THE CITY OF Fitchburg City of Fitchburg Planning/Zoning Department 5520 Lacy Road Fitchburg, WI 53711 (608-270-4200)	**LAND DIVISION APPLICATION**

The undersigned owner, or owner's authorized agent, of property herein described hereby submits ten (10) copies of the attached maps, one (1) copy no larger than 11" x 17", and one (1) pdf document of the complete submittal (planning@fitchburgwi.gov) for approval under the rules and requirements of the Fitchburg Land Division Ordinance.

1. Type of Action Requested:

- [x] Certified Survey Map Approval
- [ ] Preliminary Plat Approval
- [ ] Final Plat Approval
- [ ] Replat
- [ ] Comprehensive Development Plan Approval

2. Proposed Land Use (Check all that Apply):

- [ ] Single Family Residential
- [ ] Two-Family Residential
- [x] Multi-Family Residential
- [ ] Commercial/Industrial

3. No. of Parcels Proposed: 4 Lots

4. No. Of Buildable Lots Proposed: 4 Lots

5. Zoning District: B-H

6. Current Owner of Property: O'Brien

Address: 2747 S. Seminole Hwy **Phone No:** [redacted]

7. Contact Person: Wade Wyse

Email: [redacted]

Address: [redacted] **Phone No:** [redacted]

8. Submission of legal description in electronic format (MS Word or plain text) by email to: planning@fitchburgwi.gov

Pursuant to Section 24-2 (4) of the Fitchburg Land Division Ordinance, all Land Divisions shall be consistent with the currentlyadopted City of Fitchburg Comprehensive Plan.

Respectfully Submitted By: Tim O'Brien

Owner's or Authorized Agent's Signature — Print Owner's or Authorized Agent's Name

PLEASE NOTE - Applicants shall be responsible for legal or outside consultant costs incurred by the City. Submissions shall be made at least four (4) weeks prior to desired plan commission meeting.

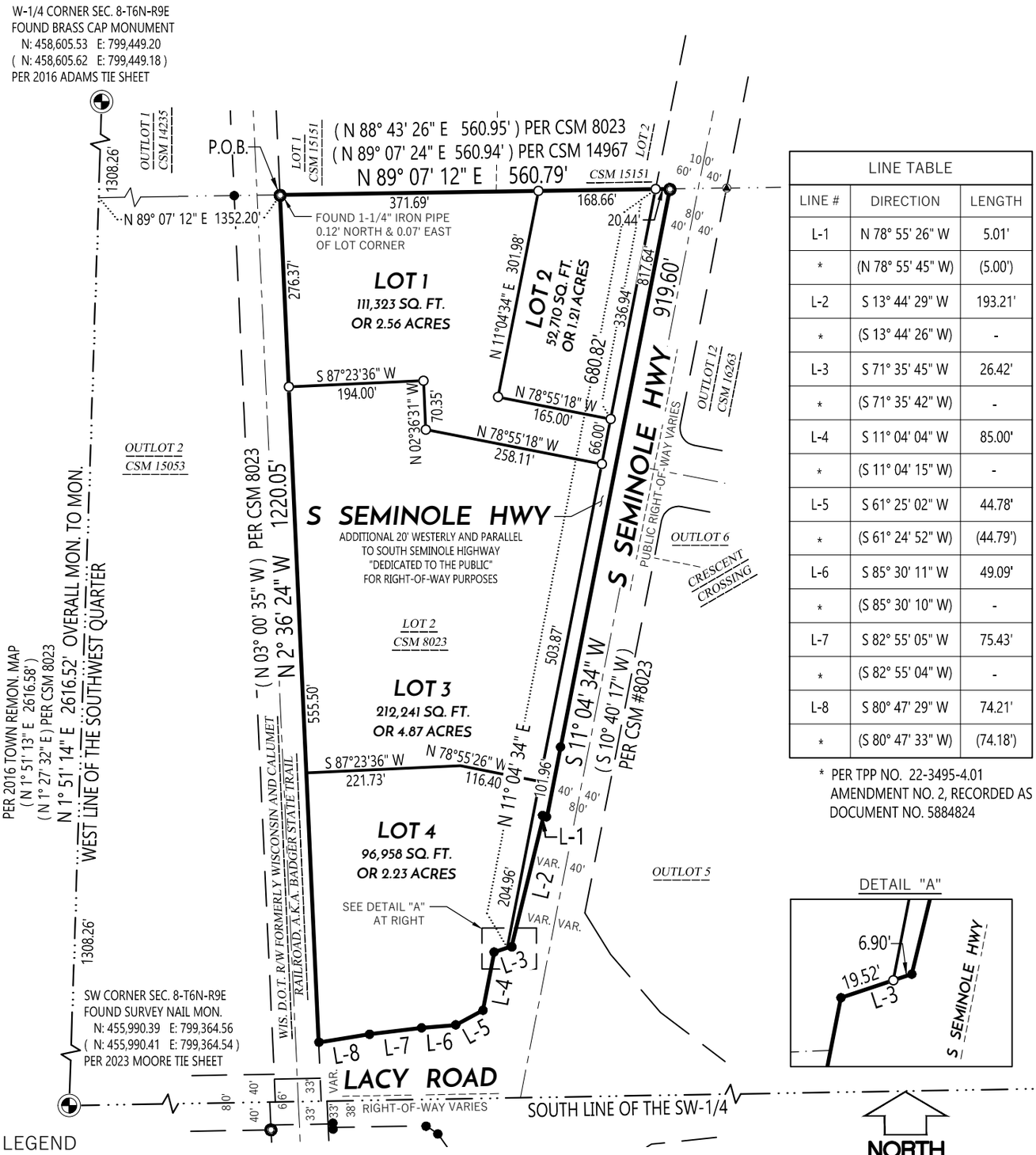
For City Use Only: **Date Received:**_____

Ordinance Section No._____ **Fee Paid:**_____

Permit Request No._____

CERTIFIED SURVEY MAP NO._____

PART OF LOT 2 OF CERTIFIED SURVEY MAP NO. 8023 RECORDED IN VOLUME 42 OF CERTIFIED SURVEY MAPS OF DANE COUNTY ON PAGES 313-316 AS DOCUMENT NO. 2719369. LOCATED IN THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 08, TOWN 06 NORTH, RANGE 9 EAST, CITY OF FITCHBURG, DANE COUNTY , WISCONSIN.



LINE TABLE		
LINE #	DIRECTION	LENGTH
L-1	N 78° 55' 26" W	5.01'
*	(N 78° 55' 45" W)	(5.00')
L-2	S 13° 44' 29" W	193.21'
*	(S 13° 44' 26" W)	-
L-3	S 71° 35' 45" W	26.42'
*	(S 71° 35' 42" W)	-
L-4	S 11° 04' 04" W	85.00'
*	(S 11° 04' 15" W)	-
L-5	S 61° 25' 02" W	44.78'
*	(S 61° 24' 52" W)	(44.79')
L-6	S 85° 30' 11" W	49.09'
*	(S 85° 30' 10" W)	-
L-7	S 82° 55' 05" W	75.43'
*	(S 82° 55' 04" W)	-
L-8	S 80° 47' 29" W	74.21'
*	(S 80° 47' 33" W)	(74.18')

* PER TPP NO. 22-3495-4.01 AMENDMENT NO. 2, RECORDED AS DOCUMENT NO. 5884824

DETAIL "A"

NORTH

0' 100' 200'

LEGEND

- SECTION CORNER FOUND / RECOVERED
- MAG NAIL FOUND
- 3/4" REBAR FOUND
- 1" IRON PIPE FOUND
- 2" IRON PIPE FOUND
- 3/4" REBAR SET 1.50 LB/FT
- CSM BOUNDARY
- RIGHT-OF-WAY LINE
- CENTERLINE
- SECTION/QUARTER LINE
- QUARTER/QUARTER LINE
- PLATTED LINE
- ( ) RECORDED INFORMATION

NOTES:

1. FIELD WORK PERFORMED BY WYSER ENGINEERING, LLC. ON THE WEEKS OF JUNE 5TH, AND 6TH, 2024.
2. NORTH REFERENCE FOR THIS CERTIFIED SURVEY AND MAP ARE BASED ON THE WISCONSIN COORDINATE REFERENCE SYSTEM, WISCRS DANE, NAD 83 (2011), GRID NORTH. THE WEST LINE OF THE SOUTHWEST QUARTER OF SECTION 8, T6N, R9E, BEARS N 01° 51' 14" E
3. THIS PARCEL IS SUBJECT TO ALL EASEMENTS AND AGREEMENTS, BOTH RECORDED AND UNRECORDED.
4. SEE SHEET 2 OF 8 FOR EXISTING IMPROVEMENTS.
5. SEE SHEETS 3 - 6 OF 8 FOR NEW EASEMENT DETAILS.

WISCONSIN
ZACHARY M. REYNOLDS
S-3223
MOUNT HOREB
WISCONSIN
PROFESSIONAL LAND SURVEYOR

WYSER ENGINEERING

PREPARED BY:
WYSER ENGINEERING
300 EAST FRONT STREET
MOUNT HOREB, WI 53572
www.wyserengineering.com

PREPARED FOR:
NEWCOMB CONSTRUCTION COMPANY, INC.
999 FOURIER DRIVE #102
MADISON, WI 53717

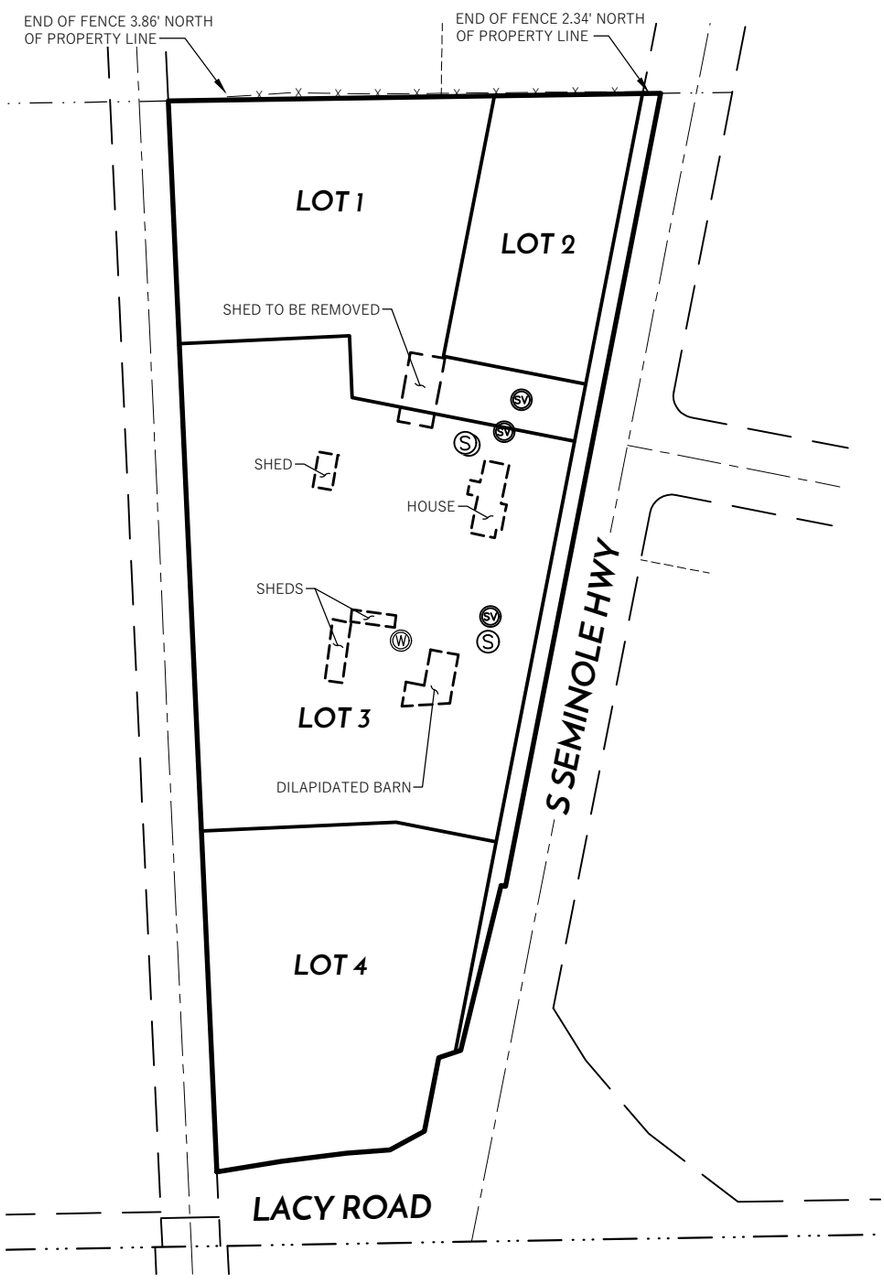
SURVEYED BY:	MAL/DZ
DRAWN BY:	AMS
CHECKED BY:	ZMR
APPROVED BY:	ZMR
PROJECT NO:	24-1243
SHEET NO:	1 of 8

VOL. _____ PAGE _____
DOC. NO. _____
C.S.M. NO. _____

File: W:\2024\241243_Newcomb – Seminole & Lacy, Fitchburg\DWG\241243_CSM.dwg Layout: CSM 1 OF 8 User: dschneider Plotted: May 16, 2025 – 1:42pm

CERTIFIED SURVEY MAP NO._____

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LEGEND

- CSM BOUNDARY
- RIGHT-OF-WAY LINE
- CENTERLINE
- SECTION/QUARTER LINE
- PLATTED LINE
- EXISTING STRUCTURE
- FENCE LINE
- SEPTIC VENT
- SEPTIC/SANITARY MANHOLE
- WELL

NOTES:

1. THIS PARCEL IS SUBJECT TO ALL EASEMENTS AND AGREEMENTS, BOTH RECORDED AND UNRECORDED.
2. SEE SHEETS 3 - 6 OF 8 FOR NEW EASEMENT DETAILS.

NORTH

0' 100' 200'

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MOUNT HOREB
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999 FOURIER DRIVE #102
MADISON, WI 53717

SURVEYED BY:	MAL/DZ
DRAWN BY:	AMS
CHECKED BY:	ZMR
APPROVED BY:	ZMR

PROJECT NO:	24-1243
SHEET NO:	2 of 8

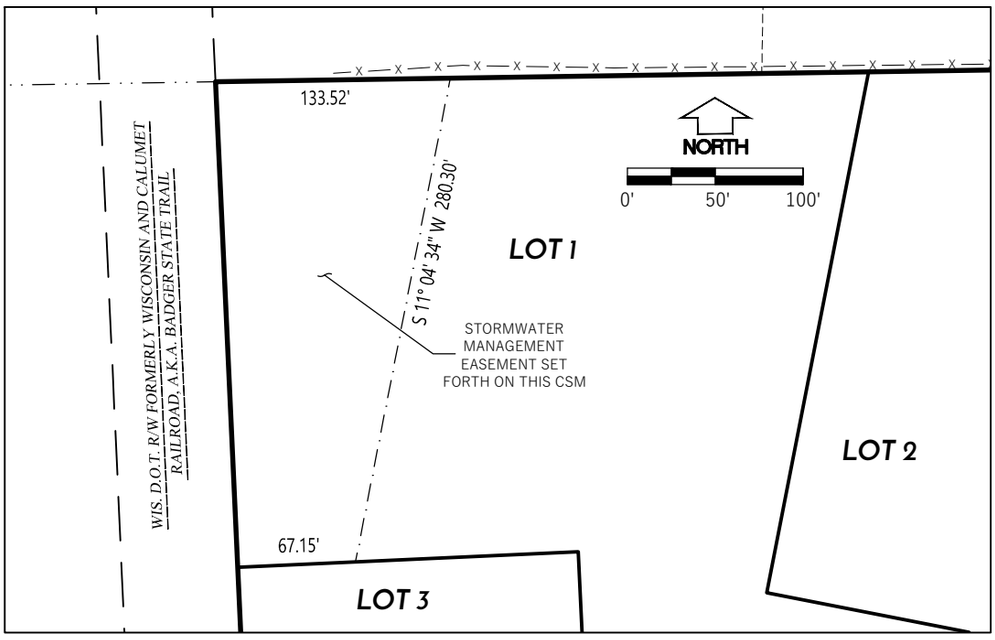
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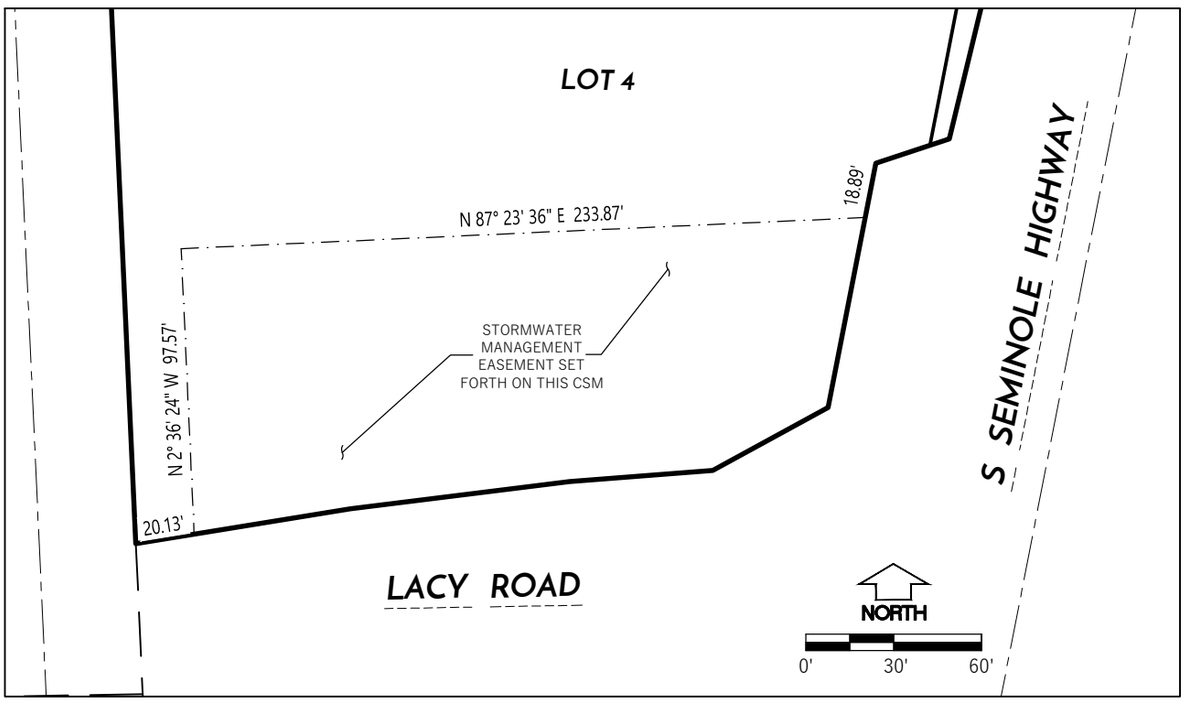
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CERTIFIED SURVEY MAP NO._____

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NEW STORMWATER MANAGEMENT EASMENT DETAILS





LEGEND

- CSM BOUNDARY
- RIGHT-OF-WAY LINE
- CENTERLINE
- PLATTED LINE
- NEW EASEMENT SET FORTH ON THIS CSM

NOTES:

1. THIS PARCEL IS SUBJECT TO ALL EASEMENTS AND AGREEMENTS, BOTH RECORDED AND UNRECORDED.
2. SEE SHEETS 4, 5 AND 6 OF 8 FOR ADDITIONAL NEW EASEMENT DETAILS.

WISCONSIN
ZACHARY M. REYNOLDS
S-3223
MOUNT HOREB
WISCONSIN
PROFESSIONAL LAND SURVEYOR

WYSER ENGINEERING

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www.wyserengineering.com

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MADISON, WI 53717

SURVEYED BY:	MAL/DZ
DRAWN BY:	AMS
CHECKED BY:	ZMR
APPROVED BY:	ZMR
PROJECT NO:	24-1243
SHEET NO:	3 of 8

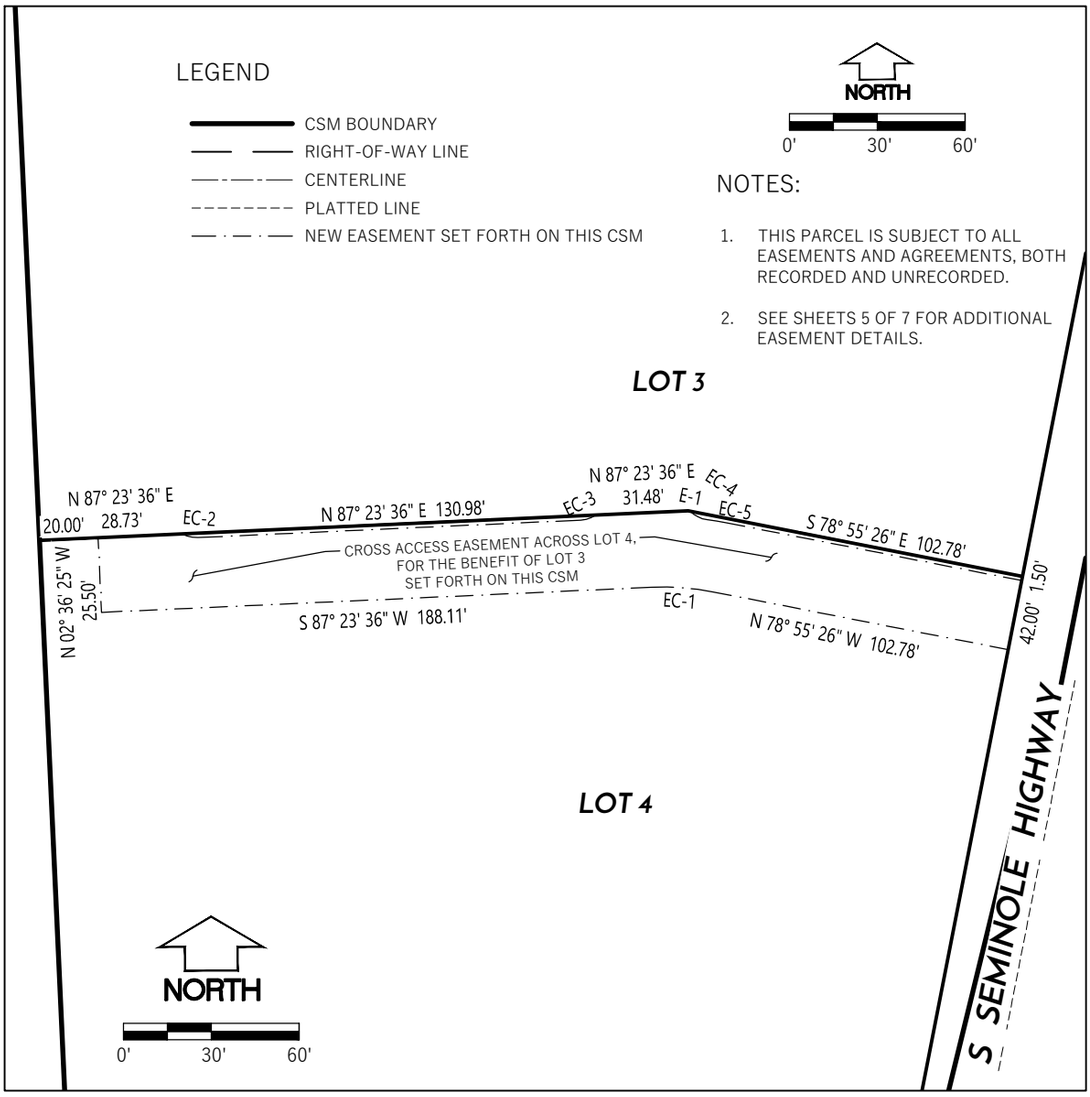
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CERTIFIED SURVEY MAP NO._____

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NEW CROSS ACCESS EASEMENT DETAILS



EASEMENT LINE TABLE		
LINE #	DIRECTION	LENGTH
E-1	S 78° 55' 26" E	0.70'

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MOUNT HOREB
WISCONSIN
PROFESSIONAL LAND SURVEYOR

EASEMENT CURVE TABLE					
CURVE #	LENGTH	RADIUS	DELTA	CHORD DIRECTION	CHORD LENGTH
EC-1	21.02'	88.00'	13° 40' 55"	N 85° 45' 55" W	20.97'
EC-2	5.55'	10.00'	31° 47' 11"	S 76° 42' 49" E	5.48'
EC-3	5.55'	10.00'	31° 47' 19"	N 71° 29' 56" E	5.48'
EC-4	6.55'	10.00'	37° 31' 59"	S 63° 35' 33" E	6.43'
EC-5	6.72'	112.00'	3° 26' 06"	S 80° 38' 29" E	6.71'

WYSER ENGINEERING

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NEWCOMB CONSTRUCTION COMPANY, INC.
999 FOURIER DRIVE #102
MADISON, WI 53717

SURVEYED BY: MAL/DZ
DRAWN BY: AMS
CHECKED BY: ZMR
APPROVED BY: ZMR

PROJECT NO: 24-1243
SHEET NO: 4 of 8

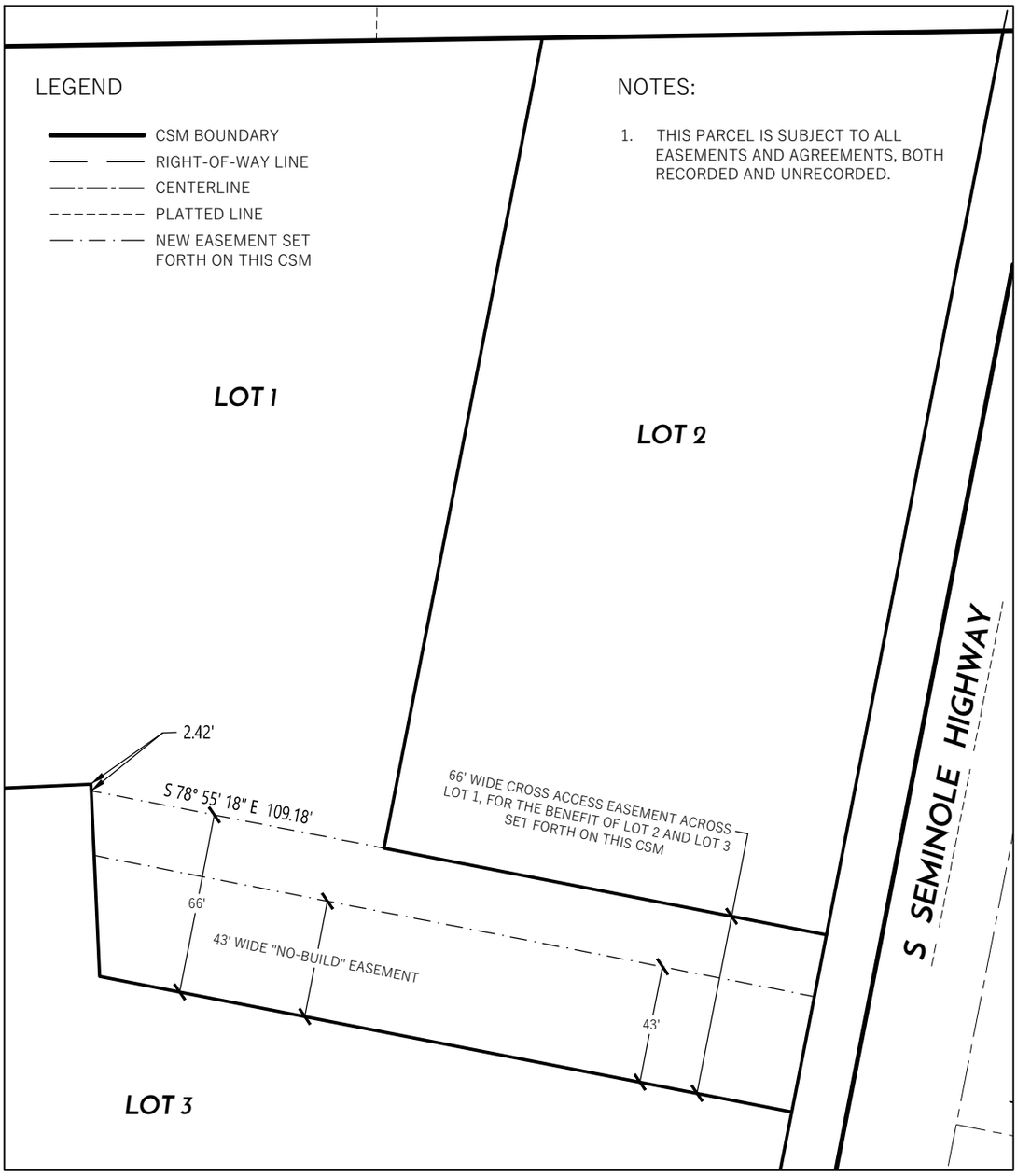
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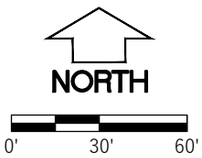
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*CERTIFIED SURVEY MAP NO.*_____

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NEW CROSS ACCESS AND NO-BUILD EASEMENT DETAIL







WYSER ENGINEERING

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SURVEYED BY:	MAL/DZ
DRAWN BY:	AMS
CHECKED BY:	ZMR
APPROVED BY:	ZMR

PROJECT NO:	24-1243
SHEET NO:	5 of 8

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DOC. NO. _____

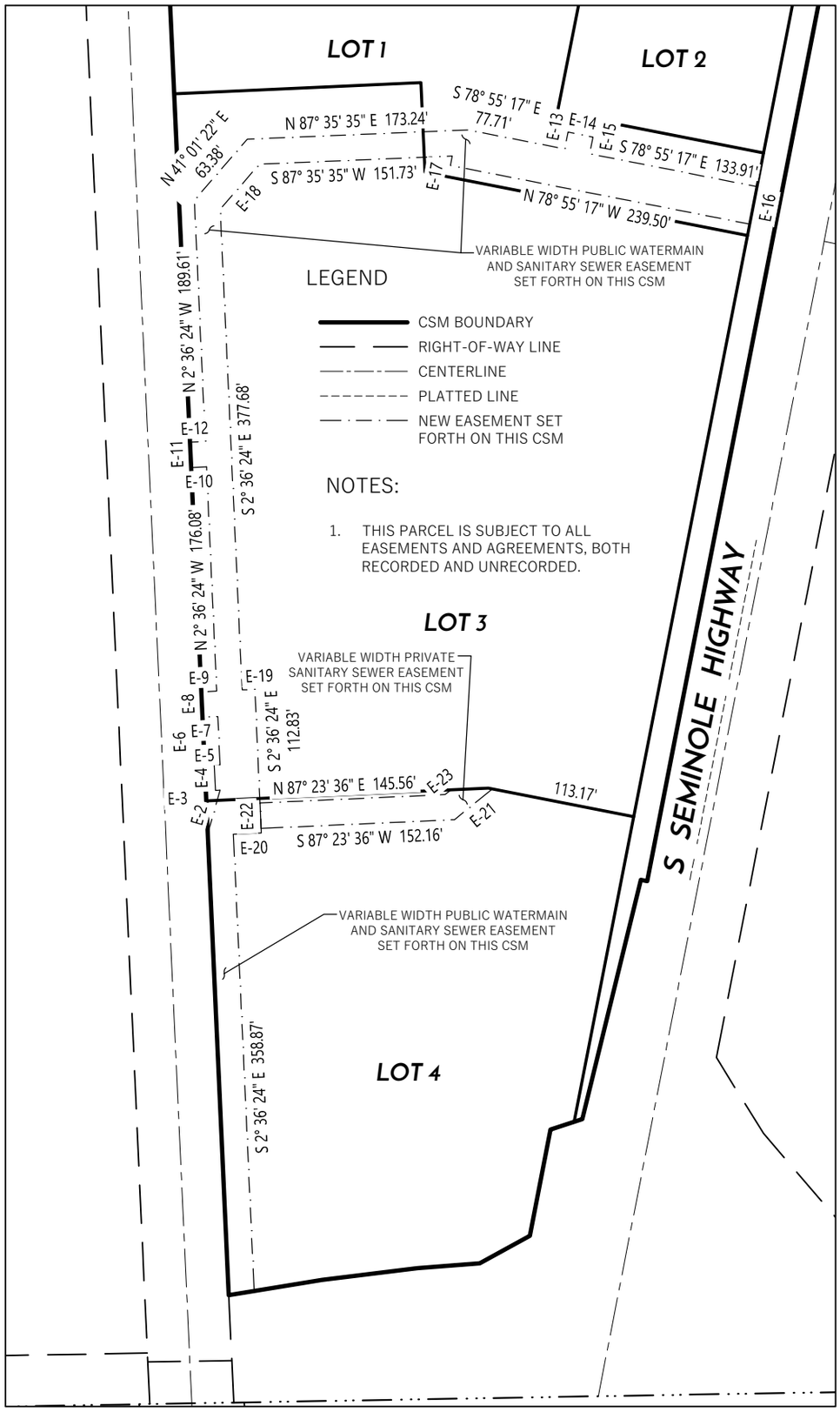
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CERTIFIED SURVEY MAP NO._____

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NEW UTILITY EASEMENT DETAILS



LINE TABLE		
LINE #	BEARING	DISTANCE
E-2	N 15° 55' 15" E	35.08'
E-3	S 87° 23' 36" W	3.64'
E-4	N 02° 36' 24" W	20.00'
E-5	N 87° 23' 36" E	4.50'
E-6	N 02° 36' 24" W	37.94'
E-7	S 87° 23' 36" W	12.00'
E-8	N 02° 36' 24" W	20.00'
E-9	N 87° 23' 36" E	12.00'
E-10	S 87° 23' 36" W	12.00'
E-11	N 02° 36' 24" W	20.00'
E-12	N 87° 23' 36" E	12.00'
E-13	N 11° 04' 43" E	13.43'
E-14	S 78° 55' 17" E	20.00'
E-15	S 11° 04' 43" W	13.43'
E-16	S 11° 04' 34" W	30.00'
E-17	N 11° 04' 09" E	7.54'
E-18	S 41° 01' 22" W	46.76'
E-19	N 87° 23' 36" E	10.00'
E-20	S 87° 23' 36" W	22.00'
E-21	S 50° 52' 54" W	38.21'
E-22	N 02° 36' 24" W	20.00'
E-23	N 50° 52' 54" E	5.88'

WISCONSIN
ZACHARY M. REYNOLDS
S-3223
MOUNT HOREB
WISCONSIN
PROFESSIONAL LAND SURVEYOR

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SURVEYED BY: MAL/DZ
DRAWN BY: AMS
CHECKED BY: ZMR
APPROVED BY: ZMR

PROJECT NO: 24-1243
SHEET NO: 6 of 8

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DOC. NO. _____
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*CERTIFIED SURVEY MAP NO.*_____

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LEGAL DESCRIPTION

PART OF LOT 2 OF CERTIFIED SURVEY MAP NO. 8023 RECORDED IN VOLUME 42 OF CERTIFIED SURVEY MAPS OF DANE COUNTY ON PAGES 313-316 AS DOCUMENT NO. 2719369 (CSM 8023), LOCATED IN THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 8, TOWNSHIP 6 NORTH, RANGE 9 EAST, CITY OF FITCHBURG, DANE COUNTY , WISCONSIN, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE WEST QUARTER CORNER OF AFORESAID SECTION 8; THENCE, ALONG THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 8, SOUTH 01 DEGREES 51 MINUTES 14 SECONDS EAST, 1308.26 FEET TO THE NORTHWEST CORNER OF THE SOUTH HALF OF THE SOUTHWEST QUARTER OF SAID SECTION 8; THENCE ALONG THE NORTH LINE OF SAID SOUTH HALF, NORTH 89 DEGREES 07 MINUTES 12 SECONDS EAST, 1352.20 FEET TO THE NORTHWEST CORNER OF AFORESAID LOT 2 OF CSM 8023, AND THE POINT OF BEGINNING; THENCE, CONTINUING ALONG SAID NORTH LINE OF THE SOUTH HALF, AND ALSO ALONG THE NORTH LINE OF SAID LOT 2, NORTH 89 DEGREES 07 MINUTES 12 SECONDS EAST, 560.79 FEET TO THE NORTHEAST CORNER OF SAID LOT 2, AND ALSO BEING A POINT ON THE WESTERLY RIGHT-OF-WAY OF SOUTH SEMINOLE HIGHWAY; THENCE, ALONG THE EAST LINE OF SAID LOT 2, AND ALONG SAID WESTERLY RIGHT-OF-WAY, SOUTH 11 DEGREES 04 MINUTES 34 SECONDS WEST, 919.60 FEET; THENCE, CONTINUING ALONG SAID WESTERLY RIGHT-OF-WAY, NORTH 78 DEGREES 55 MINUTES 25 SECONDS WEST, 5.01 FEET; THENCE, CONTINUING ALONG SAID WESTERLY RIGHT-OF-WAY, SOUTH 13 DEGREES 44 MINUTES 29 SECONDS WEST, 193.21 FEET; THENCE, CONTINUING ALONG SAID WESTERLY RIGHT-OF-WAY, SOUTH 71 DEGREES 35 MINUTES 42 SECONDS WEST, 26.42 FEET; THENCE, CONTINUING ALONG SAID WESTERLY RIGHT-OF-WAY, SOUTH 11 DEGREES 04 MINUTES 04 SECONDS WEST, 85.00 FEET TO A POINT ON THE NORTHERLY RIGHT-OF-WAY OF LACY ROAD; THENCE, CONTINUING ALONG SAID NORTHERLY RIGHT-OF-WAY, SOUTH 61 DEGREES 25 MINUTES 02 SECONDS WEST, 44.78 FEET; THENCE, CONTINUING ALONG SAID NORTHERLY RIGHT-OF-WAY, SOUTH 85 DEGREES 30 MINUTES 11 SECONDS WEST, 49.09 FEET; THENCE, CONTINUING ALONG SAID NORTHERLY RIGHT-OF-WAY, SOUTH 82 DEGREES 55 MINUTES 05 SECONDS WEST, 75.43 FEET; THENCE, CONTINUING ALONG SAID NORTHERLY RIGHT-OF-WAY, SOUTH 80 DEGREES 47 MINUTES 29 SECONDS WEST, 74.21 FEET TO A POINT ON THE WESTERLY LINE OF AFORESAID LOT 2 OF CSM 8023; THENCE, ALONG SAID WESTERLY LINE, NORTH 02 DEGREES 36 MINUTES 24 SECONDS WEST, 1220.05 FEET BACK TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINS 493,619 SQUARE FEET OR 11.33 ACRES.

SURVEYOR'S CERTIFICATE

I, ZACHARY M. REYNOLDS, WISCONSIN PROFESSIONAL LAND SURVEYOR S-3223, DO HEREBY CERTIFY THAT BY DIRECTION OF NEWCOMB CONSTRUCTION COMPANY, INC. I HAVE SURVEYED, DIVIDED, AND MAPPED THE LANDS DESCRIBED HEREON AND THAT THE MAP IS A CORRECT REPRESENTATION IN ACCORDANCE WITH THE INFORMATION PROVIDED. I FURTHER CERTIFY THAT THIS CERTIFIED SURVEY MAP IS IN FULL COMPLIANCE WITH CHAPTER 236.34 OF THE WISCONSIN STATUTES AND THE SUBDIVISION REGULATIONS OF THE CITY OF FITCHBURG AND DANE COUNTY, WISCONSIN.

_____ _____

ZACHARY M. REYNOLDS, S-3223 DATE
WISCONSIN PROFESSIONAL LAND SURVEYOR



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WYSER ENGINEERING

PREPARED BY:
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300 EAST FRONT STREET
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www.wyserengineering.com

PREPARED FOR:
NEWCOMB CONSTRUCTION COMPANY, INC.
999 FOURIER DRIVE #102
MADISON, WI 53717

SURVEYED BY: MAL/DZ
DRAWN BY: AMS
CHECKED BY: ZMR
APPROVED BY: ZMR

PROJECT NO: 24-1243
SHEET NO: 7 of 8

VOL. _____ PAGE _____
DOC. NO. _____
C.S.M. NO. _____

*CERTIFIED SURVEY MAP NO.*_____

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OWNER'S CERTIFICATE

_____ LLC, AS OWNER, WE HEREBY CERTIFY THAT WE CAUSED THE LANDS DESCRIBED HEREON TO BE SURVEYED, DIVIDED MAPPED AND DEDICATED AS SHOWN. I ALSO CERTIFY THAT THIS CERTIFIED SURVEY MAP IS REQUIRED BY S. 236.34 OF THE WISCONSIN STATE STATUES TO BE SUBMITTED TO THE CITY OF MADISON FOR APPROVAL.

BY: _____
GUS NEWCOMB, MANAGING MEMBER

_____ LLC

STATE OF WISCONSIN) SS
DANE COUNTY) SS

PERSONALLY CAME BEFORE ME THIS_____DAY OF_____, 2025, THE ABOVE NAMED

MANAGING MEMBER FOR_____, LLC, GUS NEWCOMB, TO ME KNOWN TO BE THE

PERSON WHO EXECUTED THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED THE SAME.

_____ _____
NOTARY PUBLIC, STATE OF WISCONSIN MY COMMISSION EXPIRES

CONSENT OF MORTGAGEE

_____, A BANKING ASSOCIATION DULY ORGANIZED AND EXISTING UNDER AND BY VIRTUE OF THE LAWS OF THE STATE OF WISCONSIN , MORTAGAGEE OF THE ABOVE DESCRIBED LAND, DOES HEREBY CONSENT TO THE SURVEY, DIVIDING, MAPPING AND DEDICATION OF THE LAND DESCRIBED ON THIS CERTIFIED SURVEY MAP AND DOES HEREBY CONSENT TO THE OWNER'S CERTIFICATE.

BY: _____
AUTHORIZED OFFICER

STATE OF WISCONSIN) SS
DANE COUNTY) SS

PERSONALLY CAME BEFORE ME THIS_____DAY OF_____, 2025, THE ABOVE

NAMED BANKING ASSOCIATION, _____ AUTHORIZED OFFICER

_____ TO ME KNOWN TO BE THE PERSON WHO EXECUTED THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED THE SAME.

_____ _____
NOTARY PUBLIC, STATE OF WISCONSIN MY COMMISSION EXPIRES

WISCONSIN
ZACHARY M. REYNOLDS
S-3223
MOUNT HOREB
WISCONSIN
PROFESSIONAL LAND SURVEYOR

CITY OF FITCHBURG APPROVAL

THIS CERTIFIED SURVEY MAP, INCLUDING ANY DEDICATIONS SHOWN HEREON, HAS BEEN DULY FILED WITH AND APPROVED BY THE COMMON COUNCIL OF THE CITY OF FITCHBURG, DANE COUNTY, WISCONSIN.

DATED THIS _____DAY OF _____, 2025.

_____
TRACY OLDENBURG, CITY CLERK,
CITY OF FITCHBURG

OFFICE OF THE REGISTER OF DEEDS

_____COUNTY, WISCONSIN

RECEIVED FOR RECORD_____,

20____ AT_____O'CLOCK_____M AS

DOCUMENT # _____

IN VOL. _____ OF CERTIFIED SURVEY

MAPS ON PAGE(S) _____ .

_____
KRISTI CHLEBOWSKI, REGISTER OF DEEDS

WYSER ENGINEERING

PREPARED BY:
WYSER ENGINEERING
300 EAST FRONT STREET
MOUNT HOREB, WI 53572
www.wyseengineering.com

PREPARED FOR:
NEWCOMB CONSTRUCTION COMPANY, INC.
999 FOURIER DRIVE #102
MADISON, WI 53717

SURVEYED BY:	MAL/DZ
DRAWN BY:	AMS
CHECKED BY:	ZMR
APPROVED BY:	ZMR

PROJECT NO: 24-1243
SHEET NO: 8 of 8

File: W:\2024\241243_Newcomb – Seminole & Lacy, Fitchburg\DWG\241243_CSM.dwg Layout: CSM 8 OF 8 User: dschneider Plotted: May 16, 2025 – 1:46pm

City of Fitchburg
Erosion Control and Stormwater Management
Permit Application

Last Revised 12/15/2023

Permit #	
Start Date:	
Completion:	
Office Use Only	

Project Name: Gusto! - Lot 4

Latitude/Longitude: 43.004406, -89.459899

Coordinates to 6 decimal digits req'd (e.g. 43.002512, -89.424248)

Site Address: 2747 S SEMINOLE HWY

Parcel ID(s): 060908395704

Landowner Name, Phone & E-mail: Tim O'Brien, 608-616-0032, brtimo@yahoo.com

Landowner Address: 3710 SHILOH RD
DEFOREST WI 53532

Applicant Name, Phone & E-mail: Gus Newcomb, 608 833-5220, gus@newcombbuilds.com

Designer Name, Phone & E-mail: Kate Meagher, 608-437-1980, kate.meagher@wyserengineering.com

Contractor Name, Phone & E-mail:

Total New Impervious Area added since 8-22-01: 0 s.f.

Total Disturbed Area (this project): s.f.

Total New Impervious Area (this project): 68,187 s.f.

Total Redeveloped Area (this project): s.f.

Total Impervious Area (after project): 68,187 s.f.

Proposed Permit Fee for Plat Projects*

Type of Permit *(check only one)*

- ☐ Erosion Control Only (EC Base Fee = $200) (EC Amendment Fee = $100)
- ☐ Erosion Control and Stormwater Management (EC+SWM Base Fee = $200 + $400 = $600) (EC+SWM Amendment Fee = $300)
- ☐ Stormwater Management Only (SWM Base Fee = $400) (SWM Amendment Fee = $200)

Total Disturbed Area (this project):	s.f. x	$0.005	/ s.f. =	$
Total New Impervious Area (this project):	s.f. x	$0.010	/ s.f. =	$
Total Redeveloped Impervious Area (this project):	s.f. x	$0.005	/ s.f. =	$

Permit fee of $ _____ received by _____ (*name*) on _____ (*date*)

Base Fee = (see above) $

Total Permit Fee = $

Make checks payable to "City of Fitchburg." Permit fee must be paid before Dane County review will begin.

Fees DOUBLE if work starts before permit is approved.

Note: Maximum length of permit duration is 3 years from permit start date.

** Plat projects include initial grading and infrastructure construction for plats. Development of individual lots within a plat are not considered "Plat projects" for the purposes of permit fee calculation.*

Proposed Permit Fee for non-Plat Projects

Type of Permit *(check only one)*

- ☒ Erosion Control Only (EC Base Fee = $275) (EC Amendment Fee = $100) **Plus actual costs****
- ☐ Erosion Control and Stormwater Management (EC+SWM Base Fee = $450) (EC+SWM Amendment Fee = $100) **Plus actual costs****
- ☐ Stormwater Management Only (SWM Base Fee = $375) (SWM Amendment Fee = $100) **Plus actual costs****

***In addition, the applicant shall pay the actual costs incurred by the City from any consultant or agent with whom the City may contract to provide services relating to the administration of this Code. The City shall bill the applicant for such charges, which shall be paid within thirty (30) days. Any unpaid charges shall be assessed to the subject property as a special charge pursuant to Wis. Stats. 66.0627 and placed on the tax roll.*

Make checks payable to "City of Fitchburg." Permit fee must be paid before Dane County review will begin.

Base fee DOUBLES if work starts before permit is approved.

Landowner or Applicant Signature: _____ Date: 7/11/2025

Reviewed by: _____ Date: _____

Conditionally Approved by City Engineer: _____ Date: _____

Submit 1 electronic copy of Permit Application, Report, and Plans (11"x17" max. size) to: bakha.yunusov@fitchburgwi.gov, ben.schulte@fitchburgwi.gov, and Mergen.Elliott@countyofdane.com. Submit permit fee to: Fitchburg Public Works Department, Attn: Environmental Engineer, 5520 Lacy Road, Fitchburg, WI 53711.

The following permit conditions are in addition to Conditions 1-4 listed on Page 1 of this permit.

Landowner / Applicant hereby acknowledged / agrees to the following:

1. Landowner / Applicant have reviewed Chapter 30, Article II of the City of Fitchburg Code of Ordinances and agree to follow all necessary requirements.
2. Landowner / Applicant agree to the permit conditions on the bottom of this permit.
3. Landowner / Applicant hereby grant the City of Fitchburg and its agent's permission to enter the project property for inspection and/or curative action.

Landowner / Applicant agree to keep a copy of the approved permit(s) and plan(s) available on the site at all times until final completion.

4. **City R/W Permit** - Landowner/Applicant shall check on whether a Right-of-Way (R/W) permit application is required for construction work within the City R/W. No land disturbance within the R/W is allowed unless a R/W Permit is approved.
5. **Street Access** - Per Fitchburg Chapter 70, Article V s. 70-145 vehicles over 10,000 lbs. gross weight shall use wood curb blocking when mounting or crossing curb & gutter, unless specifically permitted in writing by the City. Gravel & soil curb ramping is expressly prohibited.
6. **WDNR, Army Corps of Engineers, CARPC, etc. Permits** - Landowner/Applicant is responsible for checking with appropriate agencies for determining applicable permits. Copies of any applicable permits must be provided to the City prior to commencing land disturbance.
7. **Property Transfer** - If there is a transfer of property ownership prior to completion of the permit requirements, the permittee must notify the City and coordinate either a new permit application or permit transfer per Fitchburg Chapter 30 Article II 30-26 (f).
8. **Digger's Hotline** - Permittee shall be responsible for calling in all necessary underground utility locates for the construction work, and keeping the locates current/up-to-date. **Digger's Hotline for the area is 1-800-242-8511.**
9. **Traffic Control / Job Site Safety** - Traffic control shall comply with the current edition of the Manual on Uniform Traffic Control Devices (MUTCD). The Permittee and Permittee's Contractor are responsible for all job site safety and shall ensure that they communicate all applicable emergency contact information to the City and County emergency management services (EMS) departments.
10. **Erosion Control** - R/W surfaces shall be thoroughly cleaned before the end of each working day. All inlets, culverts, or other storm sewer structures subject to drainage shall be protected with silt screen protection device specifically designed for that structure. Any deposits of dirt, mud, rock, debris, or other material entering the storm sewer system shall be promptly and thoroughly cleaned out. If not clean by the end of the day, the City reserves the right to coordinate the work and charge back all equipment use and labor deemed necessary by the City to the Permittee. All erosion control measures shall be installed in accordance with the City of Fitchburg Standard Specifications, current edition. The City reserves the right to require additional erosion control measures as conditions warrant.
11. **Restoration** shall be completed as noted in the construction schedule unless otherwise authorized by the City. All public improvements (ie: curb and gutter, sidewalks, driveways, topsoil, vegetative cover, terrace trees, underground utilities, storm water conveyance and detention facilities, etc.) shall be installed and/or restored in accordance with the City of Fitchburg Standard Specifications, current edition.
12. **Construction Schedule Notification** - Permittee shall notify the City within 10 days of initial installation of all erosion control measures to arrange an inspection. No grading or construction work is allowed until the permit is approved and erosion control measures have been put in place and approved by the City. Permittee shall again contact the City a minimum of 2 working days prior to commencing any grading or construction work. Landowner/Applicant shall notify the City of any changes to the construction schedule as work progresses.
13. **Construction Site Erosion Control Inspections** - Contractor shall complete and upload weekly construction site erosion control inspections online using the PermiTrack system (https://www.mypermitrack.com/sehsvc/login) until Complete Stabilization is met. City Staff will set up the accounts, project, and provide training as needed to permittee, consultants, and contractors. If the site will be inactive, but stable, for a prolonged period (e.g. winter shutdown, etc.), Contractor may contact the City to request bumping inspection status to "Inactive" so weekly inspections don't need to be done until construction work resumes.
14. **Completion Date / Notice of Stabilization** - The site shall be stabilized by the Completion Date listed on Page 1 of this permit. If the site cannot be stabilized by that date, written notice shall be given to the City along with revised stabilization date, revised Soil Loss spreadsheet(s) and request to extend the Completion Date. If appropriate notification is not given prior to the Completion Date, a new permit application and appropriate fees

must be submitted for any remaining disturbed areas. Within ten days after installation of all practices in the approved erosion control plan and achievement of soil stabilization, the permittee shall notify the City to arrange a confirmation of project completion and stabilization.

15. **Approved Plan Sheets** (Include dates, sheet numbers, revision, etc.):
    _____
16. **Special Conditions:**
    _____
    _____
    _____
    _____

City of Fitchburg – Erosion Control Application Checklist

Project Name / Location: Gusto! - Lot 4 **Permit #:** _____

Please check the appropriate box: I = Included; N/A = Not Applicable *(If "N/A" is checked, an explanation must be entered.)*

		Applicant			Public Works	
	Plan Requirements (refer to Chapter 30, Article II s. 30-27 (a))	**I**	**N/A**	**Explanation / Location of Information (Page Number of Attachment)**	**I**	**N/A**
(1)	Property lines, lot dimensions, and limits of disturbed area.	X		Exhibit A		
(2)	Limits of impervious area, including buildings and paved areas	X		Exhibit A		
(3)	All natural and artificial water features	X		Exhibit A		
(4)	All erosion control measures to be installed	X		Exhibit A		
(5)	Cross sections and profiles of road ditches and channels (existing and proposed).		X			
(6)	Storm sewer pipes and/or culvert sizes (existing and proposed).	X		Exhibit E		
(7)	Direction of runoff flow (contours or runoff arrows).	X		Exhibit A		
(8)	Watershed size for each contributing drainage area.	X		Exhibit C		
(9)	Design discharge for ditches and structural measures (flow calculations).		X			
(10)	Runoff velocities in channels (ft/s).		X			
(11)	Fertilizer and seeding rates (seed, fertilizer, polymer, mulch, etc.).	X		Exhibit A		
(12)	Detailed description and proposed completion schedule of each element of the erosion control plan, including stabilization of ditches and slopes.	X		MEMO		
(13)	Show steps and calculations demonstrating the erosion control performance standards under Chapter 30, Article II s. 30-27(c) will be met. Include Soil Loss spreadsheet.	X		Exhibit D		
(14)	Provisions to prevent mud-tracking off-site onto public thoroughfares during the construction period.	X		Exhibit A		
(15)	Provisions to disconnect impervious surfaces, where feasible.		X			
(16)	Provisions to prevent sediment delivery to, and accumulation in, any proposed or existing stormwater conveyance systems.	X		Exhibit A		
(17)	Copy of permits or approvals by other agencies (e.g. WDNR, Army Corps of Engineers, etc.).	X		In Progress		
(18)	Existing and proposed elevations and contours (NAVD 88)	X		Exhibit A		
(19)	Itemized estimated cost (including labor) for installation of all elements of the erosion control plan.	X		Exhibit E		
(20)	Any other information necessary to reasonably determine the location, nature, and condition of any physical or environmental features of the site.		X			
(21)	Plan Commission Approval (if parcel is 5 acres or more); See Chapter 30, Article II s. 30-32 for details.		X			
(22)	Submit completed City of Fitchburg Inspection Form	X				

Indicates plan requirement must always be included

WYSER ENGINEERING

MEMORANDUM

To:	City of Fitchburg Engineering
From:	Kate Meagher, P.E.
Re:	Erosion Control Permit Application – Gusto! – Lot 4
Project #:	24-1243
Date:	07/15/2025
Cc:	Buffalo Development, LLC

Buffalo Development, LLC is proposing a four lot CSM on the parcel 225/0609-083-9570-4 located at the northeast corner of S Seminole Hwy and Lacy Rd in the City of Fitchburg. The four lots will be a mix of commercial and multi-family residential. This memo and associated calculations are designed to cover erosion control requirements for the installation of the public utilities for the lots and the development of Lot 4. Please refer to **Exhibit A** for the proposed plans.

The public utilities consist of two sanitary sewer main lines with services for each lot and a watermain with some future services. The Lot 4 development will consist of an apartment building, underground parking, surface parking and sidewalk around the site. A portion of the proposed parking lot will be located on Lot 3. A separate stormwater management plan has been created for the development of all four lots. Based on the stormwater management plan, the maximum amount of impervious allowed for Lot 4 is 66,110 SF. The proposed Lot 4 development has 65,852 SF of impervious area, so the site meets the stormwater management plan. Based on the stormwater management plan, there will be a bioretention basin on the south side of the lot and an underground infiltration system for rooftop infiltration. Lot 3 will have approximately 2,335 SF of new impervious area, which is less than the maximum amount allowed per the stormwater management plan (156,905). The impervious area added to Lot 3 will be captured and treated by the stormwater features on Lot 4, so no additional stormwater features are required for Lot 3 at this time. The proposed development will create approximately 185,000 SF of disturbance.

The property is currently cropland. The disturbed area of the site is comprised of three soil types: Kegonsa silt loam (KeB – Type B) and Plan silt loam (PoA, PoB – Type B). Please refer to **Exhibit B** for existing site conditions and soil information.

Storm sewer sizing was completed using the rational method. The discharge is located to the south into the regional stormwater basin. The discharge is protected with riprap. Refer to **Exhibit C** for storm sewer sizing and riprap sizing calculations.

Erosion control measures proposed for the project site have been designed in accordance with the WDNR and City of Fitchburg requirements. Construction sequencing, as follows, has been documented in

accordance with soil loss rate calculations for the construction period per the Universal Soil Loss Equation included in **Exhibit D**:

09/15/2025	Install perimeter BMP's (silt fence, stone tracking pad, etc.). Begin to install public utilities.
03/01/2026	Begin building construction.
04/01/2026	Final stabilization for disturbance areas associated with public utilities only.
06/25/2026	Temporary stabilization with mulch and erosion mat where required.
07/15/2027	Final landscaping adjustments.
09/15/2027	Final site stabilization with seed, mulch and erosion matting where required.
11/15/2027	Check to make sure vegetation has been established and fix as needed.

Tracking control measures, sediment control measures, and site stabilization details and methods have been designed to reduce erosion to sheet and rill standards, 5.0 tons per acre per year. An itemized estimated costs of erosion control plan implementation can be found in **Exhibit E**.

WYSER
ENGINEERING

Exhibit A

LOT 3 CSM _____
201,536 SQ.FT. (4.63 ACRES)

LOT 4 CSM _____
107,663 SQ.FT. (2.47 ACRES)

UNLESS OTHERWISE NOTED:
DRIVEWAY WIDTH = 24.0'
STALL WIDTH = 9.0'
STALL DEPTH = 18.0'
RADII INTO PARKING = 2.5'
RADII AT INTERSECTION = 8.0'

PRIVATE SANITARY SEWER EASEMENT. SEE CSM FOR DETAIL.

PUBLIC UTILITY EASEMENT. SEE CSM FOR DETAIL.

ADA RAMP, 12:1 MAXIMUM SLOPE. INSTALL DETECTABLE WARNING FIELDS.

SHARED ACCESS EASEMENT. SEE CSM FOR DETAIL.

117.0' - 13 STALLS

R20.0'

R14.0'

24.0'

11.0'

0.0'

STORMWATER MANAGEMENT

ADA ROUTE TO PUBLIC SIDEWALK.

2-FOOT WIDE GRAVEL SHOULDER

COMMERCIAL ENTRANCE PER THE CITY OF FITCHBURG REQUIREMENTS. SEE CITY STANDARD DETAIL 4.03.

STOP SIGN

SEMINOLE HIGHWAY

13.7'

8.0'

6.0'

14.5'

24.0'

34.0'

14.94'

22.08'

16.38'

4.0', TYP.

10.0'

36.0' - 4 STALLS

81.0' - 9 STALLS

12.0'

R10.0'

R50.0'

ADA RAMP, 12:1 MAXIMUM SLOPE. INSTALL DETECTABLE WARNING FIELDS.

45.0' - 5 STALLS

27.0' - 3 STALLS

4.0'

20.0'

7'X12' CONCRETE PAD FOR 6 BIKE STALLS. MADRAX "U" RACK OR SIMILAR. SEE DETAIL.

18.0' - 1 9'X18' ADA VAN STALL WITH 1 9'X18' LANDING

ADA STALL SIGN

R21.0'

LIMITS OF BELOW GRADE PARKING

5.0'

11.9'

6.0'

R5.0'

CONCRETE RETAINING WALL. SEE STRUCTURAL PLANS FOR DETAILS.

ADA RAMP, 12:1 MAXIMUM SLOPE. INSTALL DETECTABLE WARNING FIELDS.

PRIVATE DECKS WITH STEPS AND RAILING DOWN TO SIDEWALK CONNECTION TO PUBLIC PATH. SEE STRUCTURAL AND ARCHITECTURAL PLANS FOR DETAIL. TYPICAL TO THIS SIDE OF THE BUILDING.

34.1'

39.1'

32.37'

SHARED AMENITY SPACE OVER BELOW GRADE PARKING. SEE LANDSCAPE PLANS FOR DETAIL.

PROPOSED BUILDING
FIRST FLOOR = 22,759 SQ.FT.
BASEMENT FLOOR = 31,210 SQ.FT.

BUILDING FOOTPRINT SHOWN BASED ON ARCHITECTURAL FLOOR PLAN AS PROVIDED TO WYSER ENGINEERING. THIS DRAWING SHOULD NOT BE USED FOR CONSTRUCTION LAYOUT UNTIL FOUNDATION IS VERIFIED BY FINAL STRUCTURAL PLANS. THIS IS THE RESPONSIBILITY OF THE CONTRACTOR.

19.23'

18.20'

19.43'

15.32'

14.41'

NEW ASPHALT FLUME PER WISDOT REQUIREMENTS.

EXTEND PUBLIC CURB AND GUTTER FOR DRAINAGE REVISION FOR PUBLIC PATH IMPROVEMENT.

PUBLIC PEDESTRIAN PATH TO EXTEND INTO EXISTING PATH.

PRIVATE STORMWATER MANAGEMENT EASEMENT. SEE CSM FOR DETAIL.

LANDSCAPE RETAINING WALL LESS THAN 4-FEET IN HEIGHT. LIMESTONE BOULDER RETAINING WALL OR EQUAL. CONTRACTOR TO COORDINATE WALL TYPE WITH OWNER.

STORMWATER MANAGEMENT

LACY ROAD

ASPHALT PAVEMENT

LEGEND (PROPOSED)

- PROPOSED PROPERTY BOUNDARY
- EASEMENT
- DISTURBANCE LIMITS
- BUILDING FOOTPRINT
- BUILDING OVERHANG
- 18" CURB AND GUTTER
- 18" REJECT CURB AND GUTTER
- 18" CURB AND GUTTER FLUSH WITH PAVEMENT
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- STORMWATER TREATMENT FACILITY

NORTH

GENERAL NOTES

1. UNDERLYING SITE CONTOURS AND INFORMATION BASED ON TOPOGRAPHIC & UTILITY DATA AS SURVEYED BY WYSER ENGINEERING ON JUNE 6, 2024. WYSER ENGINEERING SHALL NOT BE HELD RESPONSIBLE FOR ANY ERRORS OR OMISSIONS THAT MAY ARISE AS A RESULT OF ERRONEOUS OR INCOMPLETE INFORMATION PROVIDED BY OTHERS. CONTRACTOR TO CONFIRM ALL ELEVATIONS, GENERAL DRAINAGE AND EARTHWORK REQUIREMENTS PRIOR TO CONSTRUCTION.
2. THE BENCHMARK LOCATIONS ARE SHOWN FOR REFERENCE ONLY ON THIS PLAN. THE BENCHMARKS SHALL BE VALIDATED BY LICENSED LAND SURVEYOR PRIOR TO CONSTRUCTION. CONTRACTOR ASSUMES RISK ASSOCIATED WITH BENCHMARK ELEVATIONS UNTIL CONFIRMED.
3. CONTRACTOR TO OBTAIN APPROPRIATE PERMITS FOR STREET OPENINGS & TO WORK WITHIN THE CITY'S LAND IF REQUIRED.
4. WYSER ENGINEERING SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER OR CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY REGULATORY AGENCIES.
5. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS WITHIN THE PLAN BECOME APPARENT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.
6. ALL MUNICIPAL UTILITY CONNECTIONS, WORK IN ROW, PUBLIC OUTLOTS AND PUBLIC EASEMENTS SHALL BE IN ACCORDANCE WITH CITY OF FITCHBURG STANDARD SPECIFICATIONS.

