

City of Ramsey
Agenda
Special Planning Commission
Monday, June 12, 2017
7:30 pm
Council Chambers, 7550 Sunwood Drive NW

- 1. Call to Order**
- 2. Citizen Input**
- 3. Approve Agenda**
- 4. Approve Minutes**
- 5. Public Hearing/Commission Business**
 1. Review Sketch Plan for Cole Addition Sketch Plan (Project No. 17-132); Case of Bryon and Lynn Cole
 2. Consider Sketch Plan Review for Northfork Meadows Located Near Puma Street and Alpine Drive; Case of Paxmar (Project #17-126)
- 6. Commission/Staff Input**
- 7. Adjournment**

Special Planning Commission

5. 1.

Meeting Date: 06/12/2017

Submitted For: Alec Henderson, Community Development

By: Alec Henderson, Community Development

Information

Title:

Review Sketch Plan for Cole Addition Sketch Plan (Project No. 17-132); Case of Bryon and Lynn Cole

Purpose/Background:

The purpose of this file is to review the official Sketch Plan, prepared by Landform and dated May 23, 2017, for the purpose of an eight (8) lot subdivision located northwest of the intersection of 16th Avenue NW and Garnet Street NW. The Sketch Plan submitted includes seven (7) sheets. The Sketch Plan Review process affords the Planning Commission the opportunity to provide early direction on the layout of the proposed plat, before the Developer prepares detailed Preliminary Plat plans. A key decision will occur at Preliminary Plat, in which the layout will be approved, subject to approving final construction plans and Final Plat documents. At that time, the City will review items including, but not limited to, Grading Plan, Utility Plan, Landscape Plan, and Street Light Plan.

Notification:

Staff attempted to notify the owners of property within 700 feet of the proposed development about the proposed Sketch Plan review.

Observations/Alternatives:

Sketch Plan Review is the first of several steps in reviewing a Major Plat, which includes Sketch Plan Review, Preliminary Plat, and Final Plat. This case is being reviewed per City Code Section 117-111 entitled R-1 Residential District and Chapter 117, Article III entitled Subdivisions.

Comprehensive Plan:

The Property is currently guided as Low Density Residential in the Comprehensive Plan. The intent of the LDR land use designation is to allow for the construction of single-family dwellings with access to municipal sewer and water. The eight (8) lots in the Sketch Plan are proposed to be served by municipal sewer and water. The adjacent properties to the south and east, which were platted as Now and Then Estates, are also guided as LDR as a result of a previous Comprehensive Plan Amendment.

Zoning:

The Property is currently zoned as R-1 Residential (MUSA). This allows for the development of single family, detached dwellings with a density of Three (3) units per one (1) acre. As proposed, the Sketch Plan describes platted property that is R-1 Residential (MUSA). The proposed density of the Sketch Plan is 3 units per acre and it appears to meet the minimum lot size and width standards of the R-1 Residential (MUSA) district.

Dimensional/Bulk Standards:

When preparing the Preliminary Plat, the Developer must demonstrate compliance with the bulk standards of the R-1 Residential (MUSA) district. It appears that the Sketch Plan does comply with the standards specified for this zoning district. Specifics are outlined in the Staff Review File.

Wetlands:

There do not appear to be any wetlands on the Property.

Density Transitioning:

As proposed, the development is not subject to the density transitioning standards. However, it is worth noting that there is an existing line of mature evergreen trees along the entire length of the eastern boundary of the Property.

Streets and Access:

Six of the eight lots will gain access from an extension of the 168th Lane NW cul-de-sac. The existing home and the proposed Lot 4, Block 1 will be accessed from 168th Avenue Northwest. It appears that the proposed extension of 168th Lane NW terminates in a temporary cul-de-sac. Staff would note that this cul-de-sac will need to be constructed to meet the minimum street design standards and shall have the necessary right-of-way dedicated as well.

Sidewalks:

The Sketch Plan does not include any indication of a sidewalk along the proposed extension of 168th Lane. There is an existing sidewalk on the north side of 168th Lane that ends at the intersection with Kamacite Street. There is an existing lot east of this intersection, but outside the boundaries of the Sketch Plan, with no sidewalk. If sidewalk were required along the north side of the street, it would have to extend beyond the boundary of the Property to connect with Kamacite Street.

Utilities and Municipal Services:

The applicant proposes connecting the new lots to city services, but has not specified whether the existing home will be connected. The assumption is that Lot 5, Block 2 would connect to city services as the Sketch Plan does indicate that the private utilities would be abandoned.

Grading and Drainage:

The project will be subject to review by the Lower Rum River Watershed Management Organization (LRRWMO) regarding both wetlands and stormwater. A LRRWMO permit will be required.

The Applicant proposes to vacate a fairly large, existing drainage easement (130 feet by 115 feet in area). The Grading and Drainage Plans will need to clearly resolve how the stormwater would be addressed so that it does not negatively impact adjacent properties or move outside designated easements. Landform has since proposed improvements to ensure proper drainage in a memo. This memo will be reviewed by the Engineering Staff as part of the Preliminary Plat process.

Landscaping:

The plan narrative indicates that the amount of significant tree Diameter at Breast Height (DBH) inches removed will exceed the allowable threshold by twenty-two (22) inches. However, the narrative also notes that twenty-eight (28) inches will be planted to satisfy the replacement standards, which can include the base landscaping requirements of two (2) trees per lot. Deciduous trees shall be at least one inch in diameter and coniferous trees shall be at least five feet in height. Each lot is subject to City's topsoil requirement.

Miscellaneous:

It appears that Temporary Construction Easements will need to be obtained from the two (2) adjacent property owners west of the Property to address the removal of the existing, temporary cul-de-sac.

Funding Source:

All costs associated with processing the Application are the responsibility of the Applicant. There are no City funds proposed to be utilized for the construction of this project.

Recommendation:

City Staff is recommending that the Planning Commission approve the Sketch Plan and direct the Developer to proceed to preparing a Preliminary Plat, with the considerations listed in the staff report.

Action:

Provide the Applicant with feedback, and recommend any changes to the Sketch Plan prior to submission of Preliminary Plat. No formal action is required.

Attachments

Site Location

Cole Addition Sketch Plan

Sketch Plan Narrative

Storm Water Memo-Landform

Staff Review Letter

Form Review

Inbox

Tim Gladhill

Form Started By: Alec Henderson

Final Approval Date: 06/09/2017

Reviewed By

Tim Gladhill

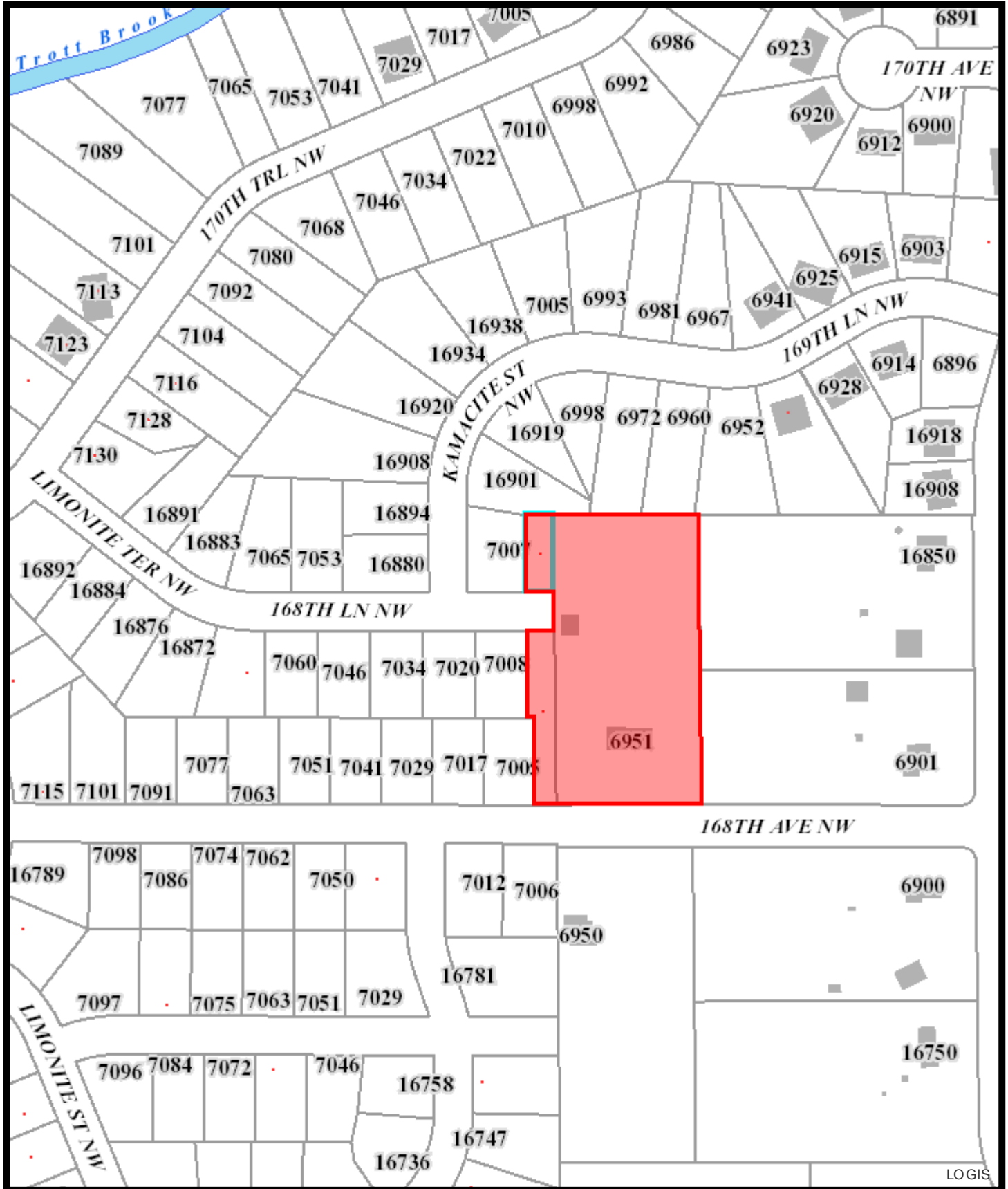
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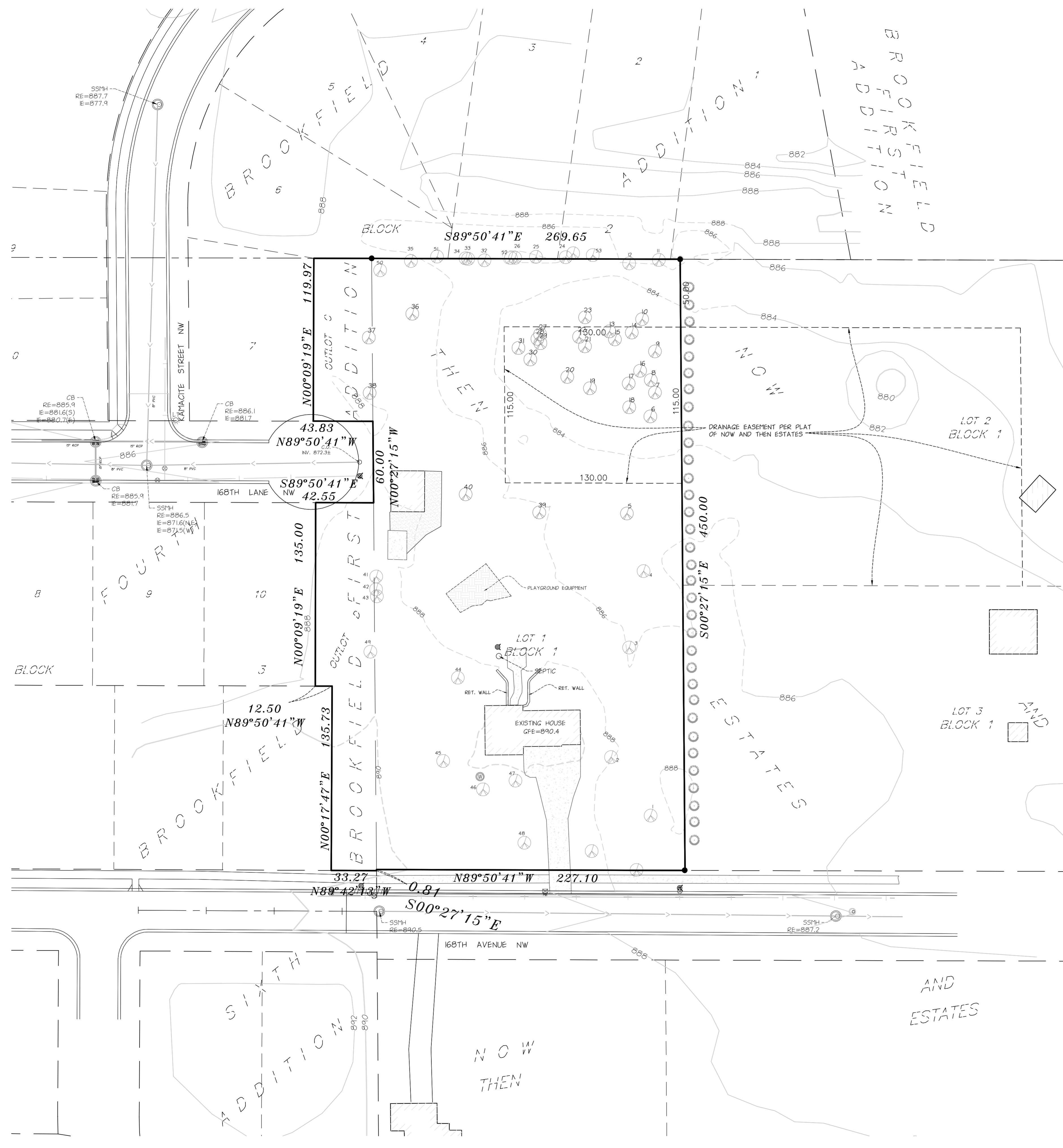
06/09/2017 02:39 PM

Started On: 06/02/2017 10:22 AM

Site Location Map

Cole Addition

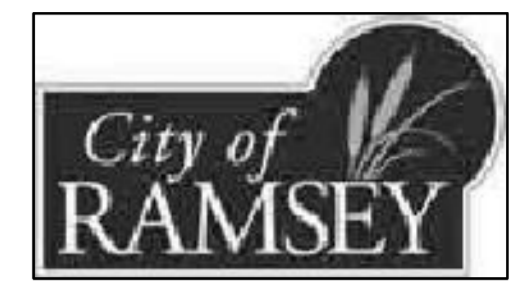




DEVELOPER

BRYON AND LYNN COLE
 6951 168TH AVE NW
 ANOKA, MN 55303
 TEL: (XXX)-XXX-XXXX

MUNICIPALITY



PROJECT

**COLE
 ADDITION
 RAMSEY, MN**

SHEET INDEX

SHEET	TITLE
C0.1	CIVIL TITLE SHEET
C1.1	EXISTING CONDITIONS
C1.2	DEMOLITION PLAN
C2.1	PRELIMINARY PLAT & SITE PLAN
C3.1	GRAVIC, DRAINAGE, AND EROSION CONTROL PLAN
C4.1	UTILITY PLAN
L1.1	TREE PRESERVATION PLAN

SURVEY NOTES

- IMPROVEMENTS SHOWN PER SURVEY PERFORMED BY LANDFORM PROFESSIONAL SERVICES, LLC ON MAY 15, 2017 EXPRESSLY FOR THIS PROJECT.
- THE BEARING BASIS OF THIS SURVEY IS THE ANOKA COUNTY COORDINATE SYSTEM.
- PROPERTY AREA - 117,608 SQ. FT. = 2.700 ACRES

PROPERTY DESCRIPTION

LOT 1, BLOCK 1, NOW AND THEN ESTATES, ANOKA COUNTY, MINNESOTA.
 AND
 OUTLOTS C AND D, BROOKFIELD FIRST ADDITION, ANOKA COUNTY, MINNESOTA.

ISSUE / REVISION HISTORY

DATE	ISSUE / REVISION	REVIEW
23 MAY 2017	SKETCH PLAN	XXX

PROJECT MANAGER REVIEW

BY: _____ DATE: 05-23-17

CERTIFICATION

I hereby certify that this survey, plan, or report was prepared by me or under my direct supervision and that I am a duly licensed Land Surveyor under the laws of the state of Minnesota.

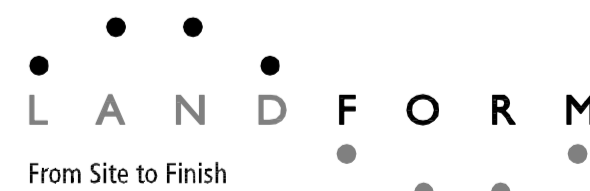
EBL
 Eric B. Lindgren
 License No: 46176 Date: 05.23.2017

Signature shown in a digital reproduction of original. Web signed copy of this plan on file at Landform Professional Services, LLC office and is available upon request.

VISIBLE. THIS SHEET HAS BEEN REPRODUCED BEYOND INTENDED READABILITY AND IS NO LONGER A VALID DOCUMENT. PLEASE CONTACT THE ENGINEER TO REQUEST ADDITIONAL DOCUMENTS.

SKETCH PLAN

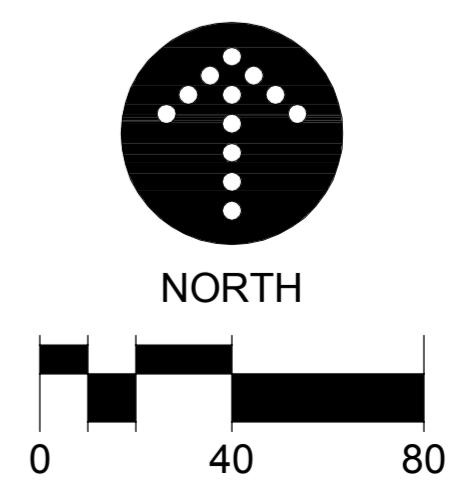
05-23-17

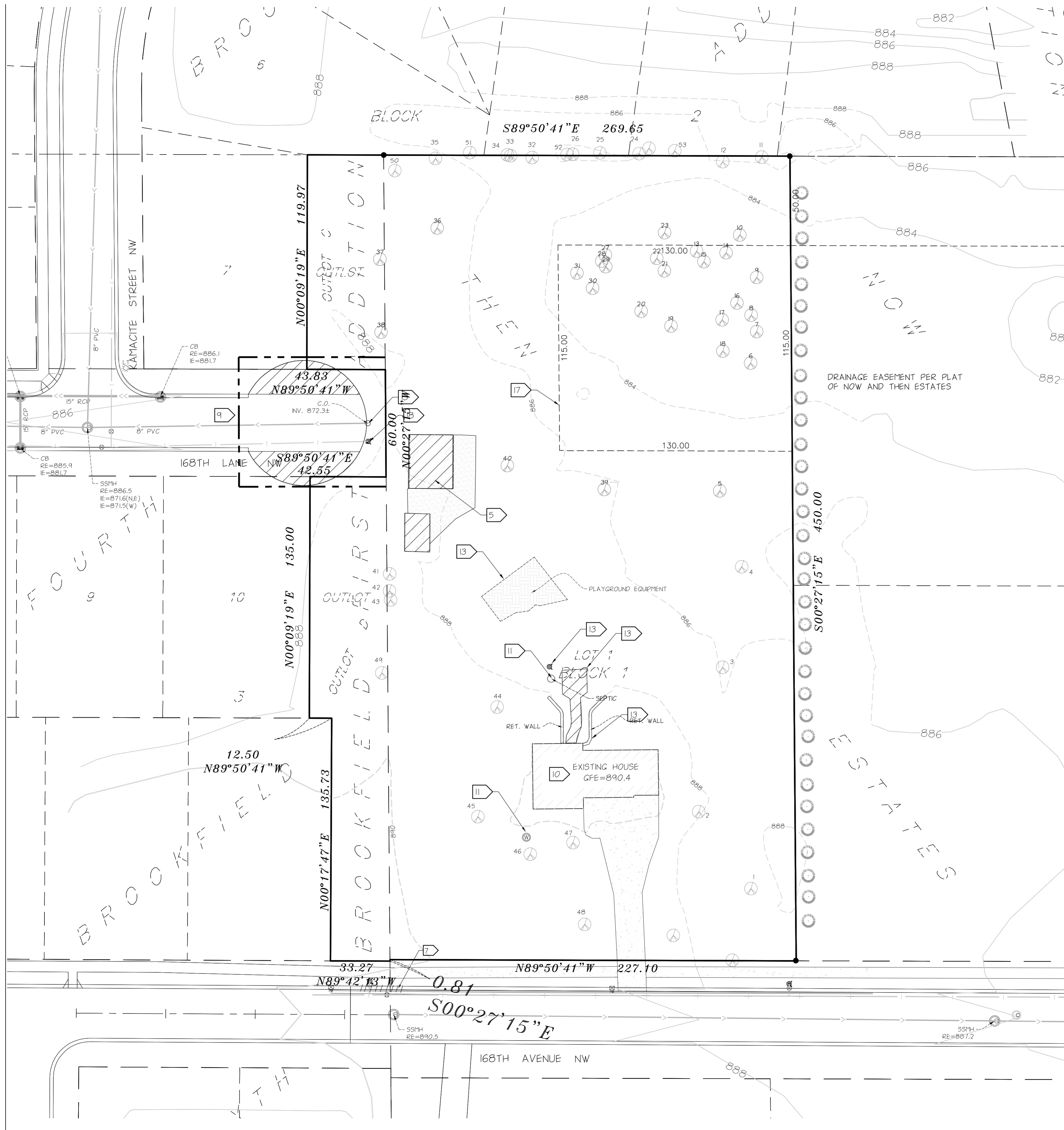


105 South Fifth Avenue Tel: 612-252-9070
 Suite 513 Fax: 612-252-9077
 Minneapolis, MN 55401 Web: landform.net

FILE NAME C101ZZZ001.DWG
 PROJECT NO. ZZZ15326

**CERTIFICATE
 OF SURVEY**
C1.1
 SHEET NO. 217





EXISTING NOTES

1. BACKGROUND INFORMATION SHOWN IS FROM SURVEY BY LANFORM PROFESSIONAL SERVICES EXPRESSLY FOR THIS PROJECT, CITY OF WADNAS HEIGHTS, MINNESOTA RECORD DRAWINGS, AND UTILITY SERVICE PROVIDERS. LANFORM OFFERS NO WARRANTY, EXPRESSED OR WRITTEN, FOR INFORMATION PROVIDED BY OTHERS. EXISTING PROJECT CONDITIONS SHALL BE VERIFIED PRIOR TO BEGINNING CONSTRUCTION. ERRORS, INCONSISTENCIES, OR OMISSIONS DISCOVERED SHALL BE REPORTED TO THE ARCHITECT/ENGINEER/OWNER IMMEDIATELY.

