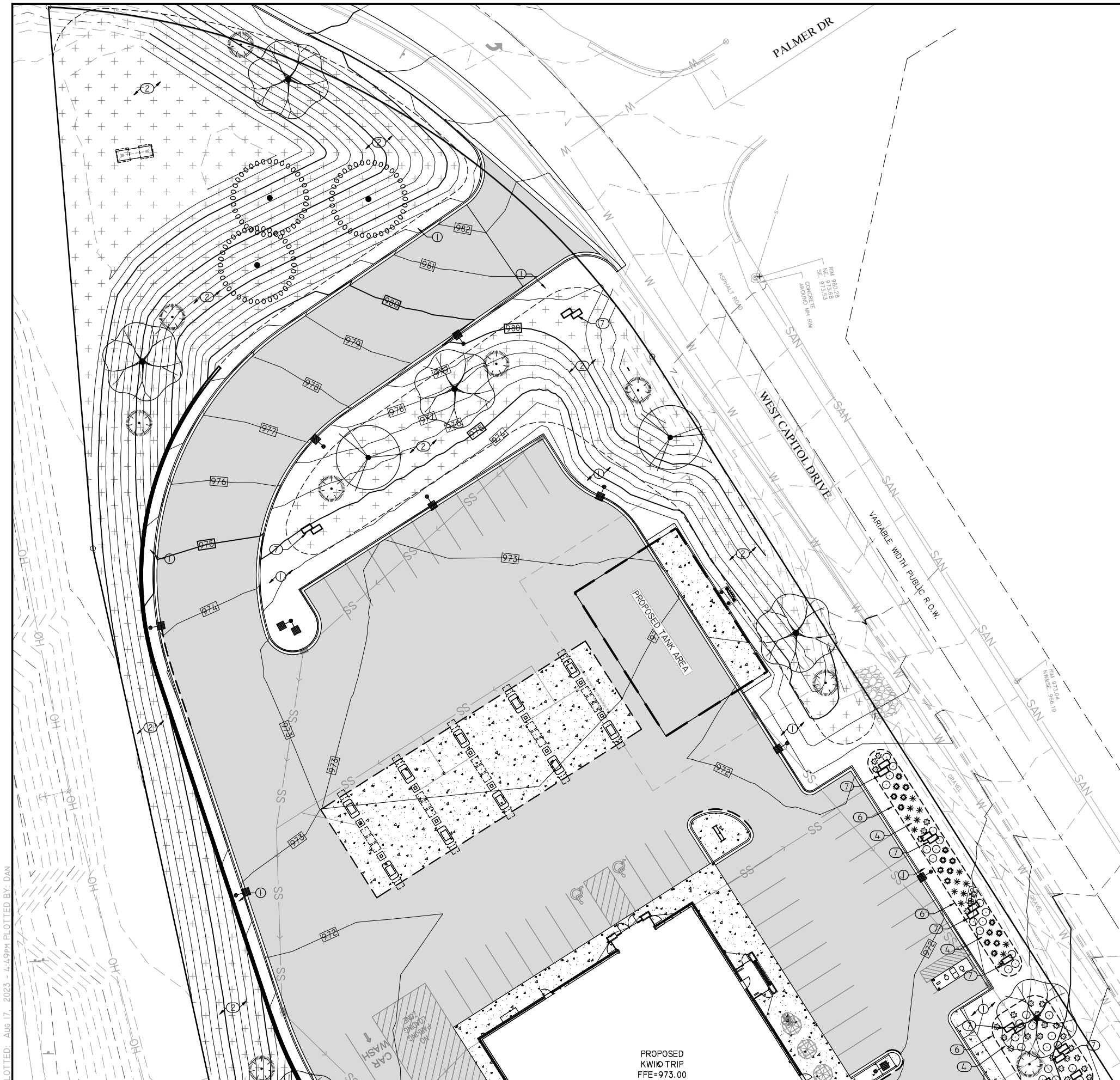

KEYED NOTES

1. SOD, *ALL AREAS NOTED ON PLAN & ALL DISTURBED AREAS DUE TO CONSTRUCTION ACTIVITY.

2. AGRECOL, SHORTGRASS PRAIRIE FOR DRY SOILS, APPLY GLYPHOSATE HERBICIDE TO AREA WHEN MAJORITY OF WEEDS ARE 2"-3" TALL. WAIT 10 DAYS THEN FINELY TILL THE SOIL ONLY 1"-2" DOWN AND PLANT IMMEDIATELY BY HAND BROADCASTING AT A RATE OF 11 LBS/ACRE. RAKE OR DRAG AREA LIGHTLY, COVERING THE SEED WITH ABOUT $\frac{1}{4}$" TO $\frac{1}{2}$" OF SOIL. ROLL AREA FIRMLY AFTER RAKING. MULCH PRAIRIE SEEDED AREAS LESS THAN 4:1 SLOPE WITH 1" OF WEED FREE STRAW MULCH. APPLY WISDOT NET-FREE CLASS I, URBAN TYPE B EROSION MAT ON SLOPING AREAS STEEPER THAN 4:1. *REFER TO AGRECOL'S "NATIVE SEEDING INSTRUCTIONS" ON THEIR WEBSITE FOR DETAILED INSTRUCTIONS/GUIDELINES FOR SUCCESSFUL SEED ESTABLISHMENT AND MANAGEMENT. (LINK BELOW)

   HTTPS://WWW.AGRECOL.COM/NATIVE-SEEDING-INSTRUCTIONS_EP_44.HTML

3. 6' DIAMETER WOOD MULCH TREE RING, 3"-4" DEPTH, DARK BROWN COLOR, *ALL TREES PLANTED WITHIN SOD AREAS.

4. SHREDDED HARDWOOD MULCH, 3"-4" DEPTH, DARK BROWN COLOR.

5. DECORATIVE STONE MULCH, 3"-4" ROUND COBBLES, 4"-5" DEPTH, WITH COMMERCIAL GRADE WEED BARRIER FABRIC UNDERLAYMENT.

6. SHOVEL CUT EDGE, 4"-5" DEPTH CLEAN CUT EDGE AROUND PLANTING BEDS WITHIN SOD AREAS.

7. ACCENT BOULDERS, (48" X 18" X 18") LIMESTONE BLOCKS/CUBES, PLAN SYMBOL:

PLANT SCHEDULE

DECIDUOUS TREES	COMMON NAME	BOTANICAL NAME
	Fall Fiesta® Sugar Maple	Acer saccharum 'Bailsta'
	Swamp White Oak	Quercus bicolor
	Red Oak	Quercus rubra
EVERGREEN TREES	**COMMON NAME**	**BOTANICAL NAME**
	White Spruce	Picea glauca
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PERENNIALS	**COMMON NAME**	**BOTANICAL NAME**
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	Pale Purple Coneflower	Echinacea pallida
	Shenandoah Switch Grass	Panicum virgatum 'Shenandoah'
	Goldsturm Coneflower	Rudbeckia fulgida sullivantii 'Goldsturm'
	Prairie Dropseed	Sporobolus heterolepis

REFER TO SHEET SP10.3 FOR COMPLETE PLANT SCHEDULE, NOTES AND SPECIFICATIONS.

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N

SCALE
0 20 40

LANDSCAPE PLAN NORTH

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	NAP
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SP10.1

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PLOTTED: AUG 17, 2023 - 4:49PM PLOTTED BY: DAN

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DECIDUOUS TREES	COMMON NAME	BOTANICAL NAME
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	Swamp White Oak	Quercus bicolor
	Red Oak	Quercus rubra
EVERGREEN TREES	**COMMON NAME**	**BOTANICAL NAME**
	White Spruce	Picea glauca
EVERGREEN SHRUBS	**COMMON NAME**	**BOTANICAL NAME**
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	Pale Purple Coneflower	Echinacea pallida
	Shenandoah Switch Grass	Panicum virgatum 'Shenandoah'
	Goldsturm Coneflower	Rudbeckia fulgida sullivantii 'Goldsturm'
	Prairie Dropseed	Sporobolus heterolepis

REFER TO SHEET SP10.3 FOR COMPLETE PLANT SCHEDULE, NOTES AND SPECIFICATIONS.

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N

SCALE
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LANDSCAPE PLAN SOUTH

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	NAP
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	SP10.2

DRAWING FILE: Q:\10800 - 10899\10827 - KWIK TRIP #1283 - HARTLAND\DRAWING\PLANS\10827-SP10-LANDSCAPING.DWG LAYOUT: SP10.2
PLOTTED: AUG 17, 2023 - 4:49PM PLOTTED BY: DAN

GENERAL NOTES:

(A) LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR LOCATING & VERIFYING ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION, AND IS RESPONSIBLE FOR ANY DAMAGE TO THEM DURING CONSTRUCTION.

(B) CALL DIGGERS HOTLINE @ 811 OR 1-800-242-8511 AT LEAST 5 WORKING DAYS PRIOR TO DEMOLITION, EXCAVATION OR ANY CONSTRUCTION ACTIVITY.

(C) ALL PLANT MATERIAL SHALL BE GUARANTEED ONE (1) FULL YEAR UPON TOTAL COMPLETION OF PROJECT AND ACCEPTANCE BY OWNER, WITH A ONE TIME REPLACEMENT WARRANTY UPON REQUEST BY OWNER. WARRANTY EXPIRES AFTER FIRST FULL YEAR FOLLOWING PROJECT COMPLETION.

(D) LANDSCAPE CONTRACTOR SHALL VERIFY MINIMUM 6" TOPSOIL DEPTH FOR ALL AREAS TO BE SEEDED/SODDED THROUGHOUT PROJECT SITE. CONTRACTOR IS REQUIRED TO CORRECT ANY DEFICIENCIES PRIOR TO SEED/SOD. TOPSOIL SHALL BE CLEAN AND FREE OF STONES, WEEDS AND OTHER UNDESIRABLE DEBRIS.

(E) LANDSCAPE CONTRACTOR SHALL VERIFY MINIMUM 12" PLANTING SOIL DEPTH FOR ALL PROPOSED PLANTING BED AREAS THROUGHOUT THE PROJECT SITE. CONTRACTOR IS REQUIRED TO CORRECT ANY DEFICIENCIES PRIOR TO PLANT INSTALLATION. PLANTING SOIL & AREA SHALL BE CLEAN AND FREE OF STONES, WEEDS, CONCRETE WASTE AND OTHER UNDESIRABLE DEBRIS.

(F) LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR REPAIRING TOPSOIL AND SEEDING OR SODDING ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITY, INCLUDING ALL R.O.W. AND ADJACENT PROPERTIES.

(G) CONTRACTOR SHALL CLEAN ALL PAVEMENT AREAS AFTER LANDSCAPE CONSTRUCTION ACTIVITIES ARE COMPLETE AND APPROVED BY OWNER. *THIS TO BE DONE DAILY AS DEEMED NECESSARY BY MUNICIPALITY.

KEYED NOTES

1. SOD, *ALL AREAS NOTED ON PLAN & ALL DISTURBED AREAS DUE TO CONSTRUCTION ACTIVITY.

2. (90,000 SF TOTAL) AGRECOL, SHORTGRASS PRAIRIE FOR DRY SOILS, APPLY GLYPHOSATE HERBICIDE TO AREA WHEN MAJORITY OF WEEDS ARE 2"-3" TALL. WAIT 10 DAYS THEN FINELY TILL THE SOIL ONLY 1"-2" DOWN AND PLANT IMMEDIATELY BY HAND BROADCASTING AT A RATE OF 11 LBS/ACRE. RAKE OR DRAG AREA LIGHTLY, COVERING THE SEED WITH ABOUT $\frac{1}{4}$" TO $\frac{1}{2}$" OF SOIL. ROLL AREA FIRMLY AFTER RAKING. MULCH PRAIRIE SEEDED AREAS LESS THAN 4:1 SLOPE WITH 1" OF WEED FREE STRAW MULCH. APPLY WISDOT NET-FREE CLASS I, URBAN TYPE B EROSION MAT ON SLOPING AREAS STEEPER THAN 4:1. *REFER TO AGRECOL'S "NATIVE SEEDING INSTRUCTIONS" ON THEIR WEBSITE FOR DETAILED INSTRUCTIONS/GUIDELINES FOR SUCCESSFUL SEED ESTABLISHMENT AND MANAGEMENT. (LINK BELOW)

   HTTPS://WWW.AGRECOL.COM/NATIVE-SEEDING-INSTRUCTIONS_EP_44.HTML

3. 6' DIAMETER WOOD MULCH TREE RING, 3"-4" DEPTH, DARK BROWN COLOR, *ALL TREES PLANTED WITHIN SOD AREAS.

4. SHREDDED HARDWOOD MULCH, 3"-4" DEPTH, DARK BROWN COLOR.

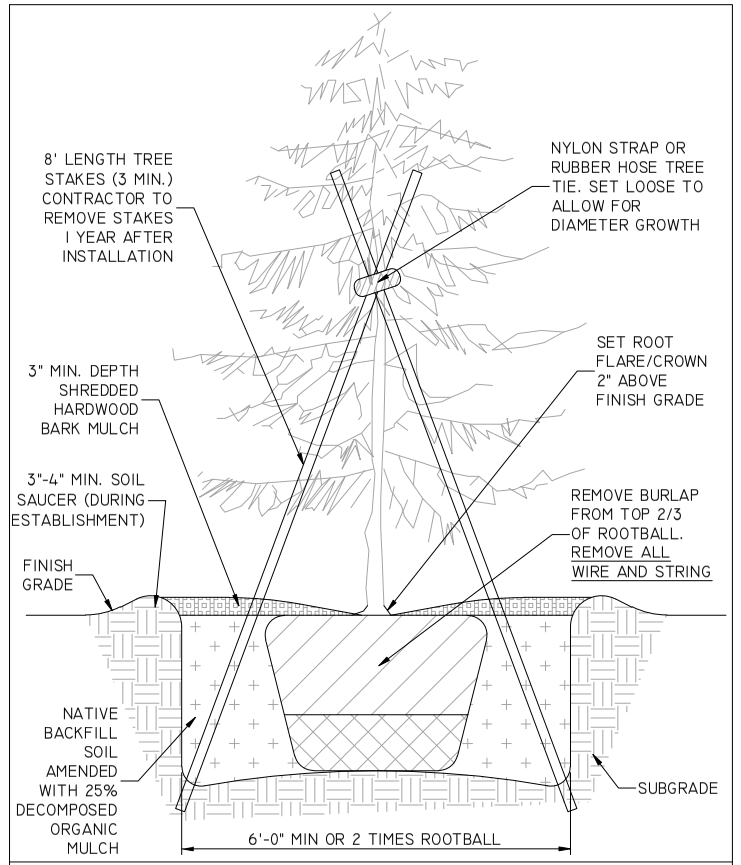
5. DECORATIVE STONE MULCH, 3"-4" ROUND COBBLES, 4"-5" DEPTH, WITH COMMERCIAL GRADE WEED BARRIER FABRIC UNDERLAYMENT.

6. SHOVEL CUT EDGE, 4"-5" DEPTH CLEAN CUT EDGE AROUND PLANTING BEDS WITHIN SOD AREAS.

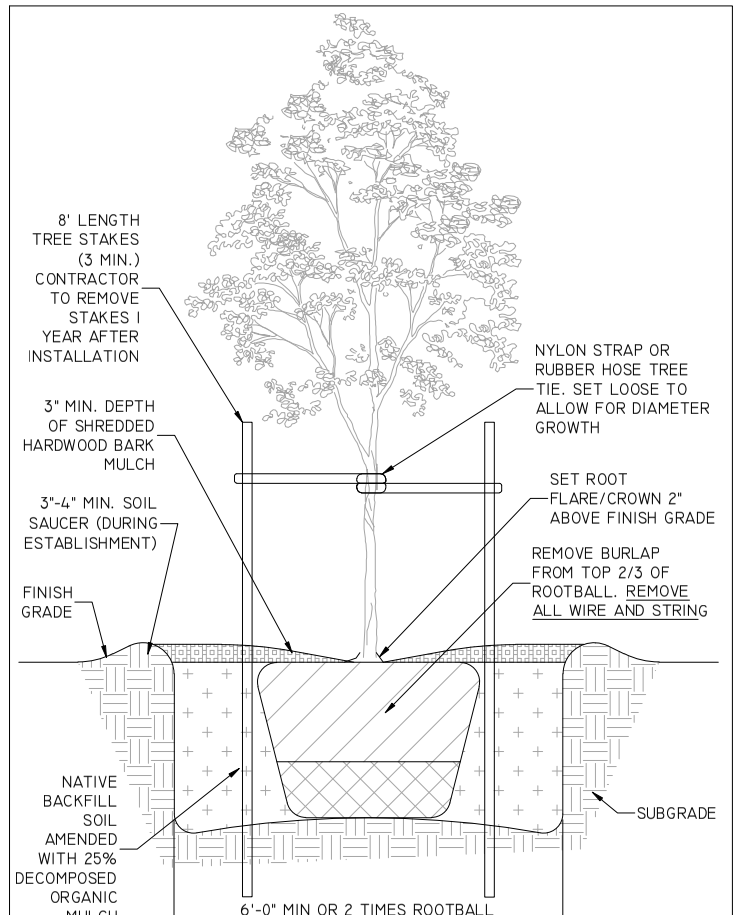
7. (25 EA TOTAL) ACCENT BOULDERS, (48" X 18" X 18") LIMESTONE BLOCKS/CUBES, PLAN SYMBOL:

PLANT SCHEDULE

DECIDUOUS TREES	COMMON NAME	BOTANICAL NAME	SIZE	CONT.	QTY
	Fall Fiesta® Sugar Maple	Acer saccharum 'Bailsta'	1.5" Cal.	B&B	5
	Swamp White Oak	Quercus bicolor	1.5" Cal.	B&B	13
	Red Oak	Quercus rubra	1.5" Cal.	B&B	8
EVERGREEN TREES	**COMMON NAME**	**BOTANICAL NAME**	**SIZE**	**CONT.**	**QTY**
	White Spruce	Picea glauca	3` Ht.	Pot	25
EVERGREEN SHRUBS	**COMMON NAME**	**BOTANICAL NAME**	**SIZE**	**CONT.**	**QTY**
	Kallay Compact Pfitzer Juniper	Juniperus chinensis 'Kallays Compact'	3 gal.	Pot	10
PERENNIALS	**COMMON NAME**	**BOTANICAL NAME**	**SIZE**	**CONT.**	**QTY**
	Karl Foerster Feather Reed Grass	Calamagrostis x acutiflora 'Karl Foerster'	1 gal.	Pot	30
	Pale Purple Coneflower	Echinacea pallida	1 gal.	Pot	47
	Shenandoah Switch Grass	Panicum virgatum 'Shenandoah'	1 gal.	Pot	38
	Goldsturm Coneflower	Rudbeckia fulgida sullivantii 'Goldsturm'	1 gal.	Pot	11
	Prairie Dropseed	Sporobolus heterolepis	1 gal.	Pot	34



EVERGREEN TREE - PLANTING DETAIL



DECIDUOUS TREE - PLANTING DETAIL

KWIK TRIP STORES

KWIK STAR STORES

KWIK TRIP, Inc.
P.O. BOX 2107
1626 OAK STREET
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WAUSAU, WISCONSIN 54401
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EMAIL: MAIL@REIENGINEERING.COM

LANDSCAPE NOTES, DETAILS & SPECIFICATIONS

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
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DRAWN BY NAP
SCALE GRAPHIC
PROJ. NO. 10827
DATE 8/17/23 - REVIEW DOCUMENTS
SHEET SP10.3

DRAWING FILE: Q:\10800 - 10899\10827 - KWIK TRIP #1283 - HARTLAND\DRAWING\PLANS\10827-SP10-LANDSCAPING.DWG LAYOUT: SP10.3
PLOTTED: AUG 17, 2023 - 4:50PM PLOTTED BY: DAN

LOT LIGHT ELEVATION DETAIL

NOT TO SCALE

FIXTURE SYMBOLS:

- LED LIGHT MOUNTED UNDER FUEL CANOPIES
- LED STRIP LIGHT MOUNTED IN GABLE
- RECESSED LED DOWNLIGHT
- POLE MOUNTED LED FIXTURE
- CAMERA

FIXTURE TYPES:

D20 - RECESSED LED DOWNLIGHT
GOTHAM EVO-35/30-8AR-WD-120-TRW

S7E - LED STRIP LIGHT MOUNTED IN GABLE LITHONIA
TZL1N-L96-10000LM-FST-MVOLT

CF - LSI LIGHTING: SCV-LED-23L-SCFT-UNV-DIM-50-WHT MOUNTED UNDER GAS CANOPY MOUNT FIXTURES WITH FORWARD THROW OPTIC AIMING IN DIRECTION OF ARROW.

C5 - LSI LIGHTING: SCV-LED-15L-SC-UNV-DIM-50-WHT MOUNTED UNDER GAS CANOPY

CFBK - LSI LIGHTING: SCV-LED-23L-SCFT-UNV-DIM-50-BLK MOUNTED UNDER DIESEL CANOPY MOUNT FIXTURES WITH FORWARD THROW OPTIC AIMING IN DIRECTION OF ARROW.

P13- LSI LIGHTING: MRS-LED-18L-SIL-3-UNV-50-70CRI-WHT

P13L- LSI LIGHTING: MRS-LED-18L-SIL-3-UNV-50-70CRI-WHT-IL

P1F- LSI LIGHTING: MRS-LED-18L-SIL-FT-UNV-50-70CRI-WHT

P1FL- LSI LIGHTING: MRS-LED-18L-SIL-FT-UNV-50-70CRI-WHT-IL

NOTE:

1. FOOTCANDLE LEVELS SHOWN ON THIS PLAN ARE CALCULATED AT GRADE LEVEL.

KEYED NOTES:

1. COORDINATE LOCATION AND MOUNTING HEIGHT OF SECURITY CAMERA WITH OWNER.
2. CONTRACTOR SHALL POLE MOUNT FIXTURE 2'-0" FROM BACK OF CURB TO EDGE OF POLE BASE.
3. CONTRACTOR SHALL POLE MOUNT FIXTURE 12'-0" FROM THE OVER DIG OF UNDERGROUND FUEL TANK TO EDGE OF POLE BASE.
4. CONTRACTOR SHALL POLE MOUNT FIXTURE 1'-0" FROM BACK OF SIDEWALK TO EDGE OF POLE BASE.
5. CONTRACTOR SHALL POLE MOUNT FIXTURE 9'-0" FROM BACK OF CURB TO EDGE OF POLE BASE.

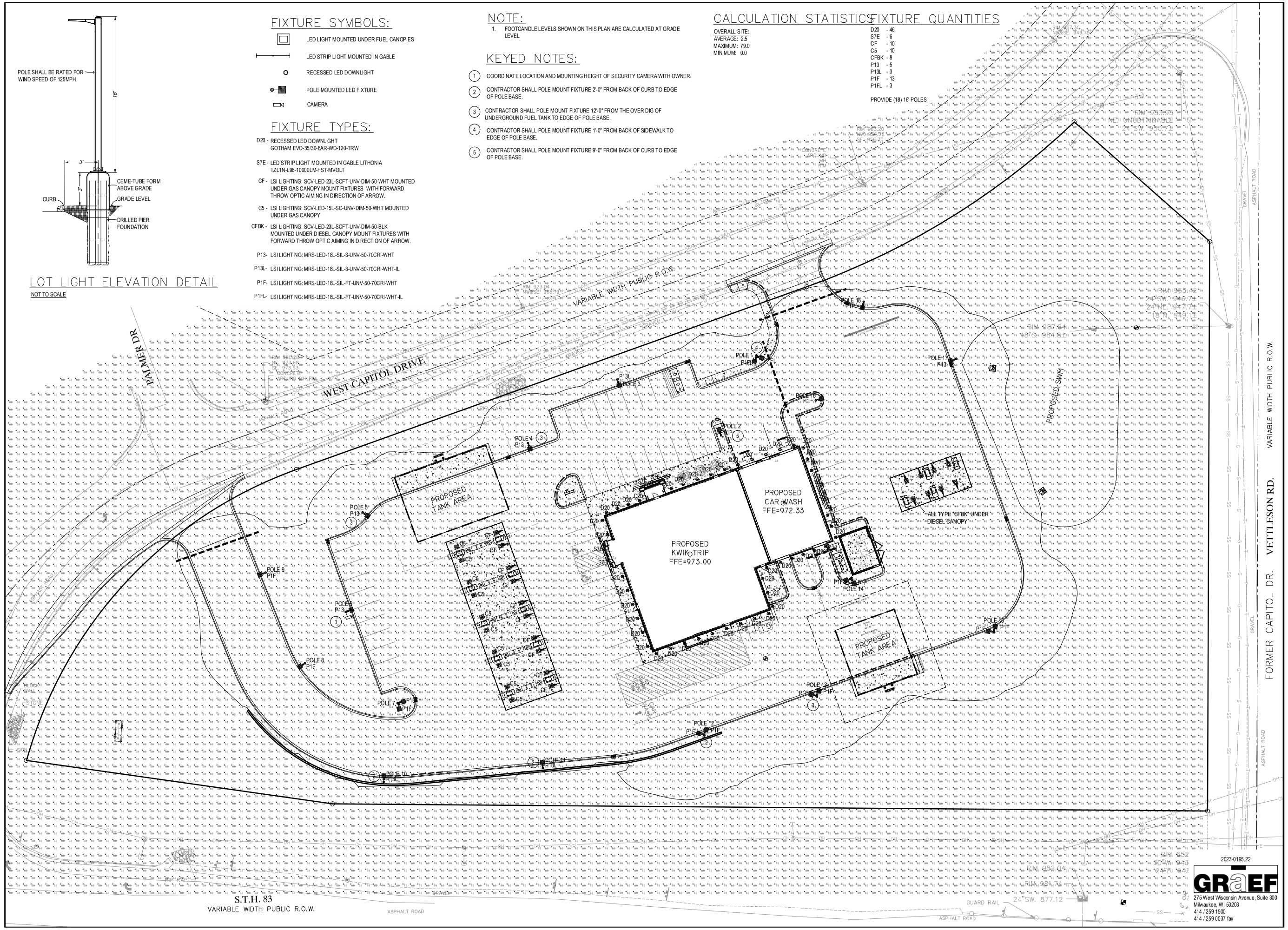
CALCULATION STATISTICS

OVERALL SITE:
AVERAGE: 2.5
MAXIMUM: 79.0
MINIMUM: 0.0

FIXTURE QUANTITIES

D20 - 46
S7E - 6
CF - 10
C5 - 10
CFBK - 8
P13 - 5
P13L - 3
P1F - 13
P1FL - 3

PROVIDE (18) 16' POLES.