SITE INFORMATION BLOCK:

SITE ADDRESS: 2715 SEMINOLE HIGHWAY (LOT 4 OF CSM _____)
SITE ACREAGE: 107,663 SQ.FT. (2.47 AC)
USE OF PROPERTY: MULTI FAMILY RESIDENTIAL
ZONING: PLANNED DEVELOPMENT DISTRICT (PDD - GIP)

SETBACKS (AS SHOWN):
- FRONT YARD (ROOF OVERHANG): 14 FEET
- FRONT YARD (FOUNDATION): 19 FEET
- FRONT YARD (DECK): 16 FEET
- REAR YARD: 32 FEET
- SIDE YARD: 20 FEET

NUMBER OF UNITS: 88

SURFACE PARKING PROVIDED: 131
- INTERIOR: 87
- EXTERIOR: 44 (1 ADA)

NUMBER OF BIKE STALLS: 92
- INTERIOR: 86
- EXTERIOR: 6

EXISTING IMPERVIOUS SURFACE AREA: 0 SQ.FT.

NEW IMPERVIOUS SURFACE AREA ON LOT 4: 64,206 SQ.FT.
- BUILDING FOUNDATION: 31,210 SQ.FT.
- PAVED (OUTSIDE OF BUILDING FOUNDATION): 32,996 SQ.FT.
  - PARKING: 29,368 SQ.FT.
  - SIDEWALK: 2,454 SQ.FT.
  - DECK: 1,174 SQ.FT.

NEW IMPERVIOUS AREA ON LOT 3: 2,333 SQ.FT.

PROPOSED IMPERVIOUS SURFACE RATIO (LOT 4): 59.6%

DISTURBANCE LIMITS (LOTS 1-4): 185,000 SQ.FT.

DIGGERS HOTLINE
Toll Free (800) 242-8511 -or- 811
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

WYSER ENGINEERING

2747 S. SEMINOLE HIGHWAY
FITCHBURG, WI 53711

GUSTO!
LOT 4 SIP

CITY OF FITCHBURG, DANE COUNTY, WI

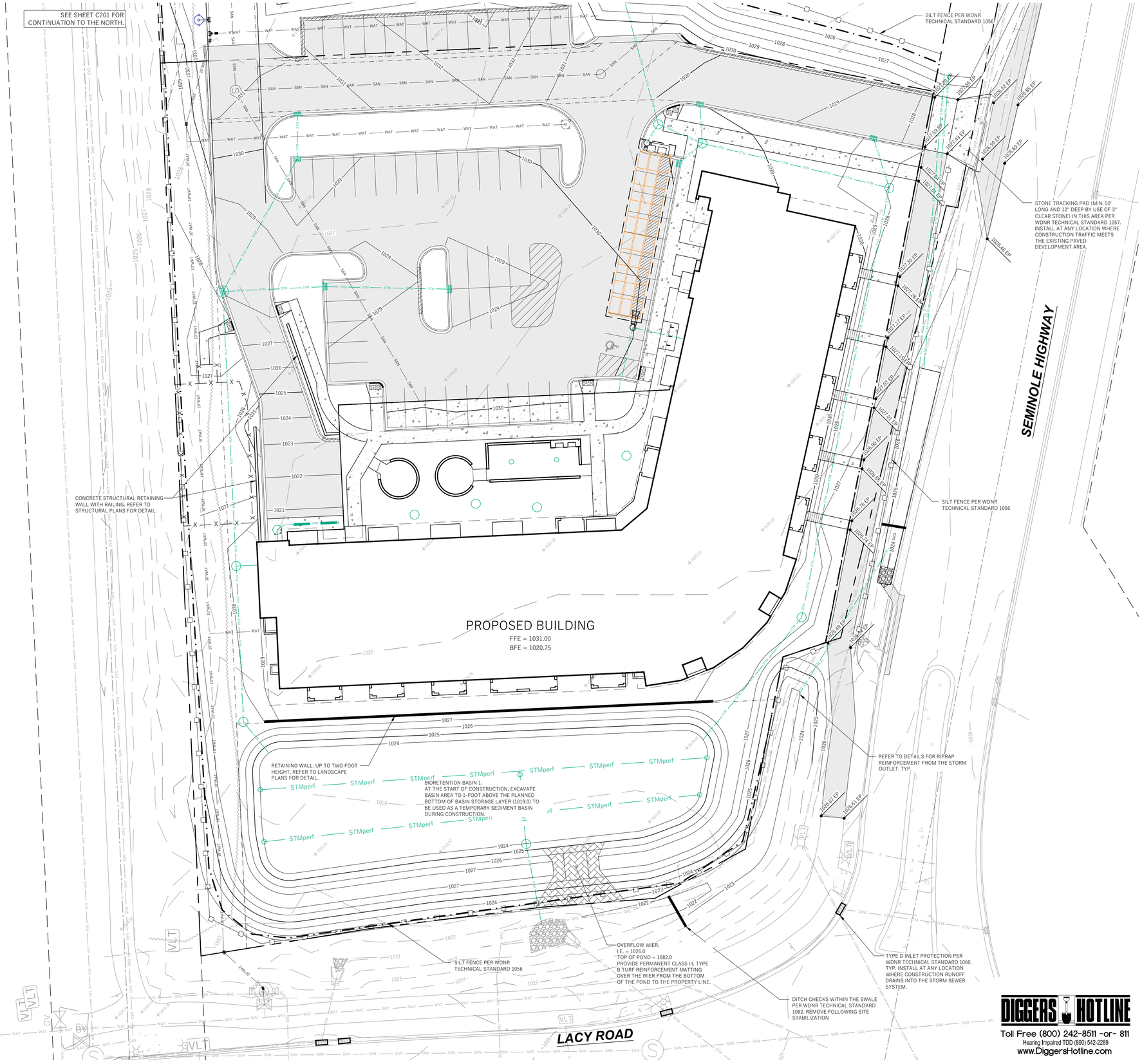
Sheet Title: SITE PLAN

Revisions:

No.	Date:	Description:

Graphic Scale: 0' 5' 10' 20' 30'
Wyser Number: 24-1243
Set Type: SIP
Date Issued: 07/15/2025
Sheet Number: C100

File: W:\2024\241243_Newcomb - Seminole & Lacy, Fitchburg\DWG\Lot 1 SIP\241243_Civil Design_Lot 1.dwg Layout: Site Plan User: dschneider Plotted: Jul 14, 2025 - 9:05am



LEGEND (PROPOSED)

- PROPERTY BOUNDARY
- EASEMENT
- BUILDING FOOTPRINT
- 18" CURB AND GUTTER
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- 1030 PROPOSED MAJOR CONTOUR
- 1028 PROPOSED MINOR CONTOUR
- STM PROPOSED STORM SEWER
- SILT FENCE
- INLET PROTECTION
- DITCH CHECK

NORTH

GENERAL NOTES

1. UNDERLYING SITE CONTOURS AND INFORMATION BASED ON TOPOGRAPHIC & UTILITY DATA AS SURVEYED BY WYSER ENGINEERING ON JUNE 6, 2024. WYSER ENGINEERING SHALL NOT BE HELD RESPONSIBLE FOR ANY ERRORS OR OMISSIONS THAT MAY ARISE AS A RESULT OF ERRONEOUS OR INCOMPLETE INFORMATION PROVIDED BY OTHERS. CONTRACTOR TO CONFIRM ALL ELEVATIONS, GENERAL DRAINAGE AND EARTHWORK REQUIREMENTS PRIOR TO CONSTRUCTION.
2. THE BENCHMARK LOCATIONS ARE SHOWN FOR REFERENCE ONLY ON THIS PLAN. THE BENCHMARKS SHALL BE VALIDATED BY LICENSED LAND SURVEYOR PRIOR TO CONSTRUCTION. CONTRACTOR ASSUMES RISK ASSOCIATED WITH BENCHMARK ELEVATIONS UNTIL CONFIRMED.
3. CONTRACTOR TO OBTAIN APPROPRIATE PERMITS FOR STREET OPENINGS & TO WORK WITHIN THE CITY'S LAND IF REQUIRED.
4. WYSER ENGINEERING SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER OR CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY REGULATORY AGENCIES.
5. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS WITHIN THE PLAN BECOME APPARENT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.
6. ALL MUNICIPAL UTILITY CONNECTIONS, WORK IN ROW, PUBLIC OUTLOTS AND PUBLIC EASEMENTS SHALL BE IN ACCORDANCE WITH CITY OF FITCHBURG STANDARD SPECIFICATIONS.

CONSTRUCTION SITE EROSION CONTROL REQUIREMENTS

1. POST WDNR CERTIFICATE OF PERMIT COVERAGE AND MUNICIPAL EROSION CONTROL PERMITS ON SITE AND MAINTAIN UNTIL CONSTRUCTION ACTIVITIES HAVE CEASED, THE SITE IS STABILIZED, AND A NOTICE OF TERMINATION IS FILED WITH WDNR.
2. KEEP A COPY OF THE CURRENT EROSION CONTROL PLAN ON SITE THROUGHOUT THE DURATION OF THE PROJECT.
3. ENGINEER / CITY OF FITCHBURG / DANE COUNTY LAND CONSERVATION / WDNR HAS THE RIGHT TO REQUIRE CONTRACTOR TO IMPLEMENT ADDITIONAL EROSION CONTROL MEASURES AS NECESSARY.CONTRACTOR MUST NOTIFY THE CITY OF FITCHBURG BUILDING INSPECTOR TWO (2) WORKING DAYS IN ADVANCE OF ANY SOIL DISTURBANCE ACTIVITIES.
4. SUBMIT PLAN REVISIONS OR AMENDMENTS TO THE WDNR AT LEAST 5 DAYS PRIOR TO FIELD IMPLEMENTATION.
5. THE SITE CONTRACTOR IS RESPONSIBLE FOR ROUTINE SITE INSPECTIONS AT LEAST ONCE EVERY 7 DAYS AND WITHIN 24 HOURS AFTER A RAINFALL EVENT OF 0.5 INCHES OR GREATER. KEEP INSPECTION REPORTS ON-SITE AND MAKE THEM AVAILABLE UPON REQUEST.
6. INSPECT AND MAINTAIN ALL INSTALLED EROSION CONTROL PRACTICES UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.
7. WHEN POSSIBLE, PRESERVE EXISTING VEGETATION (ESPECIALLY ADJACENT TO SURFACE WATERS), MINIMIZE LAND-DISTURBING CONSTRUCTION ACTIVITY ON SLOPES OF 20% OR MORE, MINIMIZE SOIL COMPACTION, AND PRESERVE TOPSOIL.
8. REFER TO THE WDNR STORMWATER CONSTRUCTION TECHNICAL STANDARDS AT http://dnr.wi.gov/topic/stormwater/standards/const_standards.html.
9. INSTALL PERIMETER EROSION CONTROLS AND ROCK TRACKING PAD CONSTRUCTION ENTRANCE(S) PRIOR TO ANY LAND-DISTURBING ACTIVITIES, INCLUDING CLEARING AND GRUBBING. USE WDNR TECHNICAL STANDARD STONE TRACKING PAD AND TIRE WASHING #1057 FOR ROCK CONSTRUCTION ENTRANCE(S).
10. INSTALL INLET PROTECTION PRIOR TO LAND-DISTURBING ACTIVITIES IN THE CONTRIBUTING DRAINAGE AREA AND/OR IMMEDIATELY UPON INLET INSTALLATION. COMPLY WITH WDNR TECHNICAL STANDARD STORM DRAIN INLET PROTECTION FOR CONSTRUCTION SITES #1060 AND DANE COUNTY REQUIREMENTS FOR FRAMED INLET PROTECTION.
11. CONTRACTOR TO PROVIDE SOLID LID OR METAL PLATE ON ALL OPEN MANHOLES DURING CONSTRUCTION TO MINIMIZE SEDIMENT FROM ENTERING THE STORM SEWER SYSTEM.
12. STAGE CONSTRUCTION GRADING ACTIVITIES TO MINIMIZE THE CUMULATIVE EXPOSED AREA. CONDUCT TEMPORARY GRADING FOR EROSION CONTROL PER WDNR TECHNICAL STANDARD TEMPORARY GRADING PRACTICES FOR EROSION CONTROL #1067.
13. PERMITTING OF GROUNDWATER DEWATERING IS THE RESPONSIBILITY OF THE CONTRACTOR. GROUNDWATER DEWATERING IS SUBJECT TO A DNR WASTEWATER DISCHARGE PERMIT AND A DNR HIGH CAPACITY WELL APPROVAL IF CUMULATIVE PUMP CAPACITY IS 70 GPM OR MORE.
14. PROVIDE ANTI-SCOUR PROTECTION AND MAINTAIN NON-EROSIVE FLOW DURING DEWATERING. PERFORM DEWATERING OF ACCUMULATED SURFACE RUNOFF IN ACCORDANCE WITH WDNR TECHNICAL STANDARD DE-WATERING #1061.
15. COMPLETE AND STABILIZE SEDIMENT BASINS/TRAPS OR WET PONDS PRIOR TO MASS LAND DISTURBANCE TO CONTROL RUNOFF DURING CONSTRUCTION. REMOVE SEDIMENT AS NEEDED TO MAINTAIN 3 FEET OF DEPTH TO THE OUTLET, AND PROPERLY DISPOSE OF SEDIMENT REMOVED DURING MAINTENANCE (REFER TO NR 528). CONSTRUCT AND MAINTAIN THE SEDIMENT BASIN PER WDNR TECHNICAL STANDARD SEDIMENT BASIN #1064 AND SEDIMENT TRAP # 1063.
16. CONSTRUCT AND PROTECT THE BIOINFILTRATION BASIN AND VEGETATION FROM RUNOFF AND SEDIMENT DURING CONSTRUCTION. REFERENCE THE WDNR TECHNICAL STANDARD BIORETENTION FOR INFILTRATION # 1004.
17. INSTALL AND MAINTAIN SILT FENCING PER WDNR TECHNICAL STANDARD SILT FENCE #1056. REMOVE SEDIMENT FROM BEHIND SILT FENCES AND SEDIMENT BARRIERS BEFORE SEDIMENT REACHES A DEPTH THAT IS EQUAL TO ONE-HALF OF THE FENCE AND/OR BARRIER HEIGHT.
18. REPAIR BREAKS AND GAPS IN SILT FENCES AND BARRIERS IMMEDIATELY. REPLACE DECOMPOSING STRAW BALES (TYPICAL BALE LIFE IS 3 MONTHS). LOCATE, INSTALL, AND MAINTAIN STRAW BALES PER WDNR TECHNICAL STANDARD DITCH CHECKS #1062.
19. INSTALL AND MAINTAIN FILTER SOCKS IN ACCORDANCE WITH WDNR TECHNICAL STANDARD INTERIM MANUFACTURED PERIMETER CONTROL AND SLOPE INTERRUPTION PRODUCTS # 1071.
20. IMMEDIATELY STABILIZE STOCKPILES AND SURROUND STOCKPILES AS NEEDED WITH SILT FENCE OR OTHER PERIMETER CONTROL. IF STOCKPILES WILL REMAIN INACTIVE FOR 7 DAYS OR LONGER.
21. IMMEDIATELY STABILIZE ALL DISTURBED AREAS THAT WILL REMAIN INACTIVE FOR 14 DAYS OR LONGER. BETWEEN SEPTEMBER 15 AND OCTOBER 15: STABILIZE WITH MULCH, TACKIFIER, AND A PERENNIAL SEED MIXED WITH WINTER WHEAT, ANNUAL OATS, OR ANNUAL RYE, AS APPROPRIATE FOR REGION AND SOIL TYPE OCTOBER 15 THROUGH COLD WEATHER: STABILIZE WITH A POLYMER AND DORMANT SEED MIX, AS APPROPRIATE FOR REGION AND SOIL TYPE.
22. STABILIZE AREAS OF FINAL GRADING WITHIN 7 DAYS OF REACHING FINAL GRADE.
23. SWEEP/CLEAN UP ALL SEDIMENT/TRASH THAT MOVES OFF-SITE DUE TO CONSTRUCTION ACTIVITY OR STORM EVENTS BEFORE THE END OF THE SAME WORKDAY OR AS DIRECTED BY THE AUTHORITIES WITH JURISDICTION. SEPARATE SWEPT MATERIALS (SOILS AND TRASH) AND DISPOSE OF APPROPRIATELY.
24. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST PER WDNR TECHNICAL STANDARD DUST CONTROL ON CONSTRUCTION SITES # 1068.
25. PROPERLY DISPOSE OF ALL WASTE AND UNUSED BUILDING MATERIALS (INCLUDING GARBAGE, DEBRIS, CLEANING WASTES, OR OTHER CONSTRUCTION MATERIALS) AND DO NOT ALLOW THESE MATERIALS TO BE CARRIED BY RUNOFF INTO THE RECEIVING CHANNEL.
26. COORDINATE WITH THE AUTHORITIES WITH JURISDICTION TO UPDATE THE LAND DISTURBANCE PERMIT TO INDICATE THE ANTICIPATED OR LIKELY DISPOSAL LOCATIONS FOR ANY EXCAVATED SOILS OR CONSTRUCTION DEBRIS THAT WILL BE HAULED OFF-SITE FOR DISPOSAL. THE DEPOSITED OR STOCKPILED MATERIAL NEEDS TO INCLUDE PERIMETER SEDIMENT CONTROL MEASURES (SUCH AS SILT FENCE, HAY BALES, FILTER SOCKS, OR COMPACTED EARTHEN BERMS).
27. FOR NON-CHANNELIZED FLOW ON DISTURBED OR CONSTRUCTED SLOPES, PROVIDE CLASS A, CLASS I TYPE B EROSION CONTROL MATTING, INSTALL AND MAINTAIN PER WDNR TECHNICAL STANDARD NON-CHANNEL EROSION MAT #1052.
28. FOR CHANNELIZED FLOW ON DISTURBED OR CONSTRUCTED AREAS, PROVIDE CLASS II TYPE B EROSION CONTROL MATTING UNLESS OTHERWISE SPECIFIED ON THE PLAN. INSTALL AND MAINTAIN PER WDNR TECHNICAL STANDARD CHANNEL EROSION MAT #1053.
29. MAKE PROVISIONS FOR WATERING DURING THE FIRST 8 WEEKS FOLLOWING SEEDING OR PLANTING OF DISTURBED AREAS WHENEVER MORE THAN 7 CONSECUTIVE DAYS OF DRY WEATHER OCCUR.
30. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE WDNR REMEDIATION AND WASTE MANAGEMENT REQUIREMENTS FOR HANDLING AND DISPOSING OF CONTAMINATED MATERIALS. SITE-SPECIFIC INFORMATION FOR AREAS WITH KNOWN OR SUSPECTED SOIL AND/OR GROUNDWATER CONTAMINATION CAN BE FOUND ON WDNR'S BUREAU OF REMEDIATION AND REDEVELOPMENT RACKING SYSTEM (BRRTS) PUBLIC DATABASE AT: http://dnr.wi.gov/botw/
31. INSTALL AND MAINTAIN A CONCRETE WASHOUT BASIN PER EPA 833-F-11-006: https://www3.epa.gov/npdes/pubs/concretewashout.pdf. REQUIRE USE BY ALL CONCRETE CONTRACTORS. LIQUID MAY BE REUSED IN CONCRETE MIXING, EVAPORATED, OR DISPOSED OF AS WASTEWATER.

GRADING, SEEDING & RESTORATION NOTES

1. ALL GRADES SHOWN ARE FINAL FINISHED SURFACE GRADES.
2. AREAS TO BE SEEDED SHALL HAVE A MINIMUM 6 INCHES TOPSOIL UNLESS OTHERWISE NOTED.
3. AREAS NOT RESTORED WITH EROSION MATTING OR OTHER STABILIZATION MEASURES SHALL BE STABILIZED WITH MULCH.
4. APPLY ANIONIC POLYMER TO DISTURBED AREAS IF EROSION BECOMES PROBLEMATIC.
5. MULCH SHALL BE WEED-FREE STRAW AND SHALL BE INSTALLED AT THE RATE OF 2 TONS PER ACRE PER SECTION 627 OF "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION" (WISDOT 2014)
6. PERMANENT SEEDING SHALL NOT OCCUR BETWEEN SEPTEMBER 15TH AND APRIL 15TH. ALTERNATE SEEDING/PLANTING METHODS AND/OR EROSION PROTECTION MAY BE NECESSARY FOR SEEDING/PLANTING THAT OCCURS DURING THAT TIME. COORDINATE WITH THE OWNER AS NECESSARY.
7. TEMPORARY STABILIZATION SHALL CONSIST OF ONE OR MORE OF THE FOLLOWING OPTIONS:
   a. TEMPORARY SEEDING CONSISTING OF ANNUAL RYE GRASS APPLIED AT A RATE OF 1.5 LBS PER 1000 SQUARE FEET.
   b. WISDOT PAL CLASS I TYPE B URBAN EROSION CONTROL MAT.

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FITCHBURG, WI 53711

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CITY OF FITCHBURG, DANE COUNTY, WI

Sheet Title:
GRADING & EROSION CONTROL PLAN

Revisions:

No.	Date:	Description:

Graphic Scale 0' 5' 10' 20' 30'

Wyser Number 24-1243

Set Type SIP

Date Issued 07/15/2025

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LEGEND (PROPOSED)

- PROPERTY BOUNDARY
- EASEMENT
- BUILDING FOOTPRINT
- 18" CURB AND GUTTER
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- 1030 PROPOSED MAJOR CONTOUR
- 1028 PROPOSED MINOR CONTOUR
- STM PROPOSED STORM SEWER
- SILT FENCE
- INLET PROTECTION
- DITCH CHECK

NORTH

GENERAL NOTES

1. UNDERLYING SITE CONTOURS AND INFORMATION BASED ON TOPOGRAPHIC & UTILITY DATA AS SURVEYED BY WYSER ENGINEERING ON JUNE 6, 2024. WYSER ENGINEERING SHALL NOT BE HELD RESPONSIBLE FOR ANY ERRORS OR OMISSIONS THAT MAY ARISE AS A RESULT OF ERRONEOUS OR INCOMPLETE INFORMATION PROVIDED BY OTHERS. CONTRACTOR TO CONFIRM ALL ELEVATIONS, GENERAL DRAINAGE AND EARTHWORK REQUIREMENTS PRIOR TO CONSTRUCTION.
2. THE BENCHMARK LOCATIONS ARE SHOWN FOR REFERENCE ONLY ON THIS PLAN. THE BENCHMARKS SHALL BE VALIDATED BY LICENSED LAND SURVEYOR PRIOR TO CONSTRUCTION. CONTRACTOR ASSUMES RISK ASSOCIATED WITH BENCHMARK ELEVATIONS UNTIL CONFIRMED.
3. CONTRACTOR TO OBTAIN APPROPRIATE PERMITS FOR STREET OPENINGS & TO WORK WITHIN THE CITY'S LAND IF REQUIRED.
4. WYSER ENGINEERING SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER OR CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY REGULATORY AGENCIES.
5. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS WITHIN THE PLAN BECOME APPARENT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.
6. ALL MUNICIPAL UTILITY CONNECTIONS, WORK IN ROW, PUBLIC OUTLOTS AND PUBLIC EASEMENTS SHALL BE IN ACCORDANCE WITH CITY OF FITCHBURG STANDARD SPECIFICATIONS.

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CITY OF FITCHBURG, DANE COUNTY, WI

Sheet Title: GRADING & EROSION CONTROL PLAN

Revisions:

No.	Date:	Description:

Graphic Scale	0' 7.5'15' 30' 45'
Wyser Number	24-1243
Set Type	SIP
Date Issued	07/15/2025
Sheet Number	C201

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SEE SHEET C201 FOR CONTINUATION TO THE NORTH.

CURB CUT REQUIRED FOR FUTURE SIDEWALK RAMP.

INSTALL MIN. 1.5' CURB TAPER DOWN TO CONCRETE DRIVEWAY, TYP.

SEMINOLE HIGHWAY

SEE INSET FOR DETAIL IN THIS AREA

CONCRETE STRUCTURAL RETAINING WALL WITH RAILING. REFER TO STRUCTURAL PLANS FOR DETAIL.

CONCRETE STEPS WITH RAILING DOWN FROM DECK. SEE STRUCTURAL AND ARCHITECTURAL PLANS FOR DETAIL, TYP. THIS SIDE OF THE BUILDING.

PROPOSED BUILDING
FFE = 1031.00
BFE = 1020.75

RETAINING WALL. UP TO TWO FOOT HEIGHT. REFER TO LANDSCAPE PLANS FOR DETAIL.

BIORETENTION BASIN 1.

LACY ROAD

PARKING BELOW

NORTH

LEGEND (PROPOSED)

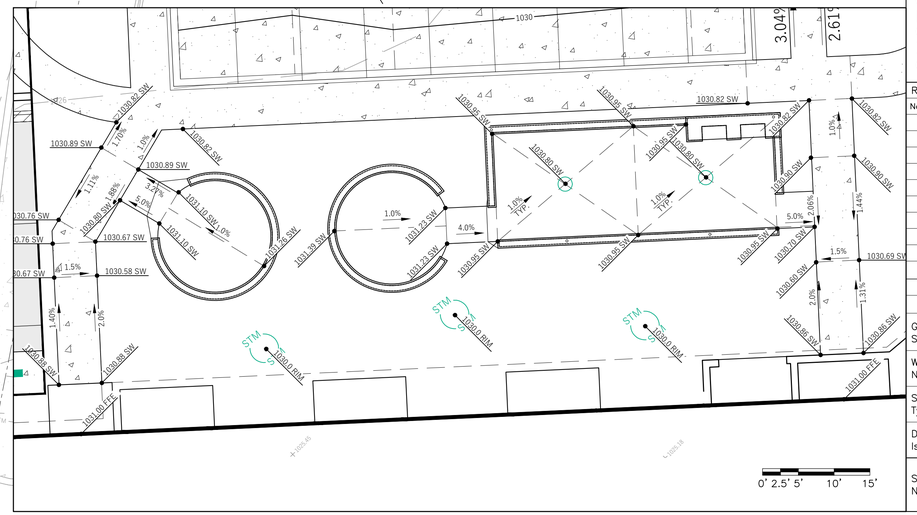
- PROPERTY BOUNDARY
- EASEMENT
- BUILDING FOOTPRINT
- 18" CURB AND GUTTER
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- 1030 PROPOSED MAJOR CONTOUR
- 1028 PROPOSED MINOR CONTOUR
- STM PROPOSED STORM SEWER
- 1029.25 EP SPOT GRADE
- DRAINAGE GRADE BREAK
- 1.0% DRAINAGE ARROW

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NOTE:
SPOT GRADES ARE AS FOLLOWS:
- FFE - FINISHED FLOOR GRADE
- EP - EDGE OF ASPHALT PAVEMENT
- EC - EDGE OF CONCRETE PAVEMENT
- BC - BACK OF CURB
- SW - EDGE OF SIDEWALK
- FG - FINISH GRADE
- TW - FINISH GRADE ADJACENT TOP OF WALL
- BW - FINISH GRADE ADJACENT BOTTOM OF WALL (NOT FOOTING)

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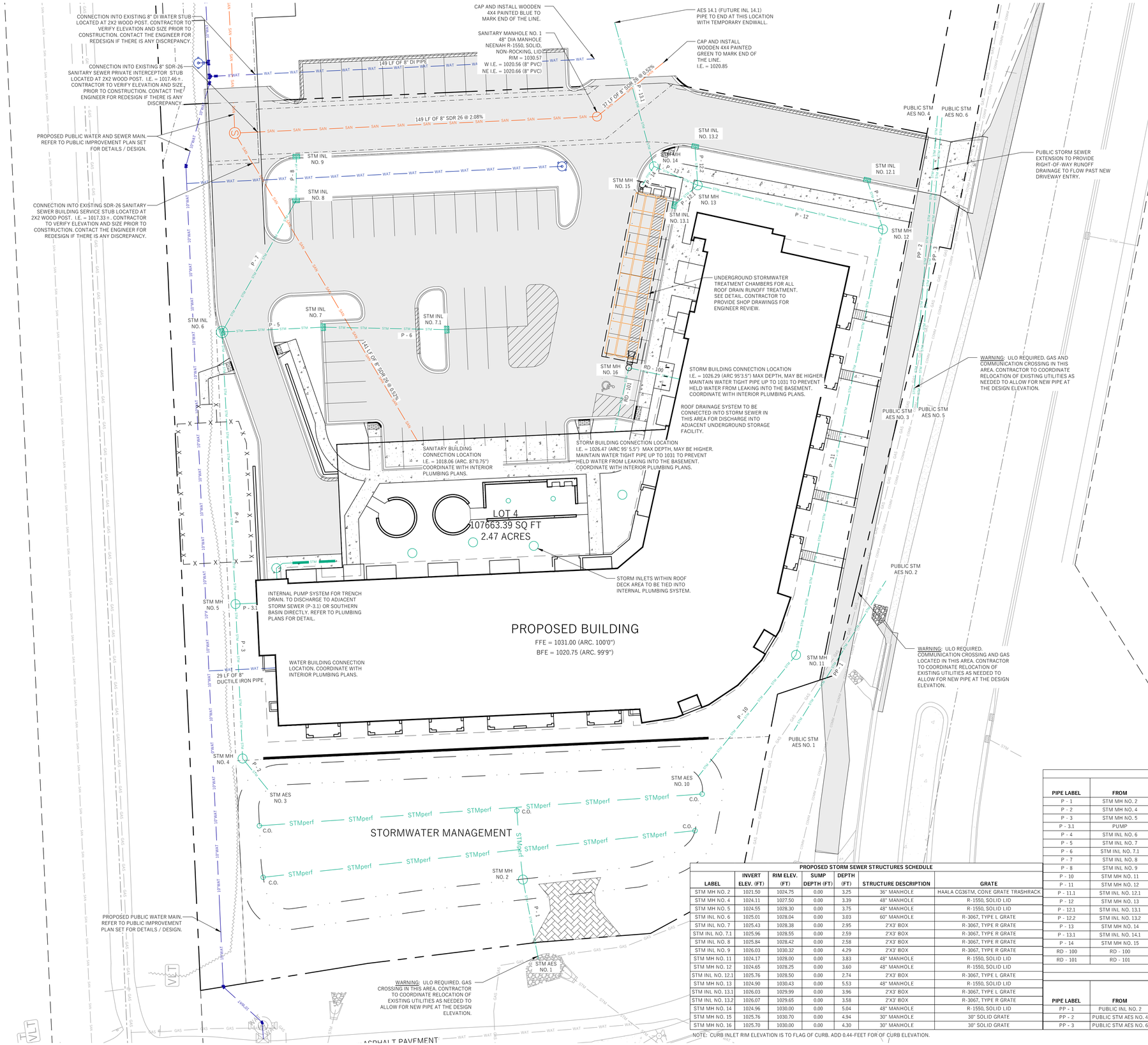
Sheet Title: DETAIL GRADING PLAN

Revisions:

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Wyser Number	24–1243
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LEGEND (PROPOSED)

- PROPOSED PROPERTY BOUNDARY
- EASEMENT
- BUILDING FOOTPRINT
- 18" CURB AND GUTTER
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- WAT — PROPOSED WATER MAIN
- SAN — PROPOSED SANITARY SEWER
- STM — PROPOSED STORM SEWER
- GAS — PROPOSED GAS SERVICE (DESIGN BY OTHERS)
- E — PROPOSED ELECTRIC SERVICE (DESIGN BY OTHERS)
- STORMWATER TREATMENT FACILITY

NORTH

GENERAL NOTES

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3. CONTRACTOR TO OBTAIN APPROPRIATE PERMITS FOR STREET OPENINGS & TO WORK WITHIN THE CITY'S LAND IF REQUIRED.
4. WYSER ENGINEERING SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER OR CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY REGULATORY AGENCIES.
5. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS WITHIN THE PLAN BECOME APPARENT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.
6. ALL MUNICIPAL UTILITY CONNECTIONS, WORK IN ROW, PUBLIC OUTLOTS AND PUBLIC EASEMENTS SHALL BE IN ACCORDANCE WITH CITY OF FITCHBURG STANDARD SPECIFICATIONS.

UTILITY NOTES

1. DIMENSIONS TAKE PRECEDENCE OVER SCALE. CONTRACTOR TO VERIFY ALL DIMENSIONS IN FIELD.
2. LENGTHS OF ALL UTILITIES ARE TO CENTER OF STRUCTURES OR FITTINGS AND MAY VARY SLIGHTLY FROM PLAN. LENGTHS SHALL BE VERIFIED IN THE FIELD DURING CONSTRUCTION.
3. CONTRACTOR SHALL VERIFY ALL ELEVATIONS, LOCATIONS, AND SIZES OF SANITARY, WATER AND STORM LATERALS AND CHECK ALL UTILITY CROSSINGS FOR CONFLICTS.
4. THE PROPOSED IMPROVEMENTS MUST BE CONSTRUCTED IN ACCORDANCE WITH ENGINEERING PLANS DESIGNED TO MEET ORDINANCES AND REQUIREMENTS OF THE MUNICIPALITY AND WISDOT, WISDSPS, AND WDNR.
5. PRIOR TO CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR:
   - EXAMINING ALL SITES CONDITIONS RELATIVE TO THE CONDITIONS INDICATED ON THE ENGINEERING DRAWINGS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER AND RESOLVED PRIOR TO THE START OF CONSTRUCTION.
   - OBTAINING ALL PERMITS INCLUDING PERMIT COSTS, TAP FEES, METER DEPOSITS, BONDS, AND ALL OTHER FEES REQUIRED FOR PROPOSED WORK TO OBTAIN OCCUPANCY.
   - VERIFYING UTILITY ELEVATIONS AND NOTIFYING ENGINEER OF ANY DISCREPANCY. NO WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS RESOLVED.
   - NOTIFYING ALL UTILITIES PRIOR TO THE INSTALLATION OF ANY UNDERGROUND IMPROVEMENTS.
   - NOTIFYING THE DESIGN ENGINEER AND MUNICIPALITY 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE FOR APPROPRIATE CONSTRUCTION OBSERVATION.
9. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE ENGINEER WITH AS-BUILT CONDITIONS OF THE DESIGNATED IMPROVEMENTS IN ORDER THAT THE APPROPRIATE DRAWINGS CAN BE PREPARED, IF REQUIRED. ANY CHANGES TO THE DRAWINGS OR ADDITIONAL ITEMS MUST BE REPORTED TO THE ENGINEER AS WORK PROGRESSES.
10. ANY SANITARY SEWER , SANITARY SEWER SERVICES, WATER MAIN, WATER SERVICES, STORM SEWER, OR OTHER UTILITIES, WHICH ARE DAMAGED BY THE CONTRACTORS, SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE. NO BLASTING IS ALLOWED WITHIN 30 FEET OF EXISTING UTILITIES.
11. ALL PRIVATE INTERCEPTOR WATER MAIN AND WATER SERVICES SHALL BE INSTALLED WITH A 6' MINIMUM BURY. PROVIDE INSULATION ABOVE PIPES WITH LESS THAN 5' OF GROUND COVER.
12. GRANULAR BACKFILL MATERIALS ARE REQUIRED IN ALL UTILITY TRENCHES UNDER SIDEWALKS AND PROPOSED PAVED AREAS (UNLESS OTHERWISE SPECIFIED BY A GEOTECHNICAL ENGINEER). ALL UTILITY TRENCH BACKFILL SHALL BE COMPACTED PER SPECIFICATIONS. ALL PAVEMENT PATCHING SHALL COMPLY WITH THE CITY OF FITCHBURG STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION. ADDITIONAL PAVEMENT MILLING AND OVERLAY MAY BE REQUIRED BY PERMIT.
13. CONTRACTOR SHALL NOTIFY THE MUNICIPAL PUBLIC WORKS DEPARTMENT A MINIMUM OF 48 HOURS BEFORE CONNECTING TO PUBLIC UTILITIES.
14. ALL NON-METALLIC BUILDING SEWER AND WATER SERVICES MUST BE ACCOMPANIED BY MEANS OF LOCATING UNDERGROUND PIPE. TRACER WIRE VALVE BOXES SHALL BE INSTALLED ON ALL LATERALS AND AS INDICATED ON THESE PLANS.
15. EXTERIOR CLEANOUTS SHALL BE PROVIDED AS REQUIRED BY SPS 382.35. ALL EXTERIOR CLEANOUTS SHALL BE PROVIDED WITH A FROST SLEEVE IN ACCORDANCE WITH SPS 382.34(5)(a)b AND SPS 384.30(2)(c).
16. ALL PRIVATE PLUMBING MATERIALS SHALL CONFORM TO SPS 384.30.
17. ALL PRIVATE PIPE JOINTS SHALL BE INSTALLED PER SPS 384.40.
18. ALL PRIVATE WATER PIPE, INCLUDING DEPTH AND SEPARATION REQUIREMENTS, SHALL BE IN ACCORDANCE WITH SPS 382.40(8).
19. THE CONTRACTOR SHALL ALLOW 10 WORKING DAYS FOR THE CONSTRUCTION OF GAS MAINS WHEN SCHEDULING THE WORK AND SHALL NOT RESTRICT ACCESS TO THE GAS MAIN CONTRACTOR OR OTHER UTILITY COMPANIES.
20. INLET CASTINGS SHALL BE SET TO GRADE PRIOR TO AND SEPARATE FROM THE POURING OF THE CONCRETE CURB AND GUTTER. IS IS REQUIRED THAT THREE FEET OF CONCRETE CURB AND GUTTER ON EACH SIDE OF THE INLET SHALL BE POURED BY HAND, NOT THROUGH THE USE OF A CURB MACHINE. THE INLET CASTING SHALL BE SET TO GRADE ON A BED OF MORTAR WHICH SHALL BE A MINIMUM OF TWO INCHES THICK. THE INLET SHALL BE PLACED ON THE MORTAR BED AND SHALL BE ADJUSTED TO GRADE BY APPLYING DIRECT PRESSURE TO THE CASTING. ONCE THE CASTING ADJUSTMENT IS COMPLETE, THREE FEET OF CURB AND GUTTER ON EACH SIDE OF THE CASTING SHALL BE POURED BY HAND.
21. CONTRACTOR SHALL VERIFY AND COORDINATE ALL UTILITY CONNECTIONS WITH THE BUILDING PRIOR TO CONSTRUCTION.
22. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO AS TO BE IN CONFORMANCE WITH THE CITY EROSION CONTROL AND STORMWATER ORDINANCE, AND DNR ADMINISTRATIVE RULE NR 216 AT ALL TIMES.

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PROPOSED STORM SEWER STRUCTURES SCHEDULE

LABEL	INVERT ELEV. (FT)	RIM ELEV. (FT)	SUMP DEPTH (FT)	DEPTH (FT)	STRUCTURE DESCRIPTION	GRATE
STM MH NO. 2	1021.50	1024.75	0.00	3.25	36" MANHOLE	HAALA CG36TM, CONE GRATE TRASHRACK
STM MH NO. 4	1024.11	1027.50	0.00	3.39	48" MANHOLE	R-1550, SOLID LID
STM MH NO. 5	1024.55	1028.30	0.00	3.75	48" MANHOLE	R-1550, SOLID LID
STM INL NO. 6	1025.01	1028.04	0.00	3.03	60" MANHOLE	R-3067, TYPE L GRATE
STM INL NO. 7	1025.43	1028.38	0.00	2.95	2'X3' BOX	R-3067, TYPE R GRATE
STM INL NO. 7.1	1025.96	1028.55	0.00	2.59	2'X3' BOX	R-3067, TYPE R GRATE
STM INL NO. 8	1025.84	1028.42	0.00	2.58	2'X3' BOX	R-3067, TYPE R GRATE
STM INL NO. 9	1026.03	1030.32	0.00	4.29	2'X3' BOX	R-3067, TYPE R GRATE
STM MH NO. 11	1024.17	1028.00	0.00	3.83	48" MANHOLE	R-1550, SOLID LID
STM MH NO. 12	1024.65	1028.25	0.00	3.60	48" MANHOLE	R-1550, SOLID LID
STM INL NO. 12.1	1025.76	1028.50	0.00	2.74	2'X3' BOX	R-3067, TYPE L GRATE
STM MH NO. 13	1024.90	1030.43	0.00	5.53	48" MANHOLE	R-1550, SOLID LID
STM INL NO. 13.1	1026.03	1029.99	0.00	3.96	2'X3' BOX	R-3067, TYPE L GRATE
STM INL NO. 13.2	1026.07	1029.65	0.00	3.58	2'X3' BOX	R-3067, TYPE R GRATE
STM MH NO. 14	1024.96	1030.00	0.00	5.04	48" MANHOLE	R-1550, SOLID LID
STM MH NO. 15	1025.76	1030.70	0.00	4.94	30" MANHOLE	30" SOLID GRATE
STM MH NO. 16	1025.70	1030.00	0.00	4.30	30" MANHOLE	30" SOLID GRATE

NOTE: CURB INLET RIM ELEVATION IS TO FLAG OF CURB. ADD 0.44-FEET FOR OF CURB ELEVATION.

PROPOSED STORM SEWER / CULVERT PIPE SCHEDULE

PIPE LABEL	FROM	TO	LENGTH (FT)	INVERT ELEV. (FT)	DISCHARGE ELEV. (FT)	SLOPE (%)	PIPE SIZE & TYPE	MANNING'S NUMBER	DESIGN RUNOFF (GPM)	PIPE CAPACITY (GPM)
P - 1	STM MH NO. 2	STM AES NO. 1	35	1021.50	1021.15	1.00%	12" HDPE	0.012	0.00	1732.36
P - 2	STM MH NO. 4	STM AES NO. 3	17	1024.11	1024.00	0.65%	18" HDPE	0.012	3980.40	4117.85
P - 3	STM MH NO. 5	STM MH NO. 4	68	1024.55	1024.11	0.65%	18" HDPE	0.012	3980.40	4117.85
P - 3.1	PUMP	STM MH NO. 5	9	1025.42	1025.22	2.08%	10" HDPE	0.012	920.61	1536.45
P - 4	STM INL NO. 6	STM MH NO. 5	119	1025.01	1024.55	0.38%	18" HDPE	0.012	3059.79	3148.51
P - 5	STM INL NO. 7	STM INL NO. 6	44	1025.43	1025.26	0.40%	15" HDPE	0.012	1867.33	1986.52
P - 6	STM INL NO. 7.1	STM INL NO. 7	55	1025.96	1025.68	0.50%	12" HDPE	0.012	1202.28	1224.96
P - 7	STM INL NO. 8	STM INL NO. 7	66	1025.84	1025.51	0.50%	12" HDPE	0.012	773.19	1224.96
P - 8	STM INL NO. 9	STM INL NO. 8	19	1026.03	1025.84	1.00%	12" HDPE	0.012	485.72	1732.36
P - 10	STM MH NO. 11	STM AES NO. 10	68	1024.17	1024.00	0.25%	24" HDPE	0.012	5250.38	5499.89
P - 11	STM MH NO. 12	STM MH NO. 11	191	1024.65	1024.17	0.25%	24" HDPE	0.012	5250.38	5499.89
P - 11.1	STM INL NO. 12.1	STM MH NO. 12	23	1025.76	1025.65	0.50%	12" HDPE	0.012	383.69	1224.96
P - 12	STM MH NO. 13	STM MH NO. 12	83	1024.90	1024.65	0.30%	24" HDPE	0.012	4866.69	6024.83
P - 12.1	STM INL NO. 13.1	STM MH NO. 13	13	1026.03	1025.90	1.00%	12" HDPE	0.012	145.02	1732.36
P - 12.2	STM INL NO. 13.2	STM MH NO. 13	17	1026.07	1025.90	1.00%	12" HDPE	0.012	484.07	1732.36
P - 13	STM MH NO. 14	STM MH NO. 13	21	1024.96	1024.90	0.30%	24" HDPE	0.012	4237.60	6024.83
P - 13.1	STM INL NO. 14.1	STM MH NO. 14	65	1025.79	1025.46	0.50%	18" HDPE	0.012	2373.60	3611.59
P - 14	STM MH NO. 15	STM MH NO. 14	10	1025.76	1025.71	0.50%	15" HDPE	0.012	1864.00	2221.00
RD - 100	RD - 100	STM MH NO. 16	23	1026.47	1026.00	2.08%	10" HDPE	0.012	1069.59	1536.45
RD - 101	RD - 101	STM MH NO. 16	29	1026.29	1026.00	1.00%	10" HDPE	0.012	794.41	1065.34

PROPOSED STORM SEWER / CULVERT PIPE SCHEDULE

PIPE LABEL	FROM	TO	LENGTH (FT)	INVERT ELEV. (FT)	DISCHARGE ELEV. (FT)	SLOPE (%)	PIPE SIZE & TYPE	MANNING'S NUMBER	DESIGN RUNOFF (GPM)	PIPE CAPACITY (GPM)
PP - 1	PUBLIC INL NO. 2	PUBLIC STM AES NO. 1	77	1023.77	1022.00	2.30%	14 x 23" RCP	0.013	5215.20	7150.16
PP - 2	PUBLIC STM AES NO. 4	PUBLIC AES NO. 3	128	1025.26	1025.00	0.20%	14 x 23" RCP	0.013	1925.56	2108.47
PP - 3	PUBLIC STM AES NO. 6	PUBLIC AES NO. 5	128	1025.26	1025.00	0.20%	14 x 23" RCP	0.013	1925.56	2108.47

WYSER ENGINEERING

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CITY OF FITCHBURG, DANE COUNTY, WI

Sheet Title: UTILITY PLAN

Revisions:

No.	Date:	Description:

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Wyser Number: 24-1243

Set Type: SIP

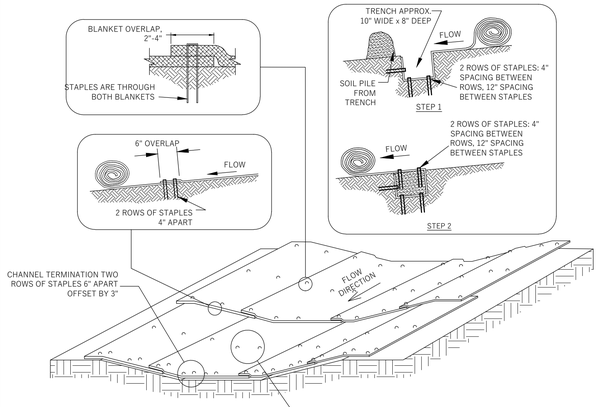
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ANCHOR TRENCH DETAIL

SEE PLANS FOR ANCHOR TRENCH LOCATIONS



MATERIAL NOTES

1. ONLY PRODUCTS LISTED IN THE WISCONSIN DEPARTMENT OF TRANSPORTATION EROSION CONTROL PRODUCT ACCEPTABILITY LIST (PAL) ARE ACCEPTABLE FOR USE.
2. STAPLES USED FOR CLASS I TYPES A & B MATS SHALL BE 1-2 INCH WIDE, U-SHAPED, MADE OF NO.11 (3.05mm) OR LARGER DIAMETER STEEL WIRE, AND NOT LESS THAN 6 INCHES LONG FOR FIRM SOILS AND 12 INCHES LONG FOR LOOSE SOILS.

INSTALLATION NOTES

1. EROSION CONTROL REVEGETATIVE MATS (ECRM) SHALL BE INSTALLED AFTER TOPSOIL AND SEED HAVE BEEN PLACED.
2. INSTALLATION OF ECRM SHOULD BE COORDINATED WITH PERMANENT RESTORATION PRACTICES.
3. INSTALLATION SHALL CONFORM WITH WDNR CONSERVATION PRACTICE STANDARD 1053.
4. ALL PRODUCTS SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS. THIS STANDARD DETAIL IS AN EXAMPLE OF TYPICAL INSTALLATION GUIDANCE.
5. MATS SHALL BE IN FIRM AND CONTINUOUS CONTACT WITH THE SOIL.
6. IF SECTIONS OF ECRM NEED TO BE OVERLAPPED, ENSURE THAT THE OVERLAP IS FACING DOWNSTREAM TO PREVENT WATER FROM FLOWING BENEATH THE ECRM.

INSPECTION & MAINTENANCE NOTES

1. INSTALL ADDITIONAL ANCHORING IN AREAS OF OBSERVED RILLING AND CONCENTRATED FLOW BENEATH THE EROSION MAT. IF RILLING IS SEVERE ENOUGH TO PREVENT VEGETATION ESTABLISHMENT, REMOVE EROSION MAT, REGRADE, COMPACT, RE-SEED, AND REPLACE THE SECTION OF MAT.
2. IF PRODUCTS WITH PLASTIC NETTING ARE USED, REMOVE NETTING OR REPLACE MAT IF SEPARATION OF THE NETTING FROM THE MAT IS OBSERVED.
3. ALL MAINTENANCE ACTIVITIES SHOULD OCCUR AS SOON AS POSSIBLE WITH CONSIDERATION OF SITE CONDITIONS.

EROSION CONTROL MAT (CHANNELS)

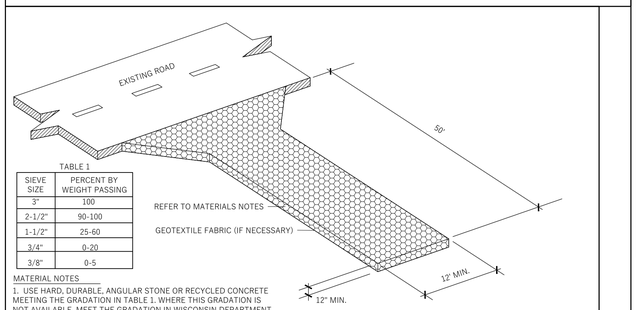


TABLE 1

SIEVE SIZE	PERCENT BY WEIGHT PASSING
3"	100
2-1/2"	90-100
1-1/2"	25-60
3/4"	0-20
3/8"	0-5

MATERIAL NOTES

1. USE HARD, DURABLE, ANGULAR STONE OR RECYCLED CONCRETE MEETING THE GRADATION IN TABLE 1. WHERE THIS GRADATION IS NOT AVAILABLE, MEET THE GRADATION IN WISCONSIN DEPARTMENT OF TRANSPORTATION (DOT) STANDARD SPECIFICATION, SECTION 312 SELECT CRUSHED MATERIAL. USE MATERIAL SUBSTANTIALLY FREE FROM DIRT, DEBRIS, STEEL, VEGETABLE MATTER, AND OTHER DELETERIOUS MATERIAL. PLACE THE AGGREGATE IN A LAYER AT LEAST 12 INCHES THICK.
2. THE TRACKING PAD SHALL BE UNDERLAIN WITH A WDOT TYPE R GEOTEXTILE FABRIC WHERE WARRANTED BASED ON SOIL TYPE OR HIGH GROUNDWATER.

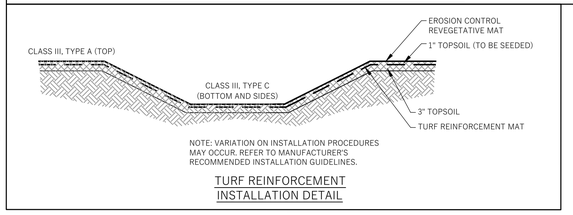
INSTALLATION NOTES

1. INSTALLATION SHALL CONFORM WITH THE REQUIREMENTS OF WDNR CONSERVATION PRACTICE STANDARD 1057.
2. INSTALL THE TRACKING PAD ACROSS THE FULL WIDTH OF THE ACCESS POINT, OR RESTRICT EXITING TRAFFIC TO A DEDICATED EGRESS LANE WITH A DRIVING SURFACE AT LEAST 12 FEET WIDE.
3. DIMENSIONS OF THE TRACKING PAD SHALL BE MINIMUM AS NOTED ON THE FIGURE ABOVE.
4. DIVERT SURFACE FLOWS AWAY FROM TRACKING PADS OR CONVEY FLOW UNDER AND/OR AROUND USING CULVERTS AND SWALES. DIRECT RUNOFF FROM TRACKING PADS TO SEDIMENT CONTROL PRACTICES.
5. DO NOT COMPACT AGGREGATE PRIOR TO USE. COMPACTION, GROUTING, OR OTHER MEANS OF CREATING A SMOOTH SURFACE COMPROMISE THE EFFECTIVENESS OF THE TRACKING PAD.
6. TRACKING PAD SHALL BE REMOVED OR INCORPORATED INTO GRAVEL DRIVEWAY ONLY AFTER CONSTRUCTION IS COMPLETE AND THE SITE HAS BEEN STABILIZED.

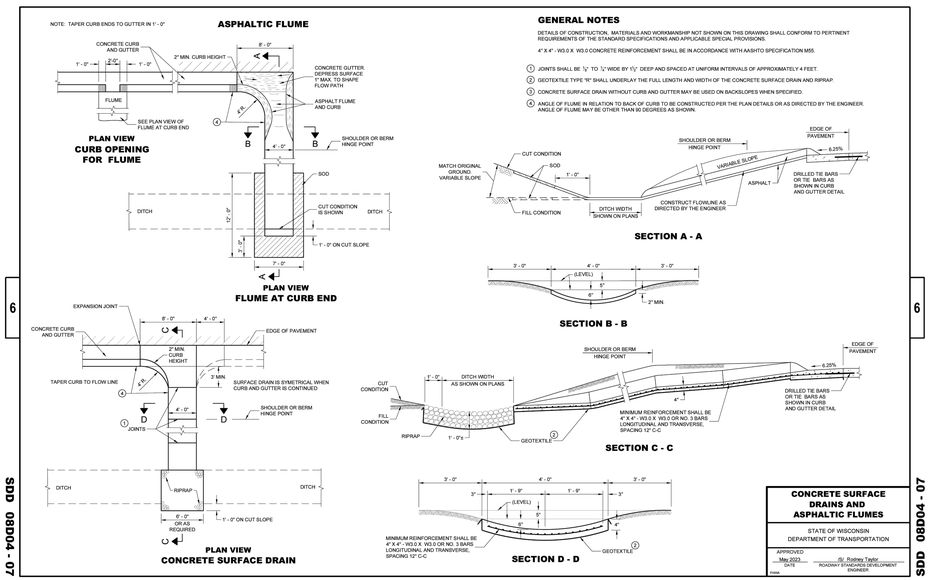
INSPECTION & MAINTENANCE NOTES

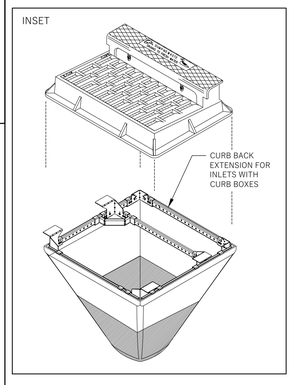
1. STONE TRACKING PADS SHALL BE INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER EVERY PRECIPITATION EVENT THAT PRODUCES 0.5 INCHES OF RAIN OR MORE DURING A 24 HOUR PERIOD.
2. MONITOR AND MAINTAIN DEVICES TO MINIMIZE SHIFTING, RUTTING OF ADJACENT SURFACES, AND STRUCTURAL FAILURE. MAINTAIN A LOOSENED, ROUGH SURFACE BY SCRAPING, LOOSENING, OR TOP-DRESSING WITH ADDITIONAL AGGREGATE.
2. ADDITIONAL AGGREGATE SHALL BE PLACED IF THE TRACKING PAD BECOMES BURIED OR IF SEDIMENT IS NOT BEING REMOVED EFFECTIVELY FROM THE VEHICLE TIRES.
3. A MINIMUM 30-FEET WIDE BY 50-FEET LONG BY 12-INCH THICK PAD SHALL BE MAINTAINED AT ALL TIMES. ADD STONE AS NEEDED TO MAINTAIN THE MINIMUM PAD THICKNESS.
4. THE TRACKING PAD PERFORMANCE SHALL BE MAINTAINED BY SCRAPING OR TOP-DRESSING WITH ADDITIONAL AGGREGATE.
5. ANY SEDIMENT TRACKED ONTO A PUBLIC OR PRIVATE ROAD SHOULD BE REMOVED BY STREET CLEANING AT THE END OF EACH WORKING DAY.
6. REMOVE STONES LODGED BETWEEN THE TIRES OF DUAL WHEEL VEHICLES PRIOR TO LEAVING THE CONSTRUCTION SITE.
7. MAINTENANCE SHALL BE COMPLETED AS SOON AS POSSIBLE WITH CONSIDERATION FOR SITE CONDITIONS.
8. REPLACE DAMAGED OR CRUSHED CULVERTS UNDER TRACKING PAD.

CONSTRUCTION ENTRANCE (STONE TRACKING PAD)



TURF REINFORCEMENT INSTALLATION DETAIL





NOTES:

1. DETAIL BASED ON WDNR TECHNICAL STANDARD 1060. ANY VARIATIONS FROM THAT STANDARD IS UNINTENDED AND SHOULD NOT BE USED.
2. TAPER BOTTOM OF BAG TO MAINTAIN 8" OF CLEARANCE BETWEEN THE BAG AND THE STRUCTURE, MEASURED FROM THE BOTTOM OF THE OVERFLOW OPENINGS TO THE STRUCTURE WALL.
3. THE RIGID FRAME SHALL BE CONSTRUCTED OF GALVANIZED STEEL AND HAVE ADEQUATE STRENGTH TO SUPPORT THE WEIGHT OF THE SEDIMENT BAG WHEN COMPLETELY FULL.
4. THE RIGID FRAME SHALL NOT INTERFERE WITH OR ELEVATE THE GRATE MORE THAN 1/8".
5. DROP THE INLET FILTER THOUGH THE CLEAR OPENING SUCH THAT THE HANGERS REST FIRMLY ON THE LIP OF THE STRUCTURE.

MAINTENANCE NOTES:

1. WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARS SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED IN THE FABRIC DOES NOT FALL INTO THE STRUCTURE. MATERIAL THAT HAS FALLEN INTO THE STRUCTURE SHALL BE IMMEDIATELY REMOVED.

TYPE D-RF INLET PROTECTION

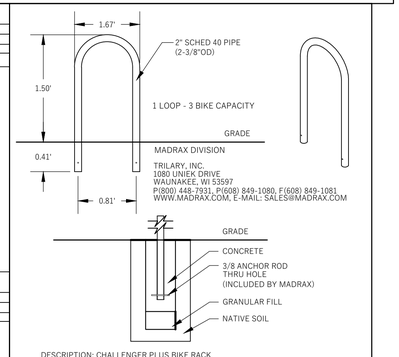
MATERIAL	THICKNESS	SPECIFICATION
BITUMINOUS UPPER LAYER	2.0"	SECTION 460, TABLE 460-1
BITUMINOUS LOWER LAYER	2.0"	SECTION 460, TABLE 460-1
DENSE GRADED BASE	14.0"	SECTION 301 AND 305, 3" AND 1.25"
TOTAL THICKNESS	18.0"	

1. SPECIFICATIONS BASED ON TEST PITS BY SCS AND CGC WITH ASSUMED CLASS II PAVEMENT PER 2018 ASPHALT PARKING LOT DESIGN GUIDE BY WAPA. A GEOTECHNICAL ENGINEER SHOULD BE HIRED BY THE CONTRACTOR IF A DIFFERENT PAVEMENT DESIGN IS DESIRED. REQUIRED FILL BELOW PAVEMENT AREAS SHOULD BE MONITORED FOR EFFECTIVENESS WITH THIS SECTION WITH A GEOTECHNICAL ENGINEER.
2. UNDERCUTTING IS LIKELY BASED ON UNNOWN FILL SOILS AND HIGH GROUNDWATER TABLE. ASSUME 30% OF SITE WILL REQUIRE UNDERCUTTING. UNDERCUT SECTION ASSUMED TO BE 12" OF 3" DGB OVER BIAXIAL GEOGRID (TENSAR BX TYPE 1 OR EQUAL). FINAL DETERMINATION BASED ON FIELD PROOF-ROLL.
3. COMPACTION REQUIREMENTS
   3.1. BITUMINOUS CONCRETE: REFER TO SECTION 460-3.
   3.2. BASE COURSE: REFER TO SECTION 301.3.4.2, STANDARD COMPACTION
4. MIXTURE TYPE LT BITUMINOUS PAVEMENT IS RECOMMENDED FOR THE PARKING AREA, REFER TO SECTION 460, TABLE 460-2 OF THE STANDARD SPECIFICATIONS.
5. THE UPPER 4" OF DGB SHALL BE 1.25"; THE BOTTOM PART OF THE LAYER CAN BE 3" DGB.

MATERIAL	THICKNESS	SPECIFICATION
CONCRETE SLAB LAYER	6.0"*	SECTION 501, GRADE A, CLASS I
DENSE GRADED BASE	8.0"**	SECTION 301 AND 305, 31.5 MM
TOTAL THICKNESS	14.0"	

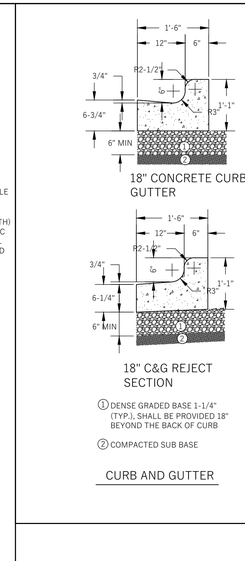
NOTE: CONCRETE SIDEWALK TO BE 5" CONCRETE OVER 4" DENSE GRADED BASE.
* REINFORCEMENT TO INCLUDE #4 REBAR 12" O.C. BOTH WAYS OR EQUIVALENT
** SITE PROOF ROLLS TO BE COMPLETED WITH ADDITIONAL THICKNESS ADDED PER GEOTECHNICAL RECOMMENDATION. BASED ON CURRENT GEOTECHNICAL RECOMMENDATIONS; 12" DGB TO BE ADDED BELOW 6" LAYER WITH ADDITIONAL BIAXIAL GEOGRID (TENSAR BX TYPE I OR EQUIVALENT)

PAVEMENT SECTIONS



DESCRIPTION: CHALLENGER PLUS BIKE RACK
2 BIKE, IN-GROUND MOUNT

BIKE RACK

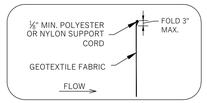


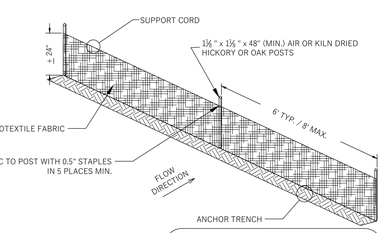
18" CONCRETE CURB & GUTTER

18" C&G REJECT SECTION

1 DENSE GRADED BASE 1-1/4" (TYP.), SHALL BE PROVIDED 18" BEYOND THE BACK OF CURB
2 COMPACTED SUB BASE

CURB AND GUTTER





MATERIAL NOTES

1. GEOTEXTILE FABRIC SHALL BE WOVEN AND SHALL CONFORM TO THE MATERIAL REQUIREMENTS LISTED IN SECTION 628 OF THE WISDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, 2003 EDITION.