LEGEND

- TREE REMOVAL
- TREE FENCE
- STRUCTURE AND/OR PAVEMENT REMOVAL
- CONSTRUCTION LIMITS

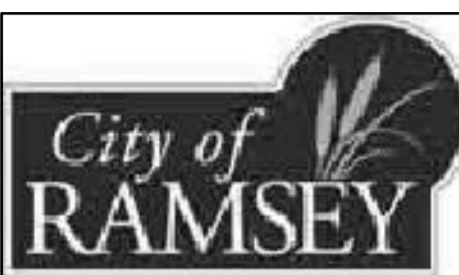
DEMOLITION AND CLEARING NOTES

2. OBTAIN PERMITS FOR DEMOLITION, CLEARING, AND DISPOSAL PRIOR TO BEGINNING.
3. CONTACT UTILITY SERVICE PROVIDERS FOR FIELD LOCATION OF SERVICES 72 HOURS PRIOR TO BEGINNING DEMOLITION AND CLEARING.
4. SEE SHEET C3.1 FOR EROSION PREVENTION AND SEDIMENT CONTROL MEASURES THAT MUST BE IN PLACE PRIOR TO DISTURBANCES TO SITE.
5. BUILDING DEMOLITION: VERIFY WITH OWNER THAT BUILDING HAS BEEN CLEARED OF REGULATED MATERIALS REQUIRING SPECIAL HANDLING OR DISPOSAL. REMOVE STRUCTURE, COLUMNS, CANOPIES, FOOTINGS, FOUNDATIONS, AND ANY ASSOCIATED CONSTRUCTION IN ITS ENTIRETY.
6. DIMENSIONS SHOWN FOR REMOVAL ARE APPROXIMATE. COORDINATE WITH NEW CONSTRUCTION TO ENSURE APPROPRIATE REMOVAL OF EXISTING FACILITIES.
7. REFER TO DETAILS FOR PAVEMENT SAWCUT. REMOVE CONCRETE WALKS AND CURBING TO THE NEAREST EXISTING JOINT BEYOND CONSTRUCTION LIMITS.
8. COMPLETE DEMOLITION WITH MINIMAL DISRUPTION OF TRAFFIC. COORDINATE LANE CLOSURES WITH THE REGULATORY AUTHORITY AND PROVIDE ADVANCE NOTIFICATION TO AFFECTED EMERGENCY RESPONSE PROVIDERS.
9. PROVIDE BARRICADES, LIGHTS, SIGNS, TRAFFIC CONTROL, AND OTHER MEASURES NECESSARY FOR PROTECTION AND SAFETY OF THE PUBLIC AND MAINTAIN THROUGHOUT CONSTRUCTION.
10. PROTECT STRUCTURES, UTILITIES, TREES, PLANT MATERIAL, SOD, AND ADJACENT PROPERTY FROM DAMAGE DURING CONSTRUCTION UNLESS NOTED FOR REMOVAL. DAMAGE SHALL BE REPAIRED TO EQUAL OR BETTER CONDITION AT NO ADDITIONAL COST.
11. ABANDON WELLS AND ON-SITE SEWAGE FACILITIES PRIOR TO ANY OTHER DEMOLITION IN ACCORDANCE WITH REQUIREMENTS OF REGULATORY AUTHORITIES.
12. SEE SHEETS L1.1 AND L1.2 FOR TREE PRESERVATION PLAN. REMOVE TREES NOTED, INCLUDING ROOT STRUCTURES, FROM THE SITE. COORDINATE WITH OWNER TO MARK TREES TO BE SAVED OR TRANSPLANTED PRIOR TO CLEARING.
13. REMOVE EXISTING SITE FEATURES INCLUDING, BUT NOT LIMITED TO, UNDERGROUND UTILITIES, PAVING, CURBING, WALKWAYS, FENCING, RETAINING WALLS, SCREEN WALLS, APRONS, LIGHTING, RELATED FOUNDATIONS, SIGNAGE, BOLLARDS, LANDSCAPING, AND STAIRWAYS WITHIN THE CONSTRUCTION LIMITS UNLESS NOTED OTHERWISE.
14. COORDINATE REMOVAL, RELOCATION, TERMINATION, AND RE-USE OF EXISTING PRIVATE UTILITY SERVICES AND APPURTENANCES WITH THE UTILITY COMPANIES. RESTORE ELECTRIC HANDHOLES, PULLBOXES, POWERPOLES, CUTLINES, AND STRUCTURES DISTURBED BY CONSTRUCTION IN ACCORDANCE WITH UTILITY OWNER REQUIREMENTS.
15. EXISTING PIPING AND CONDUITS MAY BE ABANDONED IN-PLACE IF FILLED WITH SAND AND IF NOT IN LOCATION OF PROPOSED BUILDING OR IN CONFLICT WITH PROPOSED UTILITIES OR STRUCTURES. TERMINATE EXISTING SERVICES AT THE SUPPLY SIDE IN CONFORMANCE WITH PROVIDER'S STANDARDS.
16. HALL DEMOLITION DEBRIS OFF-SITE TO A FACILITY APPROVED BY REGULATORY AUTHORITIES FOR THE HANDLING OF DEMOLITION DEBRIS, UNLESS NOTED OTHERWISE.
17. EASEMENT TO BE VACATED AT TIME OF FINAL PLAT
18. RE-USE EXISTING HYDRANT (SEE SHEET C4.1 FOR LOCATION)

DEVELOPER

BRYON AND LYNN COLE
 6951 168TH AVE NW
 ANOKA, MN 55303
 TEL (XXX)-XXX-XXXX

MUNICIPALITY



PROJECT

**COLE
 ADDITION
 RAMSEY, MN**

SHEET INDEX

SHEET	TITLE
C0.1	CIVIL TITLE SHEET
C1.1	EXISTING CONDITIONS
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C2.1	PRELIMINARY PLAT & SITE PLAN
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ISSUE / REVISION HISTORY

DATE	ISSUE / REVISION	REVIEW
23 MAY 2017	SKETCH PLAN	XXX

PROJECT MANAGER REVIEW

BY: _____ DATE: 05-23-17

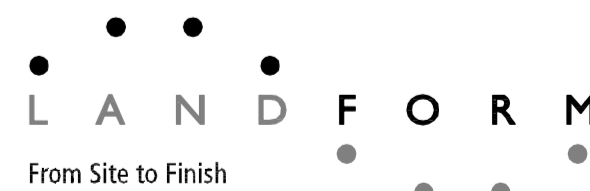
CERTIFICATION

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SKETCH PLAN

05-23-17



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 Suite 513 Fax: 612-252-9077
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FILE NAME: C101ZZZ001.DWG
 PROJECT NO.: ZZZ15326

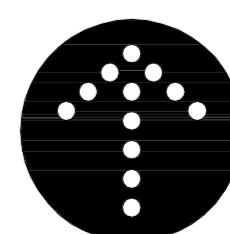
DEMOLITION

C1.2

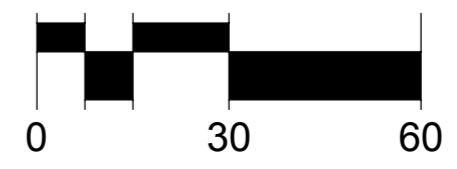
SHEET NO. 3/7

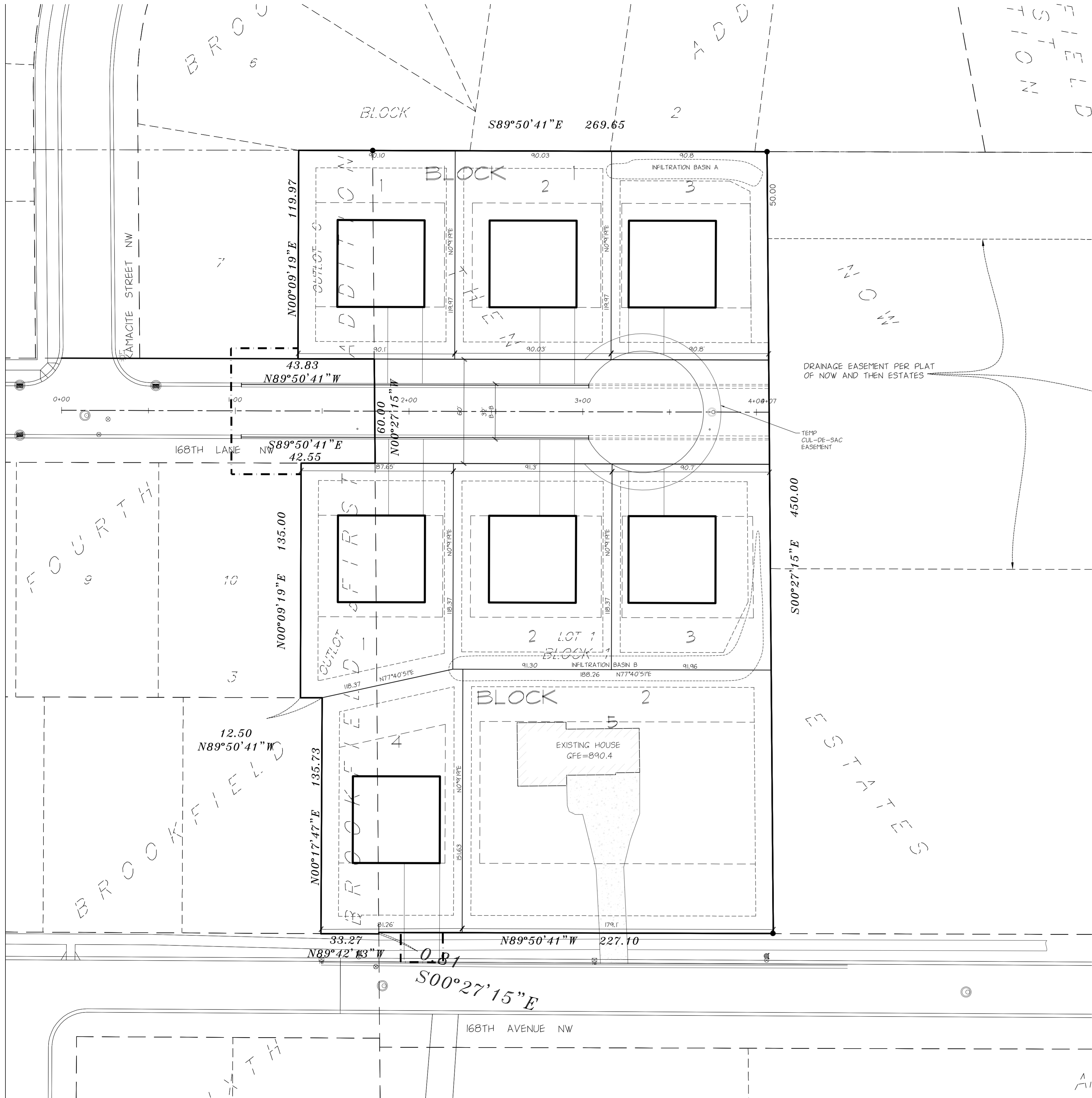


Know what's Below.
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NORTH





LEGAL DESCRIPTION

LOT 1, BLOCK 1, NOW AND THEN ESTATES, ANOKA COUNTY, MINNESOTA.
 AND
 OUTLOTS C AND D, BROOKFIELD FIRST ADDITION, ANOKA COUNTY, MINNESOTA.

ZONING AND SETBACKS

CURRENT AND PROPOSED ZONING	R-1 (MUSA)
MIN. LOT AREA:	10,800 SF
DENSITY REQUIREMENTS:	3 UNITS/ACRE
LOT WIDTH	80 FEET
SIDE YARD SETBACK (GARAGE):	6 FEET
SIDE YARD SETBACK (LIVING):	10 FEET
REAR YARD SETBACK:	30 FEET
FRONT YARD SETBACK:	30 FEET
MAX. BUILDING COVERAGE	35%

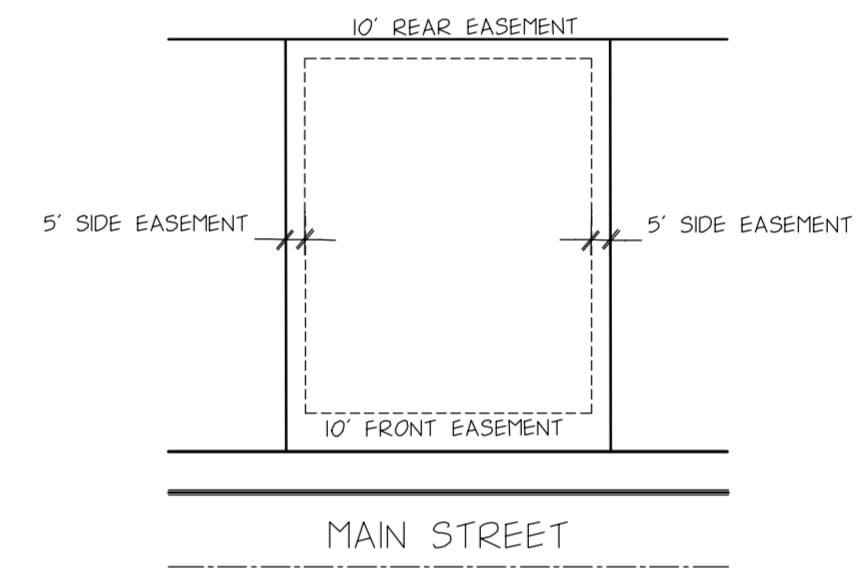
OVERALL SITE SUMMARY

TOTAL UNITS:	8 SINGLE FAMILY HOMES
TOTAL AREA:	2.7 AC. (117,612 S.F.)
NET DENSITY:	3 UNITS/AC.

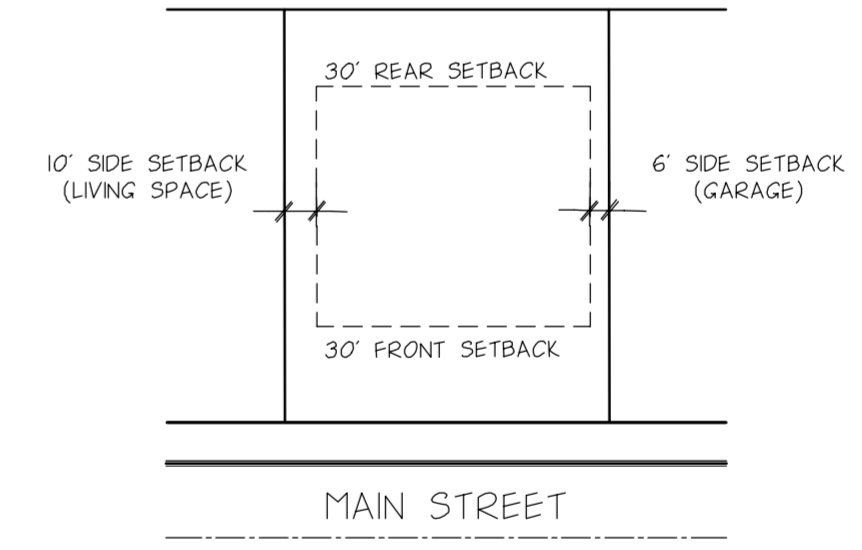
PROPOSED LOT AREAS

LOT 1, BLOCK 1,	- 10,809 SQ. FT.
LOT 2, BLOCK 1,	- 10,801 SQ. FT.
LOT 3, BLOCK 1,	- 10,816 SQ. FT.
LOT 1, BLOCK 2,	- 11,208 SQ. FT.
LOT 2, BLOCK 2,	- 10,807 SQ. FT.
LOT 3, BLOCK 2,	- 10,811 SQ. FT.
LOT 4, BLOCK 2,	- 11,694 SQ. FT.
LOT 5, BLOCK 2,	- 27,039 SQ. FT.