2023-0195.22

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SCALE
0 30 60

PHOTOMETRIC SITE PLAN

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
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DRAWN BY XXX
SCALE GRAPHIC
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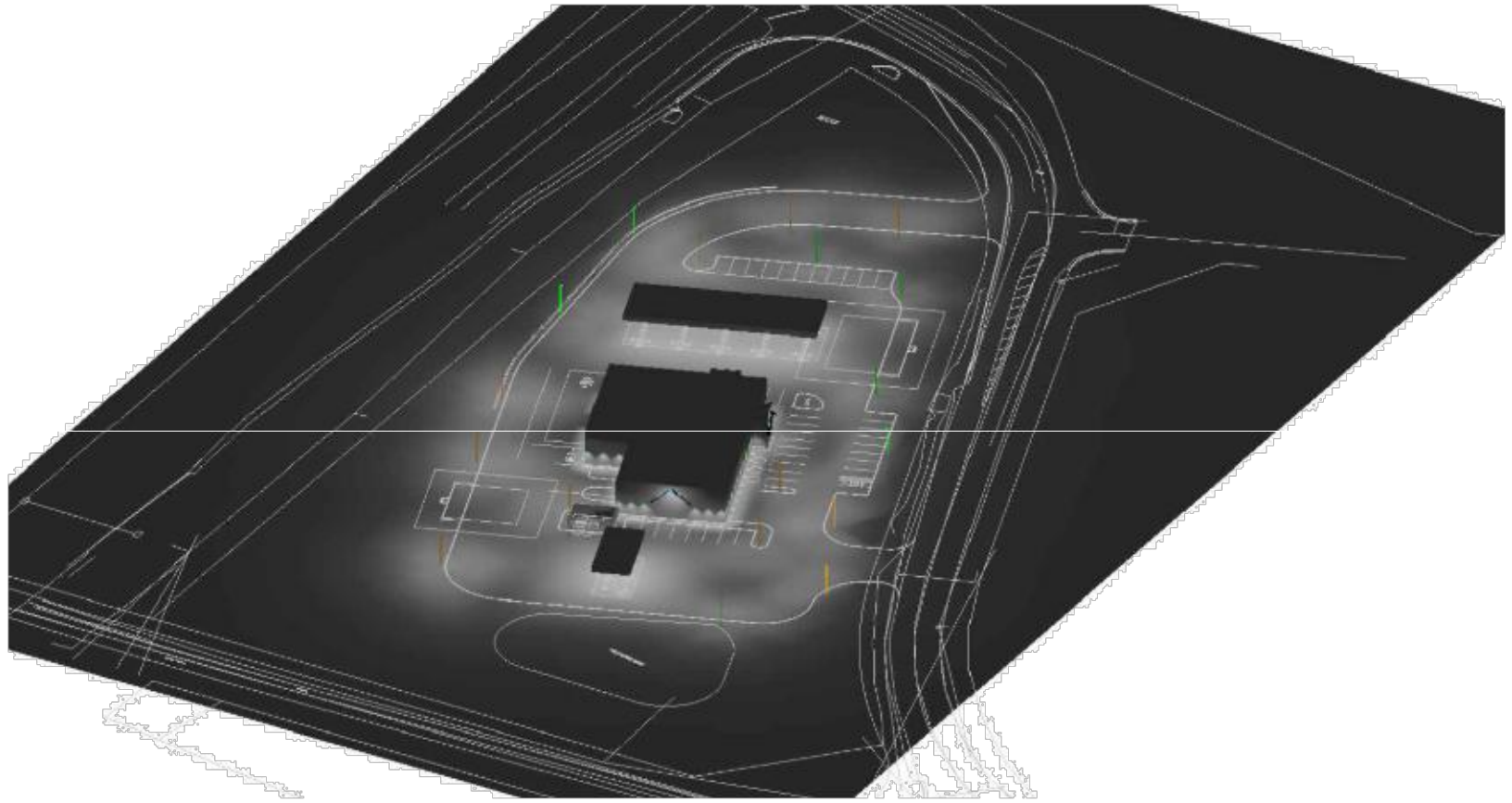
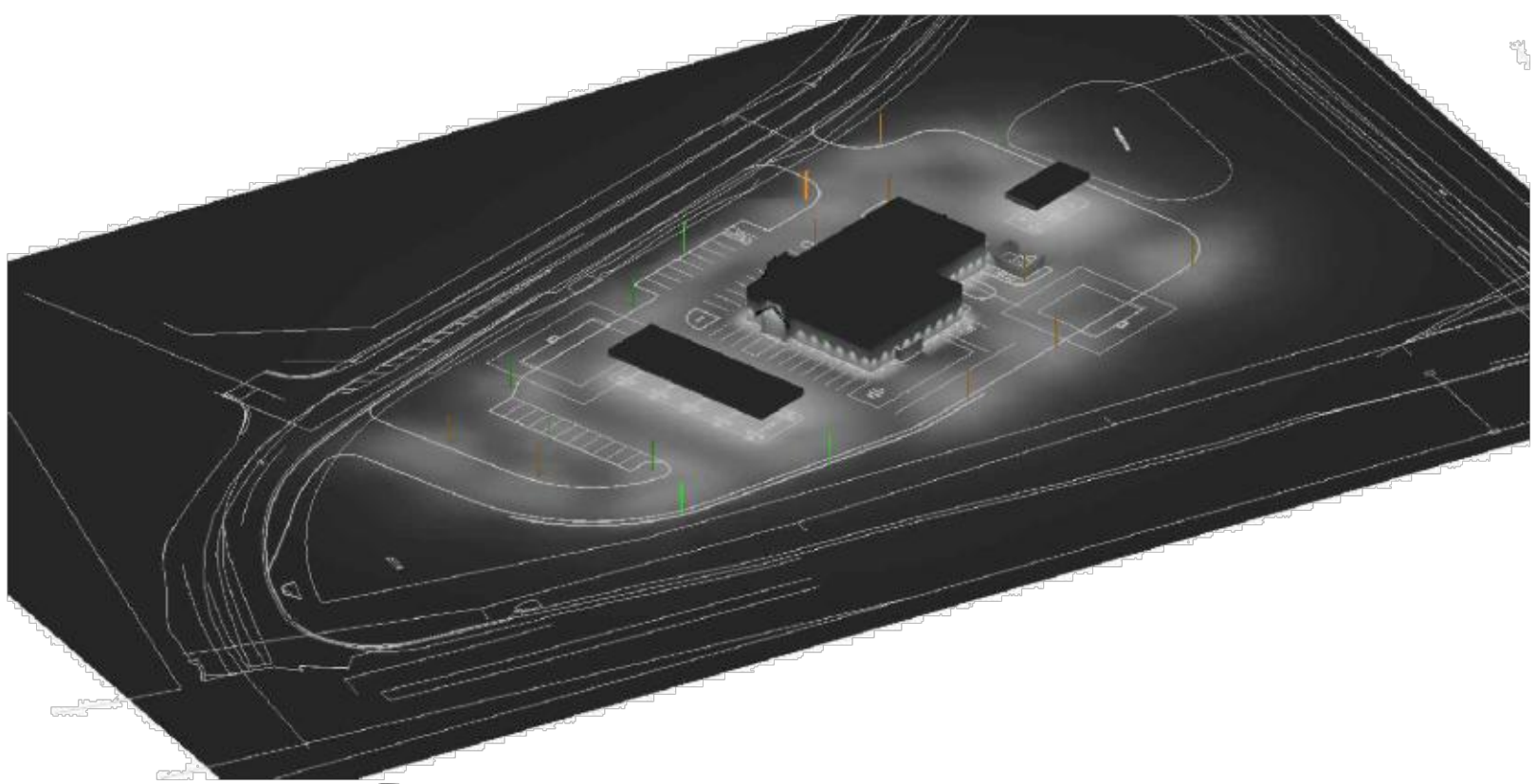
SHEET E1



PHOTOMETRIC RENDERING PLAN
NOT TO SCALE



PHOTOMETRIC RENDERING PLAN
NOT TO SCALE

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N

SCALE
0 ## ##

PHOTOMETRIC RENDERING PLAN
CONVENIENCE STORE #1283
STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	XXX
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	E2

Appendix 1

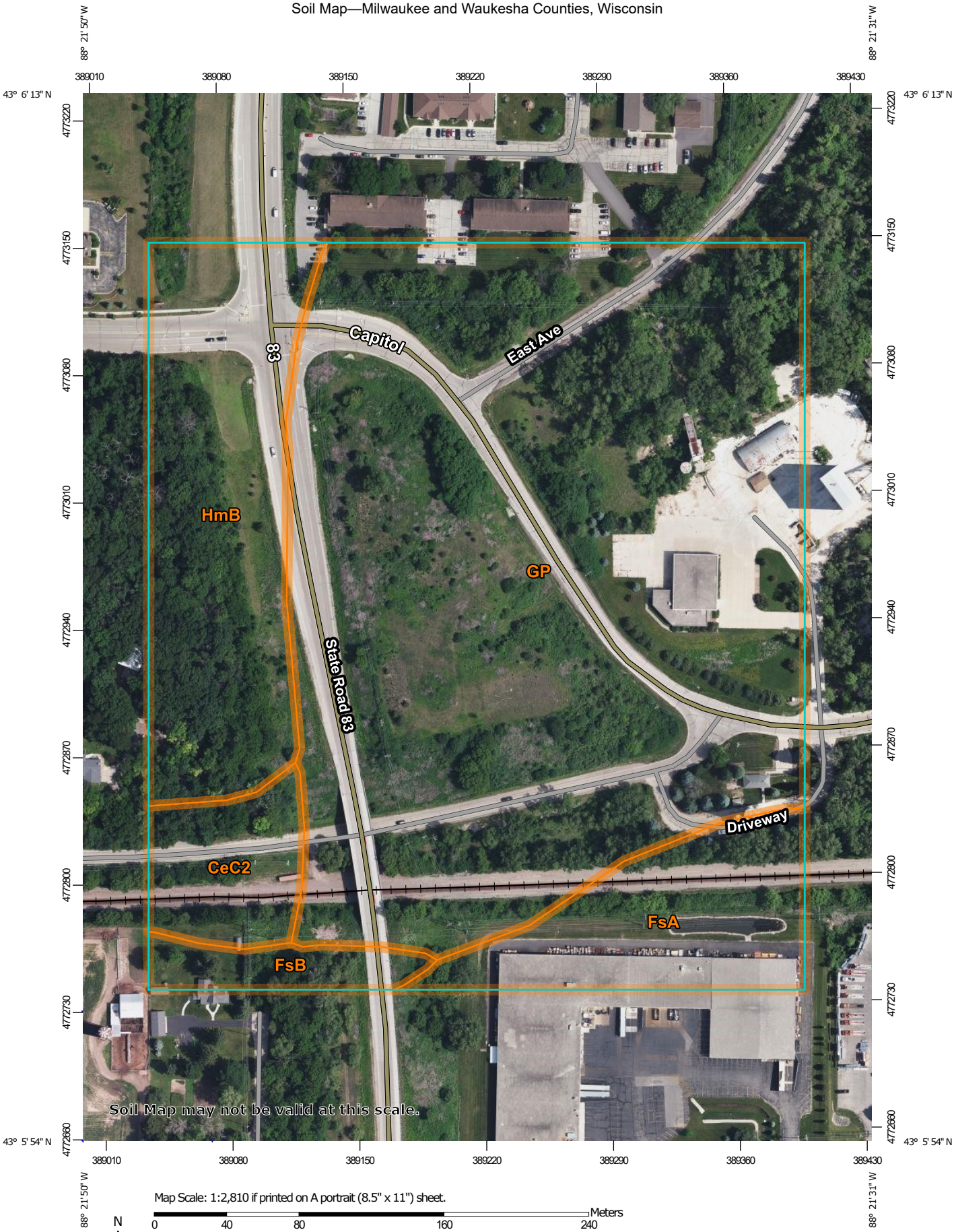
NR 151 Post Construction Standards

REI
CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

WISCONSIN DNR NR 151 STORMWATER PERFORMANCE STANDARDS APPLICABLE TO PROJECTS WITH ONE OR MORE ACRES OF DISTURBANCE (After January 1, 2011)				
DEVELOPMENT TYPE	**TOTAL SUSPENDED SOLIDS (TSS)**	**PEAK FLOW**	**INFILTRATION**	**PROTECTIVE AREA SETBACKS**
New Development Infill ≥ 5 ac Redevelopment of Sites Permitted after October 1, 2004 New Transportation Facilities	Reduce by 80% compared to no controls	Peak discharge matches pre-dev. discharge rate for 1-yr and 2-yr, 24-hr storm events	Low Impervious (up to 40% connected - eg parks, cemeteries, low density residential) – infiltrate 90% pre-development infiltration volume, w/ 1% device area cap	75 ft for outstanding resource waters and highly-susceptible wetlands
			Moderate Impervious (up to 40-80% connected - eg single- and multi-family residential, industrial, institutional, office parks) – infiltrate 75% pre-development infiltration volume w/ 2% device area cap	50 ft for lakes, perrenial and intermittent streams, and wetlands that are neither classified as highly susceptible nor less susceptible
			High Impervious (Over 80% connected - eg commercial strips, shopping centers, commercial downtown) – infiltrate 60% pre-development infiltration volume w/ 2% device area cap	10-30 feet for less susceptible wetlands based upon average wetland width
			Most New Transportation Facilities (above the local residential classification) are Exempt	10 feet for concentrated flow channels with drainage areas over 130 acres
Infill < 5 acres	Reduce by 40% compared to no controls (80% on/after October 1, 2012)	Exempt	Exempt	Exempt
Highway Reconstruction	Reduce by 40% compared to no controls	Exempt	Exempt	Exempt
Redevelopment of Sites Permitted Prior to October 1, 2004	Reduce parking areas and roads by 40% compared to no controls	Exempt	Exempt	Exempt
Post-Construction Site or Transportation Facility w/ Less than 10% Connected Impervious (assuming cumulative impervious is beneath 1 acre)	Exempt	Exempt	Exempt	Follow as if New Construction

Appendix 2

Site Soils Information



Map Scale: 1:2,810 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 40 80 160 240

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

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 1:15,800.

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: Milwaukee and Waukesha Counties, Wisconsin
Survey Area Data: Version 18, Sep 7, 2022

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

Date(s) aerial images were photographed: Jun 6, 2020—Jun 28, 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
CeC2	Casco loam, 6 to 12 percent slopes, eroded	1.7	4.6%
FsA	Fox silt loam, 0 to 2 percent slopes	3.2	8.8%
FsB	Fox silt loam, 2 to 6 percent slopes	0.9	2.5%
GP	Gravel pit	25.0	67.7%
HmB	Hochheim loam, 2 to 6 percent slopes	6.1	16.4%
Totals for Area of Interest		**36.9**	**100.0%**

Milwaukee and Waukesha Counties, Wisconsin

GP—Gravel pit

Map Unit Setting

National map unit symbol: sjky
Elevation: 660 to 980 feet
Mean annual precipitation: 31 to 35 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 110 to 150 days
Farmland classification: Not prime farmland

Map Unit Composition

Pits, gravel: 99 percent
Minor components: 1 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pits, Gravel

Setting

Parent material: Gravelly outwash

Typical profile

H1 - 0 to 10 inches: stratified extremely gravelly coarse sand to very gravelly sand

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Other vegetative classification: Not Assigned (other map units) (Noth)
Hydric soil rating: Unranked

Minor Components

Aquents

Percent of map unit: 1 percent
Landform: Depressions
Landform position (three-dimensional): Dip
Ecological site: F090AY004WI - Loamy Floodplain
Hydric soil rating: Yes

Data Source Information

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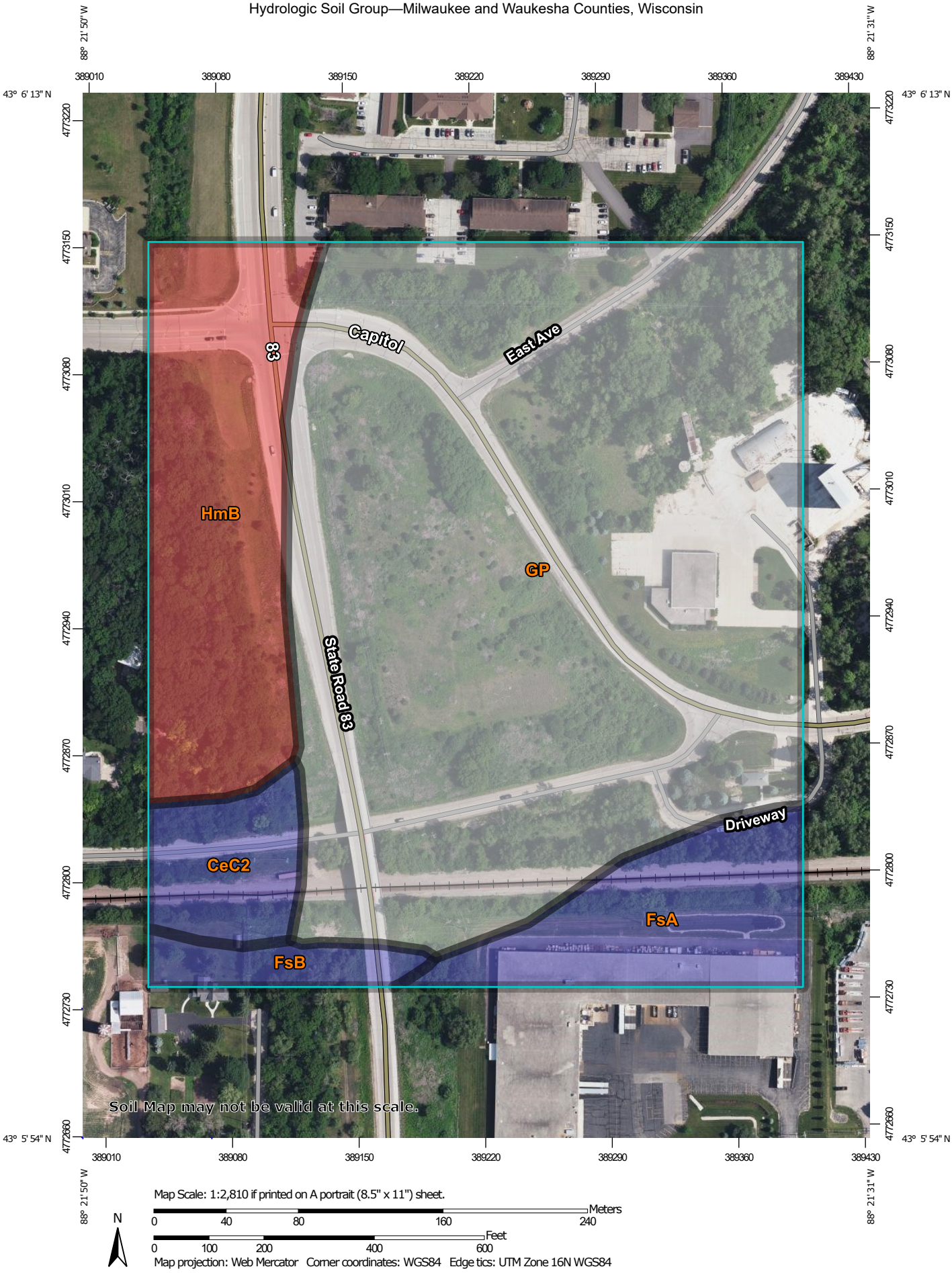
Survey Area Data: Version 18, Sep 7, 2022



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N

Meters: 0 40 80 160 240

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

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 1:15,800.

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Web Soil Survey URL:
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Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
CeC2	Casco loam, 6 to 12 percent slopes, eroded	B	1.7	4.6%
FsA	Fox silt loam, 0 to 2 percent slopes	B	3.2	8.8%
FsB	Fox silt loam, 2 to 6 percent slopes	B	0.9	2.5%
GP	Gravel pit		25.0	67.7%
HmB	Hochheim loam, 2 to 6 percent slopes	D	6.1	16.4%
Totals for Area of Interest			**36.9**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

NOTES:

1.) TEST BORING LOCATIONS ARE APPROXIMATE.

2.) PROPOSED FEATURES ARE APPROXIMATE BASED ON THE "SITE PLAN" (SHEET SP5), DATED 11-11-2021, PROVIDED BY THE CLIENT.

GILES ENGINEERING ASSOCIATES, INC.
N8 W22350 JOHNSON DRIVE, SUITE A1
WAUKESHA, WI 53186 (262)544-0118
www.gilesengr.com

FIGURE 1
TEST BORING LOCATION PLAN
PROPOSED KWIK TRIP
SEC OF HIGHWAY 83 AND W. CAPITOL DRIVE
HARTLAND, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
AJG	JDid	approx. 1"=80'	03-11-22	--
PROJECT NO.: 1G-2202025			CAD No. 1g2202025-blp	

0 40' 80'
APPROXIMATE SCALE

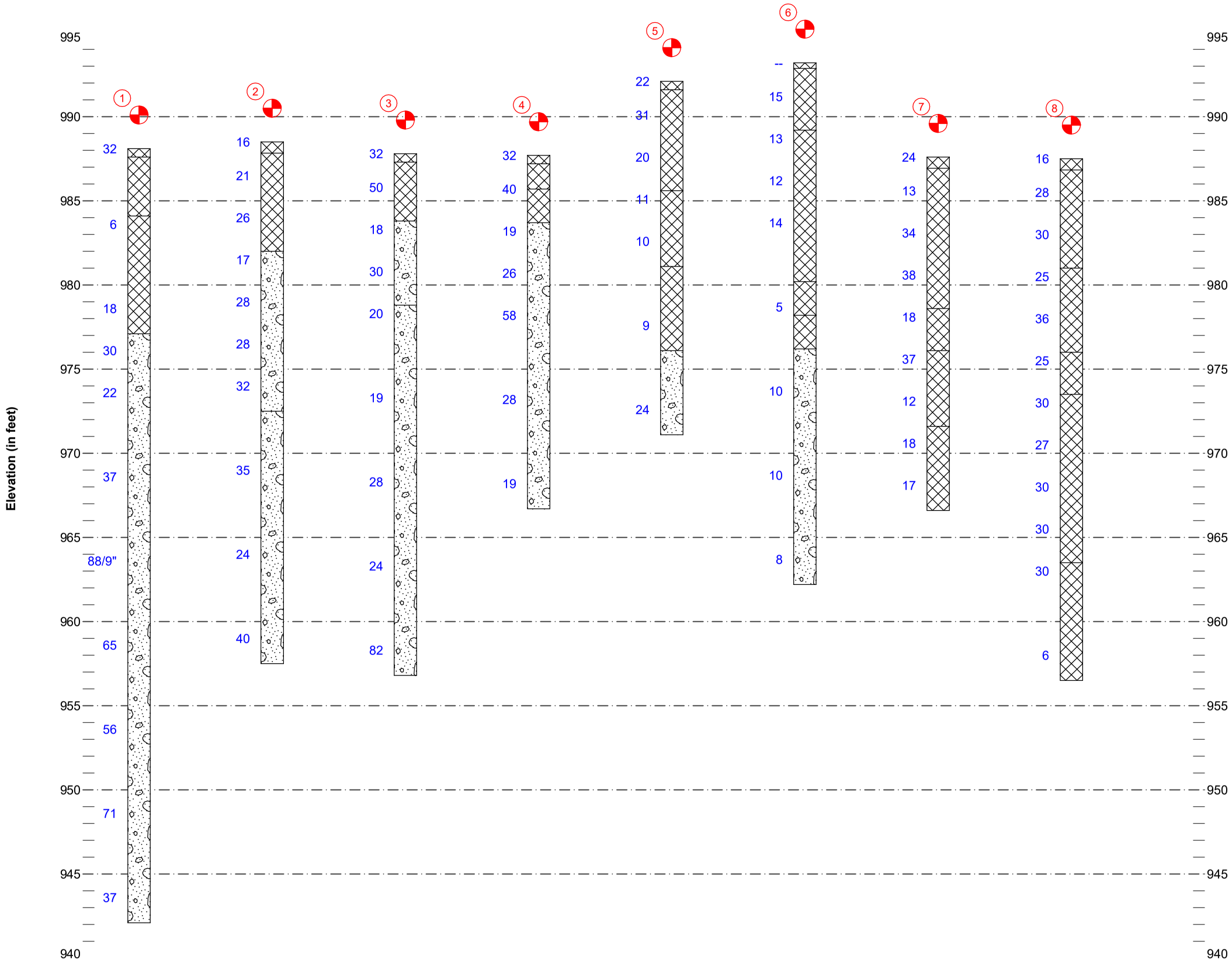
N W E S

LEGEND:

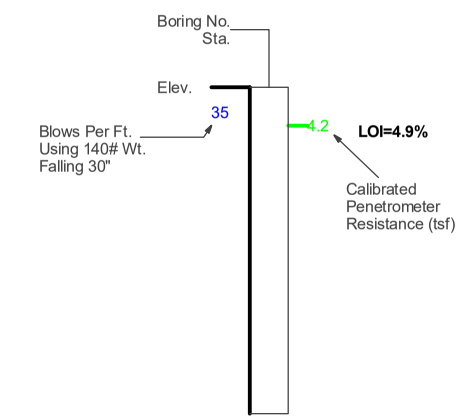
- GEOTECHNICAL TEST BORING
- PROPERTY LINE
- ELECTRIC POLE

FENCE DIAGRAM

SCALE: VERTICAL: 1" = 6.67'
HORIZONTAL: N.T.S.



LEGEND OF BORING



Unless otherwise specified, the blows per foot at the locations indicated are based on driving a 2" O.D.x 1. 4" I.D. split spoon sampler with a 140# hammer having a free fall of 30". The blow count is taken in undisturbed soil immediately below a cased or open hole eliminating side friction on the drive pipe.

MATERIAL SYMBOLS

FILL - Fill (made ground)

SPG - USCS Poorly-graded Gravelly Sand

FIGURE 2
Proposed Kwik Trip
W. Capitol Drive
Hartland, Wisconsin
Project No. 1G-2202025

GILES ENGINEERING ASSOCIATES, INC.

GILES FENCE REPORT 11 X 17 1G2202025.GPJ GILES.GDT 3/15/22

NOTES:

BORING NO. & LOCATION: 1	TEST BORING LOG	GILES ENGINEERING ASSOCIATES, INC.
SURFACE ELEVATION: 988.1 feet	PROPOSED KWIK TRIP	
COMPLETION DATE: 03/02/22	W. CAPITOL DRIVE HARTLAND, WISCONSIN	
FIELD REP: KEITH FLOWERS	PROJECT NO: 1G-2202025	

MATERIAL DESCRIPTION	Depth (ft)	Elevation	Sample No. & Type	N	Q_u (tsf)	Q_p (tsf)	Q_s (tsf)	W (%)	PID	NOTES
±6" Topsoil Fill: Dark Brown Silty fine to medium Sand, little Organic Matter, trace Gravel-Moist			1-SS	32					*BDL	
Fill: Brown Gravelly Sand, trace Silt-Moist										
Fill: Brown Silty fine Sand, trace Gravel-Moist			2-SS	6				17	*BDL	
		980								
	10		3-SS	18					*BDL	
Brown Gravelly Sand, trace Silt (Includes Cobbles and Boulders)-Moist			4-SS	30					*BDL	
			5-SS	22					*BDL	
		970								
	20		6-SS	37					*BDL	
			7-SS	88/9"					*BDL	
		960								
	30		8-SS	65					*BDL	
			9-SS	56					*BDL	
		950								
	40		10-SS	71					*BDL	
			11-SS	37					*BDL	

Boring Terminated at about 46 feet (EL. 942.1')

Water Observation Data	Remarks:
Water Encountered During Drilling:	*PID Results are lab screened results that may reflect differently from field screened results.
Water Level At End of Drilling:	
Cave Depth At End of Drilling:	
Water Level After Drilling:	
Cave Depth After Drilling:	

PRELIMINARY

Changes in strata indicated by the lines are approximate boundary between soil types. The actual transition may be gradual and may vary considerably between test borings. Location of test boring is shown on the Boring Location Plan.

BORING NO. & LOCATION: 2	TEST BORING LOG	GILES ENGINEERING ASSOCIATES, INC.
SURFACE ELEVATION: 988.5 feet	PROPOSED KWIK TRIP	
COMPLETION DATE: 03/02/22	W. CAPITOL DRIVE HARTLAND, WISCONSIN	
FIELD REP: KEITH FLOWERS	PROJECT NO: 1G-2202025	

MATERIAL DESCRIPTION	Depth (ft)	Elevation	Sample No. & Type	N	Q_u (tsf)	Q_p (tsf)	Q_s (tsf)	W (%)	PID	NOTES
±8" Topsoil Fill: Dark Brown Silty fine Sand, little Organic Matter, trace Gravel-Moist			1-SS	16					*BDL	
Fill: Dark Brown Gravelly Silty Sand, trace Clay-Moist			2-SS	21					*BDL	
			3-SS	26					*BDL	
Brown Gravelly Sand, trace Silt (Includes Cobbles and Boulders)-Moist		980	4-SS	17					*BDL	
	10		5-SS	28					*BDL	
			6-SS	28					*BDL	
			7-SS	32					*BDL	
Brown Gravelly Silty Sand (Includes Cobbles and Boulders)-Moist		970								
	20		8-SS	35					*BDL	
			9-SS	24					*BDL	
		960								
	30		10-SS	40					*BDL	
Boring Terminated at about 31 feet (EL. 957.5')										

PRELIMINARY

Water Observation Data	Remarks:
Water Encountered During Drilling:	*PID Results are lab screened results that may reflect differently from field screened results.
Water Level At End of Drilling:	
Cave Depth At End of Drilling:	
Water Level After Drilling:	
Cave Depth After Drilling:	

Changes in strata indicated by the lines are approximate boundary between soil types. The actual transition may be gradual and may vary considerably between test borings. Location of test boring is shown on the Boring Location Plan.