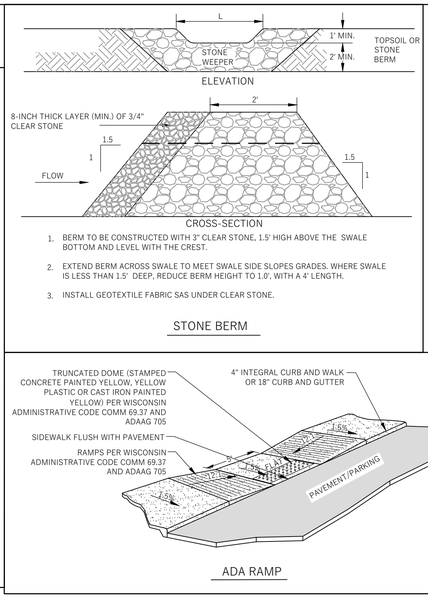
INSTALLATION NOTES

1. INSTALLATION SHALL CONFORM WITH THE REQUIREMENTS OF WDNR CONSERVATION PRACTICE STANDARD 1056.
2. CONSTRUCT THE SILT FENCE IN AN ARC WITH THE ENDS POINTING UPSLOPE TO AVOID EROSION AROUND THE ENDS OF THE FENCE.
3. FAILURE TO PROPERLY ANCHOR SILT FENCE COULD RESULT IN WATER AND SEDIMENT RELEASE BENEATH THE SILT FENCE. PROPERLY SECURE THE SILT FENCE INTO THE ANCHOR TRENCH.
4. CONSTRUCT THE FENCE FROM A CONTINUOUS ROLL OF GEOTEXTILE TO AVOID JOINTS. WHERE JOINTS ARE NECESSARY, OVERLAP TO THE NEXT POST OR WRAP ADJOINING FABRICS TOGETHER AROUND THE JOINT POST AND TIGHTLY FASTEN.
5. SILT FENCE SHALL NOT BE USED IN AREAS OF CONCENTRATED FLOW.

INSPECTION & MAINTENANCE NOTES

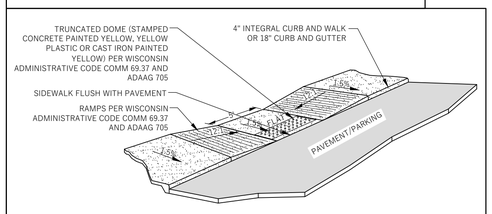
1. AT A MINIMUM, PERFORM INSPECTIONS WEEKLY AND WITHIN 24 HOURS OF PRECIPITATION EVENTS PRODUCING 0.5 INCHES OR MORE OF RAINFALL.
2. INSPECT FENCES FOR DAMAGE TO STAKES AND FABRIC, UNDERCUTTING, EXCESSIVE SEDIMENT ACCUMULATION (GREATER THAN ½ OF THE FENCE HEIGHT), AND INDICATIONS OF SCOUR AROUND THE EDGES.
3. REPAIR OR REPLACE SILT FENCE WITHIN 24 HOURS OF IDENTIFYING AND DEFICIENCIES.

SILT FENCE



1. BERM TO BE CONSTRUCTED WITH 3" CLEAR STONE, 1.5' HIGH ABOVE THE SWALE BOTTOM AND LEVEL WITH THE CREST.
2. EXTEND BERM ACROSS SWALE TO MEET SWALE SIDE SLOPES GRADES. WHERE SWALE IS LESS THAN 1.5' DEEP, REDUCE BERM HEIGHT TO 1.0', WITH A 4' LENGTH.
3. INSTALL GEOTEXTILE FABRIC SAS UNDER CLEAR STONE.

STONE BERM



ADA RAMP

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CITY OF FITCHBURG, DANE COUNTY, WI

Sheet Title: DETAILS

Revisions:

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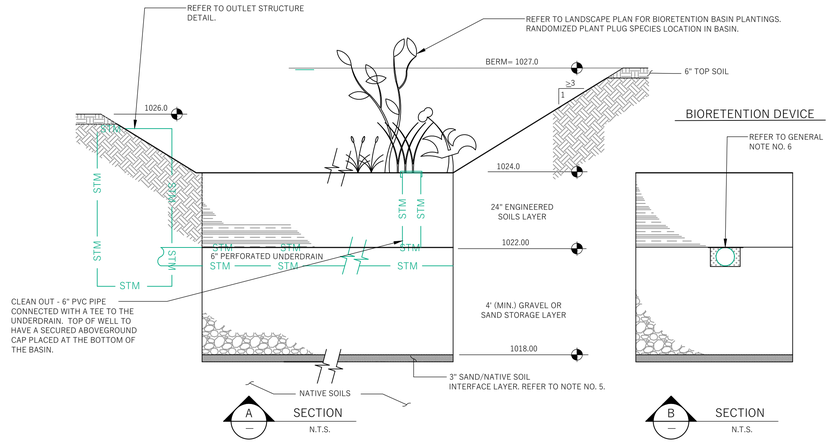
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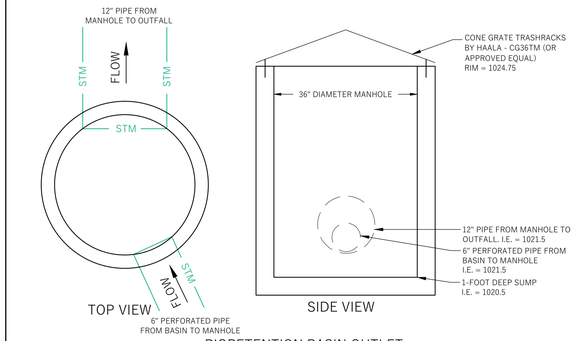
GENERAL NOTES:

1. ALL CONSTRUCTION PRACTICES SHALL MEET THE SPECIFICATIONS OF THE WDNR TECHNICAL STANDARD 1004 - BIORETENTION FOR INFILTRATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A COPY OF THIS STANDARD AND CONSTRUCT THE BIORETENTION DEVICE IN ACCORDANCE WITH THE REQUIREMENTS OUTLINED THEREIN.
2. CONTRACTOR SHALL INSTALL NATIVE PLANT PLUGS IN THE BASIN AND INSTALL A CLASS II EROSION CONTROL MAT (OVERLAPPED AND ANCHORED WITH MIN. 6" LONG HARDWOOD STAKES). CUT AN "X" IN THE MATTING AND AUGER DOWN TO PLACE APPROPRIATE PLANTING PLUGS EVERY 12 INCHES ON CENTER.
3. CONTRACTOR SHALL INSTALL 24" OF ENGINEERED SOIL CONSISTING OF: 70% ASTM C33 SAND AND 30% CERTIFIED COMPOST (SEE GENERAL NOTE 4).
4. CERTIFIED COMPOST SHALL CONSIST OF: >40% ORGANIC MATTER, <60% ASH CONTENT, PH OF 6-8, AND MOISTURE CONTENT OF 35-50% BY WEIGHT.
5. SAND/NATIVE SOIL INTERFACE LAYER SHALL BE FORMED BY A LAYER OF SAND 3 INCHES DEEP, WHICH IS VERTICALLY MIXED WITH THE NATIVE SOIL TO A DEPTH OF 2-4 INCHES. A CONSTRUCTION REPRESENTATIVE MUST BE ON SITE DURING OVER EXCAVATION TO APPROVE OF THE DEPTH AND SOIL TYPES.
6. FILTER FABRIC SHALL BE PLACED ABOVE THE PERFORATED PIPE, BETWEEN THE PEA GRAVEL AND THE ENGINEERED SOIL, A WIDTH OF 4 FEET CENTERED OVER THE FLOW LINE OF THE PIPE.
7. ANNUAL RYE GRASS SHALL BE SEEDED AT 40 LB/ACRE WITH THE SEED MIX IN THE AREAS SURROUNDING THE BASIN, ON SIDE SLOPES, AND OVER ANY LAND THAT DISCHARGES INTO THE BASIN FOR EROSION CONTROL WHEN BASIN IS BROUGHT ON-LINE. ROOTSTOCK AND PLUGS ARE REQUIRED TO ESTABLISH VEGETATION AT THE INVERT OF THE BASIN.
8. RUNOFF MUST INFILTRATE WITHIN 24-HOURS. BASINS UNABLE TO MAINTAIN THESE RATES MUST BE DEEP TILLED, REGRADED, AND IF NECESSARY REPLANTED TO RESTORE ORIGINAL INFILTRATION RATES.
9. ALL WORK TO BE CONDUCTED IN CONFORMANCE WITH APPLICABLE LOCAL, REGIONAL, AND STATE STORMWATER STANDARDS FOR THE PROJECT SITE AS APPROVED BY THE REGULATORY ENGINEER.
10. REFER TO LANDSCAPE PLAN FOR PLANTING REQUIREMENTS.

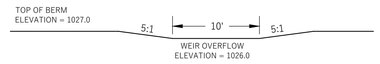
INFILTRATION DEVICES ARE DESIGNED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WDNR), COUNTY, MUNICIPALITY, AND ENGINEERING STANDARD OF CARE. ALL DESIGNATED INFILTRATION AREAS (e.g. RAIN GARDENS, INFILTRATION BASINS, BIORETENTION DEVICES) SHALL BE FENCED PRIOR TO CONSTRUCTION AND REMAIN UNDISTURBED AND PROTECTED DURING THE CONSTRUCTION OF PROPOSED SITE IMPROVEMENTS. PROPOSED BIORETENTION DEVICES SHALL NOT BE CONSTRUCTED UNTIL THE DEVICE'S CONTRIBUTING WATERSHED AREA MEETS ESTABLISHED VEGETATION REQUIREMENTS SET FORTH WITHIN THE RESPECTIVE WDNR TECHNICAL STANDARDS. IF THE LOCATION OF THE INFILTRATION AREA CONFLICTS WITH CONSTRUCTION STAGING AND/OR CONSTRUCTION TRAFFIC AND IS DISTURBED, COMPACTION MITIGATION WILL BE REQUIRED AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR IS REQUIRED TO PROVIDE QUALIFIED STAFF FOR INSPECTION AND OBSERVATION OF THE CONSTRUCTION ACTIVITIES RELATING TO ALL JOB SITE REGULATORY COMPLIANCE INCLUDING THE PROTECTION AND CONSTRUCTION OF ALL STORMWATER MANAGEMENT FEATURES. ANY OBSERVATION OF PLAN OR SITE DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

	REFERENCE	SOIL DEPTH	SOIL TYPE	INFILTRATION RATE	LIMITING LAYER
BIORETENTION BASIN 1	TP-SW	1019.6-1012	FSL/GRFS	0.5	NONE

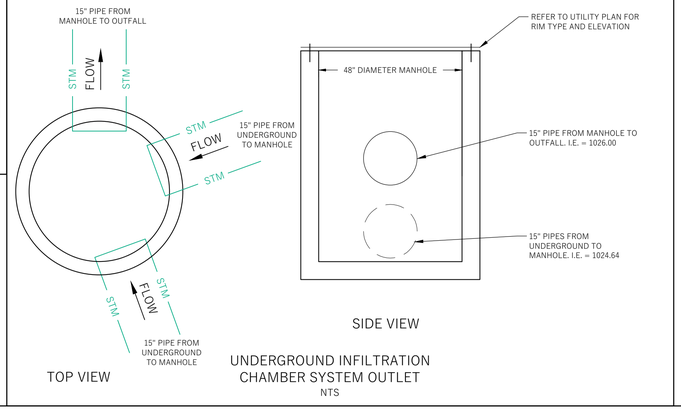


BIORETENTION BASIN OUTLET
NTS



NOTE: OVERFLOW SHALL BE REINFORCED WITH TURF REINFORCED MAT (TRM) - CLASS III, TYPE C BY PYRAMAT OR APPROVED EQUAL. TRM SHALL BE INTALLED PER MANUFACTURER'S RECOMMENTDATIONS.

BIORETENTION BASIN OVERFLOW WEIR
NTS

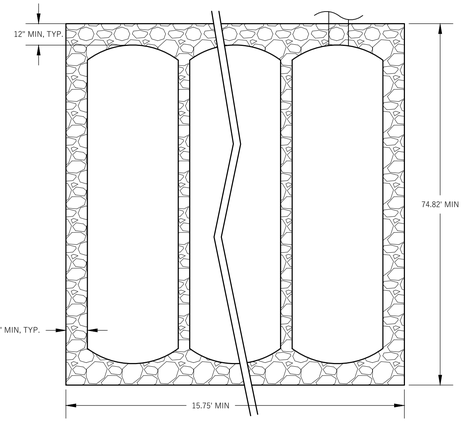


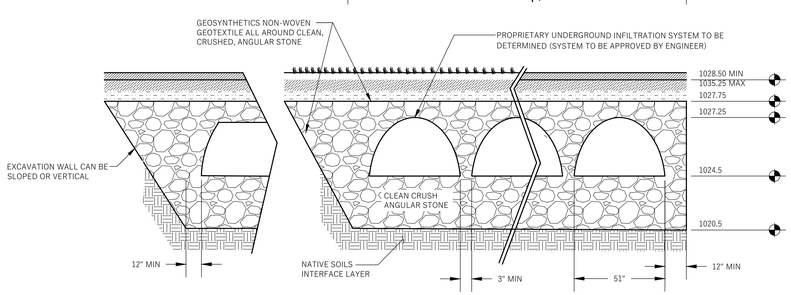
UNDERGROUND INFILTRATION CHAMBER SYSTEM OUTLET
NTS

UNDERGROUND INFILTRATION SYSTEM

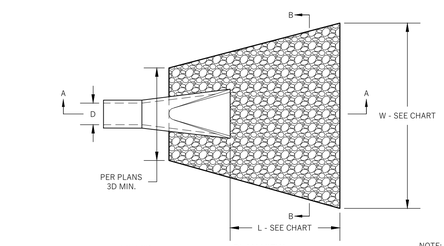
GENERAL NOTES:

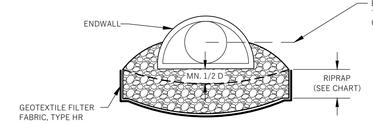
1. CLEAN, CRUSHED, ANGULAR STONE TO BE COMPACTED IN 6" (MAX) LIFTS USING TWO FULL COVERAVGES WITH A VIBRATORY COMPACTOR.
2. WHERE INFILTRATION SURFACES MY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT.
3. SAND/NATIVE SOIL INTERFACE LAYER SHALL BE FORMED BY A LAYER OF SAND 3 INCHES DEEP, WHICH IS VERTICALLY MIXED WITH THE NATIVE SOIL TO A DEPTH OF 2-4 INCHES. A CONSTRUCTION REPRESENTATIVE MUST BE ON SITE DURING OVER EXCAVATION TO APPROVE OF THE DEPTH AND SOIL TYPES.
4. GEOSYNTHETICS NON-WOVEN GEOTEXTILE SHALL BE PLACED ALL AROUND THE CLEAN, CRUSHED, ANGULAR STONE.
5. RUNOFF MUST INFILTRATE WITHIN 72-HOURS. SYSTEMS UNABLE TO MAINTAIN THESE RATES MUST BE REPLACED AND RESTORED TO ORIGINAL APPROVED PLAN.
6. ALL WORK TO BE CONDUCTED IN CONFORMANCE WITH APPLICABLE LOCAL, REGIONAL, AND STATE STORMWATER STANDARDS FOR THE PROJECT SITE AS APPROVED BY THE REGULATORY ENGINEER.





	REFERENCE	SOIL DEPTH	SOIL TYPE	INFILTRATION RATE	LIMITING LAYER
UNDERGROUND INFILTRATION	TP-MW	1020.5-1013.5	GRS	3.6	NONE

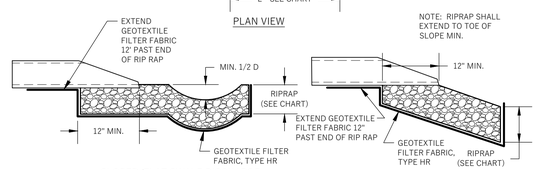




STRUCTURE	W	L	DEPTH	TYPE
STM AE NO. 1	5.7'	4.0'	1.5'	LIGHT RIPRAP
STM AE NO. 3	8.5'	6.0'	1.5'	LIGHT RIPRAP
STM AE NO. 10	11.3'	8.0'	1.5'	LIGHT RIPRAP

STRUCTURE	W	L	DEPTH	TYPE
PUBLIC AE NO. 1	9.5'	7.5'	2.0'	HEAVY RIPRAP
PUBLIC AE NO. 3	8.5'	6.0'	1.5'	LIGHT RIPRAP
PUBLIC AE NO. 5	8.5'	6.0'	1.5'	LIGHT RIPRAP

RIP RAP AND ENDWALL



SLOPED/FLAT SWALE DISCHARGE AND FLAT POND DISCHARGE

SLOPED POND DISCHARGE

CROSS SECTION A-A

1) JOINT TIES SHALL BE INSTALLED AT THE LAST (DOWNSTREAM) TWO JOINTS ON ANY PIPE RUN ENDING IN AN APRON ENDWALL

WYSER ENGINEERING

2747 S. SEMINOLE HIGHWAY
FITCHBURG, WI 53711

GUSTO!
LOT 4 SIP

CITY OF FITCHBURG, DANE COUNTY, WI

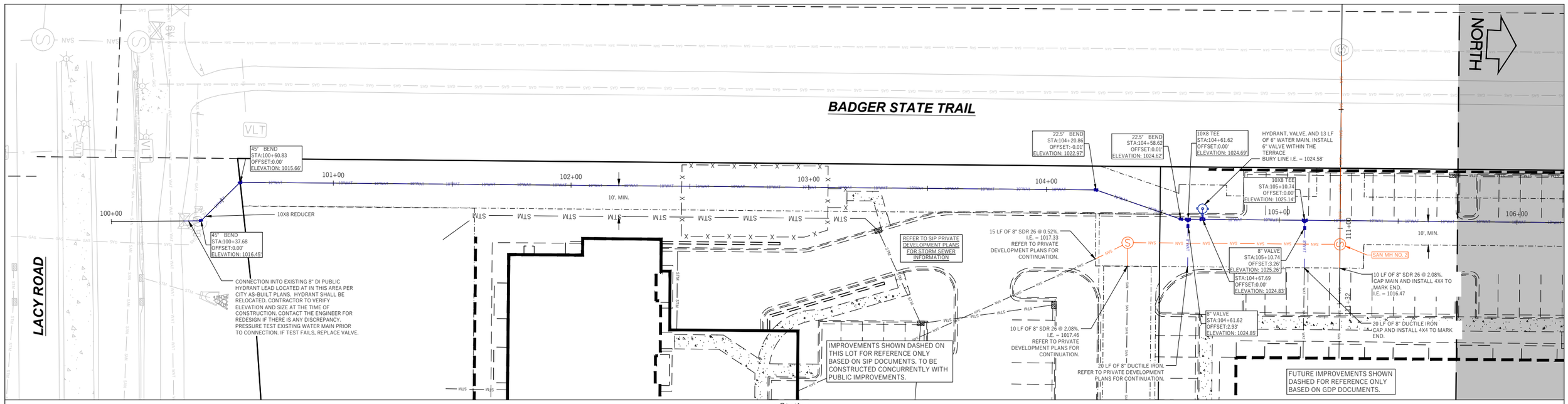
Sheet Title:
DETAILS

Revisions:

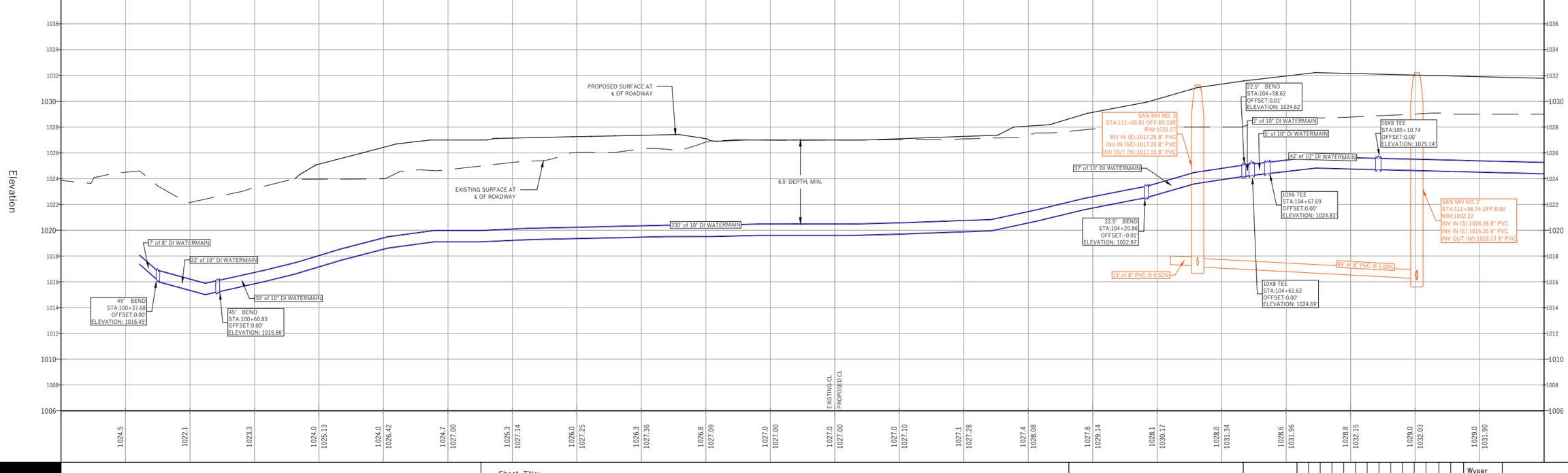
No.	Date:	Description:

Graphic Scale: NTS
Wyser Number: 24-1243
Set Type: SIP
Date Issued: 07/15/2025
Sheet Number: C401

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Station



File: W:\2024\241243_Newcomb - Seminole & Lacy, Fitchburg\DWG\241243_Public Utility Design.dwg Layout: Sheet - (1) User: dschneider Plotted: Jul 14, 2025 - 10:54am

WYSER ENGINEERING

GUSTO!

CITY OF FITCHBURG, DANE COUNTY, WI

Sheet Title:

PLAN AND PROFILE
PUBLIC SANITARY SEWER AND WATER MAIN
STA 100+00 TO 105+75

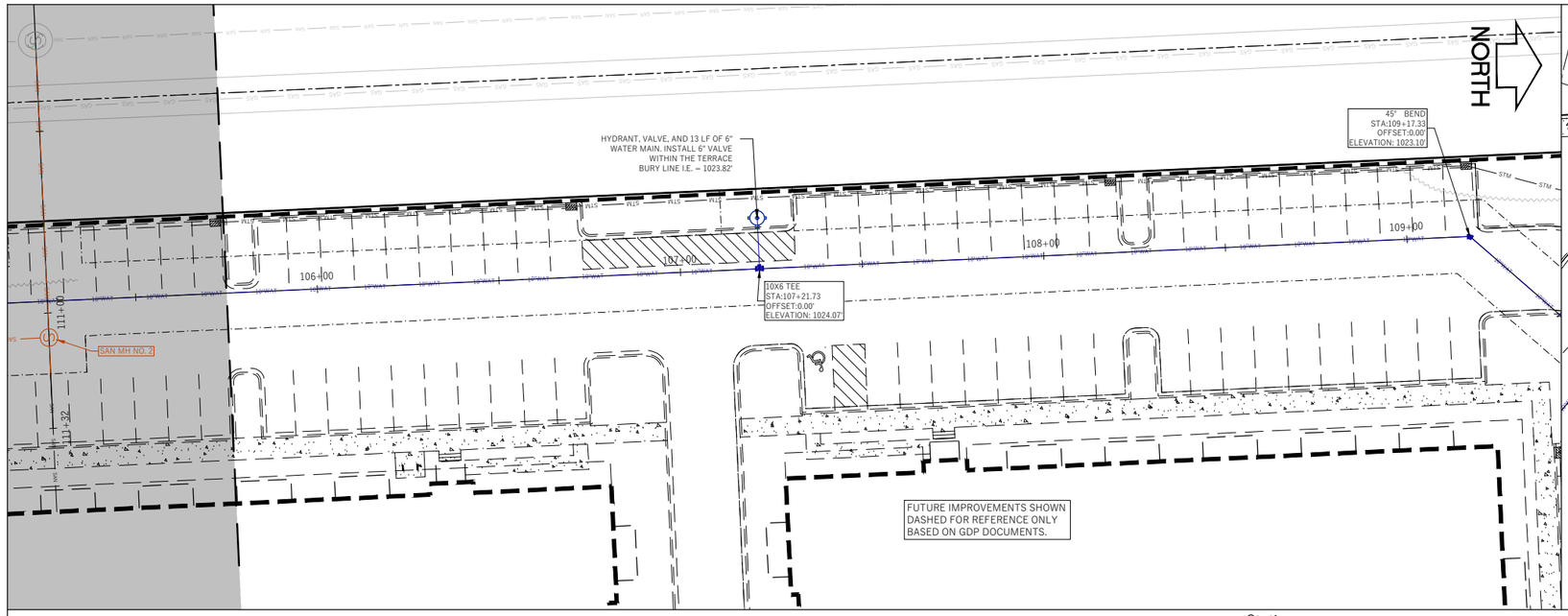
2747 S SEMINOLE HIGHWAY
FITCHBURG, WI 53711

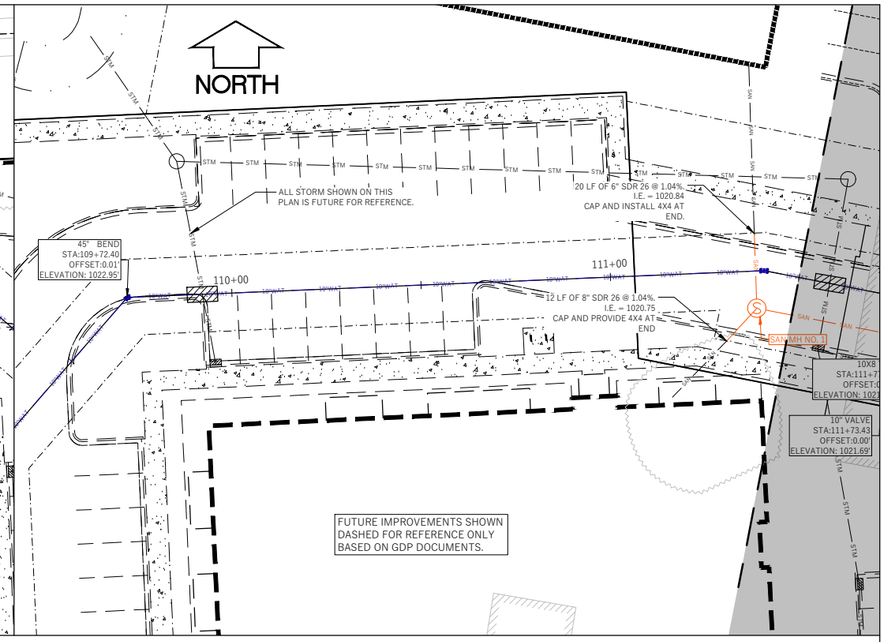
DIGGERS HOTLINE
Toll Free (800) 242-8511 -or- 811
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

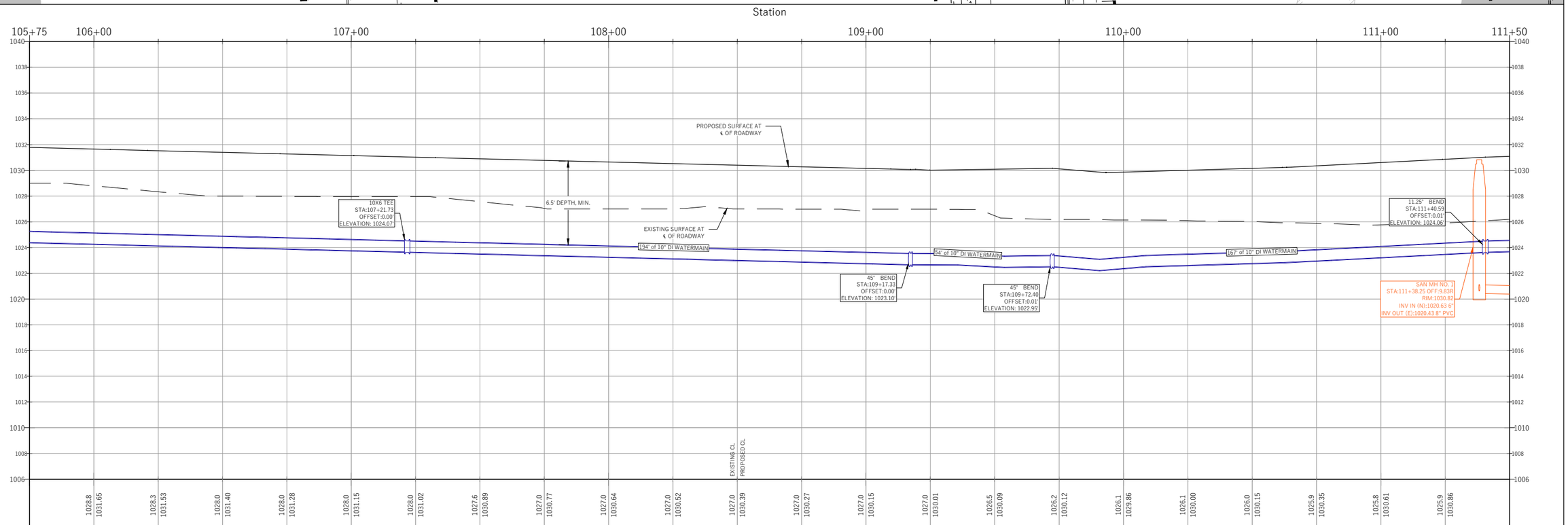
Graphic Scale
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1" = 40'

Revisions: No.	Date:	Description:

Wyser Number	24-1243
Set Type	SIP
Date Issued	07/11/2025
Sheet Number	P-1







File: W:\2024\241243_Newcomb – Seminole & Lacy, Fitchburg\DWG\241243_Public Utility Design.dwg Layout: Sheet – (2) User: dschneider Plotted: Jul 14, 2025 – 10:56am

WYSER ENGINEERING

GUSTO!

CITY OF FITCHBURG, DANE COUNTY, WI

Sheet Title:

PLAN AND PROFILE
PUBLIC SANITARY SEWER AND WATER MAIN
STA 105+75 TO 111+50

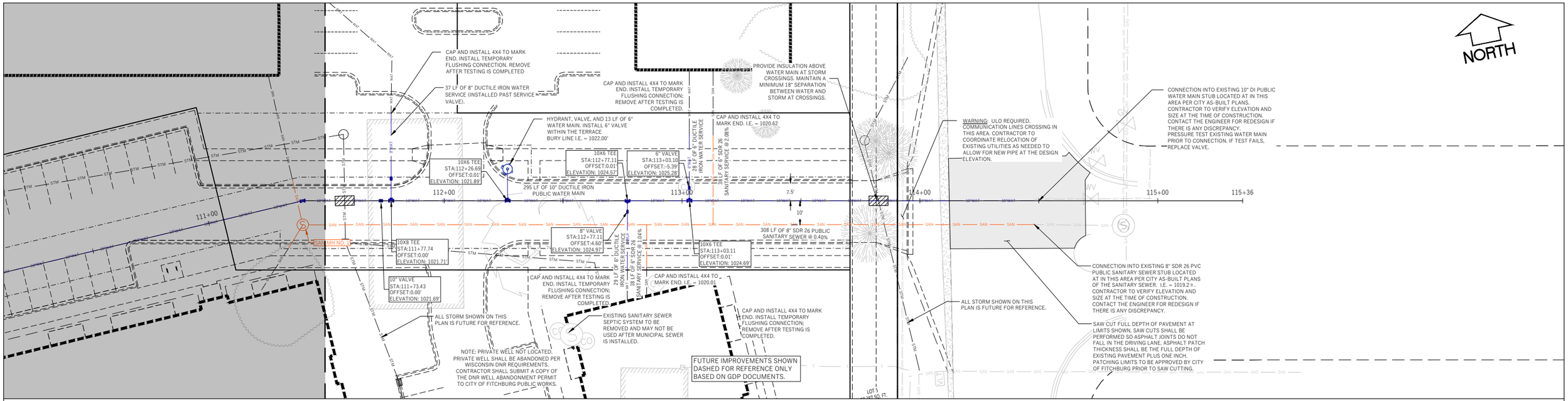
2747 S SEMINOLE HIGHWAY
FITCHBURG, WI 53711

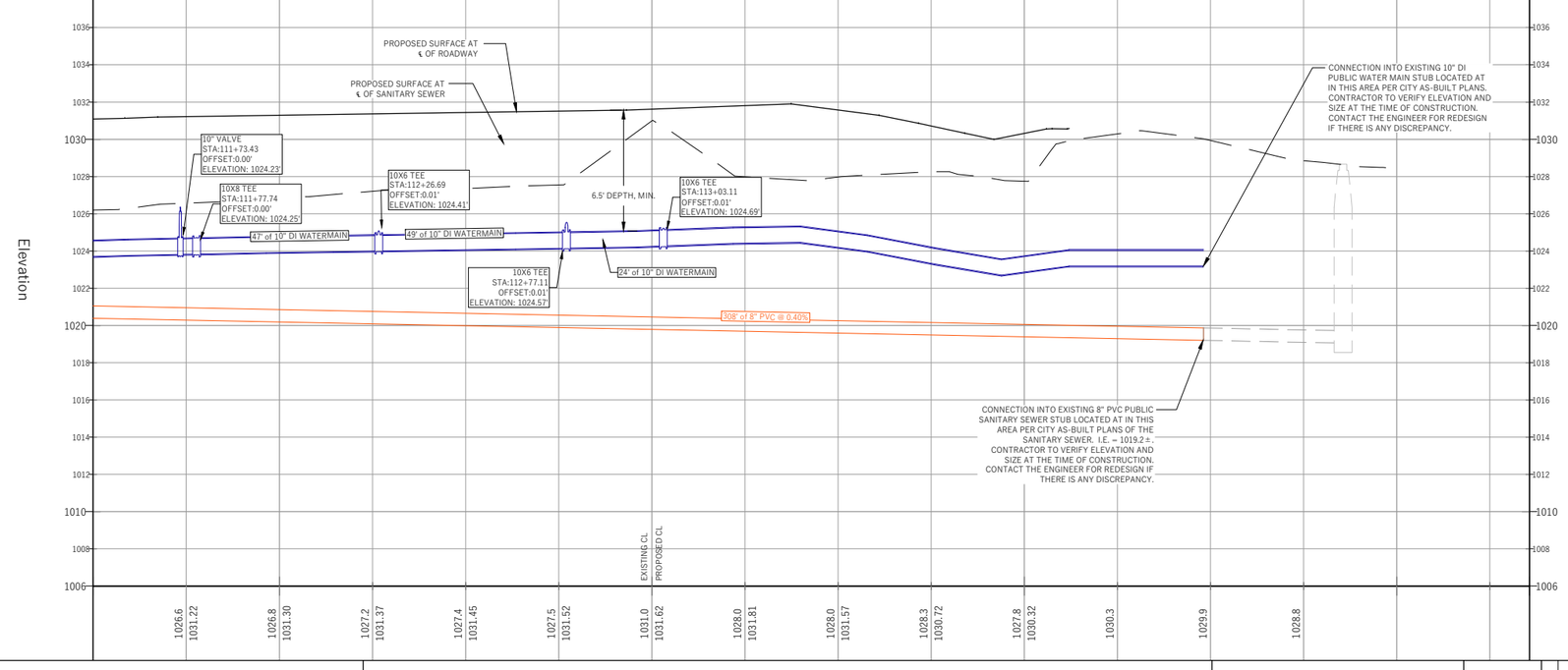
DIGGERS HOTLINE
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Hearing Impaired TDD (800) 542-2289
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Graphic Scale
0' 5' 10' 20' 30'
1" = 40'

Revisions:		
No.	Date:	Description:

Wyser Number	24–1243
Set Type	SIP
Date Issued	07/15/2025
Sheet Number	P-2





NOTES:

1. ALL PUBLIC IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF FITCHBURG STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.
2. CONTRACTOR MUST SUBMIT A TRAFFIC CONTROL PLAN TO CITY TRAFFIC ENGINEERING AT LEAST 7 DAYS PRIOR TO THE START OF WORK IN SEMINOLE HIGHWAY. WORK SHALL NOT PROCEED UNTIL AN APPROVED TRAFFIC CONTROL PLAN IS IN PLACE.
3. SEE PRIVATE PLANS FOR WORK ON PRIVATE PROPERTY.
4. CONTRACTOR SHALL SUBMIT A COPY OF THE WISCONSIN DNR WELL ABANDONMENT PERMIT TO THE CITY OF FITCHBURG PUBLIC WORKS FOR ANY PRIVATE WELLS LOCATED IN THE PROJECT AREA.

WYSER ENGINEERING

GUSTO!

CITY OF FITCHBURG, DANE COUNTY, WI

Sheet Title:

PLAN AND PROFILE
PUBLIC SANITARY SEWER AND WATER MAIN
STA 111+50 TO END

2747 S SEMINOLE HIGHWAY
FITCHBURG, WI 53711

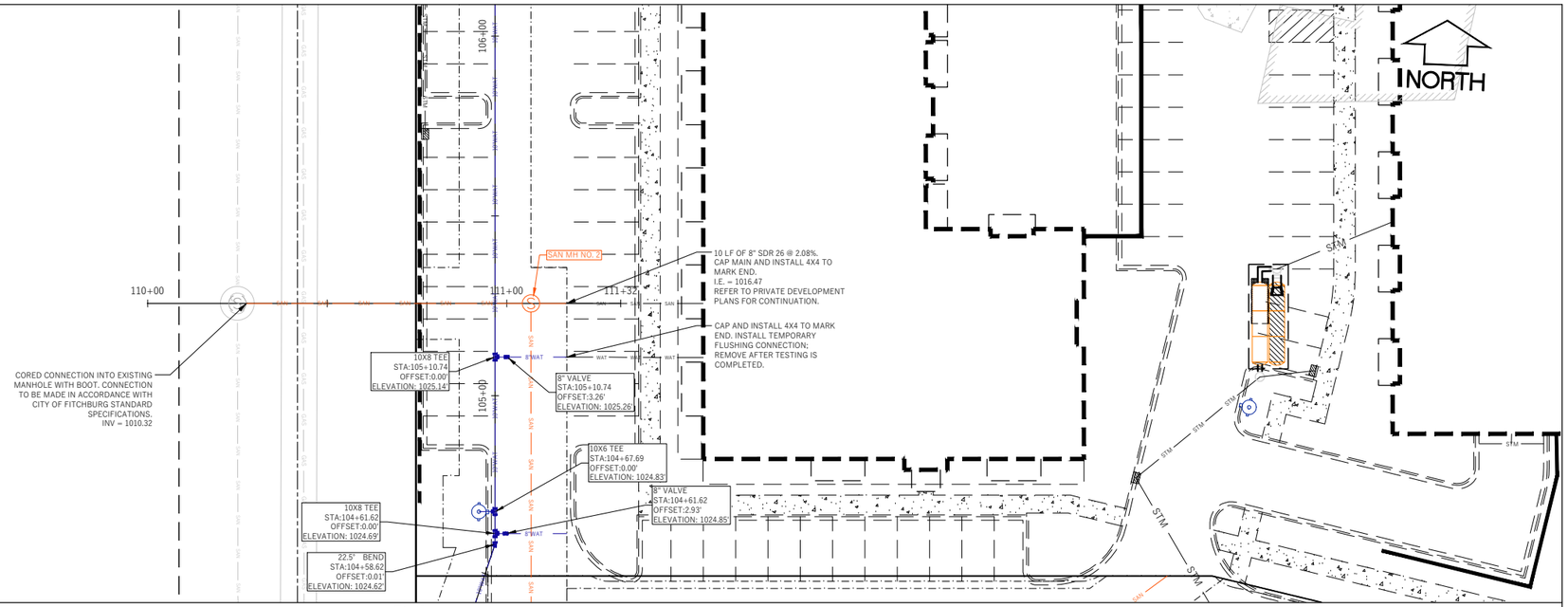
DIGGERS HOTLINE
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Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

Graphic Scale
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1" = 40'

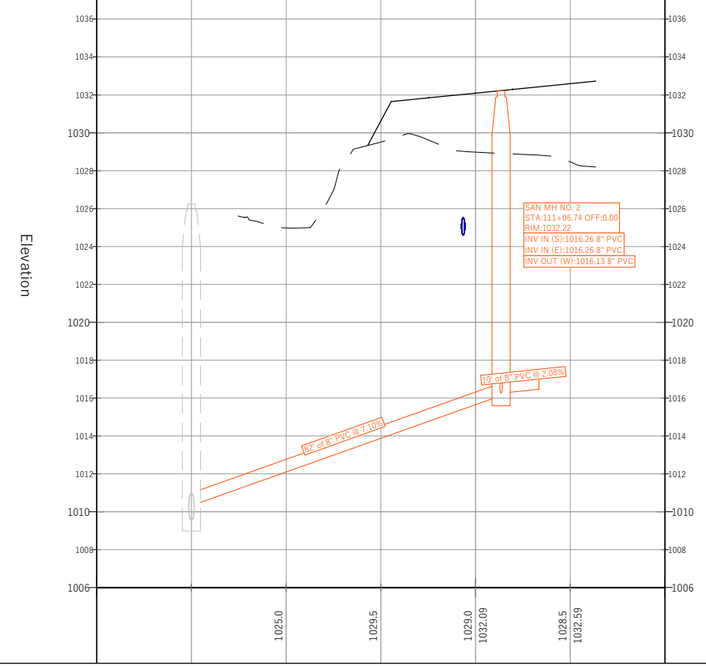
Revisions: No.	Date:	Description:

Wyser Number	24-1243
Set Type	SIP
Date Issued	07/15/2025
Sheet Number	P-3

File: W:\2024\241243_Newcomb - Seminole & Lacy, Fitchburg\DWG\241243_Public Utility Design.dwg Layout: Sheet - (3) User: dschneider Plotted: Jul 14, 2025 - 10:56am



Station



WYSER ENGINEERING

GUSTO!

CITY OF FITCHBURG, DANE COUNTY, WI

Sheet Title:

PLAN AND PROFILE
PUBLIC SANITARY SEWER
STA 110+00 TO 111+50

2747 S SEMINOLE HIGHWAY
FITCHBURG, WI 53711

DIGGERS HOTLINE
Toll Free (800) 242-8511 -or- 811
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

Graphic Scale
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1" = 40'

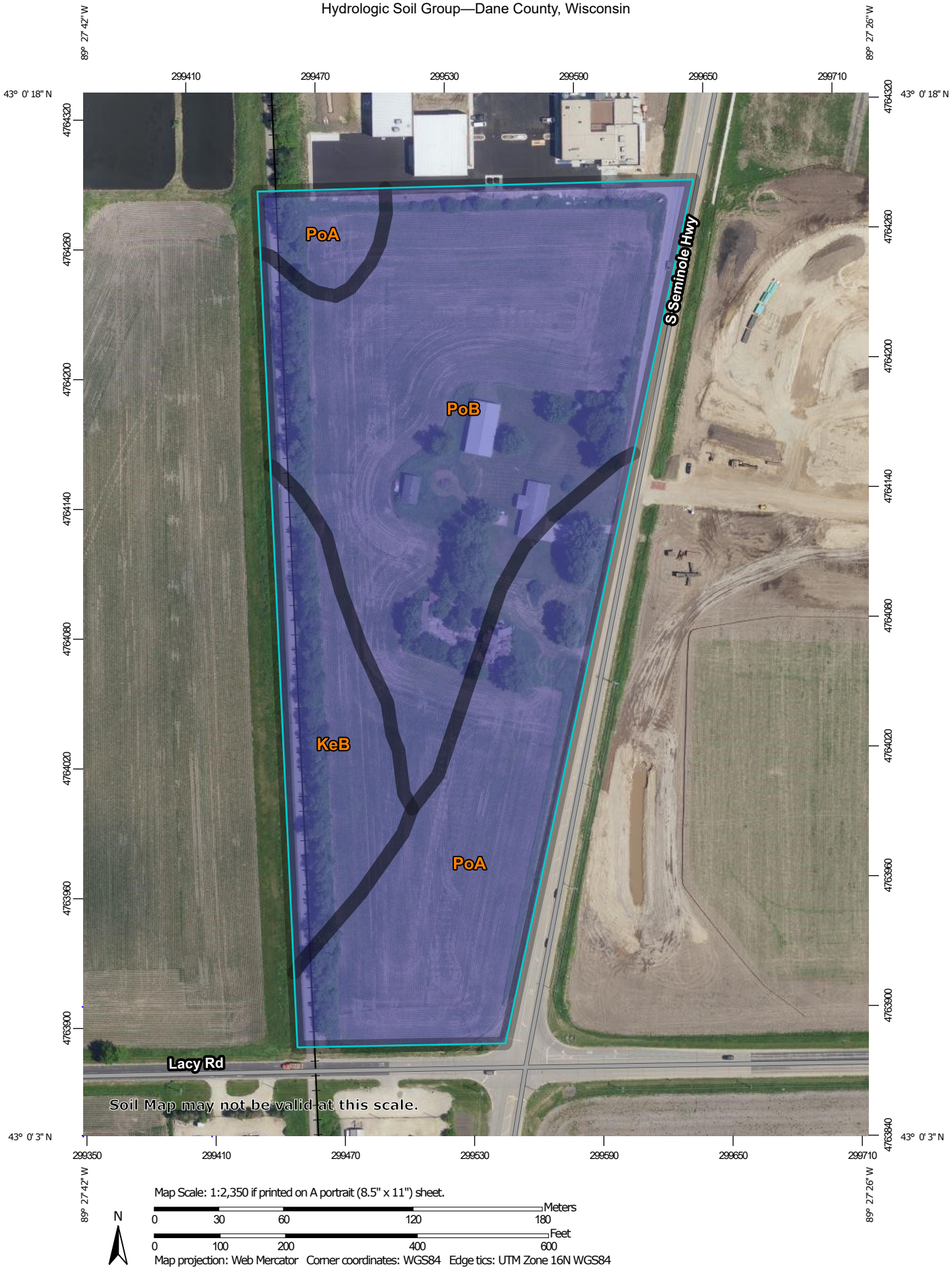
Revisions:		
No.	Date:	Description:

Wyser Number	24-1243
Set Type	SIP
Date Issued	07/15/2025
Sheet Number	P-4

File: W:\2024\241243_Newcomb - Seminole & Lacy, Fitchburg\DWG\241243_Public Utility Design.dwg Layout: Sheet - (4) User: dschneider Plotted: Jul 14, 2025 - 10:56am

WYSER
ENGINEERING

Exhibit B


89° 27' 42" W
89° 27' 26" W
43° 0' 18" N
43° 0' 3" N
299350
299410
299470
299530
299590
299650
299710
4764320
4764260
4764200
4764140
4764080
4764020
4763960
4763900
4763840
PoA
PoB
KeB
PoA
S Seminole Hwy
Lacy Rd
Soil Map may not be valid at this scale.
Map Scale: 1:2,350 if printed on A portrait (8.5" x 11") sheet.
N
Meters
0 30 60 120 180
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.

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: Dane County, Wisconsin
Survey Area Data: Version 22, Sep 8, 2023

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

Date(s) aerial images were photographed: Jun 13, 2020—Jul 31, 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.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
KeB	Kegonsa silt loam, 2 to 6 percent slopes	B	2.0	13.8%
PoA	Plano silt loam, gravelly substratum, 0 to 2 percent slopes	B	4.8	32.8%
PoB	Plano silt loam, gravelly substratum, 2 to 6 percent slopes	B	7.8	53.4%
Totals for Area of Interest			**14.7**	**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

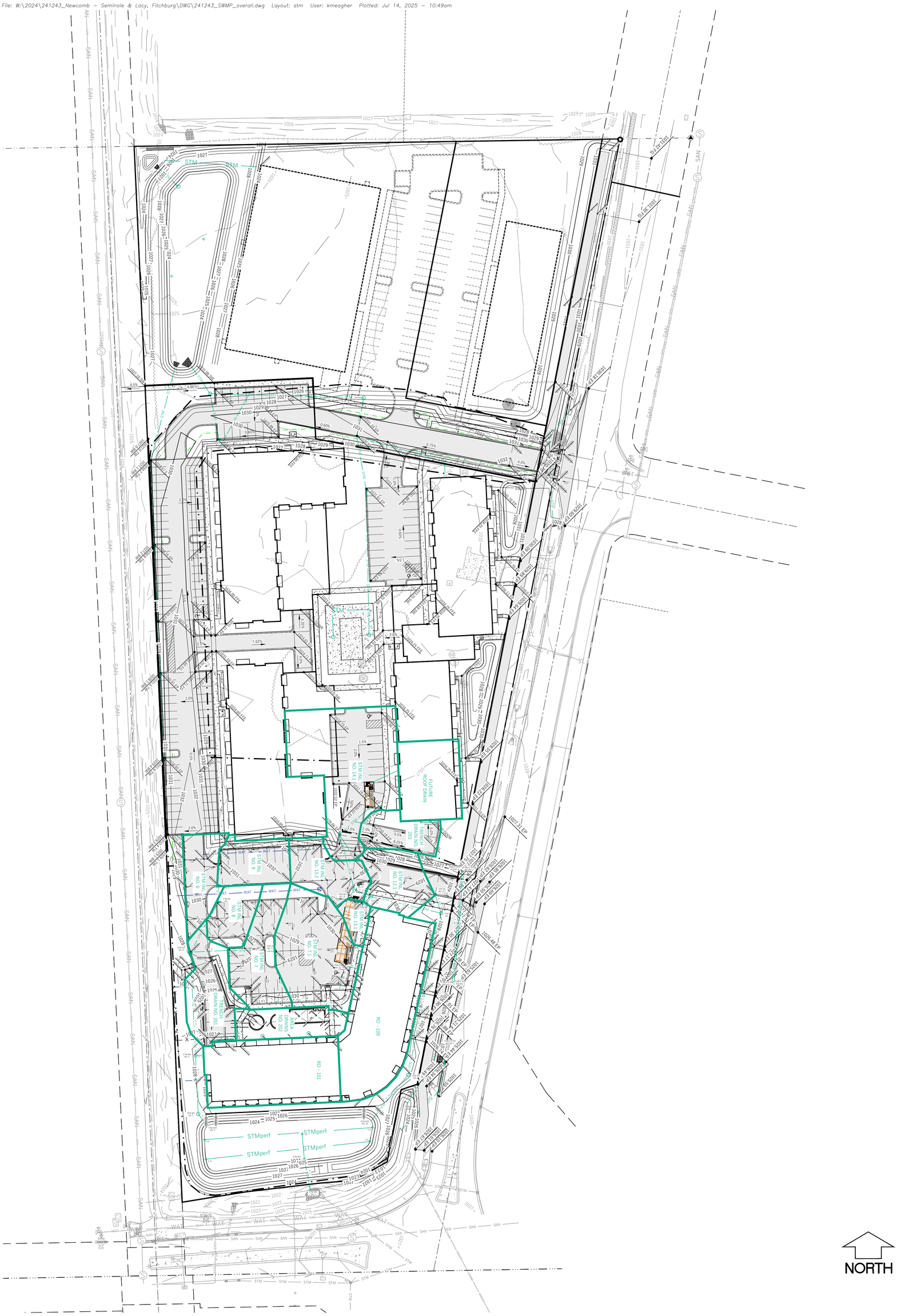
Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

WYSER
ENGINEERING

Exhibit C



Sheet Number	EX C.1
Date Issued	07/15/2025
Set Type	REVIEW
Wyser Number	24-1243
Graphic Scale	0 25 50 75

Revisions:

No.	Date:	Description:

GUSTO!

CITY OF FITCHBURG, DANE COUNTY, WI

Sheet Title:
PROPOSED AND FUTURE STORM SEWER SIZING

WYSER ENGINEERING
2747 S SEMINOLE HWY
FITCHBURG, WI 53711

NORTH

PUBLIC STM
AES NO. 6

PUBLIC STM
INL NO. 2

TEMP FLOW
P - 13.1

STM AES
NO. 51

STM INL
NO. 12.1

STM INL
NO. 13.1

STM INL
NO. 13.2

STM INL
NO. 7.1

STM INL
NO. 9

STM INL
NO. 7

STM INL
NO. 8

STM INL
NO. 6

AREA
DRAINS
NO. 202

TRENCH
DRAIN NO. 201

RD - 100

RD - 101

STMperf

WYSER
ENGINEERING

2747 S SEMINOLE HWY
FITCHBURG, WI 53711

GUSTO!

CITY OF FITCHBURG, DANE COUNTY, WI

Sheet Title:
PROPOSED STORM SEWER WATERSHED MAP

Revisions:

No.	Date:	Description:

Graphic Scale	0' 25' 50' 75'
Wyser Number	24-1243
Set Type	REVIEW
Date Issued	07/15/2025
Sheet Number	EX C.2

File: W:\2024\241243_Newcomb - Seminole & Lacy, Fitchburg\DWG\241243_SWMP_overall.dwg Layout: stm (2) User: kmeagher Plotted: Jul 14, 2025 - 10:50am

Location					Watershed Area					Travel Time			Rainfall-Runoff						Flow in Pipe								Vertical Control				PIPE WIDTH	Cover	
Structure											Flow Time																	Invert Elv.		Top of structure				
Upstream	Downstream	Number	TOTAL AREA	Open Space	Paved	Rooftop	Area A	Runoff Coeff. C	Equiv. Area for 100% Runoff delta CA	Inlet Time	Street	Pipe	Time of Concentration	Ave. Rainfall Intensity 10-year	Ave. Rainfall Intensity 100-year	Ave. Rainfall Intensity 200-year	Direct Runoff - 10-year	Direct Runoff - 100-year	Direct Runoff - 200-year	Design Runoff	Design Runoff	Slope of Sewer	Pipe Size	Elliptical Pipe Size	Length of pipe	Pipe Material	Capacity flowing full	Capacity flowing full		Mean velocity flowing full	fall of pipe	upper	lower	upper	lower			
				0.2	0.95	0.9	Acres		Acres	Min.	Min.	Min.	Min.	in/hr	in/hr	in/hr	cfs	cfs	cfs	cfs	gpm	ft/ft	in	in	ft		cfs	gpm		fps	ft	ft	ft	ft	ft			
STM MH NO. 2	STM AES NO. 1	P - 1	-	-			-	-	-	1.0		0.1	5.0	7.30	11.0	12.3	-	-	-	0.00	0.00	0.0100	12	-	35.49	HDPE	3.86	1732.36	OK	4.91	0.35	1021.50	1021.15	1024.75	-	1.08	2.17	OK
		STM MH NO. 2		0			0.00	#DIV/0!	#DIV/0!	1.0		-	5.0	7.30	11.0	12.3				0.00	0.00	-	-	-	-		-	-	-	-	-	-	-	-	-	-
STM MH NO. 4	STM AES NO. 3	P - 2	-	-			-	-	-	1.0		0.1	5.0	7.30	11.0	12.3	-	-	-	8.87	3980.40	0.0065	18	-	17.47	HDPE	9.17	4117.85	OK	5.19	0.11	1024.11	1024.00	1027.50	-	1.67	1.72	OK
STM MH NO. 5	STM MH NO. 4	P - 3	-	-			-	-	-	1.0		0.2	5.0	7.30	11.0	12.3	-	-	-	8.87	3980.40	0.0065	18	-	67.75	HDPE	9.17	4117.85	OK	5.19	0.44	1024.55	1024.11	1028.30	1027.50	1.67	2.08	OK
PUMP	STM MH NO. 5	P - 3.1	-	-			-	-	-	1.0		0.0	5.0	7.30	11.0	12.3	-	-	-	2.05	920.61	0.0208	10	-	9.39	HDPE	3.42	1536.45	OK	6.28	0.20	1025.42	1025.22	1029.00	1028.30	0.92	2.67	OK
		TRENCH DRAIN NO. 201	6255	2335	3835	85	0.14	0.67	0.10	1.0		-	5.0	7.30	11.0	12.3	0.70	1.06	1.18	1.06	474.53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		AREA DRAINS NO. 202	4350	0	415	3935	0.10	0.90	0.09	1.0		-	5.0	7.30	11.0	12.3	0.66	0.99	1.11	0.99	446.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STM INL NO. 6	STM MH NO. 5	P - 4	-	-			-	-	-	1.0		0.5	5.0	7.30	11.0	12.3	-	-	-	6.82	3059.79	0.0038	18	-	119.38	HDPE	7.01	3148.51	OK	3.97	0.45	1025.01	1024.55	1028.04	1028.30	1.67	1.37	WARNING
		STM INL NO. 6	4185	890	3295		0.10	0.79	0.08	1.0		-	5.0	7.30	11.0	12.3	0.55	0.84	0.93	0.93	419.27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STM INL NO. 7	STM INL NO. 6	P - 5	-	-			-	-	-	1.0		0.2	5.0	7.30	11.0	12.3	-	-	-	4.16	1867.33	0.0040	15	-	44.32	HDPE	4.43	1986.52	OK	3.61	0.18	1025.43	1025.26	1028.38	1028.04	1.42	1.53	OK
		STM INL NO. 7	6400	1110	5290		0.15	0.82	0.12	1.0		-	5.0	7.30	11.0	12.3	0.88	1.33	1.48	1.48	665.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STM INL NO. 7.1	STM INL NO. 7	P - 6	-	-			-	-	-	1.0		0.3	5.0	7.30	11.0	12.3	-	-	-	2.68	1202.28	0.0050	12	-	54.80	HDPE	2.73	1224.96	OK	3.47	0.27	1025.96	1025.68	1028.55	1028.38	1.08	1.51	OK
		STM INL NO. 7.1	10700	875	9380	445	0.25	0.89	0.22	1.0		-	5.0	7.30	11.0	12.3	1.59	2.40	2.68	2.68	1202.28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STM INL NO. 8	STM INL NO. 7	P - 7	-	-			-	-	-	1.0		0.3	5.0	7.30	11.0	12.3	-	-	-	1.72	773.19	0.0050	12	-	66.05	HDPE	2.73	1224.96	OK	3.47	0.33	1025.84	1025.51	1028.42	1028.04	1.08	1.50	WARNING
		STM INL NO. 8	3335	1200	2135		0.08	0.68	0.05	1.0		-	5.0	7.30	11.0	12.3	0.38	0.57	0.64	0.64	287.47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STM INL NO. 9	STM INL NO. 8	P - 8	-	-			-	-	-	1.0		0.1	5.0	7.30	11.0	12.3	-	-	-	1.08	485.72	0.0100	12	-	19.30	HDPE	3.86	1732.36	OK	4.91	0.19	1026.03	1025.84	1030.32	1028.42	1.08	3.21	OK
		STM INL NO. 9	4275	305	3970		0.10	0.90	0.09	1.0		-	5.0	7.30	11.0	12.3	0.64	0.97	1.08	1.08	485.72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STM MH NO. 11	STM AES NO. 10	P - 10	-	-			-	-	-	1.0		0.3	5.0	7.30	11.0	12.3	-	-	-	11.70	5250.38	0.0025	24	-	68.18	HDPE	12.25	5499.89	OK	3.90	0.17	1024.17	1024.00	1028.00	-	2.17	1.66	OK
STM MH NO. 12	STM MH NO. 11	P - 11	-	-			-	-	-	1.0		0.8	5.0	7.30	11.0	12.3	-	-	-	11.70	5250.38	0.0025	24	-	190.95	HDPE	12.25	5499.89	OK	3.90	0.48	1024.65	1024.17	1028.25	1028.00	2.17	1.44	WARNING
STM INL NO. 12.1	STM MH NO. 12	P - 11.1	-	-			-	-	-	1.0		0.1	5.0	7.30	11.0	12.3	-	-	-	0.85	383.69	0.0050	12	-	22.67	HDPE	2.73	1224.96	OK	3.47	0.11	1025.76	1025.65	1028.50	1028.25	1.08	1.66	OK
		STM INL NO. 12.1	4900	2170	2730		0.11	0.62	0.07	1.0		-	5.0	7.30	11.0	12.3	0.51	0.76	0.85	0.85	383.69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STM MH NO. 13	STM MH NO. 12	P - 12	-	-			-	-	-	1.0		0.3	5.0	7.30	11.0	12.3	-	-	-	10.84	4866.69	0.0030	24	-	83.41	HDPE	13.42	6024.83	OK	4.27	0.25	1024.90	1024.65	1030.43	1028.25	2.17	3.37	OK
STM INL NO. 13.1	STM MH NO. 13	P - 12.1	-	-			-	-	-	1.0		0.0	5.0	7.30	11.0	12.3	-	-	-	0.32	145.02	0.0100	12	-	13.43	HDPE	3.86	1732.36	OK	4.91	0.13	1026.03	1025.90	1029.99	1030.43	1.08	2.87	OK
		STM INL NO. 13.1	1315	140	1175		0.03	0.87	0.03	1.0		-	5.0	7.30	11.0	12.3	0.19	0.29	0.32	0.32	145.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STM INL NO. 13.2	STM MH NO. 13	P - 12.2	-	-			-	-	-	1.0		0.1	5.0	7.30	11.0	12.3	-	-	-	1.08	484.07	0.0100	12	-	17.07	HDPE	3.86	1732.36	OK	4.91	0.17	1026.07	1025.90	1029.65	1030.43	1.08	2.50	OK
		STM INL NO. 13.2	4735	905	3830		0.11	0.81	0.09	1.0		-	5.0	7.30	11.0	12.3	0.64	0.96	1.08	1.08	484.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STM MH NO. 14	STM MH NO. 13	P - 13	-	-			-	-	-	1.0		0.1	5.0	7.30	11.0	12.3	-	-	-	9.44	4237.60	0.0030	24	-	20.91	HDPE	13.42	6024.83	OK	4.27	0.06	1024.96	1024.90	1030.00	1030.43	2.17	2.87	OK
STM INL NO. 14.1	STM MH NO. 14	P - 13.1	-	-			-	-	-	1.0		0.2	5.0	7.30	11.0	12.3	-	-	-	5.29	2373.60	0.0050	18	-	65.30	HDPE	8.05	3611.59	OK	4.55	0.33	1025.79	1025.46	1029.66	1030.00	1.67	2.21	OK
FUTURE UG 6	STM INL NO. 14.1	FUTURE PIPE	-	-			-	-	-	1.0		0.2	5.0	7.30	11.0	12.3	-	-	-	5.29	2373.60	0.0050	18	-	44.48	HDPE	8.05	3611.59	OK	4.55	0.22	1026.01	1025.79	1029.66	1029.66	1.67	1.98	OK
		STM INL NO. 14.1	15835	2865	9270	3700	0.36	0.80	0.29	1.0		-	5.0	7.30	11.0	12.3	2.13	3.21	3.59	3.59	1610.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		TRENCH DRAIN NO. 203	3605	1170	2435		0.08	0.71	0.06	1.0		-	5.0	7.30	11.0	12.3	0.43	0.64	0.72	0.72	322.83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		FUTURE ROOF DRAIN	6500	0		6500	0.15	0.90	0.13	1.0		-	5.0	7.30	11.0	12.3	0.98	1.48	1.65	0.98	440.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		TEMP FLOW	40890	31890	7000	2000	0.94	0.36	0.34	1.0		-	5.0	7.30	11.0	12.3	2.48	3.74	4.19	2.48	1115.32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STM MH NO. 15	STM MH NO. 14	P - 14	-	-			-	-	-	1.0		0.0	5.0	7.30	11.0	12.3	-	-	-	4.15	1864.00	0.0050	15	-	9.50	HDPE	4.95	2221.00	OK	4.03	0.05	1025.76	1025.71	1030.70	1030.00	1.42	3.53	OK
STM MH NO. 16	UNDGROUND	MANIFOLD	-	-			-	-	-	1.0		#VALUE!	5.0	7.30	11.0	12.3	-	-	-	4.15	1864.00	-	-	-	-	-	-	-	-	-	-	1025.70	-	1030.00	-	-	-	-
RD - 100	STM MH NO. 16	RD - 100	-	-			-	-	-	1.0		0.1	5.0	7.30	11.0	12.3	-	-	-	2.38	1069.59	0.0208	10	-	22.79	HDPE	3.42	1536.45	OK	6.28	0.47	1026.47	1026.00	1031.00	1030.00	0.92	3.61	OK
		RD - 100	15800	0		15800	0.36	0.90	0.33	1.0		-	5.0	7.30	11.0	12.3	2.38	3.59	4.02	2.38	1069.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RD - 101	STM MH NO. 16	RD - 101	-	-			-	-	-	1.0		0.1	5.0	7.30	11.0	12.3	-	-	-	1.77	794.41	0.0100	10	-	28.73	HDPE	2.37	1065.34	OK	4.35	0.29	1026.29	1026.00	1030.50	1031.00	0.92	3.30	OK
		RD - 101	11735	0		11735	0.27	0.90	0.24	1.0		-	5.0	7.30	11.0	12.3	1.77	2.67	2.98	1.77	794.41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STM AES NO. 51	STM AES NO. 50	Temp Pipe	-	-			-	-	-	1.0		0.5	5.0	7.30	11.0	12.3	-	-	-	3.70	1660.50	0.0067	18	-	75.00	CMP	4.47	2006.75	OK	2.53	-	-	-	-	-	1.51	-	-
		STM AES NO. 51	98725	95395		3330	2.27	0.22	0.51	1.0		-	5.0	7.30	11.0	12.3	3.70	5.57	6.23	3.70	1660.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PUBLIC INL NO. 2	PUBLIC STM AES NO. 1	PP - 1	-	-			-	-	-	1.0		0.1	5.0	7.30	11.0	12.3	-	-	-	11.62	5215.20	0.0230	18	14 x 23	76.80	RCP	15.93	7150.16	OK	9.01	1.77	1023.77	1022.00	1026.92	-	1.44	1.72	OK
		PUBLIC INL NO. 2	25050	7550	17500		0.58	0.72	0.42	1.0		-	5.0	7.30	11.0	12.3	3.04	4.58	5.12	3.04	1364.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PUBLIC STM AES NO. 4	PUBLIC AES NO. 3	PP - 2	-	-			-	-	-	1.0		0.8	5.0	7.30	11.0	12.3	-	-	-	4.29	1925.56	0.0020	18	14 x 23	128.18	RCP	4.70	2108.47	OK	2.66	0.26	1025.26	1025.00	1027.66	-	1.44	0.97	WARNING
PUBLIC STM AES NO. 6	PUBLIC AES NO. 5	PP - 3	-	-			-	-	-	1.0		0.8	5.0	7.30	11.0	12.3	-	-	-	4.29	1925.56	0.0020	18	14 x 23	128.18	RCP	4.70	2108.47	OK	2.66	0.26	1025.26	1025.00	1027.64	-	1.44	0.95	WARNING
		PUBLIC STM AES NO. 6	108500	68500	30000	10000	2.49	0.47	1.18	1.0		-	5.0	7.30	11.0	12.3	8.58	12.93	14.46	8.58	3851.13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

ENDWALL RIPRAP SIZING

Project: **Buffalo Development - Lot 4**
Wyser Project #: 21-1243
Designed By: KLM
Date: 07/15/2025

HEC14 - EQUATION 10.4
D50 = 0.2D{Q/(√g*D^2.5)}^(4/3)*(D/TW)

g	acceleration due to gravity		32.2	ft/sec^2
TW	Tailwater Depth (Assumed)	0.4*D		ft
*	Assumed Full Pipe Capacity			
STA	Structure			

Table 10.1. Example Riprap Classes and Apron Dimensions

Class	D_{50} (mm)	D_{50} (in)	Apron Length[1]	Apron Depth
1	125	5	4D	$3.5D_{50}$
2	150	6	4D	$3.3D_{50}$
3	250	10	5D	$2.4D_{50}$
4	350	14	6D	$2.2D_{50}$
5	500	20	7D	$2.0D_{50}$
6	550	22	8D	$2.0D_{50}$

[1]D is the culvert rise.