TYPICAL EASEMENTS



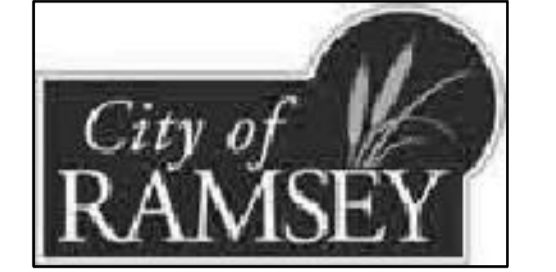
TYPICAL SETBACKS



DEVELOPER

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 TEL. (XXX)-XXX-XXXX

MUNICIPALITY



PROJECT

**COLE
 ADDITION
 RAMSEY, MN**

SHEET INDEX

SHEET	TITLE
C01	CIVIL TITLE SHEET
C11	EXISTING CONDITIONS
C12	DEMOLITION PLAN
C21	PRELIMINARY PLAT & SITE PLAN
C31	GRAVIC, DRAINAGE, AND EROSION CONTROL PLAN
C41	UTILITY PLAN
L11	TREE PRESERVATION PLAN

ISSUE / REVISION HISTORY

DATE	ISSUE / REVISION	REVIEW
23 MAY 2017	SKETCH PLAN	XXX

PROJECT MANAGER REVIEW

BY:	DATE 05-23-17
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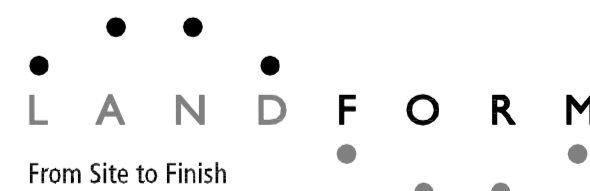
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SKETCH PLAN

05-23-17



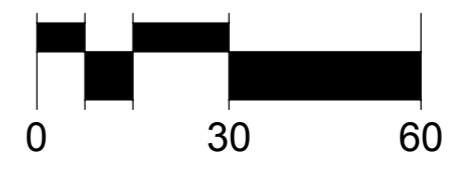
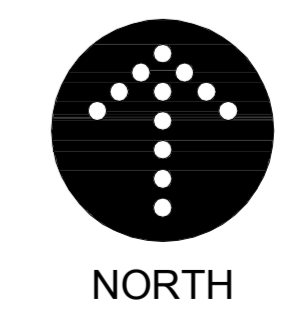
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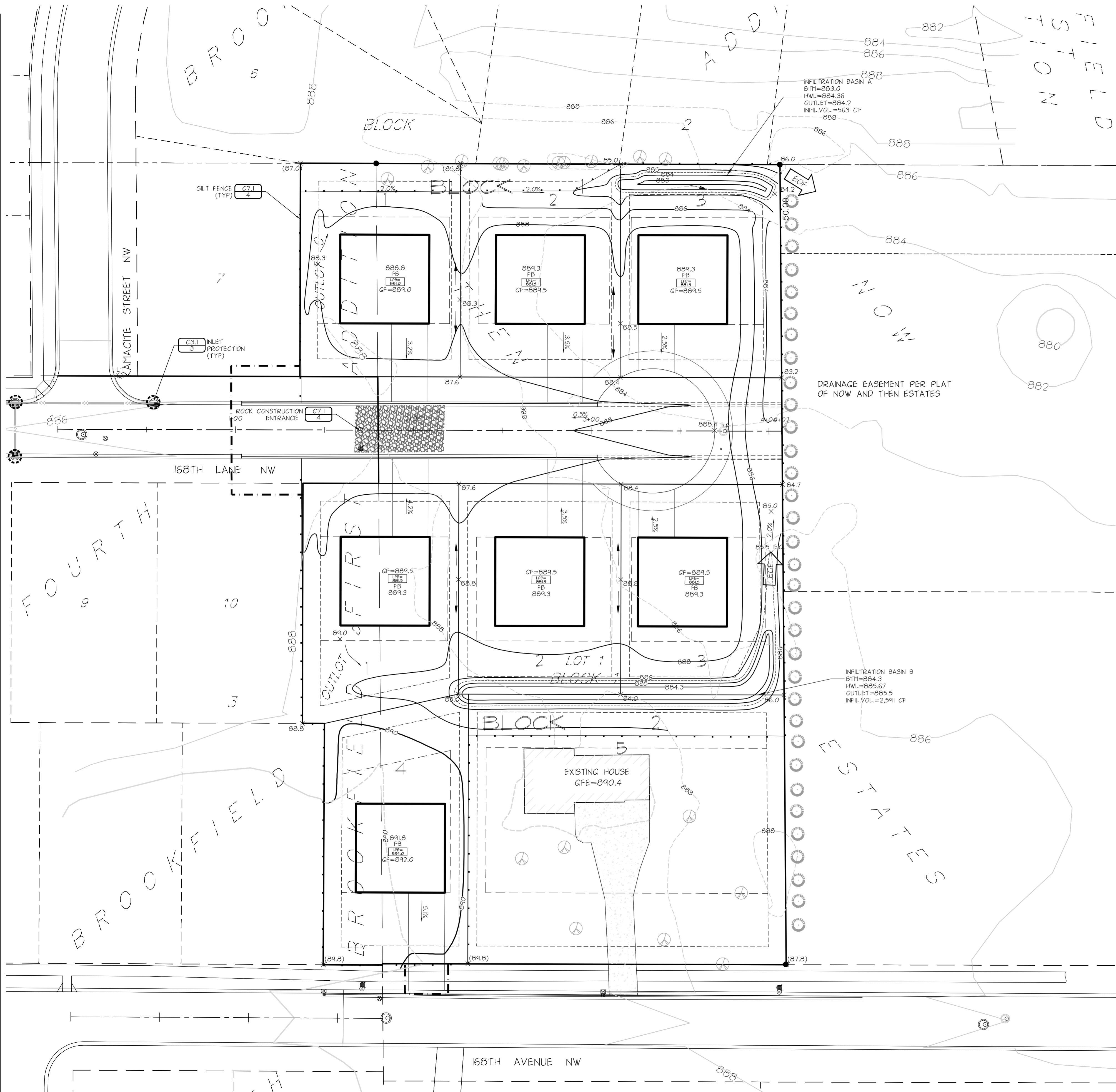
FILE NAME C201ZZZ001.DWG
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SITE PLAN
C2.1
 SHEET NO. 4/7



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GENERAL NOTES

FOR CONSTRUCTION STAKING AND SURVEYING SERVICES CONTACT LANDFORM PROFESSIONAL SERVICES AT 612.252.9070.

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

- INSTALL PERIMETER SEDIMENT CONTROLS PRIOR TO BEGINNING WORK AND MAINTAIN FOR DURATION OF CONSTRUCTION. REMOVE CONTROLS AFTER AREAS CONTRIBUTING RUNOFF ARE PERMANENTLY STABILIZED AND DISPOSE OF OFF SITE.
- LIMIT SOIL DISTURBANCE TO THE GRADING LIMITS SHOWN. SCHEDULE OPERATIONS TO MINIMIZE LENGTH OF EXPOSURE OF DISTURBED AREAS.
- MANAGEMENT PRACTICES SHOWN ARE THE MINIMUM REQUIREMENT. INSTALL AND MAINTAIN ADDITIONAL CONTROLS AS WORK PROCEEDS TO PREVENT EROSION AND CONTROL SEDIMENT CARRIED BY WIND OR WATER.
- EXCAVATE PONDS EARLY IN THE CONSTRUCTION SEQUENCE. REMOVE SEDIMENT FROM PONDS PERIODICALLY AND AFTER AREAS CONTRIBUTING RUNOFF ARE PERMANENTLY STABILIZED.
- ALL EXPOSED SOIL AREAS MUST BE STABILIZED WITHIN 72 HOURS OF COMPLETION OF WORK IN EACH AREA.
- SEED, SOD, MULCH AND FERTILIZER SHALL MEET THE FOLLOWING SPECIFICATIONS, AS MODIFIED.

ITEM	SPECIFICATION NUMBER
SOD	MNDOT 38761
SEED	MNDOT 3876
	MN TYPE 22-III @ 30.5 LB/AC - TEMPORARY EROSION CONTROL
	MN TYPE 25-151 @ 120 LB/AC - PERMANENT TURF
MULCH (MNDOT TYPE 1 @ 2 TON/AC, DISC ANCHORED)	MNDOT 3882
FERTILIZER	MNDOT 3881
GENERAL PLACEMENT	MNDOT 2575
- SEE LANDSCAPE SHEETS FOR PERMANENT TURF AND LANDSCAPE ESTABLISHMENT.
- SWEEP ADJACENT STREETS CLEAN DAILY AND SWEEP CLEAN WEEKLY. STREETS MUST BE SWEEPED WITHIN THREE HOURS OF NOTIFICATION FROM THE CITY THAT SWEEPING IS REQUIRED.

GRADING NOTES

- CONTACT UTILITY SERVICE PROVIDERS FOR FIELD LOCATION OF SERVICES 72 HOURS PRIOR TO BEGINNING GRADING.
- REMOVE TOPSOIL FROM GRADING AREAS AND STOCKPILE SUFFICIENT QUANTITY FOR REUSE. MATERIALS MAY BE MINED FROM LANDSCAPE AREAS FOR USE ON SITE AND REPLACED WITH EXCESS ORGANIC MATERIAL WITH PRIOR OWNER APPROVAL. ALL TOPSOIL PLACED MUST MEET CITY STANDARD PLATE ERO 6, DETAIL C7.1/4.
- REMOVE SURFACE AND GROUND WATER FROM EXCAVATIONS. PROVIDE INITIAL LIFTS OF STABLE FOUNDATION MATERIAL IF EXPOSED SOILS ARE WET AND UNSTABLE.
- AN INDEPENDENT TESTING FIRM SHALL VERIFY THE REMOVAL OF ORGANIC AND UNSUITABLE SOILS, SOIL CORRECTION, AND COMPACTION AND PROVIDE PERIODIC REPORTS TO THE OWNER.
- PLACE AND COMPACT FILL USING LIFT THICKNESSES MATCHED TO SOIL TYPE AND COMPACTION EQUIPMENT TO OBTAIN SPECIFIED COMPACTION THROUGHOUT THE LIFT.
- COMPACT COHESIVE SOILS IN PAVED AREAS TO 95% OF MAXIMUM DRY DENSITY, STANDARD PROCTOR (ASTM D698) EXCEPT THE TOP 3 FEET WHICH SHALL BE COMPACTED TO 100%. COMPACT TO 98% DENSITY WHERE FILL DEPTH EXCEEDS 10 FEET. THE SOILS SHALL BE WITHIN 3% OF OPTIMUM MOISTURE CONTENT. IN GRANULAR SOILS ALL PORTIONS OF THE EMBANKMENT SHALL BE COMPACTED TO NOT LESS THAN 95% OF MODIFIED PROCTOR DENSITY (ASTM D1557).

NPDES AREA SUMMARY

	EXISTING	PROPOSED
PERVIOUS	2.58 ACRES	1.91 ACRES
IMPERVIOUS	0.12 ACRES	0.79 ACRES
TOTAL	2.7 ACRES	2.7 ACRES

LEGEND

SYMBOL	DESCRIPTION	ESTIMATED QUANTITY
	INLET PROTECTION	
	SILT FENCE	
	VEHICLE TRACKING PAD	
	CONSTRUCTION LIMITS	
	GRADING LIMITS	

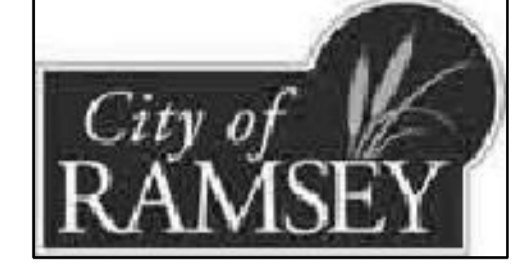
LOT ELEVATIONS TABLE

Lot	Block	House Type	Garage Elevation	Driveway Grade	Minimum Floor Elevation	Lowest Opening Elevation	Street Centerline Grade	100 year flood Elevation	Front Yard Slope	Back yard Slope
1	1	FB	889.00	3.20%	881.00	888.8	887.52	N/A	3.20%	3.60%
2	1	FB	889.50	3.50%	881.50	889.3	887.95	884.36	3.50%	15%
3	1	FB	889.50	2.50%	881.50	889.3	888.2	884.36	2.50%	18%
1	2	FB	889.50	4.20%	881.50	889.3	887.52	885.67	4.20%	4.50%
2	2	FB	889.50	3.50%	881.50	889.3	887.95	885.67	3.50%	11.70%
3	2	FB	889.50	2.50%	881.50	889.3	888.2	885.67	2.50%	11.70%
4	2	FB	892.00	5.10%	884.00	891.8	890.3	885.67	5.10%	6.80%
5	2	Split Level	890.40	2.20%	887.50	887.50	888.5	885.67	2.20%	14%

DEVELOPER

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ANOKA, MN 55303
TEL (XXX)-XXX-XXXX

MUNICIPALITY



PROJECT

COLE ADDITION
RAMSEY, MN

SHEET INDEX

SHEET	TITLE
C0.1	CIVIL TITLE SHEET
C1.1	EXISTING CONDITIONS
C1.2	DEMOLITION PLAN
C2.1	PRELIMINARY PLAT & SITE PLAN
C3.1	GRADING, DRAINAGE, AND EROSION CONTROL PLAN
C4.1	UTILITY PLAN
L1.1	TREE PRESERVATION PLAN

ISSUE / REVISION HISTORY

DATE	ISSUE / REVISION	REVIEW
23 MAY 2017	SKETCH PLAN	XXX

PROJECT MANAGER REVIEW

BY: _____ DATE 05-23-17

CERTIFICATION

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SKETCH PLAN

05-23-17

LANDFORM

From Site to Finish

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Suite 513 Fax: 612-252-9077
Minneapolis, MN 55401 Web: landform.net

FILE NAME C301ZZZ001.DWG

PROJECT NO. ZZZ15326

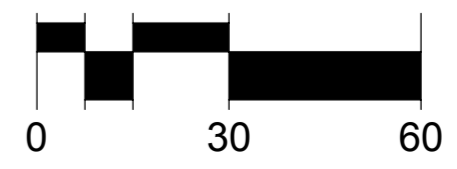
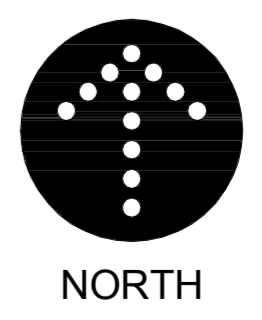
GRADING AND EROSION CONTROL

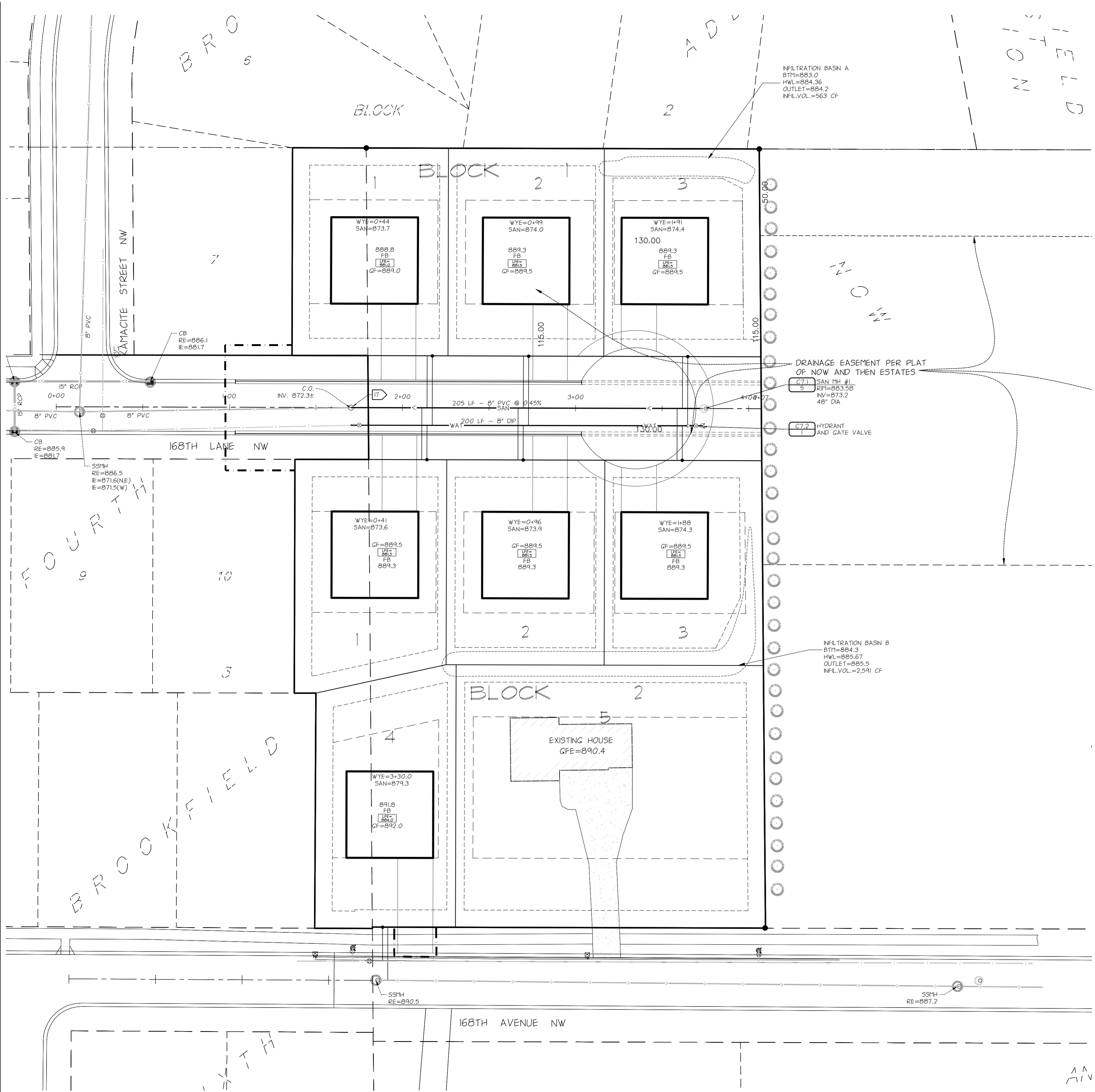
C3.1

SHEET NO. 5/7



Know what's Below.
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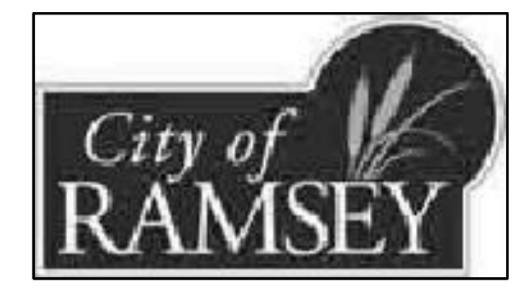
UTILITY NOTES

- PIPE MATERIALS
WATERMAN WATER SERVICE 8" DIP CLASS 52
1" COPPER TYPE K (ASTM B88)
SANITARY SEWER 8" PVC SDR 35
SAN. SEWER SERVICE 4" PVC SDR 35, SCHEDULE 40
- CONTACT UTILITY SERVICE PROVIDERS FOR FIELD LOCATION OF SERVICES 72 HOURS PRIOR TO BEGINNING.
- CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION OF ALL UTILITY POINTS OF CONNECTION PRIOR TO CONSTRUCTION OF ANY PROPOSED UTILITIES. CONTRACTOR TO NOTIFY ENGINEER IMMEDIATELY IF THERE IS ANY DISCREPANCY.
- CONTRACTOR TO POT-HOLE ALL UTILITY CROSSINGS PRIOR TO CONSTRUCTION OF NEW UTILITIES TO VERIFY DEPTHS OF EXISTING LINES. CONTACT ENGINEER IMMEDIATELY IF ANY CONFLICTS ARE DISCOVERED.
- PROVIDE MEANS AND MEASURES TO PROTECT ADJACENT PROPERTY FROM DAMAGE DURING UTILITY INSTALLATION.
- PIPE LENGTHS SHOWN ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE OR END OF END SECTION.
- INSTALL TRACER WIRE WITH ALL NON-CONDUCTIVE UTILITIES.
- CONNECT TO CITY UTILITIES IN ACCORDANCE WITH CITY OF RAMSEY STANDARDS.
- CONTACT CITY OF RAMSEY PUBLIC WORKS FOR WET TAP INSPECTION.
- MAINTAIN 7.5 FEET OF COVER ON WATER.
- DEFLECT WATER TO MAINTAIN 18-INCH MINIMUM OUTSIDE SEPARATION AT SEWER CROSSINGS. CENTER PIPE LENGTHS TO PROVIDE GREATEST SEPARATION BETWEEN JOINTS.
- CONTACT MIKE MADWALL, CITY OF RAMSEY PUBLIC WORKS DEPARTMENT, AT 763-433-9863 FOR FLUSHING AND PRESSURE TEST INSPECTIONS.
- THE WATER DISTRIBUTION SYSTEM SHALL BE DISINFECTED PER MINNESOTA RULES, PART 4715.2250.
- COMPACT COHESIVE SOILS IN PAVED AREAS TO 95% OF MAXIMUM DRY DENSITY, STANDARD PROCTOR (ASTM D698) EXCEPT THE TOP 3 FEET WHICH SHALL BE COMPACTED TO 100%. COMPACT TO 98% DENSITY WHERE FILL DEPTH EXCEEDS 10 FEET. THE SOILS SHALL BE WITHIN 3% OF OPTIMUM MOISTURE CONTENT. IN GRANULAR SOILS ALL PORTIONS OF THE EMBANKMENT SHALL BE COMPACTED TO NOT LESS THAN 95% OF MODIFIED PROCTOR DENSITY (ASTM D1557).
- ADJUST STRUCTURES TO FINAL GRADE WHERE DISTURBED. COMPLY WITH REQUIREMENTS OF UTILITY. MEET REQUIREMENTS FOR TRAFFIC LOADING IN PAVED AREAS.
- EXISTING SEWER MAIN, CONTRACTOR SHOULD FIELD VERIFY INVERTS

DEVELOPER

BRYON AND LYNN COLE
6951 168TH AVE NW
ANOKA, MN 55303
TEL (XXX)-XXXXXXX

MUNICIPALITY



PROJECT

COLE ADDITION
RAMSEY, MN

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PROJECT MANAGER REVIEW

BY RS DATE 05-23-17

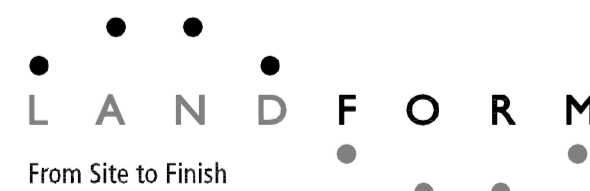
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05-23-17