BORING NO. & LOCATION: 3	TEST BORING LOG	GILES ENGINEERING ASSOCIATES, INC.
SURFACE ELEVATION: 987.8 feet	PROPOSED KWIK TRIP	
COMPLETION DATE: 03/02/22	W. CAPITOL DRIVE HARTLAND, WISCONSIN	
FIELD REP: KEITH FLOWERS	PROJECT NO: 1G-2202025	

MATERIAL DESCRIPTION	Depth (ft)	Elevation	Sample No. & Type	N	Q_u (tsf)	Q_p (tsf)	Q_s (tsf)	W (%)	PID	NOTES
±6" Topsoil Fill: Dark Brown Silty fine Sand, little Organic Matter, trace Gravel-Moist			1-SS	32					*BDL	
Fill: Dark Brown and Brown Gravelly Silty Sand (Includes Cobbles and Boulders)-Moist			2-SS	50					*BDL	
Brown Gravelly Silty Sand (Includes Cobbles and Boulders)-Moist			3-SS	18					*BDL	
		980	4-SS	30					*BDL	
Brown Gravelly Sand, trace Silt (Includes Cobbles and Boulders)-Moist	10		5-SS	20					*BDL	
			6-SS	19					*BDL	
		970								
	20		7-SS	28					*BDL	
			8-SS	24					*BDL	
		960								
	30		9-SS	82					*BDL	

Boring Terminated at about 31 feet (EL. 956.8')

PRELIMINARY

Water Observation Data	Remarks:
Water Encountered During Drilling:	*PID Results are lab screened results that may reflect differently from field screened results.
Water Level At End of Drilling:	
Cave Depth At End of Drilling:	
Water Level After Drilling:	
Cave Depth After Drilling:	

Changes in strata indicated by the lines are approximate boundary between soil types. The actual transition may be gradual and may vary considerably between test borings. Location of test boring is shown on the Boring Location Plan.

BORING NO. & LOCATION: 4	TEST BORING LOG	GILES ENGINEERING ASSOCIATES, INC.
SURFACE ELEVATION: 987.7 feet	PROPOSED KWIK TRIP	
COMPLETION DATE: 03/02/22	W. CAPITOL DRIVE HARTLAND, WISCONSIN	
FIELD REP: KEITH FLOWERS	PROJECT NO: 1G-2202025	

MATERIAL DESCRIPTION	Depth (ft)	Elevation	Sample No. & Type	N	Q_u (tsf)	Q_p (tsf)	Q_s (tsf)	W (%)	PID	NOTES
±6" Topsoil Fill: Dark Brown Silty fine Sand, trace Organic Matter and Gravel-Moist			1-SS	32					*BDL	
Fill: Brown Gravelly Sand, trace Silt (Includes Cobbles and Boulders)-Moist			2-SS	40					*BDL	
Fill: Dark Brown Silty fine Sand, trace Gravel-Moist			3-SS	19					*BDL	
Brown Gravelly Silty Sand (Includes Cobbles and Boulders)-Moist		980	4-SS	26					*BDL	
	10		5-SS	58					*BDL	
			6-SS	28					*BDL	
		970								
	20		7-SS	19					*BDL	

Boring Terminated at about 21 feet (EL. 966.7')

PRELIMINARY

Water Observation Data	Remarks:
Water Encountered During Drilling:	*PID Results are lab screened results that may reflect differently from field screened results.
Water Level At End of Drilling:	
Cave Depth At End of Drilling:	
Water Level After Drilling:	
Cave Depth After Drilling:	

Changes in strata indicated by the lines are approximate boundary between soil types. The actual transition may be gradual and may vary considerably between test borings. Location of test boring is shown on the Boring Location Plan.

BORING NO. & LOCATION: 5	TEST BORING LOG	GILES ENGINEERING ASSOCIATES, INC.
SURFACE ELEVATION: 992.1 feet	PROPOSED KWIK TRIP	
COMPLETION DATE: 03/02/22	W. CAPITOL DRIVE HARTLAND, WISCONSIN	
FIELD REP: KEITH FLOWERS	PROJECT NO: 1G-2202025	

MATERIAL DESCRIPTION	Depth (ft)	Elevation	Sample No. & Type	N	Q_u (tsf)	Q_p (tsf)	Q_s (tsf)	W (%)	PID	NOTES
±6" Topsoil Fill: Dark Brown Silty fine Sand, trace Gravel and Organic Matter-Moist			1-SS	22					*BDL	±16" Frost
		990	2-SS	31					*BDL	
Fill: Brown and Dark Brown Silty fine to medium Sand, trace Gravel-Moist			3-SS	20		4.5		13	*BDL	
Fill: Brown Sandy Silt, trace Gravel and Clay-Moist			4-SS	11					*BDL	
	10		5-SS	10		2.3		21	*BDL	
Fill: Dark Brown and Gray Silty Clay, little Sand-Moist		980								
			6-SS	9				22	*BDL	
Brown Gravelly Silty Sand (Includes Cobbles and Boulders)-Moist										
	20		7-SS	24					*BDL	

Boring Terminated at about 21 feet (EL. 971.1')

PRELIMINARY

Water Observation Data	Remarks:
Water Encountered During Drilling:	*PID Results are lab screened results that may reflect differently from field screened results.
Water Level At End of Drilling:	
Cave Depth At End of Drilling:	
Water Level After Drilling:	
Cave Depth After Drilling:	

Changes in strata indicated by the lines are approximate boundary between soil types. The actual transition may be gradual and may vary considerably between test borings. Location of test boring is shown on the Boring Location Plan.

BORING NO. & LOCATION: 6	TEST BORING LOG	GILES ENGINEERING ASSOCIATES, INC.
SURFACE ELEVATION: 993.2 feet	PROPOSED KWIK TRIP	
COMPLETION DATE: 03/02/22	W. CAPITOL DRIVE HARTLAND, WISCONSIN	
FIELD REP: KEITH FLOWERS	PROJECT NO: 1G-2202025	

MATERIAL DESCRIPTION	Depth (ft)	Elevation	Sample No. & Type	N	Q_u (tsf)	Q_p (tsf)	Q_s (tsf)	W (%)	PID	NOTES
±4" Topsoil Fill: Dark Brown Sandy Silt, little Organic Matter, trace Gravel-Moist			1-AU	--					*BDL	
Fill: Brown Sandy Silt, trace Clay-Moist		990	2-SS	15					*BDL	
Fill: Brown Silty fine Sand-Moist			3-SS	13					*BDL	
			4-SS	12					*BDL	
	10		5-SS	14					*BDL	
Fill: Brown Silty Clay with Sandy Silt lenses-Wet		980								
Fill: Dark Gray Sandy Silt-Wet			6-SS	5		1.3		26	*BDL	
Brown Gravelly Silty Sand (Includes Cobbles and Boulders)-Moist to Wet at ±21 feet	20		7-SS	10					*BDL	
		970								
			8-SS	10				10	*BDL	
	30		9-SS	8				10	*BDL	
Boring Terminated at about 31 feet (EL. 962.2')										

PRELIMINARY

Water Observation Data	Remarks:
Water Encountered During Drilling:	*PID Results are lab screened results that may reflect differently from field screened results.
Water Level At End of Drilling:	
Cave Depth At End of Drilling:	
Water Level After Drilling:	
Cave Depth After Drilling:	

Changes in strata indicated by the lines are approximate boundary between soil types. The actual transition may be gradual and may vary considerably between test borings. Location of test boring is shown on the Boring Location Plan.

BORING NO. & LOCATION: 7	TEST BORING LOG	GILES ENGINEERING ASSOCIATES, INC.
SURFACE ELEVATION: 987.6 feet	PROPOSED KWIK TRIP	
COMPLETION DATE: 03/02/22	W. CAPITOL DRIVE HARTLAND, WISCONSIN	
FIELD REP: KEITH FLOWERS	PROJECT NO: 1G-2202025	

MATERIAL DESCRIPTION	Depth (ft)	Elevation	Sample No. & Type	N	Q_u (tsf)	Q_p (tsf)	Q_s (tsf)	W (%)	PID	NOTES
±8" Topsoil Fill: Dark Brown Silty fine Sand, little Organic Matter-Moist			1-SS	24					*BDL	
Fill: Brown and Dark Silty fine to medium Sand, trace Gravel (Includes Wood Debris)-Moist			2-SS	13					*BDL	
			3-SS	34				13	*BDL	
		980	4-SS	38					*BDL	
Fill: Gray Silty Clay, little Sand, trace Gravel-Moist	10		5-SS	18					*BDL	
Fill: Brown Silty Clay with Sandy Silt lenses (Includes Wood Debris, Metal Debris and Cinders)-Moist			6-SS	37					*BDL	
			7-SS	12					*BDL	
Possible Fill: Brown Silty Clay, little Sand-Very Moist		970	8-SS	18				17	*BDL	
	20		9-SS	17		4.3		19	*BDL	

Boring Terminated at about 21 feet (EL. 966.6')

PRELIMINARY

Water Observation Data	Remarks:
Water Encountered During Drilling:	*PID Results are lab screened results that may reflect differently from field screened results.
Water Level At End of Drilling:	
Cave Depth At End of Drilling:	
Water Level After Drilling:	
Cave Depth After Drilling:	

Changes in strata indicated by the lines are approximate boundary between soil types. The actual transition may be gradual and may vary considerably between test borings. Location of test boring is shown on the Boring Location Plan.

BORING NO. & LOCATION: 8	TEST BORING LOG	GILES ENGINEERING ASSOCIATES, INC.
SURFACE ELEVATION: 987.5 feet	PROPOSED KWIK TRIP	
COMPLETION DATE: 03/02/22	W. CAPITOL DRIVE HARTLAND, WISCONSIN	
FIELD REP: KEITH FLOWERS	PROJECT NO: 1G-2202025	

MATERIAL DESCRIPTION	Depth (ft)	Elevation	Sample No. & Type	N	Q_u (tsf)	Q_p (tsf)	Q_s (tsf)	W (%)	PID	NOTES
±8" Topsoil Fill: Dark Brown Silty fine Sand, trace Organic Matter and GravelMoist			1-SS	16					*BDL	
Fill: Brown Silty fine Sand, trace Gravel-Moist			2-SS	28					*BDL	
			3-SS	30					*BDL	
Fill: Dark Gray Sandy Clay, trace Gravel-Moist		980	4-SS	25					*BDL	
	10		5-SS	36					*BDL	
Fill: Gray Silty fine to medium Sand, trace Gravel-Moist			6-SS	25					*BDL	
Fill: Brown and Gray Silty fine Sand with Sandy Silt lenses, trace Gravel (Includes Cinders and Metal Debris)-Moist			7-SS	30					*BDL	
		970	8-SS	27					*BDL	
	20		9-SS	30					*BDL	
			10-SS	30					*BDL	
Possible Fill: Gray Sandy Silt-Wet			11-SS	30					*BDL	
		960								
	30		12-SS	6					*BDL	

Boring Terminated at about 31 feet (EL. 956.5')

PRELIMINARY

Water Observation Data	Remarks:
Water Encountered During Drilling:	*PID Results are lab screened results that may reflect differently from field screened results.
Water Level At End of Drilling:	
Cave Depth At End of Drilling:	
Water Level After Drilling:	
Cave Depth After Drilling:	

Changes in strata indicated by the lines are approximate boundary between soil types. The actual transition may be gradual and may vary considerably between test borings. Location of test boring is shown on the Boring Location Plan.

1002-CPS-23
Division of Industry Services
P. O. Box 2658
Madison, Wisconsin 53701
Scott Walker, Governor
Laura Gutierrez, Secretary

Attachment 2:

SOIL AND SITE EVALUATION – STORM

In accordance with SPS 382.365, 385, Wis. Adm. Code, and WDNR Standard 1002

Attach a complete site plan on paper not less than 8 ½ x 11 inches in size. Plan must include, but not limited to: vertical and horizontal reference point (BM), direction and percent of slope, scale or dimensions, north arrow, and BM referenced to nearest road ***Please print all information*** Personal information you provide may be used for secondary purposes [Privacy Law, s. 15.04(1)(m)]	County Waukesha Parcel I.D. Reviewed by: Date:

Property Owner		Property Location Govt. Lot NW ¼ NW ¼ Section 3 T7N R18E	
Property Owner' Mail Address		Lot #	Block # / Subd. Name or CSM #
City / State / Zip Code / Phone Number		[ ] City [X] Village [ ] Town Hartland	Nearest Road W. Capitol Drive

Drainage area sq. ft. acres
Test site suitable for (check all that apply) [ ] Site not suitable:
[ ] Bioretention [ ] Subsurface Dispersal System:
[ ] Reuse: [ ] Irrigation: [ ] Other:
	Hydraulic Application Test Method
	x Morphological Evaluation
	___ Double Ring Infiltrometer
	___ Other: (specify) _____
		Soil Moisture
		Date of soil borings:
		USDA-NRCS WETS Value:
		___ Dry = 1;
		___ Normal = 2;
		___ Wet = 3

1 #OBS. [ ] Pit [x] Boring Ground surface elevation 988.1 ft. Elevation of limiting factor _____ ft.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate inches/Hr
FILL	0-6	10YR 3/3	--	LS	1, F, GR	M, FR	A –S	10%	15%	--
FILL	6-48	10YR 5/4	--	GR S	1, M, GR	M, FI	G –S	35%	10%	--
FILL	48-132	10YR 5/4	--	LS	1, F, GR	M, FI	G – S	10%	15%	--
C	132-552	10YR 5/4	--	GR S	1, M, GR	M, FI	--	35%	10%	3.60

Comments:

2 #OBS. [ ] Pit [x] Boring Ground surface elevation 988.5 ft. Elevation of limiting factor _____ ft.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate inches/Hr
FILL	0-8	10YR 3/3	--	LS	1, F, GR	M, FR	A –S	10%	15%	--
FILL	8-78	10YR 5/4	--	GR LS	1, M, GR	M, FI	G –S	35%	15%	--
B/C	78-192	10YR 5/4	--	GR S	1, F, GR	M, FI	G – S	35%	10%	3.60
C	192-372	10YR 5/4	--	GR LS	MA	M, FI	--	35%	15%	1.63

Comments:

Name (Please Print) Benjamin M. Stark, P.E.	Signature	Credential Number Soil Tester: SP-111600001 P.E. No.: 48164-6
Address N8 W22350 Johnson Drive, Waukesha, WI	Date Evaluation Conducted March 2, 2022	Telephone Number 262-544-0118

3 #OBS. [ ] Pit [x] Boring Ground surface elevation 987.8 ft. Elevation of limiting factor _____ ft.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate inches/Hr
FILL	0-6	10YR 3/3	--	LS	1, F, GR	M, FR	A –S	10%	15%	--
FILL	6-48	10YR 3/3	--	GR LS	1, M, GR	M, FI	G –S	35%	15%	--
B/C	48-108	10YR 5/4	--	GR LS	1, F, GR	M, FI	G – S	35%	15%	1.63
C	108-372	10YR 5/4	--	GR S	MA	M, FI	--	35%	10%	3.60

Comments:

4 #OBS. [ ] Pit [x] Boring Ground surface elevation 987.7 ft. Elevation of limiting factor _____ ft.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate inches/Hr
FILL	0-6	10YR 3/3	--	LS	1, F, GR	M, FR	A –S	10%	15%	--
FILL	6-24	10YR 5/4	--	GR S	1, F, GR	M, FI	G –S	35%	10%	--
FILL	24-48	10YR 3/3	--	LS	1, F, GR	M, FI	G – S	10%	15%	--
C	48-252	10YR 5/4	--	GR LS	MA	M, FI	--	35%	15%	1.63

Comments:

5 #OBS. [ ] Pit [x] Boring Ground surface elevation 992.1 ft. Elevation of limiting factor _____ ft.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate inches/Hr
FILL	0-6	10YR 3/3	--	LS	1, F, GR	M, FR	A –S	10%	15%	--
FILL	6-78	10YR 5/4	--	LS	MA	M, FI	G –S	10%	15%	--
FILL	78-132	10YR 5/4	--	SL	1, F, GR	M, FI	C – S	10%	30%	--
FILL	132-192	10YR 3/3	--	SICL	1, F, SBK	M, FI	C – S	<5%	85%	--
C	192-252	10YR 5/4	--	GR LS	MA	M, FI	--	35%	15%	1.63

Comments:

6 #OBS. [ ] Pit [x] Boring Ground surface elevation 993.2 ft. Elevation of limiting factor _____ ft.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate inches/Hr
FILL	0-4	10YR 3/3	--	SL	1, F, GR	M, FR	A –S	10%	15%	--
FILL	4-48	10YR 5/4	--	SL	1, F, GR	M, FI	C – S	<5%	30%	--
FILL	48-138	10YR 5/4	--	LS	1, F, GR	M, FI	C – S	<5%	15%	--
FILL	138-168	10YR 5/4	--	SICL	MA	M, FI	C – S	<5%	85%	-
FILL	168-204	10YR 3/1	--	SL	MA	M, FI	C – S	<5%	30%	--
C	204-372	10YR 5/4	--	GR LS	MA	M, FI	--	35%	15%	1.63

Comments:

7 #OBS. [ ] Pit [x] Boring Ground surface elevation 987.6 ft. Elevation of limiting factor _____ ft.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate inches/Hr
FILL	0-8	10YR 3/3	--	SL	1, F, GR	M, FR	A –S	<5%	15%	--
FILL	8-108	10YR 5/4	--	LS	1, F, GR	M, FI	C – S	10%	15%	--
FILL	108-138	10YR 5/1	--	SICL	1, F, GR	M, FI	C – S	10%	85%	--
FILL	138-192	10YR 5/4	--	SICL	MA	M, FI	C – S	<5%	80%	-
FILL	192-252	10YR 5/4	--	SICL	MA	M, FI	C – S	<5%	85%	--

Comments:

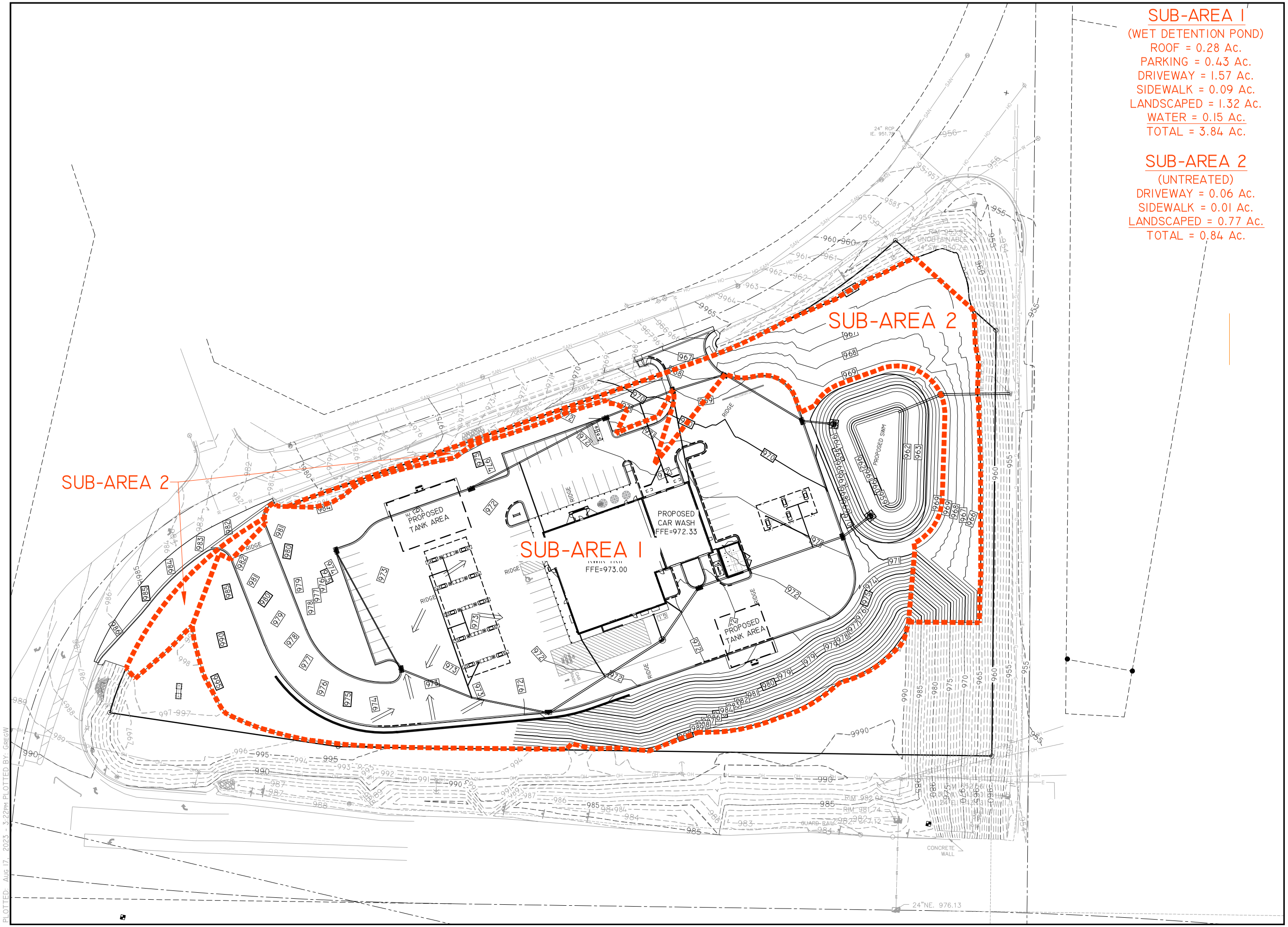
8 #OBS. [ ] Pit [x] Boring Ground surface elevation 987.5 ft. Elevation of limiting factor _____ ft.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate inches/Hr
FILL	0-8	10YR 3/3	--	SL	1, F, GR	M, FR	A –S	10%	15%	--
FILL	8-78	10YR 5/4	--	LS	1, F, GR	M, FI	C – S	10%	15%	--
FILL	78-138	10YR 3/1	--	SCL	1, F, GR	M, FI	C – S	10%	55%	--
FILL	138-168	10YR 5/1	--	LS	MA	M, FI	C – S	10%	15%	-
FILL	168-264	10YR 5/4	--	LS	MA	M, FI	C – S	10%	15%	--
FILL	264-372	10YR 5/1	--	SL	MA	M, FI	C--	<5%	30%	--

Comments:

Appendix 3

Water Quality Calculations & WinSLAMM Inputs



KWIK TRIP STORES

KWIK STAR STORES

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

REI
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WAUSAU, WISCONSIN 54401
PHONE: 715.675.9784 FAX: 715.675.4060
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SCALE
0 40 80

WATER QUALITY WATERSHED AREAS

CONVENIENCE STORE #1283

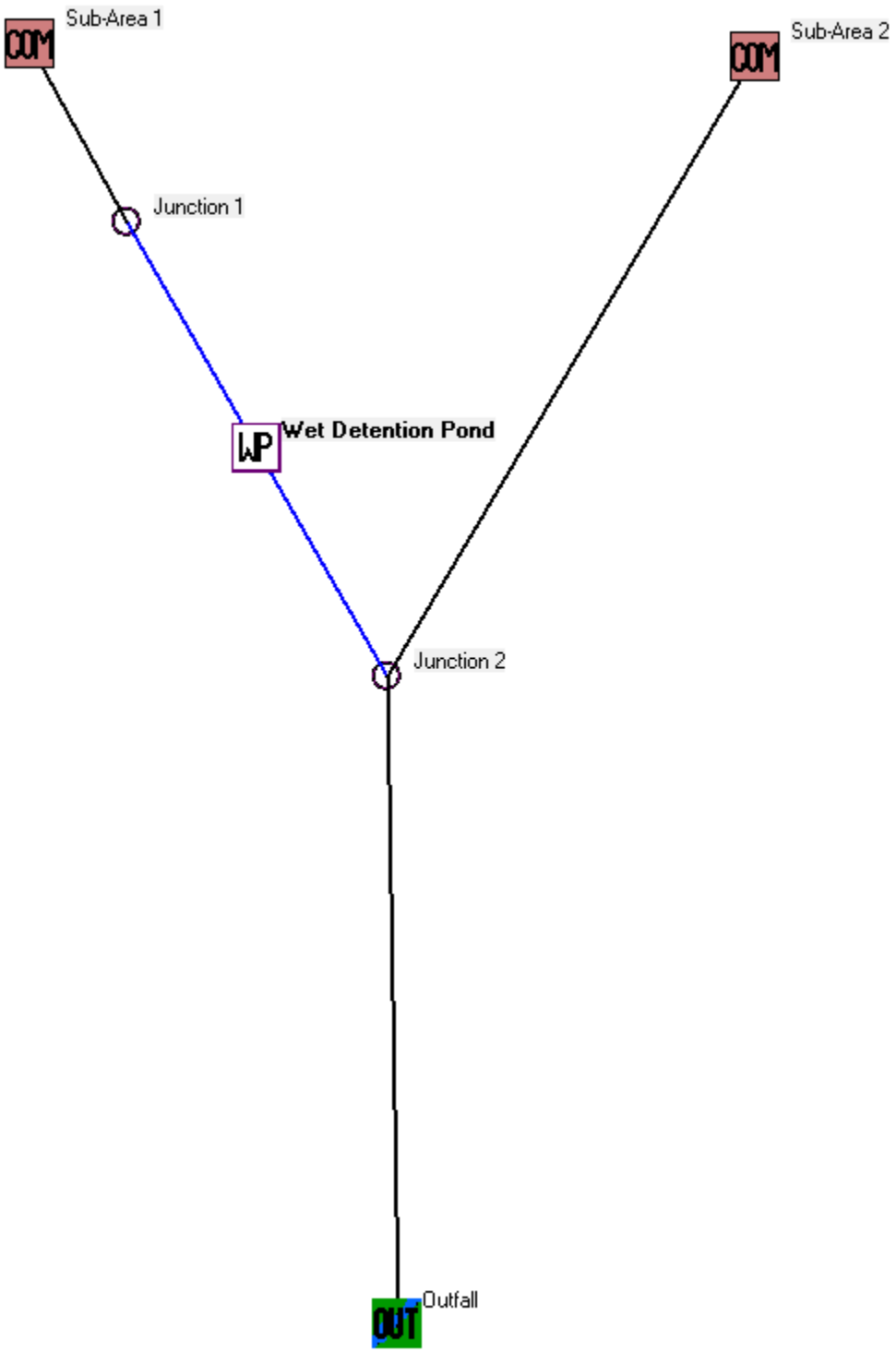
STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	NAP
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	STM-1

DRAWING FILE: Q:\10800 - 10899\10827 - KWIK TRIP #1283 - HARTLAND\DRAWING\FIGURES\10827-STM-1.DWG LAYOUT: STM-1
PLOTTED: AUG 17, 2023 - 3:22PM PLOTTED BY: GREGW

SITE TSS REMOVAL WINSLAMM INPUT



Data file name: Q:\10800 - 10899\10827 - Kwik Trip #1283 - Hartland\Engineer\Stormwater Modeling\WinSLAMM\10827-Water Quality Analysis.mdb
WinSLAMM Version 10.5.0
Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Milwaukee WI 1969.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.ppdx
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: 01/05/69 Study period ending date: 12/31/69
Start of Winter Season: 12/07 End of Winter Season: 03/27
Date: 08-17-2023 Time: 13:29:59
Site information:

LU# 1 - Commercial: Commercial 1 Total area (ac): 3.840
1 - Roofs 1: 0.280 ac. Pitched Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
13 - Paved Parking 1: 0.430 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
25 - Driveways 1: 1.570 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
31 - Sidewalks 1: 0.090 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 1.320 ac. Normal Sandy PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
70 - Water Body Areas: 0.150 ac. PSD File: Source Area PSD File:

LU# 2 - Commercial: Commercial 2 Total area (ac): 0.840
25 - Driveways 1: 0.060 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
31 - Sidewalks 1: 0.010 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.770 ac. Normal Sandy PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Wet Detention Pond CP# 1 (DS) - Wet Detention Pond
Particle Size Distribution file name: Not needed - calculated by program
Initial stage elevation (ft): 5
Peak to Average Flow Ratio: 3.8
Maximum flow allowed into pond (cfs): No maximum value entered
Outlet Characteristics:
Outlet type: Sharp Crested Weir
1. Sharp crested weir length (ft): 4
2. Sharp crested weir height from invert: 1
3. Sharp crested weir invert elevation above datum (ft): 10
Outlet type: Orifice 1
1. Orifice diameter (ft): 0.17
2. Number of orifices: 1
3. Invert elevation above datum (ft): 5
Outlet type: Orifice 2
1. Orifice diameter (ft): 0.5
2. Number of orifices: 1
3. Invert elevation above datum (ft): 8.5
Outlet type: Broad Crested Weir
1. Weir crest length (ft): 6
2. Weir crest width (ft): 10
3. Height from datum to bottom of weir opening: 10
Pond stage and surface area

Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other Outflow (cfs)
0	0.00	0.0000	0.00	0.00
1	0.01	0.0442	0.00	0.00
2	1.00	0.0538	0.00	0.00
3	2.00	0.0640	0.00	0.00
4	3.00	0.0748	0.00	0.00
5	4.00	0.0861	0.00	0.00
6	5.00	0.1516	0.00	0.00
7	6.00	0.1741	0.00	0.00
8	7.00	0.1979	0.00	0.00
9	8.00	0.2228	0.00	0.00
10	9.00	0.2496	0.00	0.00
11	10.00	0.2776	0.00	0.00
12	11.00	0.3058	0.00	0.00

WET DETENTENTION POND INPUT

Wet Detention Control Device

Pond Number 1

Drainage System Control Practice

Initial Stage Elevation (ft): 5.00

Maximum Inflow into Pond (cfs)
Enter 0 or leave blank for no limit:

Enter Two Stage Area Values in Rows 1 and 2, and Press to Interpolate

Create Pond Stage-Area Values | Refresh Schematic

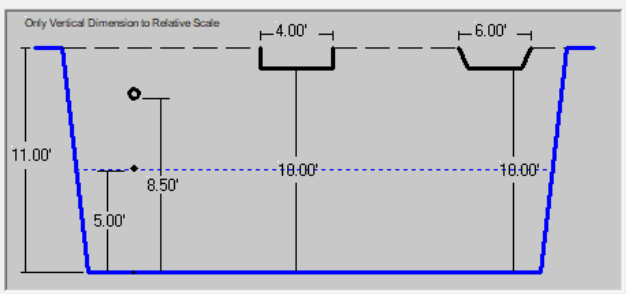
Enter fraction (greater than 0) that you want to modify all pond areas by and then select 'Modify Pond Areas' button: 0.00

Modify Pond Areas

	Stage (ft)	Area (acres)	Cumulative Volume (ac-ft)
0	0.00	0.0000	0.0000
1	0.01	0.0442	0.000
2	1.00	0.0538	0.049
3	2.00	0.0640	0.108
4	3.00	0.0748	0.177
5	4.00	0.0861	0.257
6	5.00	0.1516	0.376
7	6.00	0.1741	0.539
8	7.00	0.1979	0.725
9	8.00	0.2228	0.936
10	9.00	0.2496	1.172
11	10.00	0.2776	1.435
12	11.00	0.3058	1.727
13			
14			
15			
16			
17			

Copy Pond Data | Paste Pond Data | Recalculate Cumulative Volume

Save or Delete Pond Data to Database File | Get Pond Data From Database File



To Delete This Practice, Right Mouse Click on Icon and Select Delete

Cancel | Continue | Press 'F1' for Help

Control Practice # : 1 | CP Index # : 1

Remove **Sharp Crested Weir**

Weir Length (ft)	4.00
Height from datum to bottom of weir opening (ft)	10.00

Add **V-Notch Weir**

Weir Angle (<180 degrees)	
Height from datum to bottom of weir opening (ft)	
Number of V-Notch weirs	

Remove **Orifice Set 1**

Orifice Diameter (ft)	0.17
Invert elevation above datum (ft)	5.00
Number of orifices in set	1

Remove **Orifice Set 2**

Orifice Diameter (ft)	0.50
Invert elevation above datum (ft)	8.50
Number of orifices in set	1

Add **Orifice Set 3**

Orifice Diameter (ft)	
Invert elevation above datum (ft)	
Number of orifices in set	

Add **Stone Weeper**

Width at bottom of weeper (ft)	
Weeper side slope (_H:1V)	
Upstream side slope (_H:1V)	
Downstream side slope (_H:1V)	
Horizontal flow path length at top of weeper (ft)	
Average rock diameter (ft)	
Distance from bottom to top of weeper (ft)	
Height from datum to bottom of weeper (ft)	

Add **Vertical Stand Pipe**

Pipe diameter (ft)	
Height above datum (ft)	

Add | Add

Month	Evaporation (in/day)	Water Withdraw Rate (ac-ft/day)
Jan	0.00	0.000
Feb	0.00	0.000
Mar	0.00	0.000
Apr	0.00	0.000
May	0.00	0.000
Jun	0.00	0.000
Jul	0.00	0.000
Aug	0.00	0.000
Sep	0.00	0.000
Oct	0.00	0.000
Nov	0.00	0.000
Dec	0.00	0.000

Add | Add

Stage (ft)	Natural Seepage Rate (in/hr)	Other Outflow Rate (cfs)
0.00	0.00	0.000
0.01	0.00	0.000
1.00	0.00	0.000
2.00	0.00	0.000
3.00	0.00	0.000
4.00	0.00	0.000
5.00	0.00	0.000

Remove **Broad Crested Weir (Required)**

Weir crest length (ft)	6.00
Weir crest width (ft)	10.00
Height from datum to bottom of weir opening (ft)	10.00

Add **Seepage Basin**

Infiltration rate (in/hr)	
Width of device (ft)	
Length of device (ft)	
Invert elevation of seepage basin inlet above datum (ft)	

Add **Pump**

WINSLAMM OUTPUT

File Name:

Q:\10800 - 10899\10827 - Kwik Trip #1283 - Hartland\Engineer\Stormwater Modeling\WinSLAMM\10827-Water Quality Analysis.mdb

Outfall Output Summary

	Runoff Volume (cu. ft.)	Percent Runoff Reduction	Runoff Coefficient (Rv)	Particulate Solids Conc. (mg/L)	Particulate Solids Yield (lbs)	Percent Particulate Solids Reduction
Total of All Land Uses without Controls	214974		0.38	121.0	1624	
Outfall Total with Controls	215161	-0.09 %	0.38	19.14	257.1	84.17 %

Current File Output: Annualized Total After Outfall Controls 218150 Years in Model Run: 0.99 260.6

Pollutant (1)	Concen-tration - No Controls	Concen-tration - With Controls	Concen-tration Units	Pollutant Yield - No Controls	Pollutant Yield - With Controls	Pollutant Yield Units	Percent Yield Reduction
Particulate Solids	121.0	19.14	mg/L	1624	257.1	lbs	84.17 %
Total Phosphorus	0.3828	0.1352	mg/L	5.138	1.816	lbs	64.66 %

Print Output Summary to .csv File

Print Output Summary to Text File

Print Output Summary to Printer

Total Area Modeled (ac) 4.680

Total Control Practice Costs

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

Perform Outfall Flow Duration Curve Calculations

Receiving Water Impacts Due To Stormwater Runoff

(CWP Impervious Cover Model)

	Calculated Rv	Approximate Urban Stream Classification
Without Controls	0.38	Poor
With Controls	0.38	Poor

ANNUAL YIELD OF TSS (NO CONTROL) = 1,624 lbs

ANNUAL YIELD OF TSS AFTER CONTROLS = 257.1 lbs

PERCENT TSS REDUCTION = 84.17%

ANNUAL YIELD OF TP (NO CONTROL) = 5.138 lbs

ANNUAL YIELD OF TP AFTER CONTROLS = 1.816 lbs

PERCENT TP REDUCTION = 64.66%

Appendix 4

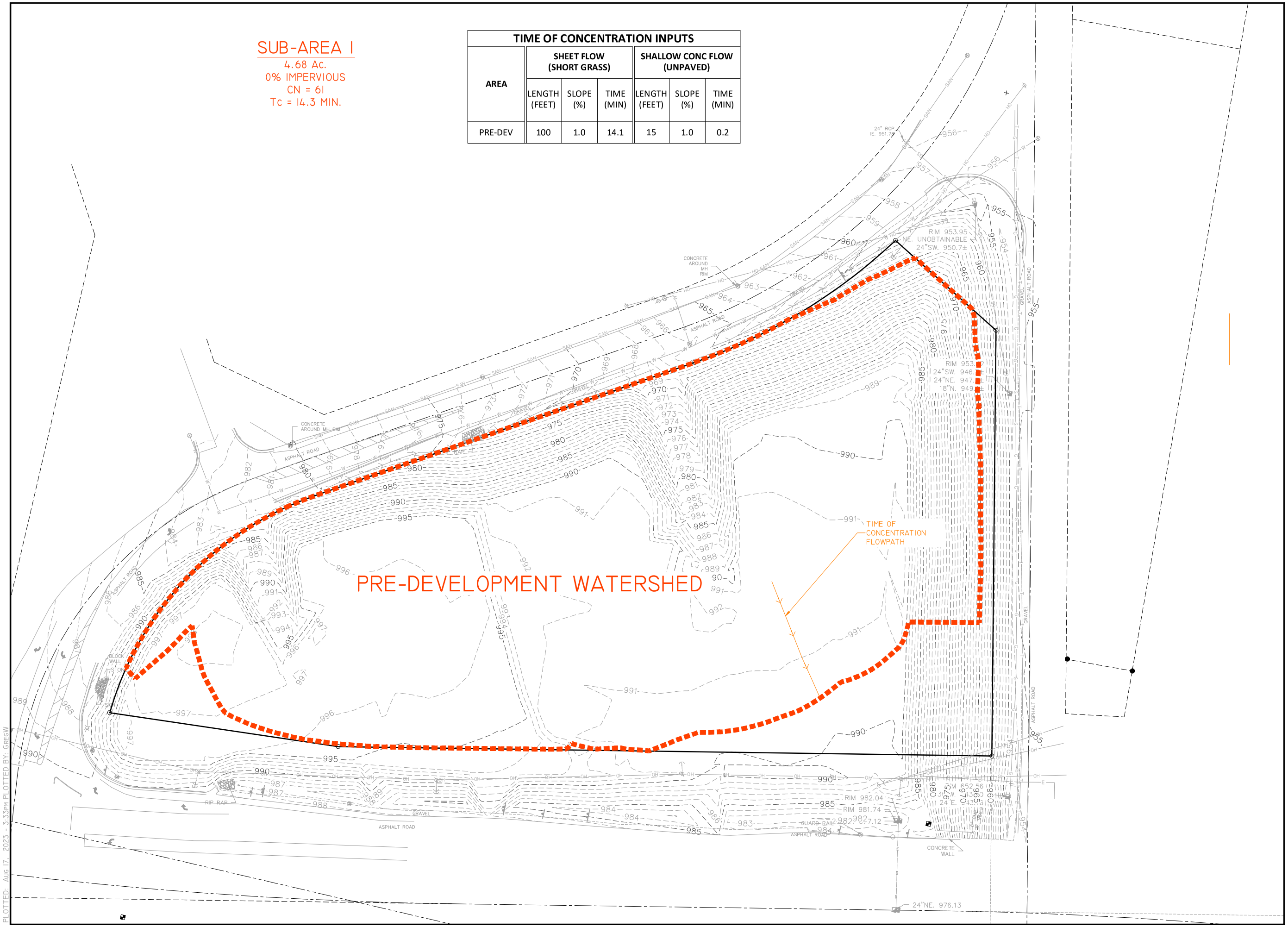
Pre-Development Conditions Peak Flow Analysis

SUB-AREA 1

4.68 Ac.
0% IMPERVIOUS
CN = 61
Tc = 14.3 MIN.

TIME OF CONCENTRATION INPUTS

AREA	SHEET FLOW (SHORT GRASS)			SHALLOW CONC FLOW (UNPAVED)		
	LENGTH (FEET)	SLOPE (%)	TIME (MIN)	LENGTH (FEET)	SLOPE (%)	TIME (MIN)
PRE-DEV	100	1.0	14.1	15	1.0	0.2



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PLOTTED: AUG 17, 2023 - 3:33pm PLOTTED BY: GREGW

KWIK TRIP STORES

KWIK STAR STORES

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SCALE
0 40 80

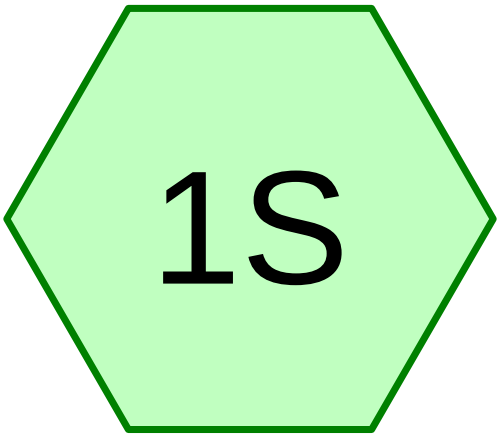
PRE-DEVELOPMENT WATERSHED AREAS

CONVENIENCE STORE #1283

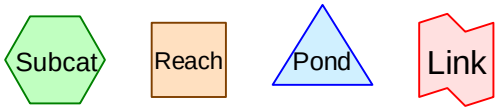
STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	NAP
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	STM-2



Pre-Development Watershed



Routing Diagram for 10827-PRE
Prepared by REI Engineering, Printed 8/17/2023
HydroCAD® 10.20-3c s/n 03070 © 2023 HydroCAD Software Solutions LLC

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Pre-Development Watershed Runoff Area=4.680 ac 0.00% Impervious Runoff Depth=0.17"
Flow Length=115' Slope=0.0100 '/' Tc=14.3 min CN=61 Runoff=0.41 cfs 0.065 af

Total Runoff Area = 4.680 ac Runoff Volume = 0.065 af Average Runoff Depth = 0.17"
100.00% Pervious = 4.680 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 1S: Pre-Development Watershed

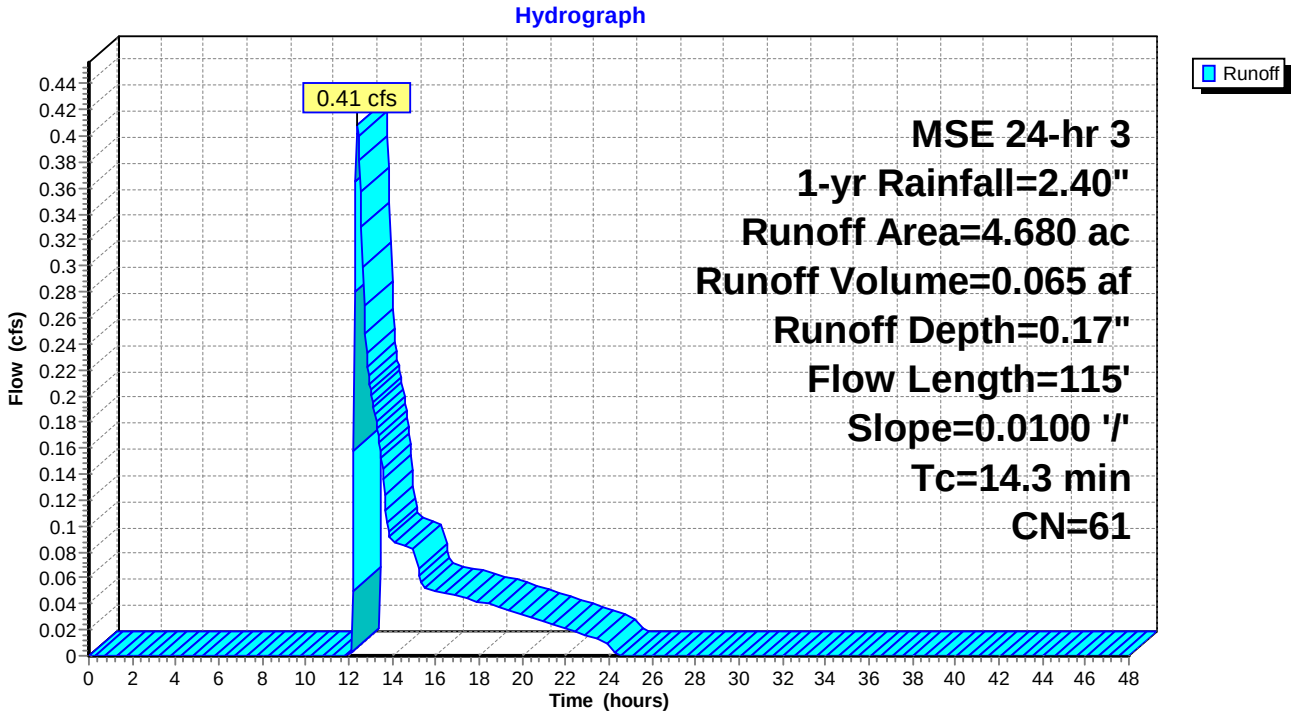
Runoff = 0.41 cfs @ 12.40 hrs, Volume= 0.065 af, Depth= 0.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-yr Rainfall=2.40"

	Area (ac)	CN	Description
*	4.680	61	Grassland, HSG B
	4.680		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.1	100	0.0100	0.12		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.70"
0.2	15	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
14.3	115	Total			

Subcatchment 1S: Pre-Development Watershed



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Pre-Development Watershed Runoff Area=4.680 ac 0.00% Impervious Runoff Depth=0.26"
Flow Length=115' Slope=0.0100 '/' Tc=14.3 min CN=61 Runoff=0.84 cfs 0.101 af

Total Runoff Area = 4.680 ac Runoff Volume = 0.101 af Average Runoff Depth = 0.26"
100.00% Pervious = 4.680 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 1S: Pre-Development Watershed

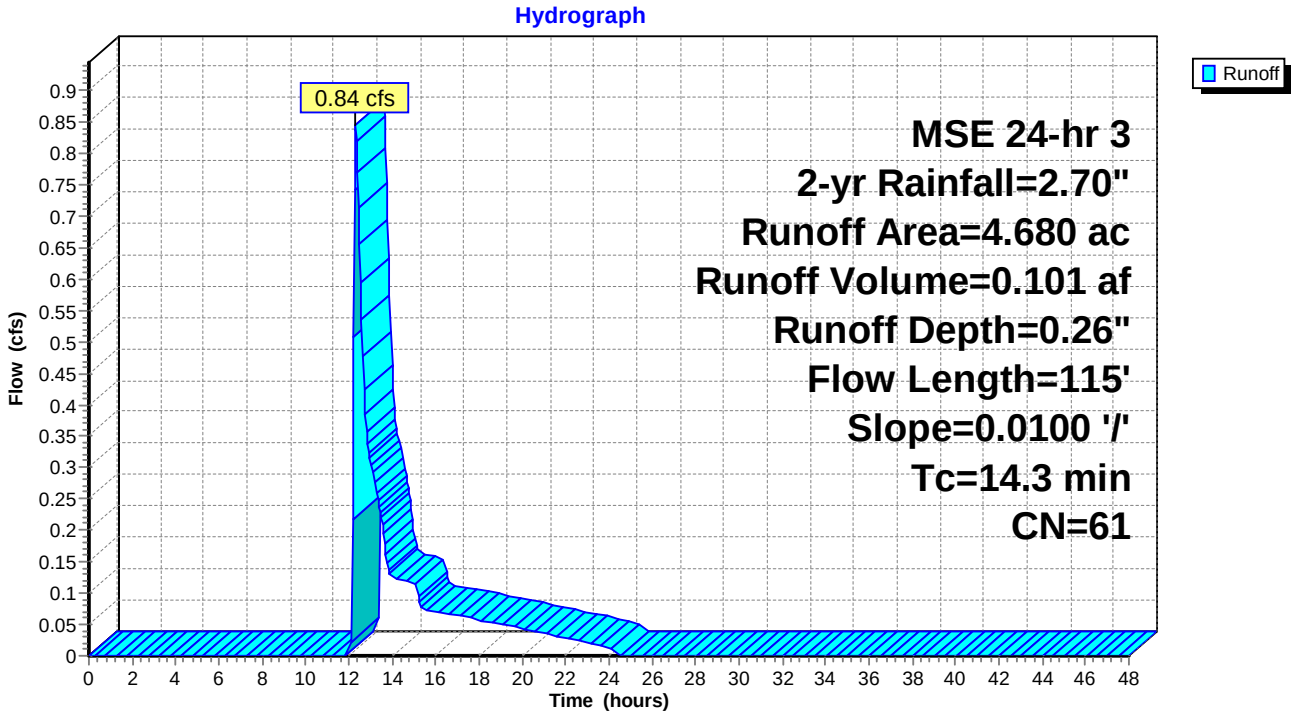
Runoff = 0.84 cfs @ 12.32 hrs, Volume= 0.101 af, Depth= 0.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-yr Rainfall=2.70"

	Area (ac)	CN	Description
*	4.680	61	Grassland, HSG B
	4.680		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.1	100	0.0100	0.12		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.70"
0.2	15	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
14.3	115	Total			

Subcatchment 1S: Pre-Development Watershed



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Pre-Development Watershed Runoff Area=4.680 ac 0.00% Impervious Runoff Depth=0.72"
Flow Length=115' Slope=0.0100 '/' Tc=14.3 min CN=61 Runoff=3.65 cfs 0.280 af

Total Runoff Area = 4.680 ac Runoff Volume = 0.280 af Average Runoff Depth = 0.72"
100.00% Pervious = 4.680 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 1S: Pre-Development Watershed

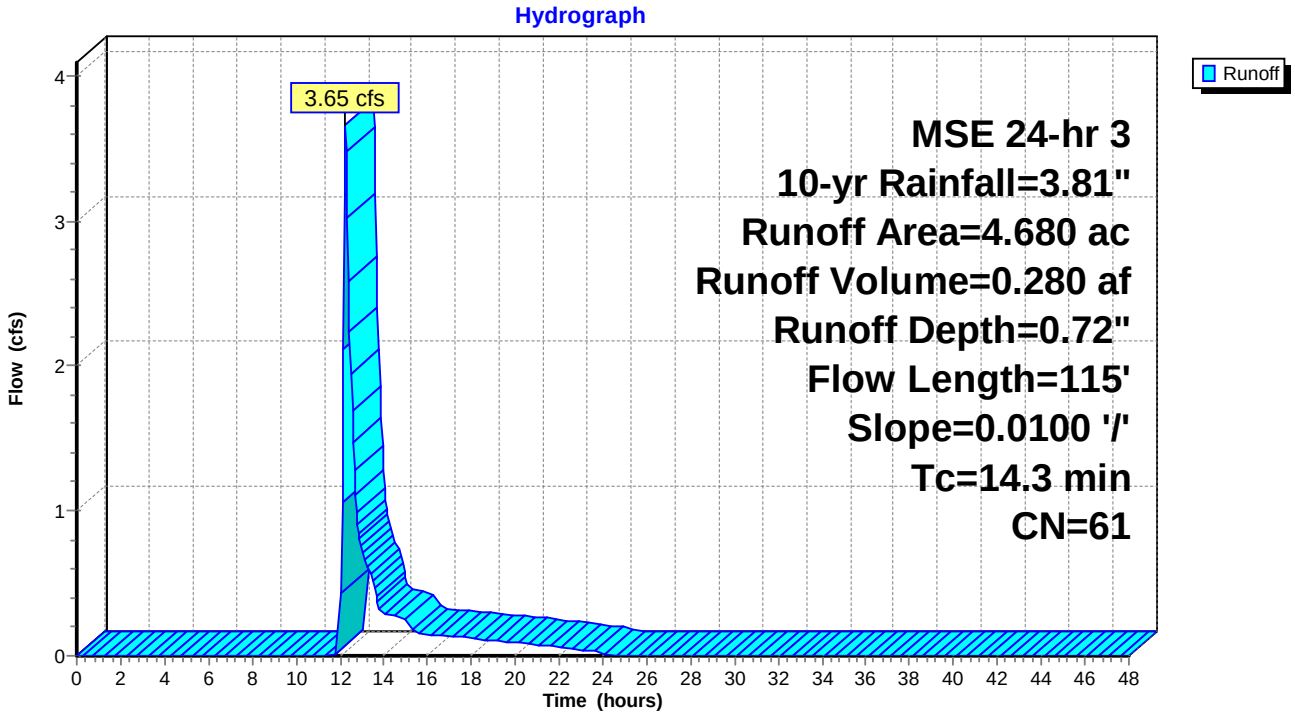
Runoff = 3.65 cfs @ 12.26 hrs, Volume= 0.280 af, Depth= 0.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-yr Rainfall=3.81"

	Area (ac)	CN	Description
*	4.680	61	Grassland, HSG B
	4.680		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.1	100	0.0100	0.12		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.70"
0.2	15	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
14.3	115	Total			

Subcatchment 1S: Pre-Development Watershed



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Pre-Development Watershed Runoff Area=4.680 ac 0.00% Impervious Runoff Depth=2.13"
Flow Length=115' Slope=0.0100 '/' Tc=14.3 min CN=61 Runoff=12.67 cfs 0.829 af

Total Runoff Area = 4.680 ac Runoff Volume = 0.829 af Average Runoff Depth = 2.13"
100.00% Pervious = 4.680 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 1S: Pre-Development Watershed

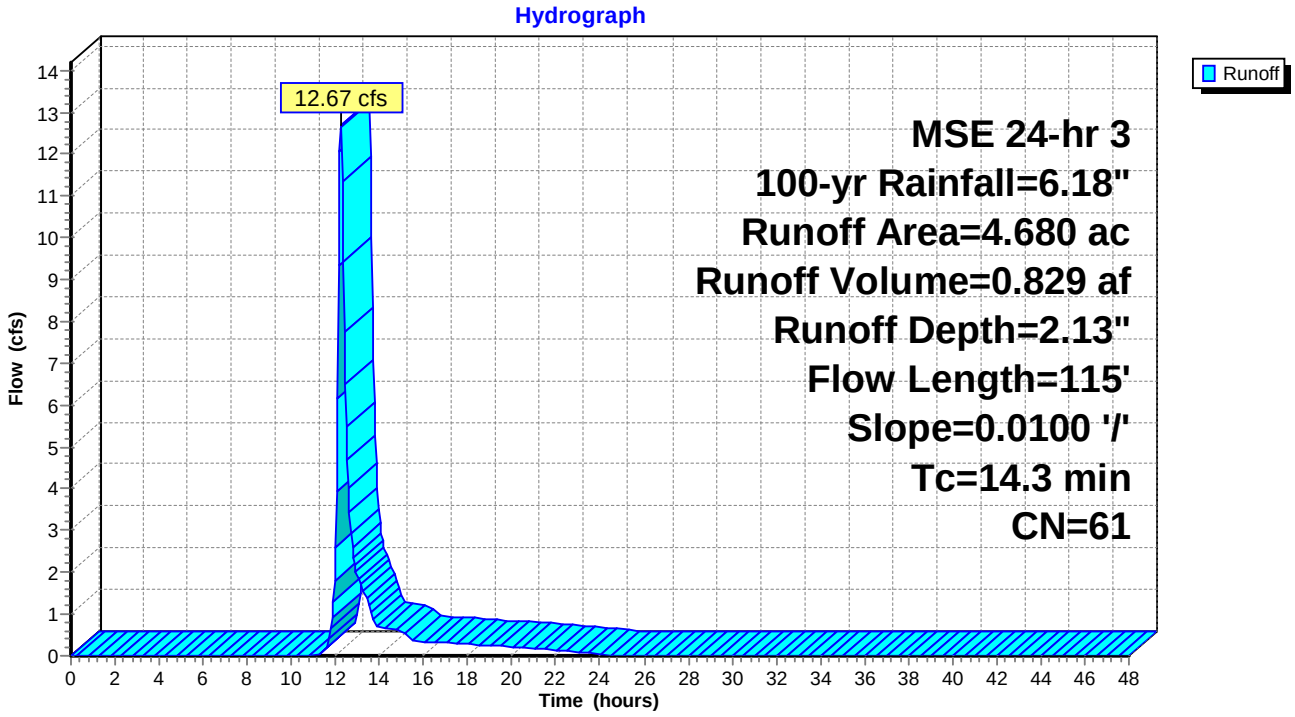
Runoff = 12.67 cfs @ 12.24 hrs, Volume= 0.829 af, Depth= 2.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-yr Rainfall=6.18"