	Pipe Diameter D (ft)	Capacity Flow Q (cfs)	Tailwater Depth TW (ft)	Riprap size D50 (in)	Riprap class (See Table 10.1) Type	D_{50}	WisDOT*	Apron Dimentions (See Table 10.1) Length	Depth	Width @ End	Width @ Pipe
STM AES NO. 1	1.00	3.86	0.40	3.59	2	5	Light Riprap	4.00	1.5	5.7	3.0
STM AES NO. 3	1.50	9.17	0.60	4.42	2	5	Light Riprap	6.00	1.5	8.5	4.5
STM AES NO. 10	2.00	12.25	0.80	3.32	2	5	Light Riprap	8.00	1.5	11.3	6.0
PUBLIC STM AES NO. 1	1.50	15.93	0.60	9.23	4	10	Heavy Riprap	7.50	2.0	9.5	4.5
PUBLIC STM AES NO. 3	1.50	4.70	0.60	1.81	2	5	Light Riprap	6.00	1.5	8.5	4.5
PUBLIC STM AES NO. 5	1.50	4.70	0.60	1.81	2	5	Light Riprap	6.00	1.5	8.5	4.5

*Refer to Section 606 and 312 for material type.
Select Crushed Material and Light Riprap require Type R geotextile Fabric
Medium, Heavy and Extra-Heavy Riprap require Type HR geotextile Fabric

WYSER
ENGINEERING

Exhibit D

NORTH

USLE FLOW PATH
- EXISTING
- PUBLIC UTILITIES

USLE FLOW PATH
- PROPOSED
- PUBLIC UTILITIES

USLE FLOW PATH
- LOT 4 - PROPOSED

USLE FLOW PATH
- LOT 4 - EXISTING

WYSER ENGINEERING

2747 S SEMINOLE HWY
FITCHBURG, WI 53711

GUSTO!

CITY OF FITCHBURG, DANE COUNTY, WI

Sheet Title:
USLE MAP

Revisions:

No.	Date:	Description:

Graphic Scale	0' 25' 50' 75'
Wyser Number	24-1243
Set Type	REVIEW
Date Issued	07/15/2025
Sheet Number	USLE

File: W:\2024\241243_Newcomb - Seminole & Lacy, Fitchburg\DWG\241243_SWMP_overall.dwg Layout: USLE User: kneagher Plotted: Jul 14, 2025 - 10:50am

Soil Loss & Sediment Discharge Calculation Tool

for use on Construction Sites in the State of Wisconsin

WDNR Version 2.1 (12-05-2024)

WISCONSIN DEPT. OF NATURAL RESOURCES

YEAR 1

Developer: Newcomb

Project: Buffalo Development - Public Utilities

Date: 07/14/25

County: Dane

Version 2.1

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	09/15/25	11/15/25	10.8%	150	Silt Loam	0.43	1.5%	200	0.20	1.00	1.4	1.132	Silt Fence	1.0
Bare Ground	11/15/25	04/01/26	6.1%	150	Silt Loam	0.43	20.0%	26	2.15	1.00	8.4	0.630	Silt Fence	3.2
Seed with Mulch or Er	04/01/26	06/01/26	16.4%	150	Silt Loam	0.43	20.0%	26	2.15	0.10	2.3	0.630	Silt Fence	0.9
End	06/01/26	-----	-----	-----	-------	-----	20.0%	26	2.15	------	-----	0.000		0.0
		-----	-----	-----	-------	-----	20.0%	0	-----	-----	-----	0.000		0.0
		-----	-----	-----	-------	-----	0.0%	0	-----	-----	-----	0.000		0.0
										TOTAL	**12.1**		**TOTAL**	**5.0**
													% Reduction Required	**0%**

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:	KLM
Date	7/14/2025

Soil Loss & Sediment Discharge Calculation Tool

for use on Construction Sites in the State of Wisconsin

WDNR Version 2.1 (12-05-2024)

WISCONSIN DEPT. OF NATURAL RESOURCES

YEAR 1

Developer: Newcomb

Project: Buffalo Development - Lot 4

Date: 07/14/25

County: Dane

Version 2.1

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	03/01/26	06/01/26	18.5%	150	Silt Loam	0.43	1.5%	420	0.25	1.00	3.0	1.197	Silt Fence	2.1
Bare Ground	06/01/26	06/25/26	15.0%	150	Silt Loam	0.43	5.0%	30	0.29	1.00	2.8	0.834	Silt Fence	1.4
Mulch or Erosion Mat	06/25/26	02/28/27	66.4%	150	Silt Loam	0.43	5.0%	30	0.29	0.20	2.5	0.834	Silt Fence	1.3
End	02/28/27	-----	-----	-----	-------	-----	5.0%	30	0.29	------	-----	0.000		0.0
		-----	-----	-----	-------	-----	5.0%	0	-----	-----	-----	0.000		0.0
		-----	-----	-----	-------	-----	0.0%	0	-----	-----	-----	0.000		0.0
										TOTAL	**8.3**		**TOTAL**	**4.8**
													% 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:	KLM
Date	7/14/2025

Soil Loss & Sediment Discharge Calculation Tool

for use on Construction Sites in the State of Wisconsin

WDNR Version 2.1 (12-05-2024)

WISCONSIN DEPT. OF NATURAL RESOURCES

YEAR 2

Developer: Newcomb

Project: Buffalo Development - Lot 4

Date: 7/14/2025

County: Dane

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)
Mulch or Erosion Mat	11/16/26	07/15/27	54.5%	150	Silt Loam	0.43	5.0%	30	0.29	0.20	2.1	0.834	Silt Fence	1.0
Bare Ground	07/15/27	09/15/27	34.6%	150	Silt Loam	0.43	5.0%	30	0.29	1.00	6.5	0.834	Silt Fence	3.3
Seed with Mulch or Er	09/15/27	11/15/27	10.8%	150	Silt Loam	0.43	5.0%	30	0.29	0.10	0.2	0.834	Silt Fence	0.1
End	11/15/27	-----	-----	-----	-------	-----	5.0%	30	0.29	------	-----	0.000		0.0
		-----	-----	-----	-------	-----	5.0%	0	-----	-----	-----	0.000		0.0
		-----	-----	-----	-------	-----	0.0%	0	-----	-----	-----	0.000		0.0
										TOTAL	**8.8**		**TOTAL**	**4.4**
													% 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:	KLM
Date	7/14/2025

WYSER
ENGINEERING

Exhibit E

WYSER ENGINEERING

Erosion Control Best Management Practice
Preliminary Opinion of Probable
Construction Costs

Item	Quantity	Unit	Unit Cost	Total
Tracking Control Pad	1	EA	$ 1,200.00	$ 1,200.00
Silt Fence	3,080	LF	$ 2.50	$ 7,700.00
Erosion Mat	9,415	SY	$ 1.75	$ 16,476.25
Fertilizer, Seed & Mulch	12,890	SY	$ 2.50	$ 32,225.00
Riprap	6	EA	$ 500.00	$ 3,000.00
Ditch Checks	2	EA	$ 500.00	$ 1,000.00
Inlet Protection	4	EA	$ 500.00	$ 2,000.00
				$ 63,601.25

STORMWATER MANAGEMENT REPORT

Gusto!

July 15, 2025

Prepared For: Buffalo Development, LLC

Wyser Engineering Project No.: 24-1243

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5.0 Conclusion

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Appendix B Soils Information
Appendix C Proposed Construction Plans
Appendix D Pre-development Hydrologic Modeling
Appendix E Post Development Hydrologic Modeling
Appendix F Water Quality and Infiltration Modeling
Appendix G Stormwater Management Best Management Practice Preliminary Opinion of Probable Construction Costs
Appendix H Declaration of Conditions, Covenants and Restrictions for Maintenance of Stormwater Management Measures

Future questions and comments can be directed to:

Kate Meagher, P.E.
Water Resource Engineer
kate.meagher@wyserengineering.com
(608) 437-1865

Wyser Engineering, LLC
300 E. Front Street
Mount Horeb, WI 53572

1.0 Introduction

A new commercial and residential development is being proposed at the northwest corner of Lacy Road and Seminole Highway in the City of Fitchburg. A CSM is being created with the development to split the existing agricultural farmstead into 4 lots. The two north lots are intended for commercial use and the two south lots are intended for residential use. This stormwater management plan is designed to cover the development of all 4 lots. The exact layout of the development for each lot has not been confirmed yet. Approximate layouts have been used to estimate the amount of impervious that will be added to each lot. The development of all four lots will create approximately 317,500 square feet of new impervious area. The project is required to meet new development standards for applicable City of Fitchburg and WDNR permitting.

To meet new development standards four bioretention basins and two underground infiltration chamber systems have been proposed. The stormwater features provide water quality treatment, oil and grease control, runoff rate control, and infiltration. The basin in the northwest corner of the site discharges to an existing swale to the northwest, which ultimately drains to a wet pond in an internally draining watershed. The basins on the south and east side of the site discharge to the Lacy Rd and S Seminole Hwy right-of-way. The swales and storm sewer along the right-of-way conveys the runoff to the south to an internally draining watershed.

2.0 Existing Conditions

The existing conditions of the proposed development area are agricultural farmstead and cropland. The entire existing parcel is bordered by Seminole Highway to the east, Lacy Road to the south, Badger State Trail to the west, and commercial developments to the north. There is a ridge near the center of the site and runs from west to east. The ridge divides the site's drainage. The north portion of the site drains to the northwest corner of the site. The commercial lot to the north was developed in 2020. A swale was created on the west side of the development to route offsite runoff around the site. A storm sewer headwall existing in the northwest corner of the lot was designed to capture runoff from the swale and discharge to the public storm sewer along Sub-Zero Parkway. The public storm sewer discharges to a wet pond to the west. The wet pond is an internally draining watershed. The south portion of the site drains south to towards Lacy Rd. Storm sewer along Lacy Rd extends to the north to capture runoff from the site. The public storm sewer discharges to the southwest corner of the Lacy Rd / S Seminole Hwy roundabout towards cropland that is an internally drained watershed. Please refer to **Appendix A** for graphical representation of the site.

The original native onsite soils are classified as Plano silt loam (PoA and PoB) and Kegonsa silt loam (KeB). The PoA, PoB, and KeB soils have a Hydrologic Soil Group (HSG) classification 'B'. HSG C soils have been assumed for post-development conditions. Test pits were completed on August 15, 2024 by CGC, Inc. The test pits in the northwest corner of the site and center of the site indicated silty loam, silty clay loam, and fine sandy loam over very gravely sand. A design infiltration rate of 3.6 in/hr has been used for the north and central parts of the site. The test pit near the south side of the site indicated silty loam, silty clay loam, and fine sandy loam over gravely fine sand. A design infiltration rate of 0.5 in/hr has been used for the south side of the site. Groundwater was not observed in any test pit. Please refer to **Appendix B**.

3.0 Design Criteria

Wisconsin Administrative Code
Department of Natural Resources (WDNR)
Chapter NR 151 & NR 216

Fitchburg, WI – City Code of Ordinances
Title III, Chapter 30, Article II

4.0 Stormwater Management Analysis / Design

The proposed improvements include development for all four lots. The development on Lot 1 is predicted to include a commercial building and shared parking lot with Lot 2. 59,585 square feet of impervious area has been included for the Lot 1 development. The development on Lot 2 is predicted to include a commercial building and a shared parking lot with Lot 1. 34,900 square feet of impervious area has been included for the Lot 2 development. The development on Lot 3 is predicted to include four multi-family residential buildings, a club house, a pool, green roofs with patios over underground parking, and parking lots. 156,905 square feet of impervious area has been included for the Lot 3 development. The development on Lot 4 includes a multi-family residential building, green roofs with patio over underground parking, and a surface parking lot. 66,110 square feet of impervious area has been included for the Lot 4 development. In total, the improvement include approximately 317,500 square feet of impervious area. Please refer to **Appendix C** for a graphic of the impervious areas for each lot and the GDP plan set of the residential development. The site will be treated to meet new development standards. The following stormwater features have been proposed to meet new development standards.

Bioretention Basin 1 is proposed in the northwest corner of the site. The basin will capture runoff from most of Lot 1, Lot 2, and the northwest portion of Lot 3. The bioretention basin will provide water quality, infiltration, and runoff rate control. The basin discharges to a sedimentation basin with level spreader to the northeast. The sedimentation basin and level spreader disperse the concentrated discharge from the bioretention basin before discharging to bypass swale on the west side of the property to the north.

Bioretention Basin 2 is proposed on the east side of the site. The basin will capture runoff from the northeast apartment building on Lot 3. The bioretention basin will provide water quality, infiltration, and runoff rate control. The basin discharges east to S Seminole Hwy right-of-way.

Bioretention Basin 3 is proposed on the east side of the site to the south of Bioretention Basin 2. The basin will capture runoff from the club house, the north half of the southeast building on Lot 3 and the overflow from the south half of that building. The bioretention basin will provide water quality, infiltration, and runoff rate control. The basin discharges east to S Seminole Hwy right-of-way.

Underground Infiltration 5 is proposed on the north side of the building on Lot 4. The facility will capture runoff from the rooftop of the building on Lot 4. The facility will provide water quality, infiltration, and runoff rate control. The facility discharges to Bioretention Basin 4.

Underground Infiltration 6 is proposed on the west side of the southeast building on Lot 3. The facility will capture runoff from the south half of the southeast building on Lot 3. The facility will provide water quality, infiltration, and runoff rate control. The facility discharges to Bioretention Basin 4.

Bioretention Basin 4 is proposed on the south side of the site. The basin will capture runoff from the parking lot and patio areas on Lot 4 and the southeast part of Lot 3 and the discharge from Underground Infiltration 5 and 6. The bioretention basin will provide water quality, infiltration, and runoff rate control. The basin discharges to the S Seminole Hwy right-of-way.

The maintenance agreement for the site stormwater management features can be found within **Appendix H**. Specifically, please note the following most stringent standards:

Stormwater Management Plan Requirements: Fitchburg, WI – City Code of Ordinances, Chapter 30 – 30-28(a)

This plan was completed and sealed under the direction of Kathleen L Meagher, Professional Engineer E-101102. The preliminary opinion of probable construction costs for use in determining the financial security instrument for the project can be found within **Appendix G** but will be provided separately by the owner prior to construction.

4.1 Water Quality

Sediment Control: Fitchburg, WI – City Code of Ordinances, Chapter 30 – 30-28(b)(1)a.i.

WinSLAMM (Version 10.4.1) has been used to analyze the water quality for this site. WinSLAMM is an approved model to run a continuous average annual rainfall for Madison (MSN 1981) using the NURP partial distribution.

The required total suspended solids treatment is based on 80% reduction from the proposed development. The model predicts the proposed development will produce 3,038 pounds of suspended solids, which requires 2,430 pounds of treatment.

With the proposed treatment facilities, the model predicts a TSS reduction of 2,810 pounds (92.54% reduction). Please refer to **Appendix F** for WinSLAMM modeling output and summary.

Oil and Grease Control: Fitchburg, WI – City Code of Ordinances, Chapter 30 – 30-28(b)(2)

The oil and grease control is provided by the bioretention basins. The basin captures the first 0.5 in rainfall and has engineered soil, which to provide oil and grease control.

4.2 Storm Water Discharge Quantity

Runoff Rate Control; Hydrologic Calculations: Fitchburg, WI – City Code of Ordinances, Chapter 30 – 30-28(b)(3)

The predevelopment site is was modeled as agricultural, HSG B, which has a curve number of 68. The existing shed and other impervious area has a curve number of 98. The soil classification has been increased to HSG C for post development conditions.

Runoff Rate Control; Design Standards: Fitchburg, WI – City Code of Ordinances, Chapter 30 – 30-28(b)(4)

HydroCAD model version 10.20-2g was used to analyze the existing and proposed runoff rate for the site. The bioretention basins have been designed to maintain predevelopment peak runoff rates for the 1-, 2-, 10-, 100-, and 200-year 24-hour storm events. The north and south watershed have been analyzed separately. Please refer to **Table 1 and 2** for the existing versus proposed predicted runoff rates for the north and south watershed respectively. Refer to **Appendix D & E** for the HydroCAD output.

Table 1. Existing vs. Proposed peak runoff rates for select storm events for the north watershed.

	Area (ac)	Impervious CN	Pervious CN	Tc	Rainfall for 24-hour storm event (inches)				
					1-year	2-year	10-year	100-year	200-year
					2.49	2.84	4.09	6.66	7.53
Existing-Development peak discharge rate (cfs)	6.36	98	68	12.7	**2.54**	**3.91**	**9.90**	**25.14**	**30.74**
Post-Development peak discharge rate (cfs)									
Watershed A - Basin 1 - North	6.15	98	74	6.0	16.65	19.37	29.25	50.04	57.13
Watershed B - No Treatment - North	0.40	98	74	6.0	0.38	0.52	1.10	2.45	2.93
Post-Development peak discharge rate without detention(cfs)					17.02	19.88	30.34	52.48	60.05
Post-Development peak discharge rate with detention (cfs)					**0.78**	**1.53**	**7.07**	**17.43**	**30.04**
Difference: Post-construction peak flow rates with detention vs. pre-existing peak flow rates (cfs)					**-1.76**	**-2.38**	**-2.83**	**-7.71**	**-0.70**

Table 2. Existing vs. Proposed peak runoff rates for select storm events for the south watershed.

	Area (ac)	Impervious CN	Pervious CN	Tc	Rainfall for 24-hour storm event (inches)				
					1-year	2-year	10-year	100-year	200-year
					2.49	2.84	4.09	6.66	7.53
Existing-Development peak discharge rate (cfs)	4.51	98	68	12.2	**2.16**	**3.17**	**7.56**	**18.55**	**22.58**
Post-Development peak discharge rate (cfs)									
Watershed C - Basin 2 - South	0.37	98	74	6.0	1.08	1.24	1.84	3.09	3.51
Watershed D - Basin 3 - South	0.31	98	74	6.0	0.83	0.97	1.47	2.52	2.88
Watershed E - Basin 4 - South	1.99	98	74	6.0	5.25	6.20	9.31	16.04	18.34
Watershed E1 - Underground Infiltration 5 - South	0.63	98	74	6.0	2.03	2.32	3.37	5.51	6.23
Watershed E2 - Underground Infiltration 6 - South	0.15	98	74	6.0	0.48	0.55	0.79	1.30	1.47
Watershed F - No Treatment - South	0.86	98	74	6.0	0.97	1.28	2.53	5.42	6.43
Post-Development peak discharge rate without detention(cfs)					10.63	12.48	19.30	33.86	38.86
Post-Development peak discharge rate with detention (cfs)					**1.72**	**2.03**	**4.70**	**16.02**	**18.56**
Difference: Post-construction peak flow rates with detention vs. pre-existing peak flow rates (cfs)					**-0.44**	**-1.14**	**-2.86**	**-2.53**	**-4.02**

Outlets: Fitchburg, WI – City Code of Ordinances, Chapter 30 – 30-28(b)(5)

The storm sewer system will be designed during each phase of the development. All discharge points will be protected with riprap. It is assumed that the downstream discharge points have protection from outlet erosion.

Infiltration: Fitchburg, WI – City Code of Ordinances, Chapter 30 – 30-28(b)(6)

The infiltration volume for the site was analyzed using WinSLAMM to determine pre- and post-development stay-on. Because the site is located in an internally drained watershed, the development is required to infiltrate as close to 100 percents as practicable of the average annual pre-development infiltration volume, regardless of the effective area of the infiltration system. The north and south watershed were analyzed separately. The pre-development volume tool in WinSLAMM was used to estimate the pre-development runoff volume. The WinSLAMM model with the stormwater controls was used to determine the post development runoff volume and stay-on volume. Please refer to Table 3 for the pre and post development for the north and south watershed. Please refer to **Appendix F** for WinSLAMM output information.

Table 3. Pre and post development stay-on for the north and south watershed.

	North	South
Total Area (acres)	6.55	4.31
Pre-Development Stay-On (cf)	665,114	437,602
Post-Development Stay-On (cf)	671,433	437,943

Thermal Control Reduction: Fitchburg, WI – City Code of Ordinances, Chapter 30 – 30-28(b)(7)

The site is not located in a thermally sensitive watershed.

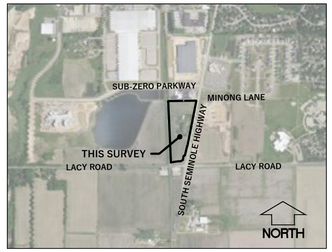
5.0 Conclusion

Construction and Post Development BMP's for stormwater management have been designed in accordance with applicable requirements of the City of Fitchburg Code of Ordinance and Wisconsin Administrative Code. Four bioretention basins and two underground infiltration systems are proposed to meet applicable new development requirements.

APPENDIX A

Existing Conditions Survey

VICINITY MAP
NOT TO SCALE

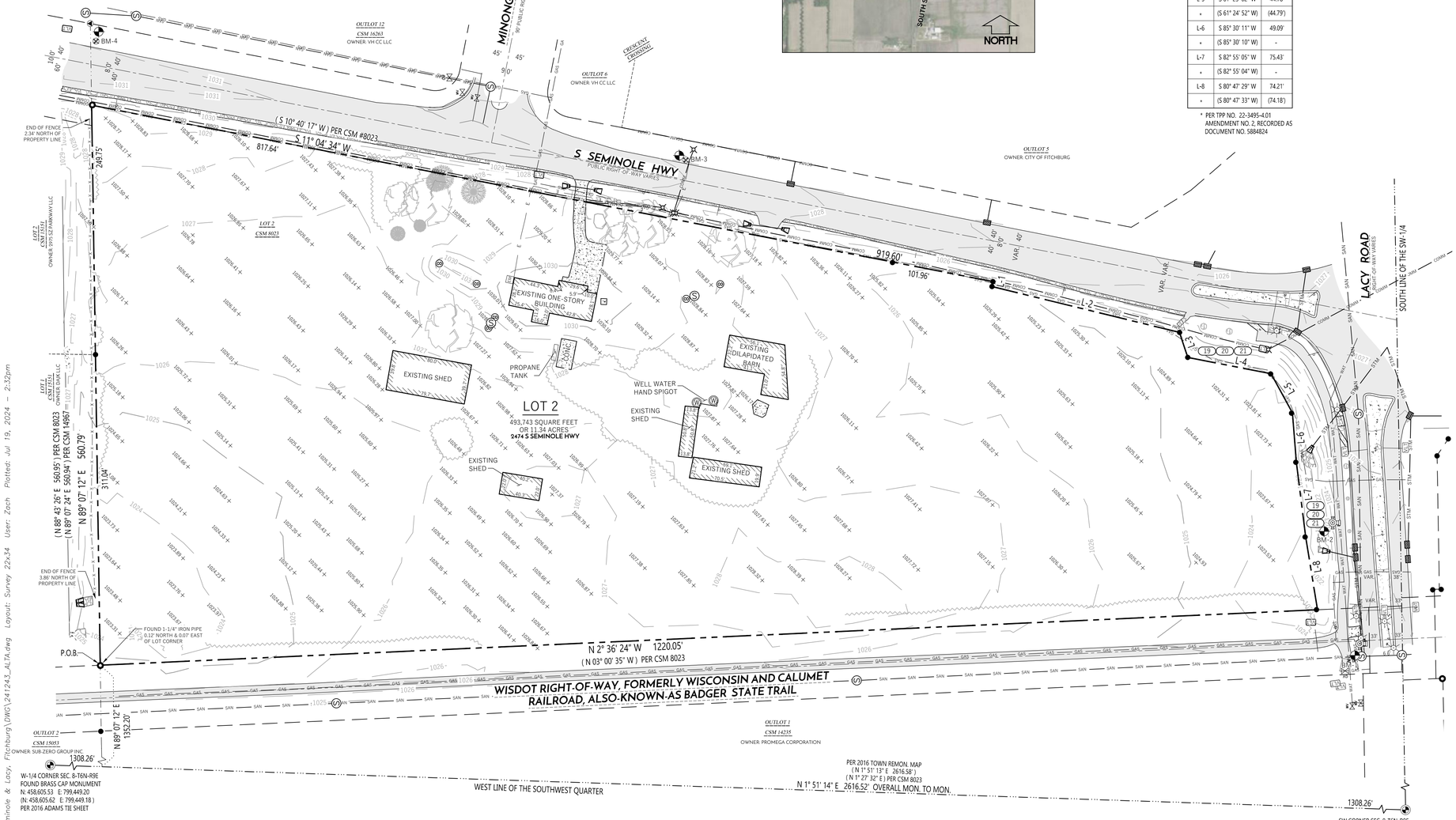


LINE TABLE		
LINE #	DIRECTION	LENGTH
L-1	N 78° 55' 26" W	5.01'
"	(N 78° 55' 45" W)	(5.00')
L-2	S 13° 44' 29" W	193.21'
"	(S 13° 44' 26" W)	-
L-3	S 71° 35' 45" W	26.42'
"	(S 71° 35' 42" W)	-
L-4	S 11° 04' 04" W	85.00'
"	(S 11° 04' 15" W)	-
L-5	S 61° 25' 02" W	44.78'
"	(S 61° 24' 52" W)	(44.79')
L-6	S 85° 30' 11" W	49.09'
"	(S 85° 30' 10" W)	-
L-7	S 82° 55' 05" W	75.43'
"	(S 82° 55' 04" W)	-
L-8	S 80° 47' 29" W	74.21'
"	(S 80° 47' 33" W)	(74.18')

* PER TPP NO. 22-3495-01 AMENDMENT NO. 2, RECORDED AS DOCUMENT NO. 5884824

NORTH

0' 30' 60' 90'
1" = 60' on 22"x34"
1"= 120' on 11"x17"



LEGEND

- FOUND PLSS MON. TYPE NOTED
- FOUND 1" IRON PIPE
- FOUND 3/4" REBAR
- FOUND PK NAIL
- FOUND CUT CROSS
- SIGN
- SANITARY MANHOLE
- SEWER CLEANOUT
- GAS VALVE
- FIRE HYDRANT
- WATER VALVE
- WELL
- COMMUNICATION PEDESTAL
- APRON END WALL
- INLETS
- LIGHTPOLE
- ELECTRICAL METER
- CONIFEROUS TREE
- DECIDUOUS TREE
- UNDERGROUND UTILITY VAULT
- VERTICAL BENCHMARK
- (XXX) RECORDED AS
- PROPERTY LINE
- PLATTED LINE
- RIGHT-OF-WAY LINE
- CENTERLINE
- SECTION LINE
- BUILDING FOOTPRINT
- EDGE OF CONCRETE
- EDGE OF ASPHALT
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- NATURAL GAS LINE
- COMMUNICATION LINE
- ELECTRIC LINE
- GRAVEL/RIP RAP
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- 1020 CONTOUR MAJOR
- 1021 CONTOUR MINOR
- FENCE LINE
- TREE LINE

LEGAL DESCRIPTION AS FURNISHED

PER FIRST AMERICAN TITLE LLC, TITLE COMMITMENT, FILE NO. NCS-122007-MAD DATED: MAY 29, 2024 AT 7:30 A.M

LOT 2 OF CERTIFIED SURVEY MAP NO. 8023 RECORDED IN THE OFFICE OF THE REGISTER OF DEEDS FOR DANE COUNTY, WISCONSIN ON NOVEMBER 16, 1995, IN VOLUME 42 OF CERTIFIED SURVEY MAPS, PAGES 313-316 AS DOCUMENT NO. 2719369, SAID CERTIFIED SURVEY MAP BEING PART OF THE SOUTHEAST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 08, TOWNSHIP 06 NORTH, RANGE 09 EAST, IN THE CITY OF FITCHBURG, DANE COUNTY, WISCONSIN.

EXCEPTING THEREFROM THE LAND DESCRIBED IN AWARD OF DAMAGES RECORDED FEBRUARY 25, 2013 AS DOCUMENT NO. 4964304.

FURTHER EXCEPTING THEREFROM THE LAND DESCRIBED IN AWARD OF DAMAGES RECORDED DECEMBER 28, 2022 AS DOCUMENT NO. 5879973.

LEGAL DESCRIPTION AS SURVEYED

PART OF LOT 2 OF CERTIFIED SURVEY MAP NO. 8023 RECORDED IN VOLUME 42 OF CERTIFIED SURVEY MAPS OF DANE COUNTY ON PAGES 313-316 AS DOCUMENT NO. 2719369 (CSM 8023), LOCATED IN THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 8, TOWNSHIP 6 NORTH, RANGE 9 EAST, CITY OF FITCHBURG, DANE COUNTY , WISCONSIN, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE WEST QUARTER CORNER OF AFORESAID SECTION 8; THENCE, ALONG THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 8, SOUTH 01 DEGREES 51 MINUTES 14 SECONDS EAST, 1308.26 FEET TO THE NORTHWEST CORNER OF THE SOUTH HALF OF THE SOUTHWEST QUARTER OF SAID SECTION 8; THENCE ALONG THE NORTH LINE OF SAID SOUTH HALF, NORTH 89 DEGREES 07 MINUTES 12 SECONDS EAST, 1352.20 FEET TO THE NORTHWEST CORNER OF AFORESAID LOT 2 OF CSM 8023, AND THE POINT OF BEGINNING; THENCE, CONTINUING ALONG SAID NORTH LINE OF THE SOUTH HALF, AND ALSO ALONG THE NORTH LINE OF SAID LOT 2, NORTH 89 DEGREES 07 MINUTES 12 SECONDS EAST, 560.79 FEET TO THE NORTHEAST CORNER OF SAID LOT 2, AND ALSO BEING A POINT ON THE WESTERLY RIGHT-OF-WAY OF SOUTH SEMINOLE HIGHWAY; THENCE, ALONG THE EAST LINE OF SAID LOT 2, AND ALONG SAID WESTERLY RIGHT-OF-WAY, SOUTH 11 DEGREES 04 MINUTES 34 SECONDS WEST, 919.60 FEET; THENCE, CONTINUING ALONG SAID WESTERLY RIGHT-OF-WAY, NORTH 78 DEGREES 55 MINUTES 25 SECONDS WEST, 5.01 FEET; THENCE, CONTINUING ALONG SAID WESTERLY RIGHT-OF-WAY, SOUTH 13 DEGREES 44 MINUTES 29 SECONDS WEST, 193.21 FEET; THENCE, CONTINUING ALONG SAID WESTERLY RIGHT-OF-WAY, SOUTH 71 DEGREES 35 MINUTES 42 SECONDS WEST, 26.42 FEET; THENCE, CONTINUING ALONG SAID WESTERLY RIGHT-OF-WAY, SOUTH 11 DEGREES 04 MINUTES 04 SECONDS WEST, 85.00 FEET TO A POINT ON THE NORTHERLY RIGHT-OF-WAY OF LACY ROAD; THENCE, CONTINUING ALONG SAID NORTHERLY RIGHT-OF-WAY, SOUTH 61 DEGREES 25 MINUTES 02 SECONDS 44.78 FEET; THENCE, CONTINUING ALONG SAID NORTHERLY RIGHT-OF-WAY, SOUTH 85 DEGREES 30 MINUTES 11 SECONDS WEST, 49.09 FEET; THENCE, CONTINUING ALONG SAID NORTHERLY RIGHT-OF-WAY, 82 DEGREES 55 MINUTES 05 SECONDS WEST, 75.43 FEET; THENCE, CONTINUING ALONG SAID NORTHERLY RIGHT-OF-WAY, SOUTH 80 DEGREES 47 MINUTES 29 SECONDS WEST, 74.21 FEET TO A POINT ON THE WESTERLY LINE OF AFORESAID LOT 2 OF CSM 8023; THENCE, ALONG SAID WESTERLY LINE, NORTH 02 DEGREES 36 MINUTES 24 SECONDS WEST, 1220.05 FEET BACK TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINS 493,619 SQUARE FEET OR 11.33 ACRES.

GENERAL NOTES

1. FIELD WORK PERFORMED BY WYSER ENGINEERING, LLC. ON THE WEEK OF, JUNE 5, 2024.
2. NORTH REFERENCE FOR THIS EXISTING CONDITIONS SURVEY AND MAP ARE BASED ON THE WISCONSIN COORDINATE REFERENCE SYSTEM, NAD 83 (2011) WISCRS DANE, GRID NORTH. THE WEST LINE OF THE SOUTHWEST QUARTER OF SECTION 08, T06N, R09E, BEARS N 01°51' 14" E.
3. ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
4. SUBSURFACE UTILITIES AND FIXTURES SHOWN ON THIS MAP HAVE BEEN APPROXIMATED BY LOCATING SURFACE FEATURES AND ACCESSORIES, DIGGERS HOTLINE FIELD MARKINGS AND EXISTING MAPS AND RECORDS.
5. BEFORE EXCAVATION, APPROPRIATE UTILITY COMPANIES SHOULD BE CONTACTED. FOR EXACT LOCATION OF UNDERGROUND UTILITIES, CONTACT DIGGERS HOTLINE, AT 1.800.242.8511 OR 811
6. THIS PARCEL IS SUBJECT TO ALL EASEMENTS AND AGREEMENTS, BOTH RECORDED AND UNRECORDED.
7. FEATURES HAVE BEEN LOCATED BY SURVEYOR IN FIELD THAT MAY HAVE ADVERSE TITLE ELEMENTS. AS TO WHICH ELEMENT ENCROACHMENT. CLAIM OF UNRECORDED EASEMENT. PRESCRIPTIVE EASEMENT, AND SO FORTH CAN NOT BE DETERMINED BY SURVEYOR.

BENCHMARK TABLE		
BM - #	ELEVATION	DESCRIPTION
BM - 1	1027.42	TOP NUT ON THE HYDRANT ON THE NORTHERLY RIGHT- OF-WAY OF LACY ROAD, EAST OF WIS D.O.T. RIGHT-OF-WAY
BM - 2	1027.34	TOP NUT ON THE HYDRANT ON THE NORTHERLY RIGHT- OF-WAY OF LACY ROAD, WEST OF WIS D.O.T. RIGHT-OF-WAY
BM - 3	1029.16	CUT CROSS IN PAVEMENT ON THE EASTERLY RIGHT-OF-WAY OF S SEMINOLE HWY
BM - 4	1032.68	CUT CROSS IN PAVEMENT ON THE EASTERLY RIGHT-OF-WAY OF S SEMINOLE HWY

SURVEYORS CERTIFICATE

TO: NEWCOMB CONSTRUCTION COMPANY INC.
BUFFALO DEVELOPMENT, LLC A WISCONSIN LIMITED LIABILITY COMPANY
ANNA M. O'BRIEN
FIRST AMERICAN TITLE INSURANCE COMPANY

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, 6(A), 7(A), 9, 11(A), 13, 14, 16, AND 19 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED WEEK OF JUNE 5TH, 2024.

DATE OF PLAT OR MAP: JULY 10, 2024.

IN ACCORDANCE WITH SECTION 3.B OF THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, ADDITIONAL CERTIFICATION BELOW TO FULFILL WISCONSIN ADMINISTRATIVE CODE, A-E 7 - MINIMUM STANDARDS FOR PROPERTY SURVEYS IN WISCONSIN. ITEM A-E 7.05 (8)

I, ZACHARY M. REYNOLDS, WISCONSIN PROFESSIONAL LAND SURVEYOR S-3223, DO HEREBY CERTIFY THAT THIS SURVEY AND MAP IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF WITH THE INFORMATION PROVIDED, BY THE ORDER OF THOSE LISTED HEREON, AND THAT THIS SURVEY COMPLIES WITH A-E 7 OF THE WISCONSIN ADMINISTRATIVE CODE.

ZACHARY M. REYNOLDS, S-3223
WISCONSIN PROFESSIONAL LAND SURVEYOR

WISCONSIN
ZACHARY M. REYNOLDS
S-3223
MOUNT HOREB
WISCONSIN
PROFESSIONAL LAND SURVEYOR

DIGGERS HOTLINE
Toll Free (800) 242-8511
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

WYSER ENGINEERING

PREPARED BY:
WYSER ENGINEERING
300 EAST front STREET
MOUNT HOREB, WI 53572
www.wyserengineering.com

PREPARED FOR:
NEWCOMB CONSTRUCTION COMPANY, INC.
999 FOURIER DRIVE #102
MADISON, WI 53717

SURVEYED BY: MAL/DZ
DRAWN BY: AL/AMS
APPROVED BY: ZMR

2747 S SEMINOLE HWY
FITCHBURG, WI 53711

PART OF LOT 2 OF CSM NO. 8023
PART OF THE SE 1/4 OF THE SW 1/4
SEC. 08 T-06-N, R-09-E
CITY OF FITCHBURG, DANE COUNTY, WI

Sheet Title: **ALTA/NSPS LAND TITLE SURVEY**

Revisions:

No.	Date:	Description:

Graphic Scale	0' 15' 30' 60' 90'
Wyser Number	24-1243
Set Type	SURVEY
Date Issued	07/10/2024
Sheet Number	V-001

File: W:\2024\241243_Newcomb - Seminole & Lacy, Fitchburg\DWG\241243_ALTA.dwg Layout: Survey 22x34 User: Zach Plotted: Jul 19, 2024 - 2:32pm

NOTES REGARDING SCHEDULE B - PART II

PER FIRST AMERICAN TITLE LLC, TITLE COMMITMENT, FILE NO. NCS-122007-MAD DATED: MAY 29, 2024 AT 7:30 A.M.

(1) ANY FACTS, RIGHTS, INTERESTS, OR CLAIMS THAT ARE NOT SHOWN BY THE PUBLIC RECORDS BUT THAT COULD BE ASCERTAINED BY AN INSPECTION OF THE LAND OR BY MAKING INQUIRE OF PERSONS IN POSSESSION OF THE LAND.

(2) EASEMENTS, CLAIMS OF EASEMENTS OR ENCUMBRANCES THAT ARE NOT SHOWN BY THE PUBLIC RECORDS.

(3) ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION, OR ADVERSE CIRCUMSTANCE AFFECTING THE TITLE INCLUDING DISCREPANCIES, CONFLICT IN BOUNDARY LINES, SHORTAGES IN AREA, OR ANY OTHER FACTS THAT WOULD BE DISCLOSED BY AN ACCURATE AND COMPLETE LAND SURVEY OF THE LAND, AND THAT ARE NOT SHOWN BY THE PUBLIC RECORDS.

(13) EASEMENTS, DEDICATIONS, RESERVATIONS, PROVISIONS, RELINQUISHMENTS, RECITALS, CERTIFICATES, AND ANY OTHER MATTERS AS PROVIDED FOR OR DELINEATED ON CERTIFIED SURVEY MAP NO. 8023 RECORDED NOVEMBER 16, 1995, IN VOLUME 42 OF CERTIFIED SURVEY MAPS, PAGES 313-316 AS DOCUMENT NO. 2719369 REFERENCED IN THE LEGAL DESCRIPTION CONTAINED HEREIN. REFERENCE IS HEREBY MADE TO SAID PLAT FOR PARTICULARS.

THIS ITEM DOES AFFECT SUBJECT PARCEL, HOWEVER, THERE ARE NO SUCH MATTERS TO BE GRAPHICALLY SHOWN OR PLOTTED HEREON.

(14) RESTRICTIONS, DEDICATIONS, CONDITIONS, RESERVATIONS, EASEMENTS AND OTHER MATTERS SHOWN ON THE PLAT OF TRANSPORTATION PROJECT PLAT NO: 1206-07-29 - 4.02, AS RECORDED IN DOCUMENT NO. 4896305 ON JULY 31, 2012, BUT DELETING ANY COVENANT, CONDITION OR RESTRICTION INDICATING A PREFERENCE, LIMITATION OR DISCRIMINATION BASED ON RACE, COLOR, RELIGION, SEX, HANDICAP, FAMILIAL STATUS OR NATIONAL ORIGIN TO THE EXTENT SUCH COVENANTS, CONDITIONS OR RESTRICTIONS VIOLATE 42 USC 3604(C).

THIS ITEM DOES AFFECT SUBJECT PARCEL. TEMPORARY LIMITED EASEMENTS SHOWN ON SAID PLAT HAVE EXPIRED, HOWEVER ACCESS TO SOUTH SEMINOLE HIGHWAY AND LACY ROAD ARE CONTROLLED BY THE CITY OF FITCHBURG; EXTENTS OF CONTROLLED ACCESS IS UNCLEAR AND ARE NOT PLOTTED HEREON.

(15) RESTRICTIONS, DEDICATIONS, CONDITIONS, RESERVATIONS, EASEMENTS AND OTHER MATTERS SHOWN ON THE PLAT OF TRANSPORTATION PROJECT PLAT NO: 22-3495 - 4.01, AS RECORDED IN VOLUME 61-060B, PAGE 363 ON MARCH 24, 2022 AS DOCUMENT NO. 5821244, BUT DELETING ANY COVENANT, CONDITION OR RESTRICTION INDICATING A PREFERENCE, LIMITATION OR DISCRIMINATION BASED ON RACE, COLOR, RELIGION, SEX, HANDICAP, FAMILIAL STATUS OR NATIONAL ORIGIN TO THE EXTENT SUCH COVENANTS, CONDITIONS OR RESTRICTIONS VIOLATE 42 USC 3604(C).

MODIFICATION AND/OR AMENDMENT BY INSTRUMENT: TRANSPORTATION PROJECT PLAT NO: 22-3495 - 4.01, AMENDMENT NO. 1

RECORDING INFORMATION: AUGUST 22, 2022 IN VOLUME 61-072A, PAGE 434 AS DOCUMENT NO. 5857262

MODIFICATION AND/OR AMENDMENT BY INSTRUMENT: TRANSPORTATION PROJECT PLAT NO: 22-3495 - 4.01, AMENDMENT NO. 2

RECORDING INFORMATION: FEBRUARY 02, 2023 IN VOLUME 61-083A, PAGE 487 AS DOCUMENT NO. 5884824

THIS ITEM DOES AFFECT SUBJECT PARCEL. TEMPORARY LIMITED EASEMENTS SHOWN ON SAID PLAT HAVE EXPIRED, HOWEVER ACCESS TO SOUTH SEMINOLE HIGHWAY AND LACY ROAD ARE CONTROLLED BY THE CITY OF FITCHBURG; EXTENTS OF CONTROLLED ACCESS IS UNCLEAR AND ARE NOT PLOTTED HEREON.

(16) UTILITY EASEMENT TO MADISON GAS AND ELECTRIC COMPANY, A WISCONSIN CORPORATION, ITS SUCCESSORS AND ASSIGNS, DATED APRIL 08, 1965, RECORDED/FILED APRIL 15, 1965 IN VOLUME 425, PAGE 199 AS DOCUMENT NO. 1128469.

THIS ITEM DOES NOT AFFECT SUBJECT PARCEL, AND IS NOT PLOTTED HEREON.

EASEMENT SUPPLEMENT RECORDED SEPTEMBER 03, 1987 IN VOLUME 10556 OF RECORDS, PAGE 67 AS DOCUMENT NO. 2043073.

THIS ITEM DOES NOT AFFECT SUBJECT PARCEL, AND IS NOT PLOTTED HEREON.

EASEMENT SUPPLEMENT RECORDED SEPTEMBER 03, 1987 IN VOLUME 10556 OF RECORDS, PAGE 68 AS DOCUMENT NO. 2043074.

THIS ITEM DOES NOT AFFECT SUBJECT PARCEL, AND IS NOT PLOTTED HEREON.

EASEMENT SUPPLEMENT RECORDED SEPTEMBER 03, 1987 IN VOLUME 10556 OF RECORDS, PAGE 69 AS DOCUMENT NO. 2043075.

THIS ITEM DOES NOT AFFECT SUBJECT PARCEL, AND IS NOT PLOTTED HEREON.

EASEMENT SUPPLEMENT RECORDED SEPTEMBER 03, 1987 IN VOLUME 10556 OF RECORDS, PAGE 70 AS DOCUMENT NO. 2043076.

THIS ITEM DOES NOT AFFECT SUBJECT PARCEL, AND IS NOT PLOTTED HEREON.

(17) PRIVATE SEWAGE SYSTEM MAINTENANCE AGREEMENT COVENANT AGREEMENT:

DATED: APRIL 20, 1988
PARTIES: O'BRIEN FARM TRUST AND CITY OF FITCHBURG
RECORDED: MAY 04, 1988 IN VOLUME 11387 OF RECORDS, PAGE 22
INSTRUMENT NO.: 2079460

THIS ITEM DOES AFFECT SUBJECT PARCEL, BUT IS NOT GRAPHIC IN NATURE, AND IS NOT PLOTTED HEREON.

(18) PRIVATE SEWAGE SYSTEM COVENANT AGREEMENT:

DATED: FEBRUARY 26, 1996
PARTIES: WARREN J O'BRIEN AND THE COUNTY OF DANE
RECORDED: MARCH 01, 1996 IN VOLUME 32155, PAGE 72
INSTRUMENT NO.: 2742032

THIS ITEM DOES AFFECT SUBJECT PARCEL, BUT IS NOT GRAPHIC IN NATURE, AND IS NOT PLOTTED HEREON.

(19) COVENANTS, CONDITIONS AND RESTRICTIONS AS SET FORTH IN AWARD OF DAMAGES RECORDED ON FEBRUARY 25, 2013 AS DOCUMENT NO. 4964304, OF OFFICIAL RECORDS, BUT DELETING ANY COVENANT, CONDITION OR RESTRICTION INDICATING A PREFERENCE, LIMITATION OR DISCRIMINATION BASED ON RACE, COLOR, RELIGION, SEX, HANDICAP, FAMILIAL STATUS OR NATIONAL ORIGIN TO THE EXTENT SUCH COVENANTS, CONDITIONS OR RESTRICTIONS VIOLATE 42 USC 3604(C).

THIS ITEM DOES AFFECT SUBJECT PARCEL AND IS PLOTTED HEREON. THIS ITEM CONCERNS THE TAKING OF ADDITIONAL RIGHT-OF-WAY ALONG SOUTH SEMINOLE HIGHWAY AND LACY ROAD.

(20) EASEMENT AS SET FORTH IN NOTICE OF LIS PENDENS RECORDED ON OCTOBER 11, 2022 AS DOCUMENT NO. 5867230.

THIS ITEM DOES AFFECT SUBJECT PARCEL AND IS PLOTTED HEREON. THIS ITEM CONCERNS THE TAKING OF ADDITIONAL RIGHT-OF-WAY ALONG SOUTH SEMINOLE HIGHWAY AND LACY ROAD.

(21) COVENANTS, CONDITIONS AND RESTRICTIONS AS SET FORTH IN AWARD OF DAMAGES RECORDED ON DECEMBER 28, 2022 AS DOCUMENT NO. 5879973, OF OFFICIAL RECORDS, BUT DELETING ANY COVENANT, CONDITION OR RESTRICTION INDICATING A PREFERENCE, LIMITATION OR DISCRIMINATION BASED ON RACE, COLOR, RELIGION, SEX, HANDICAP, FAMILIAL STATUS OR NATIONAL ORIGIN TO THE EXTENT SUCH COVENANTS, CONDITIONS OR RESTRICTIONS VIOLATE 42 USC 3604(C).

THIS ITEM DOES AFFECT SUBJECT PARCEL AND IS PLOTTED HEREON. THIS ITEM CONCERNS THE TAKING OF ADDITIONAL RIGHT-OF-WAY ALONG SOUTH SEMINOLE HIGHWAY AND LACY ROAD.

NOTES REGARDING ALTA TABLE A REQUIREMENTS

ITEM 3: ALL OF THE SUBJECT PARCEL LIES IN "ZONE X" AREAS DETERMINED TO BE BELOW THE 0.2% ANNUAL CHANCE FLOODPLAIN PER NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP NO. 55025C0415G DATED JANUARY 2, 2009

ITEM 6(A): SAID PARCEL IS CURRENTLY ZONED RURAL RESIDENTIAL (R-R), BUT IS BEING REZONED TO GENERAL BUSINESS (B-G). NO ZONING LETTER PROVIDED BY CITY OF FITCHBURG, OR CLIENT. CURRENT ZONING INFORMATION TAKEN FROM FITCHBURG PUBLIC MAP SYSTEM.

ITEM 9: NO EXISTING PARKING STALLS LOCATED ON SAID PARCEL.

ITEM 11(A): NO REPORTS PROVIDED BY CLIENT FOR PRIVATE UTILITY LOCATIONS, NO PRIVATE LOCATE WAS COORDINATED BY THE SURVEYOR. DIGGER'S HOTLINE WAS CALLED AND THEIR FIELD MARKINGS WERE LOCATED.

ITEM 14: SUBJECT PARCEL IS ADJACENT TO S SEMINOLE HWY AND LACY ROAD INTERSECTION. FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING/ZONING DEPARTMENT OF THE CITY OF FITCHBURG. EXISTING ACCESS CONTROL ALONG SEMINOLE HIGHWAY AND LACY ROAD ESTABLISHED FROM SECTION 27 OF THE CITY OF FITCHBURG ORDINANCES.

ITEM 16: NO EVIDENCE OF CURRENT EARTHWORK OR CONSTRUCTION WAS OBSERVED ONSITE AT THE TIME OF THIS SURVEY.

WYSER ENGINEERING

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999 FOURIER DRIVE #102
MADISON, WI 53717

SURVEYED BY: MAL/DZ
DRAWN BY: AL/AMS
APPROVED BY: ZMR

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PART OF LOT 2 OF CSM NO. 8023
PART OF THE SE 1/4 OF THE SW 1/4
SEC. 08 T-06-N, R-09-E
CITY OF FITCHBURG, DANE COUNTY, WI

Sheet Title:
ALTA/NSPS LAND TITLE SURVEY

Revisions:

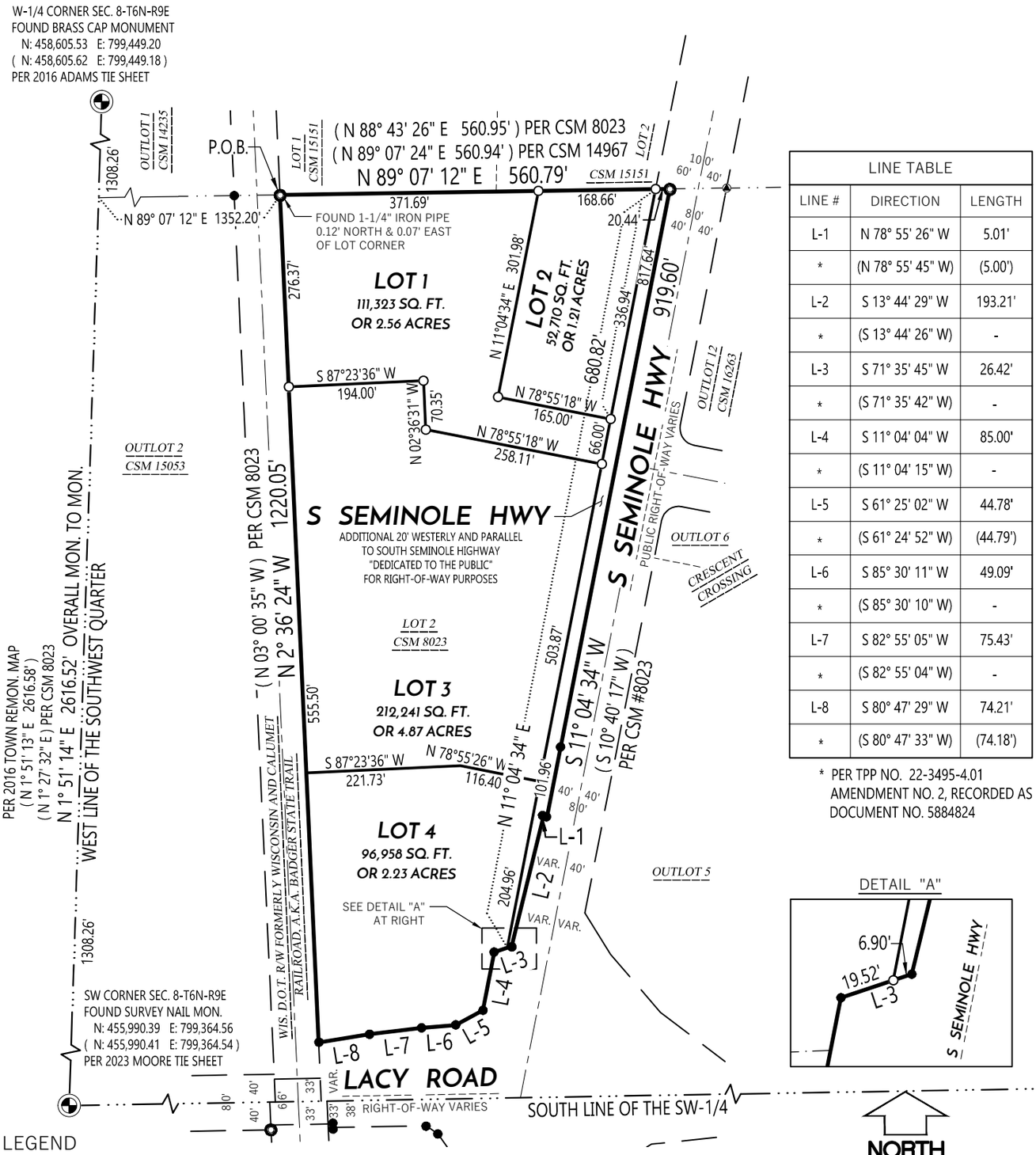
No.	Date:	Description:

Graphic Scale	0' 15' 30' 60' 90'
Wyser Number	24-1243
Set Type	SURVEY
Date Issued	07/10/2024
Sheet Number	V-002

File: W:\2024\241243_Newcomb - Seminole & Lacy, Fitchburg\DWG\241243_ALTA.dwg Layout: Survey 22x34 (2) User: Zach Plotted: Jul 19, 2024 - 2:33pm

CERTIFIED SURVEY MAP NO._____

PART OF LOT 2 OF CERTIFIED SURVEY MAP NO. 8023 RECORDED IN VOLUME 42 OF CERTIFIED SURVEY MAPS OF DANE COUNTY ON PAGES 313-316 AS DOCUMENT NO. 2719369. LOCATED IN THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 08, TOWN 06 NORTH, RANGE 9 EAST, CITY OF FITCHBURG, DANE COUNTY , WISCONSIN.



LINE TABLE		
LINE #	DIRECTION	LENGTH
L-1	N 78° 55' 26" W	5.01'
*	(N 78° 55' 45" W)	(5.00')
L-2	S 13° 44' 29" W	193.21'
*	(S 13° 44' 26" W)	-
L-3	S 71° 35' 45" W	26.42'
*	(S 71° 35' 42" W)	-
L-4	S 11° 04' 04" W	85.00'
*	(S 11° 04' 15" W)	-
L-5	S 61° 25' 02" W	44.78'
*	(S 61° 24' 52" W)	(44.79')
L-6	S 85° 30' 11" W	49.09'
*	(S 85° 30' 10" W)	-
L-7	S 82° 55' 05" W	75.43'
*	(S 82° 55' 04" W)	-
L-8	S 80° 47' 29" W	74.21'
*	(S 80° 47' 33" W)	(74.18')

* PER TPP NO. 22-3495-4.01 AMENDMENT NO. 2, RECORDED AS DOCUMENT NO. 5884824

DETAIL "A"

NORTH

0' 100' 200'

LEGEND

- SECTION CORNER FOUND / RECOVERED
- MAG NAIL FOUND
- 3/4" REBAR FOUND
- 1" IRON PIPE FOUND
- 2" IRON PIPE FOUND
- 3/4" REBAR SET 1.50 LB/FT
- CSM BOUNDARY
- RIGHT-OF-WAY LINE
- CENTERLINE
- SECTION/QUARTER LINE
- QUARTER/QUARTER LINE
- PLATTED LINE
- ( ) RECORDED INFORMATION

NOTES:

1. FIELD WORK PERFORMED BY WYSER ENGINEERING, LLC. ON THE WEEKS OF JUNE 5TH, AND 6TH, 2024.
2. NORTH REFERENCE FOR THIS CERTIFIED SURVEY AND MAP ARE BASED ON THE WISCONSIN COORDINATE REFERENCE SYSTEM, WISCRS DANE, NAD 83 (2011), GRID NORTH. THE WEST LINE OF THE SOUTHWEST QUARTER OF SECTION 8, T6N, R9E, BEARS N 01° 51' 14" E
3. THIS PARCEL IS SUBJECT TO ALL EASEMENTS AND AGREEMENTS, BOTH RECORDED AND UNRECORDED.
4. SEE SHEET 2 OF 8 FOR EXISTING IMPROVEMENTS.
5. SEE SHEETS 3 - 6 OF 8 FOR NEW EASEMENT DETAILS.

WISCONSIN
ZACHARY M. REYNOLDS
S-3223
MOUNT HOREB
WISCONSIN
PROFESSIONAL LAND SURVEYOR

WYSER ENGINEERING

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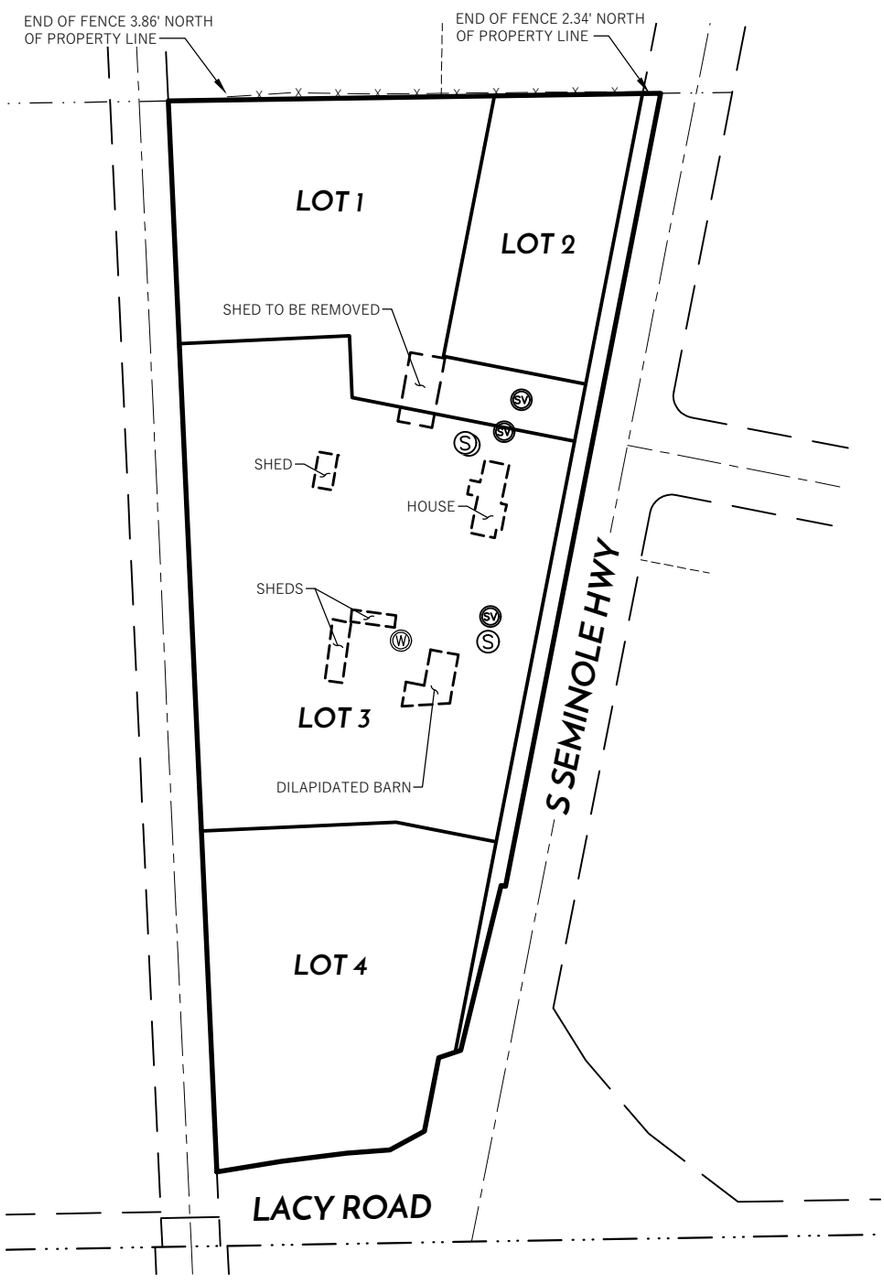
SURVEYED BY:	MAL/DZ
DRAWN BY:	AMS
CHECKED BY:	ZMR
APPROVED BY:	ZMR
PROJECT NO:	24-1243
SHEET NO:	1 of 8

VOL. _____ PAGE _____
DOC. NO. _____
C.S.M. NO. _____

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CERTIFIED SURVEY MAP NO._____

PART OF LOT 2 OF CERTIFIED SURVEY MAP NO. 8023 RECORDED IN VOLUME 42 OF CERTIFIED SURVEY MAPS OF DANE COUNTY ON PAGES 313-316 AS DOCUMENT NO. 2719369. LOCATED IN THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 08, TOWN 06 NORTH, RANGE 9 EAST, CITY OF FITCHBURG, DANE COUNTY , WISCONSIN.