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FILE NAME C401ZZZ001.DWG

PROJECT NO. ZZZ15326

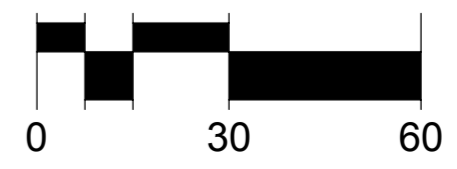
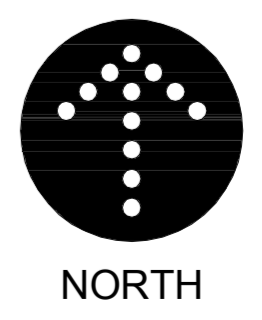
UTILITY PLAN

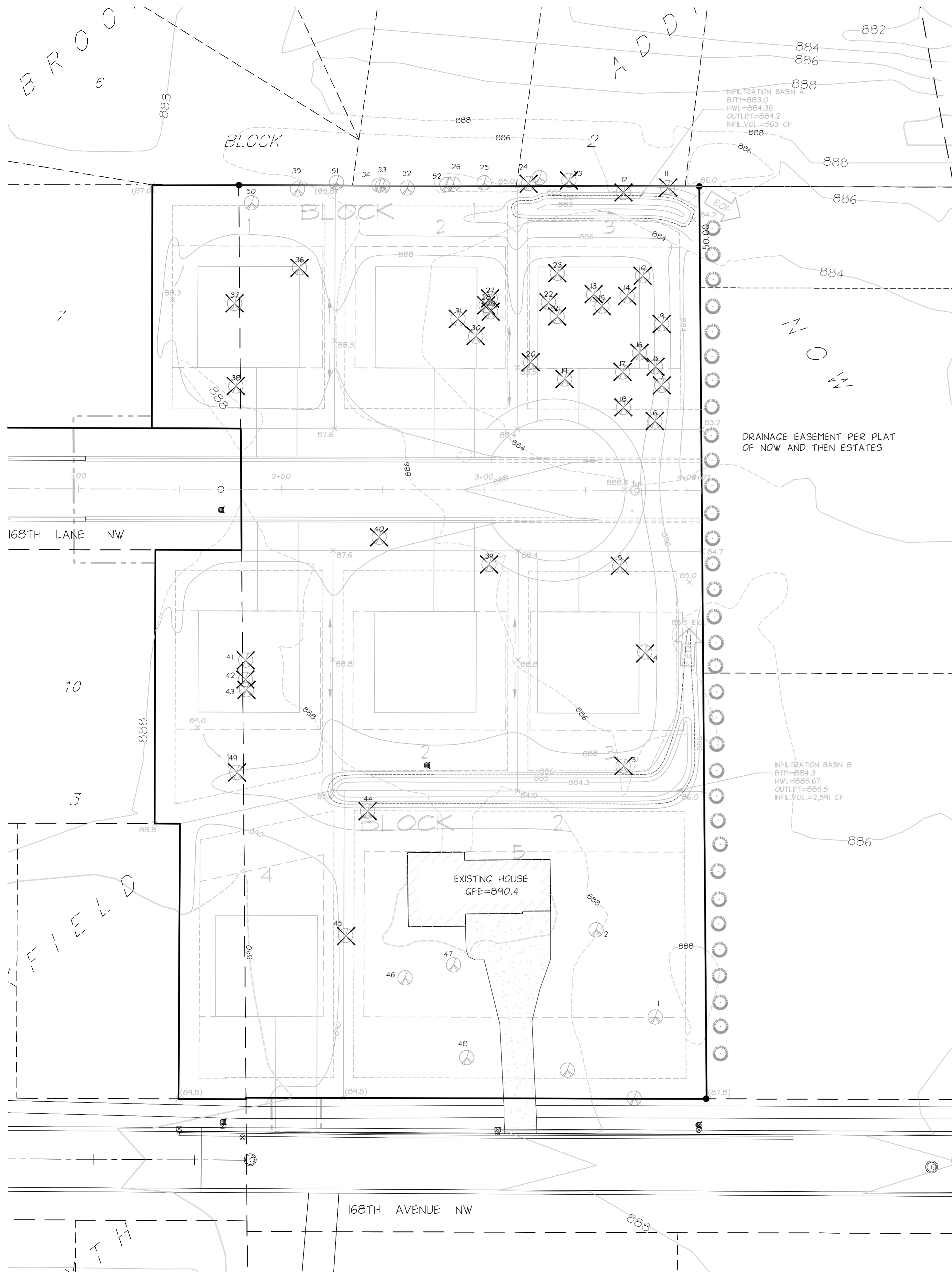
C4.1

SHEET NO. 6/7



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TABLE

Tree #	Species	DBH	Condition	Stems	Removed	Saved
1	Maple, silver	14.0	Good	1		X
2	Maple, silver	15.5	Good	1		X
3	Maple, silver	17.0	Fair	1	X	
4	Maple, silver	9.5	Good	1	X	
5	Elm, Siberian	10.0	Fair	1	X	
6	Boxelder	8.0	Fair	1	X	
7	Boxelder	16.0	Fair	3	X	
8	Boxelder	27.0	Fair	5	X	
9	Boxelder	21.0	Fair	3	X	
10	Boxelder	25.0	Fair	4	X	
11	Boxelder	46.0	Fair	4	X	
12	Boxelder	42.5	Fair	5	X	
13	Boxelder	13.0	Fair	2	X	
14	Boxelder	13.0	Fair	3	X	
15	Boxelder	10.5	Fair	2	X	
16	Boxelder	12.5	Fair	2	X	
17	Boxelder	12.0	Fair	2	X	
18	Boxelder	8.5	Fair	2	X	
19	Boxelder	9.0	Fair	2	X	
20	Boxelder	13.0	Fair	2	X	
21	Boxelder	11.5	Fair	2	X	
22	Boxelder	24.0	Fair	5	X	
23	Boxelder	14.0	Fair	2	X	
24	Boxelder	21.0	Fair	3	X	
25	Boxelder	29.0	Fair	3		X
26	Boxelder	24.0	Fair	1		X
27	Boxelder	8.5	Good	1	X	
28	Boxelder	16.5	Fair	3	X	
29	Boxelder	8.0	Good	1	X	
30	Boxelder	14.0	Fair	2	X	
31	Boxelder	8.5	Good	1	X	
32	Boxelder	40.0	Fair	1		X
33	Boxelder	10.5	Fair	1		X
34	Boxelder	11.0	Fair	1		X
35	Boxelder	38.0	Fair	1		X
36	Boxelder	8.0	Good	1	X	
37	Boxelder	8.5	Fair	1	X	
38	Boxelder	12.5	Fair	1	X	
39	Cottonwood	15.0	Good	1	X	
40	Elm, Siberian	15.0	Fair	3	X	
41	Boxelder	11.0	Good	1	X	
42	Boxelder	10.0	Good	1	X	
43	Boxelder	10.5	Fair	1	X	
44	Maple, silver	22.0	Good	1	X	
45	Maple, silver	24.0	Fair	1	X	
46	Ash, green	11.0	Good	1		X
47	Ash, green	13.0	Good	1		X
48	Ash, green	14.0	Fair	1		X
49	Ash, green	17.0	Good	1	X	
50	Boxelder	16.0	Fair	1		X
51	Boxelder	16.0	Fair	1		X
52	Boxelder	8.0	Fair	1		X
53	Boxelder	8.0	Fair	1	X	

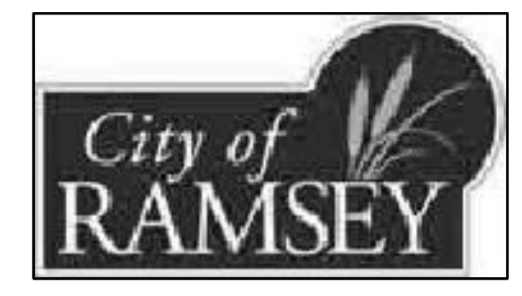
TREE SUMMARY

Total Sig. Tree Inches:	861.0
Total Sig. Tree Inches (Exempt):	157
Net Sig. Tree Inches:	704.5
60% allowable sig. tree removals (threshold):	422.7
Removal inches (Non-exempt):	444.5
Removal Inches above threshold:	21.8
Removal Percentage:	63.1%
Replacement Inches:	27.25

DEVELOPER

BRYON AND LYNN COLE
 6951 168TH AVE NW
 ANOKA, MN 55303
 TEL: (XXX)-XXX-XXXX

MUNICIPALITY



PROJECT

**COLE
 ADDITION
 RAMSEY, MN**

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FILE NAME L101ZZZ001.DWG
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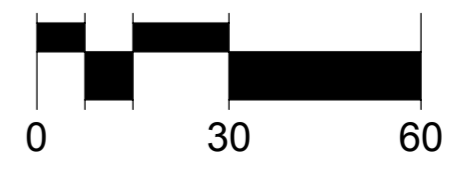
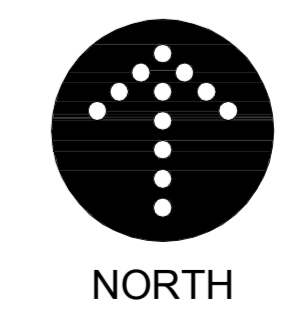
**TREE PRESERVATION
 PLAN AND TABLE**

L1.1

SHEET NO. 7/7
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Lynn and Bryon Cole
Ramsey, MN

APPLICATION FOR SKETCH PLAN
FOR THE COLE ADDITION

May 25, 2017

INTRODUCTION

On behalf of Bryon and Lynn Cole, Landform is pleased to submit this application for sketch plan review to subdivide three existing lots into eight lots, including one for the existing single family home. The property is northwest of the intersection of 168th Avenue Northwest and Garnet Street Northwest. (PID #s 10-32-25-32-0005, 10-32-25-32-0006 and 10-32-25-31-0002). All three parcels are owned by Bryon and Lynn Cole, who have a tentative agreement with a builder to purchase all lots and proceed with construction this summer. We are excited about the proposed improvements to the site, and request your immediate review.

SKETCH PLAN

Section 117-588 of the Subdivision Ordinance requires a sketch plan review at Planning Commission for major plats. The property is 2.7 acres and includes a single-family home and two accessory buildings. The two western parcels are existing Outlots created in the Brookfield First Addition Plat. All parcels are guided Low Density Residential in the 2030 Comprehensive Plan and zoned R-1 MUSA (Residential, Metropolitan Urban Service Area). The proposed improvements include the extension of 168th Lane Northwest to allow access to six of the seven the newly created lots. The plan includes removal of the existing temporary cul-de-sac and construction of a new temporary cul-de-sac until the lot to the east is developed. The seventh new lot will be served off of 168th Avenue Northwest alongside the existing home.

In 2007, the continuation of the Brookfield plat was contemplated on the Cole's property. An agreement between the developer at the time, and the Coles was made to configure the alignment of 168th Lane and supporting utilities, such that they would be conducive to the development now proposed. The storm sewer design to the west was also modified to include the runoff generated on Cole's property once developed. The outlots in their current configuration were specifically sized to optimize the proposed development shown. Subsequent to that agreement, the Coles purchased the outlots, and are now fee owners of that property in anticipation of this application. It is the applicants' belief that the concept proposed was well thought through and coordinated since 2007, and respectfully request a timely review of the sketch plan, preliminary, and final plat applications such that the Coles can proceed with their development, ten years in the making.

Lot Standards and Setbacks

The site plan for the proposed subdivision complies with the bulk standards of the R-1, MUSA Zoning District. The proposed site plan meets the 30-foot front and rear setbacks and the 10-foot side yard setback for living spaces and the 6-foot side yard setback for garages. The plan shows 10-foot front and rear easements and 5-foot side yard easements. All lots meet the minimum lot area of 10,800 square feet and the 80-foot lot width requirement in the R-1 MUSA Zoning District. Each newly created lot complies with the 35 percent maximum building coverage limitation.

Access

The proposed subdivision is bordered by 168th Avenue Northwest along the existing south property line and existing residential developments along all other property lines. The plan is proposing access to six of the new lots by the extension of 168th Lane Northwest. The existing home and Lot 4, Block 2 will be accessed from 168th Avenue Northwest.

Tree Preservation

Section 117-327 of the City Code requires a tree preservation plan prior to any development. Residential developments are required to maintain 40 percent of the inches of existing significant tree Diameter at Breast Height (DBH). The site includes 861 inches of existing inches of trees. The plans indicate 157 inches to be exempt from the removal threshold calculation as permitted by Section 117-327 (g) 2 of the City Code, which allows significant trees removed for water quality treatment ponds, public trails and sidewalks and arterial and collector streets, or that are considered invasive species to be exempt from the removal threshold calculation.

The plan indicates removal of 601 of the 861 inches of tree inches. Of the 601 inches removed, 157 inches are exempt. The final tree preservation plan shows removal of 63 percent inches of trees. The plan proposes reforestation, as permitted by Section 117-327 (g) (1) of the Zoning Ordinance to account for the 22 inches of trees exceeding the maximum removal requirements. The 22 excess inches removed required 28 inches of trees to be planted (replacement at a rate of 1.25 inch for each inch of tree removed). The landscaping plan includes 32 inches of new tree that will account for the 28 inches of tree required for restitution as permitted by Section 117-327 (j) (11) d. of the Zoning Ordinance.

Park Dedication and Trails

The applicant is requesting to provide a cash payment in lieu of land dedication as permitted by Section 117-614 (j) 6 of the Subdivision Ordinance. The 2030 Comprehensive Plan does not show any proposed trails planned for this site.

Landscaping

The site plan shows two overstory trees per dwelling unit as required by Section 117-111 of the City Code.

Parking and Loading Requirements

The plan includes driveways and garages to provide parking for future residents. The R-1 Zoning District does not state any standards for parking and loading requirements for single-family homes.

SUMMARY

We are looking forward to hearing your feedback on the proposed sketch plan for the property located at 6951 168th Avenue Northwest in Ramsey, Minnesota. We respectfully request our sketch plan be heard by the Planning Commission *prior to* the scheduled July 13th Planning Commission meeting.

The applicant expects to make full application for Preliminary and Final Plat on June 1, with the hope of being heard by Planning Commission and Council at their July Meetings. This schedule allows us to meet the schedule anticipated by the buyer and get underway this summer.

Thank you for your consideration and we look forward to any questions or comments you may have through your review.

CONTACT INFORMATION

This document was prepared by:

Reid Schulz, Project Lead

Landform

105 South Fifth Street, Suite 513

Minneapolis, MN 55401

Any additional questions regarding this application can be directed to Reid Schulz at rshulz@landform.net or 612.638.0261.

MEMORANDUM

DATE June 8, 2017
TO Bruce Westby, City Engineer
CC Tim Gladhill, Community Development Director, Bryon Cole,
FROM Reid Schulz
RE Cole Addition

Mr. Westby,

As part of the "Cole Addition" subdivision, we are requesting to vacate the drainage and utility easement on our subject property. It is our understanding that this easement is for the sole purpose to convey drainage to the neighboring property where a wetland/storage basin exists. As part of our proposed stormwater management plan, we are proposing to direct more water to the west through the public right of way, where City storm sewer infrastructure exists and reduce the rate and volume of water directed to the east on the adjacent property.

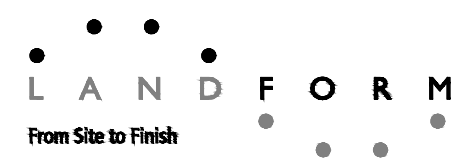
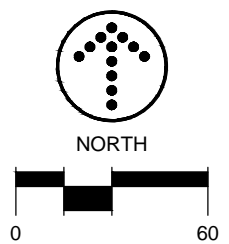
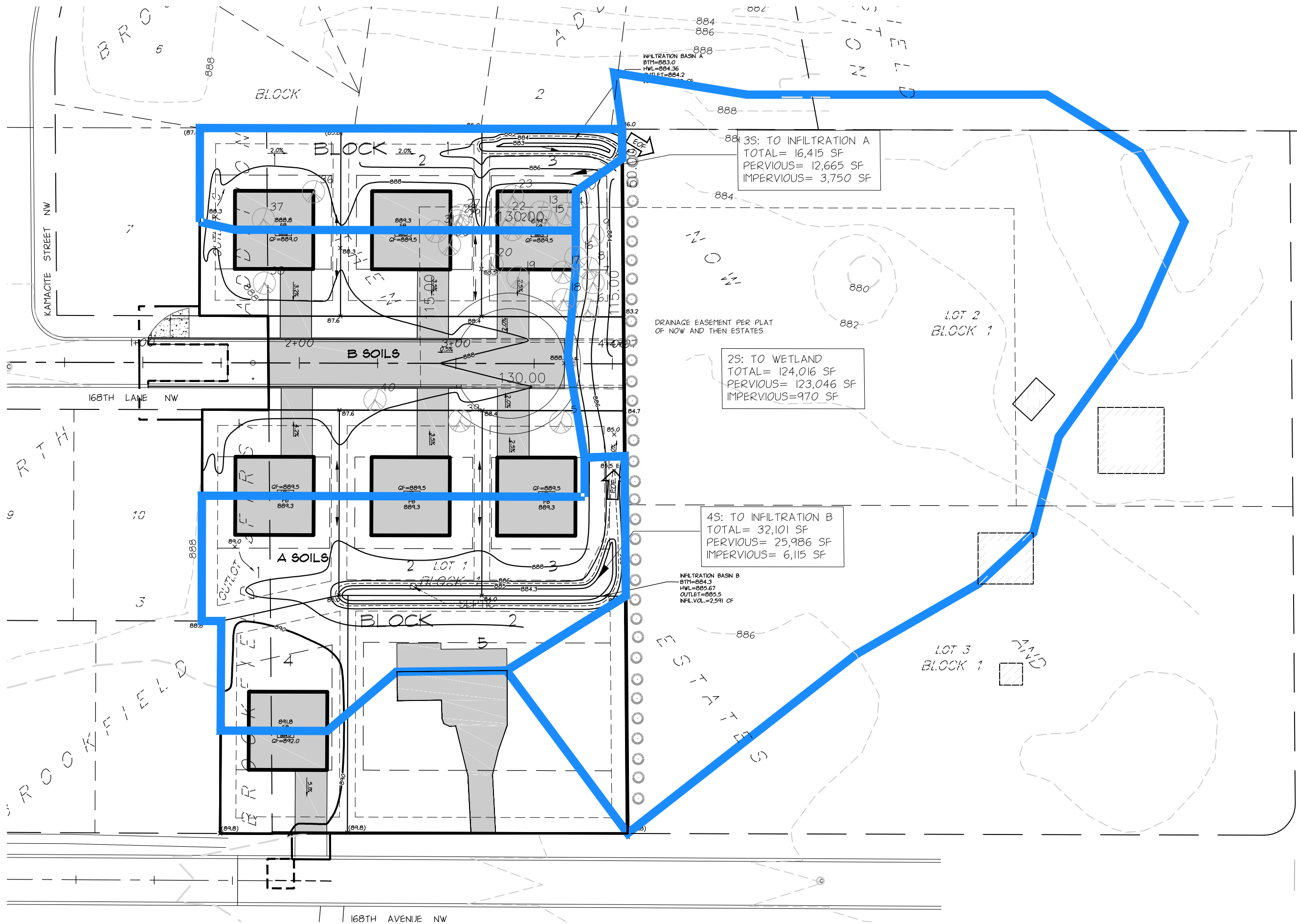
To ensure the high-water elevations of the wetland are not increased with our development, we modelled the existing conditions and the proposed conditions for the subwatershed area to this wetland. Enclosed please find the drainage maps and report. In summary, the HWL of the wetland in the proposed condition are less than the existing condition for the 2-yr, 10-yr and 100-yr events as modelled in hydrocad.

We appreciate the City reviewing this information and supporting the vacation of the existing easement. Please feel free to contact me with any questions or concerns.