	Area (ac)	CN	Description
*	4.680	61	Grassland, HSG B
	4.680		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.1	100	0.0100	0.12		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.70"
0.2	15	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
14.3	115	Total			

Subcatchment 1S: Pre-Development Watershed



Appendix 5

Post-Development Conditions Peak Flow Analysis

POST-DEVELOPMENT WATERSHED

AREA = 4.68 Ac.
55% IMPERVIOUS
CN = 82

SUB-AREA 1

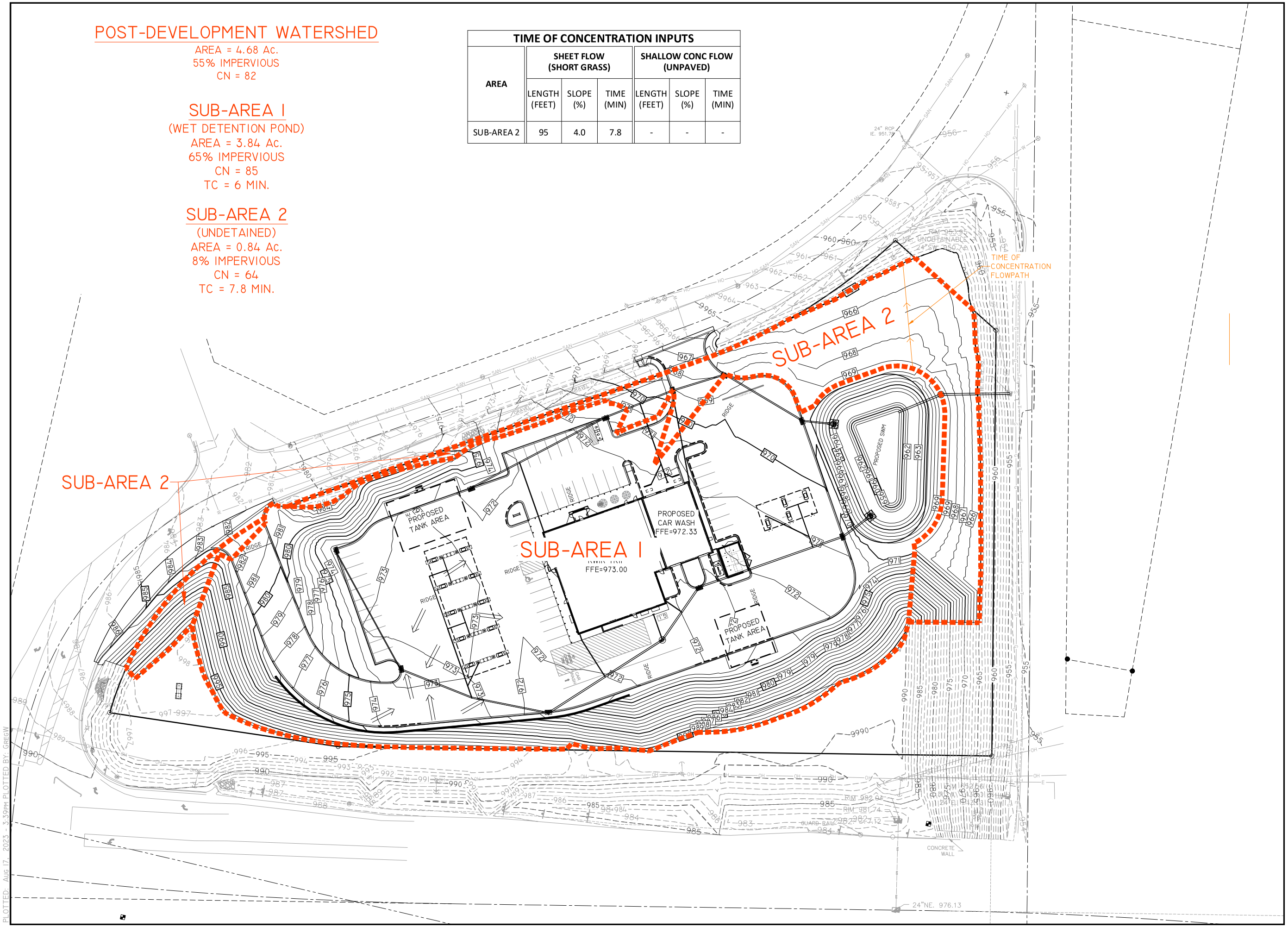
(WET DETENTION POND)
AREA = 3.84 Ac.
65% IMPERVIOUS
CN = 85
TC = 6 MIN.

SUB-AREA 2

(UNDETAINED)
AREA = 0.84 Ac.
8% IMPERVIOUS
CN = 64
TC = 7.8 MIN.

TIME OF CONCENTRATION INPUTS

AREA	SHEET FLOW (SHORT GRASS)			SHALLOW CONC FLOW (UNPAVED)		
	LENGTH (FEET)	SLOPE (%)	TIME (MIN)	LENGTH (FEET)	SLOPE (%)	TIME (MIN)
SUB-AREA 2	95	4.0	7.8	-	-	-



KWIK TRIP STORES

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SCALE
0 40 80

POST-DEVELOPMENT WATERSHED AREAS

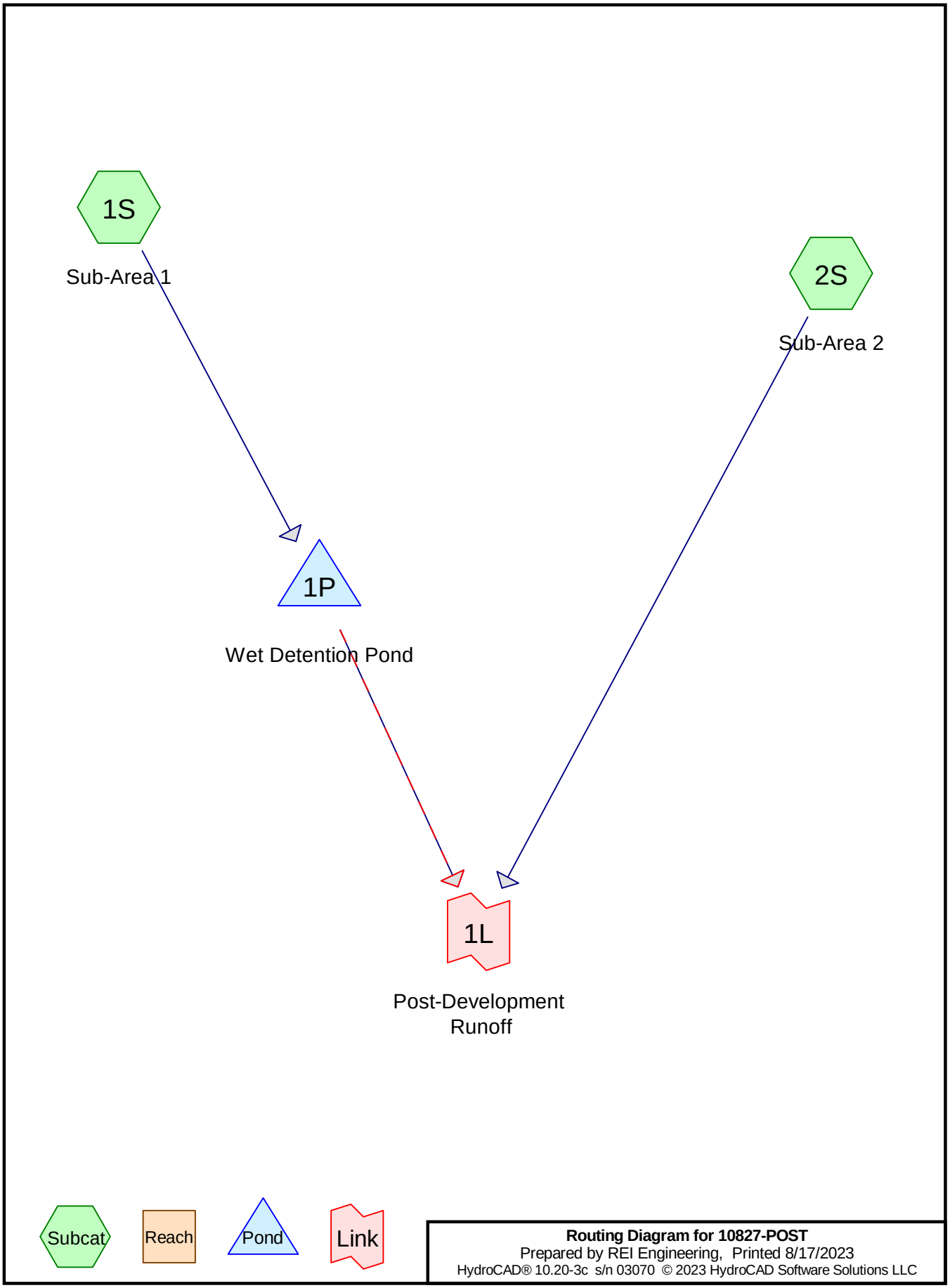
CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY NAP
SCALE GRAPHIC
PROJ. NO. 10827
DATE 8/17/23 - REVIEW DOCUMENTS
SHEET STM-3

DRAWING FILE: Q:\10800 - 10899\10827 - KWIK TRIP #1283 - HARTLAND\DRAWING\FIGURES\10827-STM-3.DWG LAYOUT: STM-3
PLOTTED: AUG 17, 2023 - 3:39PM PLOTTED BY: GREGW



Routing Diagram for 10827-POST
Prepared by REI Engineering, Printed 8/17/2023
HydroCAD® 10.20-3c s/n 03070 © 2023 HydroCAD Software Solutions LLC

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Sub-Area 1 Runoff Area=3.840 ac 65.63% Impervious Runoff Depth=1.49"
Tc=6.0 min CN=WQ Runoff=8.64 cfs 0.477 af

Subcatchment 2S: Sub-Area 2 Runoff Area=0.840 ac 8.33% Impervious Runoff Depth=0.33"
Flow Length=95' Slope=0.0400 '/' Tc=7.8 min CN=WQ Runoff=0.27 cfs 0.023 af

Pond 1P: Wet Detention Pond Peak Elev=965.10' Storage=16,034 cf Inflow=8.64 cfs 0.477 af
Primary=0.15 cfs 0.376 af Secondary=0.00 cfs 0.000 af Outflow=0.15 cfs 0.376 af

Link 1L: Post-Development Runoff Inflow=0.39 cfs 0.399 af
Primary=0.39 cfs 0.399 af

Total Runoff Area = 4.680 ac Runoff Volume = 0.501 af Average Runoff Depth = 1.28"
44.66% Pervious = 2.090 ac 55.34% Impervious = 2.590 ac

Summary for Subcatchment 1S: Sub-Area 1

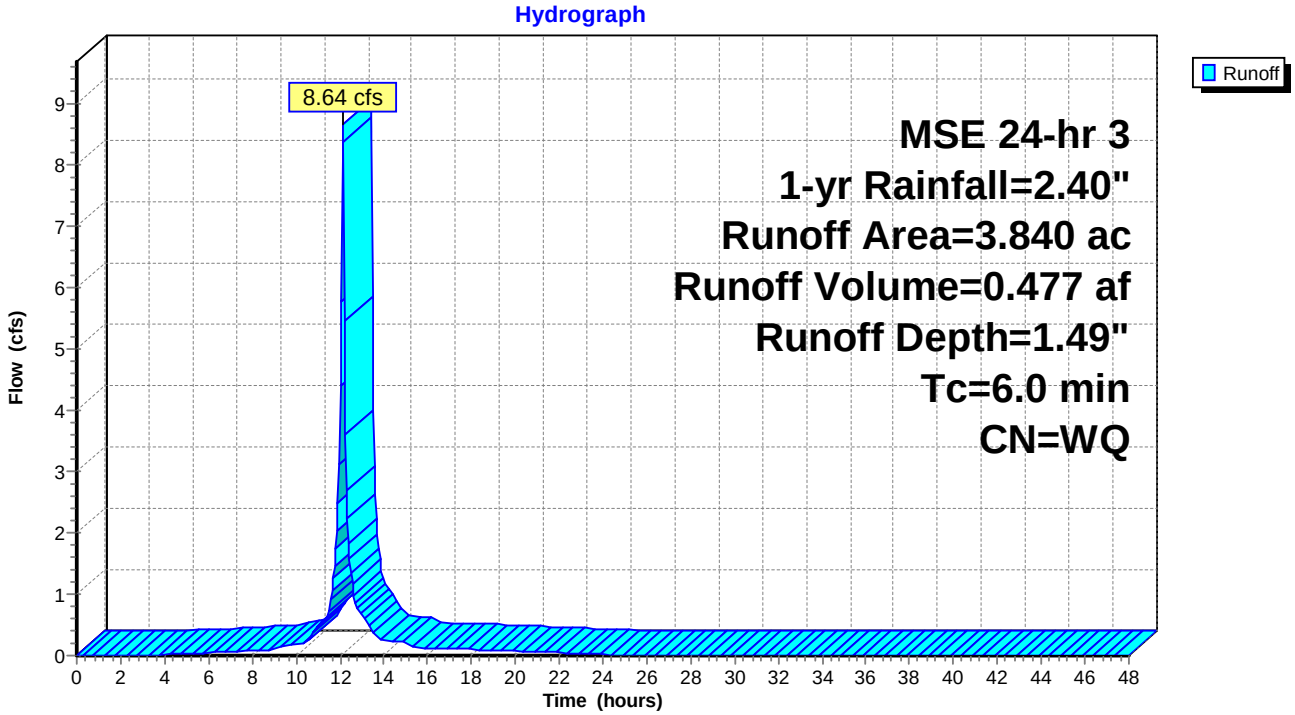
Runoff = 8.64 cfs @ 12.13 hrs, Volume= 0.477 af, Depth= 1.49"
Routed to Pond 1P : Wet Detention Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-yr Rainfall=2.40"

	Area (ac)	CN	Description
*	0.280	98	Roof
*	0.430	98	Parking
*	1.570	98	Driveway
*	0.090	98	Sidewalk
	1.320	61	>75% Grass cover, Good, HSG B
*	0.150	100	Water Body
	3.840		Weighted Average
	1.320		34.38% Pervious Area
	2.520		65.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 Minimum**

Subcatchment 1S: Sub-Area 1



Summary for Subcatchment 2S: Sub-Area 2

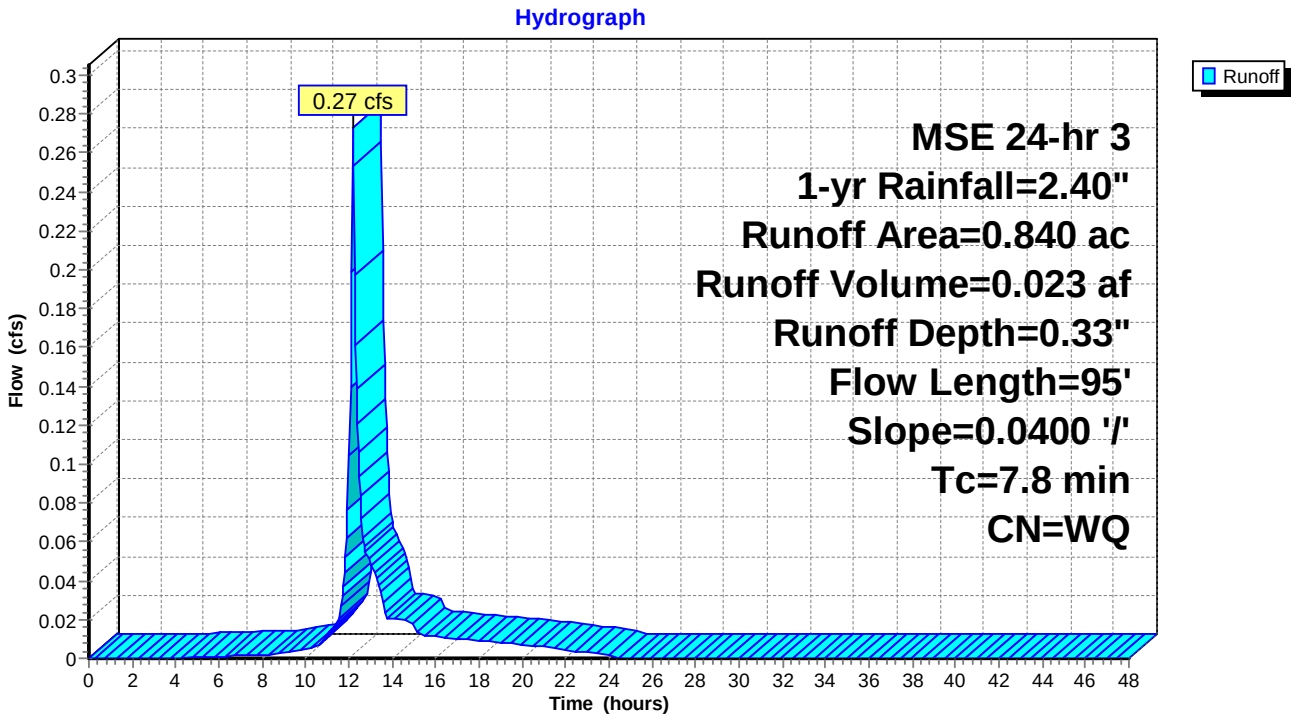
Runoff = 0.27 cfs @ 12.17 hrs, Volume= 0.023 af, Depth= 0.33"
Routed to Link 1L : Post-Development Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-yr Rainfall=2.40"

	Area (ac)	CN	Description
*	0.060	98	Driveway
*	0.010	98	Driveway
	0.770	61	>75% Grass cover, Good, HSG B
	0.840		Weighted Average
	0.770		91.67% Pervious Area
	0.070		8.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8	95	0.0400	0.20		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.70"

Subcatchment 2S: Sub-Area 2



Summary for Pond 1P: Wet Detention Pond

Inflow Area = 3.840 ac, 65.63% Impervious, Inflow Depth = 1.49" for 1-yr event
Inflow = 8.64 cfs @ 12.13 hrs, Volume= 0.477 af
Outflow = 0.15 cfs @ 15.15 hrs, Volume= 0.376 af, Atten= 98%, Lag= 181.3 min
Primary = 0.15 cfs @ 15.15 hrs, Volume= 0.376 af
Routed to Link 1L : Post-Development Runoff
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link 1L : Post-Development Runoff

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 965.10' @ 15.15 hrs Surf.Area= 8,723 sf Storage= 16,034 cf

Plug-Flow detention time= 951.3 min calculated for 0.376 af (79% of inflow)
Center-of-Mass det. time= 889.5 min (1,650.2 - 760.8)

Volume	Invert	Avail.Storage	Storage Description
#1	963.00'	58,804 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

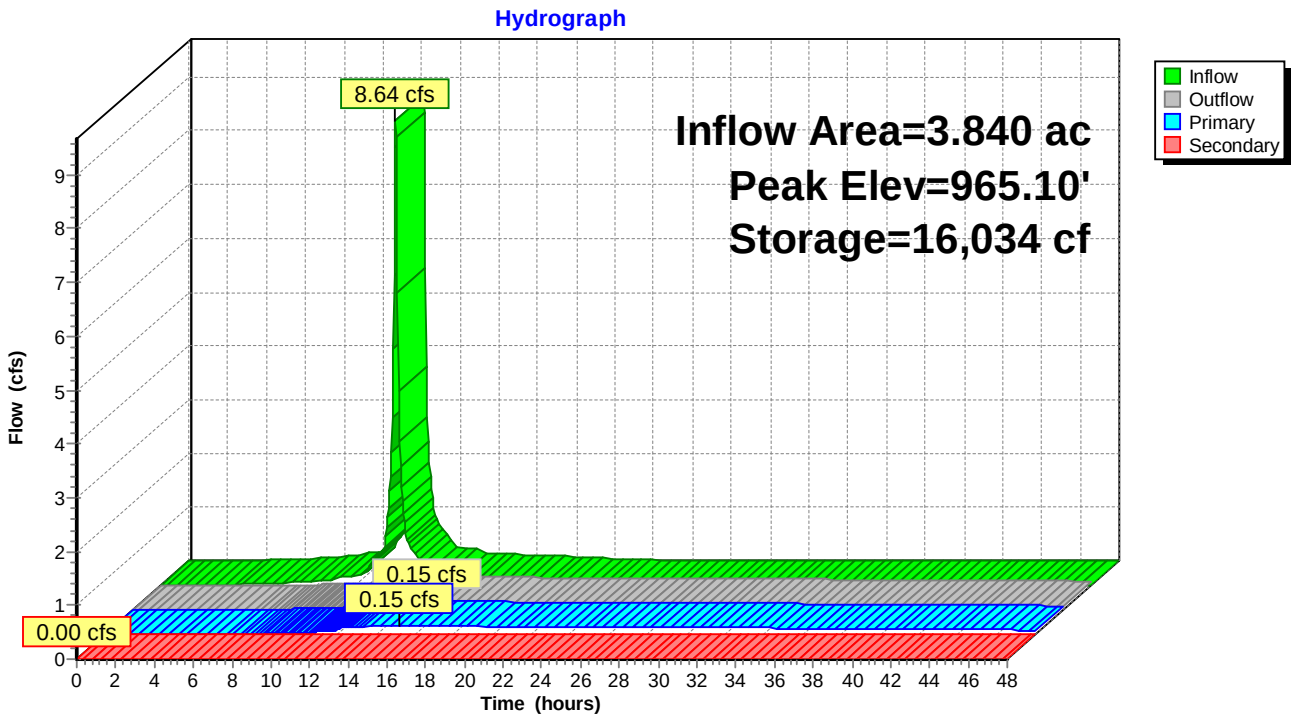
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
963.00	6,604	316.8	0	0	6,604
964.00	7,584	335.6	7,088	7,088	7,633
965.00	8,619	354.5	8,096	15,184	8,727
966.00	9,707	373.3	9,158	24,342	9,875
967.00	10,873	393.5	10,284	34,626	11,166
968.00	12,092	413.7	11,477	46,104	12,525
969.00	13,319	429.9	12,701	58,804	13,691

Device	Routing	Invert	Outlet Devices
#1	Primary	958.00'	**12.0" Round Culvert** L= 62.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 958.00' / 949.10' S= 0.1435 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	963.00'	**2.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	966.50'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	968.00'	**4.0' long x 1.00' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#5	Secondary	968.00'	**6.0' long + 5.0 '/' SideZ x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.15 cfs @ 15.15 hrs HW=965.10' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.15 cfs of 7.67 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 0.15 cfs @ 6.83 fps)
  ├─**3=Orifice/Grate** (Controls 0.00 cfs)
  └─**4=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=963.00' TW=0.00' (Dynamic Tailwater)
└─**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 1P: Wet Detention Pond

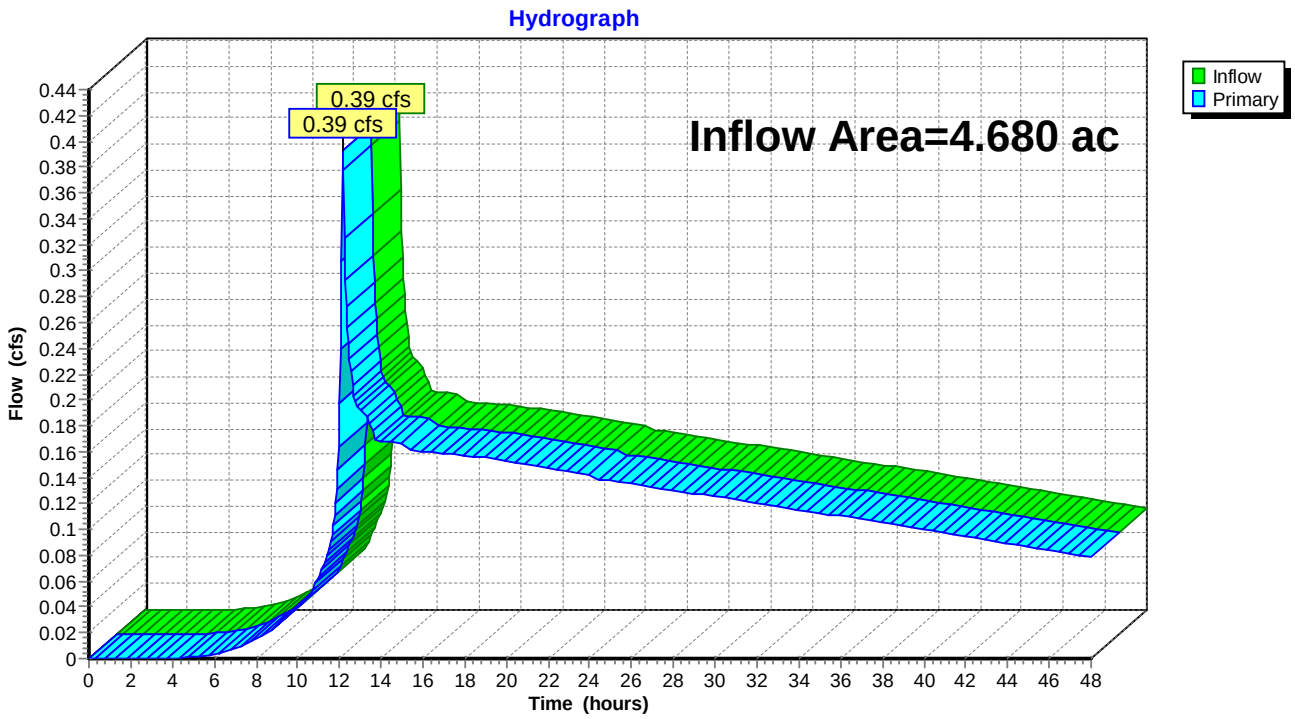


Summary for Link 1L: Post-Development Runoff

Inflow Area = 4.680 ac, 55.34% Impervious, Inflow Depth > 1.02" for 1-yr event
Inflow = 0.39 cfs @ 12.17 hrs, Volume= 0.399 af
Primary = 0.39 cfs @ 12.17 hrs, Volume= 0.399 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 1L: Post-Development Runoff



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Sub-Area 1 Runoff Area=3.840 ac 65.63% Impervious Runoff Depth=1.72"
Tc=6.0 min CN=WQ Runoff=9.94 cfs 0.550 af

Subcatchment 2S: Sub-Area 2 Runoff Area=0.840 ac 8.33% Impervious Runoff Depth=0.44"
Flow Length=95' Slope=0.0400 '/' Tc=7.8 min CN=WQ Runoff=0.41 cfs 0.031 af

Pond 1P: Wet Detention Pond Peak Elev=965.39' Storage=18,595 cf Inflow=9.94 cfs 0.550 af
Primary=0.16 cfs 0.414 af Secondary=0.00 cfs 0.000 af Outflow=0.16 cfs 0.414 af

Link 1L: Post-Development Runoff Inflow=0.54 cfs 0.445 af
Primary=0.54 cfs 0.445 af