LEGEND

- CSM BOUNDARY
- RIGHT-OF-WAY LINE
- CENTERLINE
- SECTION/QUARTER LINE
- PLATTED LINE
- EXISTING STRUCTURE
- FENCE LINE
- SEPTIC VENT
- SEPTIC/SANITARY MANHOLE
- WELL

NOTES:

1. THIS PARCEL IS SUBJECT TO ALL EASEMENTS AND AGREEMENTS, BOTH RECORDED AND UNRECORDED.
2. SEE SHEETS 3 - 6 OF 8 FOR NEW EASEMENT DETAILS.

NORTH

0' 100' 200'

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SURVEYED BY:	MAL/DZ
DRAWN BY:	AMS
CHECKED BY:	ZMR
APPROVED BY:	ZMR

PROJECT NO:	24-1243
SHEET NO:	2 of 8

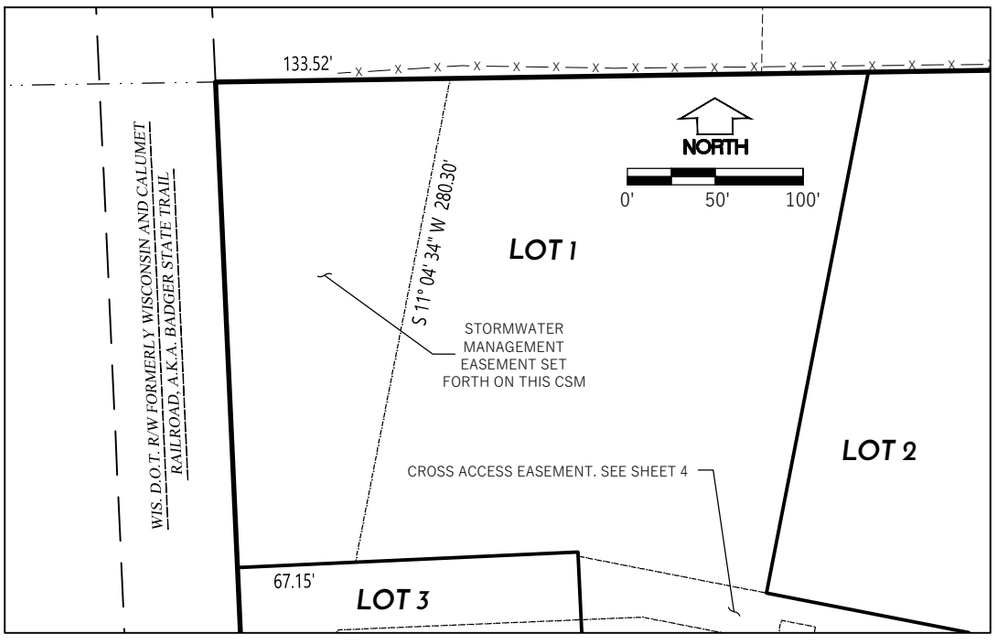
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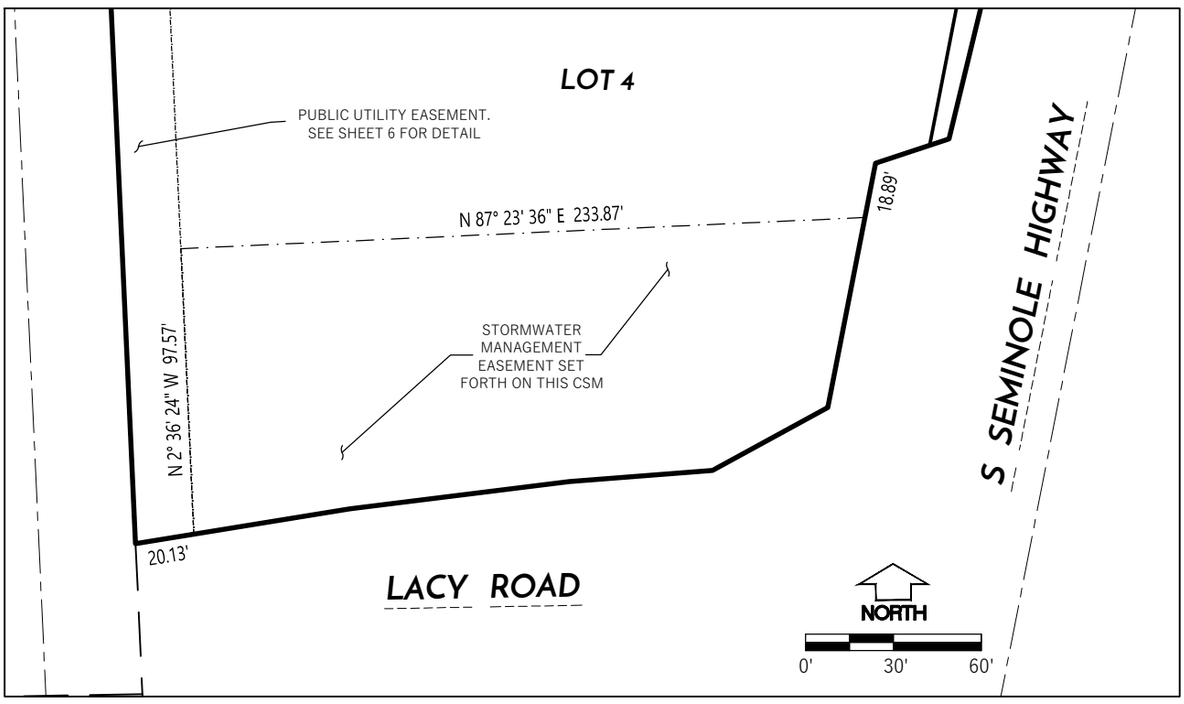
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CERTIFIED SURVEY MAP NO._____

PART OF LOT 2 OF CERTIFIED SURVEY MAP NO. 8023 RECORDED IN VOLUME 42 OF CERTIFIED SURVEY MAPS OF DANE COUNTY ON PAGES 313-316 AS DOCUMENT NO. 2719369. LOCATED IN THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 08, TOWN 06 NORTH, RANGE 9 EAST, CITY OF FITCHBURG, DANE COUNTY , WISCONSIN.

NEW STORMWATER MANAGEMENT EASMENT DETAILS





LEGEND

- CSM BOUNDARY
- RIGHT-OF-WAY LINE
- CENTERLINE
- PLATTED LINE
- NEW EASEMENT SET FORTH ON THIS CSM

NOTES:

1. THIS PARCEL IS SUBJECT TO ALL EASEMENTS AND AGREEMENTS, BOTH RECORDED AND UNRECORDED.
2. SEE SHEETS 4, 5 AND 6 OF 8 FOR ADDITIONAL NEW EASEMENT DETAILS.

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SURVEYED BY:	MAL/DZ
DRAWN BY:	AMS
CHECKED BY:	ZMR
APPROVED BY:	ZMR
PROJECT NO:	24-1243
SHEET NO:	3 of 8

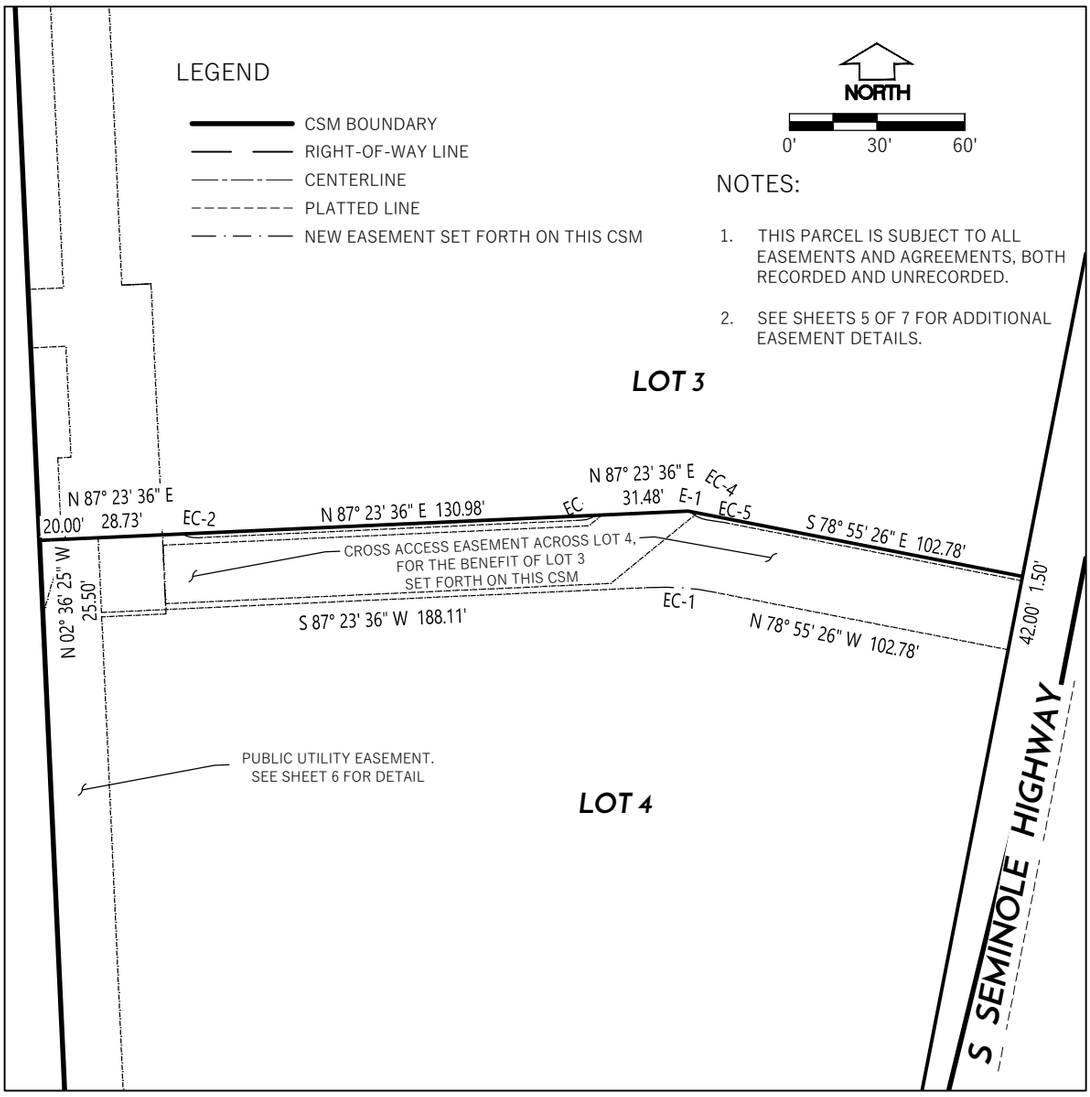
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*CERTIFIED SURVEY MAP NO.*_____

PART OF LOT 2 OF CERTIFIED SURVEY MAP NO. 8023 RECORDED IN VOLUME 42 OF CERTIFIED SURVEY MAPS OF DANE COUNTY ON PAGES 313-316 AS DOCUMENT NO. 2719369. LOCATED IN THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 08, TOWN 06 NORTH, RANGE 9 EAST, CITY OF FITCHBURG, DANE COUNTY , WISCONSIN.

NEW CROSS ACCESS EASEMENT DETAILS



EASEMENT LINE TABLE		
LINE #	DIRECTION	LENGTH
E-1	S 78° 55' 26" E	0.70'

WISCONSIN
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S-3223
MOUNT HOREB
WISCONSIN
PROFESSIONAL LAND SURVEYOR

EASEMENT CURVE TABLE					
CURVE #	LENGTH	RADIUS	DELTA	CHORD DIRECTION	CHORD LENGTH
EC-1	21.02'	88.00'	13° 40' 55"	N 85° 45' 55" W	20.97'
EC-2	5.55'	10.00'	31° 47' 11"	S 76° 42' 49" E	5.48'
EC-3	5.55'	10.00'	31° 47' 19"	N 71° 29' 56" E	5.48'
EC-4	6.55'	10.00'	37° 31' 59"	S 63° 35' 33" E	6.43'
EC-5	6.72'	112.00'	3° 26' 06"	S 80° 38' 29" E	6.71'

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SURVEYED BY: MAL/DZ
DRAWN BY: AMS
CHECKED BY: ZMR
APPROVED BY: ZMR

PROJECT NO: 24-1243
SHEET NO: 4 of 8

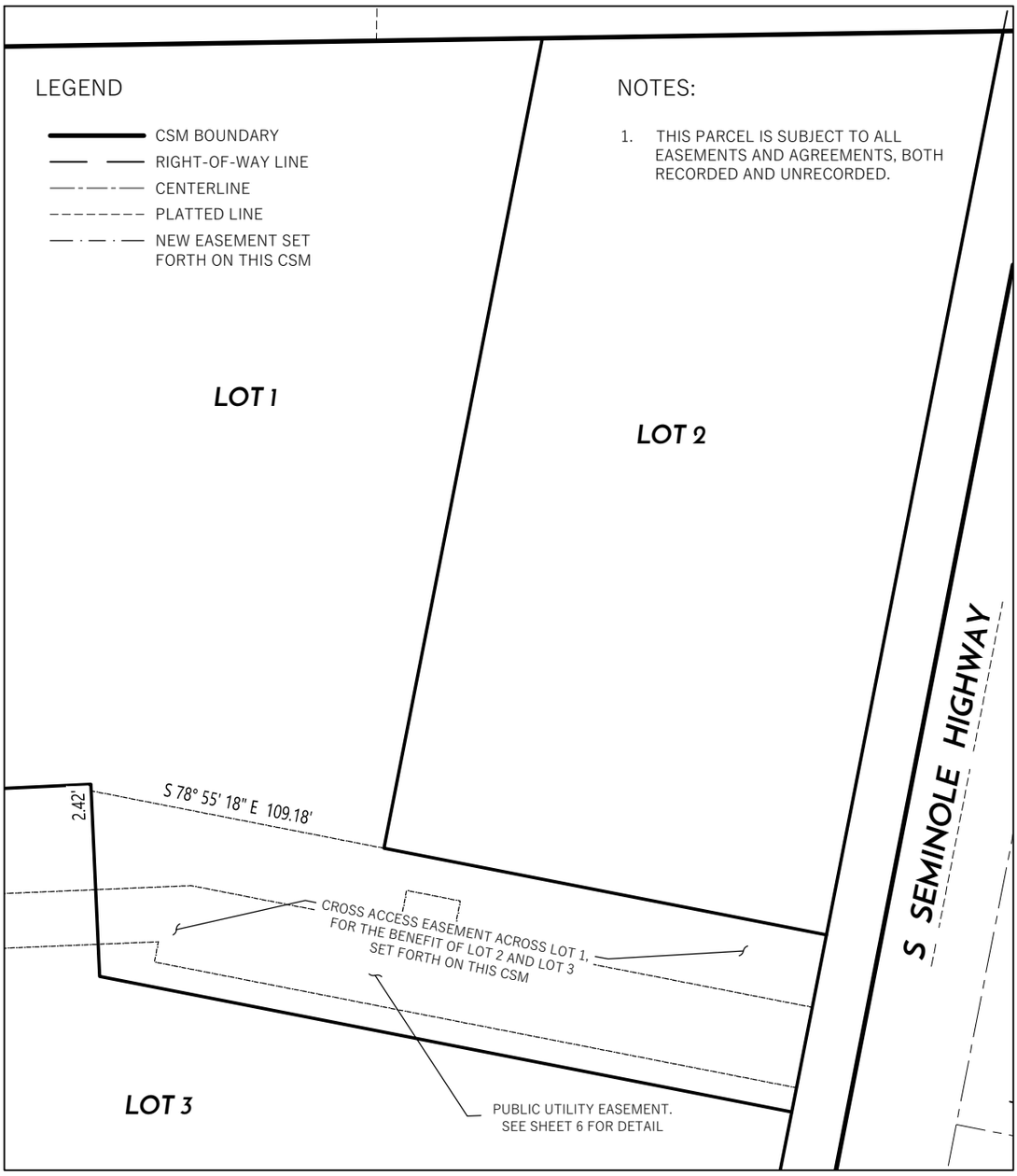
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*CERTIFIED SURVEY MAP NO.*_____

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NEW CROSS ACCESS EASEMENT DETAILS



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PROJECT NO:	24-1243
SHEET NO:	5 of 8

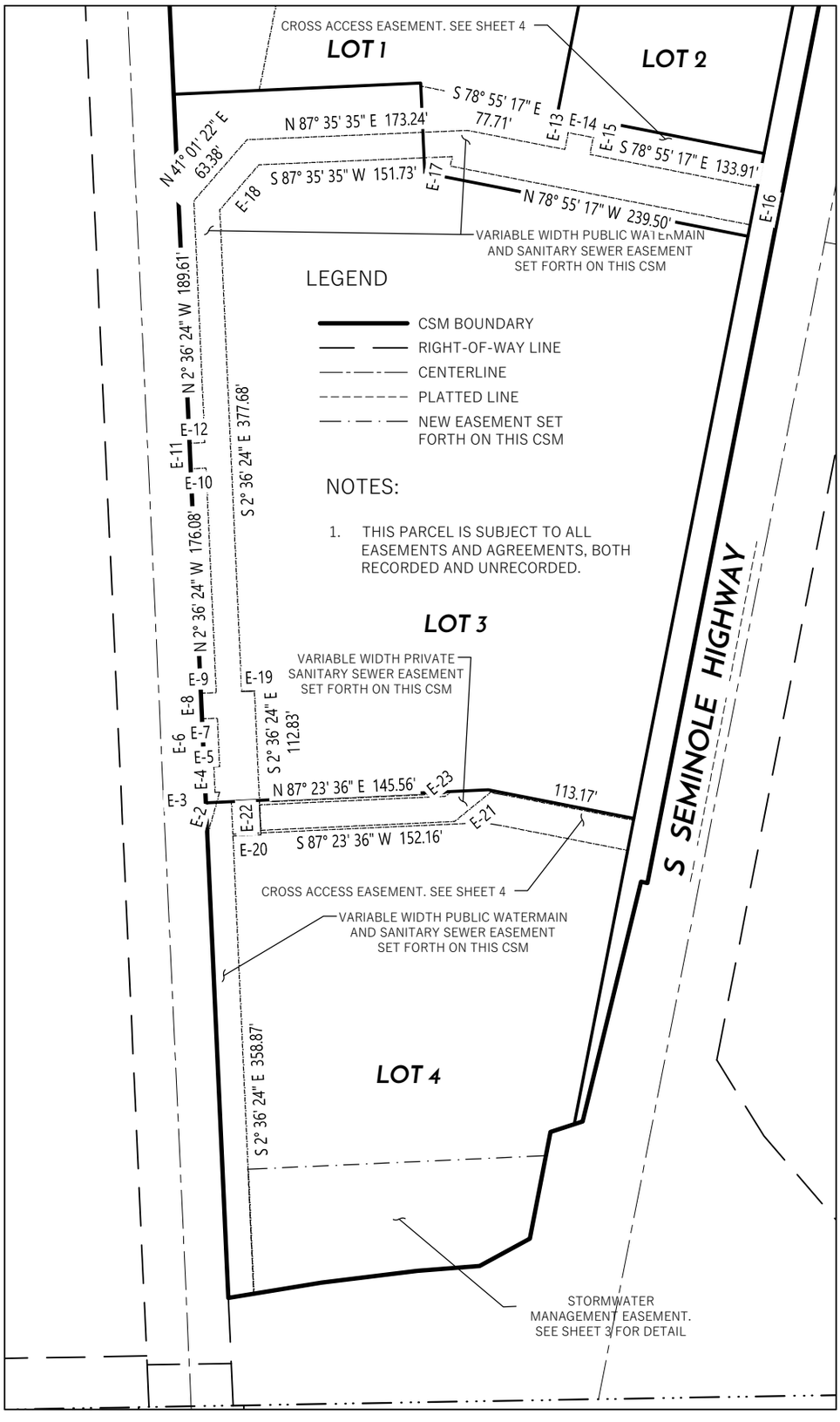
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File: W:\2024\241243_Newcomb – Seminole & Lacy, Fitchburg\DWG\241243_CSM.dwg Layout: CSM 5 OF 8 User: dschneider Plotted: May 16, 2025 – 1:43pm

CERTIFIED SURVEY MAP NO._____

PART OF LOT 2 OF CERTIFIED SURVEY MAP NO. 8023 RECORDED IN VOLUME 42 OF CERTIFIED SURVEY MAPS OF DANE COUNTY ON PAGES 313-316 AS DOCUMENT NO. 2719369. LOCATED IN THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 08, TOWN 06 NORTH, RANGE 9 EAST, CITY OF FITCHBURG, DANE COUNTY , WISCONSIN.

NEW UTILITY EASEMENT DETAILS



LINE TABLE		
LINE #	BEARING	DISTANCE
E-2	N 15° 55' 15" E	35.08'
E-3	S 87° 23' 36" W	3.64'
E-4	N 02° 36' 24" W	20.00'
E-5	N 87° 23' 36" E	4.50'
E-6	N 02° 36' 24" W	37.94'
E-7	S 87° 23' 36" W	12.00'
E-8	N 02° 36' 24" W	20.00'
E-9	N 87° 23' 36" E	12.00'
E-10	S 87° 23' 36" W	12.00'
E-11	N 02° 36' 24" W	20.00'
E-12	N 87° 23' 36" E	12.00'
E-13	N 11° 04' 43" E	13.43'
E-14	S 78° 55' 17" E	20.00'
E-15	S 11° 04' 43" W	13.43'
E-16	S 11° 04' 34" W	30.00'
E-17	N 11° 04' 09" E	7.54'
E-18	S 41° 01' 22" W	46.76'
E-19	N 87° 23' 36" E	10.00'
E-20	S 87° 23' 36" W	22.00'
E-21	S 50° 52' 54" W	38.21'
E-22	N 02° 36' 24" W	20.00'
E-23	N 50° 52' 54" E	5.88'

WISCONSIN
ZACHARY M. REYNOLDS
S-3223
MOUNT HOREB
WISCONSIN
PROFESSIONAL LAND SURVEYOR

WYSER ENGINEERING

PREPARED BY:
WYSER ENGINEERING
300 EAST FRONT STREET
MOUNT HOREB, WI 53572
www.wyserengineering.com

PREPARED FOR:
NEWCOMB CONSTRUCTION COMPANY, INC.
999 FOURIER DRIVE #102
MADISON, WI 53717

SURVEYED BY: MAL/DZ
DRAWN BY: AMS
CHECKED BY: ZMR
APPROVED BY: ZMR

PROJECT NO: 24-1243
SHEET NO: 6 of 8

VOL. _____ PAGE _____
DOC. NO. _____
C.S.M. NO. _____

File: W:\2024\241243_Newcomb – Seminole & Lacy, Fitchburg\DWG\241243_CSM.dwg Layout: CSM 6 OF 8 User: dschneider Plotted: May 16, 2025 – 1:51pm

*CERTIFIED SURVEY MAP NO.*_____

PART OF LOT 2 OF CERTIFIED SURVEY MAP NO. 8023 RECORDED IN VOLUME 42 OF CERTIFIED SURVEY MAPS OF DANE COUNTY ON PAGES 313-316 AS DOCUMENT NO. 2719369. LOCATED IN THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 08, TOWN 06 NORTH, RANGE 9 EAST, CITY OF FITCHBURG, DANE COUNTY , WISCONSIN.

LEGAL DESCRIPTION

PART OF LOT 2 OF CERTIFIED SURVEY MAP NO. 8023 RECORDED IN VOLUME 42 OF CERTIFIED SURVEY MAPS OF DANE COUNTY ON PAGES 313-316 AS DOCUMENT NO. 2719369 (CSM 8023), LOCATED IN THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 8, TOWNSHIP 6 NORTH, RANGE 9 EAST, CITY OF FITCHBURG, DANE COUNTY , WISCONSIN, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE WEST QUARTER CORNER OF AFORESAID SECTION 8; THENCE, ALONG THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 8, SOUTH 01 DEGREES 51 MINUTES 14 SECONDS EAST, 1308.26 FEET TO THE NORTHWEST CORNER OF THE SOUTH HALF OF THE SOUTHWEST QUARTER OF SAID SECTION 8; THENCE ALONG THE NORTH LINE OF SAID SOUTH HALF, NORTH 89 DEGREES 07 MINUTES 12 SECONDS EAST, 1352.20 FEET TO THE NORTHWEST CORNER OF AFORESAID LOT 2 OF CSM 8023, AND THE POINT OF BEGINNING; THENCE, CONTINUING ALONG SAID NORTH LINE OF THE SOUTH HALF, AND ALSO ALONG THE NORTH LINE OF SAID LOT 2, NORTH 89 DEGREES 07 MINUTES 12 SECONDS EAST, 560.79 FEET TO THE NORTHEAST CORNER OF SAID LOT 2, AND ALSO BEING A POINT ON THE WESTERLY RIGHT-OF-WAY OF SOUTH SEMINOLE HIGHWAY; THENCE, ALONG THE EAST LINE OF SAID LOT 2, AND ALONG SAID WESTERLY RIGHT-OF-WAY, SOUTH 11 DEGREES 04 MINUTES 34 SECONDS WEST, 919.60 FEET; THENCE, CONTINUING ALONG SAID WESTERLY RIGHT-OF-WAY, NORTH 78 DEGREES 55 MINUTES 25 SECONDS WEST, 5.01 FEET; THENCE, CONTINUING ALONG SAID WESTERLY RIGHT-OF-WAY, SOUTH 13 DEGREES 44 MINUTES 29 SECONDS WEST, 193.21 FEET; THENCE, CONTINUING ALONG SAID WESTERLY RIGHT-OF-WAY, SOUTH 71 DEGREES 35 MINUTES 42 SECONDS WEST, 26.42 FEET; THENCE, CONTINUING ALONG SAID WESTERLY RIGHT-OF-WAY, SOUTH 11 DEGREES 04 MINUTES 04 SECONDS WEST, 85.00 FEET TO A POINT ON THE NORTHERLY RIGHT-OF-WAY OF LACY ROAD; THENCE, CONTINUING ALONG SAID NORTHERLY RIGHT-OF-WAY, SOUTH 61 DEGREES 25 MINUTES 02 SECONDS WEST, 44.78 FEET; THENCE, CONTINUING ALONG SAID NORTHERLY RIGHT-OF-WAY, SOUTH 85 DEGREES 30 MINUTES 11 SECONDS WEST, 49.09 FEET; THENCE, CONTINUING ALONG SAID NORTHERLY RIGHT-OF-WAY, SOUTH 82 DEGREES 55 MINUTES 05 SECONDS WEST, 75.43 FEET; THENCE, CONTINUING ALONG SAID NORTHERLY RIGHT-OF-WAY, SOUTH 80 DEGREES 47 MINUTES 29 SECONDS WEST, 74.21 FEET TO A POINT ON THE WESTERLY LINE OF AFORESAID LOT 2 OF CSM 8023; THENCE, ALONG SAID WESTERLY LINE, NORTH 02 DEGREES 36 MINUTES 24 SECONDS WEST, 1220.05 FEET BACK TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINS 493,619 SQUARE FEET OR 11.33 ACRES.

SURVEYOR'S CERTIFICATE

I, ZACHARY M. REYNOLDS, WISCONSIN PROFESSIONAL LAND SURVEYOR S-3223, DO HEREBY CERTIFY THAT BY DIRECTION OF NEWCOMB CONSTRUCTION COMPANY, INC. I HAVE SURVEYED, DIVIDED, AND MAPPED THE LANDS DESCRIBED HEREON AND THAT THE MAP IS A CORRECT REPRESENTATION IN ACCORDANCE WITH THE INFORMATION PROVIDED. I FURTHER CERTIFY THAT THIS CERTIFIED SURVEY MAP IS IN FULL COMPLIANCE WITH CHAPTER 236.34 OF THE WISCONSIN STATUTES AND THE SUBDIVISION REGULATIONS OF THE CITY OF FITCHBURG AND DANE COUNTY, WISCONSIN.

_____ _____

ZACHARY M. REYNOLDS, S-3223 DATE
WISCONSIN PROFESSIONAL LAND SURVEYOR



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WYSER ENGINEERING

PREPARED BY:
WYSER ENGINEERING
300 EAST FRONT STREET
MOUNT HOREB, WI 53572
www.wyserengineering.com

PREPARED FOR:
NEWCOMB CONSTRUCTION COMPANY, INC.
999 FOURIER DRIVE #102
MADISON, WI 53717

SURVEYED BY: MAL/DZ
DRAWN BY: AMS
CHECKED BY: ZMR
APPROVED BY: ZMR

PROJECT NO: 24-1243
SHEET NO: 7 of 8

VOL. _____ PAGE _____
DOC. NO. _____
C.S.M. NO. _____

*CERTIFIED SURVEY MAP NO.*_____

PART OF LOT 2 OF CERTIFIED SURVEY MAP NO. 8023 RECORDED IN VOLUME 42 OF CERTIFIED SURVEY MAPS OF DANE COUNTY ON PAGES 313-316 AS DOCUMENT NO. 2719369. LOCATED IN THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 08, TOWN 06 NORTH, RANGE 9 EAST, CITY OF FITCHBURG, DANE COUNTY , WISCONSIN.

OWNER'S CERTIFICATE

_____ LLC, AS OWNER, WE HEREBY CERTIFY THAT WE CAUSED THE LANDS DESCRIBED HEREON TO BE SURVEYED, DIVIDED MAPPED AND DEDICATED AS SHOWN. I ALSO CERTIFY THAT THIS CERTIFIED SURVEY MAP IS REQUIRED BY S. 236.34 OF THE WISCONSIN STATE STATUES TO BE SUBMITTED TO THE CITY OF MADISON FOR APPROVAL.

BY: _____
GUS NEWCOMB, MANAGING MEMBER

_____ LLC

STATE OF WISCONSIN) SS
DANE COUNTY) SS

PERSONALLY CAME BEFORE ME THIS_____DAY OF_____, 2025, THE ABOVE NAMED

MANAGING MEMBER FOR_____, LLC, GUS NEWCOMB, TO ME KNOWN TO BE THE

PERSON WHO EXECUTED THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED THE SAME.

_____ _____
NOTARY PUBLIC, STATE OF WISCONSIN MY COMMISSION EXPIRES

CONSENT OF MORTGAGEE

_____, A BANKING ASSOCIATION DULY ORGANIZED AND EXISTING UNDER AND BY VIRTUE OF THE LAWS OF THE STATE OF WISCONSIN , MORTAGAGEE OF THE ABOVE DESCRIBED LAND, DOES HEREBY CONSENT TO THE SURVEY, DIVIDING, MAPPING AND DEDICATION OF THE LAND DESCRIBED ON THIS CERTIFIED SURVEY MAP AND DOES HEREBY CONSENT TO THE OWNER'S CERTIFICATE.

BY: _____
AUTHORIZED OFFICER

STATE OF WISCONSIN) SS
DANE COUNTY) SS

PERSONALLY CAME BEFORE ME THIS_____DAY OF_____, 2025, THE ABOVE

NAMED BANKING ASSOCIATION, _____ AUTHORIZED OFFICER

_____ TO ME KNOWN TO BE THE PERSON WHO EXECUTED THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED THE SAME.

_____ _____
NOTARY PUBLIC, STATE OF WISCONSIN MY COMMISSION EXPIRES

WISCONSIN
ZACHARY M. REYNOLDS
S-3223
MOUNT HOREB
WISCONSIN
PROFESSIONAL LAND SURVEYOR

CITY OF FITCHBURG APPROVAL

THIS CERTIFIED SURVEY MAP, INCLUDING ANY DEDICATIONS SHOWN HEREON, HAS BEEN DULY FILED WITH AND APPROVED BY THE COMMON COUNCIL OF THE CITY OF FITCHBURG, DANE COUNTY, WISCONSIN.

DATED THIS _____DAY OF _____, 2025.

_____
TRACY OLDENBURG, CITY CLERK,
CITY OF FITCHBURG

OFFICE OF THE REGISTER OF DEEDS

_____COUNTY, WISCONSIN

RECEIVED FOR RECORD_____,

20____ AT_____O'CLOCK_____M AS

DOCUMENT # _____

IN VOL. _____ OF CERTIFIED SURVEY

MAPS ON PAGE(S) _____ .

_____
KRISTI CHLEBOWSKI, REGISTER OF DEEDS

WYSER ENGINEERING

PREPARED BY:
WYSER ENGINEERING
300 EAST FRONT STREET
MOUNT HOREB, WI 53572
www.wyseengineering.com

PREPARED FOR:
NEWCOMB CONSTRUCTION COMPANY, INC.
999 FOURIER DRIVE #102
MADISON, WI 53717

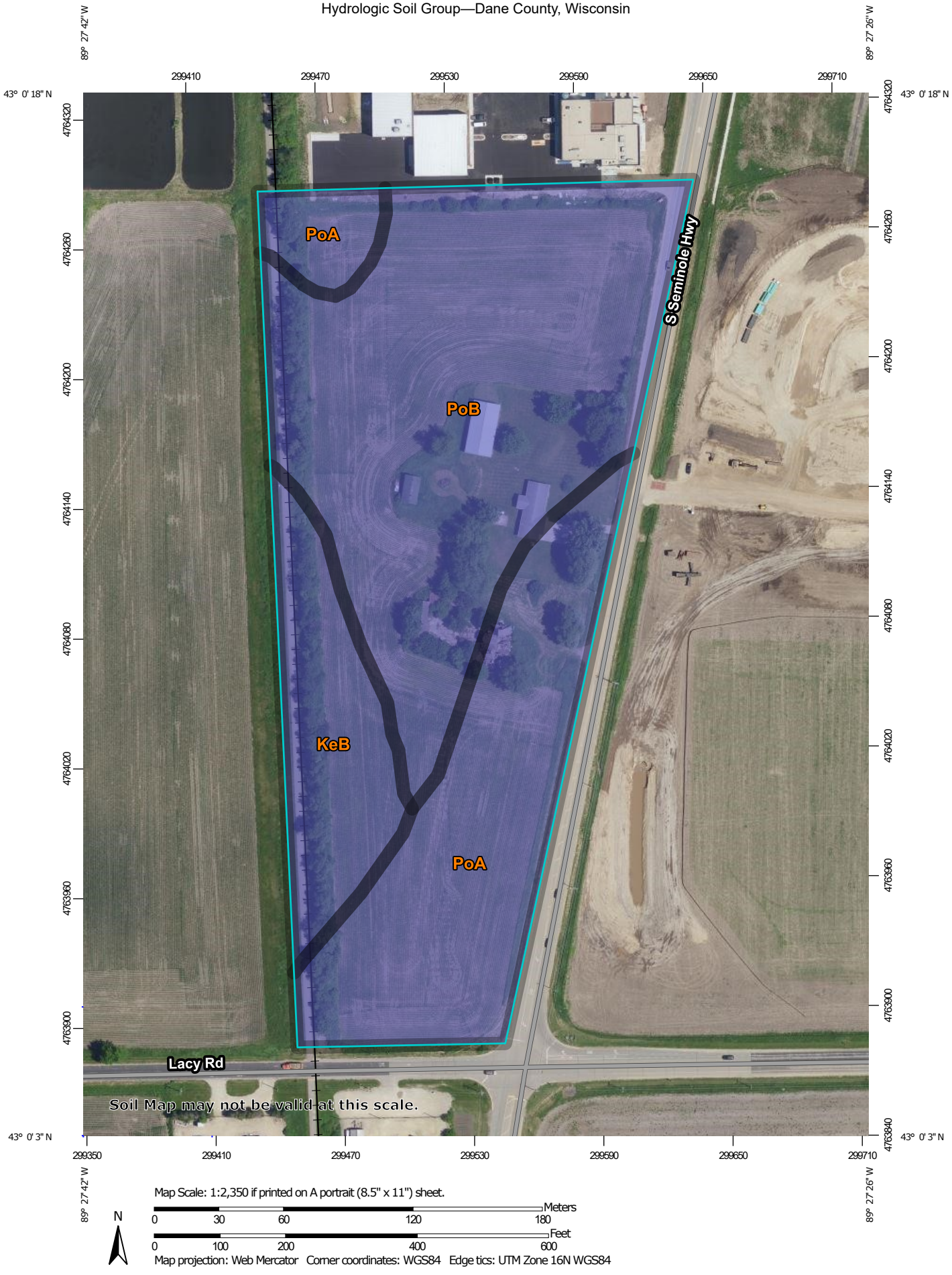
SURVEYED BY:	MAL/DZ
DRAWN BY:	AMS
CHECKED BY:	ZMR
APPROVED BY:	ZMR

PROJECT NO: 24-1243
SHEET NO: 8 of 8

File: W:\2024\241243_Newcomb – Seminole & Lacy, Fitchburg\DWG\241243_CSM.dwg Layout: CSM 8 OF 8 User: dschneider Plotted: May 16, 2025 – 1:46pm

APPENDIX B

Soils Information


89° 27' 42" W
89° 27' 26" W
43° 0' 18" N
43° 0' 3" N
299350
299410
299470
299530
299590
299650
299710
4764320
4764260
4764200
4764140
4764080
4764020
4763960
4763900
4763840
PoA
PoB
KeB
PoA
S Seminole Hwy
Lacy Rd
Soil Map may not be valid at this scale.
Map Scale: 1:2,350 if printed on A portrait (8.5" x 11") sheet.
N
Meters
0 30 60 120 180
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.

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: Dane County, Wisconsin
Survey Area Data: Version 22, Sep 8, 2023

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

Date(s) aerial images were photographed: Jun 13, 2020—Jul 31, 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.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
KeB	Kegonsa silt loam, 2 to 6 percent slopes	B	2.0	13.8%
PoA	Plano silt loam, gravelly substratum, 0 to 2 percent slopes	B	4.8	32.8%
PoB	Plano silt loam, gravelly substratum, 2 to 6 percent slopes	B	7.8	53.4%
Totals for Area of Interest			**14.7**	**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



Legend

Denotes Test Pit Location

Notes:

1. Base map from Google Earth.
2. Test pits excavated by Northwestern Stone on August 15, 2024.
3. Locations are approximate.

Scale: Reduced

Job No.	CGC, Inc.	**TEST PIT LOCATION EXHIBIT** **S. SEMINOLE HWY AND LACY ROAD** **Fitchburg, WI**
Date: 08/2024		

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	7.1	22.7	4.9	11.8	51.3	2.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1	100.0		
3/4	92.9		
1/2	81.2		
3/8	77.7		
#4	70.2		
#8	66.0		
#10	65.3		
#16	63.6		
#30	60.4		
#40	53.5		
#50	39.6		
#80	13.0		
#100	7.4		
#200	2.2		

* (no specification provided)

Material Description

Brown Fine to Medium Sand, Trace Silt, Some Gravel

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 17.3038 D_{85}= 14.7358 D_{60}= 0.5801
D_{50}= 0.3819 D_{30}= 0.2515 D_{15}= 0.1888
D_{10}= 0.1652 C_u= 3.51 C_c= 0.66

Classification

USCS= SP AASHTO=

Remarks

USDA: Gravelly Sand

Sample Number: TP MW

Date: 8/21/24

CGC,Inc.

Client: Newcomb Construction
Project: Newcomb Seminole

Project No: C24411 **Figure**

Tested By: JFS **Checked By:** KJS

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	41.2	14.5	20.8	21.9	1.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	91.6		
3/8	81.6		
#4	58.8		
#8	46.0		
#10	44.3		
#16	39.7		
#30	32.8		
#40	23.5		
#50	12.5		
#80	4.0		
#100	2.9		
#200	1.6		

* (no specification provided)

Material Description

Brown Gravelly Fine to Coarse Sand, Trace Silt

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 12.0515 D_{85}= 10.4364 D_{60}= 4.9714
D_{50}= 3.1507 D_{30}= 0.5308 D_{15}= 0.3271
D_{10}= 0.2708 C_u= 18.36 C_c= 0.21

Classification

USCS= SP AASHTO=

Remarks

USDA: Very Gravelly Sand

Sample Number: TP NW

Date: 8/21/24

CGC,Inc.

Client: Newcomb Construction
Project: Newcomb Seminole

Project No: C24411 **Figure**

Tested By: JFS **Checked By:** KJS

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	19.5	4.5	12.9	58.9	4.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	90.7		
3/8	86.4		
#4	80.5		
#8	76.7		
#10	76.0		
#16	74.1		
#30	70.3		
#40	63.1		
#50	52.6		
#80	24.4		
#100	13.8		
#200	4.2		

* (no specification provided)

Material Description

Brn Fine to Medium Sand, Trace Silt, Some Gravel

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 12.2280 D_{85}= 8.3567 D_{60}= 0.3764
D_{50}= 0.2827 D_{30}= 0.1971 D_{15}= 0.1536
D_{10}= 0.1139 C_u= 3.30 C_c= 0.91

Classification

USCS= SP AASHTO=

Remarks

USDA: Gravelly Fine Sand

Sample Number: TP SW

Date: 8/21/24

CGC,Inc.

Client: Newcomb Construction
Project: Newcomb Seminole

Project No: C24411 **Figure**

Tested By: JFS **Checked By:** KJS

Division of Industry Services
P.O. Box 2658
Madison, Wisconsin 53701

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: *Dane*

Parcel I.D.: *60908395704*

Reviewed by:

Date:

Property Owner

Property Owner's Mail Address

City State Zip Code Phone Number

Property Location
Govt. Lot *SE ¼ SW ¼* S *8* T *6* N R *9* E

Lot # *2* | Block# | Subd. Name or CSM # *CSM 8023*

[x] City [ ] Village *Fitchburg* [ ] Town

Nearest Road: *2747 S. Seminole HWY*

Drainage area _____ [ ] sq ft [ ] acres

Test site suitable for (check all that apply): [ ] Site not suitable;
[ ] Bioretention; [ ] Subsurface Disperal 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.

TPSW #OBS. [x] Pit [ ] Boring Ground surface elevation 1025 ft. +/- Elevation of limiting factor below 1012.0 ft.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% P200	Hydraulic App Rate Inches/Hr
1	0-14	10YR 3/2	None	SIL	1msbk	mfr		<5		0.13
2	14-65	10YR 4/4	None	SICL	1msbk	mfi		<5		0.04
3	65-77	10YR 4/4	None	FSL	1fsbk	mfr		10		0.5
4	77-156	10YR 6/4	None	GRFS	0sg	ml		26 (1)	4.2 (1)	0.5

Comments: Groundwater not encoutnered during or shortly after excavation. (1) Based on sample collected near 8 ft.

TPMW #OBS. [x] Pit [ ] Boring Ground surface elevation 1026.5 ft. +/- Elevation of limiting factor below 1013.5 ft.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% P200	Hydraulic App Rate Inches/Hr
1	0-11	10YR 3/2	None	SIL	1msbk	mfr		<5		0.13
2	11-53	10YR 4/4	f1f10YR 5/8	SICL	1msbk	mfi		<5		0.04
3	53-72	10YR 4/4	None	FSL	1fsbk	mfr		10		0.5
4	72-156	10YR 6/4	None	GRS	0sg	ml		35 (1)	2.2 (1)	3.6

Comments: Groundwater not encoutnered during or shortly after excavation. (1) Based on sample collected near 7 ft. (2) Faint redox features in Horizon 2 attributed to limited permeability of the horizon and infiltrating surface water. Free draining soils below with no groundwater observed to the termination depth of the test pits.

TPNW #OBS. [ ] Pit [x] Boring Ground surface elevation 1024.5 ft. +/- Elevation of limiting factor below 1011.5 ft.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% P200	Hydraulic App Rate Inches/Hr
1	0-14	10YR 3/2	None	SIL	1msbk	mfr		<5		0.13
2	14-74	10YR 4/4	f1f10YR 5/8	SICL	1msbk	mfi		<5		0.04
3	74-100	10YR 4/4	None	FSL	1fsbk	mfr		10		0.5
4	100-156	10YR 6/4	None	VGRS	0sg	ml		56 (1)	1.6 (1)	3.6

Comments: Groundwater not encoutnered during or shortly after excavation. (1) Based on sample collected near 10 ft. (2) Faint redox features in Horizon 2 attributed to limited permeability of the horizon and infiltrating surface water. Free draining soils below with no groundwater observed to the termination depth of the test pits.

Name (Please Print): Alex J. Bina

Signature: Alex Bina

Credential Number: **111802008**

Address: 403 6th Street, Waunakee, WI

Date Evaluation Conducted: **8/15/2024**

Telephone Number: 608-288-4100

APPENDIX C

Proposed Construction Plans

NORTH

LO1 2: 52,710 SQ.FT.
IMPERVIOUS AREA: 34,900 SQ.FT.
(66.2% IMPERVIOUS)

LO1 1: 111,323 SQ.FT.
IMPERVIOUS AREA: 59,585 SQ.FT.
(53.5% IMPERVIOUS)

LO1 3: 212,241 SQ.FT.
IMPERVIOUS AREA: 156,905 SQ.FT.
(73.9% IMPERVIOUS)

LO1 4: 96,958 SQ.FT.
IMPERVIOUS AREA: 66,110 SQ.FT.
(68.2% IMPERVIOUS)

WYSER ENGINEERING

2747 S SEMINOLE HWY
FITCHBURG, WI 53711

GUSTO!

CITY OF FITCHBURG, DANE COUNTY, WI

Sheet Title: IMPERVIOUS AREA GRAPHIC

Revisions:

No.	Date:	Description:

Graphic Scale	0' 25' 50' 75'
Wyser Number	24-1243
Set Type	REVIEW
Date Issued	07/15/2025
Sheet Number	EX C

File: W:\2024\241243_Newcomb - Seminole & Lacy, Fitchburg\DWG\241243_SWMP_overall.dwg Layout: impervious User: kneagher Plotted: Jul 14, 2025 - 10:39am

SITE INFORMATION BLOCK (LOT 3):

SITE ADDRESS: SEMINOLE HIGHWAY
SITE ACREAGE: 201,536 SQ.FT. (4.63 AC)
USE OF PROPERTY: MULTI-FAMILY RESIDENTIAL
ZONING: PLANNED DEVELOPMENT DISTRICT (PDD - GIP)

SETBACKS (AS SHOWN):
FRONT YARD (ROOF OVERHANG): 7 FEET TO SEMINOLE
FRONT YARD (FOUNDATION): 14 FEET TO SEMINOLE
REAR YARD: 30 FEET
SIDE YARD (ROOF OVERHANG): ALLOWED TO CROSS PROPERTY LINE
SITE YARD (FOUNDATION): 2 FEET

NUMBER OF UNITS: 216

PARKING PROVIDED (SURFACE ONLY): 154 (3 ADA STALLS)

NUMBER OF BIKE STALLS (SURFACE ONLY): 14

EXISTING IMPERVIOUS SURFACE AREA: 0 SQ.FT.

NEW IMPERVIOUS SURFACE AREA: 108,140 SQ.FT.
BUILDING FOUNDATION: 28,800 SQ.FT.
PAVED: 79,340 SQ.FT.
PARKING: 57,612 SQ.FT.
SIDEWALK: 16,328 SQ.FT.
DECK: 5,400 SQ.FT.

PROPOSED IMPERVIOUS SURFACE RATIO: 53.7%

SITE INFORMATION BLOCK (LOT 4):

SITE ADDRESS: SEMINOLE HIGHWAY
SITE ACREAGE: 107,663 SQ.FT. (2.47 AC)
USE OF PROPERTY: MULTI FAMILY RESIDENTIAL
ZONING: PLANNED DEVELOPMENT DISTRICT (PDD - GIP)

SETBACKS (AS SHOWN):
FRONT YARD (ROOF OVERHANG): 14 FEET
FRONT YARD (FOUNDATION): 19 FEET
REAR YARD: 32 FEET
SIDE YARD: 20 FEET

NUMBER OF UNITS: 88

PARKING PROVIDED (SURFACE ONLY): 42 (1 ADA)

NUMBER OF BIKE STALLS: 6

EXISTING IMPERVIOUS SURFACE AREA: 0 SQ.FT.

NEW IMPERVIOUS SURFACE AREA: 64,469 SQ.FT.
BUILDING FOUNDATION: 31,200 SQ.FT.
PAVED: 33,269 SQ.FT.
PARKING: 29,571 SQ.FT.
SIDEWALK: 2,348 SQ.FT.
DECK: 1,350 SQ.FT.

PROPOSED IMPERVIOUS SURFACE RATIO: 59.9%

LEGEND (PROPOSED)

- PROPOSED PROPERTY BOUNDARY
- EASEMENT
- BUILDING FOOTPRINT
- 18" CURB AND GUTTER
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- STORMWATER TREATMENT FACILITY

NORTH

GENERAL NOTES

1. UNDERLYING SITE CONTOURS AND INFORMATION BASED ON TOPOGRAPHIC & UTILITY DATA AS SURVEYED BY WYSER ENGINEERING ON JUNE 6, 2024. WYSER ENGINEERING SHALL NOT BE HELD RESPONSIBLE FOR ANY ERRORS OR OMISSIONS THAT MAY ARISE AS A RESULT OF ERRONEOUS OR INCOMPLETE INFORMATION PROVIDED BY OTHERS. CONTRACTOR TO CONFIRM ALL ELEVATIONS, GENERAL DRAINAGE AND EARTHWORK REQUIREMENTS PRIOR TO CONSTRUCTION.
2. THE BENCHMARK LOCATIONS ARE SHOWN FOR REFERENCE ONLY ON THIS PLAN. THE BENCHMARKS SHALL BE VALIDATED BY LICENSED LAND SURVEYOR PRIOR TO CONSTRUCTION. CONTRACTOR ASSUMES RISK ASSOCIATED WITH BENCHMARK ELEVATIONS UNTIL CONFIRMED.
3. CONTRACTOR TO OBTAIN APPROPRIATE PERMITS FOR STREET OPENINGS & TO WORK WITHIN THE CITY'S LAND IF REQUIRED.
4. WYSER ENGINEERING SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER OR CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY REGULATORY AGENCIES.
5. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS WITHIN THE PLAN BECOME APPARENT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.
6. ALL MUNICIPAL UTILITY CONNECTIONS, WORK IN ROW, PUBLIC OUTLOTS AND PUBLIC EASEMENTS SHALL BE IN ACCORDANCE WITH CITY OF FITCHBURG STANDARD SPECIFICATIONS.

MINONG LANE

SEMINOLE HIGHWAY

LACY ROAD

LOT 1
111,323 SQ. FT.
OR 2.56 ACRES

LOT 2
52,710 SQ. FT.
OR 1.21 ACRES

LOT 3
201,536 SQ. FT.
OR 4.63 ACRES

LOT 4
107,663 SQ. FT.
OR 2.47 ACRES

BUILDING A
4 STORY - 88 UNITS
23,000 SQ.FT. @ FIRST FLOOR
31,200 SQ.FT. @ BASEMENT LEVEL

BUILDING B - NORTH
4 STORY - 43 UNITS
11,450 SQ.FT. @ FIRST FLOOR
11,450 SQ.FT. @ BASEMENT LEVEL

BUILDING B - SOUTH
4 STORY - 43 UNITS
11,450 SQ.FT. @ FIRST FLOOR
11,450 SQ.FT. @ BASEMENT LEVEL

BUILDING C
4 STORY - 71 UNITS
17,050 SQ.FT. @ FIRST FLOOR
22,150 SQ.FT. @ BASEMENT LEVEL

BUILDING D
4 STORY - 59 UNITS
14,550 SQ.FT. @ FIRST FLOOR
19,650 SQ.FT. @ BASEMENT LEVEL

BLD B COMMUNITY SPACE
1 STORY
3,100 SQ.FT. @ FIRST FLOOR
1,000 SQ.FT. @ BASEMENT LEVEL

POOL

STORMWATER MANAGEMENT

STORMWATER MANAGEMENT

LANDSCAPE AREA OVER UNDERGROUND PARKING

30' WIDE PUBLIC UTILITY EASEMENT

SHARED ACCESS EASEMENT BENEFITING LOTS 2, 3, & 4.

SHARED ACCESS EASEMENT BENEFITING LOTS 1,2, & 3.

PRIVATE STORMWATER MANAGEMENT EASEMENT

20' WIDE PRIVATE SANITARY SEWER EASEMENT

20' WIDE PUBLIC WATER MAIN EASEMENT

9' WIDE LOADING AND UNLOADING AREA

30' WIDE PUBLIC UTILITY EASEMENT

20' WIDE PUBLIC UTILITY EASEMENT

DIGGERS HOTLINE
Toll Free (800) 242-8511 -or- 811
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

WYSER ENGINEERING

SEMINOLE HIGHWAY
FITCHBURG, WI 53719

CITY OF FITCHBURG, DANE COUNTY, WI

Sheet Title: SITE PLAN

Revisions:

No.	Date:	Description:

Graphic Scale	0' 20' 40' 60'
Wyser Number	24-1243
Set Type	REVIEW
Date Issued	05/19/2025
Sheet Number	C100

File: W:\2024\241243_Newcomb - Seminole & Lacy, Fitchburg\DWG\241243_Overall GDP.dwg Layout: Site Plan User: dschneider Plotted: May 19, 2025 - 11:47am

LEGEND (PROPOSED)

- PROPERTY BOUNDARY
- EASEMENT
- BUILDING FOOTPRINT
- 18" CURB AND GUTTER
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- 1180 — PROPOSED MAJOR CONTOUR
- 1181 — PROPOSED MINOR CONTOUR
- STM — PROPOSED STORM SEWER
- 1181.25 EP — SPOT GRADE
- DRAINAGE GRADE BREAK
- 1.0% — DRAINAGE ARROW

NORTH

DIGGERS HOTLINE
Toll Free (800) 242-8511 -or- 811
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

MINONG LANE

SEMINOLE HIGHWAY

RETAINING WALL

BUILDING B - NORTH
FFE = 1034.25
BFE = 1024.00

BLD B COMMUNITY SPACE
FFE = 1034.25

BUILDING B - SOUTH
FFE = 1034.25
BFE = 1024.00

BUILDING C
FFE = 1034.00
BFE = 1023.75

BUILDING D
FFE = 1034.00
BFE = 1023.75

BUILDING A
FFE = 1031.00
BFE = 1020.75

STORMWATER MANAGEMENT
BASIN BOTTOM = 1024.0
BASIN TOP = 1027.0

RETAINING WALL

RETAINING WALL

WYSER ENGINEERING

CITY OF FITCHBURG, DANE COUNTY, WI

SEMINOLE HIGHWAY
FITCHBURG, WI 53719

Sheet Title: GRADING PLAN

Revisions:

No.	Date:	Description:

Graphic Scale	0' 20' 40' 60'
Wyser Number	24-1243
Set Type	REVIEW
Date Issued	05/19/2025
Sheet Number	C200

File: W:\2024\241243_Newcomb - Seminole & Lacy, Fitchburg\DWG\241243_Overall GDP.dwg Layout: Grading Plan User: dschneider Plotted: May 19, 2025 - 11:50am

LEGEND (PROPOSED)

- PROPOSED PROPERTY BOUNDARY
- EASEMENT
- BUILDING FOOTPRINT
- 18" CURB AND GUTTER
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- WAT — PROPOSED WATER MAIN
- SAN — PROPOSED SANITARY SEWER
- STM — PROPOSED STORM SEWER
- GAS — PROPOSED GAS SERVICE (DESIGN BY OTHERS)
- E — PROPOSED ELECTRIC SERVICE (DESIGN BY OTHERS)
- STORMWATER TREATMENT FACILITY

NORTH

MINONG LANE

SEMINOLE HIGHWAY

LACY ROAD

CONNECTION INTO EXISTING 10" DUCTILE IRON PUBLIC WATER MAIN STUB LOCATED IN THIS AREA PER CITY AS-BUILT PLANS. PRESSURE TEST EXISTING WATER MAIN PRIOR TO CONNECTION. IF TEST FAILS, REPLACE VALVE.

PROVIDE NEW PUBLIC CONNECTION INTO EXISTING PUBLIC SANITARY SEWER STUB LOCATED IN THIS AREA PER CITY AS-BUILT PLANS (EX.) I.E. = 1019.2 (8" SDR PVC)

NOTE: 20' ROW TAKING PER NEW CSM.

10" WATER MAIN PER COURT AND COURT PLAN IMPROVEMENTS

STORMWATER MANAGEMENT

BUILDING B - NORTH
FFE = 1034.25
BFE = 1024.00

SANITARY BUILDING CONNECTION LOCATION I.E. = 1020.4 COORDINATE WITH INTERIOR PLUMBING PLANS.

STORMWATER MANAGEMENT

BUILDING B - SOUTH
FFE = 1034.25
BFE = 1024.00

SANITARY BUILDING CONNECTION LOCATION I.E. = 1021.20 COORDINATE WITH INTERIOR PLUMBING PLANS.

295 LF OF 10" DUCTILE IRON PIPE

208 LF OF 8" SDR 26 @ 0.40%

101 LF OF 8" SDR 26 @ 0.52%

PUBLIC SANITARY SEWER MANHOLE
RIM = 1029.96
E I.E. = 1020.43 (8" PVC)
SW I.E. = 1020.53 (8" PVC)
NW I.E. = 1020.63 (6" PVC)

UNDERGROUND INFILTRATION STORMWATER MANAGEMENT SYSTEM FOR A PORTION OF BUILDING B - SOUTH TOWER ROOFTOP

UNDERGROUND INFILTRATION STORMWATER MANAGEMENT SYSTEM FOR BUILDING A ROOFTOP

SANITARY BUILDING CONNECTION LOCATION I.E. = 1021.2 COORDINATE WITH INTERIOR PLUMBING PLANS.

BUILDING C
FFE = 1034.00
BFE = 1023.75

BUILDING D
FFE = 1034.00
BFE = 1024.00

SANITARY BUILDING CONNECTION LOCATION I.E. = 1017.23 COORDINATE WITH INTERIOR PLUMBING PLANS.

BUILDING A
FFE = 1031.00
BFE = 1020.75

STORMWATER MANAGEMENT

PUBLIC SANITARY SEWER MANHOLE CONNECTION
RIM = 1029.2
W I.E. = 1020.57 (8" PVC)
NE I.E. = 1020.67 (8" PVC)

SANITARY BUILDING CONNECTION LOCATION I.E. = 1018.00 COORDINATE WITH INTERIOR PLUMBING PLANS.

161 LF OF 8" DUCTILE IRON PIPE

159 LF OF 8" SDR 26 @ 2.08%

150 LF OF 8" SDR 26 @ 0.52%

48 LF OF 8" SDR 26 @ 2.08%

89 LF OF 8" SDR 26 @ 1.00%

1122 LF OF 10" DUCTILE IRON PIPE

82 LF OF 8" SDR 26 @ 2.08%

STORMWATER MANAGEMENT

PUBLIC SANITARY SEWER MANHOLE
RIM = 1031.0
W I.E. = 1016.13 (8" PVC)
E I.E. = 1016.23 (8" PVC)
S I.E. = 1016.23 (8" PVC)

PUBLIC SANITARY SEWER MANHOLE CONNECTION
RIM = 1030.0
N I.E. = 1017.12 (8" PVC)
E I.E. = 1017.22 (8" PVC)
SE I.E. = 1017.22 (8" PVC)

PROVIDE NEW PUBLIC CONNECTION INTO EXISTING PUBLIC SANITARY SEWER MANHOLE
N (EX.) I.E. = 1009.49 (18" PVC)
S (EX.) I.E. = 1009.54 (18" PVC)
E I.E. = 1010.32 (8" PVC)

WYSER ENGINEERING

SEMINOLE HIGHWAY
FITCHBURG, WI 53719

CITY OF FITCHBURG, DANE COUNTY, WI

Sheet Title: UTILITY PLAN

Revisions:

No.	Date:	Description:

Graphic Scale	0' 20' 40' 60'
Wyser Number	24-1243
Set Type	REVIEW
Date Issued	05/19/2025
Sheet Number	C300

File: W:\2024\241243_Newcomb - Seminole & Lacy, Fitchburg\DWG\241243_Overall GDP.dwg Layout: Utility Plan User: dschneider Plotted: May 19, 2025 - 11:52am

APPENDIX D

Pre Development Hydrologic Modeling

NORTH

TIME OF CONCENTRATION FLOW PATH

EXISTING
NORTH
WATERSHED

EXISTING
SOUTH
WATERSHED

TIME OF CONCENTRATION FLOW PATH

WYSER
ENGINEERING

2747 S SEMINOLE HWY
FITCHBURG, WI 53711

GUSTO!