Sincerely,

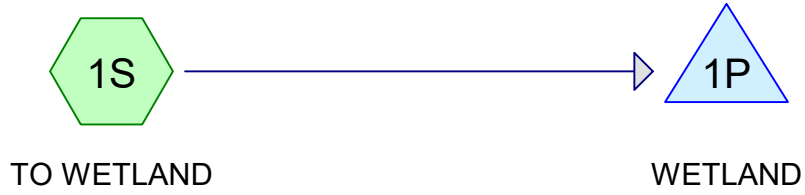


Reid Schulz
Project Lead

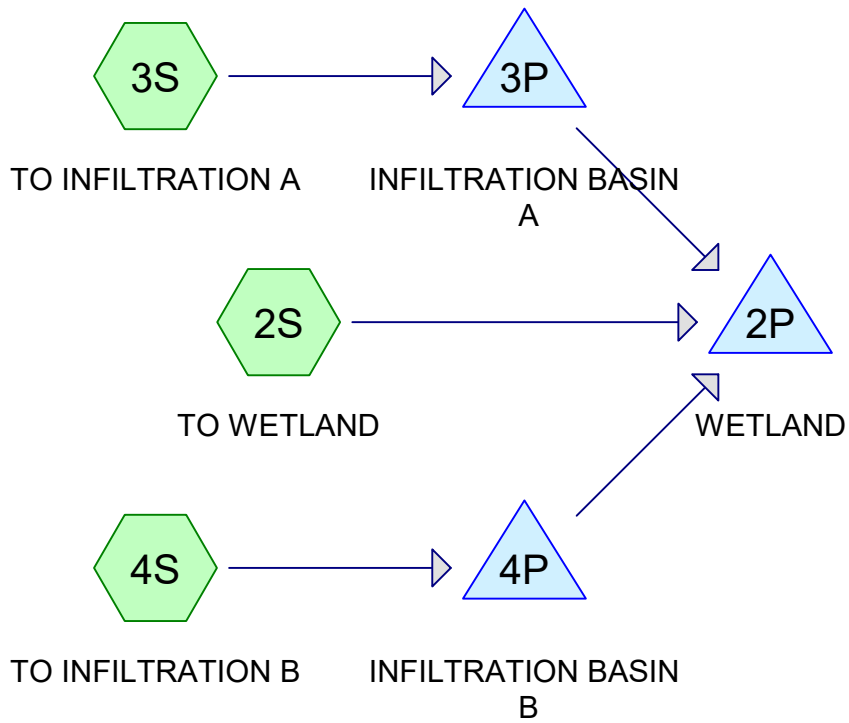


**PROPOSED DRAINAGE
MAP - WETLAND**

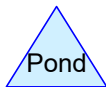
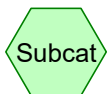
06-08-2017



EXISTING



PROPOSED



Routing Diagram for ZZZ15326 Existing Proposed Drainage - Wetland

Prepared by Microsoft, Printed 6/8/2017

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ZZZ15326 Existing Proposed Drainage - Wetland

Prepared by Microsoft

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Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.995	49	50-75% Grass cover, Fair, HSG A (1S)
6.759	69	50-75% Grass cover, Fair, HSG B (1S, 2S)
0.390	39	>75% Grass cover, Good, HSG A (3S, 4S)
0.497	61	>75% Grass cover, Good, HSG B (3S, 4S)
0.328	98	Paved parking, HSG B (1S, 2S, 3S, 4S)
8.970	66	TOTAL AREA

ZZZ15326 Existing Proposed Drainage - Wetland

Prepared by Microsoft

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Page 3

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
1.385	HSG A	1S, 3S, 4S
7.584	HSG B	1S, 2S, 3S, 4S
0.000	HSG C	
0.000	HSG D	
0.000	Other	
8.970		TOTAL AREA

ZZZ15326 Existing Proposed Drainage - Wetland

Prepared by Microsoft

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Page 4

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.995	6.759	0.000	0.000	0.000	7.754	50-75% Grass cover, Fair	1S, 2S
0.390	0.497	0.000	0.000	0.000	0.887	>75% Grass cover, Good	3S, 4S
0.000	0.328	0.000	0.000	0.000	0.328	Paved parking	1S, 2S, 3S, 4S
1.385	7.584	0.000	0.000	0.000	8.970	TOTAL AREA	

ZZZ15326 Existing Proposed Drainage - Wetland

Type II 24-hr 2-yr Rainfall=2.86"

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Page 5

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: TO WETLAND Runoff Area=218,186 sf 1.58% Impervious Runoff Depth=0.48"
Tc=10.0 min CN=65/98 Runoff=2.92 cfs 0.200 af

Subcatchment 2S: TO WETLAND Runoff Area=124,016 sf 0.78% Impervious Runoff Depth=0.61"
Tc=10.0 min CN=69/98 Runoff=2.39 cfs 0.145 af

Subcatchment 3S: TO INFILTRATION A Runoff Area=16,415 sf 22.84% Impervious Runoff Depth=0.68"
Flow Length=120' Slope=0.0230 '/' Tc=11.4 min CN=52/98 Runoff=0.29 cfs 0.021 af

Subcatchment 4S: TO INFILTRATION B Runoff Area=32,101 sf 19.05% Impervious Runoff Depth=0.57"
Flow Length=100' Slope=0.0400 '/' Tc=7.9 min CN=51/98 Runoff=0.53 cfs 0.035 af

Pond 1P: WETLAND Peak Elev=882.36' Storage=4,412 cf Inflow=2.92 cfs 0.200 af
Discarded=0.13 cfs 0.200 af Primary=0.00 cfs 0.000 af Outflow=0.13 cfs 0.200 af

Pond 2P: WETLAND Peak Elev=882.22' Storage=3,557 cf Inflow=2.39 cfs 0.148 af
Discarded=0.09 cfs 0.148 af Primary=0.00 cfs 0.000 af Outflow=0.09 cfs 0.148 af

Pond 3P: INFILTRATION BASIN A Peak Elev=884.21' Storage=567 cf Inflow=0.29 cfs 0.021 af
Discarded=0.00 cfs 0.016 af Primary=0.02 cfs 0.003 af Outflow=0.02 cfs 0.019 af

Pond 4P: INFILTRATION BASIN B Peak Elev=884.99' Storage=1,255 cf Inflow=0.53 cfs 0.035 af
Discarded=0.01 cfs 0.023 af Primary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.023 af

Total Runoff Area = 8.970 ac Runoff Volume = 0.401 af Average Runoff Depth = 0.54"
96.34% Pervious = 8.642 ac 3.66% Impervious = 0.328 ac

ZZZ15326 Existing Proposed Drainage - Wetland

Type II 24-hr 2-yr Rainfall=2.86"

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Summary for Subcatchment 1S: TO WETLAND

Runoff = 2.92 cfs @ 12.04 hrs, Volume= 0.200 af, Depth= 0.48"

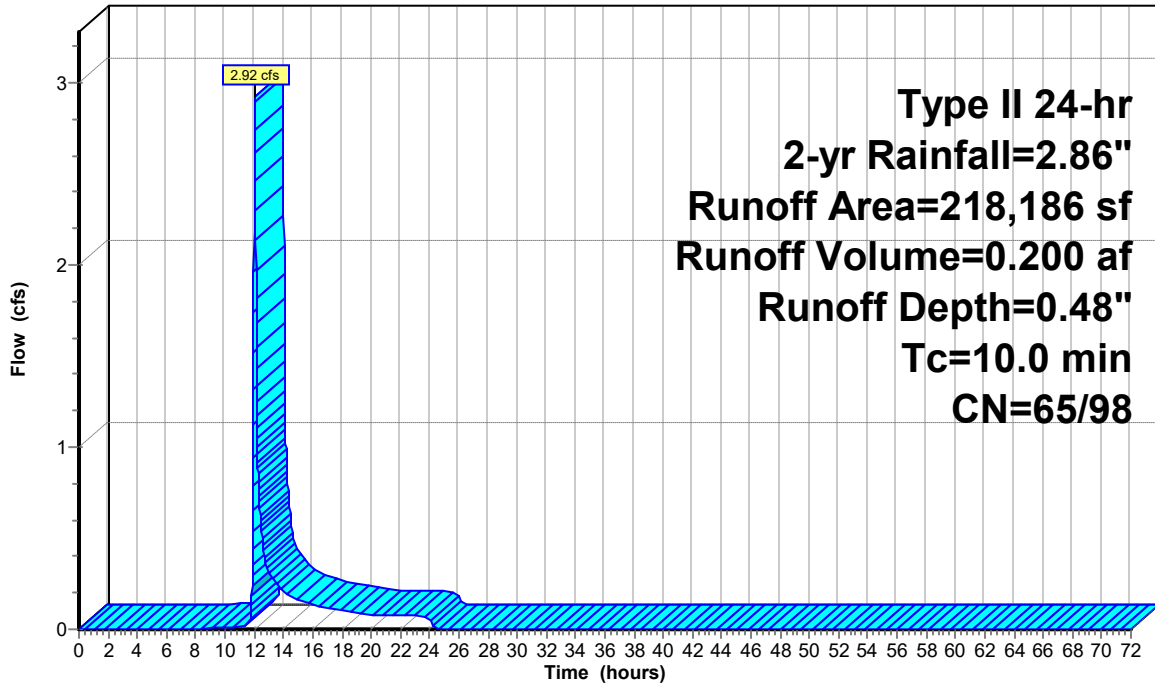
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type II 24-hr 2-yr Rainfall=2.86"

Area (sf)	CN	Description
3,453	98	Paved parking, HSG B
43,348	49	50-75% Grass cover, Fair, HSG A
171,385	69	50-75% Grass cover, Fair, HSG B
218,186	65	Weighted Average
214,733	65	98.42% Pervious Area
3,453	98	1.58% Impervious Area

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

Subcatchment 1S: TO WETLAND

Hydrograph



**Type II 24-hr
 2-yr Rainfall=2.86"
 Runoff Area=218,186 sf
 Runoff Volume=0.200 af
 Runoff Depth=0.48"
 Tc=10.0 min
 CN=65/98**

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Type II 24-hr 2-yr Rainfall=2.86"

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Summary for Subcatchment 2S: TO WETLAND

Runoff = 2.39 cfs @ 12.03 hrs, Volume= 0.145 af, Depth= 0.61"

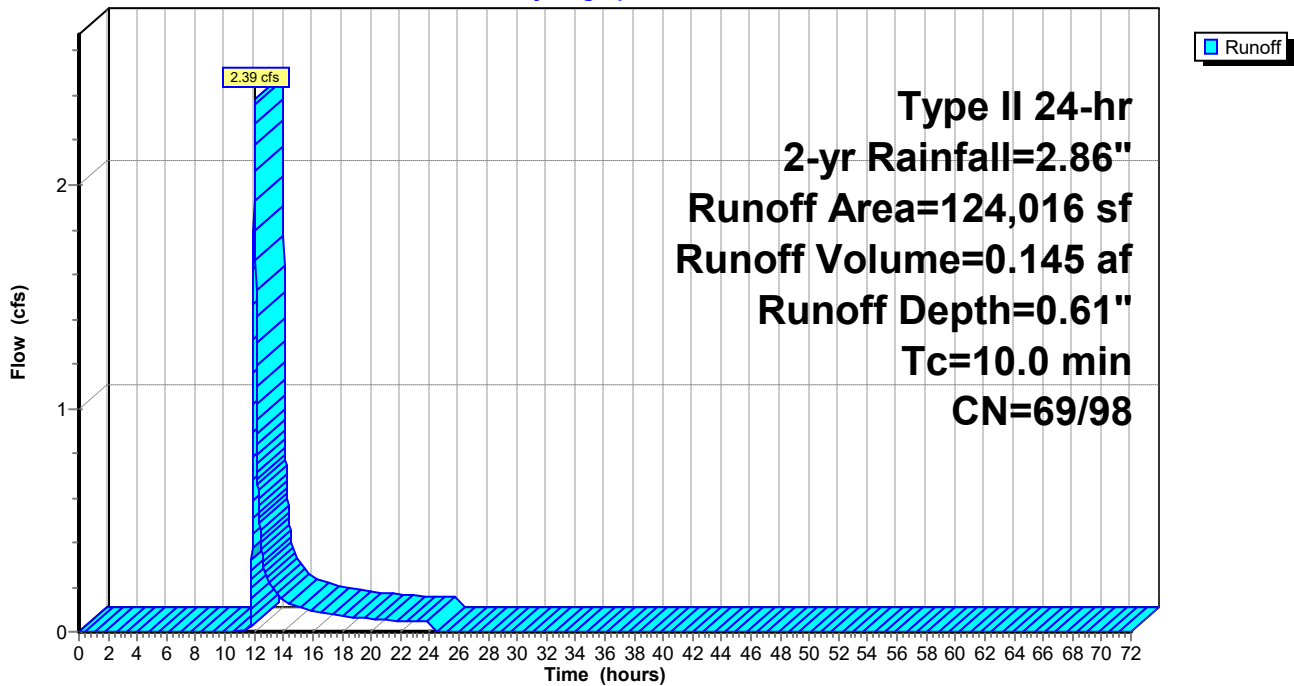
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-yr Rainfall=2.86"

Area (sf)	CN	Description
970	98	Paved parking, HSG B
123,046	69	50-75% Grass cover, Fair, HSG B
124,016	69	Weighted Average
123,046	69	99.22% Pervious Area
970	98	0.78% Impervious Area

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

Subcatchment 2S: TO WETLAND

Hydrograph



Summary for Subcatchment 3S: TO INFILTRATION A

Runoff = 0.29 cfs @ 12.02 hrs, Volume= 0.021 af, Depth= 0.68"

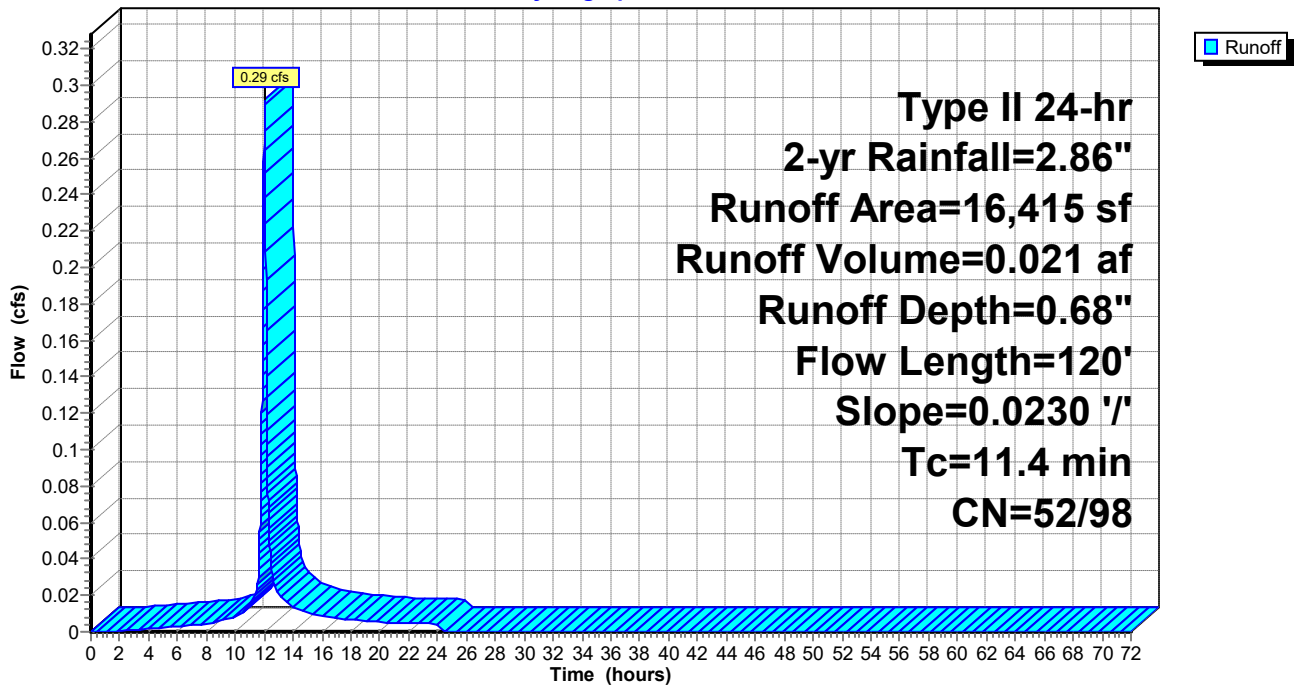
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-yr Rainfall=2.86"

Area (sf)	CN	Description
3,750	98	Paved parking, HSG B
7,665	61	>75% Grass cover, Good, HSG B
5,000	39	>75% Grass cover, Good, HSG A
16,415	63	Weighted Average
12,665	52	77.16% Pervious Area
3,750	98	22.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4	120	0.0230	0.18		Sheet Flow, Grass: Short n= 0.150 P2= 2.85"

Subcatchment 3S: TO INFILTRATION A

Hydrograph



ZZZ15326 Existing Proposed Drainage - Wetland

Type II 24-hr 2-yr Rainfall=2.86"

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Summary for Subcatchment 4S: TO INFILTRATION B

Runoff = 0.53 cfs @ 11.99 hrs, Volume= 0.035 af, Depth= 0.57"

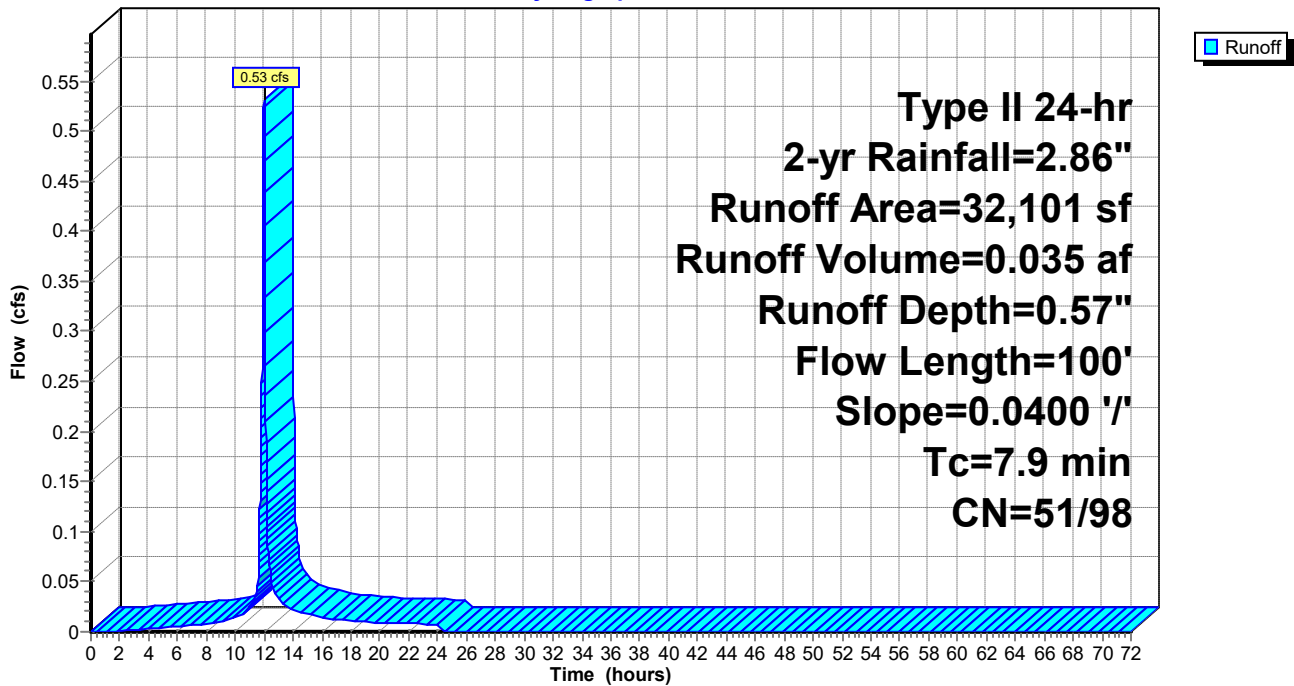
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-yr Rainfall=2.86"

Area (sf)	CN	Description
6,115	98	Paved parking, HSG B
12,000	39	>75% Grass cover, Good, HSG A
13,986	61	>75% Grass cover, Good, HSG B
32,101	60	Weighted Average
25,986	51	80.95% Pervious Area
6,115	98	19.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.9	100	0.0400	0.21		Sheet Flow, Grass: Short n= 0.150 P2= 2.85"

Subcatchment 4S: TO INFILTRATION B

Hydrograph



ZZZ15326 Existing Proposed Drainage - Wetland

Type II 24-hr 2-yr Rainfall=2.86"

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Summary for Pond 1P: WETLAND

Inflow Area = 5.009 ac, 1.58% Impervious, Inflow Depth = 0.48" for 2-yr event
 Inflow = 2.92 cfs @ 12.04 hrs, Volume= 0.200 af
 Outflow = 0.13 cfs @ 16.46 hrs, Volume= 0.200 af, Atten= 96%, Lag= 265.1 min
 Discarded = 0.13 cfs @ 16.46 hrs, Volume= 0.200 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 882.36' @ 16.46 hrs Surf.Area= 6,779 sf Storage= 4,412 cf