Total Runoff Area = 4.680 ac Runoff Volume = 0.581 af Average Runoff Depth = 1.49"
44.66% Pervious = 2.090 ac 55.34% Impervious = 2.590 ac

Summary for Subcatchment 1S: Sub-Area 1

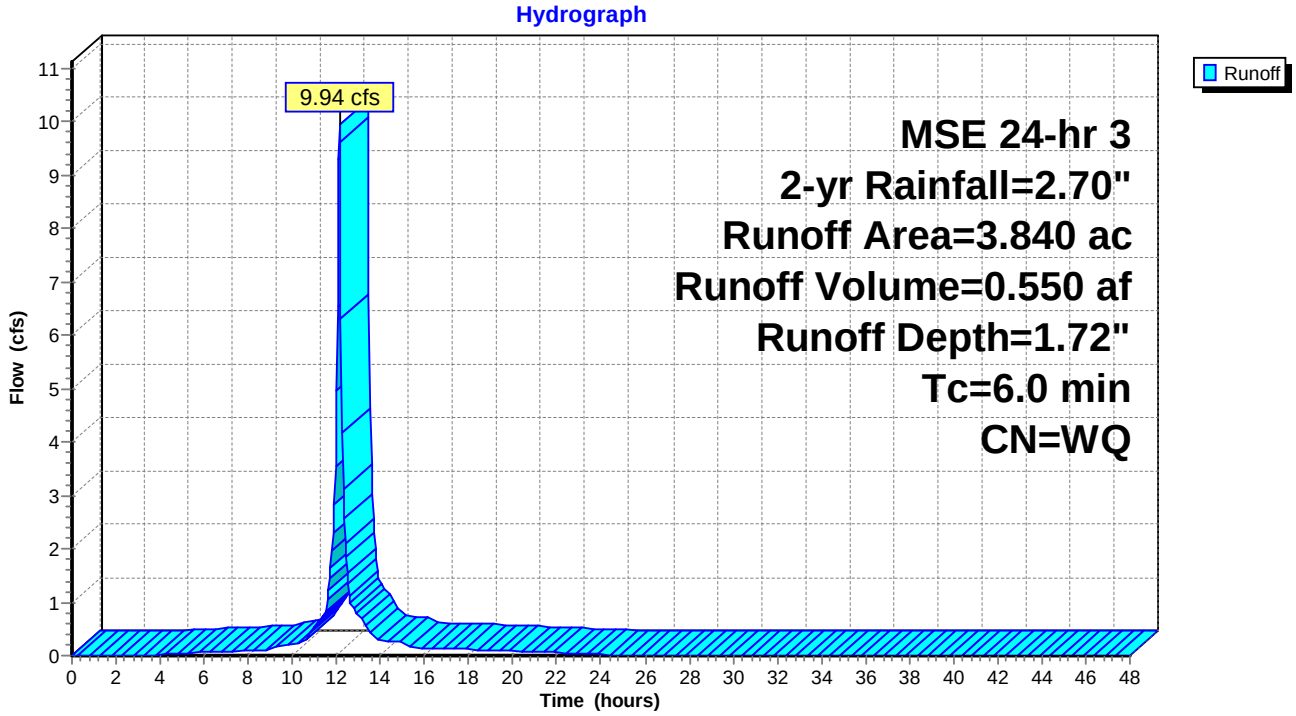
Runoff = 9.94 cfs @ 12.13 hrs, Volume= 0.550 af, Depth= 1.72"
Routed to Pond 1P : Wet Detention Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-yr Rainfall=2.70"

	Area (ac)	CN	Description
*	0.280	98	Roof
*	0.430	98	Parking
*	1.570	98	Driveway
*	0.090	98	Sidewalk
	1.320	61	>75% Grass cover, Good, HSG B
*	0.150	100	Water Body
	3.840		Weighted Average
	1.320		34.38% Pervious Area
	2.520		65.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 Minimum**

Subcatchment 1S: Sub-Area 1



Summary for Subcatchment 2S: Sub-Area 2

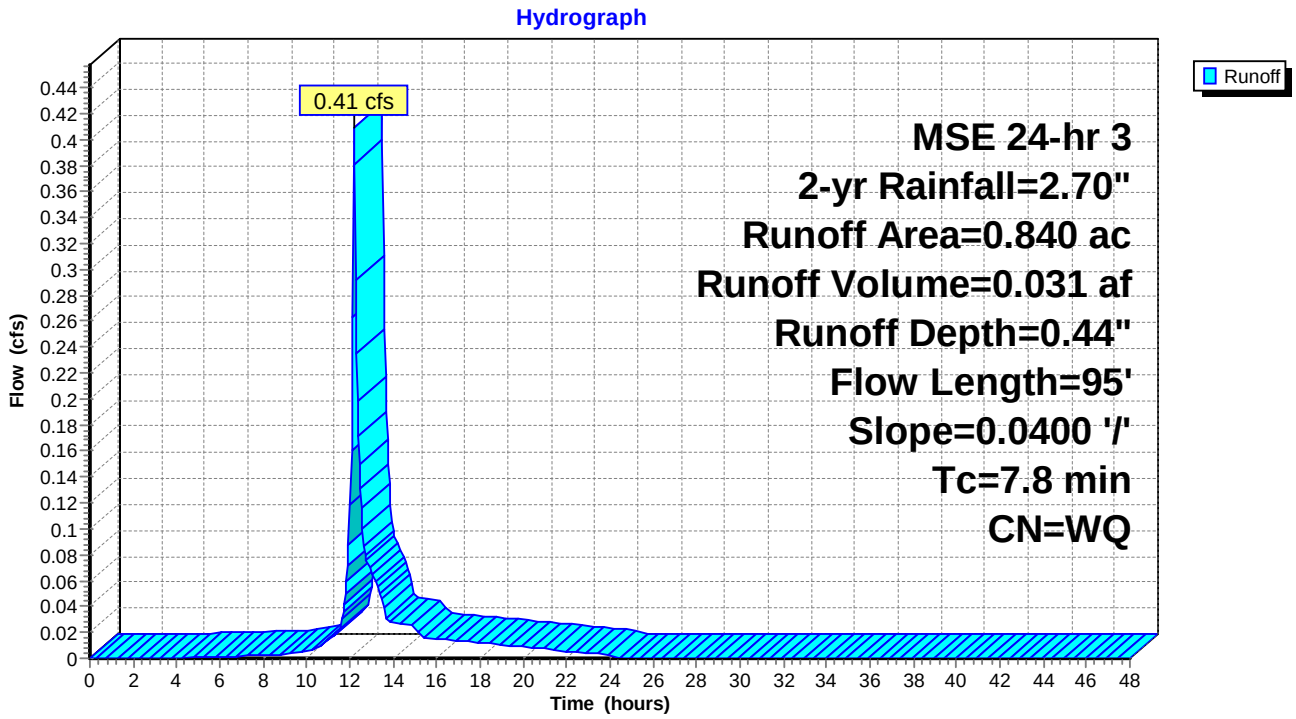
Runoff = 0.41 cfs @ 12.17 hrs, Volume= 0.031 af, Depth= 0.44"
Routed to Link 1L : Post-Development Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-yr Rainfall=2.70"

	Area (ac)	CN	Description
*	0.060	98	Driveway
*	0.010	98	Driveway
	0.770	61	>75% Grass cover, Good, HSG B
	0.840		Weighted Average
	0.770		91.67% Pervious Area
	0.070		8.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8	95	0.0400	0.20		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.70"

Subcatchment 2S: Sub-Area 2



Summary for Pond 1P: Wet Detention Pond

Inflow Area = 3.840 ac, 65.63% Impervious, Inflow Depth = 1.72" for 2-yr event
Inflow = 9.94 cfs @ 12.13 hrs, Volume= 0.550 af
Outflow = 0.16 cfs @ 15.22 hrs, Volume= 0.414 af, Atten= 98%, Lag= 185.4 min
Primary = 0.16 cfs @ 15.22 hrs, Volume= 0.414 af
Routed to Link 1L : Post-Development Runoff
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link 1L : Post-Development Runoff

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 965.39' @ 15.22 hrs Surf.Area= 9,032 sf Storage= 18,595 cf

Plug-Flow detention time= 967.7 min calculated for 0.413 af (75% of inflow)
Center-of-Mass det. time= 901.4 min (1,661.3 - 759.9)

Volume	Invert	Avail.Storage	Storage Description
#1	963.00'	58,804 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

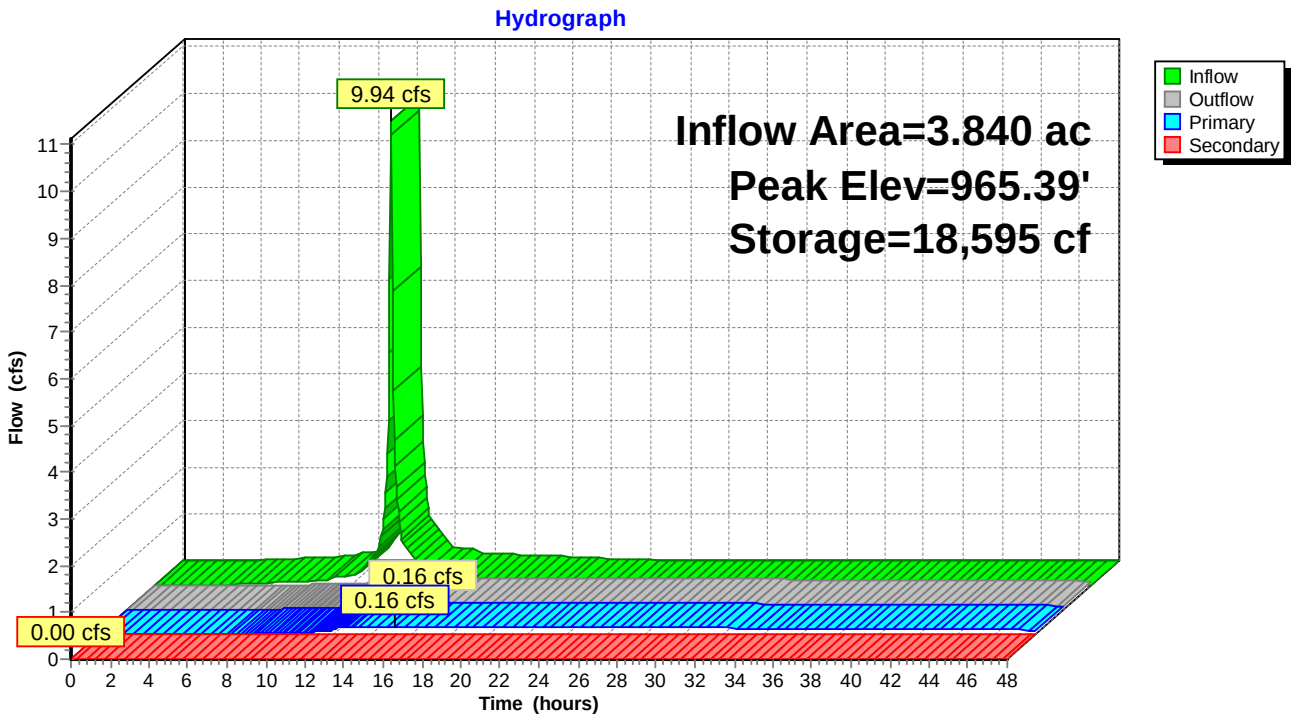
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
963.00	6,604	316.8	0	0	6,604
964.00	7,584	335.6	7,088	7,088	7,633
965.00	8,619	354.5	8,096	15,184	8,727
966.00	9,707	373.3	9,158	24,342	9,875
967.00	10,873	393.5	10,284	34,626	11,166
968.00	12,092	413.7	11,477	46,104	12,525
969.00	13,319	429.9	12,701	58,804	13,691

Device	Routing	Invert	Outlet Devices
#1	Primary	958.00'	**12.0" Round Culvert** L= 62.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 958.00' / 949.10' S= 0.1435 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	963.00'	**2.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	966.50'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	968.00'	**4.0' long x 1.00' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#5	Secondary	968.00'	**6.0' long + 5.0 '/' SideZ x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.16 cfs @ 15.22 hrs HW=965.39' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.16 cfs of 7.83 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 0.16 cfs @ 7.31 fps)
  ├─**3=Orifice/Grate** (Controls 0.00 cfs)
  └─**4=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=963.00' TW=0.00' (Dynamic Tailwater)
└─**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 1P: Wet Detention Pond

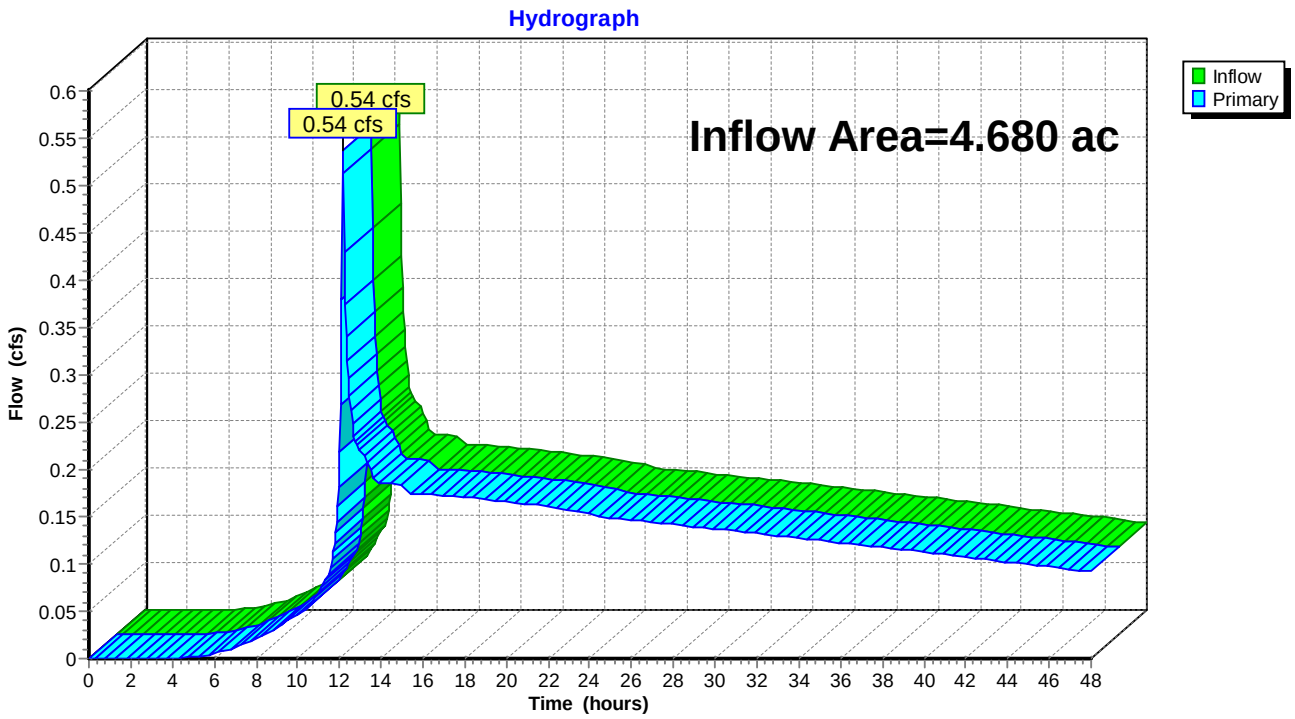


Summary for Link 1L: Post-Development Runoff

Inflow Area = 4.680 ac, 55.34% Impervious, Inflow Depth > 1.14" for 2-yr event
Inflow = 0.54 cfs @ 12.17 hrs, Volume= 0.445 af
Primary = 0.54 cfs @ 12.17 hrs, Volume= 0.445 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 1L: Post-Development Runoff



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Sub-Area 1 Runoff Area=3.840 ac 65.63% Impervious Runoff Depth=2.60"
Tc=6.0 min CN=WQ Runoff=15.18 cfs 0.833 af

Subcatchment 2S: Sub-Area 2 Runoff Area=0.840 ac 8.33% Impervious Runoff Depth=0.96"
Flow Length=95' Slope=0.0400 '/' Tc=7.8 min CN=WQ Runoff=1.15 cfs 0.067 af

Pond 1P: Wet Detention Pond Peak Elev=966.45' Storage=28,876 cf Inflow=15.18 cfs 0.833 af
Primary=0.19 cfs 0.535 af Secondary=0.00 cfs 0.000 af Outflow=0.19 cfs 0.535 af

Link 1L: Post-Development Runoff Inflow=1.31 cfs 0.602 af
Primary=1.31 cfs 0.602 af

Total Runoff Area = 4.680 ac Runoff Volume = 0.900 af Average Runoff Depth = 2.31"
44.66% Pervious = 2.090 ac 55.34% Impervious = 2.590 ac

Summary for Subcatchment 1S: Sub-Area 1

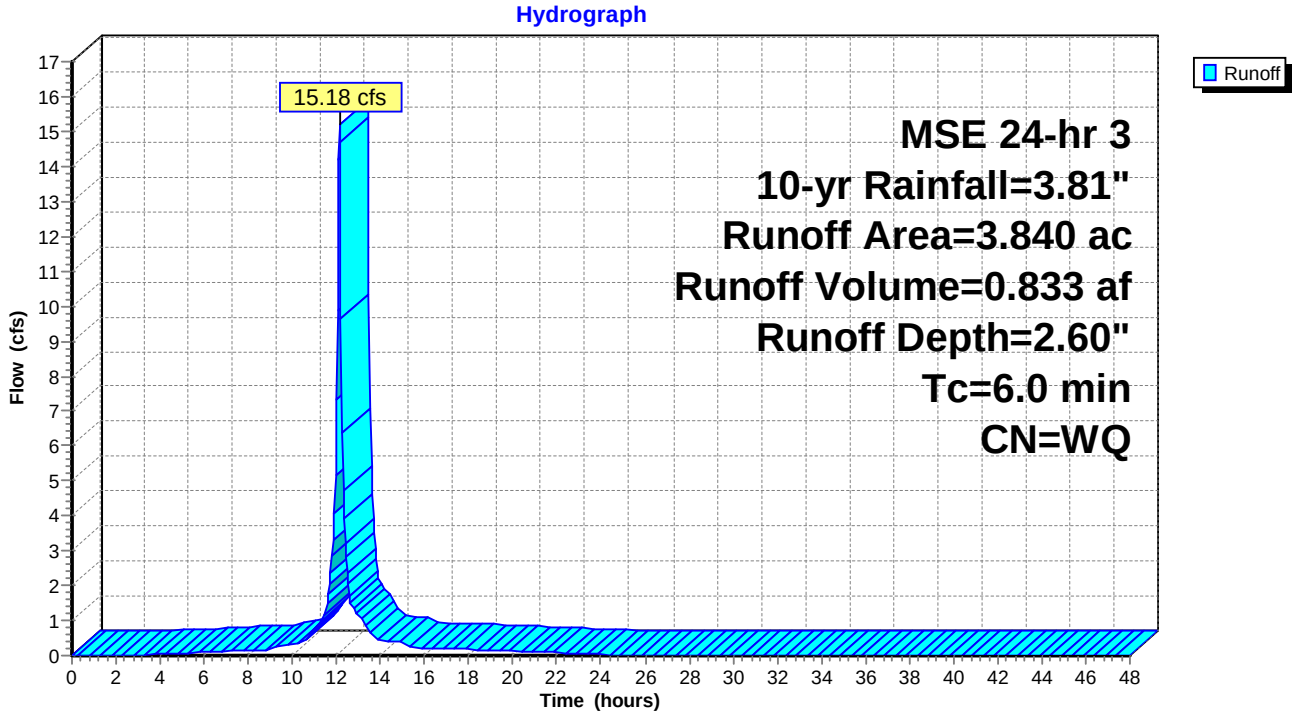
Runoff = 15.18 cfs @ 12.13 hrs, Volume= 0.833 af, Depth= 2.60"
Routed to Pond 1P : Wet Detention Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-yr Rainfall=3.81"

	Area (ac)	CN	Description
*	0.280	98	Roof
*	0.430	98	Parking
*	1.570	98	Driveway
*	0.090	98	Sidewalk
	1.320	61	>75% Grass cover, Good, HSG B
*	0.150	100	Water Body
	3.840		Weighted Average
	1.320		34.38% Pervious Area
	2.520		65.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 Minimum**

Subcatchment 1S: Sub-Area 1



Summary for Subcatchment 2S: Sub-Area 2

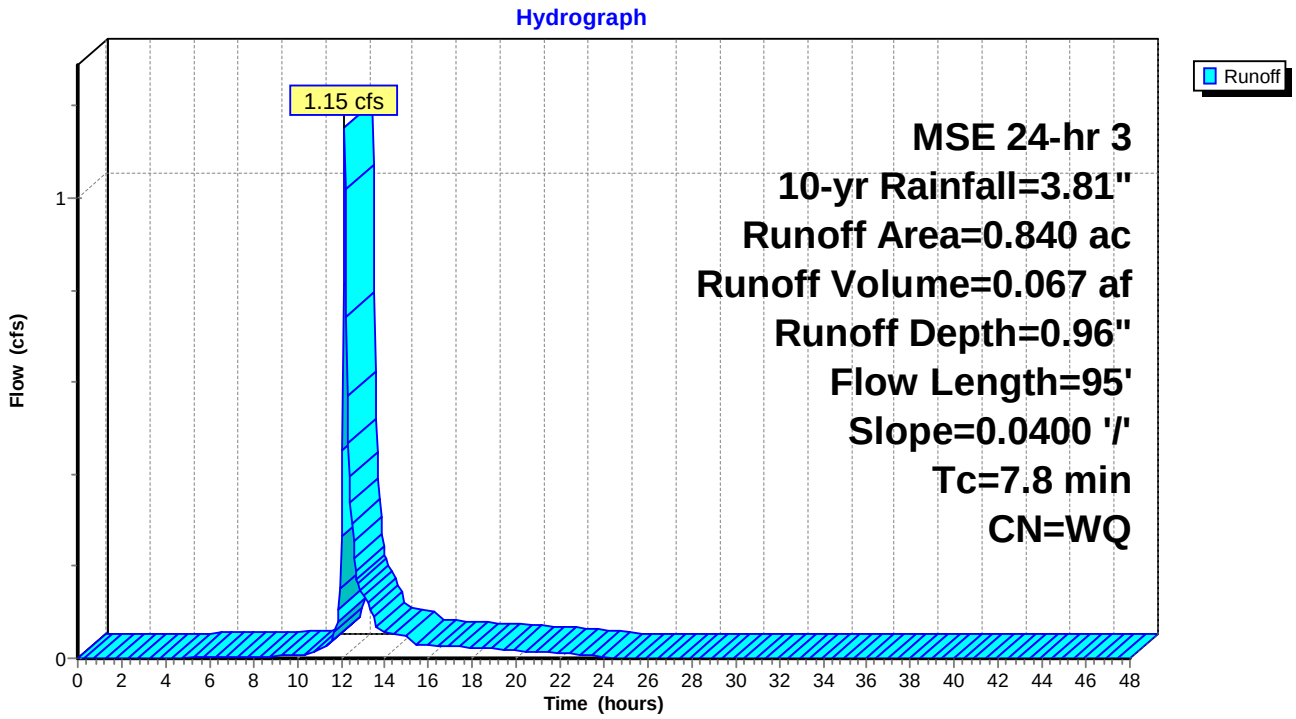
Runoff = 1.15 cfs @ 12.16 hrs, Volume= 0.067 af, Depth= 0.96"
Routed to Link 1L : Post-Development Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-yr Rainfall=3.81"

	Area (ac)	CN	Description
*	0.060	98	Driveway
*	0.010	98	Driveway
	0.770	61	>75% Grass cover, Good, HSG B
	0.840		Weighted Average
	0.770		91.67% Pervious Area
	0.070		8.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8	95	0.0400	0.20		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.70"

Subcatchment 2S: Sub-Area 2



Summary for Pond 1P: Wet Detention Pond

Inflow Area = 3.840 ac, 65.63% Impervious, Inflow Depth = 2.60" for 10-yr event
Inflow = 15.18 cfs @ 12.13 hrs, Volume= 0.833 af
Outflow = 0.19 cfs @ 17.24 hrs, Volume= 0.535 af, Atten= 99%, Lag= 306.5 min
Primary = 0.19 cfs @ 17.24 hrs, Volume= 0.535 af
Routed to Link 1L : Post-Development Runoff
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link 1L : Post-Development Runoff

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 966.45' @ 17.24 hrs Surf.Area= 10,229 sf Storage= 28,876 cf

Plug-Flow detention time= 1,005.3 min calculated for 0.534 af (64% of inflow)
Center-of-Mass det. time= 927.1 min (1,684.8 - 757.6)

Volume	Invert	Avail.Storage	Storage Description
#1	963.00'	58,804 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

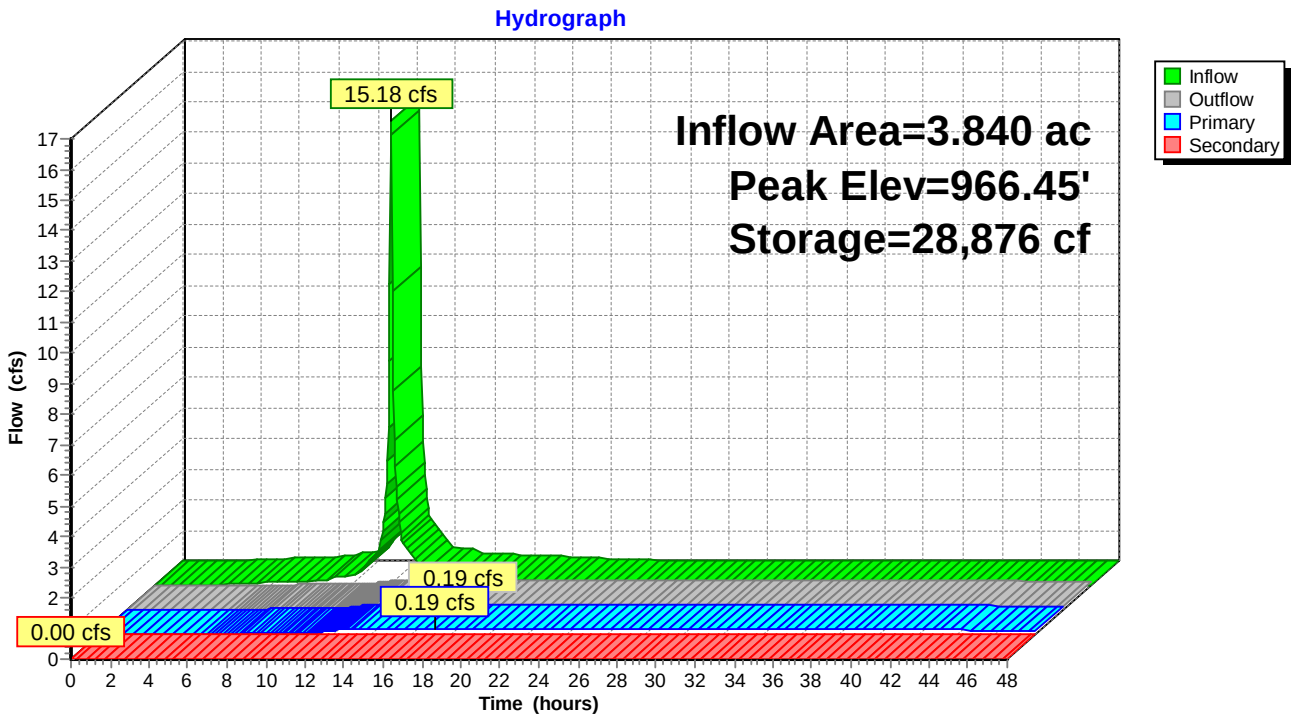
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
963.00	6,604	316.8	0	0	6,604
964.00	7,584	335.6	7,088	7,088	7,633
965.00	8,619	354.5	8,096	15,184	8,727
966.00	9,707	373.3	9,158	24,342	9,875
967.00	10,873	393.5	10,284	34,626	11,166
968.00	12,092	413.7	11,477	46,104	12,525
969.00	13,319	429.9	12,701	58,804	13,691