CITY OF FITCHBURG, DANE COUNTY, WI

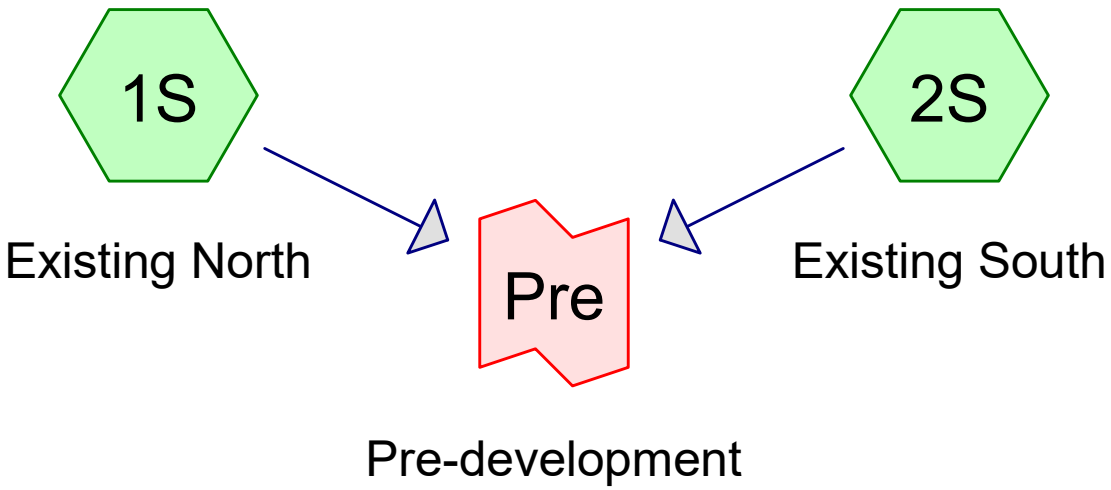
Sheet Title:
PREDEVELOPMENT WATERSHED MAP

Revisions:

No.	Date:	Description:

Graphic Scale	0' 25' 50' 75'
Wyser Number	24-1243
Set Type	REVIEW
Date Issued	07/15/2025
Sheet Number	EX D

File: W:\2024\241243_Newcomb - Seminole & Lacy, Fitchburg\DWG\241243_SWMP_overall.dwg Layout: ex User: kmeagher Plotted: Jul 14, 2025 - 10:40am



Subcat Reach Pond Link

Routing Diagram for 241243_Seminole Lacy
Prepared by Wyser Engineering, Printed 6/24/2025
HydroCAD® 10.20-2h s/n 08415 © 2024 HydroCAD Software Solutions LLC

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
10.435	68	Cropland, HSG B (1S, 2S)
0.429	98	Impervious (1S, 2S)
10.864	**69**	**TOTAL AREA**

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
10.435	HSG B	1S, 2S
0.000	HSG C	
0.000	HSG D	
0.429	Other	1S, 2S
10.864		**TOTAL AREA**

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	10.435	0.000	0.000	0.000	10.435	Cropland	1S, 2S
0.000	0.000	0.000	0.000	0.429	0.429	Impervious	1S, 2S
0.000	**10.435**	**0.000**	**0.000**	**0.429**	**10.864**	**TOTAL AREA**	

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 2
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Existing North Runoff Area=276,950 sf 2.51% Impervious Runoff Depth=0.43"
Flow Length=435' Tc=12.7 min CN=68/98 Runoff=2.54 cfs 0.228 af

Subcatchment 2S: Existing South Runoff Area=196,300 sf 5.97% Impervious Runoff Depth=0.50"
Flow Length=425' Tc=12.2 min CN=68/98 Runoff=2.16 cfs 0.186 af

Link Pre: Pre-development Inflow=4.69 cfs 0.414 af
Primary=4.69 cfs 0.414 af

Total Runoff Area = 10.864 ac Runoff Volume = 0.414 af Average Runoff Depth = 0.46"
96.05% Pervious = 10.435 ac 3.95% Impervious = 0.429 ac

Summary for Subcatchment 1S: Existing North

Runoff = 2.54 cfs @ 12.23 hrs, Volume= 0.228 af, Depth= 0.43"
Routed to Link Pre : Pre-development

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr_NRCS Rainfall=2.49"

	Area (sf)	CN	Description
*	6,960	98	Impervious
*	269,990	68	Cropland, HSG B
	276,950	69	Weighted Average
	269,990	68	97.49% Pervious Area
	6,960	98	2.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5	100	0.0120	0.25		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.49"
6.2	335	0.0100	0.90		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
12.7	435	Total			

Summary for Subcatchment 2S: Existing South

Runoff = 2.16 cfs @ 12.22 hrs, Volume= 0.186 af, Depth= 0.50"
Routed to Link Pre : Pre-development

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr_NRCS Rainfall=2.49"

	Area (sf)	CN	Description
*	11,725	98	Impervious
*	184,575	68	Cropland, HSG B
	196,300	70	Weighted Average
	184,575	68	94.03% Pervious Area
	11,725	98	5.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	100	0.0100	0.24		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.49"
5.2	325	0.0133	1.04		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
12.2	425	Total			

Summary for Link Pre: Pre-development

Inflow Area = 10.864 ac, 3.95% Impervious, Inflow Depth = 0.46" for 1-yr_NRCS event
Inflow = 4.69 cfs @ 12.23 hrs, Volume= 0.414 af
Primary = 4.69 cfs @ 12.23 hrs, Volume= 0.414 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 2
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Existing North Runoff Area=276,950 sf 2.51% Impervious Runoff Depth=0.60"
Flow Length=435' Tc=12.7 min CN=68/98 Runoff=3.91 cfs 0.317 af

Subcatchment 2S: Existing South Runoff Area=196,300 sf 5.97% Impervious Runoff Depth=0.67"
Flow Length=425' Tc=12.2 min CN=68/98 Runoff=3.17 cfs 0.251 af

Link Pre: Pre-development Inflow=7.07 cfs 0.568 af
Primary=7.07 cfs 0.568 af

Total Runoff Area = 10.864 ac Runoff Volume = 0.568 af Average Runoff Depth = 0.63"
96.05% Pervious = 10.435 ac 3.95% Impervious = 0.429 ac

Summary for Subcatchment 1S: Existing North

Runoff = 3.91 cfs @ 12.23 hrs, Volume= 0.317 af, Depth= 0.60"
Routed to Link Pre : Pre-development

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr_NRCS Rainfall=2.84"

	Area (sf)	CN	Description
*	6,960	98	Impervious
*	269,990	68	Cropland, HSG B
	276,950	69	Weighted Average
	269,990	68	97.49% Pervious Area
	6,960	98	2.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5	100	0.0120	0.25		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.49"
6.2	335	0.0100	0.90		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
12.7	435	Total			

Summary for Subcatchment 2S: Existing South

Runoff = 3.17 cfs @ 12.22 hrs, Volume= 0.251 af, Depth= 0.67"
Routed to Link Pre : Pre-development

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr_NRCS Rainfall=2.84"

	Area (sf)	CN	Description
*	11,725	98	Impervious
*	184,575	68	Cropland, HSG B
	196,300	70	Weighted Average
	184,575	68	94.03% Pervious Area
	11,725	98	5.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	100	0.0100	0.24		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.49"
5.2	325	0.0133	1.04		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
12.2	425	Total			

Summary for Link Pre: Pre-development

Inflow Area = 10.864 ac, 3.95% Impervious, Inflow Depth = 0.63" for 2-yr_NRCS event
Inflow = 7.07 cfs @ 12.22 hrs, Volume= 0.568 af
Primary = 7.07 cfs @ 12.22 hrs, Volume= 0.568 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 2
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Existing North Runoff Area=276,950 sf 2.51% Impervious Runoff Depth=1.33"
Flow Length=435' Tc=12.7 min CN=68/98 Runoff=9.90 cfs 0.703 af

Subcatchment 2S: Existing South Runoff Area=196,300 sf 5.97% Impervious Runoff Depth=1.42"
Flow Length=425' Tc=12.2 min CN=68/98 Runoff=7.56 cfs 0.532 af

Link Pre: Pre-development Inflow=17.45 cfs 1.236 af
Primary=17.45 cfs 1.236 af

Total Runoff Area = 10.864 ac Runoff Volume = 1.236 af Average Runoff Depth = 1.36"
96.05% Pervious = 10.435 ac 3.95% Impervious = 0.429 ac

Summary for Subcatchment 1S: Existing North

Runoff = 9.90 cfs @ 12.21 hrs, Volume= 0.703 af, Depth= 1.33"
Routed to Link Pre : Pre-development

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr_NRCS Rainfall=4.09"

	Area (sf)	CN	Description
*	6,960	98	Impervious
*	269,990	68	Cropland, HSG B
	276,950	69	Weighted Average
	269,990	68	97.49% Pervious Area
	6,960	98	2.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5	100	0.0120	0.25		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.49"
6.2	335	0.0100	0.90		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
12.7	435	Total			

Summary for Subcatchment 2S: Existing South

Runoff = 7.56 cfs @ 12.21 hrs, Volume= 0.532 af, Depth= 1.42"
Routed to Link Pre : Pre-development

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr_NRCS Rainfall=4.09"

	Area (sf)	CN	Description
*	11,725	98	Impervious
*	184,575	68	Cropland, HSG B
	196,300	70	Weighted Average
	184,575	68	94.03% Pervious Area
	11,725	98	5.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	100	0.0100	0.24		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.49"
5.2	325	0.0133	1.04		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
12.2	425	Total			

Summary for Link Pre: Pre-development

Inflow Area = 10.864 ac, 3.95% Impervious, Inflow Depth = 1.36" for 10-yr_NRCS event
Inflow = 17.45 cfs @ 12.21 hrs, Volume= 1.236 af
Primary = 17.45 cfs @ 12.21 hrs, Volume= 1.236 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 2
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Existing North Runoff Area=276,950 sf 2.51% Impervious Runoff Depth=3.22"
Flow Length=435' Tc=12.7 min CN=68/98 Runoff=25.14 cfs 1.706 af

Subcatchment 2S: Existing South Runoff Area=196,300 sf 5.97% Impervious Runoff Depth=3.33"
Flow Length=425' Tc=12.2 min CN=68/98 Runoff=18.55 cfs 1.252 af

Link Pre: Pre-development Inflow=43.67 cfs 2.958 af
Primary=43.67 cfs 2.958 af

Total Runoff Area = 10.864 ac Runoff Volume = 2.958 af Average Runoff Depth = 3.27"
96.05% Pervious = 10.435 ac 3.95% Impervious = 0.429 ac

Summary for Subcatchment 1S: Existing North

Runoff = 25.14 cfs @ 12.21 hrs, Volume= 1.706 af, Depth= 3.22"
Routed to Link Pre : Pre-development

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr_NRCS Rainfall=6.66"

	Area (sf)	CN	Description
*	6,960	98	Impervious
*	269,990	68	Cropland, HSG B
	276,950	69	Weighted Average
	269,990	68	97.49% Pervious Area
	6,960	98	2.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5	100	0.0120	0.25		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.49"
6.2	335	0.0100	0.90		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
12.7	435	Total			

Summary for Subcatchment 2S: Existing South

Runoff = 18.55 cfs @ 12.20 hrs, Volume= 1.252 af, Depth= 3.33"
Routed to Link Pre : Pre-development

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr_NRCS Rainfall=6.66"

	Area (sf)	CN	Description
*	11,725	98	Impervious
*	184,575	68	Cropland, HSG B
	196,300	70	Weighted Average
	184,575	68	94.03% Pervious Area
	11,725	98	5.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	100	0.0100	0.24		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.49"
5.2	325	0.0133	1.04		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
12.2	425	Total			

Summary for Link Pre: Pre-development

Inflow Area = 10.864 ac, 3.95% Impervious, Inflow Depth = 3.27" for 100-yr_NRCS event
Inflow = 43.67 cfs @ 12.21 hrs, Volume= 2.958 af
Primary = 43.67 cfs @ 12.21 hrs, Volume= 2.958 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 2
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Existing North Runoff Area=276,950 sf 2.51% Impervious Runoff Depth=3.93"
Flow Length=435' Tc=12.7 min CN=68/98 Runoff=30.74 cfs 2.082 af

Subcatchment 2S: Existing South Runoff Area=196,300 sf 5.97% Impervious Runoff Depth=4.05"
Flow Length=425' Tc=12.2 min CN=68/98 Runoff=22.58 cfs 1.521 af

Link Pre: Pre-development Inflow=53.31 cfs 3.603 af
Primary=53.31 cfs 3.603 af

Total Runoff Area = 10.864 ac Runoff Volume = 3.603 af Average Runoff Depth = 3.98"
96.05% Pervious = 10.435 ac 3.95% Impervious = 0.429 ac

Summary for Subcatchment 1S: Existing North

Runoff = 30.74 cfs @ 12.21 hrs, Volume= 2.082 af, Depth= 3.93"
Routed to Link Pre : Pre-development

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr_NRCS Rainfall=7.53"

	Area (sf)	CN	Description
*	6,960	98	Impervious
*	269,990	68	Cropland, HSG B
	276,950	69	Weighted Average
	269,990	68	97.49% Pervious Area
	6,960	98	2.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5	100	0.0120	0.25		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.49"
6.2	335	0.0100	0.90		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
12.7	435	Total			

Summary for Subcatchment 2S: Existing South

Runoff = 22.58 cfs @ 12.20 hrs, Volume= 1.521 af, Depth= 4.05"
Routed to Link Pre : Pre-development

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr_NRCS Rainfall=7.53"

	Area (sf)	CN	Description
*	11,725	98	Impervious
*	184,575	68	Cropland, HSG B
	196,300	70	Weighted Average
	184,575	68	94.03% Pervious Area
	11,725	98	5.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	100	0.0100	0.24		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.49"
5.2	325	0.0133	1.04		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
12.2	425	Total			

Summary for Link Pre: Pre-development

Inflow Area = 10.864 ac, 3.95% Impervious, Inflow Depth = 3.98" for 200-yr_NRCS event
Inflow = 53.31 cfs @ 12.21 hrs, Volume= 3.603 af
Primary = 53.31 cfs @ 12.21 hrs, Volume= 3.603 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

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APPENDIX E

Post Development Hydrologic Modeling

NORTH

WATERSHED F

WATERSHED C

WATERSHED E2

WATERSHED D

WATERSHED F

WATERSHED A

WATERSHED E1

WATERSHED E

WATERSHED F

WATERSHED B

WYSER ENGINEERING

2747 S SEMINOLE HWY
FITCHBURG, WI 53711

GUSTO!

CITY OF FITCHBURG, DANE COUNTY, WI

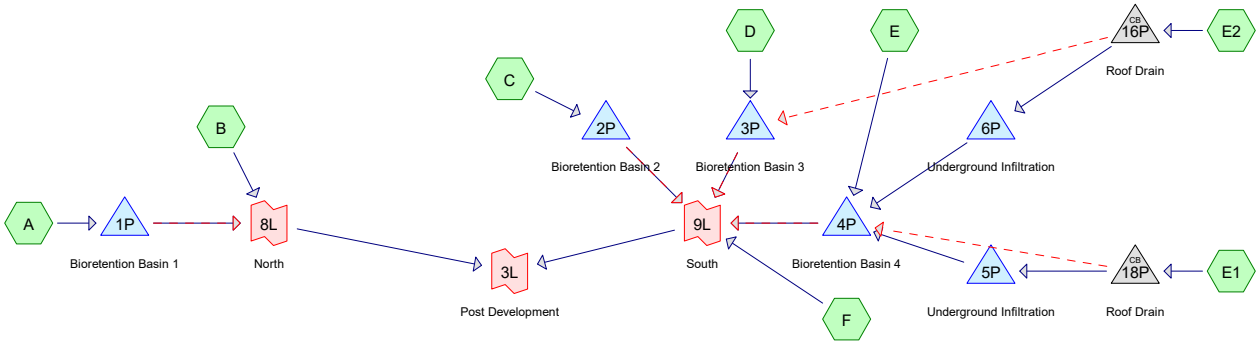
Sheet Title:
PROPOSED WATERSHED MAP

Revisions:

No.	Date:	Description:

Graphic Scale	0' 25' 50' 75'
Wyser Number	24-1243
Set Type	REVIEW
Date Issued	07/15/2025
Sheet Number	EX E

File: W:\2024\241243_Newcomb - Seminole & Lacy, Fitchburg\DWG\241243_SWMP_overall.dwg Layout: pro User: kmeagher Plotted: Jul 14, 2025 - 10:42am



Subcat Reach Pond Link

Routing Diagram for 241243_Seminole Lacy
Prepared by Wyser Engineering, Printed 7/11/2025
HydroCAD® 10.20-2h s/n 08415 © 2024 HydroCAD Software Solutions LLC

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
3.114	74	>75% Grass cover, Good, HSG C (A, B, C, D, E, F)
0.419	98	Green Roof (A, E)
3.000	98	Parking (A, E, F)
3.163	98	Roofs, HSG C (A, C, D, E1, E2)
0.707	98	Sidewalk (A, B, C, D, E, F)
0.461	100	Water Surface, HSG C (A, C, D, E)
10.864	**91**	**TOTAL AREA**

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
6.739	HSG C	A, B, C, D, E, E1, E2, F
0.000	HSG D	
4.125	Other	A, B, C, D, E, F
10.864		**TOTAL AREA**

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	3.114	0.000	0.000	3.114	>75% Grass cover, Good	A, B, C, D, E, F
0.000	0.000	0.000	0.000	0.419	0.419	Green Roof	A, E
0.000	0.000	0.000	0.000	3.000	3.000	Parking	A, E, F
0.000	0.000	3.163	0.000	0.000	3.163	Roofs	A, C, D, E1, E2
0.000	0.000	0.000	0.000	0.707	0.707	Sidewalk	A, B, C, D, E, F
0.000	0.000	0.461	0.000	0.000	0.461	Water Surface	A, C, D, E
0.000	**0.000**	**6.739**	**0.000**	**4.125**	**10.864**	**TOTAL AREA**	

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 2
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment A: Runoff Area=267,875 sf 78.43% Impervious Runoff Depth=1.90"
Tc=6.0 min CN=74/98 Runoff=16.65 cfs 0.975 af

Subcatchment B: Runoff Area=17,570 sf 0.57% Impervious Runoff Depth=0.61"
Tc=6.0 min CN=74/98 Runoff=0.38 cfs 0.021 af

Subcatchment C: Runoff Area=16,050 sf 87.54% Impervious Runoff Depth=2.05"
Tc=6.0 min CN=74/98 Runoff=1.08 cfs 0.063 af

Subcatchment D: Runoff Area=13,550 sf 76.75% Impervious Runoff Depth=1.88"
Tc=6.0 min CN=74/98 Runoff=0.83 cfs 0.049 af

Subcatchment E: Runoff Area=86,735 sf 75.40% Impervious Runoff Depth=1.85"
Tc=6.0 min CN=74/98 Runoff=5.25 cfs 0.307 af

Subcatchment E1: Runoff Area=27,535 sf 100.00% Impervious Runoff Depth=2.26"
Tc=6.0 min CN=0/98 Runoff=2.03 cfs 0.119 af

Subcatchment E2: Runoff Area=6,500 sf 100.00% Impervious Runoff Depth=2.26"
Tc=6.0 min CN=0/98 Runoff=0.48 cfs 0.028 af

Subcatchment F: Runoff Area=37,435 sf 9.43% Impervious Runoff Depth=0.76"
Tc=6.0 min CN=74/98 Runoff=0.97 cfs 0.054 af

Pond 1P: Bioretention Basin 1 Peak Elev=1,025.54' Storage=17,215 cf Inflow=16.65 cfs 0.975 af
Discarded=1.03 cfs 0.840 af Primary=0.71 cfs 0.135 af Secondary=0.00 cfs 0.000 af Outflow=1.74 cfs 0.975 af

Pond 2P: Bioretention Basin 2 Peak Elev=1,030.08' Storage=1,051 cf Inflow=1.08 cfs 0.063 af
Discarded=0.10 cfs 0.061 af Primary=0.05 cfs 0.002 af Secondary=0.00 cfs 0.000 af Outflow=0.16 cfs 0.063 af

Pond 3P: Bioretention Basin 3 Peak Elev=1,029.09' Storage=794 cf Inflow=0.83 cfs 0.049 af
Discarded=0.09 cfs 0.046 af Primary=0.06 cfs 0.002 af Secondary=0.00 cfs 0.000 af Outflow=0.15 cfs 0.049 af

Pond 4P: Bioretention Basin 4 Peak Elev=1,024.47' Storage=4,373 cf Inflow=5.25 cfs 0.366 af
Primary=0.75 cfs 0.366 af Secondary=0.00 cfs 0.000 af Outflow=0.75 cfs 0.366 af

Pond 5P: Underground Infiltration Peak Elev=1,026.28' Storage=0.079 af Inflow=2.03 cfs 0.119 af
15.0" Round Culvert n=0.012 L=400.0' S=0.0050 '/' Outflow=0.28 cfs 0.045 af

Pond 6P: Underground Infiltration Peak Elev=1,027.26' Storage=0.016 af Inflow=0.48 cfs 0.028 af
12.0" Round Culvert n=0.012 L=400.0' S=0.0050 '/' Outflow=0.22 cfs 0.013 af

Pond 16P: Roof Drain Peak Elev=1,031.43' Inflow=0.48 cfs 0.028 af
Primary=0.48 cfs 0.028 af Secondary=0.00 cfs 0.000 af Outflow=0.48 cfs 0.028 af

Pond 18P: Roof Drain Peak Elev=1,028.77' Inflow=2.03 cfs 0.119 af
Primary=2.03 cfs 0.119 af Secondary=0.00 cfs 0.000 af Outflow=2.03 cfs 0.119 af

Link 3L: Post Development Inflow=2.32 cfs 0.581 af
Primary=2.32 cfs 0.581 af

Link 8L: North Inflow=0.78 cfs 0.156 af
Primary=0.78 cfs 0.156 af

Link 9L: South Inflow=1.72 cfs 0.425 af
Primary=1.72 cfs 0.425 af

Total Runoff Area = 10.864 ac Runoff Volume = 1.617 af Average Runoff Depth = 1.79"
28.66% Pervious = 3.114 ac 71.34% Impervious = 7.750 ac

Summary for Subcatchment A:

Runoff = 16.65 cfs @ 12.13 hrs, Volume= 0.975 af, Depth= 1.90"
Routed to Pond 1P : Bioretention Basin 1

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr_NRCS Rainfall=2.49"

	Area (sf)	CN	Description
	81,360	98	Roofs, HSG C
*	10,025	98	Green Roof
*	86,500	98	Parking
*	22,200	98	Sidewalk
*	10,000	100	Water Surface, HSG C
	57,790	74	>75% Grass cover, Good, HSG C
	267,875	93	Weighted Average
	57,790	74	21.57% Pervious Area
	210,085	98	78.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment B:

Runoff = 0.38 cfs @ 12.14 hrs, Volume= 0.021 af, Depth= 0.61"
Routed to Link 8L : North

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr_NRCS Rainfall=2.49"

	Area (sf)	CN	Description
	0	98	Roofs, HSG C
*	0	98	Parking
*	100	98	Sidewalk
*	0	100	Water Surface, HSG C
	17,470	74	>75% Grass cover, Good, HSG C
	17,570	74	Weighted Average
	17,470	74	99.43% Pervious Area
	100	98	0.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment C:

Runoff = 1.08 cfs @ 12.13 hrs, Volume= 0.063 af, Depth= 2.05"
Routed to Pond 2P : Bioretention Basin 2

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr_NRCS Rainfall=2.49"

	Area (sf)	CN	Description
	13,000	98	Roofs, HSG C
*	0	98	Green Roof
*	0	98	Parking
*	350	98	Sidewalk
*	700	100	Water Surface, HSG C
	2,000	74	>75% Grass cover, Good, HSG C
	16,050	95	Weighted Average
	2,000	74	12.46% Pervious Area
	14,050	98	87.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment D:

Runoff = 0.83 cfs @ 12.13 hrs, Volume= 0.049 af, Depth= 1.88"
Routed to Pond 3P : Bioretention Basin 3

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr_NRCS Rainfall=2.49"

	Area (sf)	CN	Description
	9,400	98	Roofs, HSG C
*	0	98	Green Roof
*	0	98	Parking
*	600	98	Sidewalk
*	400	100	Water Surface, HSG C
	3,150	74	>75% Grass cover, Good, HSG C
	13,550	92	Weighted Average
	3,150	74	23.25% Pervious Area
	10,400	98	76.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment E:

Runoff = 5.25 cfs @ 12.13 hrs, Volume= 0.307 af, Depth= 1.85"
Routed to Pond 4P : Bioretention Basin 4

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr_NRCS Rainfall=2.49"

	Area (sf)	CN	Description
	0	98	Roofs, HSG C
*	8,230	98	Green Roof
*	42,500	98	Parking
*	5,670	98	Sidewalk
*	9,000	100	Water Surface, HSG C
	21,335	74	>75% Grass cover, Good, HSG C
	86,735	92	Weighted Average
	21,335	74	24.60% Pervious Area
	65,400	98	75.40% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment E1:

Runoff = 2.03 cfs @ 12.13 hrs, Volume= 0.119 af, Depth= 2.26"
Routed to Pond 18P : Roof Drain

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr_NRCS Rainfall=2.49"

	Area (sf)	CN	Description
	27,535	98	Roofs, HSG C
*	0	98	Green Roof
*	0	98	Parking
*	0	98	Sidewalk
*	0	100	Water Surface, HSG C
	0	74	>75% Grass cover, Good, HSG C
	27,535	98	Weighted Average
	27,535	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment E2:

Runoff = 0.48 cfs @ 12.13 hrs, Volume= 0.028 af, Depth= 2.26"
Routed to Pond 16P : Roof Drain

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr_NRCS Rainfall=2.49"

	Area (sf)	CN	Description
	6,500	98	Roofs, HSG C
*	0	98	Green Roof
*	0	98	Parking
*	0	98	Sidewalk
*	0	100	Water Surface, HSG C
	0	74	>75% Grass cover, Good, HSG C
	6,500	98	Weighted Average
	6,500	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment F:

Runoff = 0.97 cfs @ 12.14 hrs, Volume= 0.054 af, Depth= 0.76"
Routed to Link 9L : South

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr_NRCS Rainfall=2.49"

	Area (sf)	CN	Description
	0	98	Roofs, HSG C
*	1,670	98	Parking
*	1,860	98	Sidewalk
*	0	100	Water Surface, HSG C
	33,905	74	>75% Grass cover, Good, HSG C
	37,435	76	Weighted Average
	33,905	74	90.57% Pervious Area
	3,530	98	9.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Pond 1P: Bioretention Basin 1

Inflow Area = 6.150 ac, 78.43% Impervious, Inflow Depth = 1.90" for 1-yr_NRCS event
Inflow = 16.65 cfs @ 12.13 hrs, Volume= 0.975 af
Outflow = 1.74 cfs @ 12.65 hrs, Volume= 0.975 af, Atten= 90%, Lag= 31.1 min
Discarded = 1.03 cfs @ 12.65 hrs, Volume= 0.840 af
Primary = 0.71 cfs @ 12.65 hrs, Volume= 0.135 af
Routed to Link 8L : North
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link 8L : North

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,025.54' @ 12.65 hrs Surf.Area= 12,314 sf Storage= 17,215 cf

Plug-Flow detention time= 99.8 min calculated for 0.975 af (100% of inflow)
Center-of-Mass det. time= 99.8 min (865.4 - 765.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1,024.00'	52,000 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,024.00	10,000	0	0
1,025.00	11,500	10,750	10,750
1,026.00	13,000	12,250	23,000
1,027.00	14,500	13,750	36,750
1,028.00	16,000	15,250	52,000

Device	Routing	Invert	Outlet Devices
#1	Primary	1,024.30'	**18.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,024.30' / 1,024.00' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.77 sf
#2	Device 1	1,024.75'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	1,025.50'	**36.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	1,027.50'	**25.0' long + 5.0 '/' SideZ x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#5	Discarded	1,024.00'	**3.600 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=1.03 cfs @ 12.65 hrs HW=1,025.54' (Free Discharge)
└**5=Exfiltration** (Exfiltration Controls 1.03 cfs)

Primary OutFlow Max=0.71 cfs @ 12.65 hrs HW=1,025.54' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.71 cfs of 4.69 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.70 cfs @ 3.55 fps)
  └**3=Orifice/Grate** (Orifice Controls 0.01 cfs @ 0.71 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,024.00' TW=0.00' (Dynamic Tailwater)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 2P: Bioretention Basin 2

Inflow Area = 0.368 ac, 87.54% Impervious, Inflow Depth = 2.05" for 1-yr_NRCS event
Inflow = 1.08 cfs @ 12.13 hrs, Volume= 0.063 af
Outflow = 0.16 cfs @ 12.53 hrs, Volume= 0.063 af, Atten= 85%, Lag= 23.8 min
Discarded = 0.10 cfs @ 12.53 hrs, Volume= 0.061 af
Primary = 0.05 cfs @ 12.53 hrs, Volume= 0.002 af
Routed to Link 9L : South
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link 9L : South

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,030.08' @ 12.53 hrs Surf.Area= 1,241 sf Storage= 1,051 cf

Plug-Flow detention time= 77.7 min calculated for 0.063 af (100% of inflow)
Center-of-Mass det. time= 77.7 min (840.1 - 762.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,029.00'	2,400 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,029.00	700	0	0
1,030.00	1,200	950	950
1,031.00	1,700	1,450	2,400

Device	Routing	Invert	Outlet Devices
#1	Primary	1,029.30'	**18.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,029.30' / 1,028.30' S= 0.0200 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.77 sf
#2	Device 1	1,030.00'	**36.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	1,030.50'	**20.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#4	Discarded	1,029.00'	**3.600 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.10 cfs @ 12.53 hrs HW=1,030.08' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.10 cfs)

Primary OutFlow Max=0.05 cfs @ 12.53 hrs HW=1,030.08' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.05 cfs of 2.22 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.05 cfs @ 0.98 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,029.00' TW=0.00' (Dynamic Tailwater)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 3P: Bioretention Basin 3

Inflow Area = 0.311 ac, 76.75% Impervious, Inflow Depth = 1.88" for 1-yr_NRCS event
Inflow = 0.83 cfs @ 12.13 hrs, Volume= 0.049 af
Outflow = 0.15 cfs @ 12.45 hrs, Volume= 0.049 af, Atten= 81%, Lag= 19.3 min
Discarded = 0.09 cfs @ 12.45 hrs, Volume= 0.046 af
Primary = 0.06 cfs @ 12.45 hrs, Volume= 0.002 af
Routed to Link 9L : South
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link 9L : South

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,029.09' @ 12.45 hrs Surf.Area= 1,073 sf Storage= 794 cf

Plug-Flow detention time= 72.2 min calculated for 0.049 af (100% of inflow)
Center-of-Mass det. time= 72.2 min (838.4 - 766.2)

Volume	Invert	Avail.Storage	Storage Description
#1	1,028.00'	2,100 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,028.00	400	0	0
1,029.00	1,000	700	700
1,030.00	1,800	1,400	2,100

Device	Routing	Invert	Outlet Devices
#1	Primary	1,028.30'	**18.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,028.30' / 1,027.30' S= 0.0200 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.77 sf
#2	Device 1	1,029.00'	**36.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	1,029.50'	**20.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#4	Discarded	1,028.00'	**3.600 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.09 cfs @ 12.45 hrs HW=1,029.09' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.09 cfs)

Primary OutFlow Max=0.06 cfs @ 12.45 hrs HW=1,029.09' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.06 cfs of 2.26 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.06 cfs @ 1.03 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,028.00' TW=0.00' (Dynamic Tailwater)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 4P: Bioretention Basin 4

Inflow Area = 2.772 ac, 82.33% Impervious, Inflow Depth = 1.58" for 1-yr_NRCS event
Inflow = 5.25 cfs @ 12.13 hrs, Volume= 0.366 af
Outflow = 0.75 cfs @ 11.92 hrs, Volume= 0.366 af, Atten= 86%, Lag= 0.0 min
Primary = 0.75 cfs @ 11.92 hrs, Volume= 0.366 af
Routed to Link 9L : South
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link 9L : South

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,024.47' @ 12.77 hrs Surf.Area= 9,656 sf Storage= 4,373 cf

Plug-Flow detention time= 39.1 min calculated for 0.366 af (100% of inflow)
Center-of-Mass det. time= 39.1 min (830.8 - 791.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,024.00'	33,400 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,024.00	9,000	0	0
1,025.00	10,400	9,700	9,700
1,026.00	11,800	11,100	20,800
1,027.00	13,400	12,600	33,400

Device	Routing	Invert	Outlet Devices
#1	Primary	1,021.50'	**12.0" Round Culvert** L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,021.50' / 1,021.30' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf
#2	Device 1	1,021.50'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 2	1,024.00'	**3.600 in/hr Exfiltration over Surface area from 1,021.50' - 1,024.00'** Excluded Surface area = 0 sf Phase-In= 0.01'
#4	Device 1	1,024.75'	**36.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#5	Secondary	1,026.00'	**10.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=0.75 cfs @ 11.92 hrs HW=1,024.04' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 0.75 cfs of 4.26 cfs potential flow)
  - **2=Orifice/Grate** (Passes 0.75 cfs of 1.43 cfs potential flow)
    - **3=Exfiltration** (Exfiltration Controls 0.75 cfs)
  - **4=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,024.00' TW=0.00' (Dynamic Tailwater)
- **5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 5P: Underground Infiltration

Inflow Area = 0.632 ac,100.00% Impervious, Inflow Depth = 2.26" for 1-yr_NRCS event
Inflow = 2.03 cfs @ 12.13 hrs, Volume= 0.119 af
Outflow = 0.28 cfs @ 12.54 hrs, Volume= 0.045 af, Atten= 86%, Lag= 24.4 min
Primary = 0.28 cfs @ 12.54 hrs, Volume= 0.045 af
Routed to Pond 4P : Bioretention Basin 4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,026.28' @ 12.54 hrs Surf.Area= 0.027 ac Storage= 0.079 af

Plug-Flow detention time= 300.6 min calculated for 0.045 af (38% of inflow)
Center-of-Mass det. time= 176.7 min (935.6 - 758.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	1,020.50'	0.063 af	**15.75'W x 74.82'L x 7.00'H Field A** 0.189 af Overall - 0.032 af Embedded = 0.158 af x 40.0% Voids
#2A	1,024.50'	0.032 af	**ADS_StormTech SC-740 +Cap** x 30 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 30 Chambers in 3 Rows
		0.095 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	1,026.00'	**15.0" Round Culvert** L= 400.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,026.00' / 1,024.00' S= 0.0050 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=0.28 cfs @ 12.54 hrs HW=1,026.28' TW=1,024.46' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 0.28 cfs @ 2.07 fps)

Pond 5P: Underground Infiltration - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

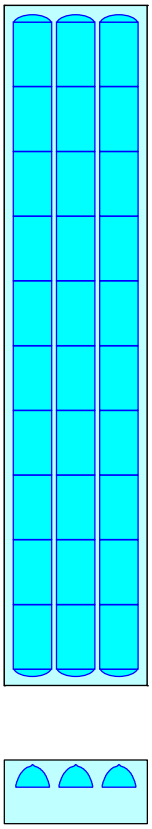
10 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 72.82' Row Length +12.0" End Stone x 2 = 74.82' Base Length
3 Rows x 51.0" Wide + 6.0" Spacing x 2 + 12.0" Side Stone x 2 = 15.75' Base Width
48.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 7.00' Field Height

30 Chambers x 45.9 cf = 1,378.2 cf Chamber Storage

8,248.5 cf Field - 1,378.2 cf Chambers = 6,870.3 cf Stone x 40.0% Voids = 2,748.1 cf Stone Storage

Chamber Storage + Stone Storage = 4,126.3 cf = 0.095 af
Overall Storage Efficiency = 50.0%
Overall System Size = 74.82' x 15.75' x 7.00'

30 Chambers
305.5 cy Field
254.5 cy Stone



Summary for Pond 6P: Underground Infiltration

Inflow Area = 0.149 ac,100.00% Impervious, Inflow Depth = 2.26" for 1-yr_NRCS event
Inflow = 0.48 cfs @ 12.13 hrs, Volume= 0.028 af
Outflow = 0.22 cfs @ 12.23 hrs, Volume= 0.013 af, Atten= 55%, Lag= 6.2 min
Primary = 0.22 cfs @ 12.23 hrs, Volume= 0.013 af
Routed to Pond 4P : Bioretention Basin 4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,027.26' @ 12.23 hrs Surf.Area= 0.006 ac Storage= 0.016 af

Plug-Flow detention time= 227.7 min calculated for 0.013 af (48% of inflow)
Center-of-Mass det. time= 122.4 min (881.3 - 758.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	1,022.00'	0.015 af	**11.00'W x 24.98'L x 7.00'H Field A** 0.044 af Overall - 0.006 af Embedded = 0.038 af x 40.0% Voids
#2A	1,026.00'	0.006 af	**ADS_StormTech SC-740 +Cap** x 6 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 6 Chambers in 2 Rows
		0.021 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	1,027.00'	**12.0" Round Culvert** L= 400.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,027.00' / 1,025.00' S= 0.0050 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.22 cfs @ 12.23 hrs HW=1,027.26' TW=1,024.36' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 0.22 cfs @ 2.06 fps)

Pond 6P: Underground Infiltration - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

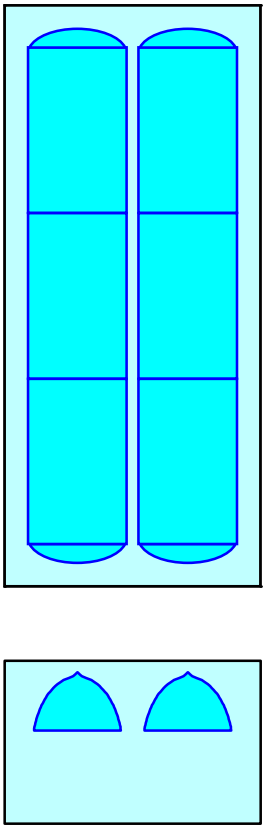
3 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 22.98' Row Length +12.0" End Stone x 2 = 24.98' Base Length
2 Rows x 51.0" Wide + 6.0" Spacing x 1 + 12.0" Side Stone x 2 = 11.00' Base Width
48.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 7.00' Field Height

6 Chambers x 45.9 cf = 275.6 cf Chamber Storage

1,923.2 cf Field - 275.6 cf Chambers = 1,647.6 cf Stone x 40.0% Voids = 659.0 cf Stone Storage

Chamber Storage + Stone Storage = 934.7 cf = 0.021 af
Overall Storage Efficiency = 48.6%
Overall System Size = 24.98' x 11.00' x 7.00'

6 Chambers
71.2 cy Field
61.0 cy Stone



Summary for Pond 16P: Roof Drain

[57] Hint: Peaked at 1,031.43' (Flood elevation advised)

Inflow Area = 0.149 ac,100.00% Impervious, Inflow Depth = 2.26" for 1-yr_NRCS event
Inflow = 0.48 cfs @ 12.13 hrs, Volume= 0.028 af
Outflow = 0.48 cfs @ 12.13 hrs, Volume= 0.028 af, Atten= 0%, Lag= 0.0 min
Primary = 0.48 cfs @ 12.13 hrs, Volume= 0.028 af
Routed to Pond 6P : Underground Infiltration
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond 3P : Bioretention Basin 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,031.43' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1,031.00'	**8.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,031.00' / 1,030.80' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.35 sf
#2	Secondary	1,031.67'	**100.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=0.48 cfs @ 12.13 hrs HW=1,031.43' TW=1,026.75' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.48 cfs @ 2.85 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,031.00' TW=1,028.00' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 18P: Roof Drain

[57] Hint: Peaked at 1,028.77' (Flood elevation advised)

Inflow Area = 0.632 ac,100.00% Impervious, Inflow Depth = 2.26" for 1-yr_NRCS event
Inflow = 2.03 cfs @ 12.13 hrs, Volume= 0.119 af
Outflow = 2.03 cfs @ 12.13 hrs, Volume= 0.119 af, Atten= 0%, Lag= 0.0 min
Primary = 2.03 cfs @ 12.13 hrs, Volume= 0.119 af
Routed to Pond 5P : Underground Infiltration
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond 4P : Bioretention Basin 4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,028.77' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1,028.00'	**15.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,028.00' / 1,027.80' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf
#2	Secondary	1,029.25'	**100.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=2.02 cfs @ 12.13 hrs HW=1,028.77' TW=1,025.16' (Dynamic Tailwater)
1=Culvert (Barrel Controls 2.02 cfs @ 3.63 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,028.00' TW=1,024.00' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Link 3L: Post Development

Inflow Area = 10.864 ac, 71.34% Impervious, Inflow Depth = 0.64" for 1-yr_NRCS event
Inflow = 2.32 cfs @ 12.15 hrs, Volume= 0.581 af
Primary = 2.32 cfs @ 12.15 hrs, Volume= 0.581 af, Atten= 0%, Lag= 0.0 min
Routed to nonexistent node Post

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Summary for Link 8L: North

Inflow Area = 6.553 ac, 73.63% Impervious, Inflow Depth = 0.29" for 1-yr_NRCS event
Inflow = 0.78 cfs @ 12.55 hrs, Volume= 0.156 af
Primary = 0.78 cfs @ 12.55 hrs, Volume= 0.156 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3L : Post Development

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Summary for Link 9L: South

Inflow Area = 4.311 ac, 67.84% Impervious, Inflow Depth = 1.18" for 1-yr_NRCS event
Inflow = 1.72 cfs @ 12.14 hrs, Volume= 0.425 af
Primary = 1.72 cfs @ 12.14 hrs, Volume= 0.425 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3L : Post Development

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 2
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment A: Runoff Area=267,875 sf 78.43% Impervious Runoff Depth=2.22"
Tc=6.0 min CN=74/98 Runoff=19.37 cfs 1.138 af

Subcatchment B: Runoff Area=17,570 sf 0.57% Impervious Runoff Depth=0.82"
Tc=6.0 min CN=74/98 Runoff=0.52 cfs 0.028 af

Subcatchment C: Runoff Area=16,050 sf 87.54% Impervious Runoff Depth=2.38"
Tc=6.0 min CN=74/98 Runoff=1.24 cfs 0.073 af

Subcatchment D: Runoff Area=13,550 sf 76.75% Impervious Runoff Depth=2.19"
Tc=6.0 min CN=74/98 Runoff=0.97 cfs 0.057 af

Subcatchment E: Runoff Area=86,735 sf 75.40% Impervious Runoff Depth=2.17"
Tc=6.0 min CN=74/98 Runoff=6.12 cfs 0.359 af

Subcatchment E1: Runoff Area=27,535 sf 100.00% Impervious Runoff Depth=2.61"
Tc=6.0 min CN=0/98 Runoff=2.32 cfs 0.137 af

Subcatchment E2: Runoff Area=6,500 sf 100.00% Impervious Runoff Depth=2.61"
Tc=6.0 min CN=0/98 Runoff=0.55 cfs 0.032 af

Subcatchment F: Runoff Area=37,435 sf 9.43% Impervious Runoff Depth=0.98"
Tc=6.0 min CN=74/98 Runoff=1.28 cfs 0.070 af

Pond 1P: Bioretention Basin 1 Peak Elev=1,025.78' Storage=20,184 cf Inflow=19.37 cfs 1.138 af
Discarded=1.06 cfs 0.918 af Primary=1.44 cfs 0.220 af Secondary=0.00 cfs 0.000 af Outflow=2.49 cfs 1.138 af

Pond 2P: Bioretention Basin 2 Peak Elev=1,030.16' Storage=1,145 cf Inflow=1.24 cfs 0.073 af
Discarded=0.11 cfs 0.066 af Primary=0.19 cfs 0.008 af Secondary=0.00 cfs 0.000 af Outflow=0.30 cfs 0.073 af

Pond 3P: Bioretention Basin 3 Peak Elev=1,029.16' Storage=865 cf Inflow=0.97 cfs 0.057 af
Discarded=0.09 cfs 0.050 af Primary=0.19 cfs 0.007 af Secondary=0.00 cfs 0.000 af Outflow=0.28 cfs 0.057 af

Pond 4P: Bioretention Basin 4 Peak Elev=1,024.66' Storage=6,240 cf Inflow=6.36 cfs 0.440 af
Primary=0.75 cfs 0.440 af Secondary=0.00 cfs 0.000 af Outflow=0.75 cfs 0.440 af

Pond 5P: Underground Infiltration Peak Elev=1,026.44' Storage=0.082 af Inflow=2.32 cfs 0.137 af
15.0" Round Culvert n=0.012 L=400.0' S=0.0050 '/' Outflow=0.69 cfs 0.063 af

Pond 6P: Underground Infiltration Peak Elev=1,027.36' Storage=0.016 af Inflow=0.55 cfs 0.032 af
12.0" Round Culvert n=0.012 L=400.0' S=0.0050 '/' Outflow=0.44 cfs 0.018 af

Pond 16P: Roof Drain Peak Elev=1,031.47' Inflow=0.55 cfs 0.032 af
Primary=0.55 cfs 0.032 af Secondary=0.00 cfs 0.000 af Outflow=0.55 cfs 0.032 af

Pond 18P: Roof Drain Peak Elev=1,028.84' Inflow=2.32 cfs 0.137 af
Primary=2.32 cfs 0.137 af Secondary=0.00 cfs 0.000 af Outflow=2.32 cfs 0.137 af

Link 3L: Post Development Inflow=3.01 cfs 0.773 af
Primary=3.01 cfs 0.773 af

Link 8L: North Inflow=1.53 cfs 0.248 af
Primary=1.53 cfs 0.248 af

Link 9L: South Inflow=2.03 cfs 0.525 af
Primary=2.03 cfs 0.525 af

Total Runoff Area = 10.864 ac Runoff Volume = 1.895 af Average Runoff Depth = 2.09"
28.66% Pervious = 3.114 ac 71.34% Impervious = 7.750 ac

Summary for Subcatchment A:

Runoff = 19.37 cfs @ 12.13 hrs, Volume= 1.138 af, Depth= 2.22"
Routed to Pond 1P : Bioretention Basin 1

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr_NRCS Rainfall=2.84"

	Area (sf)	CN	Description
	81,360	98	Roofs, HSG C
*	10,025	98	Green Roof
*	86,500	98	Parking
*	22,200	98	Sidewalk
*	10,000	100	Water Surface, HSG C
	57,790	74	>75% Grass cover, Good, HSG C
	267,875	93	Weighted Average
	57,790	74	21.57% Pervious Area
	210,085	98	78.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment B:

Runoff = 0.52 cfs @ 12.14 hrs, Volume= 0.028 af, Depth= 0.82"
Routed to Link 8L : North

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr_NRCS Rainfall=2.84"

	Area (sf)	CN	Description
	0	98	Roofs, HSG C
*	0	98	Parking
*	100	98	Sidewalk
*	0	100	Water Surface, HSG C
	17,470	74	>75% Grass cover, Good, HSG C
	17,570	74	Weighted Average
	17,470	74	99.43% Pervious Area
	100	98	0.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment C:

Runoff = 1.24 cfs @ 12.13 hrs, Volume= 0.073 af, Depth= 2.38"
Routed to Pond 2P : Bioretention Basin 2

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr_NRCS Rainfall=2.84"

	Area (sf)	CN	Description
	13,000	98	Roofs, HSG C
*	0	98	Green Roof
*	0	98	Parking
*	350	98	Sidewalk
*	700	100	Water Surface, HSG C
	2,000	74	>75% Grass cover, Good, HSG C
	16,050	95	Weighted Average
	2,000	74	12.46% Pervious Area
	14,050	98	87.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment D:

Runoff = 0.97 cfs @ 12.13 hrs, Volume= 0.057 af, Depth= 2.19"
Routed to Pond 3P : Bioretention Basin 3

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr_NRCS Rainfall=2.84"

	Area (sf)	CN	Description
	9,400	98	Roofs, HSG C
*	0	98	Green Roof
*	0	98	Parking
*	600	98	Sidewalk
*	400	100	Water Surface, HSG C
	3,150	74	>75% Grass cover, Good, HSG C
	13,550	92	Weighted Average
	3,150	74	23.25% Pervious Area
	10,400	98	76.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment E:

Runoff = 6.12 cfs @ 12.13 hrs, Volume= 0.359 af, Depth= 2.17"
Routed to Pond 4P : Bioretention Basin 4

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr_NRCS Rainfall=2.84"

	Area (sf)	CN	Description
	0	98	Roofs, HSG C
*	8,230	98	Green Roof
*	42,500	98	Parking
*	5,670	98	Sidewalk
*	9,000	100	Water Surface, HSG C
	21,335	74	>75% Grass cover, Good, HSG C
	86,735	92	Weighted Average
	21,335	74	24.60% Pervious Area
	65,400	98	75.40% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment E1:

Runoff = 2.32 cfs @ 12.13 hrs, Volume= 0.137 af, Depth= 2.61"
Routed to Pond 18P : Roof Drain

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr_NRCS Rainfall=2.84"

	Area (sf)	CN	Description
	27,535	98	Roofs, HSG C
*	0	98	Green Roof
*	0	98	Parking
*	0	98	Sidewalk
*	0	100	Water Surface, HSG C
	0	74	>75% Grass cover, Good, HSG C
	27,535	98	Weighted Average
	27,535	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment E2:

Runoff = 0.55 cfs @ 12.13 hrs, Volume= 0.032 af, Depth= 2.61"
Routed to Pond 16P : Roof Drain

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr_NRCS Rainfall=2.84"

	Area (sf)	CN	Description
	6,500	98	Roofs, HSG C
*	0	98	Green Roof
*	0	98	Parking
*	0	98	Sidewalk
*	0	100	Water Surface, HSG C
	0	74	>75% Grass cover, Good, HSG C
	6,500	98	Weighted Average
	6,500	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment F:

Runoff = 1.28 cfs @ 12.14 hrs, Volume= 0.070 af, Depth= 0.98"
Routed to Link 9L : South

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr_NRCS Rainfall=2.84"

	Area (sf)	CN	Description
	0	98	Roofs, HSG C
*	1,670	98	Parking
*	1,860	98	Sidewalk
*	0	100	Water Surface, HSG C
	33,905	74	>75% Grass cover, Good, HSG C
	37,435	76	Weighted Average
	33,905	74	90.57% Pervious Area
	3,530	98	9.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Pond 1P: Bioretention Basin 1

Inflow Area = 6.150 ac, 78.43% Impervious, Inflow Depth = 2.22" for 2-yr_NRCS event
Inflow = 19.37 cfs @ 12.13 hrs, Volume= 1.138 af
Outflow = 2.49 cfs @ 12.57 hrs, Volume= 1.138 af, Atten= 87%, Lag= 26.4 min
Discarded = 1.06 cfs @ 12.57 hrs, Volume= 0.918 af
Primary = 1.44 cfs @ 12.57 hrs, Volume= 0.220 af
Routed to Link 8L : North
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link 8L : North

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,025.78' @ 12.57 hrs Surf.Area= 12,671 sf Storage= 20,184 cf

Plug-Flow detention time= 102.7 min calculated for 1.138 af (100% of inflow)
Center-of-Mass det. time= 102.7 min (866.2 - 763.5)

Volume	Invert	Avail.Storage	Storage Description
#1	1,024.00'	52,000 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,024.00	10,000	0	0
1,025.00	11,500	10,750	10,750
1,026.00	13,000	12,250	23,000
1,027.00	14,500	13,750	36,750
1,028.00	16,000	15,250	52,000

Device	Routing	Invert	Outlet Devices
#1	Primary	1,024.30'	**18.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,024.30' / 1,024.00' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.77 sf
#2	Device 1	1,024.75'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	1,025.50'	**36.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	1,027.50'	**25.0' long + 5.0 '/' SideZ x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#5	Discarded	1,024.00'	**3.600 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=1.06 cfs @ 12.57 hrs HW=1,025.78' (Free Discharge)
└**5=Exfiltration** (Exfiltration Controls 1.06 cfs)

Primary OutFlow Max=1.44 cfs @ 12.57 hrs HW=1,025.78' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 1.44 cfs of 5.77 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.84 cfs @ 4.25 fps)
  └**3=Orifice/Grate** (Orifice Controls 0.60 cfs @ 1.80 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,024.00' TW=0.00' (Dynamic Tailwater)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 2P: Bioretention Basin 2

Inflow Area = 0.368 ac, 87.54% Impervious, Inflow Depth = 2.38" for 2-yr_NRCS event
Inflow = 1.24 cfs @ 12.13 hrs, Volume= 0.073 af
Outflow = 0.30 cfs @ 12.36 hrs, Volume= 0.073 af, Atten= 76%, Lag= 14.1 min
Discarded = 0.11 cfs @ 12.36 hrs, Volume= 0.066 af
Primary = 0.19 cfs @ 12.36 hrs, Volume= 0.008 af
Routed to Link 9L : South
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link 9L : South

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,030.16' @ 12.36 hrs Surf.Area= 1,279 sf Storage= 1,145 cf

Plug-Flow detention time= 73.6 min calculated for 0.073 af (100% of inflow)
Center-of-Mass det. time= 73.6 min (833.7 - 760.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1,029.00'	2,400 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,029.00	700	0	0
1,030.00	1,200	950	950
1,031.00	1,700	1,450	2,400

Device	Routing	Invert	Outlet Devices
#1	Primary	1,029.30'	**18.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,029.30' / 1,028.30' S= 0.0200 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.77 sf
#2	Device 1	1,030.00'	**36.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	1,030.50'	**20.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#4	Discarded	1,029.00'	**3.600 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.11 cfs @ 12.36 hrs HW=1,030.16' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.11 cfs)

Primary OutFlow Max=0.19 cfs @ 12.36 hrs HW=1,030.16' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.19 cfs of 2.60 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.19 cfs @ 1.35 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,029.00' TW=0.00' (Dynamic Tailwater)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 3P: Bioretention Basin 3

Inflow Area = 0.311 ac, 76.75% Impervious, Inflow Depth = 2.19" for 2-yr_NRCS event
Inflow = 0.97 cfs @ 12.13 hrs, Volume= 0.057 af
Outflow = 0.28 cfs @ 12.31 hrs, Volume= 0.057 af, Atten= 71%, Lag= 11.1 min
Discarded = 0.09 cfs @ 12.31 hrs, Volume= 0.050 af
Primary = 0.19 cfs @ 12.31 hrs, Volume= 0.007 af
Routed to Link 9L : South
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link 9L : South

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,029.16' @ 12.31 hrs Surf.Area= 1,124 sf Storage= 865 cf

Plug-Flow detention time= 68.0 min calculated for 0.057 af (100% of inflow)
Center-of-Mass det. time= 68.0 min (832.2 - 764.2)

Volume	Invert	Avail.Storage	Storage Description
#1	1,028.00'	2,100 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,028.00	400	0	0
1,029.00	1,000	700	700
1,030.00	1,800	1,400	2,100

Device	Routing	Invert	Outlet Devices
#1	Primary	1,028.30'	**18.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,028.30' / 1,027.30' S= 0.0200 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.77 sf
#2	Device 1	1,029.00'	**36.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	1,029.50'	**20.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#4	Discarded	1,028.00'	**3.600 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.09 cfs @ 12.31 hrs HW=1,029.16' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.09 cfs)

Primary OutFlow Max=0.19 cfs @ 12.31 hrs HW=1,029.16' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.19 cfs of 2.59 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.19 cfs @ 1.34 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,028.00' TW=0.00' (Dynamic Tailwater)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 4P: Bioretention Basin 4

Inflow Area = 2.772 ac, 82.33% Impervious, Inflow Depth = 1.91" for 2-yr_NRCS event
Inflow = 6.36 cfs @ 12.14 hrs, Volume= 0.440 af
Outflow = 0.75 cfs @ 11.87 hrs, Volume= 0.440 af, Atten= 88%, Lag= 0.0 min
Primary = 0.75 cfs @ 11.87 hrs, Volume= 0.440 af
Routed to Link 9L : South
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link 9L : South

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,024.66' @ 12.97 hrs Surf.Area= 9,923 sf Storage= 6,240 cf

Plug-Flow detention time= 58.7 min calculated for 0.440 af (100% of inflow)
Center-of-Mass det. time= 58.7 min (846.3 - 787.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1,024.00'	33,400 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,024.00	9,000	0	0
1,025.00	10,400	9,700	9,700
1,026.00	11,800	11,100	20,800
1,027.00	13,400	12,600	33,400

Device	Routing	Invert	Outlet Devices
#1	Primary	1,021.50'	**12.0" Round Culvert** L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,021.50' / 1,021.30' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf
#2	Device 1	1,021.50'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 2	1,024.00'	**3.600 in/hr Exfiltration over Surface area from 1,021.50' - 1,024.00'** Excluded Surface area = 0 sf Phase-In= 0.01'
#4	Device 1	1,024.75'	**36.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#5	Secondary	1,026.00'	**10.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=0.75 cfs @ 11.87 hrs HW=1,024.04' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 0.75 cfs of 4.26 cfs potential flow)
  - **2=Orifice/Grate** (Passes 0.75 cfs of 1.43 cfs potential flow)
    - **3=Exfiltration** (Exfiltration Controls 0.75 cfs)
  - **4=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,024.00' TW=0.00' (Dynamic Tailwater)
- **5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 5P: Underground Infiltration

Inflow Area = 0.632 ac,100.00% Impervious, Inflow Depth = 2.61" for 2-yr_NRCS event
Inflow = 2.32 cfs @ 12.13 hrs, Volume= 0.137 af
Outflow = 0.69 cfs @ 12.30 hrs, Volume= 0.063 af, Atten= 70%, Lag= 10.2 min
Primary = 0.69 cfs @ 12.30 hrs, Volume= 0.063 af
Routed to Pond 4P : Bioretention Basin 4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,026.44' @ 12.30 hrs Surf.Area= 0.027 ac Storage= 0.082 af

Plug-Flow detention time= 250.2 min calculated for 0.063 af (46% of inflow)
Center-of-Mass det. time= 140.9 min (897.1 - 756.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	1,020.50'	0.063 af	**15.75'W x 74.82'L x 7.00'H Field A** 0.189 af Overall - 0.032 af Embedded = 0.158 af x 40.0% Voids
#2A	1,024.50'	0.032 af	**ADS_StormTech SC-740 +Cap** x 30 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 30 Chambers in 3 Rows
		0.095 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	1,026.00'	**15.0" Round Culvert** L= 400.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,026.00' / 1,024.00' S= 0.0050 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=0.69 cfs @ 12.30 hrs HW=1,026.44' TW=1,024.52' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 0.69 cfs @ 2.71 fps)

Pond 5P: Underground Infiltration - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

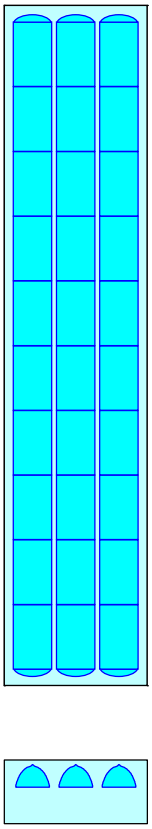
10 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 72.82' Row Length +12.0" End Stone x 2 = 74.82' Base Length
3 Rows x 51.0" Wide + 6.0" Spacing x 2 + 12.0" Side Stone x 2 = 15.75' Base Width
48.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 7.00' Field Height

30 Chambers x 45.9 cf = 1,378.2 cf Chamber Storage

8,248.5 cf Field - 1,378.2 cf Chambers = 6,870.3 cf Stone x 40.0% Voids = 2,748.1 cf Stone Storage

Chamber Storage + Stone Storage = 4,126.3 cf = 0.095 af
Overall Storage Efficiency = 50.0%
Overall System Size = 74.82' x 15.75' x 7.00'

30 Chambers
305.5 cy Field
254.5 cy Stone



Summary for Pond 6P: Underground Infiltration

Inflow Area = 0.149 ac,100.00% Impervious, Inflow Depth = 2.61" for 2-yr_NRCS event
Inflow = 0.55 cfs @ 12.13 hrs, Volume= 0.032 af
Outflow = 0.44 cfs @ 12.17 hrs, Volume= 0.018 af, Atten= 20%, Lag= 2.6 min
Primary = 0.44 cfs @ 12.17 hrs, Volume= 0.018 af
Routed to Pond 4P : Bioretention Basin 4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,027.36' @ 12.17 hrs Surf.Area= 0.006 ac Storage= 0.016 af

Plug-Flow detention time= 199.9 min calculated for 0.018 af (55% of inflow)
Center-of-Mass det. time= 103.7 min (859.8 - 756.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	1,022.00'	0.015 af	**11.00'W x 24.98'L x 7.00'H Field A** 0.044 af Overall - 0.006 af Embedded = 0.038 af x 40.0% Voids
#2A	1,026.00'	0.006 af	**ADS_StormTech SC-740 +Cap** x 6 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 6 Chambers in 2 Rows
		0.021 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	1,027.00'	**12.0" Round Culvert** L= 400.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,027.00' / 1,025.00' S= 0.0050 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.44 cfs @ 12.17 hrs HW=1,027.36' TW=1,024.38' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 0.44 cfs @ 2.52 fps)

Pond 6P: Underground Infiltration - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

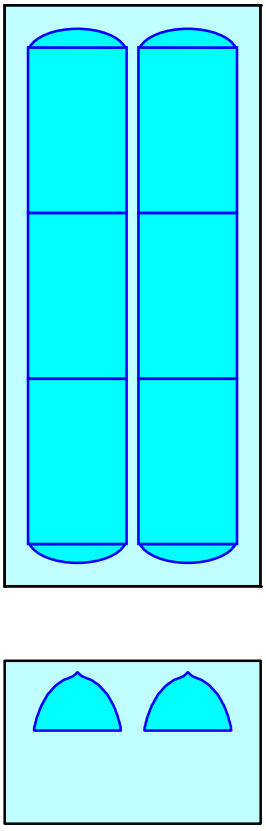
3 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 22.98' Row Length +12.0" End Stone x 2 = 24.98' Base Length
2 Rows x 51.0" Wide + 6.0" Spacing x 1 + 12.0" Side Stone x 2 = 11.00' Base Width
48.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 7.00' Field Height

6 Chambers x 45.9 cf = 275.6 cf Chamber Storage

1,923.2 cf Field - 275.6 cf Chambers = 1,647.6 cf Stone x 40.0% Voids = 659.0 cf Stone Storage

Chamber Storage + Stone Storage = 934.7 cf = 0.021 af
Overall Storage Efficiency = 48.6%
Overall System Size = 24.98' x 11.00' x 7.00'

6 Chambers
71.2 cy Field
61.0 cy Stone



Summary for Pond 16P: Roof Drain

[57] Hint: Peaked at 1,031.47' (Flood elevation advised)

Inflow Area = 0.149 ac,100.00% Impervious, Inflow Depth = 2.61" for 2-yr_NRCS event
Inflow = 0.55 cfs @ 12.13 hrs, Volume= 0.032 af
Outflow = 0.55 cfs @ 12.13 hrs, Volume= 0.032 af, Atten= 0%, Lag= 0.0 min
Primary = 0.55 cfs @ 12.13 hrs, Volume= 0.032 af
Routed to Pond 6P : Underground Infiltration
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond 3P : Bioretention Basin 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,031.47' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1,031.00'	**8.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,031.00' / 1,030.80' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.35 sf
#2	Secondary	1,031.67'	**100.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=0.55 cfs @ 12.13 hrs HW=1,031.47' TW=1,027.23' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.55 cfs @ 2.93 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,031.00' TW=1,028.00' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 18P: Roof Drain

[57] Hint: Peaked at 1,028.84' (Flood elevation advised)

Inflow Area = 0.632 ac,100.00% Impervious, Inflow Depth = 2.61" for 2-yr_NRCS event
Inflow = 2.32 cfs @ 12.13 hrs, Volume= 0.137 af
Outflow = 2.32 cfs @ 12.13 hrs, Volume= 0.137 af, Atten= 0%, Lag= 0.0 min
Primary = 2.32 cfs @ 12.13 hrs, Volume= 0.137 af
Routed to Pond 5P : Underground Infiltration
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond 4P : Bioretention Basin 4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,028.84' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1,028.00'	**15.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,028.00' / 1,027.80' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf
#2	Secondary	1,029.25'	**100.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=2.32 cfs @ 12.13 hrs HW=1,028.84' TW=1,025.63' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 2.32 cfs @ 3.73 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,028.00' TW=1,024.00' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 3L: Post Development

Inflow Area = 10.864 ac, 71.34% Impervious, Inflow Depth = 0.85" for 2-yr_NRCS event
Inflow = 3.01 cfs @ 12.15 hrs, Volume= 0.773 af
Primary = 3.01 cfs @ 12.15 hrs, Volume= 0.773 af, Atten= 0%, Lag= 0.0 min
Routed to nonexistent node Post