Plug-Flow detention time= 633.8 min calculated for 0.200 af (100% of inflow)
 Center-of-Mass det. time= 634.0 min (1,530.2 - 896.2)

Volume	Invert	Avail.Storage	Storage Description
#1	880.00'	40,401 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
880.00	372	0	0
882.00	2,380	2,752	2,752
883.00	14,516	8,448	11,200
884.00	43,886	29,201	40,401

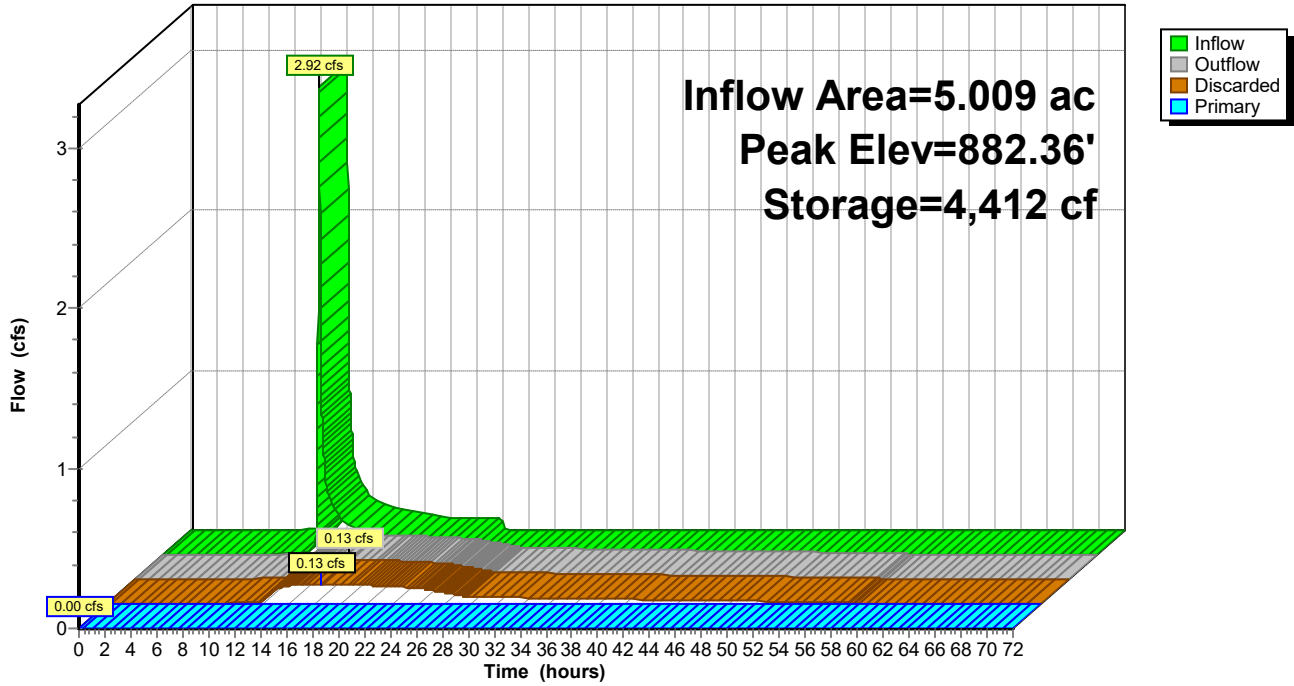
Device	Routing	Invert	Outlet Devices
#1	Discarded	880.00'	0.800 in/hr Exfiltration over Surface area
#2	Primary	883.50'	Custom Weir/Orifice, Cv= 2.62 (C= 3.28)
			Head (feet) 0.00 0.50
			Width (feet) 0.00 20.00

Discarded OutFlow Max=0.13 cfs @ 16.46 hrs HW=882.36' (Free Discharge)
 ↑1=**Exfiltration** (Exfiltration Controls 0.13 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=880.00' (Free Discharge)
 ↑2=**Custom Weir/Orifice** (Controls 0.00 cfs)

Pond 1P: WETLAND

Hydrograph



ZZZ15326 Existing Proposed Drainage - Wetland

Type II 24-hr 2-yr Rainfall=2.86"

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Summary for Pond 2P: WETLAND

Inflow Area = 3.961 ac, 6.28% Impervious, Inflow Depth = 0.45" for 2-yr event
Inflow = 2.39 cfs @ 12.03 hrs, Volume= 0.148 af
Outflow = 0.09 cfs @ 16.26 hrs, Volume= 0.148 af, Atten= 96%, Lag= 253.5 min
Discarded = 0.09 cfs @ 16.26 hrs, Volume= 0.148 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 882.22' @ 16.26 hrs Surf.Area= 4,896 sf Storage= 3,557 cf

Plug-Flow detention time= 696.7 min calculated for 0.148 af (100% of inflow)
Center-of-Mass det. time= 696.9 min (1,582.8 - 885.9)

Volume	Invert	Avail.Storage	Storage Description
#1	880.00'	32,485 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
880.00	372	0	0
882.00	2,380	2,752	2,752
883.00	13,756	8,068	10,820
884.00	29,573	21,665	32,485

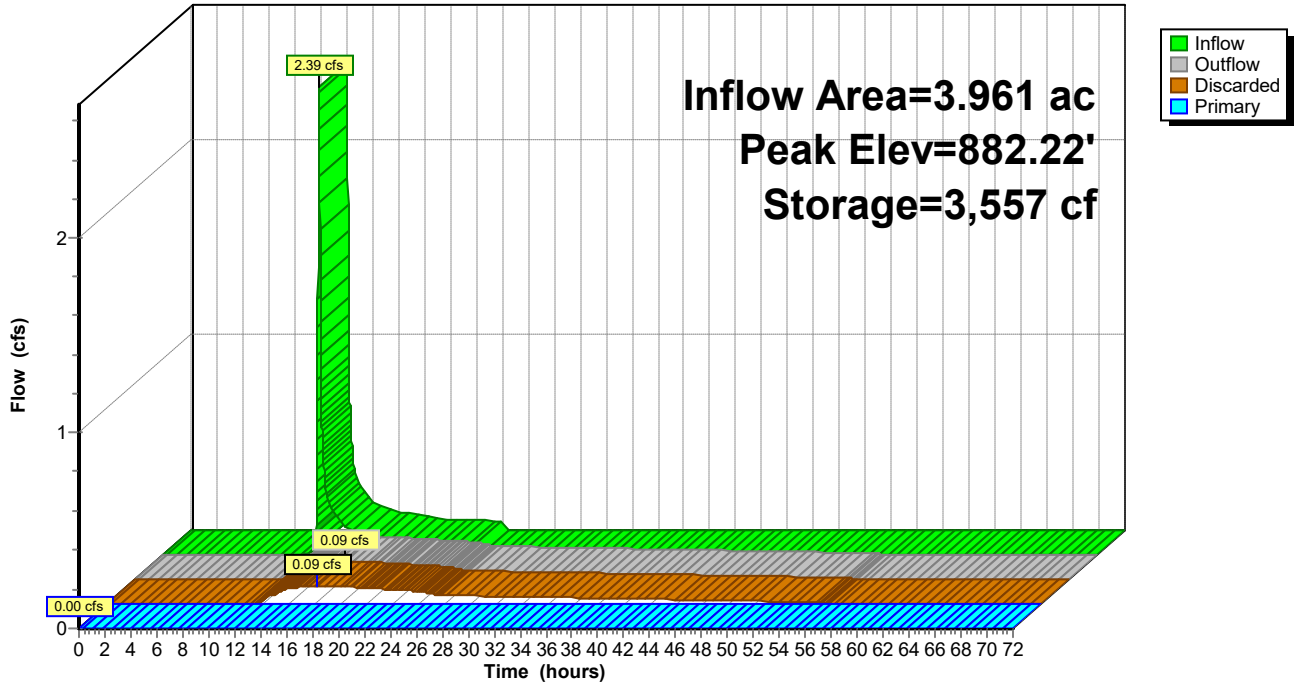
Device	Routing	Invert	Outlet Devices
#1	Discarded	880.00'	0.800 in/hr Exfiltration over Surface area
#2	Primary	883.50'	Custom Weir/Orifice, Cv= 2.62 (C= 3.28) Head (feet) 0.00 0.50 Width (feet) 0.00 20.00

Discarded OutFlow Max=0.09 cfs @ 16.26 hrs HW=882.22' (Free Discharge)
↑1=Exfiltration (Exfiltration Controls 0.09 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=880.00' (Free Discharge)
↑2=Custom Weir/Orifice (Controls 0.00 cfs)

Pond 2P: WETLAND

Hydrograph



ZZZ15326 Existing Proposed Drainage - Wetland

Type II 24-hr 2-yr Rainfall=2.86"

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Summary for Pond 3P: INFILTRATION BASIN A

Inflow Area = 0.377 ac, 22.84% Impervious, Inflow Depth = 0.68" for 2-yr event
 Inflow = 0.29 cfs @ 12.02 hrs, Volume= 0.021 af
 Outflow = 0.02 cfs @ 12.96 hrs, Volume= 0.019 af, Atten= 93%, Lag= 56.4 min
 Discarded = 0.00 cfs @ 12.76 hrs, Volume= 0.016 af
 Primary = 0.02 cfs @ 12.96 hrs, Volume= 0.003 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 3
 Peak Elev= 884.21' @ 12.96 hrs Surf.Area= 803 sf Storage= 567 cf

Plug-Flow detention time= 1,162.8 min calculated for 0.019 af (90% of inflow)
 Center-of-Mass det. time= 1,109.0 min (1,900.2 - 791.2)

Volume	Invert	Avail.Storage	Storage Description
#1	883.00'	3,253 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
883.00	155	0	0
884.00	675	415	415
885.00	1,300	988	1,403
886.00	2,400	1,850	3,253

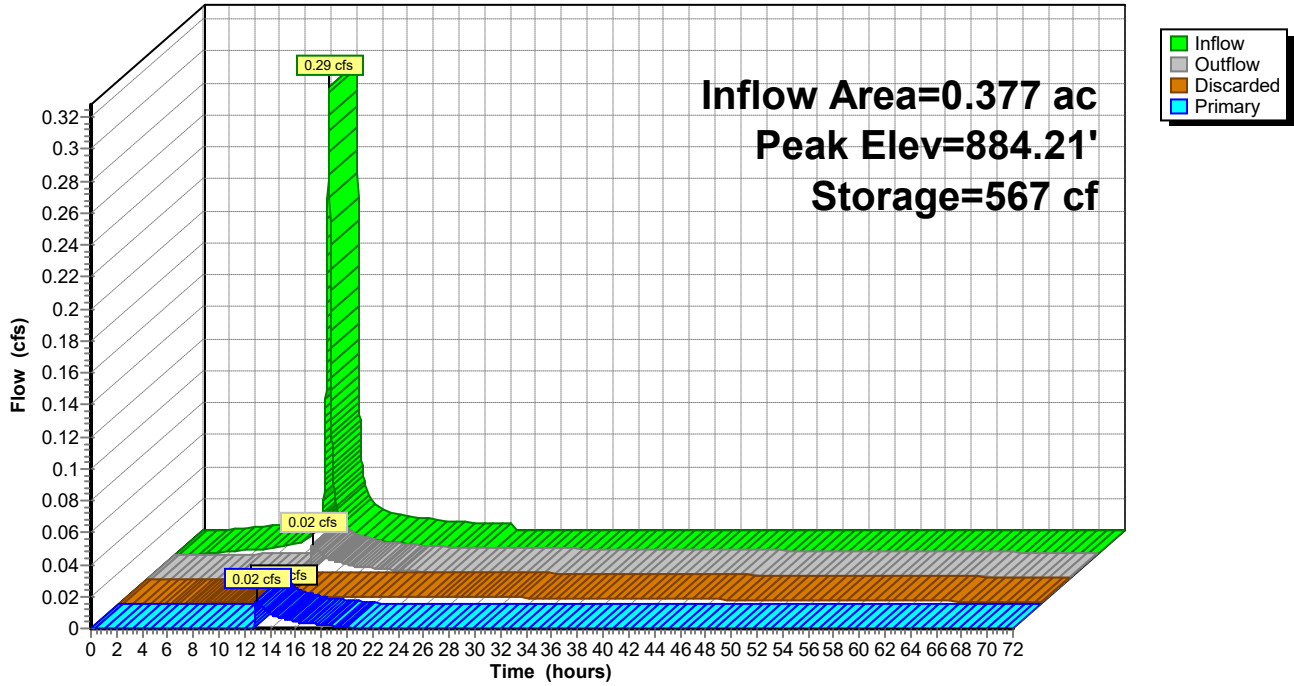
Device	Routing	Invert	Outlet Devices
#1	Primary	884.20'	Custom Weir/Orifice, Cv= 2.62 (C= 3.28) Head (feet) 0.00 0.80 Width (feet) 6.00 10.00
#2	Discarded	883.00'	0.300 in/hr Exfiltration over Surface area from 883.00' - 884.20' Excluded Surface area = 155 sf

Discarded OutFlow Max=0.00 cfs @ 12.76 hrs HW=884.20' (Free Discharge)
 ↑**2=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.01 cfs @ 12.96 hrs HW=884.21' (Free Discharge)
 ↑**1=Custom Weir/Orifice** (Weir Controls 0.01 cfs @ 0.23 fps)

Pond 3P: INFILTRATION BASIN A

Hydrograph



ZZZ15326 Existing Proposed Drainage - Wetland

Type II 24-hr 2-yr Rainfall=2.86"

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Summary for Pond 4P: INFILTRATION BASIN B

Inflow Area = 0.737 ac, 19.05% Impervious, Inflow Depth = 0.57" for 2-yr event
 Inflow = 0.53 cfs @ 11.99 hrs, Volume= 0.035 af
 Outflow = 0.01 cfs @ 24.08 hrs, Volume= 0.023 af, Atten= 99%, Lag= 725.4 min
 Discarded = 0.01 cfs @ 24.08 hrs, Volume= 0.023 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 884.99' @ 24.08 hrs Surf.Area= 2,242 sf Storage= 1,255 cf

Plug-Flow detention time= 1,604.4 min calculated for 0.023 af (66% of inflow)
 Center-of-Mass det. time= 1,480.2 min (2,271.6 - 791.4)

Volume	Invert	Avail.Storage	Storage Description
#1	884.30'	8,301 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
884.30	1,375	0	0
885.00	2,250	1,269	1,269
885.50	3,040	1,323	2,591
886.00	3,500	1,635	4,226
887.00	4,650	4,075	8,301

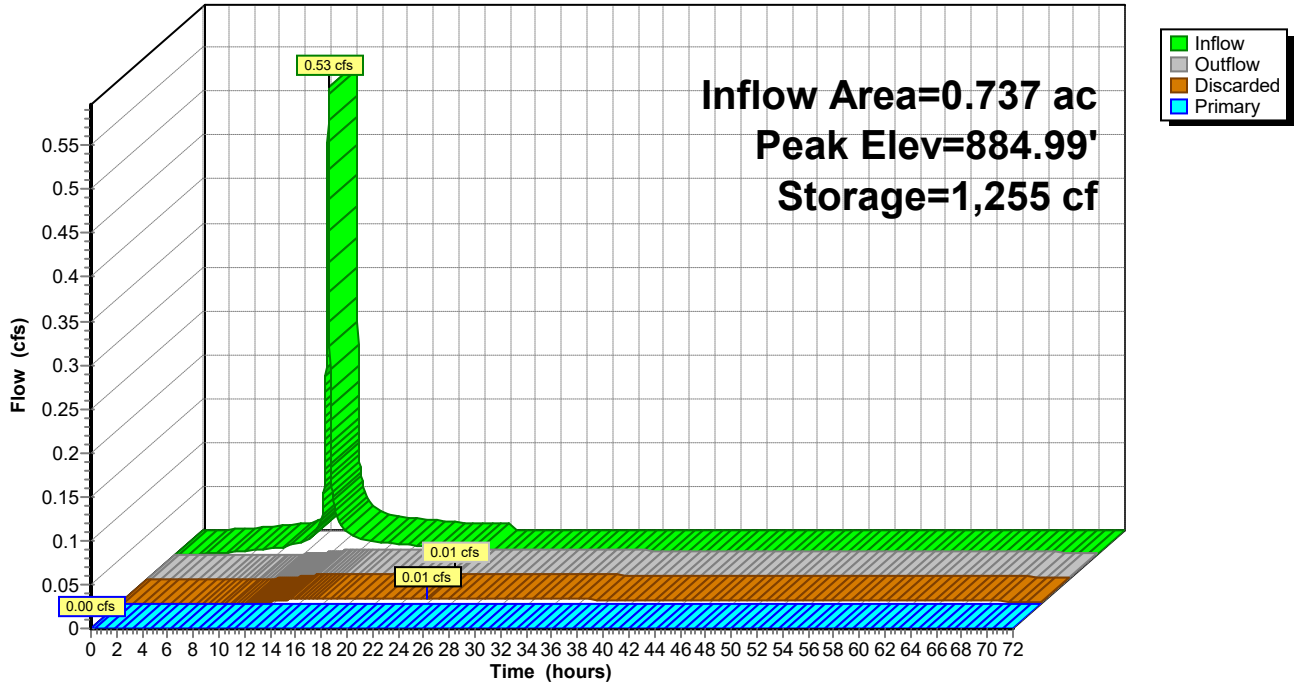
Device	Routing	Invert	Outlet Devices
#1	Primary	885.50'	Custom Weir/Orifice, Cv= 2.62 (C= 3.28) Head (feet) 0.00 0.50 Width (feet) 3.00 6.00
#2	Discarded	884.30'	0.300 in/hr Exfiltration over Surface area from 884.30' - 885.50' Excluded Surface area = 1,375 sf

Discarded OutFlow Max=0.01 cfs @ 24.08 hrs HW=884.99' (Free Discharge)
 ↑2=Exfiltration (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=884.30' (Free Discharge)
 ↑1=Custom Weir/Orifice (Controls 0.00 cfs)

Pond 4P: INFILTRATION BASIN B

Hydrograph



ZZZ15326 Existing Proposed Drainage - Wetland

Type II 24-hr 10-yr Rainfall=4.26"

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Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: TO WETLAND Runoff Area=218,186 sf 1.58% Impervious Runoff Depth=1.23"
Tc=10.0 min CN=65/98 Runoff=9.01 cfs 0.512 af

Subcatchment 2S: TO WETLAND Runoff Area=124,016 sf 0.78% Impervious Runoff Depth=1.46"
Tc=10.0 min CN=69/98 Runoff=6.27 cfs 0.346 af

Subcatchment 3S: TO INFILTRATION A Runoff Area=16,415 sf 22.84% Impervious Runoff Depth=1.31"
Flow Length=120' Slope=0.0230 '/' Tc=11.4 min CN=52/98 Runoff=0.56 cfs 0.041 af

Subcatchment 4S: TO INFILTRATION B Runoff Area=32,101 sf 19.05% Impervious Runoff Depth=1.14"
Flow Length=100' Slope=0.0400 '/' Tc=7.9 min CN=51/98 Runoff=1.06 cfs 0.070 af

Pond 1P: WETLAND Peak Elev=883.08' Storage=12,429 cf Inflow=9.01 cfs 0.512 af
Discarded=0.31 cfs 0.512 af Primary=0.00 cfs 0.000 af Outflow=0.31 cfs 0.512 af

Pond 2P: WETLAND Peak Elev=882.87' Storage=9,124 cf Inflow=6.41 cfs 0.369 af
Discarded=0.23 cfs 0.369 af Primary=0.00 cfs 0.000 af Outflow=0.23 cfs 0.369 af

Pond 3P: INFILTRATION BASIN A Peak Elev=884.28' Storage=629 cf Inflow=0.56 cfs 0.041 af
Discarded=0.00 cfs 0.016 af Primary=0.47 cfs 0.023 af Outflow=0.48 cfs 0.039 af

Pond 4P: INFILTRATION BASIN B Peak Elev=885.49' Storage=2,554 cf Inflow=1.06 cfs 0.070 af
Discarded=0.01 cfs 0.044 af Primary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.044 af

Total Runoff Area = 8.970 ac Runoff Volume = 0.969 af Average Runoff Depth = 1.30"
96.34% Pervious = 8.642 ac 3.66% Impervious = 0.328 ac

ZZZ15326 Existing Proposed Drainage - Wetland

Type II 24-hr 10-yr Rainfall=4.26"

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Summary for Subcatchment 1S: TO WETLAND

Runoff = 9.01 cfs @ 12.03 hrs, Volume= 0.512 af, Depth= 1.23"