Device	Routing	Invert	Outlet Devices
#1	Primary	958.00'	**12.0" Round Culvert** L= 62.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 958.00' / 949.10' S= 0.1435 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	963.00'	**2.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	966.50'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	968.00'	**4.0' long x 1.00' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#5	Secondary	968.00'	**6.0' long + 5.0 '/' SideZ x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.19 cfs @ 17.24 hrs HW=966.45' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.19 cfs of 8.42 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 0.19 cfs @ 8.84 fps)
  ├─**3=Orifice/Grate** (Controls 0.00 cfs)
  └─**4=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=963.00' TW=0.00' (Dynamic Tailwater)
└─**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 1P: Wet Detention Pond

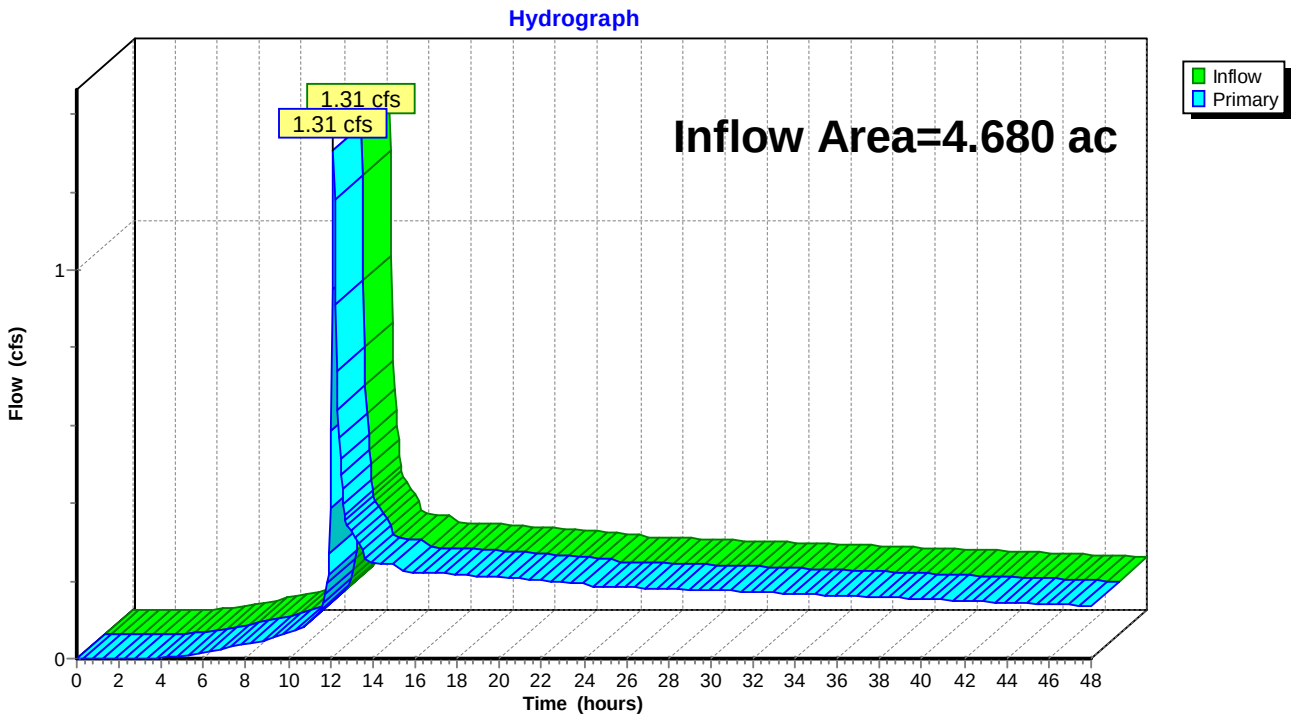


Summary for Link 1L: Post-Development Runoff

Inflow Area = 4.680 ac, 55.34% Impervious, Inflow Depth > 1.54" for 10-yr event
Inflow = 1.31 cfs @ 12.16 hrs, Volume= 0.602 af
Primary = 1.31 cfs @ 12.16 hrs, Volume= 0.602 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 1L: Post-Development Runoff



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Sub-Area 1 Runoff Area=3.840 ac 65.63% Impervious Runoff Depth=4.64"
Tc=6.0 min CN=WQ Runoff=27.34 cfs 1.485 af

Subcatchment 2S: Sub-Area 2 Runoff Area=0.840 ac 8.33% Impervious Runoff Depth=2.44"
Flow Length=95' Slope=0.0400 '/' Tc=7.8 min CN=WQ Runoff=3.30 cfs 0.171 af

Pond 1P: Wet Detention Pond Peak Elev=967.92' Storage=45,097 cf Inflow=27.34 cfs 1.485 af
Primary=1.25 cfs 1.131 af Secondary=0.00 cfs 0.000 af Outflow=1.25 cfs 1.131 af

Link 1L: Post-Development Runoff Inflow=3.59 cfs 1.302 af
Primary=3.59 cfs 1.302 af

Total Runoff Area = 4.680 ac Runoff Volume = 1.656 af Average Runoff Depth = 4.25"
44.66% Pervious = 2.090 ac 55.34% Impervious = 2.590 ac

Summary for Subcatchment 1S: Sub-Area 1

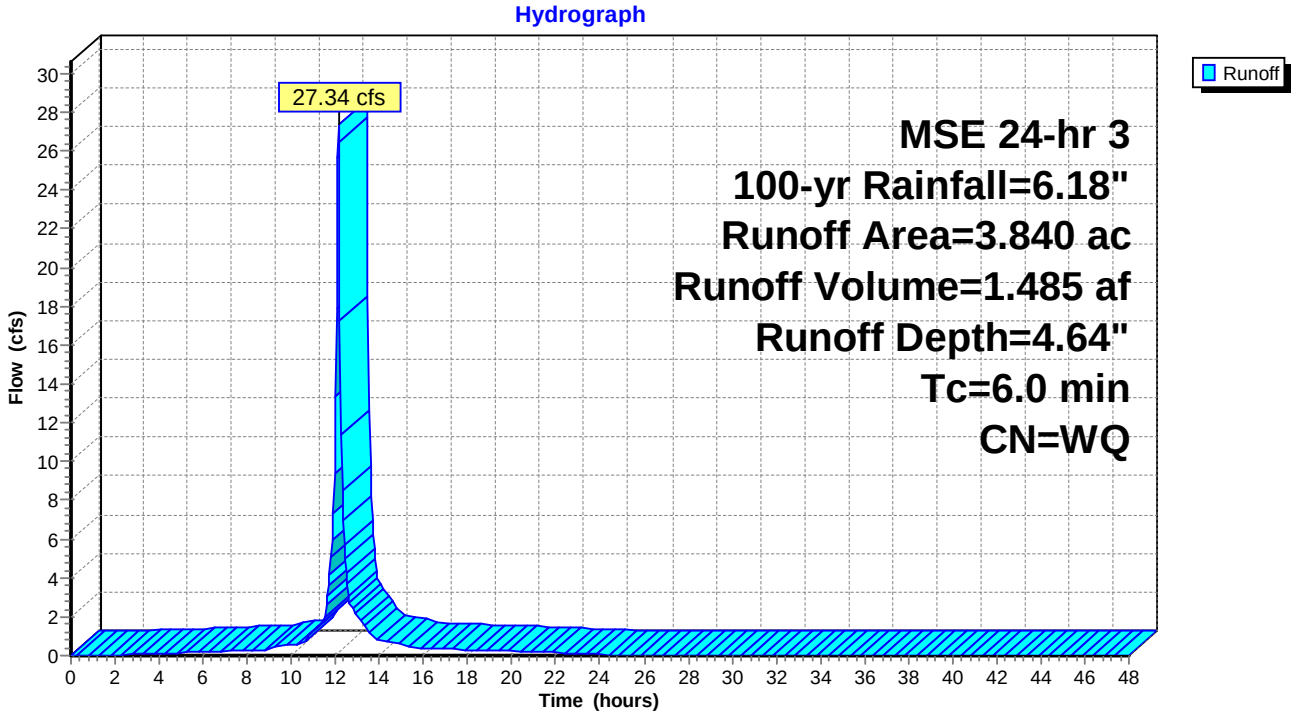
Runoff = 27.34 cfs @ 12.13 hrs, Volume= 1.485 af, Depth= 4.64"
Routed to Pond 1P : Wet Detention Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-yr Rainfall=6.18"

	Area (ac)	CN	Description
*	0.280	98	Roof
*	0.430	98	Parking
*	1.570	98	Driveway
*	0.090	98	Sidewalk
	1.320	61	>75% Grass cover, Good, HSG B
*	0.150	100	Water Body
	3.840		Weighted Average
	1.320		34.38% Pervious Area
	2.520		65.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 Minimum**

Subcatchment 1S: Sub-Area 1



Summary for Subcatchment 2S: Sub-Area 2

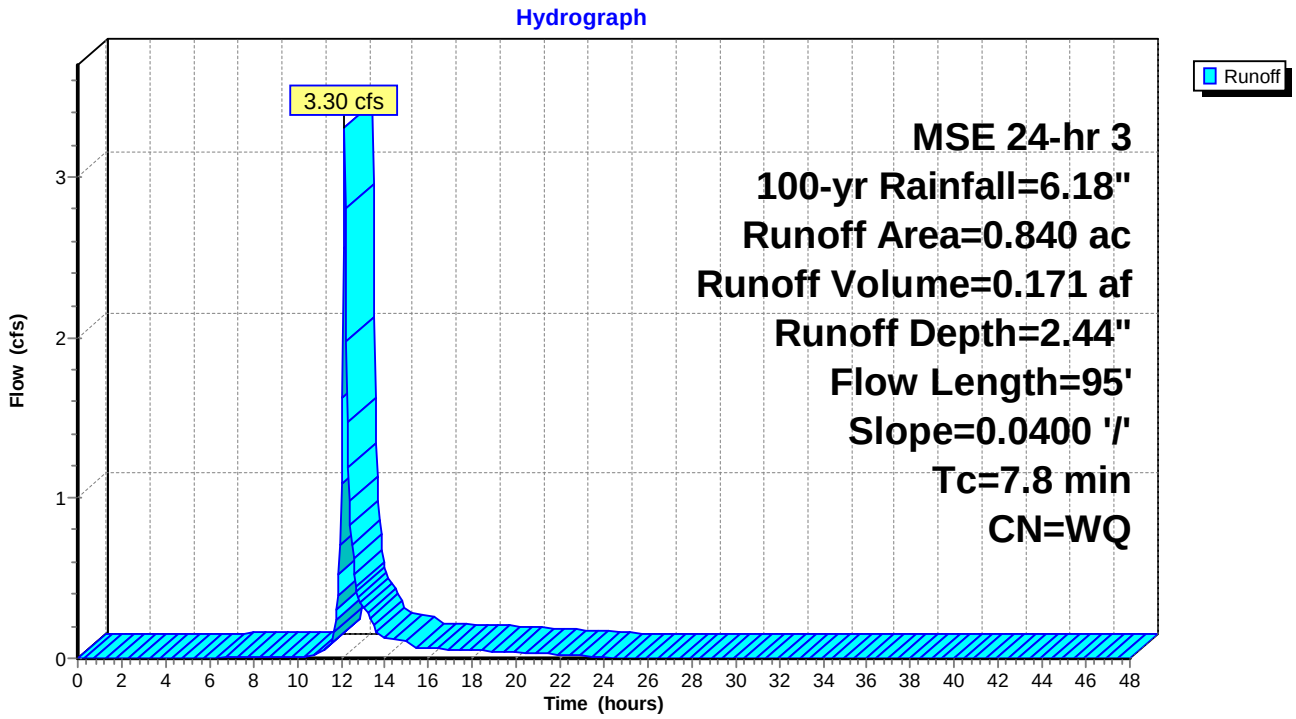
Runoff = 3.30 cfs @ 12.16 hrs, Volume= 0.171 af, Depth= 2.44"
Routed to Link 1L : Post-Development Runoff

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-yr Rainfall=6.18"

	Area (ac)	CN	Description
*	0.060	98	Driveway
*	0.010	98	Driveway
	0.770	61	>75% Grass cover, Good, HSG B
	0.840		Weighted Average
	0.770		91.67% Pervious Area
	0.070		8.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8	95	0.0400	0.20		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.70"

Subcatchment 2S: Sub-Area 2



Summary for Pond 1P: Wet Detention Pond

Inflow Area = 3.840 ac, 65.63% Impervious, Inflow Depth = 4.64" for 100-yr event
Inflow = 27.34 cfs @ 12.13 hrs, Volume= 1.485 af
Outflow = 1.25 cfs @ 13.50 hrs, Volume= 1.131 af, Atten= 95%, Lag= 82.2 min
Primary = 1.25 cfs @ 13.50 hrs, Volume= 1.131 af
Routed to Link 1L : Post-Development Runoff
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link 1L : Post-Development Runoff

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 967.92' @ 13.50 hrs Surf.Area= 11,988 sf Storage= 45,097 cf

Plug-Flow detention time= 633.2 min calculated for 1.131 af (76% of inflow)
Center-of-Mass det. time= 565.9 min (1,320.6 - 754.7)

Volume	Invert	Avail.Storage	Storage Description
#1	963.00'	58,804 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

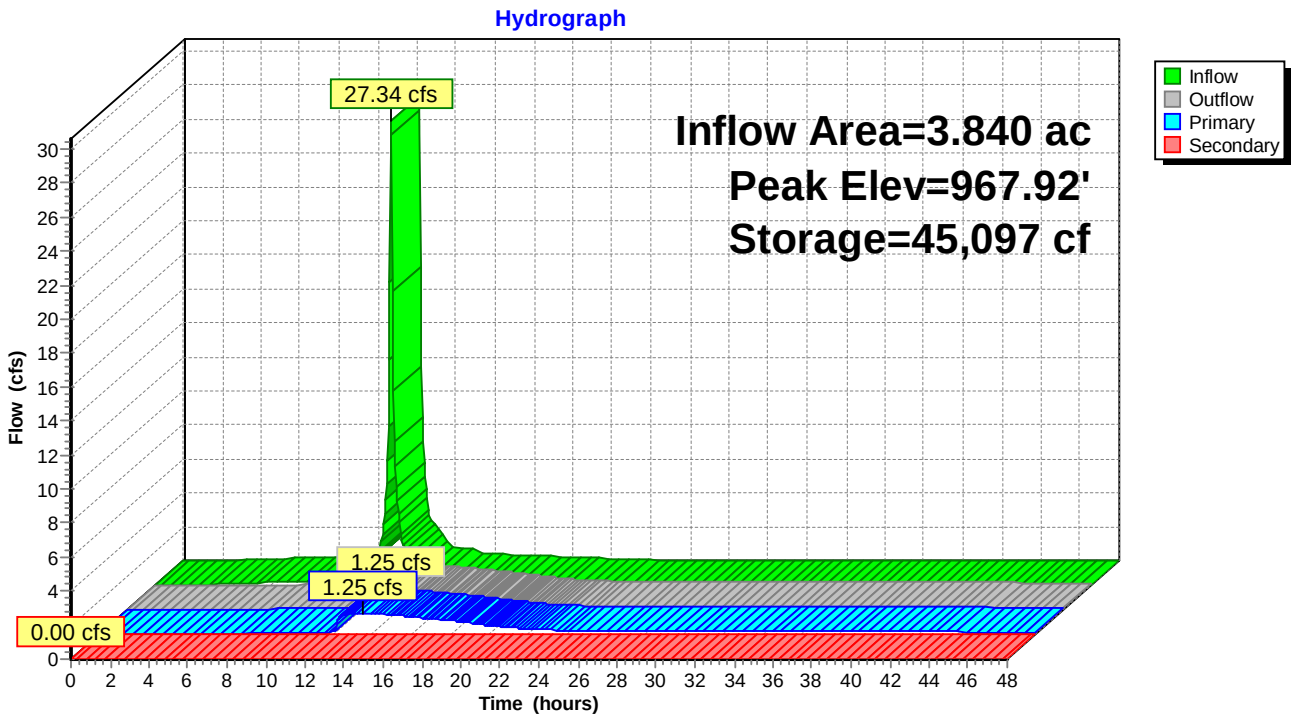
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
963.00	6,604	316.8	0	0	6,604
964.00	7,584	335.6	7,088	7,088	7,633
965.00	8,619	354.5	8,096	15,184	8,727
966.00	9,707	373.3	9,158	24,342	9,875
967.00	10,873	393.5	10,284	34,626	11,166
968.00	12,092	413.7	11,477	46,104	12,525
969.00	13,319	429.9	12,701	58,804	13,691

Device	Routing	Invert	Outlet Devices
#1	Primary	958.00'	**12.0" Round Culvert** L= 62.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 958.00' / 949.10' S= 0.1435 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	963.00'	**2.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	966.50'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	968.00'	**4.0' long x 1.00' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#5	Secondary	968.00'	**6.0' long + 5.0 '/' SideZ x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=1.25 cfs @ 13.50 hrs HW=967.92' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 1.25 cfs of 9.16 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 0.23 cfs @ 10.59 fps)
  ├─**3=Orifice/Grate** (Orifice Controls 1.02 cfs @ 5.20 fps)
  └─**4=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=963.00' TW=0.00' (Dynamic Tailwater)
└─**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 1P: Wet Detention Pond

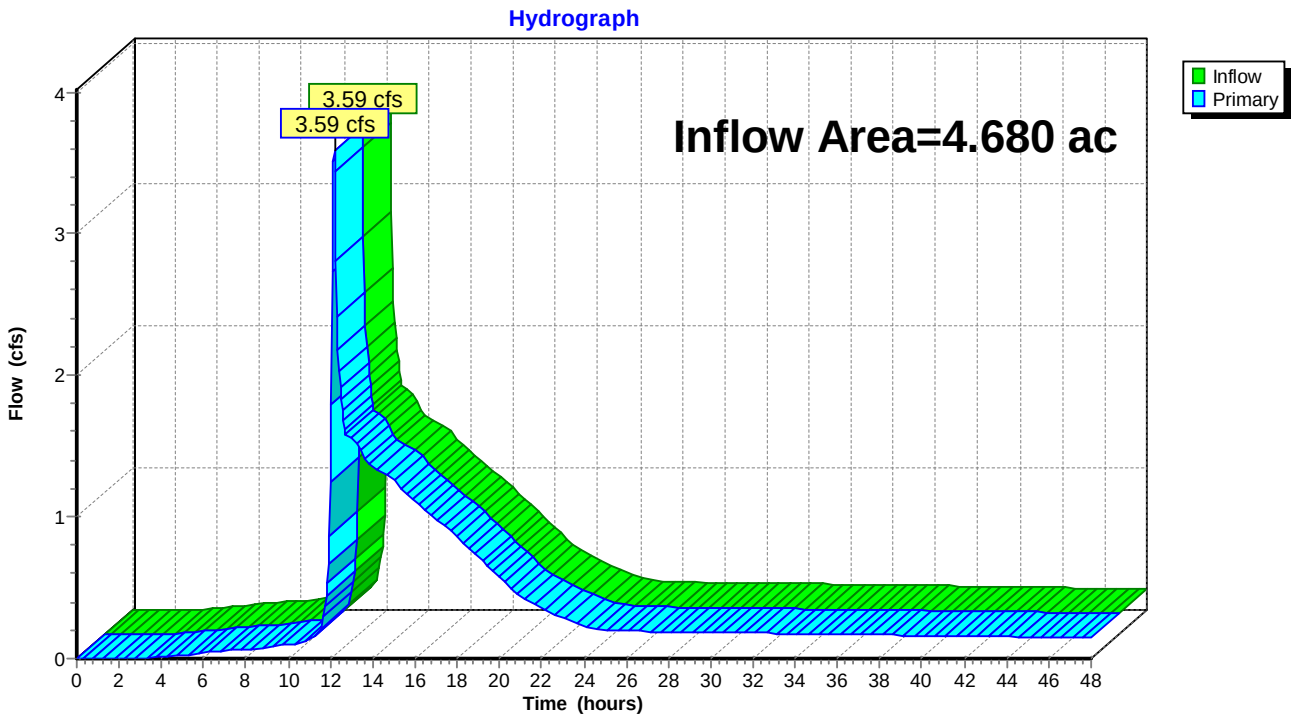


Summary for Link 1L: Post-Development Runoff

Inflow Area = 4.680 ac, 55.34% Impervious, Inflow Depth > 3.34" for 100-yr event
Inflow = 3.59 cfs @ 12.17 hrs, Volume= 1.302 af
Primary = 3.59 cfs @ 12.17 hrs, Volume= 1.302 af, Atten= 0%, Lag= 0.0 min

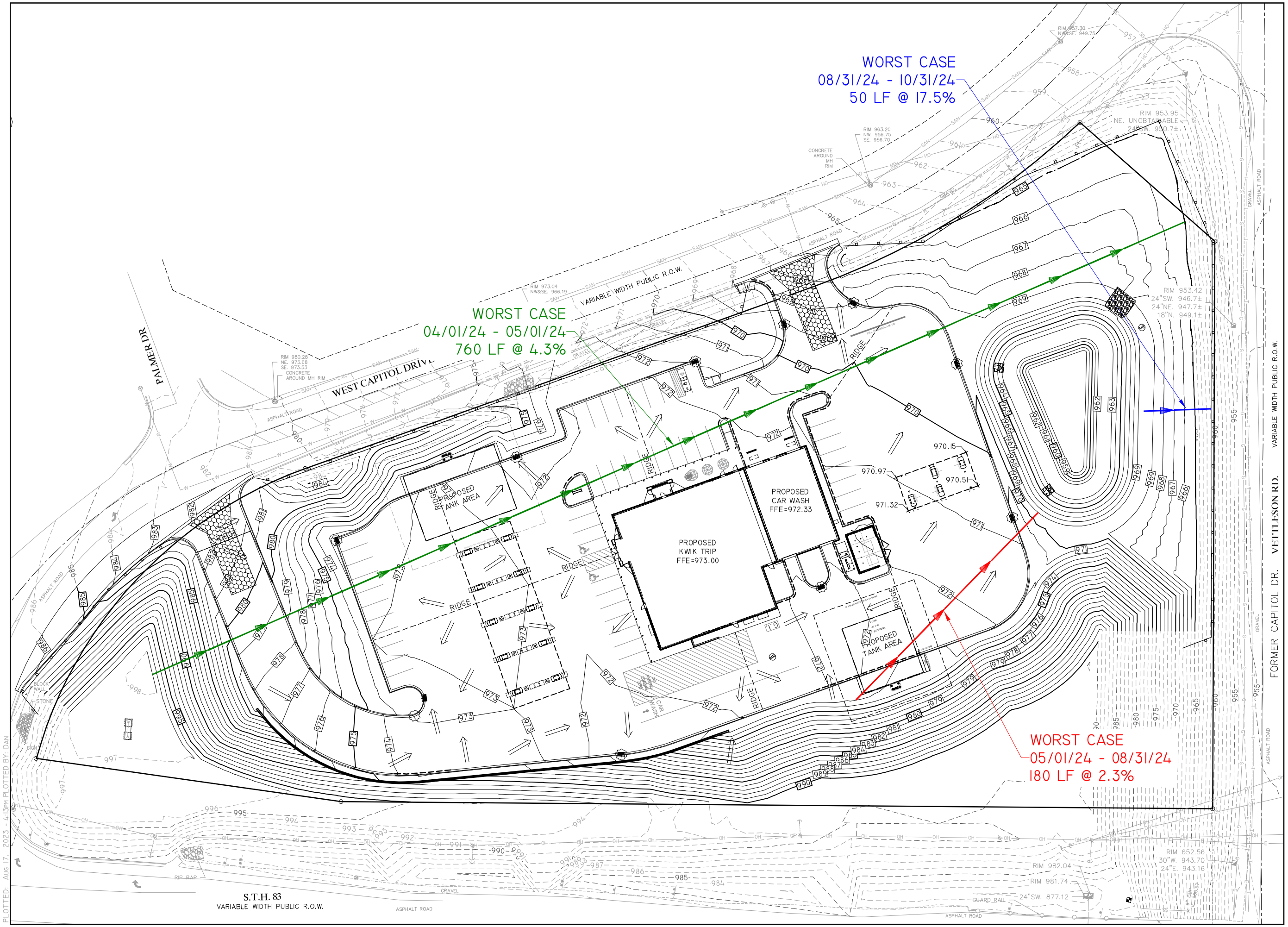
Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 1L: Post-Development Runoff



Appendix 6

USLE Map & Calculations



DRAWING FILE: Q:\10800 - 10899\10827 - KWIK TRIP #1283 - HARTLAND\DRAWING\FIGURES\10827-USLE MAP.DWG LAYOUT: USLE
PLOTTED: AUG 17, 2023 - 4:13pm PLOTTED BY: DAN

KWIK TRIP™ STORES

KWIK STAR™ STORES

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

REI
CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING
REI Engineering, INC.
4080 N. 20TH AVENUE
WAUSAU, WISCONSIN 54401
PHONE: 715.675.9784 FAX: 715.675.4060
EMAIL: MAIL@REIENGINEERING.COM

SCALE
0 30 60

UNIVERSAL SOIL LOSS EQUATION PLAN

CONVENIENCE STORE #1283

STH 83 AND W. CAPITOL DRIVE
HARTLAND, WI

#	DATE	DESCRIPTION
1		

DRAWN BY	NAP
SCALE	GRAPHIC
PROJ. NO.	10827
DATE	8/17/23 - REVIEW DOCUMENTS
SHEET	USLE

Soil Loss & Sediment Discharge Calculation Tool

for use on Construction Sites in the State of Wisconsin

WDNR Version 2.0 (06-29-2017)

WISCONSIN DEPT. OF NATURAL RESOURCES

YEAR 1

Developer: Kwik Trip, Inc.

Project: Hartland - Store #1283

Date: 08/17/23

County: Waukesha

Version 1.0

Activity (1)	Begin Date (2)	End Date (3)	Period % R (4)	Annual R Factor (5)	Sub Soil Texture (6)	Soil Erodibility K Factor (7)	Slope (%) (8)	Slope Length (ft) (9)	LS Factor (10)	Land Cover C Factor (11)	Soil loss A (tons/acre) (12)	SDF (13)	Sediment Control Practice (14)	Sediment Discharge (t/ac) (15)
Bare Ground	04/01/24	05/01/24	5.2%	130	Sand	0.15	4.3%	760	0.98	1.00	1.0	1.241	Silt Fence	0.7
Bare Ground	05/01/24	08/31/24	70.6%	130	Sand	0.15	2.3%	180	0.27	1.00	3.7	0.959	Sediment Trap	0.7
Seed with Mulch or Er	08/31/24	10/31/24	17.0%	130	Sand	0.15	17.5%	50	2.38	0.10	0.8	0.613	Silt Fence	0.3
End	10/31/24	-----	-----	-----	------	-----	17.5%	50	2.38	------	-----	0.000		0.0
		-----	-----	-----	------	-----	17.5%	0	-----	-----	-----	0.000		0.0
		-----	-----	-----	------	-----	0.0%	0	-----	-----	-----	0.000		0.0
										TOTAL	**5.5**		**TOTAL**	**1.7**
													% Reduction Required	**NONE**

Notes:

See Help Page for further descriptions of variables and items in drop-down boxes.
The last land disturbing activity on each sheet must be 'End'. This is either 12 months from the start of construction or final stabilization.
For periods of construction that exceed 12 months, please demonstrate that 5 tons/acre/year is not exceeded in any given 12 month period.

NOTE: THIS TOOL ONLY ADDRESSED SOIL EROSION DUE TO SHEET FLOW. MEASURES TO CONTROL CHANNEL EROSION MAY ALSO BE REQUIRED TO MEET SEDIMENT DISCHARGE REQUIREMENTS.

Recommended Permanent Seeding Dates:

4/1-5/15	and	8/7-8/29	Turf, introduced grasses and legumes
Thaw-6/30			Native Grasses, forbs, and legumes

Designed By:	GSW
Date	8/17/2023

Appendix 7

Storm Water Management
Maintenance Schedule and Procedures

KWIK TRIP INC.