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Summary for Link 8L: North

Inflow Area = 6.553 ac, 73.63% Impervious, Inflow Depth = 0.45" for 2-yr_NRCS event
Inflow = 1.53 cfs @ 12.55 hrs, Volume= 0.248 af
Primary = 1.53 cfs @ 12.55 hrs, Volume= 0.248 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3L : Post Development

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Summary for Link 9L: South

Inflow Area = 4.311 ac, 67.84% Impervious, Inflow Depth = 1.46" for 2-yr_NRCS event
Inflow = 2.03 cfs @ 12.14 hrs, Volume= 0.525 af
Primary = 2.03 cfs @ 12.14 hrs, Volume= 0.525 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3L : Post Development

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 2
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment A: Runoff Area=267,875 sf 78.43% Impervious Runoff Depth=3.38"
Tc=6.0 min CN=74/98 Runoff=29.25 cfs 1.733 af

Subcatchment B: Runoff Area=17,570 sf 0.57% Impervious Runoff Depth=1.68"
Tc=6.0 min CN=74/98 Runoff=1.10 cfs 0.056 af

Subcatchment C: Runoff Area=16,050 sf 87.54% Impervious Runoff Depth=3.58"
Tc=6.0 min CN=74/98 Runoff=1.84 cfs 0.110 af

Subcatchment D: Runoff Area=13,550 sf 76.75% Impervious Runoff Depth=3.35"
Tc=6.0 min CN=74/98 Runoff=1.47 cfs 0.087 af

Subcatchment E: Runoff Area=86,735 sf 75.40% Impervious Runoff Depth=3.32"
Tc=6.0 min CN=74/98 Runoff=9.31 cfs 0.550 af

Subcatchment E1: Runoff Area=27,535 sf 100.00% Impervious Runoff Depth=3.85"
Tc=6.0 min CN=0/98 Runoff=3.37 cfs 0.203 af

Subcatchment E2: Runoff Area=6,500 sf 100.00% Impervious Runoff Depth=3.85"
Tc=6.0 min CN=0/98 Runoff=0.79 cfs 0.048 af

Subcatchment F: Runoff Area=37,435 sf 9.43% Impervious Runoff Depth=1.87"
Tc=6.0 min CN=74/98 Runoff=2.53 cfs 0.134 af

Pond 1P: Bioretention Basin 1 Peak Elev=1,026.39' Storage=28,154 cf Inflow=29.25 cfs 1.733 af
Discarded=1.13 cfs 1.119 af Primary=6.73 cfs 0.614 af Secondary=0.00 cfs 0.000 af Outflow=7.86 cfs 1.733 af

Pond 2P: Bioretention Basin 2 Peak Elev=1,030.37' Storage=1,422 cf Inflow=1.84 cfs 0.110 af
Discarded=0.12 cfs 0.080 af Primary=1.01 cfs 0.029 af Secondary=0.00 cfs 0.000 af Outflow=1.13 cfs 0.110 af

Pond 3P: Bioretention Basin 3 Peak Elev=1,029.34' Storage=1,083 cf Inflow=1.47 cfs 0.087 af
Discarded=0.11 cfs 0.062 af Primary=0.87 cfs 0.024 af Secondary=0.00 cfs 0.000 af Outflow=0.97 cfs 0.087 af

Pond 4P: Bioretention Basin 4 Peak Elev=1,025.15' Storage=11,273 cf Inflow=13.02 cfs 0.712 af
Primary=1.95 cfs 0.712 af Secondary=0.00 cfs 0.000 af Outflow=1.95 cfs 0.712 af

Pond 5P: Underground Infiltration Peak Elev=1,026.98' Storage=0.089 af Inflow=3.37 cfs 0.203 af
15.0" Round Culvert n=0.012 L=400.0' S=0.0050 '/' Outflow=3.10 cfs 0.129 af

Pond 6P: Underground Infiltration Peak Elev=1,027.49' Storage=0.017 af Inflow=0.79 cfs 0.048 af
12.0" Round Culvert n=0.012 L=400.0' S=0.0050 '/' Outflow=0.77 cfs 0.033 af

Pond 16P: Roof Drain Peak Elev=1,031.60' Inflow=0.79 cfs 0.048 af
Primary=0.79 cfs 0.048 af Secondary=0.00 cfs 0.000 af Outflow=0.79 cfs 0.048 af

Pond 18P: Roof Drain Peak Elev=1,029.07' Inflow=3.37 cfs 0.203 af
Primary=3.37 cfs 0.203 af Secondary=0.00 cfs 0.000 af Outflow=3.37 cfs 0.203 af

Link 3L: Post Development Inflow=10.71 cfs 1.571 af
Primary=10.71 cfs 1.571 af

Link 8L: North Inflow=7.07 cfs 0.671 af
Primary=7.07 cfs 0.671 af

Link 9L: South Inflow=4.70 cfs 0.900 af
Primary=4.70 cfs 0.900 af

Total Runoff Area = 10.864 ac Runoff Volume = 2.921 af Average Runoff Depth = 3.23"
28.66% Pervious = 3.114 ac 71.34% Impervious = 7.750 ac

Summary for Subcatchment A:

Runoff = 29.25 cfs @ 12.13 hrs, Volume= 1.733 af, Depth= 3.38"
Routed to Pond 1P : Bioretention Basin 1

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr_NRCS Rainfall=4.09"

	Area (sf)	CN	Description
	81,360	98	Roofs, HSG C
*	10,025	98	Green Roof
*	86,500	98	Parking
*	22,200	98	Sidewalk
*	10,000	100	Water Surface, HSG C
	57,790	74	>75% Grass cover, Good, HSG C
	267,875	93	Weighted Average
	57,790	74	21.57% Pervious Area
	210,085	98	78.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment B:

Runoff = 1.10 cfs @ 12.14 hrs, Volume= 0.056 af, Depth= 1.68"
Routed to Link 8L : North

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr_NRCS Rainfall=4.09"

	Area (sf)	CN	Description
	0	98	Roofs, HSG C
*	0	98	Parking
*	100	98	Sidewalk
*	0	100	Water Surface, HSG C
	17,470	74	>75% Grass cover, Good, HSG C
	17,570	74	Weighted Average
	17,470	74	99.43% Pervious Area
	100	98	0.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment C:

Runoff = 1.84 cfs @ 12.13 hrs, Volume= 0.110 af, Depth= 3.58"
Routed to Pond 2P : Bioretention Basin 2

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr_NRCS Rainfall=4.09"

	Area (sf)	CN	Description
	13,000	98	Roofs, HSG C
*	0	98	Green Roof
*	0	98	Parking
*	350	98	Sidewalk
*	700	100	Water Surface, HSG C
	2,000	74	>75% Grass cover, Good, HSG C
	16,050	95	Weighted Average
	2,000	74	12.46% Pervious Area
	14,050	98	87.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment D:

Runoff = 1.47 cfs @ 12.13 hrs, Volume= 0.087 af, Depth= 3.35"
Routed to Pond 3P : Bioretention Basin 3

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr_NRCS Rainfall=4.09"

	Area (sf)	CN	Description
	9,400	98	Roofs, HSG C
*	0	98	Green Roof
*	0	98	Parking
*	600	98	Sidewalk
*	400	100	Water Surface, HSG C
	3,150	74	>75% Grass cover, Good, HSG C
	13,550	92	Weighted Average
	3,150	74	23.25% Pervious Area
	10,400	98	76.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment E:

Runoff = 9.31 cfs @ 12.13 hrs, Volume= 0.550 af, Depth= 3.32"
Routed to Pond 4P : Bioretention Basin 4

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr_NRCS Rainfall=4.09"

	Area (sf)	CN	Description
	0	98	Roofs, HSG C
*	8,230	98	Green Roof
*	42,500	98	Parking
*	5,670	98	Sidewalk
*	9,000	100	Water Surface, HSG C
	21,335	74	>75% Grass cover, Good, HSG C
	86,735	92	Weighted Average
	21,335	74	24.60% Pervious Area
	65,400	98	75.40% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment E1:

Runoff = 3.37 cfs @ 12.13 hrs, Volume= 0.203 af, Depth= 3.85"
Routed to Pond 18P : Roof Drain

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr_NRCS Rainfall=4.09"

	Area (sf)	CN	Description
	27,535	98	Roofs, HSG C
*	0	98	Green Roof
*	0	98	Parking
*	0	98	Sidewalk
*	0	100	Water Surface, HSG C
	0	74	>75% Grass cover, Good, HSG C
	27,535	98	Weighted Average
	27,535	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment E2:

Runoff = 0.79 cfs @ 12.13 hrs, Volume= 0.048 af, Depth= 3.85"
Routed to Pond 16P : Roof Drain

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr_NRCS Rainfall=4.09"

	Area (sf)	CN	Description
	6,500	98	Roofs, HSG C
*	0	98	Green Roof
*	0	98	Parking
*	0	98	Sidewalk
*	0	100	Water Surface, HSG C
	0	74	>75% Grass cover, Good, HSG C
	6,500	98	Weighted Average
	6,500	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment F:

Runoff = 2.53 cfs @ 12.13 hrs, Volume= 0.134 af, Depth= 1.87"
Routed to Link 9L : South

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr_NRCS Rainfall=4.09"

	Area (sf)	CN	Description
	0	98	Roofs, HSG C
*	1,670	98	Parking
*	1,860	98	Sidewalk
*	0	100	Water Surface, HSG C
	33,905	74	>75% Grass cover, Good, HSG C
	37,435	76	Weighted Average
	33,905	74	90.57% Pervious Area
	3,530	98	9.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Pond 1P: Bioretention Basin 1

Inflow Area = 6.150 ac, 78.43% Impervious, Inflow Depth = 3.38" for 10-yr_NRCS event
Inflow = 29.25 cfs @ 12.13 hrs, Volume= 1.733 af
Outflow = 7.86 cfs @ 12.34 hrs, Volume= 1.733 af, Atten= 73%, Lag= 12.4 min
Discarded = 1.13 cfs @ 12.34 hrs, Volume= 1.119 af
Primary = 6.73 cfs @ 12.34 hrs, Volume= 0.614 af
Routed to Link 8L : North
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link 8L : North

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,026.39' @ 12.34 hrs Surf.Area= 13,582 sf Storage= 28,154 cf

Plug-Flow detention time= 91.6 min calculated for 1.733 af (100% of inflow)
Center-of-Mass det. time= 91.6 min (849.9 - 758.2)

Volume	Invert	Avail.Storage	Storage Description
#1	1,024.00'	52,000 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,024.00	10,000	0	0
1,025.00	11,500	10,750	10,750
1,026.00	13,000	12,250	23,000
1,027.00	14,500	13,750	36,750
1,028.00	16,000	15,250	52,000

Device	Routing	Invert	Outlet Devices
#1	Primary	1,024.30'	**18.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,024.30' / 1,024.00' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.77 sf
#2	Device 1	1,024.75'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	1,025.50'	**36.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	1,027.50'	**25.0' long + 5.0 '/' SideZ x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#5	Discarded	1,024.00'	**3.600 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=1.13 cfs @ 12.34 hrs HW=1,026.39' (Free Discharge)
└**5=Exfiltration** (Exfiltration Controls 1.13 cfs)

Primary OutFlow Max=6.73 cfs @ 12.34 hrs HW=1,026.39' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 6.73 cfs of 7.77 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 1.11 cfs @ 5.67 fps)
  └**3=Orifice/Grate** (Orifice Controls 5.61 cfs @ 3.21 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,024.00' TW=0.00' (Dynamic Tailwater)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 2P: Bioretention Basin 2

Inflow Area = 0.368 ac, 87.54% Impervious, Inflow Depth = 3.58" for 10-yr_NRCS event
Inflow = 1.84 cfs @ 12.13 hrs, Volume= 0.110 af
Outflow = 1.13 cfs @ 12.20 hrs, Volume= 0.110 af, Atten= 39%, Lag= 4.2 min
Discarded = 0.12 cfs @ 12.20 hrs, Volume= 0.080 af
Primary = 1.01 cfs @ 12.20 hrs, Volume= 0.029 af
Routed to Link 9L : South
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link 9L : South

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,030.37' @ 12.20 hrs Surf.Area= 1,383 sf Storage= 1,422 cf

Plug-Flow detention time= 62.1 min calculated for 0.110 af (100% of inflow)
Center-of-Mass det. time= 62.1 min (816.4 - 754.3)

Volume	Invert	Avail.Storage	Storage Description
#1	1,029.00'	2,400 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,029.00	700	0	0
1,030.00	1,200	950	950
1,031.00	1,700	1,450	2,400

Device	Routing	Invert	Outlet Devices
#1	Primary	1,029.30'	**18.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,029.30' / 1,028.30' S= 0.0200 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.77 sf
#2	Device 1	1,030.00'	**36.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	1,030.50'	**20.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#4	Discarded	1,029.00'	**3.600 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.12 cfs @ 12.20 hrs HW=1,030.37' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.12 cfs)

Primary OutFlow Max=1.01 cfs @ 12.20 hrs HW=1,030.37' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 1.01 cfs of 3.72 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 1.01 cfs @ 2.06 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,029.00' TW=0.00' (Dynamic Tailwater)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 3P: Bioretention Basin 3

Inflow Area = 0.311 ac, 76.75% Impervious, Inflow Depth = 3.35" for 10-yr_NRCS event
Inflow = 1.47 cfs @ 12.13 hrs, Volume= 0.087 af
Outflow = 0.97 cfs @ 12.19 hrs, Volume= 0.087 af, Atten= 34%, Lag= 3.7 min
Discarded = 0.11 cfs @ 12.19 hrs, Volume= 0.062 af
Primary = 0.87 cfs @ 12.19 hrs, Volume= 0.024 af
Routed to Link 9L : South
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link 9L : South

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,029.34' @ 12.19 hrs Surf.Area= 1,270 sf Storage= 1,083 cf

Plug-Flow detention time= 57.5 min calculated for 0.087 af (100% of inflow)
Center-of-Mass det. time= 57.5 min (816.5 - 759.0)

Volume	Invert	Avail.Storage	Storage Description
#1	1,028.00'	2,100 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,028.00	400	0	0
1,029.00	1,000	700	700
1,030.00	1,800	1,400	2,100

Device	Routing	Invert	Outlet Devices
#1	Primary	1,028.30'	**18.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,028.30' / 1,027.30' S= 0.0200 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.77 sf
#2	Device 1	1,029.00'	**36.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	1,029.50'	**20.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#4	Discarded	1,028.00'	**3.600 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.11 cfs @ 12.19 hrs HW=1,029.34' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.11 cfs)

Primary OutFlow Max=0.86 cfs @ 12.19 hrs HW=1,029.34' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.86 cfs of 3.57 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.86 cfs @ 1.98 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,028.00' TW=0.00' (Dynamic Tailwater)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 4P: Bioretention Basin 4

Inflow Area = 2.772 ac, 82.33% Impervious, Inflow Depth = 3.08" for 10-yr_NRCS event
Inflow = 13.02 cfs @ 12.14 hrs, Volume= 0.712 af
Outflow = 1.95 cfs @ 12.55 hrs, Volume= 0.712 af, Atten= 85%, Lag= 24.8 min
Primary = 1.95 cfs @ 12.55 hrs, Volume= 0.712 af
Routed to Link 9L : South
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link 9L : South

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,025.15' @ 12.55 hrs Surf.Area= 10,610 sf Storage= 11,273 cf

Plug-Flow detention time= 80.9 min calculated for 0.712 af (100% of inflow)
Center-of-Mass det. time= 80.9 min (859.2 - 778.3)

Volume	Invert	Avail.Storage	Storage Description
#1	1,024.00'	33,400 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,024.00	9,000	0	0
1,025.00	10,400	9,700	9,700
1,026.00	11,800	11,100	20,800
1,027.00	13,400	12,600	33,400

Device	Routing	Invert	Outlet Devices
#1	Primary	1,021.50'	**12.0" Round Culvert** L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,021.50' / 1,021.30' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf
#2	Device 1	1,021.50'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 2	1,024.00'	**3.600 in/hr Exfiltration over Surface area from 1,021.50' - 1,024.00'** Excluded Surface area = 0 sf Phase-In= 0.01'
#4	Device 1	1,024.75'	**36.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#5	Secondary	1,026.00'	**10.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=1.95 cfs @ 12.55 hrs HW=1,025.15' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 1.95 cfs of 5.30 cfs potential flow)
  ├─**2=Orifice/Grate** (Passes 0.75 cfs of 1.74 cfs potential flow)
  │ └─**3=Exfiltration** (Exfiltration Controls 0.75 cfs)
  └─**4=Orifice/Grate** (Orifice Controls 1.20 cfs @ 2.15 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,024.00' TW=0.00' (Dynamic Tailwater)
└─**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 5P: Underground Infiltration

Inflow Area = 0.632 ac,100.00% Impervious, Inflow Depth = 3.85" for 10-yr_NRCS event
Inflow = 3.37 cfs @ 12.13 hrs, Volume= 0.203 af
Outflow = 3.10 cfs @ 12.15 hrs, Volume= 0.129 af, Atten= 8%, Lag= 1.5 min
Primary = 3.10 cfs @ 12.15 hrs, Volume= 0.129 af
Routed to Pond 4P : Bioretention Basin 4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,026.98' @ 12.16 hrs Surf.Area= 0.027 ac Storage= 0.089 af

Plug-Flow detention time= 183.6 min calculated for 0.129 af (63% of inflow)
Center-of-Mass det. time= 95.7 min (845.3 - 749.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	1,020.50'	0.063 af	**15.75'W x 74.82'L x 7.00'H Field A** 0.189 af Overall - 0.032 af Embedded = 0.158 af x 40.0% Voids
#2A	1,024.50'	0.032 af	**ADS_StormTech SC-740 +Cap** x 30 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 30 Chambers in 3 Rows
		0.095 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	1,026.00'	**15.0" Round Culvert** L= 400.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,026.00' / 1,024.00' S= 0.0050 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=3.09 cfs @ 12.15 hrs HW=1,026.98' TW=1,024.72' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 3.09 cfs @ 4.12 fps)

Pond 5P: Underground Infiltration - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

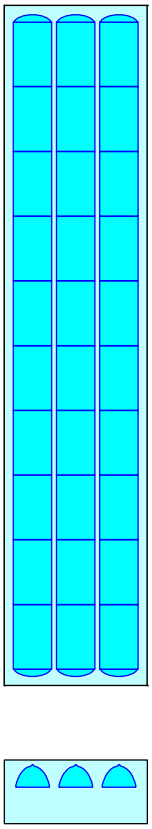
10 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 72.82' Row Length +12.0" End Stone x 2 = 74.82' Base Length
3 Rows x 51.0" Wide + 6.0" Spacing x 2 + 12.0" Side Stone x 2 = 15.75' Base Width
48.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 7.00' Field Height

30 Chambers x 45.9 cf = 1,378.2 cf Chamber Storage

8,248.5 cf Field - 1,378.2 cf Chambers = 6,870.3 cf Stone x 40.0% Voids = 2,748.1 cf Stone Storage

Chamber Storage + Stone Storage = 4,126.3 cf = 0.095 af
Overall Storage Efficiency = 50.0%
Overall System Size = 74.82' x 15.75' x 7.00'

30 Chambers
305.5 cy Field
254.5 cy Stone



Summary for Pond 6P: Underground Infiltration

Inflow Area = 0.149 ac,100.00% Impervious, Inflow Depth = 3.85" for 10-yr_NRCS event
Inflow = 0.79 cfs @ 12.13 hrs, Volume= 0.048 af
Outflow = 0.77 cfs @ 12.14 hrs, Volume= 0.033 af, Atten= 3%, Lag= 0.9 min
Primary = 0.77 cfs @ 12.14 hrs, Volume= 0.033 af
Routed to Pond 4P : Bioretention Basin 4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,027.49' @ 12.14 hrs Surf.Area= 0.006 ac Storage= 0.017 af

Plug-Flow detention time= 158.4 min calculated for 0.033 af (69% of inflow)
Center-of-Mass det. time= 77.3 min (827.0 - 749.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	1,022.00'	0.015 af	**11.00'W x 24.98'L x 7.00'H Field A** 0.044 af Overall - 0.006 af Embedded = 0.038 af x 40.0% Voids
#2A	1,026.00'	0.006 af	**ADS_StormTech SC-740 +Cap** x 6 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 6 Chambers in 2 Rows
		0.021 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	1,027.00'	**12.0" Round Culvert** L= 400.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,027.00' / 1,025.00' S= 0.0050 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.77 cfs @ 12.14 hrs HW=1,027.49' TW=1,024.68' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 0.77 cfs @ 2.94 fps)

Pond 6P: Underground Infiltration - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

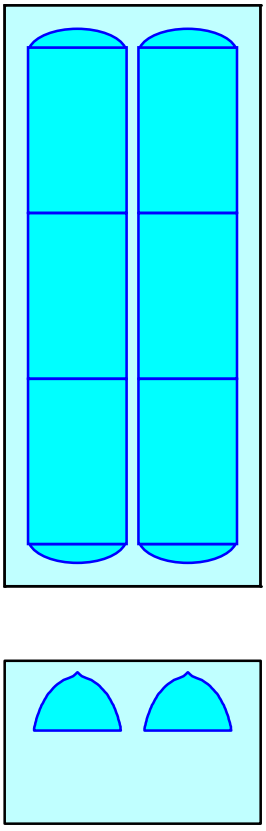
3 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 22.98' Row Length +12.0" End Stone x 2 = 24.98' Base Length
2 Rows x 51.0" Wide + 6.0" Spacing x 1 + 12.0" Side Stone x 2 = 11.00' Base Width
48.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 7.00' Field Height

6 Chambers x 45.9 cf = 275.6 cf Chamber Storage

1,923.2 cf Field - 275.6 cf Chambers = 1,647.6 cf Stone x 40.0% Voids = 659.0 cf Stone Storage

Chamber Storage + Stone Storage = 934.7 cf = 0.021 af
Overall Storage Efficiency = 48.6%
Overall System Size = 24.98' x 11.00' x 7.00'

6 Chambers
71.2 cy Field
61.0 cy Stone



Summary for Pond 16P: Roof Drain

[57] Hint: Peaked at 1,031.60' (Flood elevation advised)

Inflow Area = 0.149 ac,100.00% Impervious, Inflow Depth = 3.85" for 10-yr_NRCS event
Inflow = 0.79 cfs @ 12.13 hrs, Volume= 0.048 af
Outflow = 0.79 cfs @ 12.13 hrs, Volume= 0.048 af, Atten= 0%, Lag= 0.0 min
Primary = 0.79 cfs @ 12.13 hrs, Volume= 0.048 af
Routed to Pond 6P : Underground Infiltration
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond 3P : Bioretention Basin 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,031.60' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1,031.00'	**8.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,031.00' / 1,030.80' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.35 sf
#2	Secondary	1,031.67'	**100.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=0.79 cfs @ 12.13 hrs HW=1,031.60' TW=1,027.49' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.79 cfs @ 3.17 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,031.00' TW=1,028.00' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 18P: Roof Drain

[57] Hint: Peaked at 1,029.07' (Flood elevation advised)

Inflow Area = 0.632 ac,100.00% Impervious, Inflow Depth = 3.85" for 10-yr_NRCS event
Inflow = 3.37 cfs @ 12.13 hrs, Volume= 0.203 af
Outflow = 3.37 cfs @ 12.13 hrs, Volume= 0.203 af, Atten= 0%, Lag= 0.0 min
Primary = 3.37 cfs @ 12.13 hrs, Volume= 0.203 af
Routed to Pond 5P : Underground Infiltration
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond 4P : Bioretention Basin 4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,029.07' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1,028.00'	**15.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,028.00' / 1,027.80' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf
#2	Secondary	1,029.25'	**100.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=3.36 cfs @ 12.13 hrs HW=1,029.07' TW=1,026.93' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 3.36 cfs @ 4.05 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,028.00' TW=1,024.00' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 3L: Post Development

Inflow Area = 10.864 ac, 71.34% Impervious, Inflow Depth = 1.73" for 10-yr_NRCS event
Inflow = 10.71 cfs @ 12.27 hrs, Volume= 1.571 af
Primary = 10.71 cfs @ 12.27 hrs, Volume= 1.571 af, Atten= 0%, Lag= 0.0 min
Routed to nonexistent node Post

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Summary for Link 8L: North

Inflow Area = 6.553 ac, 73.63% Impervious, Inflow Depth = 1.23" for 10-yr_NRCS event
Inflow = 7.07 cfs @ 12.32 hrs, Volume= 0.671 af
Primary = 7.07 cfs @ 12.32 hrs, Volume= 0.671 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3L : Post Development

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Summary for Link 9L: South

Inflow Area = 4.311 ac, 67.84% Impervious, Inflow Depth = 2.51" for 10-yr_NRCS event
Inflow = 4.70 cfs @ 12.16 hrs, Volume= 0.900 af
Primary = 4.70 cfs @ 12.16 hrs, Volume= 0.900 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3L : Post Development

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 2
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment A: Runoff Area=267,875 sf 78.43% Impervious Runoff Depth=5.84"
Tc=6.0 min CN=74/98 Runoff=50.04 cfs 2.995 af

Subcatchment B: Runoff Area=17,570 sf 0.57% Impervious Runoff Depth=3.76"
Tc=6.0 min CN=74/98 Runoff=2.45 cfs 0.126 af

Subcatchment C: Runoff Area=16,050 sf 87.54% Impervious Runoff Depth=6.09"
Tc=6.0 min CN=74/98 Runoff=3.09 cfs 0.187 af

Subcatchment D: Runoff Area=13,550 sf 76.75% Impervious Runoff Depth=5.80"
Tc=6.0 min CN=74/98 Runoff=2.52 cfs 0.150 af

Subcatchment E: Runoff Area=86,735 sf 75.40% Impervious Runoff Depth=5.76"
Tc=6.0 min CN=74/98 Runoff=16.04 cfs 0.956 af

Subcatchment E1: Runoff Area=27,535 sf 100.00% Impervious Runoff Depth=6.42"
Tc=6.0 min CN=0/98 Runoff=5.51 cfs 0.338 af

Subcatchment E2: Runoff Area=6,500 sf 100.00% Impervious Runoff Depth=6.42"
Tc=6.0 min CN=0/98 Runoff=1.30 cfs 0.080 af

Subcatchment F: Runoff Area=37,435 sf 9.43% Impervious Runoff Depth=4.00"
Tc=6.0 min CN=74/98 Runoff=5.42 cfs 0.286 af

Pond 1P: Bioretention Basin 1 Peak Elev=1,027.70' Storage=47,299 cf Inflow=50.04 cfs 2.995 af
Discarded=1.30 cfs 1.432 af Primary=10.94 cfs 1.481 af Secondary=5.56 cfs 0.082 af Outflow=17.79 cfs 2.995 af

Pond 2P: Bioretention Basin 2 Peak Elev=1,030.55' Storage=1,689 cf Inflow=3.09 cfs 0.187 af
Discarded=0.12 cfs 0.106 af Primary=2.26 cfs 0.078 af Secondary=0.56 cfs 0.003 af Outflow=2.95 cfs 0.187 af

Pond 3P: Bioretention Basin 3 Peak Elev=1,029.54' Storage=1,355 cf Inflow=2.87 cfs 0.153 af
Discarded=0.12 cfs 0.084 af Primary=2.15 cfs 0.067 af Secondary=0.36 cfs 0.001 af Outflow=2.63 cfs 0.153 af

Pond 4P: Bioretention Basin 4 Peak Elev=1,025.89' Storage=19,565 cf Inflow=22.22 cfs 1.283 af
Primary=5.89 cfs 1.283 af Secondary=0.00 cfs 0.000 af Outflow=5.89 cfs 1.283 af

Pond 5P: Underground Infiltration Peak Elev=1,027.37' Storage=0.093 af Inflow=4.34 cfs 0.332 af
15.0" Round Culvert n=0.012 L=400.0' S=0.0050 '/' Outflow=4.11 cfs 0.258 af

Pond 6P: Underground Infiltration Peak Elev=1,027.56' Storage=0.017 af Inflow=0.94 cfs 0.078 af
12.0" Round Culvert n=0.012 L=400.0' S=0.0050 '/' Outflow=0.94 cfs 0.063 af

Pond 16P: Roof Drain Peak Elev=1,031.68' Inflow=1.30 cfs 0.080 af
Primary=0.94 cfs 0.078 af Secondary=0.36 cfs 0.002 af Outflow=1.30 cfs 0.080 af

Pond 18P: Roof Drain Peak Elev=1,029.28' Inflow=5.51 cfs 0.338 af
Primary=4.34 cfs 0.332 af Secondary=1.17 cfs 0.006 af Outflow=5.51 cfs 0.338 af

Link 3L: Post Development Inflow=28.46 cfs 3.408 af
Primary=28.46 cfs 3.408 af

Link 8L: North Inflow=17.43 cfs 1.689 af
Primary=17.43 cfs 1.689 af

Link 9L: South Inflow=16.02 cfs 1.719 af
Primary=16.02 cfs 1.719 af

Total Runoff Area = 10.864 ac Runoff Volume = 5.120 af Average Runoff Depth = 5.65"
28.66% Pervious = 3.114 ac 71.34% Impervious = 7.750 ac

Summary for Subcatchment A:

Runoff = 50.04 cfs @ 12.13 hrs, Volume= 2.995 af, Depth= 5.84"
Routed to Pond 1P : Bioretention Basin 1

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr_NRCS Rainfall=6.66"

	Area (sf)	CN	Description
	81,360	98	Roofs, HSG C
*	10,025	98	Green Roof
*	86,500	98	Parking
*	22,200	98	Sidewalk
*	10,000	100	Water Surface, HSG C
	57,790	74	>75% Grass cover, Good, HSG C
	267,875	93	Weighted Average
	57,790	74	21.57% Pervious Area
	210,085	98	78.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment B:

Runoff = 2.45 cfs @ 12.13 hrs, Volume= 0.126 af, Depth= 3.76"
Routed to Link 8L : North

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr_NRCS Rainfall=6.66"

	Area (sf)	CN	Description
	0	98	Roofs, HSG C
*	0	98	Parking
*	100	98	Sidewalk
*	0	100	Water Surface, HSG C
	17,470	74	>75% Grass cover, Good, HSG C
	17,570	74	Weighted Average
	17,470	74	99.43% Pervious Area
	100	98	0.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment C:

Runoff = 3.09 cfs @ 12.13 hrs, Volume= 0.187 af, Depth= 6.09"
Routed to Pond 2P : Bioretention Basin 2

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr_NRCS Rainfall=6.66"

	Area (sf)	CN	Description
	13,000	98	Roofs, HSG C
*	0	98	Green Roof
*	0	98	Parking
*	350	98	Sidewalk
*	700	100	Water Surface, HSG C
	2,000	74	>75% Grass cover, Good, HSG C
	16,050	95	Weighted Average
	2,000	74	12.46% Pervious Area
	14,050	98	87.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment D:

Runoff = 2.52 cfs @ 12.13 hrs, Volume= 0.150 af, Depth= 5.80"
Routed to Pond 3P : Bioretention Basin 3

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr_NRCS Rainfall=6.66"

	Area (sf)	CN	Description
	9,400	98	Roofs, HSG C
*	0	98	Green Roof
*	0	98	Parking
*	600	98	Sidewalk
*	400	100	Water Surface, HSG C
	3,150	74	>75% Grass cover, Good, HSG C
	13,550	92	Weighted Average
	3,150	74	23.25% Pervious Area
	10,400	98	76.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment E:

Runoff = 16.04 cfs @ 12.13 hrs, Volume= 0.956 af, Depth= 5.76"
Routed to Pond 4P : Bioretention Basin 4

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr_NRCS Rainfall=6.66"

	Area (sf)	CN	Description
	0	98	Roofs, HSG C
*	8,230	98	Green Roof
*	42,500	98	Parking
*	5,670	98	Sidewalk
*	9,000	100	Water Surface, HSG C
	21,335	74	>75% Grass cover, Good, HSG C
	86,735	92	Weighted Average
	21,335	74	24.60% Pervious Area
	65,400	98	75.40% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment E1:

Runoff = 5.51 cfs @ 12.13 hrs, Volume= 0.338 af, Depth= 6.42"
Routed to Pond 18P : Roof Drain

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr_NRCS Rainfall=6.66"

	Area (sf)	CN	Description
	27,535	98	Roofs, HSG C
*	0	98	Green Roof
*	0	98	Parking
*	0	98	Sidewalk
*	0	100	Water Surface, HSG C
	0	74	>75% Grass cover, Good, HSG C
	27,535	98	Weighted Average
	27,535	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment E2:

Runoff = 1.30 cfs @ 12.13 hrs, Volume= 0.080 af, Depth= 6.42"
Routed to Pond 16P : Roof Drain

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr_NRCS Rainfall=6.66"

	Area (sf)	CN	Description
	6,500	98	Roofs, HSG C
*	0	98	Green Roof
*	0	98	Parking
*	0	98	Sidewalk
*	0	100	Water Surface, HSG C
	0	74	>75% Grass cover, Good, HSG C
	6,500	98	Weighted Average
	6,500	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment F:

Runoff = 5.42 cfs @ 12.13 hrs, Volume= 0.286 af, Depth= 4.00"
Routed to Link 9L : South

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr_NRCS Rainfall=6.66"

	Area (sf)	CN	Description
	0	98	Roofs, HSG C
*	1,670	98	Parking
*	1,860	98	Sidewalk
*	0	100	Water Surface, HSG C
	33,905	74	>75% Grass cover, Good, HSG C
	37,435	76	Weighted Average
	33,905	74	90.57% Pervious Area
	3,530	98	9.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Pond 1P: Bioretention Basin 1

Inflow Area = 6.150 ac, 78.43% Impervious, Inflow Depth = 5.84" for 100-yr_NRCS event
Inflow = 50.04 cfs @ 12.13 hrs, Volume= 2.995 af
Outflow = 17.79 cfs @ 12.27 hrs, Volume= 2.995 af, Atten= 64%, Lag= 8.5 min
Discarded = 1.30 cfs @ 12.27 hrs, Volume= 1.432 af
Primary = 10.94 cfs @ 12.27 hrs, Volume= 1.481 af
Routed to Link 8L : North
Secondary = 5.56 cfs @ 12.27 hrs, Volume= 0.082 af
Routed to Link 8L : North

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,027.70' @ 12.27 hrs Surf.Area= 15,553 sf Storage= 47,299 cf

Plug-Flow detention time= 82.3 min calculated for 2.995 af (100% of inflow)
Center-of-Mass det. time= 82.3 min (834.4 - 752.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1,024.00'	52,000 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,024.00	10,000	0	0
1,025.00	11,500	10,750	10,750
1,026.00	13,000	12,250	23,000
1,027.00	14,500	13,750	36,750
1,028.00	16,000	15,250	52,000

Device	Routing	Invert	Outlet Devices
#1	Primary	1,024.30'	**18.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,024.30' / 1,024.00' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.77 sf
#2	Device 1	1,024.75'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	1,025.50'	**36.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	1,027.50'	**25.0' long + 5.0 '/' SideZ x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#5	Discarded	1,024.00'	**3.600 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=1.30 cfs @ 12.27 hrs HW=1,027.70' (Free Discharge)
└**5=Exfiltration** (Exfiltration Controls 1.30 cfs)

Primary OutFlow Max=10.94 cfs @ 12.27 hrs HW=1,027.70' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 10.94 cfs @ 6.19 fps)
  ├**2=Orifice/Grate** (Passes < 1.55 cfs potential flow)
  └**3=Orifice/Grate** (Passes < 28.09 cfs potential flow)

Secondary OutFlow Max=5.55 cfs @ 12.27 hrs HW=1,027.70' TW=0.00' (Dynamic Tailwater)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 5.55 cfs @ 1.06 fps)

Summary for Pond 2P: Bioretention Basin 2

Inflow Area = 0.368 ac, 87.54% Impervious, Inflow Depth = 6.09" for 100-yr_NRCS event
Inflow = 3.09 cfs @ 12.13 hrs, Volume= 0.187 af
Outflow = 2.95 cfs @ 12.15 hrs, Volume= 0.187 af, Atten= 5%, Lag= 1.2 min
Discarded = 0.12 cfs @ 12.15 hrs, Volume= 0.106 af
Primary = 2.26 cfs @ 12.15 hrs, Volume= 0.078 af
Routed to Link 9L : South
Secondary = 0.56 cfs @ 12.15 hrs, Volume= 0.003 af
Routed to Link 9L : South

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,030.55' @ 12.15 hrs Surf.Area= 1,476 sf Storage= 1,689 cf

Plug-Flow detention time= 53.2 min calculated for 0.187 af (100% of inflow)
Center-of-Mass det. time= 53.2 min (801.0 - 747.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,029.00'	2,400 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,029.00	700	0	0
1,030.00	1,200	950	950
1,031.00	1,700	1,450	2,400

Device	Routing	Invert	Outlet Devices
#1	Primary	1,029.30'	**18.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,029.30' / 1,028.30' S= 0.0200 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.77 sf
#2	Device 1	1,030.00'	**36.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	1,030.50'	**20.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#4	Discarded	1,029.00'	**3.600 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.12 cfs @ 12.15 hrs HW=1,030.55' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.12 cfs)

Primary OutFlow Max=2.26 cfs @ 12.15 hrs HW=1,030.55' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 2.26 cfs of 4.74 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 2.26 cfs @ 2.53 fps)

Secondary OutFlow Max=0.56 cfs @ 12.15 hrs HW=1,030.55' TW=0.00' (Dynamic Tailwater)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 0.56 cfs @ 0.54 fps)

Summary for Pond 3P: Bioretention Basin 3

Inflow Area = 0.311 ac, 76.75% Impervious, Inflow Depth = 5.89" for 100-yr_NRCS event
Inflow = 2.87 cfs @ 12.13 hrs, Volume= 0.153 af
Outflow = 2.63 cfs @ 12.15 hrs, Volume= 0.153 af, Atten= 8%, Lag= 1.4 min
Discarded = 0.12 cfs @ 12.15 hrs, Volume= 0.084 af
Primary = 2.15 cfs @ 12.15 hrs, Volume= 0.067 af
Routed to Link 9L : South
Secondary = 0.36 cfs @ 12.15 hrs, Volume= 0.001 af
Routed to Link 9L : South

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,029.54' @ 12.15 hrs Surf.Area= 1,431 sf Storage= 1,355 cf

Plug-Flow detention time= 48.9 min calculated for 0.153 af (100% of inflow)
Center-of-Mass det. time= 48.9 min (801.5 - 752.5)

Volume	Invert	Avail.Storage	Storage Description
#1	1,028.00'	2,100 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,028.00	400	0	0
1,029.00	1,000	700	700
1,030.00	1,800	1,400	2,100

Device	Routing	Invert	Outlet Devices
#1	Primary	1,028.30'	**18.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,028.30' / 1,027.30' S= 0.0200 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.77 sf
#2	Device 1	1,029.00'	**36.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	1,029.50'	**20.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#4	Discarded	1,028.00'	**3.600 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.12 cfs @ 12.15 hrs HW=1,029.54' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.12 cfs)

Primary OutFlow Max=2.15 cfs @ 12.15 hrs HW=1,029.54' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 2.15 cfs of 4.67 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 2.15 cfs @ 2.50 fps)

Secondary OutFlow Max=0.35 cfs @ 12.15 hrs HW=1,029.54' TW=0.00' (Dynamic Tailwater)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 0.35 cfs @ 0.46 fps)

Summary for Pond 4P: Bioretention Basin 4

Inflow Area = 2.772 ac, 82.33% Impervious, Inflow Depth = 5.55" for 100-yr_NRCS event
Inflow = 22.22 cfs @ 12.13 hrs, Volume= 1.283 af
Outflow = 5.89 cfs @ 12.36 hrs, Volume= 1.283 af, Atten= 73%, Lag= 13.6 min
Primary = 5.89 cfs @ 12.36 hrs, Volume= 1.283 af
Routed to Link 9L : South
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link 9L : South

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,025.89' @ 12.36 hrs Surf.Area= 11,653 sf Storage= 19,565 cf

Plug-Flow detention time= 69.4 min calculated for 1.283 af (100% of inflow)
Center-of-Mass det. time= 69.4 min (838.3 - 768.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1,024.00'	33,400 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,024.00	9,000	0	0
1,025.00	10,400	9,700	9,700
1,026.00	11,800	11,100	20,800
1,027.00	13,400	12,600	33,400

Device	Routing	Invert	Outlet Devices
#1	Primary	1,021.50'	**12.0" Round Culvert** L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,021.50' / 1,021.30' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf
#2	Device 1	1,021.50'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 2	1,024.00'	**3.600 in/hr Exfiltration over Surface area from 1,021.50' - 1,024.00'** Excluded Surface area = 0 sf Phase-In= 0.01'
#4	Device 1	1,024.75'	**36.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#5	Secondary	1,026.00'	**10.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=5.89 cfs @ 12.36 hrs HW=1,025.89' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 5.89 cfs @ 7.50 fps)
  ├─**2=Orifice/Grate** (Passes < 1.92 cfs potential flow)
  │ └─**3=Exfiltration** (Passes < 0.75 cfs potential flow)
  └─**4=Orifice/Grate** (Passes < 9.03 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,024.00' TW=0.00' (Dynamic Tailwater)
└─**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 5P: Underground Infiltration

Inflow Area = 0.632 ac,100.00% Impervious, Inflow Depth = 6.30" for 100-yr_NRCS event
Inflow = 4.34 cfs @ 12.13 hrs, Volume= 0.332 af
Outflow = 4.11 cfs @ 12.16 hrs, Volume= 0.258 af, Atten= 5%, Lag= 2.1 min
Primary = 4.11 cfs @ 12.16 hrs, Volume= 0.258 af
Routed to Pond 4P : Bioretention Basin 4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,027.37' @ 12.18 hrs Surf.Area= 0.027 ac Storage= 0.093 af

Plug-Flow detention time= 146.7 min calculated for 0.258 af (78% of inflow)
Center-of-Mass det. time= 74.7 min (817.5 - 742.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	1,020.50'	0.063 af	**15.75'W x 74.82'L x 7.00'H Field A** 0.189 af Overall - 0.032 af Embedded = 0.158 af x 40.0% Voids
#2A	1,024.50'	0.032 af	**ADS_StormTech SC-740 +Cap** x 30 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 30 Chambers in 3 Rows
		0.095 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	1,026.00'	**15.0" Round Culvert** L= 400.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,026.00' / 1,024.00' S= 0.0050 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=4.11 cfs @ 12.16 hrs HW=1,027.36' TW=1,025.62' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 4.11 cfs @ 3.83 fps)

Pond 5P: Underground Infiltration - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

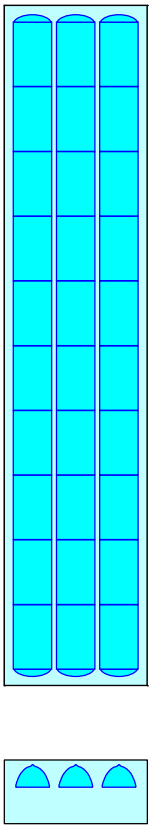
10 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 72.82' Row Length +12.0" End Stone x 2 = 74.82' Base Length
3 Rows x 51.0" Wide + 6.0" Spacing x 2 + 12.0" Side Stone x 2 = 15.75' Base Width
48.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 7.00' Field Height

30 Chambers x 45.9 cf = 1,378.2 cf Chamber Storage

8,248.5 cf Field - 1,378.2 cf Chambers = 6,870.3 cf Stone x 40.0% Voids = 2,748.1 cf Stone Storage

Chamber Storage + Stone Storage = 4,126.3 cf = 0.095 af
Overall Storage Efficiency = 50.0%
Overall System Size = 74.82' x 15.75' x 7.00'

30 Chambers
305.5 cy Field
254.5 cy Stone



Summary for Pond 6P: Underground Infiltration

Inflow Area = 0.149 ac,100.00% Impervious, Inflow Depth = 6.24" for 100-yr_NRCS event
Inflow = 0.94 cfs @ 12.13 hrs, Volume= 0.078 af
Outflow = 0.94 cfs @ 12.12 hrs, Volume= 0.063 af, Atten= 1%, Lag= 0.0 min
Primary = 0.94 cfs @ 12.12 hrs, Volume= 0.063 af
Routed to Pond 4P : Bioretention Basin 4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,027.56' @ 12.18 hrs Surf.Area= 0.006 ac Storage= 0.017 af

Plug-Flow detention time= 130.8 min calculated for 0.063 af (81% of inflow)
Center-of-Mass det. time= 63.5 min (806.5 - 743.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	1,022.00'	0.015 af	**11.00'W x 24.98'L x 7.00'H Field A** 0.044 af Overall - 0.006 af Embedded = 0.038 af x 40.0% Voids
#2A	1,026.00'	0.006 af	**ADS_StormTech SC-740 +Cap** x 6 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 6 Chambers in 2 Rows
		0.021 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	1,027.00'	**12.0" Round Culvert** L= 400.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,027.00' / 1,025.00' S= 0.0050 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.94 cfs @ 12.12 hrs HW=1,027.55' TW=1,025.39' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 0.94 cfs @ 3.10 fps)

Pond 6P: Underground Infiltration - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

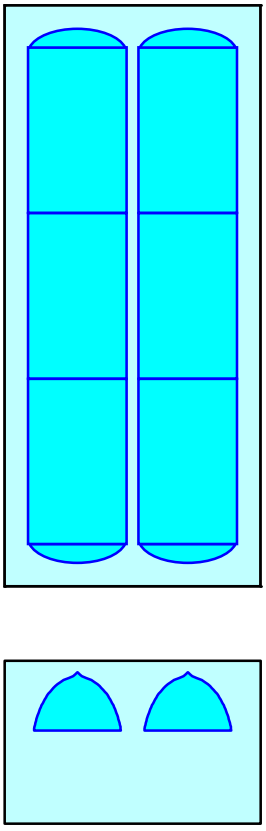
3 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 22.98' Row Length +12.0" End Stone x 2 = 24.98' Base Length
2 Rows x 51.0" Wide + 6.0" Spacing x 1 + 12.0" Side Stone x 2 = 11.00' Base Width
48.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 7.00' Field Height

6 Chambers x 45.9 cf = 275.6 cf Chamber Storage

1,923.2 cf Field - 275.6 cf Chambers = 1,647.6 cf Stone x 40.0% Voids = 659.0 cf Stone Storage

Chamber Storage + Stone Storage = 934.7 cf = 0.021 af
Overall Storage Efficiency = 48.6%
Overall System Size = 24.98' x 11.00' x 7.00'

6 Chambers
71.2 cy Field
61.0 cy Stone



Summary for Pond 16P: Roof Drain

[57] Hint: Peaked at 1,031.68' (Flood elevation advised)

Inflow Area = 0.149 ac,100.00% Impervious, Inflow Depth = 6.42" for 100-yr_NRCS event
Inflow = 1.30 cfs @ 12.13 hrs, Volume= 0.080 af
Outflow = 1.30 cfs @ 12.13 hrs, Volume= 0.080 af, Atten= 0%, Lag= 0.0 min
Primary = 0.94 cfs @ 12.13 hrs, Volume= 0.078 af
Routed to Pond 6P : Underground Infiltration
Secondary = 0.36 cfs @ 12.13 hrs, Volume= 0.002 af
Routed to Pond 3P : Bioretention Basin 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,031.68' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1,031.00'	**8.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,031.00' / 1,030.80' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.35 sf
#2	Secondary	1,031.67'	**100.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=0.94 cfs @ 12.13 hrs HW=1,031.68' TW=1,027.55' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.94 cfs @ 3.28 fps)

Secondary OutFlow Max=0.35 cfs @ 12.13 hrs HW=1,031.68' TW=1,029.52' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Weir Controls 0.35 cfs @ 0.29 fps)

Summary for Pond 18P: Roof Drain

[57] Hint: Peaked at 1,029.28' (Flood elevation advised)

Inflow Area = 0.632 ac,100.00% Impervious, Inflow Depth = 6.42" for 100-yr_NRCS event
Inflow = 5.51 cfs @ 12.13 hrs, Volume= 0.338 af
Outflow = 5.51 cfs @ 12.13 hrs, Volume= 0.338 af, Atten= 0%, Lag= 0.0 min
Primary = 4.34 cfs @ 12.13 hrs, Volume= 0.332 af
Routed to Pond 5P : Underground Infiltration
Secondary = 1.17 cfs @ 12.13 hrs, Volume= 0.006 af
Routed to Pond 4P : Bioretention Basin 4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,029.28' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1,028.00'	**15.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,028.00' / 1,027.80' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf
#2	Secondary	1,029.25'	**100.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=4.34 cfs @ 12.13 hrs HW=1,029.28' TW=1,027.30' (Dynamic Tailwater)
1=Culvert (Barrel Controls 4.34 cfs @ 4.30 fps)

Secondary OutFlow Max=1.16 cfs @ 12.13 hrs HW=1,029.28' TW=1,025.44' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Weir Controls 1.16 cfs @ 0.44 fps)

Summary for Link 3L: Post Development

Inflow Area = 10.864 ac, 71.34% Impervious, Inflow Depth = 3.76" for 100-yr_NRCS event
Inflow = 28.46 cfs @ 12.24 hrs, Volume= 3.408 af
Primary = 28.46 cfs @ 12.24 hrs, Volume= 3.408 af, Atten= 0%, Lag= 0.0 min
Routed to nonexistent node Post

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Summary for Link 8L: North

Inflow Area = 6.553 ac, 73.63% Impervious, Inflow Depth = 3.09" for 100-yr_NRCS event
Inflow = 17.43 cfs @ 12.27 hrs, Volume= 1.689 af
Primary = 17.43 cfs @ 12.27 hrs, Volume= 1.689 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3L : Post Development

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Summary for Link 9L: South

Inflow Area = 4.311 ac, 67.84% Impervious, Inflow Depth = 4.78" for 100-yr_NRCS event
Inflow = 16.02 cfs @ 12.15 hrs, Volume= 1.719 af
Primary = 16.02 cfs @ 12.15 hrs, Volume= 1.719 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3L : Post Development

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Time span=0.00-60.00 hrs, dt=0.01 hrs, 6001 points x 2
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment A: Runoff Area=267,875 sf 78.43% Impervious Runoff Depth=6.69"
Tc=6.0 min CN=74/98 Runoff=57.13 cfs 3.428 af

Subcatchment B: Runoff Area=17,570 sf 0.57% Impervious Runoff Depth=4.52"
Tc=6.0 min CN=74/98 Runoff=2.93 cfs 0.152 af

Subcatchment C: Runoff Area=16,050 sf 87.54% Impervious Runoff Depth=6.94"
Tc=6.0 min CN=74/98 Runoff=3.51 cfs 0.213 af

Subcatchment D: Runoff Area=13,550 sf 76.75% Impervious Runoff Depth=6.64"
Tc=6.0 min CN=74/98 Runoff=2.88 cfs 0.172 af

Subcatchment E: Runoff Area=86,735 sf 75.40% Impervious Runoff Depth=6.61"
Tc=6.0 min CN=74/98 Runoff=18.34 cfs 1.096 af

Subcatchment E1: Runoff Area=27,535 sf 100.00% Impervious Runoff Depth=7.29"
Tc=6.0 min CN=0/98 Runoff=6.23 cfs 0.384 af

Subcatchment E2: Runoff Area=6,500 sf 100.00% Impervious Runoff Depth=7.29"
Tc=6.0 min CN=0/98 Runoff=1.47 cfs 0.091 af

Subcatchment F: Runoff Area=37,435 sf 9.43% Impervious Runoff Depth=4.77"
Tc=6.0 min CN=74/98 Runoff=6.43 cfs 0.342 af

Pond 1P: Bioretention Basin 1 Peak Elev=1,027.90' Storage=50,449 cf Inflow=57.13 cfs 3.428 af
Discarded=1.32 cfs 1.519 af Primary=11.35 cfs 1.647 af Secondary=17.08 cfs 0.263 af Outflow=29.75 cfs 3.428 af

Pond 2P: Bioretention Basin 2 Peak Elev=1,030.57' Storage=1,716 cf Inflow=3.51 cfs 0.213 af
Discarded=0.12 cfs 0.114 af Primary=2.41 cfs 0.093 af Secondary=0.89 cfs 0.006 af Outflow=3.42 cfs 0.213 af

Pond 3P: Bioretention Basin 3 Peak Elev=1,029.56' Storage=1,392 cf Inflow=3.40 cfs 0.176 af
Discarded=0.12 cfs 0.090 af Primary=2.36 cfs 0.081 af Secondary=0.78 cfs 0.004 af Outflow=3.25 cfs 0.176 af

Pond 4P: Bioretention Basin 4 Peak Elev=1,026.16' Storage=22,669 cf Inflow=25.21 cfs 1.478 af
Primary=6.09 cfs 1.451 af Secondary=1.47 cfs 0.028 af Outflow=7.56 cfs 1.478 af

Pond 5P: Underground Infiltration Peak Elev=1,027.48' Storage=0.095 af Inflow=4.38 cfs 0.372 af
15.0" Round Culvert n=0.012 L=400.0' S=0.0050 '/' Outflow=4.10 cfs 0.298 af

Pond 6P: Underground Infiltration Peak Elev=1,027.59' Storage=0.017 af Inflow=0.95 cfs 0.087 af
12.0" Round Culvert n=0.012 L=400.0' S=0.0050 '/' Outflow=0.93 cfs 0.072 af

Pond 16P: Roof Drain Peak Elev=1,031.69' Inflow=1.47 cfs 0.091 af
Primary=0.95 cfs 0.087 af Secondary=0.52 cfs 0.004 af Outflow=1.47 cfs 0.091 af

Pond 18P: Roof Drain Peak Elev=1,029.29' Inflow=6.23 cfs 0.384 af
Primary=4.38 cfs 0.372 af Secondary=1.85 cfs 0.012 af Outflow=6.23 cfs 0.384 af

Link 3L: Post Development Inflow=44.18 cfs 4.066 af
Primary=44.18 cfs 4.066 af

Link 8L: North Inflow=30.04 cfs 2.062 af
Primary=30.04 cfs 2.062 af

Link 9L: South Inflow=18.56 cfs 2.005 af
Primary=18.56 cfs 2.005 af

Total Runoff Area = 10.864 ac Runoff Volume = 5.878 af Average Runoff Depth = 6.49"
28.66% Pervious = 3.114 ac 71.34% Impervious = 7.750 ac

Summary for Subcatchment A:

Runoff = 57.13 cfs @ 12.13 hrs, Volume= 3.428 af, Depth= 6.69"
Routed to Pond 1P : Bioretention Basin 1

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr_NRCS Rainfall=7.53"

	Area (sf)	CN	Description
	81,360	98	Roofs, HSG C
*	10,025	98	Green Roof
*	86,500	98	Parking
*	22,200	98	Sidewalk
*	10,000	100	Water Surface, HSG C
	57,790	74	>75% Grass cover, Good, HSG C
	267,875	93	Weighted Average
	57,790	74	21.57% Pervious Area
	210,085	98	78.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment B:

Runoff = 2.93 cfs @ 12.13 hrs, Volume= 0.152 af, Depth= 4.52"
Routed to Link 8L : North

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr_NRCS Rainfall=7.53"

	Area (sf)	CN	Description
	0	98	Roofs, HSG C
*	0	98	Parking
*	100	98	Sidewalk
*	0	100	Water Surface, HSG C
	17,470	74	>75% Grass cover, Good, HSG C
	17,570	74	Weighted Average
	17,470	74	99.43% Pervious Area
	100	98	0.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment C:

Runoff = 3.51 cfs @ 12.13 hrs, Volume= 0.213 af, Depth= 6.94"
Routed to Pond 2P : Bioretention Basin 2

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr_NRCS Rainfall=7.53"

	Area (sf)	CN	Description
	13,000	98	Roofs, HSG C
*	0	98	Green Roof
*	0	98	Parking
*	350	98	Sidewalk
*	700	100	Water Surface, HSG C
	2,000	74	>75% Grass cover, Good, HSG C
	16,050	95	Weighted Average
	2,000	74	12.46% Pervious Area
	14,050	98	87.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment D:

Runoff = 2.88 cfs @ 12.13 hrs, Volume= 0.172 af, Depth= 6.64"
Routed to Pond 3P : Bioretention Basin 3

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr_NRCS Rainfall=7.53"

	Area (sf)	CN	Description
	9,400	98	Roofs, HSG C
*	0	98	Green Roof
*	0	98	Parking
*	600	98	Sidewalk
*	400	100	Water Surface, HSG C
	3,150	74	>75% Grass cover, Good, HSG C
	13,550	92	Weighted Average
	3,150	74	23.25% Pervious Area
	10,400	98	76.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment E:

Runoff = 18.34 cfs @ 12.13 hrs, Volume= 1.096 af, Depth= 6.61"
Routed to Pond 4P : Bioretention Basin 4

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr_NRCS Rainfall=7.53"

	Area (sf)	CN	Description
	0	98	Roofs, HSG C
*	8,230	98	Green Roof
*	42,500	98	Parking
*	5,670	98	Sidewalk
*	9,000	100	Water Surface, HSG C
	21,335	74	>75% Grass cover, Good, HSG C
	86,735	92	Weighted Average
	21,335	74	24.60% Pervious Area
	65,400	98	75.40% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment E1:

Runoff = 6.23 cfs @ 12.13 hrs, Volume= 0.384 af, Depth= 7.29"
Routed to Pond 18P : Roof Drain

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr_NRCS Rainfall=7.53"

	Area (sf)	CN	Description
	27,535	98	Roofs, HSG C
*	0	98	Green Roof
*	0	98	Parking
*	0	98	Sidewalk
*	0	100	Water Surface, HSG C
	0	74	>75% Grass cover, Good, HSG C
	27,535	98	Weighted Average
	27,535	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment E2:

Runoff = 1.47 cfs @ 12.13 hrs, Volume= 0.091 af, Depth= 7.29"
Routed to Pond 16P : Roof Drain

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr_NRCS Rainfall=7.53"

	Area (sf)	CN	Description
	6,500	98	Roofs, HSG C
*	0	98	Green Roof
*	0	98	Parking
*	0	98	Sidewalk
*	0	100	Water Surface, HSG C
	0	74	>75% Grass cover, Good, HSG C
	6,500	98	Weighted Average
	6,500	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment F:

Runoff = 6.43 cfs @ 12.13 hrs, Volume= 0.342 af, Depth= 4.77"
Routed to Link 9L : South

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-60.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr_NRCS Rainfall=7.53"

	Area (sf)	CN	Description
	0	98	Roofs, HSG C
*	1,670	98	Parking
*	1,860	98	Sidewalk
*	0	100	Water Surface, HSG C
	33,905	74	>75% Grass cover, Good, HSG C
	37,435	76	Weighted Average
	33,905	74	90.57% Pervious Area
	3,530	98	9.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Pond 1P: Bioretention Basin 1

Inflow Area = 6.150 ac, 78.43% Impervious, Inflow Depth = 6.69" for 200-yr_NRCS event
Inflow = 57.13 cfs @ 12.13 hrs, Volume= 3.428 af
Outflow = 29.75 cfs @ 12.22 hrs, Volume= 3.428 af, Atten= 48%, Lag= 5.1 min
Discarded = 1.32 cfs @ 12.22 hrs, Volume= 1.519 af
Primary = 11.35 cfs @ 12.22 hrs, Volume= 1.647 af
Routed to Link 8L : North
Secondary = 17.08 cfs @ 12.22 hrs, Volume= 0.263 af
Routed to Link 8L : North

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,027.90' @ 12.22 hrs Surf.Area= 15,854 sf Storage= 50,449 cf

Plug-Flow detention time= 78.7 min calculated for 3.428 af (100% of inflow)
Center-of-Mass det. time= 78.7 min (829.3 - 750.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,024.00'	52,000 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,024.00	10,000	0	0
1,025.00	11,500	10,750	10,750
1,026.00	13,000	12,250	23,000
1,027.00	14,500	13,750	36,750
1,028.00	16,000	15,250	52,000

Device	Routing	Invert	Outlet Devices
#1	Primary	1,024.30'	**18.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,024.30' / 1,024.00' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.77 sf
#2	Device 1	1,024.75'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	1,025.50'	**36.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	1,027.50'	**25.0' long + 5.0 '/' SideZ x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#5	Discarded	1,024.00'	**3.600 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=1.32 cfs @ 12.22 hrs HW=1,027.90' (Free Discharge)
└**5=Exfiltration** (Exfiltration Controls 1.32 cfs)

Primary OutFlow Max=11.34 cfs @ 12.22 hrs HW=1,027.90' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 11.34 cfs @ 6.42 fps)
  ├**2=Orifice/Grate** (Passes < 1.61 cfs potential flow)
  └**3=Orifice/Grate** (Passes < 32.01 cfs potential flow)

Secondary OutFlow Max=17.04 cfs @ 12.22 hrs HW=1,027.90' TW=0.00' (Dynamic Tailwater)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 17.04 cfs @ 1.57 fps)

Summary for Pond 2P: Bioretention Basin 2

Inflow Area = 0.368 ac, 87.54% Impervious, Inflow Depth = 6.94" for 200-yr_NRCS event
Inflow = 3.51 cfs @ 12.13 hrs, Volume= 0.213 af
Outflow = 3.42 cfs @ 12.14 hrs, Volume= 0.213 af, Atten= 3%, Lag= 0.9 min
Discarded = 0.12 cfs @ 12.14 hrs, Volume= 0.114 af
Primary = 2.41 cfs @ 12.14 hrs, Volume= 0.093 af
Routed to Link 9L : South
Secondary = 0.89 cfs @ 12.14 hrs, Volume= 0.006 af
Routed to Link 9L : South

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,030.57' @ 12.14 hrs Surf.Area= 1,485 sf Storage= 1,716 cf

Plug-Flow detention time= 51.5 min calculated for 0.213 af (100% of inflow)
Center-of-Mass det. time= 51.5 min (797.9 - 746.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,029.00'	2,400 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,029.00	700	0	0
1,030.00	1,200	950	950
1,031.00	1,700	1,450	2,400

Device	Routing	Invert	Outlet Devices
#1	Primary	1,029.30'	**18.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,029.30' / 1,028.30' S= 0.0200 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.77 sf
#2	Device 1	1,030.00'	**36.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	1,030.50'	**20.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#4	Discarded	1,029.00'	**3.600 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.12 cfs @ 12.14 hrs HW=1,030.57' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.12 cfs)

Primary OutFlow Max=2.40 cfs @ 12.14 hrs HW=1,030.57' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 2.40 cfs of 4.83 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 2.40 cfs @ 2.57 fps)

Secondary OutFlow Max=0.88 cfs @ 12.14 hrs HW=1,030.57' TW=0.00' (Dynamic Tailwater)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 0.88 cfs @ 0.63 fps)

Summary for Pond 3P: Bioretention Basin 3

Inflow Area = 0.311 ac, 76.75% Impervious, Inflow Depth = 6.79" for 200-yr_NRCS event
Inflow = 3.40 cfs @ 12.13 hrs, Volume= 0.176 af
Outflow = 3.25 cfs @ 12.15 hrs, Volume= 0.176 af, Atten= 4%, Lag= 1.0 min
Discarded = 0.12 cfs @ 12.15 hrs, Volume= 0.090 af
Primary = 2.36 cfs @ 12.15 hrs, Volume= 0.081 af
Routed to Link 9L : South
Secondary = 0.78 cfs @ 12.15 hrs, Volume= 0.004 af
Routed to Link 9L : South