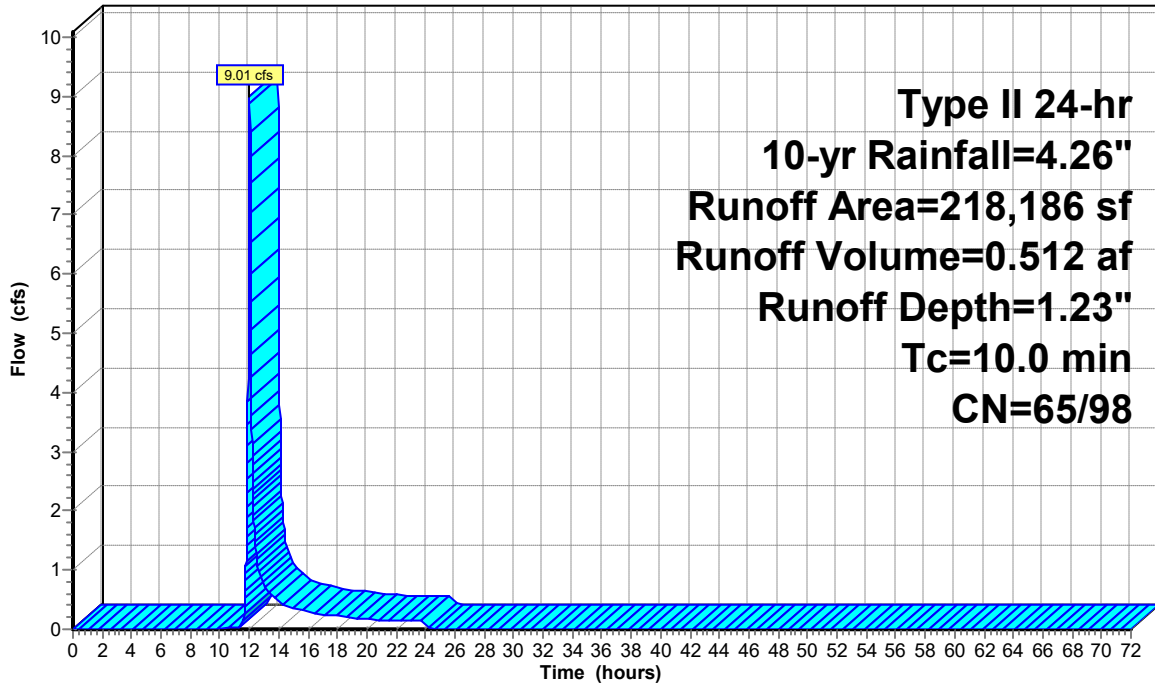
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=4.26"

Area (sf)	CN	Description
3,453	98	Paved parking, HSG B
43,348	49	50-75% Grass cover, Fair, HSG A
171,385	69	50-75% Grass cover, Fair, HSG B
218,186	65	Weighted Average
214,733	65	98.42% Pervious Area
3,453	98	1.58% Impervious Area

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

Subcatchment 1S: TO WETLAND

Hydrograph



Summary for Subcatchment 2S: TO WETLAND

Runoff = 6.27 cfs @ 12.03 hrs, Volume= 0.346 af, Depth= 1.46"

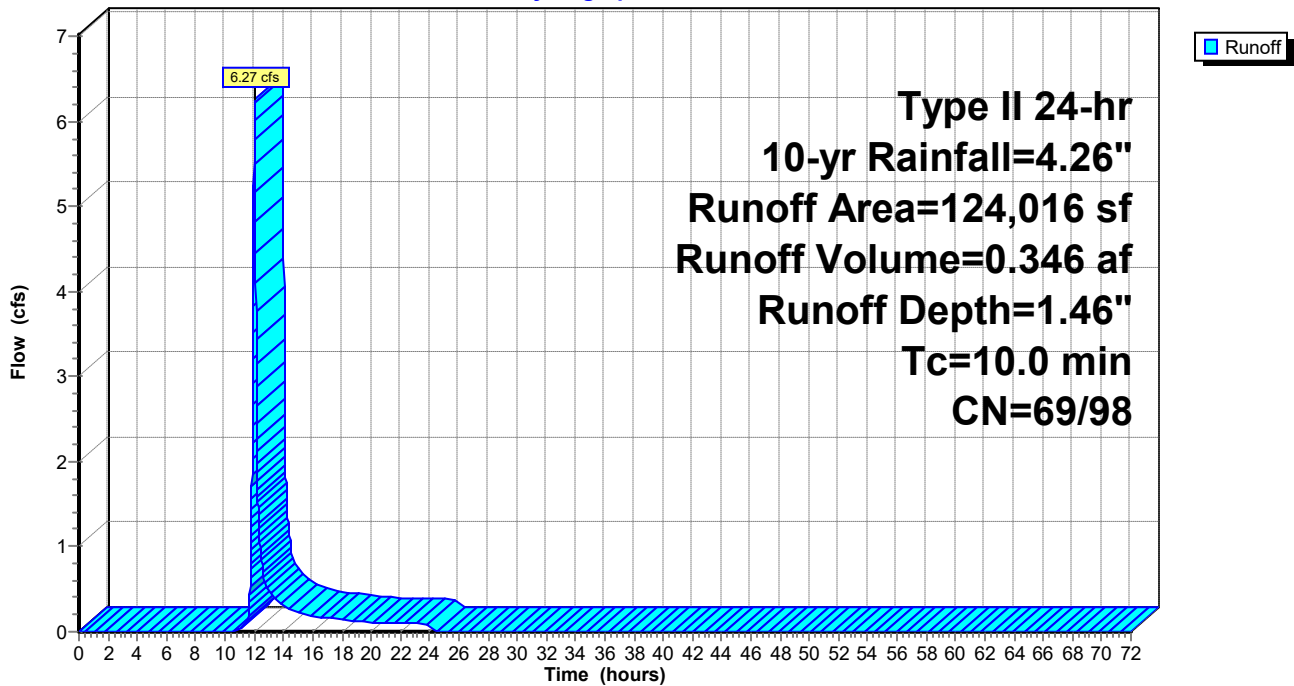
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type II 24-hr 10-yr Rainfall=4.26"

Area (sf)	CN	Description
970	98	Paved parking, HSG B
123,046	69	50-75% Grass cover, Fair, HSG B
124,016	69	Weighted Average
123,046	69	99.22% Pervious Area
970	98	0.78% Impervious Area

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

Subcatchment 2S: TO WETLAND

Hydrograph



Summary for Subcatchment 3S: TO INFILTRATION A

Runoff = 0.56 cfs @ 12.04 hrs, Volume= 0.041 af, Depth= 1.31"

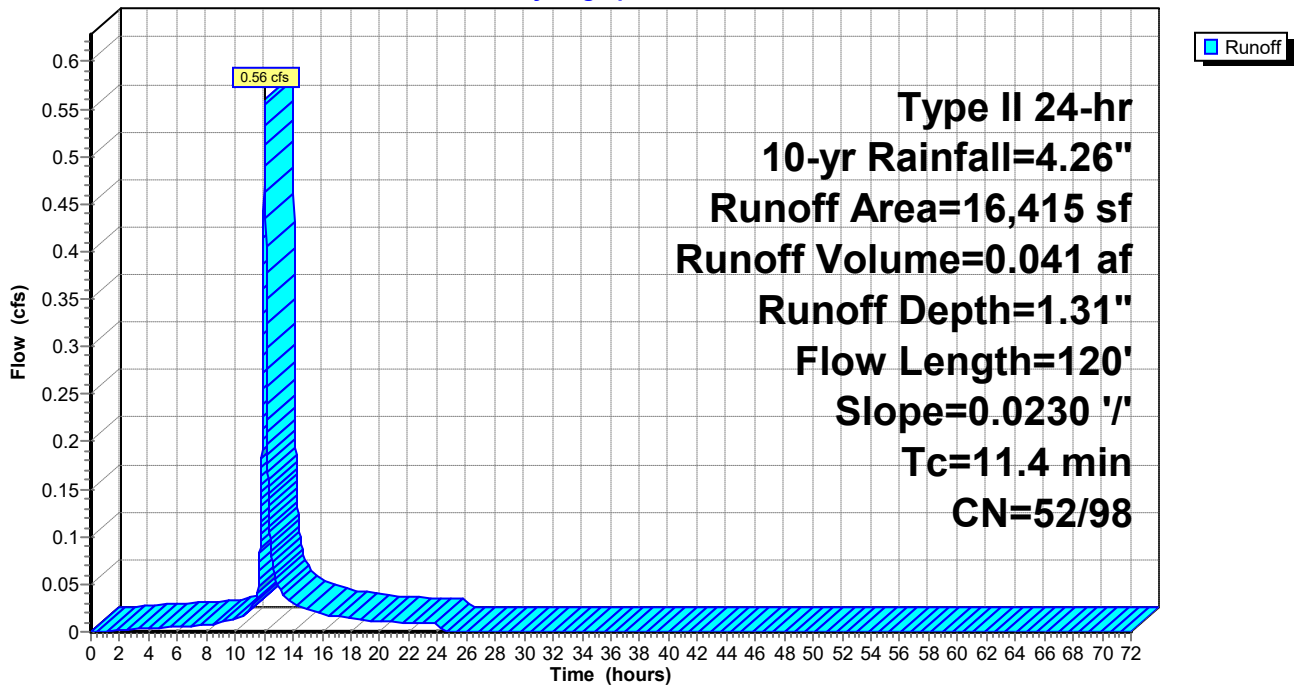
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type II 24-hr 10-yr Rainfall=4.26"

Area (sf)	CN	Description
3,750	98	Paved parking, HSG B
7,665	61	>75% Grass cover, Good, HSG B
5,000	39	>75% Grass cover, Good, HSG A
16,415	63	Weighted Average
12,665	52	77.16% Pervious Area
3,750	98	22.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4	120	0.0230	0.18		Sheet Flow, Grass: Short n= 0.150 P2= 2.85"

Subcatchment 3S: TO INFILTRATION A

Hydrograph



Summary for Subcatchment 4S: TO INFILTRATION B

Runoff = 1.06 cfs @ 12.00 hrs, Volume= 0.070 af, Depth= 1.14"

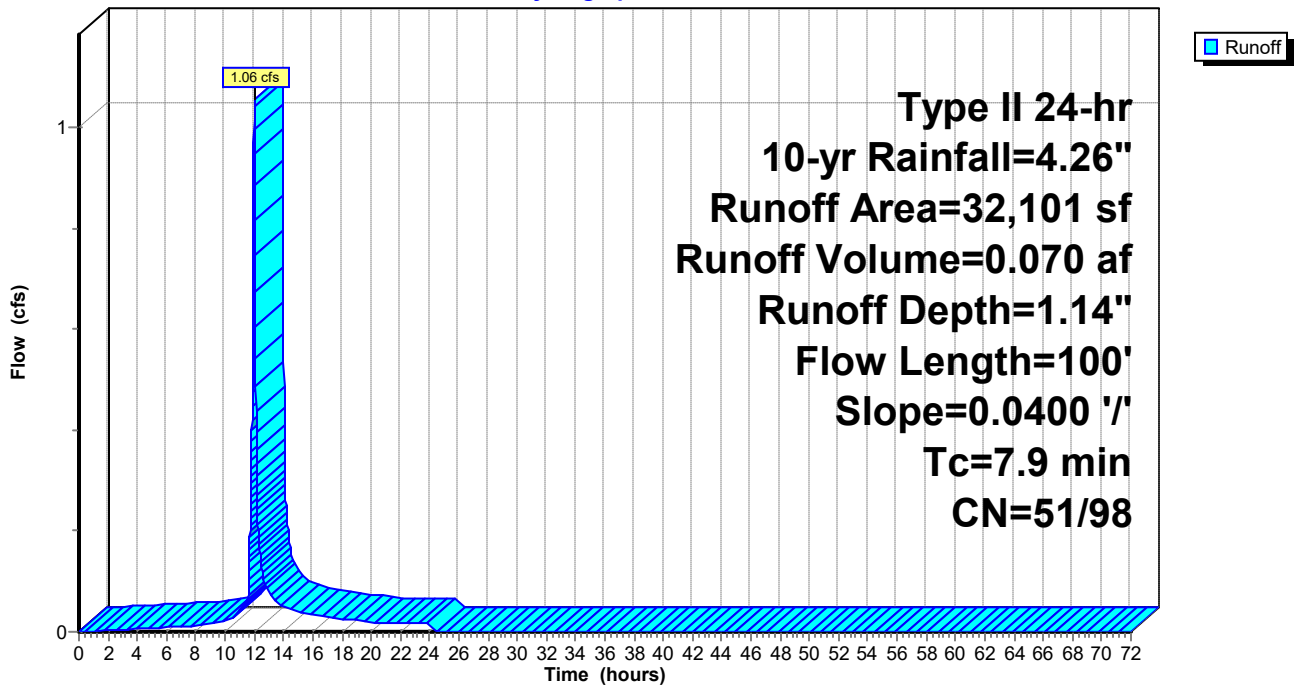
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type II 24-hr 10-yr Rainfall=4.26"

Area (sf)	CN	Description
6,115	98	Paved parking, HSG B
12,000	39	>75% Grass cover, Good, HSG A
13,986	61	>75% Grass cover, Good, HSG B
32,101	60	Weighted Average
25,986	51	80.95% Pervious Area
6,115	98	19.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.9	100	0.0400	0.21		Sheet Flow, Grass: Short n= 0.150 P2= 2.85"

Subcatchment 4S: TO INFILTRATION B

Hydrograph



Summary for Pond 1P: WETLAND

Inflow Area = 5.009 ac, 1.58% Impervious, Inflow Depth = 1.23" for 10-yr event
 Inflow = 9.01 cfs @ 12.03 hrs, Volume= 0.512 af
 Outflow = 0.31 cfs @ 15.72 hrs, Volume= 0.512 af, Atten= 97%, Lag= 221.3 min
 Discarded = 0.31 cfs @ 15.72 hrs, Volume= 0.512 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 883.08' @ 15.72 hrs Surf.Area= 16,820 sf Storage= 12,429 cf

Plug-Flow detention time= 654.8 min calculated for 0.512 af (100% of inflow)
 Center-of-Mass det. time= 655.1 min (1,520.8 - 865.7)

Volume	Invert	Avail.Storage	Storage Description
#1	880.00'	40,401 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
880.00	372	0	0
882.00	2,380	2,752	2,752
883.00	14,516	8,448	11,200
884.00	43,886	29,201	40,401

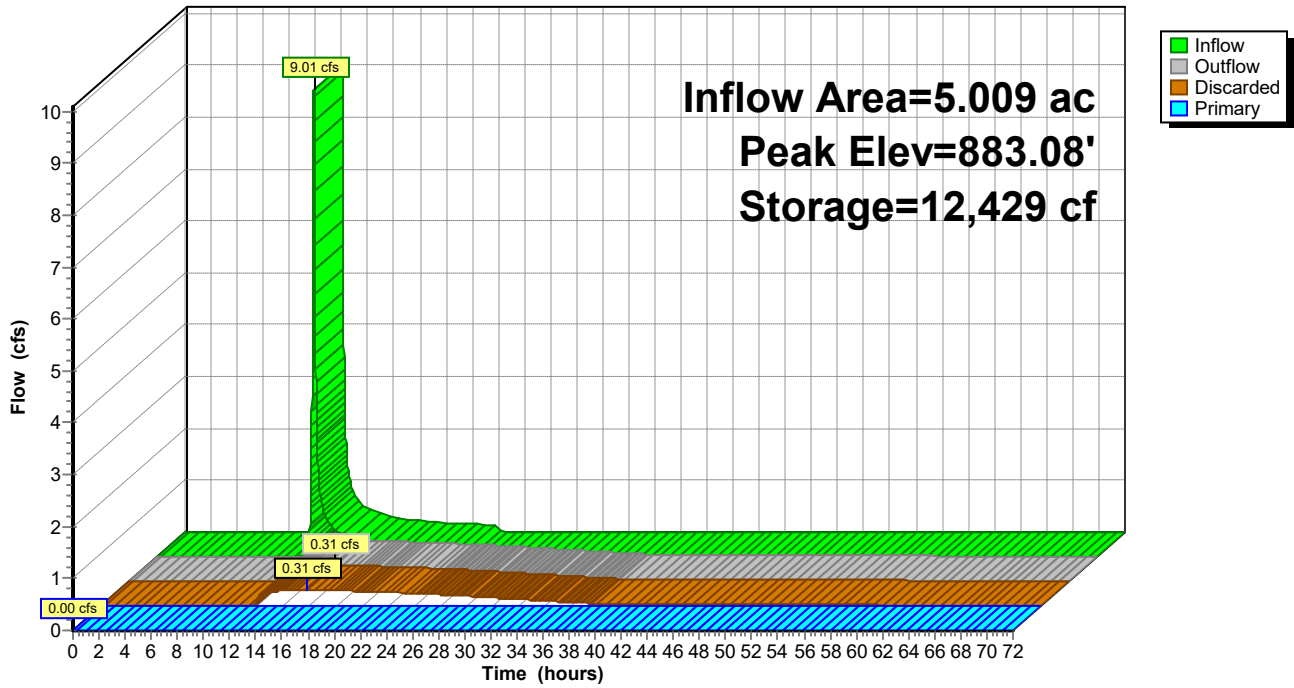
Device	Routing	Invert	Outlet Devices
#1	Discarded	880.00'	0.800 in/hr Exfiltration over Surface area
#2	Primary	883.50'	Custom Weir/Orifice, Cv= 2.62 (C= 3.28)
			Head (feet) 0.00 0.50
			Width (feet) 0.00 20.00

Discarded OutFlow Max=0.31 cfs @ 15.72 hrs HW=883.08' (Free Discharge)
 ↑1=**Exfiltration** (Exfiltration Controls 0.31 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=880.00' (Free Discharge)
 ↑2=**Custom Weir/Orifice** (Controls 0.00 cfs)

Pond 1P: WETLAND

Hydrograph



Summary for Pond 2P: WETLAND

Inflow Area = 3.961 ac, 6.28% Impervious, Inflow Depth = 1.12" for 10-yr event
 Inflow = 6.41 cfs @ 12.04 hrs, Volume= 0.369 af
 Outflow = 0.23 cfs @ 15.48 hrs, Volume= 0.369 af, Atten= 96%, Lag= 206.5 min
 Discarded = 0.23 cfs @ 15.48 hrs, Volume= 0.369 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 882.87' @ 15.48 hrs Surf.Area= 12,273 sf Storage= 9,124 cf

Plug-Flow detention time= 650.2 min calculated for 0.369 af (100% of inflow)
 Center-of-Mass det. time= 650.5 min (1,508.5 - 858.0)

Volume	Invert	Avail.Storage	Storage Description
#1	880.00'	32,485 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
880.00	372	0	0
882.00	2,380	2,752	2,752
883.00	13,756	8,068	10,820
884.00	29,573	21,665	32,485

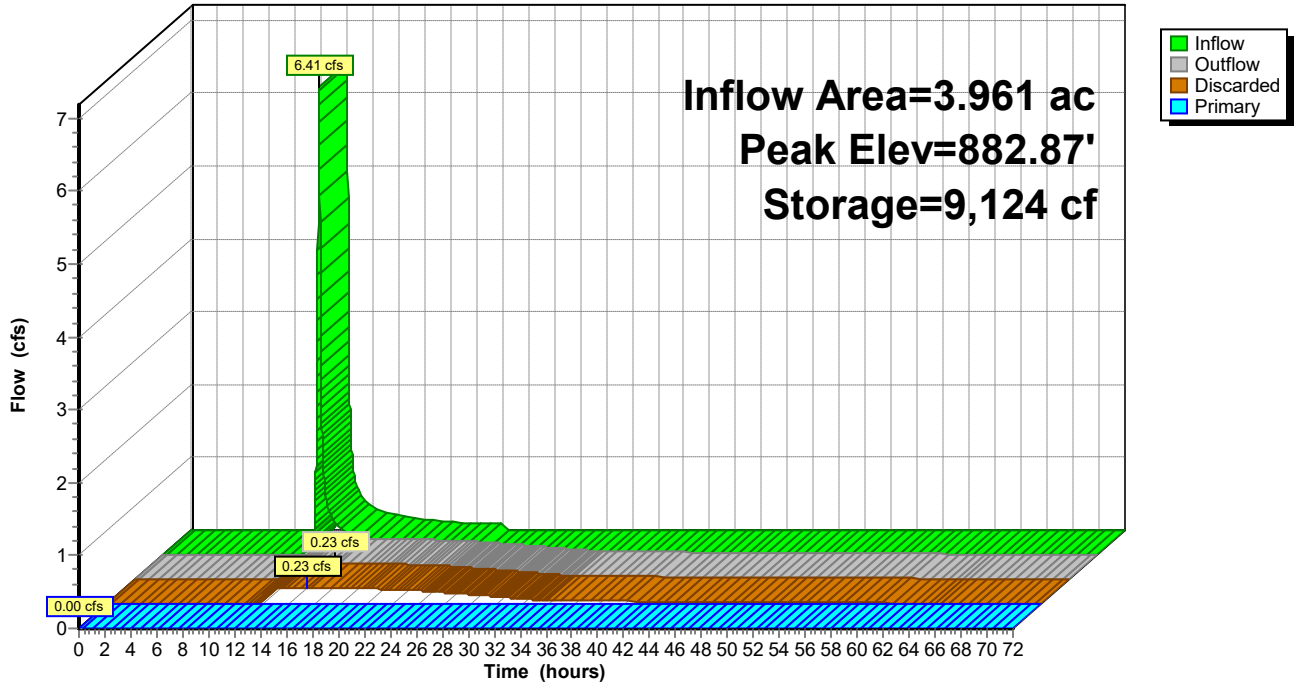
Device	Routing	Invert	Outlet Devices
#1	Discarded	880.00'	0.800 in/hr Exfiltration over Surface area
#2	Primary	883.50'	Custom Weir/Orifice, Cv= 2.62 (C= 3.28)
			Head (feet) 0.00 0.50
			Width (feet) 0.00 20.00