Store Engineering

FAX 608-793-6237

1626 Oak St., P.O. Box 2107
La Crosse, WI 54602

www.kwiktrip.com

Post Construction Long Term Maintenance Plan for
Kwik Trip # 1283 Village of Hartland, Wisconsin

System Description:

The property is located at the corner of Main Street and Town Line Road, Town of Lisbon, Waukesha County, Wisconsin. The site consists of a series of storm water conveyances through sheet draining, piping, bio-retention pond, wet detention pond and Manhole type control structure.

System Maintenance

Catch Basin / Manhole and Oil Skimmer

- The facility structures should be checked annually for signs of damage and cracks to top slab, walls and bottom.
- The structure's cover or grate should be fully in place.
- Metal grates shall be free of debris and vegetation.
- Grates should be checked for missing or broken members of the grate.
- Ladder should be inspected for missing rungs, wall attachments, rust, cracks or sharp edges.
- The structure bottom and pipes should be clear of vegetation and debris.
- Remove sediment when it is within 12 inches from the lowest pipe invert or 50% of sump depth.

Trench Drain

- The facility structures should be checked annually for signs of damage and cracks to top grate.
- The structure's bottom and walls to be checked for cracks.
- Metal grates shall be free of debris and vegetation.
- Grates should be checked for missing or broken members of the grate.
- The structure bottom and pipes should be clear of sediment and debris.

Outflow Control Structures

- The facility structures should be checked annually for signs of damage and cracks to top slab, walls and bottom.
- The structure's cover or grate should be fully in place.
- Metal grates shall be free of debris and vegetation.
- Grates should be checked for missing or broken members of the grate.
- Ladder should be inspected for missing rungs, wall attachments, misalignment, rust, cracks or sharp edges.
- Removed debris from interior trash rack (if present).
- The connection of the interior steel plates to the structure should be inspection for cracks.
- The structure bottom and pipes should be clear of vegetation and debris.
- Remove sediment when it within 12 inches from the lowest pipe invert.

Apron and Riprap

- The facility structures should be checked annually for signs of damage to apron.
- The end of pipe, apron and surrounding riprap should be free of debris.
- Inspect for erosion around apron.
- Inspect for erosion and sediment accumulation with in the riprap.

Ditches and Swales

- The facility should be checked annually for signs of erosion, vegetation loss, side slopes and channelization of the flow.
- Area should be free of any standing water.
- The grass should not be allowed to grow greater than 8" in height and shall not be cut any shorter than 2 inches.
- Keep all areas free of debris.
- Remove cuttings if necessary.
- Remove sediment by hand with a flat-bottomed shovel during dry periods if present.
- Remove only the amount of sediment necessary to restore hydraulic capacity, leaving as much of the vegetation in place as possible. Reseed or unplug any damaged turf or vegetation.

Storm Detention Areas/Wet Ponds

- The facility should be checked annually for signs of erosion or bare soil along the perimeter, inlet pipe or swale, side slopes and at the inlet/outlet devices.

- Remove any dead or invasive vegetation and trees.
- Keep all areas free of debris.
- Remove sediment by hand with a flat-bottomed shovel during dry periods. Remove only the amount of sediment necessary to restore hydraulic capacity, leaving as much of the vegetation in place as possible. Reseed or unplug any damaged turf or vegetation.

**NOTE

- Some sediment may contain contaminants that requires special disposal. If there is uncertainty about what the sediment contains or it is known to contain contaminants, the Department of Natural Resources should be consulted through Kwik Trip's Environmental Department. Generally, special attention or sampling should be given to sediment accumulated in fueling areas, large parking lots, or other areas where pollutants (other than clean soil) are suspected to accumulate and be conveyed by storm runoff.
- Some sediment collected may be free of pollutants and can be used as fill material. It is vital that this material not be placed in any way that will promote or allow re-suspension in the storm runoff.

Tasks	Street Clean	Underground Storm Sewer System	Catch Basin	Ditches & Swales	Outflow Control Structures	Apron/ Rip Rap	Wet Detention Pond	Wetland Issues	Schedule
Inspection		X	X	X	X	X	X	X	Annual
Clean Streets	X								Annual
Mowing				X			X		0-2 times per year
System Clean Out		X							1 Time per 4 years

KWIK TRIP INC.

Kwik Trip Stormwater BMP Inspection

Store #: 1283 | Number of BMPs: 17

Location (City, State): Village of Hartland, Waukesha County, WI | Weather: _____

Inspection date: _____ | Inspection By: _____

Inspection Results:

Maintenance Required:	YES	NO	N/A	Maintenance Required:	YES	NO	N/A
Infall Erosion	☐	☐	☐	Trench Drain	☐	☐	☐
Outfall Erosion	☐	☐	☐	Oil/Debris Separator	☐	☐	☐
Outlet Structure	☐	☐	☐	Catch Basin/Manhole	☐	☐	☐
Depth/Sediment Accumulation	☐	☐	☐	Apron	☐	☐	☐
Wet Detention Pond Liner	☐	☐	☐	Rip Rap	☐	☐	☐
Safety Shelf	☐	☐	☐				
Other Structure	☐	☐	☐	Other			

_____ _____

Attach pictures on last page

Communication Notes

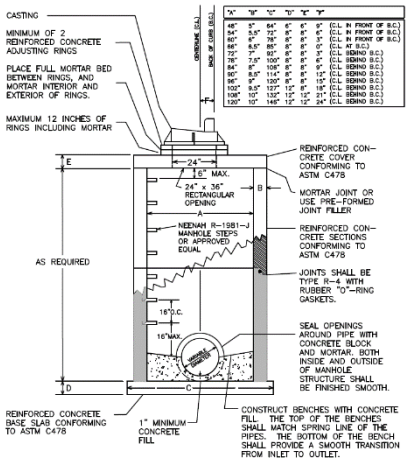
Phone ☐ Fax ☐ Written ☐ E-Mail ☐ Personal Discussion ☐

To whom: _____

Comments: _____

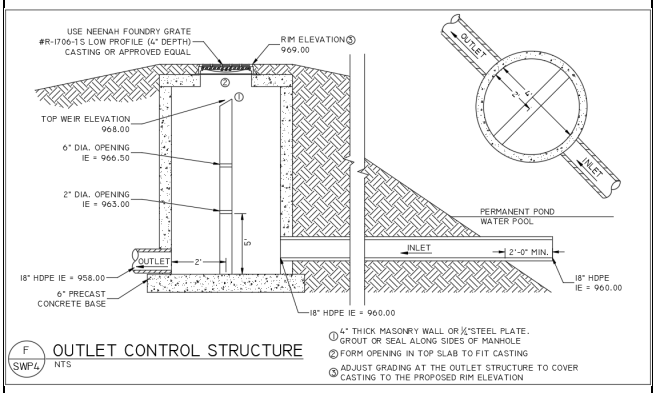
KWIK TRIP INC.

Structure — Quantity: 10



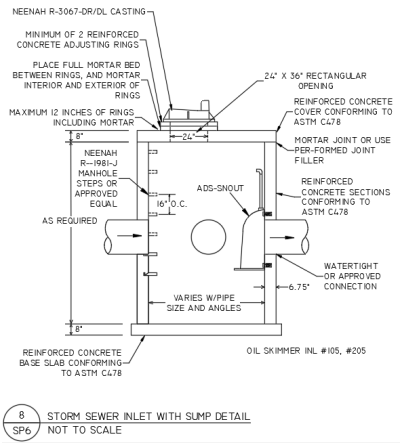
- Casting
- Adjustment rings and mortar
- Concrete cover and mortar
- Steps (if present), wall and floor
- Pipes and seals
- If sediment is present, use a rod to determine depth and if it needs to be removed

Outlet Structure (Wet Detention Pond) Quantity: 1

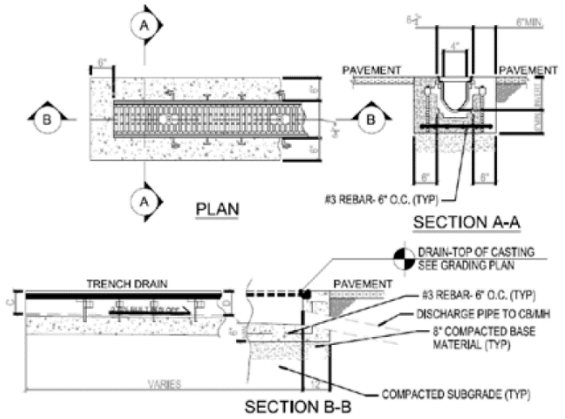
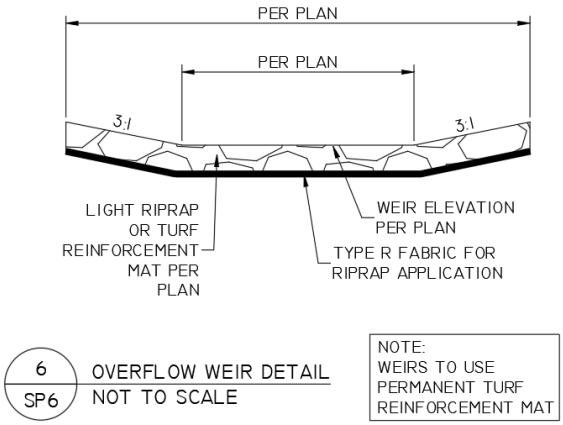
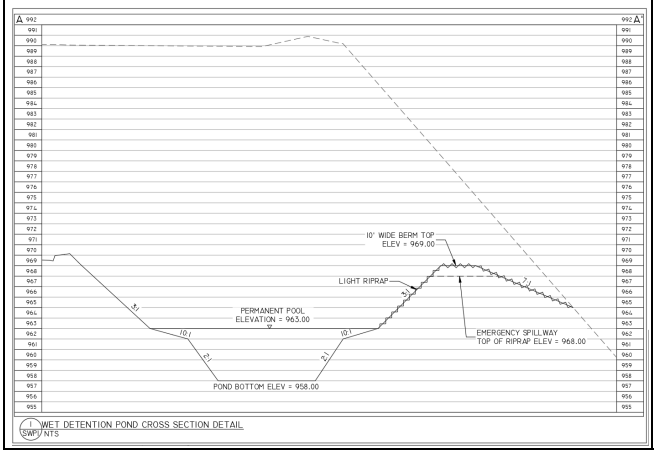


- Casting and grout
- Wall
- Floor condition and sediment/trash
- Pipe/seal and office
- If sediment is present, use a rod to determine depth and if it needs to be removed

Oil Skimmer — Quantity: 02



- Casting
- Adjustment rings and mortar
- Concrete cover and mortar
- Steps (if present), wall and floor
- Pipes, snout and seals
- If sediment is present, use a rod to determine depth and if it needs to be removed

Trench Drain **Quantity: 02**  	• Casting • Surrounding concrete / pavement • Trench condition • Pipes and seals • Sediment depth
Outfall / Overflow **Quantity: 01**  	• Sides • Sediment depth • Signs of erosion
Detention Basin / Wet Pond **Quantity: 1**  	• Vegetation (weeds or bare spots) • Sediment depth / odor • Erosion • Emergency spill way • Side Slopes

Photos Before Maintenance	Photos After Maintenance (if required)
Structure:	
Structure:	
Structure:	

Structure:	
Structure:	
Structure:	

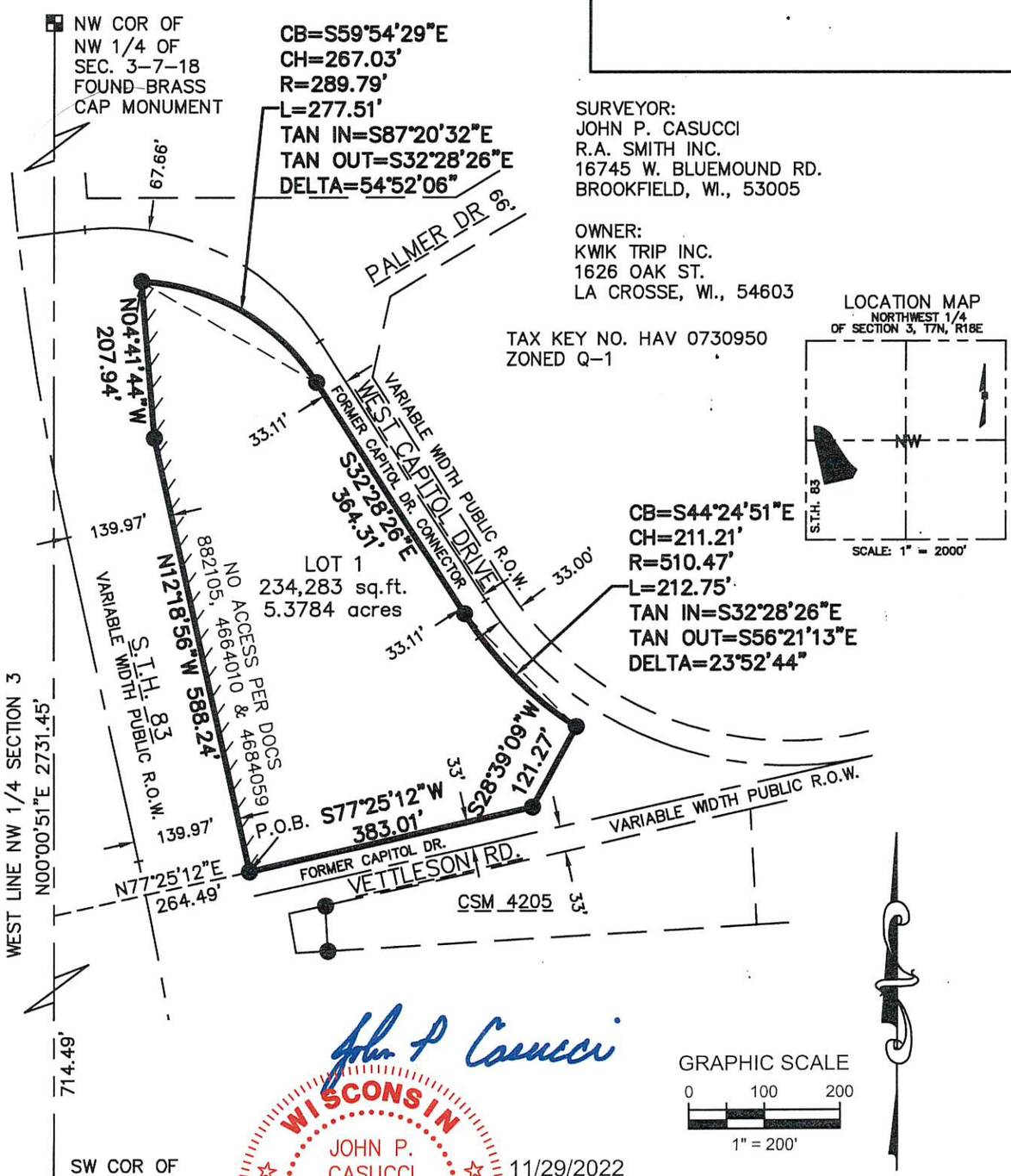
CERTIFIED SURVEY MAP NO. _____

Part of the Northwest 1/4 and Southwest 1/4 of the Northwest 1/4 of Section 3, in Township 7 North, Range 18 East, in the Village of Hartland, Waukesha County, Wisconsin.

● INDICATES FOUND 1" IRON PIPE

ALL DIMENSIONS SHOWN ARE MEASURED TO THE NEAREST HUNDREDTH OF A FOOT.
ALL BEARINGS ARE REFERENCED TO THE WEST LINE OF THE NW 1/4 OF SECTION 3, T 7 N, R 18 E, WHICH BEARS N00°00'51"E. WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE (NAD27).

STH 83 & W. CAPITOL DR. REFER TO PROJ. ID 1371-2-21 (1972)



SURVEYOR:
JOHN P. CASUCCI
R.A. SMITH INC.
16745 W. BLUEMOUND RD.
BROOKFIELD, WI., 53005

OWNER:
KWIK TRIP INC.
1626 OAK ST.
LA CROSSE, WI., 54603

TAX KEY NO. HAV 0730950
ZONED Q-1

LOCATION MAP
NORTHWEST 1/4 OF SECTION 3, T7N, R18E
NW
S.T.H. 83
SCALE: 1" = 2000'

John P Casucci

WISCONSIN
JOHN P. CASUCCI
S-2055
OCONOMOWOC WI
LAND SURVEYOR

11/29/2022

raSmith
CREATIVITY BEYOND ENGINEERING
16745 W. Bluemound Road
Brookfield, WI 53005-5938
(262) 781-1000
rasmith.com

S:\5168756\dwg\ CS100L.dwg \ SHEET 1

CERTIFIED SURVEY MAP NO. _____

Part of the Northwest 1/4 and Southwest 1/4 of the Northwest 1/4 of Section 3, in Township 7 North, Range 18 East, in the Village of Hartland, Waukesha County, Wisconsin.

SURVEYOR'S CERTIFICATE

STATE OF WISCONSIN }
:SS
WAUKESHA COUNTY }

I, JOHN P. CASUCCI, Professional Land Surveyor, do hereby certify:

THAT I have surveyed, divided and mapped a division of a part of the Northwest 1/4 and Southwest 1/4 of the Northwest 1/4 of Section 3, in Township 7 North, Range 18 East, in the Village of Hartland, Waukesha County, Wisconsin, bounded and described as follows:

Commencing at the Southwest corner of the Northwest 1/4 of said Section; thence North 00° 00' 51" East along the West line of said 1/4 Section a distance of 714.49 feet to a point; thence North 77° 25' 12" East 264.49 feet to a point in the North line of Vettleson Road and the East line of State Trunk Highway 83, said point also the point of beginning of lands to be described; thence North 12° 18' 56" West along the East line of State trunk Highway 83 a distance of 588.24 feet to a point; thence North 04° 41' 44" West along said East line 207.94 feet to a point in the Westerly line of West Capitol Drive; thence Southeasterly 277.51 feet along said Westerly line and an arc of a curve, whose center lies the Southwest, whose radius is 289.79 feet and whose chord bears South 59° 54' 29" East 267.03 feet to a point; thence South 32° 28' 26" East along said Westerly line 364.31 feet to a point; thence Southeasterly 212.75 feet along said Westerly line and an arc of a curve whose center lies to the Northeast, whose radius is 510.47 feet, and whose chord bears South 44° 24' 51" East 211.21 feet to a point; thence South 28° 39' 09" West along said Westerly line 121.27 feet to a point in the North line of Vettleson Road; thence South 77° 25' 12" West along said North line 383.01 feet to the point of beginning.

Said land contains 234,283 square feet or 5.3784 acres.

THAT I have made the survey, land division and map by the direction of KWIK TRIP INC., owner.

THAT the map is a correct representation of all the exterior boundaries of the land surveyed and the land division thereof made.

THAT I have complied with Chapter 236.34 of the Wisconsin Statutes and the Village of Hartland Land Division ordinance in surveying, dividing and mapping the same.

Date:_____

_____
JOHN P. CASUCCI
PROFESSIONAL LAND SURVEYOR S-2055

raSmith
CREATIVITY BEYOND ENGINEERING
16745 W. Bluemound Road
Brookfield, WI 53005-5938
(262) 781-1000
rasmith.com

CERTIFIED SURVEY MAP NO. _____

Part of the Northwest 1/4 and Southwest 1/4 of the Northwest 1/4 of Section 3, in Township 7 North, Range 18 East, in the Village of Hartland, Waukesha County, Wisconsin.

OWNER CERTIFICATE

KWIP TRIP INC., a company duly organized and existing under and by virtue of the laws of the State of Wisconsin, as owner, certifies that said corporation has caused the land described on this map to be surveyed, divided, and mapped as represented on this map in accordance with the Ordinances of the Village of Hartland.

KWIK TRIP INC., does further certify that this map is required by S.236.10 or S.236.12 to be submitted to the following for approval or objection: Village of Hartland.

IN Witness Whereof, KWIK TRIP INC., has caused these presents to be signed

by _____, it's _____

on this _____ day of _____, 20_____.

KWIK TRIP INC.

_____

PERSONALLY came before me this_____day of_____, 20_____,

_____, the _____ of the above named corporation, to me known to be the person who executed the foregoing instrument, and acknowledged that he/she executed the foregoing instrument as such officer on behalf of the entity, by its authority.

(Notary Seal)

_____

_____
(print name)
Notary Public, State of Wisconsin
My commission expires_____

CERTIFIED SURVEY MAP NO. _____

Part of the Northwest 1/4 and Southwest 1/4 of the Northwest 1/4 of Section 3, in Township 7 North, Range 18 East, in the Village of Hartland, Waukesha County, Wisconsin.

VILLAGE OF HARTLAND PLAN COMMISSION APPROVAL

APPROVED by the Plan Commission of the Village of Hartland, Wisconsin on the _____ day of

_____, 20_____.

Date:_____ _____

Jeffery Pfannerstill, Chairman

VILLAGE OF HARTLAND BOARD APPROVAL

RESOLVED that the Certified Survey Map of KWIK TRIP INC., owner of said lands, being a part of the Northwest 1/4 and Southwest 1/4 of the Northwest 1/4 of Section 3, in Township 7 North, Range 18 East, in the Village of Hartland, Waukesha County, Wisconsin, having been approved by the Plan Commission and the same is hereby approved by the Village of Board of Trustees of the Village of Hartland

on this _____ day of _____,20_____.

Date:_____ _____

Jeffery Pfannerstill, Village President

Date:_____ _____

Darlene Igl, Village Clerk

THIS INSTRUMENT WAS DRAFTED BY JOHN P. CASUCCI

VILLAGE OF HARTLAND PLAN COMMISSION

RESOLUTION NO. _____

A VILLAGE PLAN COMMISSION RESOLUTION RECOMMENDING ADOPTION OF AN AMENDMENT TO THE VILLAGE OF HARTLAND COMPREHENSIVE DEVELOPMENT PLAN: 2045

WHEREAS, the Village of Hartland, pursuant to the provisions of Section 62.23 of the Wisconsin Statutes, has created a Village Plan Commission; and

WHEREAS, it is the duty and function of the Village Plan Commission, pursuant to Section 62.23(2) of the Wisconsin Statutes, to make, adopt and amend a comprehensive plan for the physical development of the Village of Hartland; and

WHEREAS, the Village of Hartland has adopted *The Village of Hartland Comprehensive Development Plan: 2045,* and the attendant recommended land use plan as a guide for the future development of the Village of Hartland and its environs; and

WHEREAS, the Village of Hartland has received a request to amend the Recommended Land Use Plan (Figure 22) of said Plan to designate lands for development west of W. Capitol Drive, north of Vettleson Road and east of Hwy 83 tax key HAV 0730950 to Commercial as shown in the attached Exhibit A; and

WHEREAS, the Village Plan Commission considered the request at public meeting on October 16, 2023; and

WHEREAS, the Village Plan Commission has carefully considered the proposed Plan amendment at public meetings in addition to the meeting referenced above; and

WHEREAS, the Village Plan Commission considers the Plan Amendment to be a necessary guide to the future development of the Village and environs.

NOW, THEREFORE, BE IT RESOLVED, that pursuant to Section 62.23(3)(B) of the Wisconsin Statutes, the Village of Hartland Plan Commission hereby recommends adoption of and amendment to the Recommended Land Use Plan (Figure 22) of *The Village of Hartland Comprehensive Development Plan: 2045* to designate lands proposed for development west of W. Capitol Road, north of Vettleson Road and east of Hwy 83 which is tax key HAV 0730950 Commercial; and

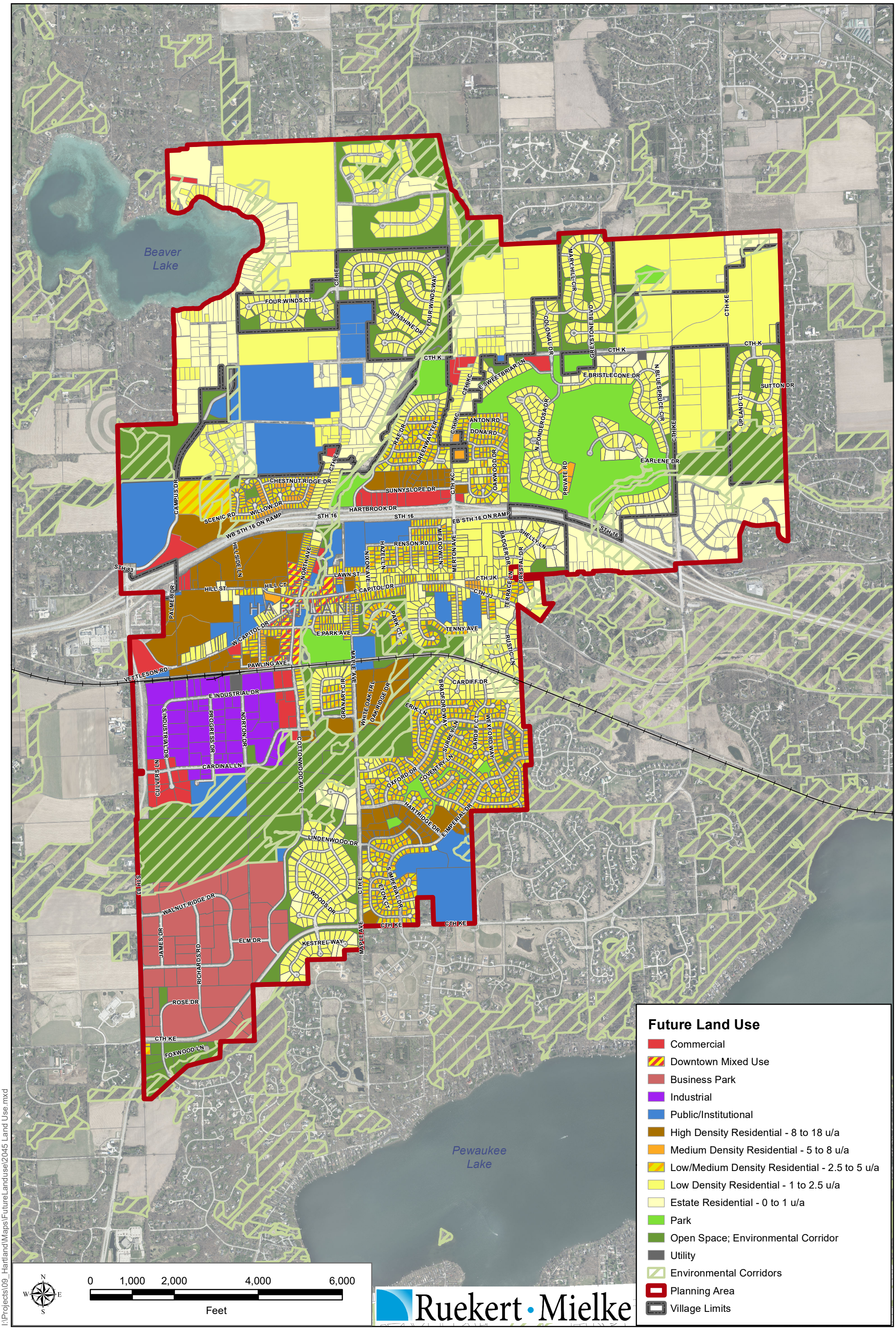
BE IT FURTHER RESOLVED, that the Clerk of the Village of Hartland on behalf of the Plan Commission transmits a certified copy of this resolution, after recording the action on the adopted plan, to the Board of Trustees of the Village of Hartland, Waukesha County, Wisconsin, to the State Department of Administration, Southeastern Wisconsin Regional Planning Commission, and to Waukesha County.

Passed and adopted this 16th day of October, 2023, by the Village of Hartland Plan Commission.

ATTEST:

_____ _____

Jeffrey Pfannerstill, Village President Sandee Policello, Village Clerk



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Village of Hartland

2045 Future Land Use

Village of Hartland - Comprehensive Plan

Village of Hartland

Date: 9/15/2023