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,029.56' @ 12.15 hrs Surf.Area= 1,452 sf Storage= 1,392 cf

Plug-Flow detention time= 47.1 min calculated for 0.176 af (100% of inflow)
Center-of-Mass det. time= 47.1 min (798.1 - 750.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1,028.00'	2,100 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,028.00	400	0	0
1,029.00	1,000	700	700
1,030.00	1,800	1,400	2,100

Device	Routing	Invert	Outlet Devices
#1	Primary	1,028.30'	**18.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,028.30' / 1,027.30' S= 0.0200 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.77 sf
#2	Device 1	1,029.00'	**36.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	1,029.50'	**20.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#4	Discarded	1,028.00'	**3.600 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.12 cfs @ 12.15 hrs HW=1,029.56' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.12 cfs)

Primary OutFlow Max=2.35 cfs @ 12.15 hrs HW=1,029.56' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 2.35 cfs of 4.80 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 2.35 cfs @ 2.56 fps)

Secondary OutFlow Max=0.77 cfs @ 12.15 hrs HW=1,029.56' TW=0.00' (Dynamic Tailwater)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 0.77 cfs @ 0.60 fps)

Summary for Pond 4P: Bioretention Basin 4

Inflow Area = 2.772 ac, 82.33% Impervious, Inflow Depth = 6.40" for 200-yr_NRCS event
Inflow = 25.21 cfs @ 12.13 hrs, Volume= 1.478 af
Outflow = 7.56 cfs @ 12.32 hrs, Volume= 1.478 af, Atten= 70%, Lag= 11.6 min
Primary = 6.09 cfs @ 12.32 hrs, Volume= 1.451 af
Routed to Link 9L : South
Secondary = 1.47 cfs @ 12.32 hrs, Volume= 0.028 af
Routed to Link 9L : South

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,026.16' @ 12.32 hrs Surf.Area= 12,051 sf Storage= 22,669 cf

Plug-Flow detention time= 68.6 min calculated for 1.478 af (100% of inflow)
Center-of-Mass det. time= 68.6 min (835.3 - 766.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,024.00'	33,400 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,024.00	9,000	0	0
1,025.00	10,400	9,700	9,700
1,026.00	11,800	11,100	20,800
1,027.00	13,400	12,600	33,400

Device	Routing	Invert	Outlet Devices
#1	Primary	1,021.50'	**12.0" Round Culvert** L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,021.50' / 1,021.30' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf
#2	Device 1	1,021.50'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 2	1,024.00'	**3.600 in/hr Exfiltration over Surface area from 1,021.50' - 1,024.00'** Excluded Surface area = 0 sf Phase-In= 0.01'
#4	Device 1	1,024.75'	**36.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#5	Secondary	1,026.00'	**10.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=6.09 cfs @ 12.32 hrs HW=1,026.16' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 6.09 cfs @ 7.75 fps)
  ├─**2=Orifice/Grate** (Passes < 1.98 cfs potential flow)
  │ └─**3=Exfiltration** (Passes < 0.75 cfs potential flow)
  └─**4=Orifice/Grate** (Passes < 13.14 cfs potential flow)

Secondary OutFlow Max=1.47 cfs @ 12.32 hrs HW=1,026.16' TW=0.00' (Dynamic Tailwater)
└─**5=Broad-Crested Rectangular Weir** (Weir Controls 1.47 cfs @ 0.94 fps)

Summary for Pond 5P: Underground Infiltration

Inflow Area = 0.632 ac,100.00% Impervious, Inflow Depth = 7.06" for 200-yr_NRCS event
Inflow = 4.38 cfs @ 12.13 hrs, Volume= 0.372 af
Outflow = 4.10 cfs @ 12.14 hrs, Volume= 0.298 af, Atten= 6%, Lag= 0.9 min
Primary = 4.10 cfs @ 12.14 hrs, Volume= 0.298 af
Routed to Pond 4P : Bioretention Basin 4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,027.48' @ 12.19 hrs Surf.Area= 0.027 ac Storage= 0.095 af

Plug-Flow detention time= 141.3 min calculated for 0.298 af (80% of inflow)
Center-of-Mass det. time= 71.9 min (813.4 - 741.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	1,020.50'	0.063 af	**15.75'W x 74.82'L x 7.00'H Field A** 0.189 af Overall - 0.032 af Embedded = 0.158 af x 40.0% Voids
#2A	1,024.50'	0.032 af	**ADS_StormTech SC-740 +Cap** x 30 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 30 Chambers in 3 Rows
		0.095 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	1,026.00'	**15.0" Round Culvert** L= 400.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,026.00' / 1,024.00' S= 0.0050 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=4.10 cfs @ 12.14 hrs HW=1,027.40' TW=1,025.77' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 4.10 cfs @ 3.72 fps)

Pond 5P: Underground Infiltration - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

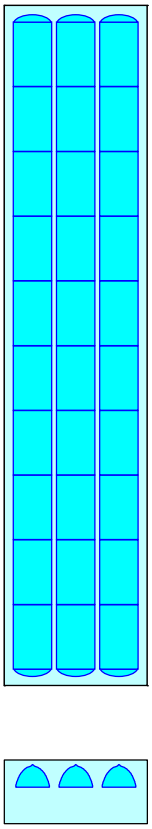
10 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 72.82' Row Length +12.0" End Stone x 2 = 74.82' Base Length
3 Rows x 51.0" Wide + 6.0" Spacing x 2 + 12.0" Side Stone x 2 = 15.75' Base Width
48.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 7.00' Field Height

30 Chambers x 45.9 cf = 1,378.2 cf Chamber Storage

8,248.5 cf Field - 1,378.2 cf Chambers = 6,870.3 cf Stone x 40.0% Voids = 2,748.1 cf Stone Storage

Chamber Storage + Stone Storage = 4,126.3 cf = 0.095 af
Overall Storage Efficiency = 50.0%
Overall System Size = 74.82' x 15.75' x 7.00'

30 Chambers
305.5 cy Field
254.5 cy Stone



Summary for Pond 6P: Underground Infiltration

Inflow Area = 0.149 ac,100.00% Impervious, Inflow Depth = 6.98" for 200-yr_NRCS event
Inflow = 0.95 cfs @ 12.13 hrs, Volume= 0.087 af
Outflow = 0.93 cfs @ 12.09 hrs, Volume= 0.072 af, Atten= 2%, Lag= 0.0 min
Primary = 0.93 cfs @ 12.09 hrs, Volume= 0.072 af
Routed to Pond 4P : Bioretention Basin 4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,027.59' @ 12.19 hrs Surf.Area= 0.006 ac Storage= 0.017 af

Plug-Flow detention time= 125.6 min calculated for 0.072 af (83% of inflow)
Center-of-Mass det. time= 61.3 min (802.9 - 741.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	1,022.00'	0.015 af	**11.00'W x 24.98'L x 7.00'H Field A** 0.044 af Overall - 0.006 af Embedded = 0.038 af x 40.0% Voids
#2A	1,026.00'	0.006 af	**ADS_StormTech SC-740 +Cap** x 6 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 6 Chambers in 2 Rows
		0.021 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	1,027.00'	**12.0" Round Culvert** L= 400.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,027.00' / 1,025.00' S= 0.0050 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.93 cfs @ 12.09 hrs HW=1,027.55' TW=1,025.44' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 0.93 cfs @ 3.07 fps)

Pond 6P: Underground Infiltration - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-740 +Cap (ADS StormTech® SC-740 with cap length)
Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf
Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

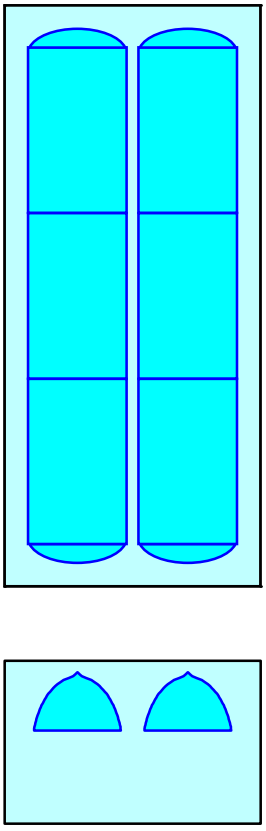
3 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 22.98' Row Length +12.0" End Stone x 2 = 24.98' Base Length
2 Rows x 51.0" Wide + 6.0" Spacing x 1 + 12.0" Side Stone x 2 = 11.00' Base Width
48.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 7.00' Field Height

6 Chambers x 45.9 cf = 275.6 cf Chamber Storage

1,923.2 cf Field - 275.6 cf Chambers = 1,647.6 cf Stone x 40.0% Voids = 659.0 cf Stone Storage

Chamber Storage + Stone Storage = 934.7 cf = 0.021 af
Overall Storage Efficiency = 48.6%
Overall System Size = 24.98' x 11.00' x 7.00'

6 Chambers
71.2 cy Field
61.0 cy Stone



Summary for Pond 16P: Roof Drain

[57] Hint: Peaked at 1,031.69' (Flood elevation advised)

Inflow Area = 0.149 ac,100.00% Impervious, Inflow Depth = 7.29" for 200-yr_NRCS event
Inflow = 1.47 cfs @ 12.13 hrs, Volume= 0.091 af
Outflow = 1.47 cfs @ 12.13 hrs, Volume= 0.091 af, Atten= 0%, Lag= 0.0 min
Primary = 0.95 cfs @ 12.13 hrs, Volume= 0.087 af
Routed to Pond 6P : Underground Infiltration
Secondary = 0.52 cfs @ 12.13 hrs, Volume= 0.004 af
Routed to Pond 3P : Bioretention Basin 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,031.69' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1,031.00'	**8.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,031.00' / 1,030.80' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.35 sf
#2	Secondary	1,031.67'	**100.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=0.95 cfs @ 12.13 hrs HW=1,031.69' TW=1,027.56' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.95 cfs @ 3.29 fps)

Secondary OutFlow Max=0.52 cfs @ 12.13 hrs HW=1,031.69' TW=1,029.56' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Weir Controls 0.52 cfs @ 0.33 fps)

Summary for Pond 18P: Roof Drain

[57] Hint: Peaked at 1,029.29' (Flood elevation advised)

Inflow Area = 0.632 ac,100.00% Impervious, Inflow Depth = 7.29" for 200-yr_NRCS event
Inflow = 6.23 cfs @ 12.13 hrs, Volume= 0.384 af
Outflow = 6.23 cfs @ 12.13 hrs, Volume= 0.384 af, Atten= 0%, Lag= 0.0 min
Primary = 4.38 cfs @ 12.13 hrs, Volume= 0.372 af
Routed to Pond 5P : Underground Infiltration
Secondary = 1.85 cfs @ 12.13 hrs, Volume= 0.012 af
Routed to Pond 4P : Bioretention Basin 4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 1,029.29' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1,028.00'	**15.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,028.00' / 1,027.80' S= 0.0100 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf
#2	Secondary	1,029.25'	**100.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=4.38 cfs @ 12.13 hrs HW=1,029.29' TW=1,027.37' (Dynamic Tailwater)
1=Culvert (Barrel Controls 4.38 cfs @ 4.31 fps)

Secondary OutFlow Max=1.84 cfs @ 12.13 hrs HW=1,029.29' TW=1,025.68' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Weir Controls 1.84 cfs @ 0.51 fps)

Summary for Link 3L: Post Development

Inflow Area = 10.864 ac, 71.34% Impervious, Inflow Depth = 4.49" for 200-yr_NRCS event
Inflow = 44.18 cfs @ 12.20 hrs, Volume= 4.066 af
Primary = 44.18 cfs @ 12.20 hrs, Volume= 4.066 af, Atten= 0%, Lag= 0.0 min
Routed to nonexistent node Post

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Summary for Link 8L: North

Inflow Area = 6.553 ac, 73.63% Impervious, Inflow Depth = 3.78" for 200-yr_NRCS event
Inflow = 30.04 cfs @ 12.21 hrs, Volume= 2.062 af
Primary = 30.04 cfs @ 12.21 hrs, Volume= 2.062 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3L : Post Development

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

Summary for Link 9L: South

Inflow Area = 4.311 ac, 67.84% Impervious, Inflow Depth = 5.58" for 200-yr_NRCS event
Inflow = 18.56 cfs @ 12.14 hrs, Volume= 2.005 af
Primary = 18.56 cfs @ 12.14 hrs, Volume= 2.005 af, Atten= 0%, Lag= 0.0 min
Routed to Link 3L : Post Development

Primary outflow = Inflow, Time Span= 0.00-60.00 hrs, dt= 0.01 hrs

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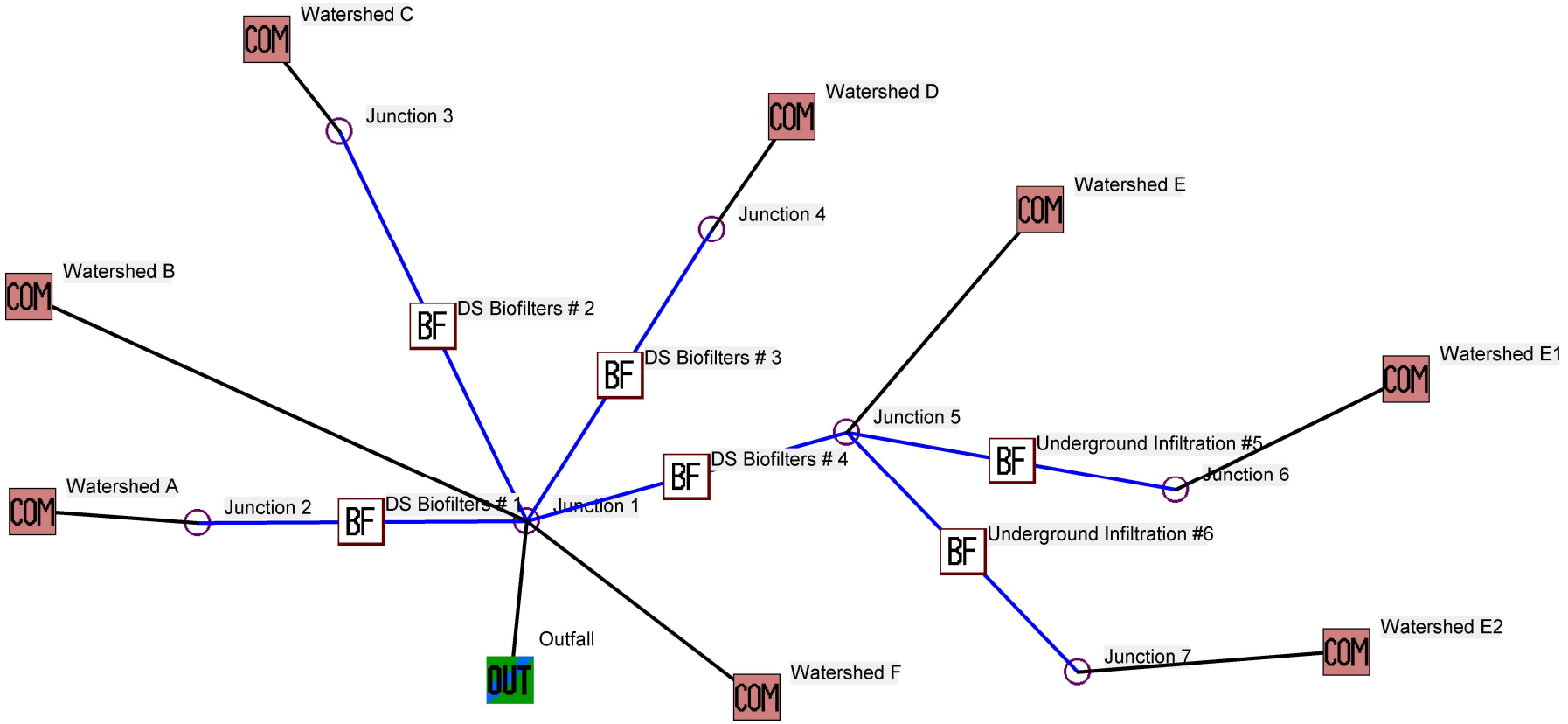
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APPENDIX F

Water Quality and Infiltration Modeling


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COM
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Junction 4
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Watershed B
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DS Biofilters # 2
BF
DS Biofilters # 3
BF
Watershed E1
COM
Junction 5
DS Biofilters # 4
BF
Underground Infiltration #5
BF
Junction 6
Watershed A
COM
Junction 2
DS Biofilters # 1
BF
Junction 1
Underground Infiltration #6
BF
Outfall
OUT
Junction 7
Watershed E2
COM
Watershed F
COM

Data file name: W:\2024\241243_Newcomb - Seminole & Lacy, Fitchburg\SWMP\SWMP_overall\WinSLAMM\241243_Seminole Lacy.mdb
WinSLAMM Version 10.4.1
Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.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: 01/01/81 Study period ending date: 12/31/81
Start of Winter Season: 12/02 End of Winter Season: 03/12
Date: 07-11-2025 Time: 11:55:46
Site information:

LU# 1 - Commercial: Watershed A Total area (ac): 6.150
1 - Roofs 1: 1.868 ac. Flat Connected PSD File: C:\WinSLAMM Files\NURP.cpz
2 - Roofs 2: 0.230 ac. Flat Connected PSD File: C:\WinSLAMM Files\NURP.cpz
13 - Paved Parking 1: 1.986 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz
31 - Sidewalks 1: 0.510 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 1.326 ac. Normal Clayey Low Density PSD File: C:\WinSLAMM Files\NURP.cpz
70 - Water Body Areas: 0.230 ac. PSD File:

LU# 2 - Commercial: Watershed B Total area (ac): 0.403
31 - Sidewalks 1: 0.002 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.401 ac. Normal Clayey Low Density PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 3 - Commercial: Watershed C Total area (ac): 0.368
1 - Roofs 1: 0.298 ac. Flat Connected PSD File: C:\WinSLAMM Files\NURP.cpz
31 - Sidewalks 1: 0.008 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.046 ac. Normal Clayey Low Density PSD File: C:\WinSLAMM Files\NURP.cpz
70 - Water Body Areas: 0.016 ac. PSD File:

LU# 4 - Commercial: Watershed D Total area (ac): 0.311
1 - Roofs 1: 0.216 ac. Flat Connected PSD File: C:\WinSLAMM Files\NURP.cpz
31 - Sidewalks 1: 0.014 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.072 ac. Normal Clayey Low Density PSD File: C:\WinSLAMM Files\NURP.cpz
70 - Water Body Areas: 0.009 ac. PSD File:

LU# 5 - Commercial: Watershed E Total area (ac): 1.992
2 - Roofs 2: 0.189 ac. Flat Connected PSD File: C:\WinSLAMM Files\NURP.cpz
13 - Paved Parking 1: 0.976 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz
31 - Sidewalks 1: 0.130 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.490 ac. Normal Clayey Low Density PSD File: C:\WinSLAMM Files\NURP.cpz
70 - Water Body Areas: 0.207 ac. PSD File:

LU# 6 - Commercial: Watershed F Total area (ac): 0.859
13 - Paved Parking 1: 0.038 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz
31 - Sidewalks 1: 0.043 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.778 ac. Normal Clayey Low Density PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 7 - Commercial: Watershed E1 Total area (ac): 0.632
1 - Roofs 1: 0.632 ac. Flat Connected PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 8 - Commercial: Watershed E2 Total area (ac): 0.149
1 - Roofs 1: 0.149 ac. Flat Connected PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Biofilter CP# 1 (DS) - DS Biofilters # 1
1. Top area (square feet) = 16000
2. Bottom aea (square feet) = 10000
3. Depth (ft): 10
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 3.6
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 0.001
8. Infiltration rate fraction (bottom): 1
9. Depth of biofilter that is rock filled (ft) 4
10. Porosity of rock filled volume = 0.33
11. Engineered soil infiltration rate: 3.6
12. Engineered soil depth (ft) = 2
13. Engineered soil porosity = 0.27
14. Percent solids reduction due to flow through engineered soil = 80
15. Biofilter peak to average flow ratio = 3.8
16. Number of biofiltration control devices = 1
17. Particle size distribution file: Not needed - calculated by program
18. Initial water surface elevation (ft): 0

Soil Data Soil Type Fraction in Eng. Soil
User-Defined Soil Type 1.000

Biofilter Outlet/Discharge Characteristics:
Outlet type: Broad Crested Weir
1. Weir crest length (ft): 25
2. Weir crest width (ft): 6
3. Height of datum to bottom of weir opening: 9.5

Outlet type: Vertical Stand Pipe
1. Stand pipe diameter (ft): 3
2. Stand pipe height above datum (ft): 7.5

Outlet type: Surface Discharge Pipe
1. Surface discharge pipe outlet diameter (ft): 0.5
2. Pipe invert elevation above datum (ft): 6.75
3. Number of surface pipe outlets: 1

Control Practice 2: Biofilter CP# 2 (DS) - DS Biofilters # 2
1. Top area (square feet) = 1700
2. Bottom aea (square feet) = 700
3. Depth (ft): 8
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 3.6
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 0.001
8. Infiltration rate fraction (bottom): 1
9. Depth of biofilter that is rock filled (ft) 4
10. Porosity of rock filled volume = 0.33
11. Engineered soil infiltration rate: 3.6
12. Engineered soil depth (ft) = 2
13. Engineered soil porosity = 0.27
14. Percent solids reduction due to flow through engineered soil = 80
15. Biofilter peak to average flow ratio = 3.8
16. Number of biofiltration control devices = 1
17. Particle size distribution file: Not needed - calculated by program
18. Initial water surface elevation (ft): 0

Soil Data Soil Type Fraction in Eng. Soil
User-Defined Soil Type 1.000

Biofilter Outlet/Discharge Characteristics:
Outlet type: Broad Crested Weir
1. Weir crest length (ft): 20
2. Weir crest width (ft): 6
3. Height of datum to bottom of weir opening: 7.5

Outlet type: Vertical Stand Pipe
1. Stand pipe diameter (ft): 3
2. Stand pipe height above datum (ft): 7

Control Practice 3: Biofilter CP# 3 (DS) - DS Biofilters # 3
1. Top area (square feet) = 1800
2. Bottom aea (square feet) = 400
3. Depth (ft): 8
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 3.6
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 0.001
8. Infiltration rate fraction (bottom): 1
9. Depth of biofilter that is rock filled (ft) 4
10. Porosity of rock filled volume = 0.33
11. Engineered soil infiltration rate: 3.6
12. Engineered soil depth (ft) = 2
13. Engineered soil porosity = 0.27
14. Percent solids reduction due to flow through engineered soil = 80
15. Biofilter peak to average flow ratio = 3.8
16. Number of biofiltration control devices = 1
17. Particle size distribution file: Not needed - calculated by program
18. Initial water surface elevation (ft): 0

Soil Data — Soil Type Fraction in Eng. Soil
User-Defined Soil Type 1.000

Biofilter Outlet/Discharge Characteristics:

Outlet type: Broad Crested Weir
1. Weir crest length (ft): 20
2. Weir crest width (ft): 6
3. Height of datum to bottom of weir opening: 7.5

Outlet type: Vertical Stand Pipe
1. Stand pipe diameter (ft): 3
2. Stand pipe height above datum (ft): 7

Control Practice 4: Biofilter CP# 4 (DS) - DS Biofilters # 4
1. Top area (square feet) = 13500
2. Bottom aea (square feet) = 9000
3. Depth (ft): 9
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 0.5
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 0.001
8. Infiltration rate fraction (bottom): 1
9. Depth of biofilter that is rock filled (ft) 4
10. Porosity of rock filled volume = 0.33
11. Engineered soil infiltration rate: 3.6
12. Engineered soil depth (ft) = 2
13. Engineered soil porosity = 0.27
14. Percent solids reduction due to flow through engineered soil = 80
15. Biofilter peak to average flow ratio = 3.8
16. Number of biofiltration control devices = 1
17. Particle size distribution file: Not needed - calculated by program
18. Initial water surface elevation (ft): 0

Soil Data — Soil Type Fraction in Eng. Soil
User-Defined Soil Type 1.000

Biofilter Outlet/Discharge Characteristics:

Outlet type: Broad Crested Weir
1. Weir crest length (ft): 10
2. Weir crest width (ft): 6
3. Height of datum to bottom of weir opening: 8

Outlet type: Vertical Stand Pipe
1. Stand pipe diameter (ft): 3
2. Stand pipe height above datum (ft): 6.75

Outlet type: Drain Tile/Underdrain
1. Underdrain outlet diameter (ft): 0.5
2. Invert elevation above datum (ft): 3.5
3. Number of underdrain outlets: 1

Control Practice 5: Biofilter CP# 5 (DS) - Underground Infiltration #5

1. Top area (square feet) = 1150
2. Bottom aea (square feet) = 1150
3. Depth (ft): 7
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 3.6
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 0.001
8. Infiltration rate fraction (bottom): 1
9. Depth of biofilter that is rock filled (ft) 4
10. Porosity of rock filled volume = 0.33
11. Engineered soil infiltration rate: 0
12. Engineered soil depth (ft) = 0
13. Engineered soil porosity = 0
14. Percent solids reduction due to flow through engineered soil = 0
15. Biofilter peak to average flow ratio = 3.8
16. Number of biofiltration control devices = 1
17. Particle size distribution file: Not needed - calculated by program
18. Initial water surface elevation (ft): 0

Soil Data Soil Type Fraction in Eng. Soil

Biofilter Outlet/Discharge Characteristics:

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 0.01
2. Weir crest width (ft): 0.01
3. Height of datum to bottom of weir opening: 6.99

Outlet type: Surface Discharge Pipe

1. Surface discharge pipe outlet diameter (ft): 1.25
2. Pipe invert elevation above datum (ft): 5.5
3. Number of surface pipe outlets: 1

Control Practice 6: Biofilter CP# 6 (DS) - Underground Infiltration #6

1. Top area (square feet) = 200
2. Bottom aea (square feet) = 200
3. Depth (ft): 7
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 3.6
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 0.001
8. Infiltration rate fraction (bottom): 1
9. Depth of biofilter that is rock filled (ft) 4
10. Porosity of rock filled volume = 0.33
11. Engineered soil infiltration rate: 0
12. Engineered soil depth (ft) = 0
13. Engineered soil porosity = 0
14. Percent solids reduction due to flow through engineered soil = 0
15. Biofilter peak to average flow ratio = 3.8
16. Number of biofiltration control devices = 1
17. Particle size distribution file: Not needed - calculated by program
18. Initial water surface elevation (ft): 0

Soil Data Soil Type Fraction in Eng. Soil

Biofilter Outlet/Discharge Characteristics:

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 0.01
2. Weir crest width (ft): 0.01
3. Height of datum to bottom of weir opening: 6.99

Outlet type: Surface Discharge Pipe

1. Surface discharge pipe outlet diameter (ft): 1.25
2. Pipe invert elevation above datum (ft): 5
3. Number of surface pipe outlets: 1

SLAMM for Windows Version 10.4.1
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Data file name: W:\2024\241243_Newcomb - Seminole & Lacy, Fitchburg\SWMP\SWMP_overall\WinSLAMM\241243_Seminole Lacy.mdb
WinSLAMM Version 10.4.1
Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.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
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdx
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
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: 01/01/81 Study period ending date: 12/31/81
Start of Winter Season: 12/02 End of Winter Season: 03/12
Model Run Start Date: 01/01/81 Model Run End Date: 12/31/81
Date of run: 07-11-2025 Time of run: 11:58:25
Total Area Modeled (acres): 10.864
Years in Model Run: 1.00

	Runoff Volume (cu ft)	Percent Runoff Volume Reduction	Particulate Solids Conc. (mg/L)	Particulate Solids Yield (lbs)	Percent Particulate Solids Reduction
Total of all Land Uses without Controls:	641487	-	75.85	3038	-
Outfall Total with Controls:	26819	95.82%	135.4	226.7	92.54%
Annualized Total After Outfall Controls:	26892			227.3	

Data File: W:\2024\241243_Newcomb - Seminole & Lacy, Fitchburg\SWMP\SWMP_overall\WinSLAMM\241243_Seminole Lacy.mdb
Rain File: WisReg - Madison WI 1981.RAN
Date: 07-11-25 Time: 9:53:31 AM
Site Description:

Col. #:	2	3	4	5	6	7	8	9	10	11	12	13	14	15	18	19	27	28	29	30	31	32	33	34	35	39	54	61
Control Practice No.	Control Practice Type	Control Practice Name or Location	Total Inflow Volume (cf)	Total Outflow Volume (cf)	Percent Volume Reduction	Total Influent Load (lbs)	Total Effluent Load (lbs)	Percent Load Reduction	Flow Weighted Influent Conc (mg/L)	Flow Weighted Effluent Conc (mg/L)	Percent Conc. Reduction	Influent Median Part. Size (microns)	Effluent Median Part. Size (microns)	Notes	Maximum Stage (ft)	Hydraulic Volume Out (cf)	Maximum Surface Ponding Time (hrs)	Maximum Subsurface Ponding Time (hrs)	Volume Infiltrated (cf)	Underdrain Discharge Vol. (cf)	Evapo-Transpir. Vol. (cf)	Minimum Soil Moist. (frac)	Surface Discharge Bypass Vol. (cf)	Evap. Vol. (cf)	Volume Supplemtl. Irig. (cf)	Surface Ponding Events >72 hrs (Cont)	Residence Time in Media (hrs)	Runoff Producing Events / Ttl. Rains
1	Biofilter	DS Biofilters # 1	392227	10573	97.3	1899	54.31	97.14	77.55	82.28	-6.104	7.8	7.8	No Biofilter Overflows	7.41	10599	9.2	4.28	382673	0			0			0	1.8	Mar-90
2	Biofilter	DS Biofilters # 2	26548	196.7	99.26	57.21	0.4679	99.18	34.52	38.09	-10.353	7.8	7.8	No Biofilter Overflows	7.02	197	9.9	5.05	26422.1	0			393.6			0	1.8	Jan-90
3	Biofilter	DS Biofilters # 3	19897	493.9	97.52	48.68	1.38	97.17	39.19	44.75	-14.188	7.8	7.8	No Biofilter Overflows	7.03	494	14.4	6.79	19455.5	0			988.74			0	1.8	Feb-90
4	Biofilter	DS Biofilters # 4	125677	0	100	735.4	0	100	93.73	0	100	7.8	0	No Biofilter Overflows	6.24	0	2.8	28.9	124945	0			0			0	1.8	0/90
5	Biofilter	Underground Infiltr	50700	407.5	99.2	104.4	0.8394	99.2	33	33	0	7.8	7.8	No Biofilter Overflows	5.51	534	11.1	10.52	92310.4	0			0			0	0	Jan-90
6	Biofilter	Underground Infiltr	11953	661.5	94.47	24.62	1.363	94.46	33	33	0	7.8	7.8	No Biofilter Overflows	5.01	845	11	9.1	19978.9	0			0			0	0	May-90

NORTH
Data File: W:\2024\241243_Newcomb - Seminole & Lacy, Fitchburg\SWMP\SWMP_overall\WinSLAMM\241243_Seminole Lacy.mdb
Rain File: WisReg - Madison WI 1981.RAN
Date: 06-24-25 Time: 10:50:19 AM
Site Description:

Runoff Volume Total (cf) at the Outfall

Rain Number	Start Date	Rain Total	Outfall Tot	Rv	Total Losses	Calculated Event Peal	Pre-Dev Runoff Vol. (cf)
Minimum:		0	0	0.001	0.01	58.6	0	0
Maximum:		2.59	11029	0.108	2.31	99.5	0.396	10172
Average:		0.26	244.6	0.006	0.26	68.5	0.252	224.4
Total:		28.81	26658		28.19			20192

* Note: NRCS does not recommend using CN method for rains < 0.5 in.
See 'PreDevelopment Areas and CN' Help for more info.

SOUTH
Data File: W:\2024\241243_Newcomb - Seminole & Lacy, Fitchburg\SWMP\SWMP_overall\WinSLAMM\241243_Seminole Lacy.mdb
Rain File: WisReg - Madison WI 1981.RAN
Date: 06-24-25 Time: 10:47:17 AM
Site Description:

Runoff Volume Total (cf) at the Outfall

Rain Number	Start Date	Rain Total	Outfall Tot	Rv	Total Losses	Calculated Event Peal	Pre-Dev Runoff Vol. (cf)
Minimum:		0	0	0.001	0.01	58.6	0	0
Maximum:		2.59	11029	0.108	2.31	99.5	0.396	6693
Average:		0.26	244.6	0.006	0.26	68.5	0.252	147.6
Total:		28.81	26658		28.19			13287

* Note: NRCS does not recommend using CN method for rains < 0.5 in.
See 'PreDevelopment Areas and CN' Help for more info.

TSS Calculations - WinSLAMM

Project: Gusto!
Modeled By: KLM
Date: 7/15/25

WYSER ENGINEERING
300 E. Front Street
Mt. Horeb, Wisconsin 53572
Ph: (608) 437-1980

Watershed	WinSLAMM Node	Area	Particulate Solids Yield	Treatement Required	Post Development Particulat Solids Treatement Required	Particulate Solid Yield After Controls	Particulate Solids Treatement Provided	Percent Reduction
		(Acres)	(lbs)	(%)	(lbs)	(lbs)	(lbs)	(%)
Watershed A - Basin 1 - North	**Watershed A**	6.15	1898.83	-	-	-	-	-
-	**Basin 1**	-	-	-	-	54.31	1844.52	97.14%
Watershed B - No Treatment - North	**Watershed B**	0.40	45.33	-	-	45.33	0.00	0.00%
Watershed C - Basin 2 - South	**Watershed C**	0.37	57.21	-	-	-	-	-
-	**Basin 2**	-	-	-	-	0.47	56.74	99.18%
Watershed D - Basin 3 - South	**Watershed D**	0.31	48.68	-	-	-	-	-
-	**Basin 3**	-	-	-	-	1.38	47.30	97.17%
Watershed E - Basin 4 - South	**Watershed E**	1.99	733.21	-	-	-	-	-
Watershed E1 - Underground Infiltration 5 - South	**Watershed E1**	0.63	104.44	-	-	-	-	-
-	**Underground Infiltration 5**	-	-	-	-	0.84	103.60	99.20%
Watershed E2 - Underground Infiltration 6 - South	**Watershed E2**	0.15	24.62	-	-	-	-	-
-	**Underground Infiltration 6**	-	-	-	-	1.36	23.26	94.46%
-	**Basin 4**	-	-	-	-	0.00	735.41	100.00%
Watershed F - No Treatment - South	**Watershed F**	0.86	125.24	-	-	125.24	0.00	0.00%
		10.86	3037.56	80.00%	2430.05	226.73	2810.83	92.54%

Infiltration Calculations - WinSLAMM

Project: Gusto!
Modeled By: KLM
Date: 7/15/25

Watershed	WinSLAMM Node	Area	Post Development Infiltration Postdevelopment Stay-on No Controls		Runoff	Postdevelopment Stay-on with Controls		Runoff
		(Acres)	(in)	(cf)	(cf)	(in)	(cf)	(cf)
		A	**E**	**F**	**G**	**H**	**I**	**J**
			= F / A	= (28.81 * A) - G	(From SLAMM)	= I / A	= (28.12 * A) - J	(From SLAMM)
Watershed A - Basin 1 - North	**Watershed A**	6.15	11.24	250,897	392,226	-	-	-
-	**Basin 1**	-	-	-	-	-	632,550	10,573
Watershed B - No Treatment - North	**Watershed B**	0.40	26.56	38,883	3,300	-	38,883	3,300
Watershed C - Basin 2 - South	**Watershed C**	0.37	8.96	11,986	26,547	-	-	-
-	**Basin 2**	-	-	-	-	-	38,337	197
Watershed D - Basin 3 - South	**Watershed D**	0.31	11.19	12,633	19,898	-	-	-
-	**Basin 3**	-	-	-	-	-	32,037	494
Watershed E - Basin 4 - South	**Watershed E**	1.99	11.57	83,624	124,612	-	-	-
Watershed E1 - Underground Infiltration 5 - South	**Watershed E1**	0.63	6.71	15,408	50,699	-	-	-
-	**Underground Infiltration 5**	-	-	-	-	-	65,699	408
Watershed E2 - Underground Infiltration 6 - South	**Watershed E2**	0.15	6.74	3,652	11,953	-	-	-
-	**Underground Infiltration 6**	-	-	-	-	-	14,944	662
-	**Basin 4**	-	-	-	-	-	209,305	0
Watershed F - No Treatment - South	**Watershed F**	0.86	24.88	77,620	12,255	-	77,620	12,255
		10.86	12.54	494,704	641,490	28.13	1,109,376	26,819
	North	6.55	12.18	289,780	395,526	28.23	671,433	13,873
	South	4.31	13.09	204,925	245,964	27.98	437,943	12,946

	Predevelopment Stay-on - New Development - Infiltration Area (from WinSLAMM)					Post-Development
	Predevelopment Stay-on		Runoff	Stay-on Required (100% Predevelopment Stay-on)		Stay-on Required (Entire Development)
North	**K**	**L**	**M**	**N**	**O**	**S**
	= L / A	= (28.81 * A) - M	(From SLAMM)	= K * 100%	= L * 100%	= I
	(in)	(cf)	(cf)	(in)	(cf)	(cf)
	27.96	665,114	20,192	27.96	665,114	671,433
	Predevelopment Stay-on - New Development - Infiltration Area (from WinSLAMM)					Post-Development
	Predevelopment Stay-on		Runoff	Stay-on Required (100% Predevelopment Stay-on)		Stay-on Provided (Entire Development)
South	**K**	**L**	**M**	**N**	**O**	**S**
	= L / A	= (28.81 * A) - M	(From SLAMM)	= K * 100%	= L * 100%	= I
	(in)	(cf)	(cf)	(in)	(cf)	(cf)
	27.96	437,602	13,287	27.96	437,602	437,943

APPENDIX G

Stormwater Management Best Management Practice

Preliminary Opinion of Probable Construction Costs

Stormwater Management Best Management Practice Preliminary Opinion of Probable Construction Costs

Item	Quantity	Unit	Unit Cost	Total
Sediment Basin and Level Spreader	1	EA	$ 2,000.00	$ 2,000.00
Underground Infiltration 5	1	EA	$ 65,000.00	$ 65,000.00
Underground Infiltration 6	1	EA	$ 21,000.00	$ 21,000.00
Bioretention System	20,100	SF	$ 15.00	$ 301,500.00
Outlet Structures	4	EA	$ 1,500.00	$ 6,000.00
				$ 395,500.00

APPENDIX H

Declaration of Conditions, Covenants and Restrictions for

Maintenance of Stormwater Management Measures

DECLARATION OF CONDITIONS AND RESTRICTIONS FOR
MAINTENANCE OF STORMWATER MANAGEMENT MEASURES

RECITALS:

A. _____ ("Owner") is the owner of _____ more particularly described on Exhibit A attached hereto (the "Property").

B. Owner desires to construct stormwater management measures on the Property in accordance with certain plans and specifications approved by the City of Fitchburg (the "City").

C. The City requires Owner to record this Declaration of Conditions and Restrictions for Maintenance of Stormwater Management Measures (this "Declaration") regarding maintenance of certain stormwater management measures ("Stormwater Management Measures") to be located on the Property all as more particularly described in Exhibit A and shown on Exhibit B. Owner agrees to maintain the Stormwater Management Measures and to grant to the City the rights set forth below.

This space reserved for recording data

Return to:
City of Fitchburg
5520 Lacy Road
Fitchburg, WI 53711

PIN#:

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

1. Maintenance. Owner and its successors and assigns shall be responsible to repair and maintain the Stormwater Management Measures located on the Property in good condition and in working order and such that the measures comply with approved plans on file with the City. Said maintenance shall be at the Owner's sole cost and expense. Owner will conduct such maintenance or repair work in accordance with all applicable laws, codes, regulations, and similar requirements. *Specific maintenance tasks and their schedules shall be conducted in accordance with Exhibit A.*

2. Easement to City. If Owner fails to maintain the Stormwater Management Measures as required in Section 1, then the City shall have the right, after providing Owner with written notice of the maintenance issue (each, a "Maintenance Notice") and thirty (30) days to comply with the City's Maintenance Notice, to enter the Property in order to conduct the maintenance specified in the Maintenance Notice. The City will conduct such maintenance work in accordance with all applicable laws, codes, regulations, and similar requirements and will not unreasonably interfere with Owner's use of Property. All costs and expenses incurred by the City in conducting such maintenance may be charged to Owner by placing the amount on the tax roll for the Property as a special assessment in accordance with Section 66.0703, Wis. Stats.

3. Term/Termination. The term of this Declaration shall commence on the date that this Declaration is field of record with the Register of Deeds Office for Dane County, Wisconsin, and except as otherwise herein specifically provided, shall continue in perpetuity. Notwithstanding the foregoing, this Declaration may be terminated by recording with the Register of Deeds Office for Dane County, Wisconsin, a written instrument of termination signed by the City and all of the then-owners of the Property.

4. Miscellaneous.

(a) Notices. Any notice, request or demand required or permitted under this Declaration shall be in writing and shall be deemed given when personally served or three (3) days after the same has been deposited with the United States Post Office, registered or certified mail, return receipt requested, postage prepaid and addressed as follows:

If to Owner: _____
Attn: Gus Newcomb
999 Fourier Dr STE 102
Madison, WI 53717

If to the City: City Engineering Division
5520 Lacy Road
Fitchburg, WI 53711
Attn: City Engineer

Any party may change its address for the receipt of notice by written notice to the other.

(b) Governing Law. This Declaration shall be governed and construed in accordance with the laws of the State of Wisconsin.

(c) Amendments or Further Agreements to be in Writing. This Declaration may not be modified in whole or in part unless such agreement is in writing and signed by all parties bound hereby.

(d) Covenants Running with the Land. All of the easements, restrictions, covenants, and agreements set forth in this Declaration are intended to be and shall be construed as covenants running with the land, binding upon, inuring to the benefit of, and enforceable by the parties hereto and their respective successors and assigns.

(e) Partial Invalidity. If any provisions, or portions thereof, of this Declaration or the application thereof to any person or circumstance shall, to any extent, be invalid or unenforceable, the remainder of this Declaration, or the application of such provision, or portion thereof, to any other persons or circumstances shall be affected thereby and each provision of this Declaration shall be valid and enforceable to the fullest extend permitted by law.

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

_____
Owner:

By: _____

STATE OF WISCONSIN)
) ss
COUNTY OF DANE)

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

_____
NOTARY PUBLIC SIGNATURE

_____
PRINTED NAME OF NOTARY PUBLIC

My Commission Expires: _____

Drafted by: Kate Meagher, P.E.
Wyser Engineering

EXHIBIT A
Stormwater Management Maintenance Measures

Legal Description of Property:
Lot 1-4 CSM _____

Tax Parcel Numbers: _____

Stormwater Management Measures Included in this Agreement (as shown on the attached Erosion Control Plan, Grading Plan, and Utility Plan, hereby made a part of Exhibit B):

- All site storm sewer pipes and structures
- Bioretention Basin
- Underground Infiltration Chambers

Specific Maintenance Requirements:

Short Term Maintenance (during construction and/or restoration):

- The building construction contractor at the owner's expense or as agreed to by the owner and contractor shall perform inspection of all facilities during construction and until site stabilization.
- Inspections during construction shall be weekly and/or after a rainfall event of 0.5" or more.
- Repairs necessary to restore the facility to design performance will be made within 48 hours of the inspection.
- Deficiencies include, but are not limited to, rill erosion, sediment deposition in the infiltration pond or behind perimeter control, and deposition of sediment on the tracking pad.
- Tracking on the public right-of-way shall be inspected regularly during days that construction traffic is leaving the construction site. Any excessive sediment tracked onto the public right-of-way shall be scraped immediately. Thorough sweeping, with appropriate equipment that physically picks up and removes the sediment (vs. pushing it to other locations within the public right-of-way) shall be conducted at the end of each working day during construction activities.

Long Term Maintenance:

- Inspector qualifications for Long Term Maintenance: Inspectors under this item shall maintain a current Registered Professional Engineer License in the State of Wisconsin or possess an alternate certification approved by the **City of Fitchburg's** Public Works Department.
- All stormwater provisions constructed as part of this project are permanent in location and function over time. The constructed stormwater provisions such as infiltration ponds, inlet filters, and storm structures shall not be removed or significantly altered without written permission from the **City of Fitchburg's** Public Works Department. Owner shall maintain records of inspections and maintenance as described below in accordance with Chapter 30 – Article II of the **City of Fitchburg** Municipal Code of Ordinances. Inspections and maintenance reports shall be submitted to the **City of Fitchburg's** Public Works Department on an annual basis.
- An operation and maintenance plan shall be developed that is consistent with the purposes of the infiltration device, its intended life, safety requirements and the criteria for its design. The plan shall be developed for inspection, operation and maintenance of the device. The plan shall assign responsibility for activities and the qualifications of the personnel performing the work.

STORM SEWER

- Visual inspection of components shall be performed and debris removed from inlets and storm sewer manholes.
- Repair inlet/outlet areas that are damaged or show signs or erosion.
- Rip-rap shall be replaced as necessary.
- Repairs must restore the component to the specifications of the original plan.

BIORETENTION BASIN

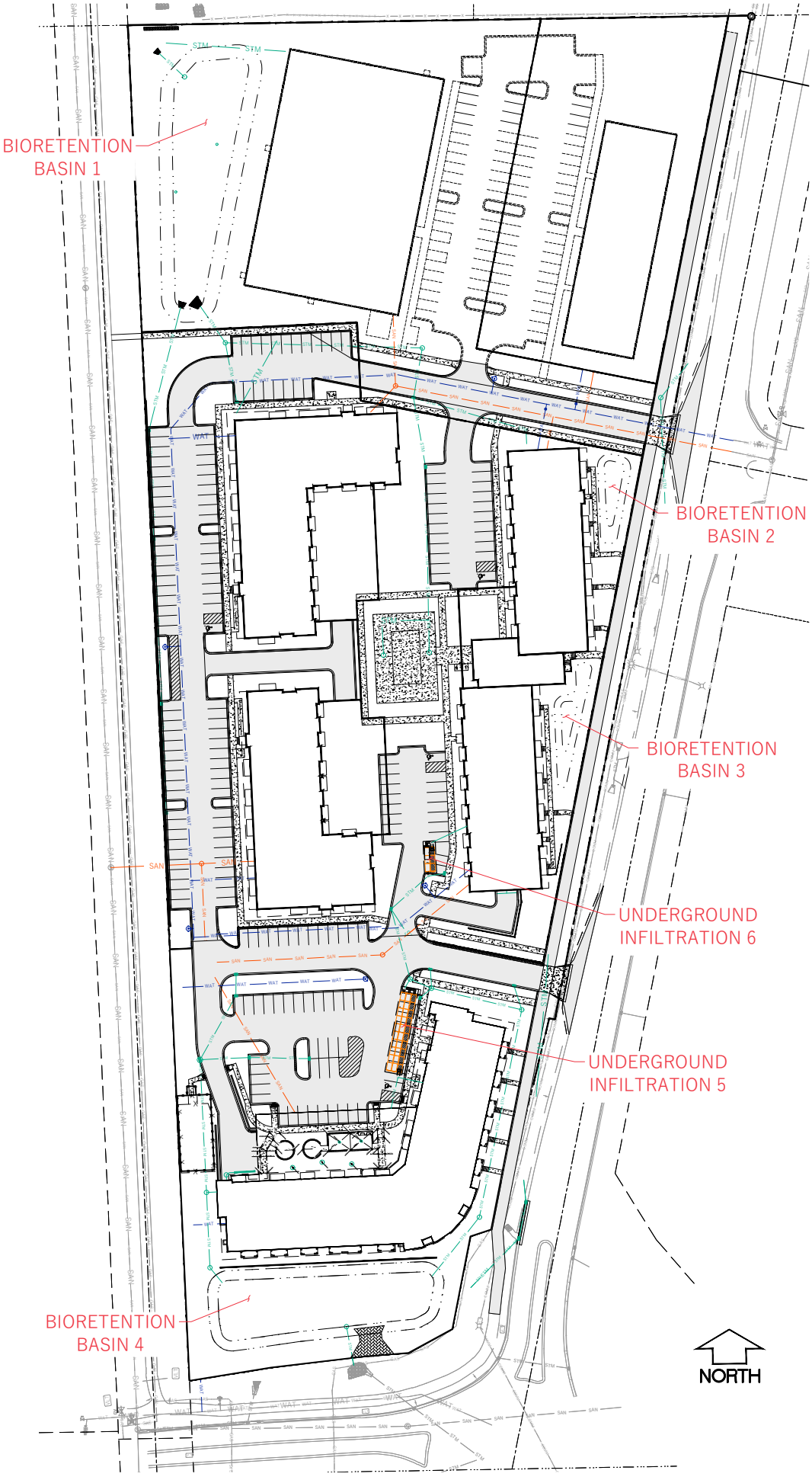
- The Owner is responsible for carrying out typical maintenance activities for bioretention areas and shall include details on these activities that are consistent with the following standards:
    - Inspect soil and repair eroded areas on a monthly basis;
    - Remove litter and debris on a monthly basis;
    - Add additional mulch on an annual basis;
    - Water plants accordingly during first growing season and as necessary during dry periods after first growing season;
    - Re-mulch void areas as needed;
    - Treat diseased trees and shrubs as needed.
- Snow shall not be dumped directly onto the conditioned planting bed.
- If the bioretention device receives runoff only from residential land uses other than streets, the mulch layer can be discontinued at maturity provided that a dense vegetation layer is formed.
- Visual Inspection of the bioretention basins shall be performed, at a minimum, monthly.
- Major maintenance shall be required when system shows standing water beyond 24 hours of rain event.
    - Cleaning shall consist of removal of sediment, one (1) foot undercut, undercut replacement with material as specified in WDNR Conservation Practice Standard #1004 and restoration in-kind.
    - Restoration of plant material shall be by plugging, not seeding alone.
    - Any repairs shall return the facility to the specifications in the approved plan.

UNDERGROUND INFILTRATION SYSTEM

- The owner shall install and maintain an underground storage chamber system (SC-800) as distributed by StormTech. Said system is installed for detention and infiltration purposes. Installation and maintenance shall be in accordance with the manufacturer's guidelines.
- The frequency of inspection and maintenance varies by location. A routine inspection schedule needs to be established for each individual location based upon site specific variables. The type of land use (i.e. industrial, commercial, residential), anticipated pollutant load, percent imperviousness, climate, etc. all play a critical role in determining the actual frequency of inspection and maintenance practices. At a minimum, StormTech recommends annual inspections. Initially, the Isolator Row should be inspected every 6 months for the first year of operation. For subsequent years, the inspection should be adjusted based upon previous observation of sediment deposition.
- If upon visual inspection it is found that sediment has accumulated, a stadia rod should be inserted to determine the depth of sediment. When the average depth of sediment exceeds 3 inches throughout the length of the Isolator Row PLUS, clean-out should be performed. Maintenance is accomplished with the JetVac process. StormTech recommends a maximum nozzle pressure of 2000 psi be utilized during cleaning. The JetVac process shall only be performed on StormTech Isolator Row that have ADS Fabric (as specified by StormTech) over their angular base stone.
- The Owner shall maintain records of inspections, any survey data and cleaning schedules all in accord with the requirements of the City of Fitchburg Code of Ordinances.
- Detailed information regarding installation and maintenance can be found on the Internet at www.stormtech.com or by calling StormTech at 888-892-2694.

EXHIBIT B

Figure(s) of Stormwater Management Maintenance Measures



City of Fitchburg
Erosion Control and Stormwater Management
Permit Application

Last Revised 12/15/2023

Permit #	
Start Date:	
Completion:	
Office Use Only	

Project Name: Gusto! Latitude/Longitude: 43.004406, -89.459899
Coordinates to 6 decimal digits req'd (e.g. 43.002512, -89.424248)

Site Address: 2747 S SEMINOLE HWY Parcel ID(s): 060908395704

Landowner Name, Phone & E-mail: Tim O'Brien, 608-616-0032, brtimo@yahoo.com

Landowner Address: 3710 SHILOH RD
DEFOREST WI 53532

Applicant Name, Phone & E-mail: Gus Newcomb, 608 833-5220, gus@newcombbuilds.com

Designer Name, Phone & E-mail: Kate Meagher, 608-437-1980, kate.meagher@wyserengineering.com

Contractor Name, Phone & E-mail:

Total Disturbed Area (this project): ____ s.f.
Total Redeveloped Area (this project): ____ s.f.
Total New Impervious Area added since 8-22-01: 0 s.f.
Total New Impervious Area (this project): 317,500 s.f.
Total Impervious Area (after project): 317,500 s.f.

Proposed Permit Fee for Plat Projects*

Type of Permit *(check only one)*
- ☐ Erosion Control Only (EC Base Fee = $200) (EC Amendment Fee = $100)
- ☐ Erosion Control and Stormwater Management (EC+SWM Base Fee = $200 + $400 = $600) (EC+SWM Amendment Fee = $300)
- ☐ Stormwater Management Only (SWM Base Fee = $400) (SWM Amendment Fee = $200)

Total Disturbed Area (this project):	s.f. x $0.005	/ s.f. =	$
Total New Impervious Area (this project):	s.f. x $0.010	/ s.f. =	$
Total Redeveloped Impervious Area (this project):	s.f. x $0.005	/ s.f. =	$

Permit fee of $ ____ received by ____ (*name*) on ____ (*date*)

Base Fee = (see above) $ ____
Total Permit Fee = $ ____

Make checks payable to "City of Fitchburg." Permit fee must be paid before Dane County review will begin.
Fees DOUBLE if work starts before permit is approved.
Note: Maximum length of permit duration is 3 years from permit start date.
** Plat projects include initial grading and infrastructure construction for plats. Development of individual lots within a plat are not considered "Plat projects" for the purposes of permit fee calculation.*

Proposed Permit Fee for non-Plat Projects

Type of Permit *(check only one)*
- ☐ Erosion Control Only (EC Base Fee = $275) (EC Amendment Fee = $100) **Plus actual costs****
- ☐ Erosion Control and Stormwater Management (EC+SWM Base Fee = $450) (EC+SWM Amendment Fee = $100) **Plus actual costs****
- ☒ Stormwater Management Only (SWM Base Fee = $375) (SWM Amendment Fee = $100) **Plus actual costs****

***In addition, the applicant shall pay the actual costs incurred by the City from any consultant or agent with whom the City may contract to provide services relating to the administration of this Code. The City shall bill the applicant for such charges, which shall be paid within thirty (30) days. Any unpaid charges shall be assessed to the subject property as a special charge pursuant to Wis. Stats. 66.0627 and placed on the tax roll.*

Make checks payable to "City of Fitchburg." Permit fee must be paid before Dane County review will begin.
Base fee DOUBLES if work starts before permit is approved.

Landowner or Applicant Signature: Tim O'Brien Date: 6/25/25

Reviewed by: ____ Date: ____

Conditionally Approved by City Engineer: ____ Date: ____

Submit 1 electronic copy of Permit Application, Report, and Plans (11"x17" max. size) to: bakha.yunusov@fitchburgwi.gov, ben.schulte@fitchburgwi.gov, and Mergen.Elliott@countyofdane.com. Submit permit fee to: Fitchburg Public Works Department, Attn: Environmental Engineer, 5520 Lacy Road, Fitchburg, WI 53711.

The following permit conditions are in addition to Conditions 1-4 listed on Page 1 of this permit.

Landowner / Applicant hereby acknowledged / agrees to the following:

1. Landowner / Applicant have reviewed Chapter 30, Article II of the City of Fitchburg Code of Ordinances and agree to follow all necessary requirements.
2. Landowner / Applicant agree to the permit conditions on the bottom of this permit.
3. Landowner / Applicant hereby grant the City of Fitchburg and its agent's permission to enter the project property for inspection and/or curative action.

Landowner / Applicant agree to keep a copy of the approved permit(s) and plan(s) available on the site at all times until final completion.

4. **City R/W Permit** - Landowner/Applicant shall check on whether a Right-of-Way (R/W) permit application is required for construction work within the City R/W. No land disturbance within the R/W is allowed unless a R/W Permit is approved.
5. **Street Access** - Per Fitchburg Chapter 70, Article V s. 70-145 vehicles over 10,000 lbs. gross weight shall use wood curb blocking when mounting or crossing curb & gutter, unless specifically permitted in writing by the City. Gravel & soil curb ramping is expressly prohibited.
6. **WDNR, Army Corps of Engineers, CARPC, etc. Permits** - Landowner/Applicant is responsible for checking with appropriate agencies for determining applicable permits. Copies of any applicable permits must be provided to the City prior to commencing land disturbance.
7. **Property Transfer** - If there is a transfer of property ownership prior to completion of the permit requirements, the permittee must notify the City and coordinate either a new permit application or permit transfer per Fitchburg Chapter 30 Article II 30-26 (f).
8. **Digger's Hotline** - Permittee shall be responsible for calling in all necessary underground utility locates for the construction work, and keeping the locates current/up-to-date. **Digger's Hotline for the area is 1-800-242-8511.**
9. **Traffic Control / Job Site Safety** - Traffic control shall comply with the current edition of the Manual on Uniform Traffic Control Devices (MUTCD). The Permittee and Permittee's Contractor are responsible for all job site safety and shall ensure that they communicate all applicable emergency contact information to the City and County emergency management services (EMS) departments.
10. **Erosion Control** - R/W surfaces shall be thoroughly cleaned before the end of each working day. All inlets, culverts, or other storm sewer structures subject to drainage shall be protected with silt screen protection device specifically designed for that structure. Any deposits of dirt, mud, rock, debris, or other material entering the storm sewer system shall be promptly and thoroughly cleaned out. If not clean by the end of the day, the City reserves the right to coordinate the work and charge back all equipment use and labor deemed necessary by the City to the Permittee. All erosion control measures shall be installed in accordance with the City of Fitchburg Standard Specifications, current edition. The City reserves the right to require additional erosion control measures as conditions warrant.
11. **Restoration** shall be completed as noted in the construction schedule unless otherwise authorized by the City. All public improvements (ie: curb and gutter, sidewalks, driveways, topsoil, vegetative cover, terrace trees, underground utilities, storm water conveyance and detention facilities, etc.) shall be installed and/or restored in accordance with the City of Fitchburg Standard Specifications, current edition.
12. **Construction Schedule Notification** - Permittee shall notify the City within 10 days of initial installation of all erosion control measures to arrange an inspection. No grading or construction work is allowed until the permit is approved and erosion control measures have been put in place and approved by the City. Permittee shall again contact the City a minimum of 2 working days prior to commencing any grading or construction work. Landowner/Applicant shall notify the City of any changes to the construction schedule as work progresses.
13. **Construction Site Erosion Control Inspections** - Contractor shall complete and upload weekly construction site erosion control inspections online using the PermiTrack system (https://www.mypermitrack.com/sehsvc/login) until Complete Stabilization is met. City Staff will set up the accounts, project, and provide training as needed to permittee, consultants, and contractors. If the site will be inactive, but stable, for a prolonged period (e.g. winter shutdown, etc.), Contractor may contact the City to request bumping inspection status to "Inactive" so weekly inspections don't need to be done until construction work resumes.
14. **Completion Date / Notice of Stabilization** - The site shall be stabilized by the Completion Date listed on Page 1 of this permit. If the site cannot be stabilized by that date, written notice shall be given to the City along with revised stabilization date, revised Soil Loss spreadsheet(s) and request to extend the Completion Date. If appropriate notification is not given prior to the Completion Date, a new permit application and appropriate fees

must be submitted for any remaining disturbed areas. Within ten days after installation of all practices in the approved erosion control plan and achievement of soil stabilization, the permittee shall notify the City to arrange a confirmation of project completion and stabilization.

15. **Approved Plan Sheets** (Include dates, sheet numbers, revision, etc.):
    _____
16. **Special Conditions:**
    _____
    _____
    _____
    _____

City of Fitchburg – Stormwater Management Application Checklist

Project Name / Location: Gusto! **Permit #:** _____

Please check the appropriate box: I = Included; N/A = Not Applicable *(If "N/A" is checked, an explanation must be entered.)*

*SWM Plan/Report must have P.E. Stamp on Cover Page		Applicant			Public Works	
	Plan Requirements (refer to Chapter 30, Article II s. 30-27 (a))	**I**	**N/A**	**Explanation / Location of Information (Page Number of Attachment)**	**I**	**N/A**
(1)	Narrative describing the proposed project, including implementation schedule of designed practices.	X		SWMP Narrative		
(2)	Identification of the entity responsible for long-term maintenance of the project.	X		Appendix H		
(3)	Map showing drainage areas for each watershed area.	X		Appendix E		
(4)	A topographic map of the site location, including the contiguous properties, existing drainage patterns and watercourses affected by the proposed development of the site and the existing vegetative cover	X		Appendix C		
(5)	Design practices to maintain peak discharge rates for the 1, 2, 10, and 100-year 24-hour storm events. Include a summary table showing the results of the analysis.		X	Appendix E		
a.	Pre-development peak flow rates		X	Appendix D		
b.	Post development peak flow rates with no detention		X	Appendix E		
c.	Post development peak flow rates with detention		X	Appendix E		
d.	Assumed runoff curve numbers		X	Appendix E		
e.	Time of concentration used in calculations		X	Appendix E		
(6)	Complete site plan and specifications.	X		Appendix C		
a.	Property lines and lot dimensions	X		Appendix C		
b.	All buildings and outdoor uses, existing and proposed, including all dimensions and setbacks	X		Appendix C		
c.	All public and private roads, interior roads, driveways and parking lots, showing traffic patterns and type of paving and surfacing material	X		Appendix C		
d.	All natural and artificial water features		X			
e.	Depth to bedrock	X		Appendix B		
f.	Depth to seasonal high water table		X			
g.	The extent and location of all soil types as described in the Dane County Soil Survey, slopes exceeding 12%, and areas of natural woodland or prairie	X		Appendix B		
h.	Existing and proposed elevations (NAVD 88)	X		Appendix C		
i.	Elevations, sections, profiles, and details as needed to describe all natural and artificial features of the project	X		Appendix C		
j.	Soil erosion control and overland runoff control measures, including runoff calculations as appropriate	X		Appendix C		
k.	Detailed construction schedule	X		SWMP Narrative		
l.	Copies of permits or permit applications required by any other governmental entities or agencies	X		In progress		
m	Location of all stormwater management practices	X		Appendix C		
n.	All existing and proposed drainage features	X		Appendix C		
o.	The location and area of all proposed impervious surfaces	X		Appendix C		
p.	The size (ft^2) and limits of the disturbed area	X		Appendix C		
q.	Any other information necessary to reasonably determine the location, nature and condition of any physical or environmental features		X			

Indicates plan requirement must always be included

City of Fitchburg – Stormwater Management Application Checklist

Project Name / Location: Gusto! **Permit #:** _____

Please check the appropriate box: I = Included; N/A = Not Applicable *(If "N/A" is checked, an explanation must be entered.)*

(7)	Calculations demonstrating the stormwater management performance standards under Chapter 30, Article II s. 30-28 (b) will be met.	x		SWMP Narrative		
(8)	Engineered designs for all structural management practices.					
(9)	Description of methods to control oil and grease or written justification for not providing such control.	x		SWMP Narrative		
(10)	Description and plans to control temperature of runoff.	x		SWMP Narrative		
(11)	Maintenance plan and schedule for all permanent stormwater management practices.	x		Appendix H		
(12)	"A summary of infiltration calculations including: predevelopment infiltration volume, calculated infiltration volume goal, achieved post-development infiltration volume.	x		SWMP Narrative		
(13)	Submit completed City of Fitchburg Inspector Form.	x				

Indicates plan requirement must always be included