Discarded OutFlow Max=0.23 cfs @ 15.48 hrs HW=882.87' (Free Discharge)
 ↑1=**Exfiltration** (Exfiltration Controls 0.23 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=880.00' (Free Discharge)
 ↑2=**Custom Weir/Orifice** (Controls 0.00 cfs)

Pond 2P: WETLAND

Hydrograph



Summary for Pond 3P: INFILTRATION BASIN A

Inflow Area = 0.377 ac, 22.84% Impervious, Inflow Depth = 1.31" for 10-yr event
 Inflow = 0.56 cfs @ 12.04 hrs, Volume= 0.041 af
 Outflow = 0.48 cfs @ 12.10 hrs, Volume= 0.039 af, Atten= 15%, Lag= 3.4 min
 Discarded = 0.00 cfs @ 12.02 hrs, Volume= 0.016 af
 Primary = 0.47 cfs @ 12.10 hrs, Volume= 0.023 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 3
 Peak Elev= 884.28' @ 12.10 hrs Surf.Area= 851 sf Storage= 629 cf

Plug-Flow detention time= 596.1 min calculated for 0.039 af (95% of inflow)
 Center-of-Mass det. time= 565.9 min (1,370.5 - 804.6)

Volume	Invert	Avail.Storage	Storage Description
#1	883.00'	3,253 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
883.00	155	0	0
884.00	675	415	415
885.00	1,300	988	1,403
886.00	2,400	1,850	3,253

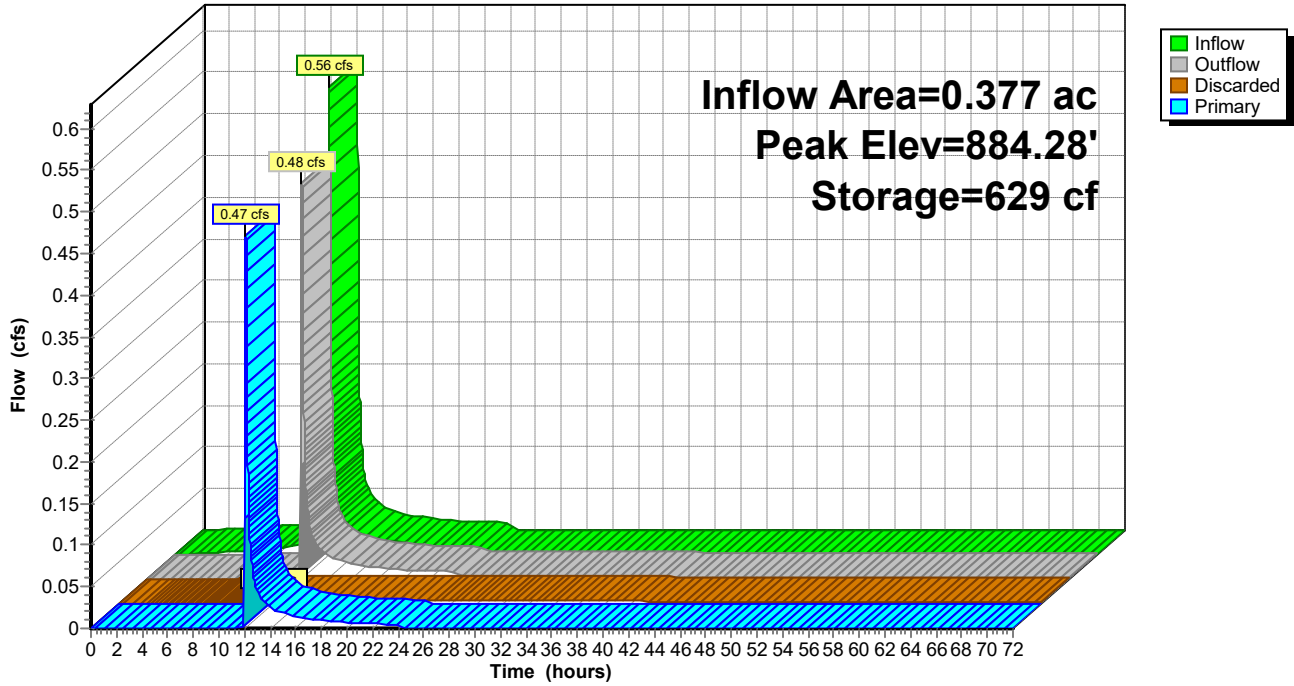
Device	Routing	Invert	Outlet Devices
#1	Primary	884.20'	Custom Weir/Orifice, Cv= 2.62 (C= 3.28) Head (feet) 0.00 0.80 Width (feet) 6.00 10.00
#2	Discarded	883.00'	0.300 in/hr Exfiltration over Surface area from 883.00' - 884.20' Excluded Surface area = 155 sf

Discarded OutFlow Max=0.00 cfs @ 12.02 hrs HW=884.21' (Free Discharge)
 ↑**2=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.46 cfs @ 12.10 hrs HW=884.28' (Free Discharge)
 ↑**1=Custom Weir/Orifice** (Weir Controls 0.46 cfs @ 0.93 fps)

Pond 3P: INFILTRATION BASIN A

Hydrograph



Summary for Pond 4P: INFILTRATION BASIN B

Inflow Area = 0.737 ac, 19.05% Impervious, Inflow Depth = 1.14" for 10-yr event
 Inflow = 1.06 cfs @ 12.00 hrs, Volume= 0.070 af
 Outflow = 0.01 cfs @ 24.09 hrs, Volume= 0.044 af, Atten= 99%, Lag= 725.2 min
 Discarded = 0.01 cfs @ 24.09 hrs, Volume= 0.044 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 885.49' @ 24.09 hrs Surf.Area= 3,021 sf Storage= 2,554 cf

Plug-Flow detention time= 1,616.0 min calculated for 0.044 af (63% of inflow)
 Center-of-Mass det. time= 1,481.4 min (2,290.2 - 808.8)

Volume	Invert	Avail.Storage	Storage Description
#1	884.30'	8,301 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
884.30	1,375	0	0
885.00	2,250	1,269	1,269
885.50	3,040	1,323	2,591
886.00	3,500	1,635	4,226
887.00	4,650	4,075	8,301

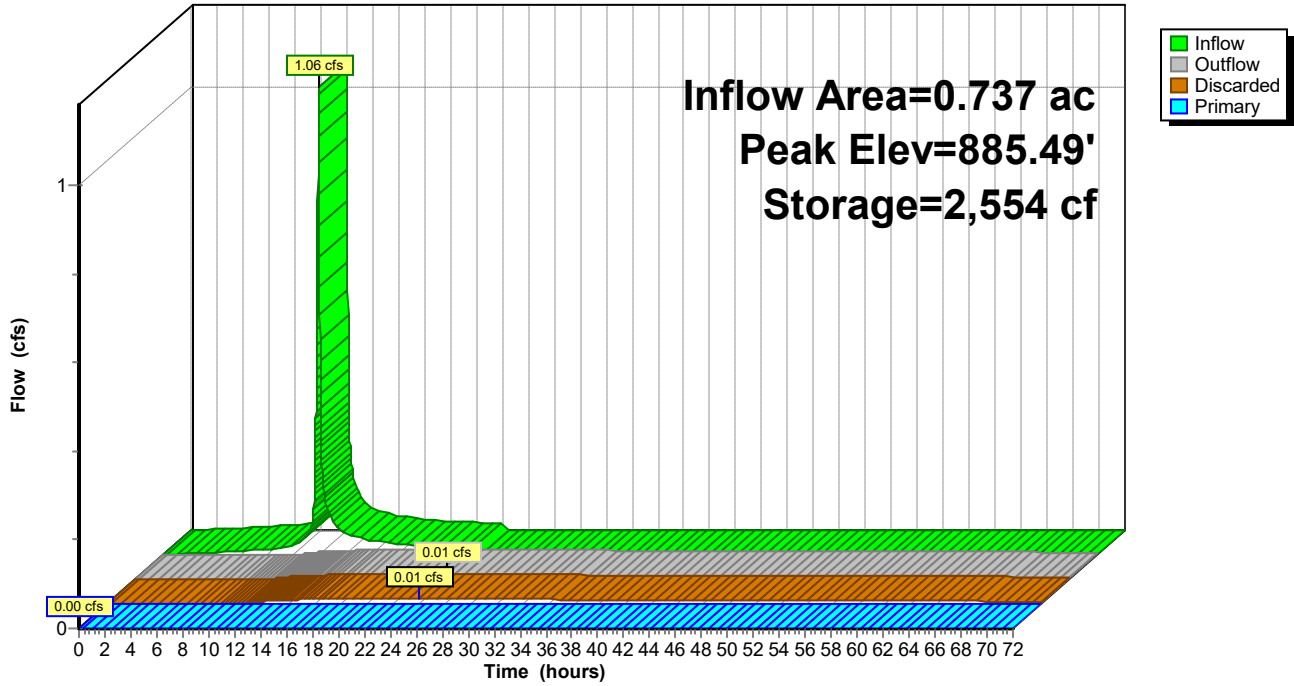
Device	Routing	Invert	Outlet Devices
#1	Primary	885.50'	Custom Weir/Orifice, Cv= 2.62 (C= 3.28) Head (feet) 0.00 0.50 Width (feet) 3.00 6.00
#2	Discarded	884.30'	0.300 in/hr Exfiltration over Surface area from 884.30' - 885.50' Excluded Surface area = 1,375 sf

Discarded OutFlow Max=0.01 cfs @ 24.09 hrs HW=885.49' (Free Discharge)
 ↑**2=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=884.30' (Free Discharge)
 ↑**1=Custom Weir/Orifice** (Controls 0.00 cfs)

Pond 4P: INFILTRATION BASIN B

Hydrograph



ZZZ15326 Existing Proposed Drainage - Wetland

Type II 24-hr 100-yr Rainfall=7.06"

Prepared by Microsoft

Printed 6/8/2017

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Page 31

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: TO WETLAND Runoff Area=218,186 sf 1.58% Impervious Runoff Depth=3.21"
Tc=10.0 min CN=65/98 Runoff=24.63 cfs 1.339 af

Subcatchment 2S: TO WETLAND Runoff Area=124,016 sf 0.78% Impervious Runoff Depth=3.59"
Tc=10.0 min CN=69/98 Runoff=15.71 cfs 0.851 af

Subcatchment 3S: TO INFILTRATION A Runoff Area=16,415 sf 22.84% Impervious Runoff Depth=3.01"
Flow Length=120' Slope=0.0230 '/' Tc=11.4 min CN=52/98 Runoff=1.48 cfs 0.095 af

Subcatchment 4S: TO INFILTRATION B Runoff Area=32,101 sf 19.05% Impervious Runoff Depth=2.75"
Flow Length=100' Slope=0.0400 '/' Tc=7.9 min CN=51/98 Runoff=3.01 cfs 0.169 af

Pond 1P: WETLAND Peak Elev=883.73' Storage=29,634 cf Inflow=24.63 cfs 1.339 af
Discarded=0.67 cfs 1.055 af Primary=1.35 cfs 0.281 af Outflow=2.01 cfs 1.336 af

Pond 2P: WETLAND Peak Elev=883.68' Storage=23,947 cf Inflow=17.16 cfs 1.023 af
Discarded=0.46 cfs 0.842 af Primary=0.78 cfs 0.178 af Outflow=1.23 cfs 1.020 af

Pond 3P: INFILTRATION BASIN A Peak Elev=884.37' Storage=707 cf Inflow=1.48 cfs 0.095 af
Discarded=0.00 cfs 0.017 af Primary=1.45 cfs 0.076 af Outflow=1.45 cfs 0.092 af

Pond 4P: INFILTRATION BASIN B Peak Elev=885.69' Storage=3,197 cf Inflow=3.01 cfs 0.169 af
Discarded=0.01 cfs 0.046 af Primary=0.97 cfs 0.096 af Outflow=0.98 cfs 0.142 af

Total Runoff Area = 8.970 ac Runoff Volume = 2.453 af Average Runoff Depth = 3.28"
96.34% Pervious = 8.642 ac 3.66% Impervious = 0.328 ac

Summary for Subcatchment 1S: TO WETLAND

Runoff = 24.63 cfs @ 12.02 hrs, Volume= 1.339 af, Depth= 3.21"

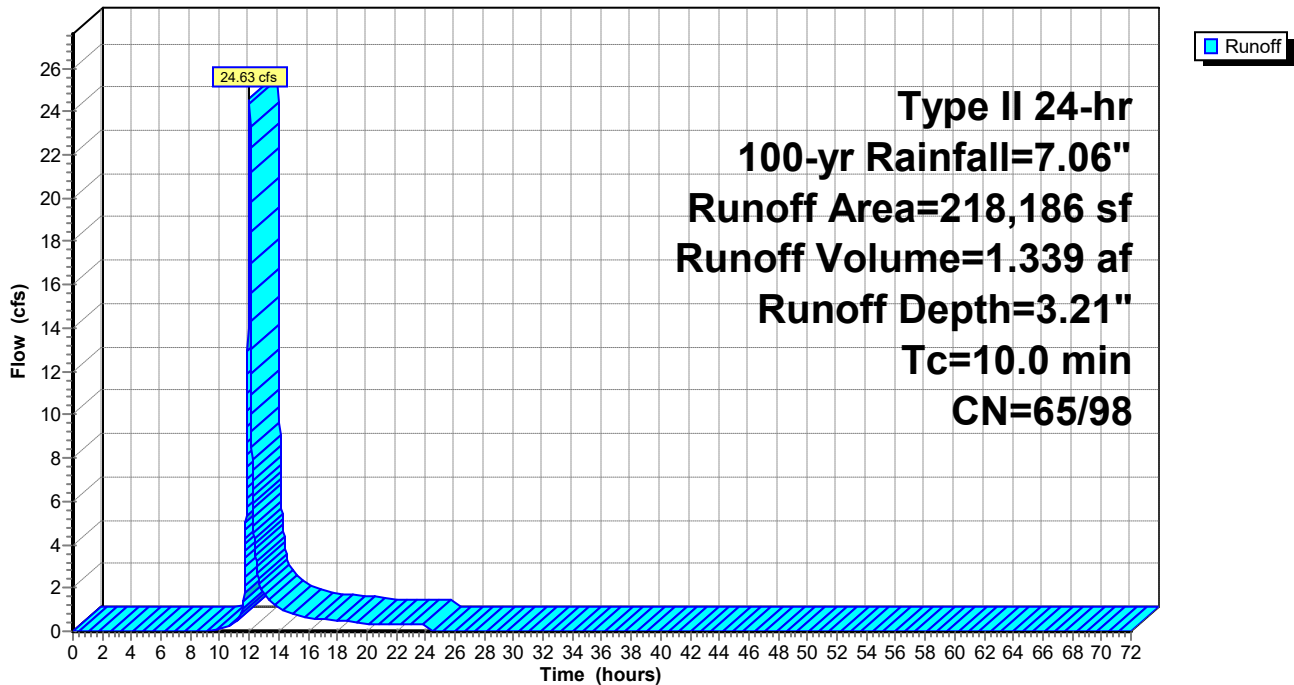
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type II 24-hr 100-yr Rainfall=7.06"

Area (sf)	CN	Description
3,453	98	Paved parking, HSG B
43,348	49	50-75% Grass cover, Fair, HSG A
171,385	69	50-75% Grass cover, Fair, HSG B
218,186	65	Weighted Average
214,733	65	98.42% Pervious Area
3,453	98	1.58% Impervious Area

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

Subcatchment 1S: TO WETLAND

Hydrograph



Summary for Subcatchment 2S: TO WETLAND

Runoff = 15.71 cfs @ 12.02 hrs, Volume= 0.851 af, Depth= 3.59"

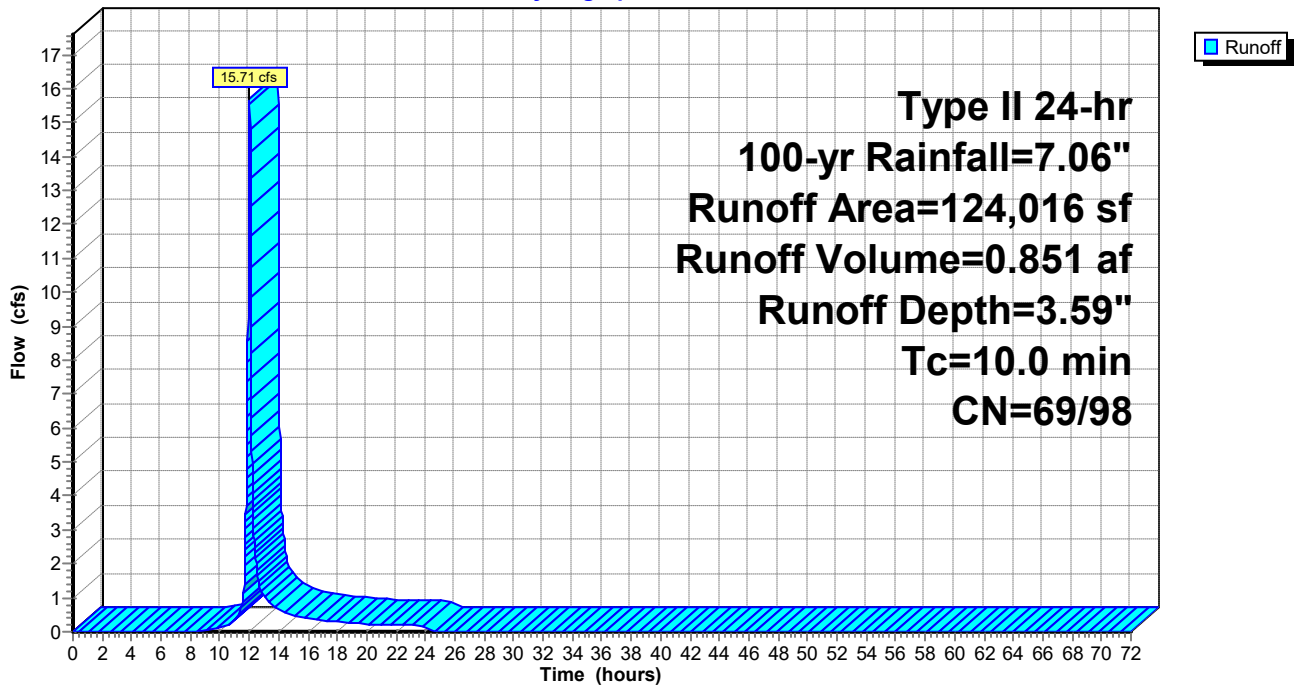
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Type II 24-hr 100-yr Rainfall=7.06"

Area (sf)	CN	Description
970	98	Paved parking, HSG B
123,046	69	50-75% Grass cover, Fair, HSG B
124,016	69	Weighted Average
123,046	69	99.22% Pervious Area
970	98	0.78% Impervious Area

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

Subcatchment 2S: TO WETLAND

Hydrograph



Summary for Subcatchment 3S: TO INFILTRATION A

Runoff = 1.48 cfs @ 12.04 hrs, Volume= 0.095 af, Depth= 3.01"

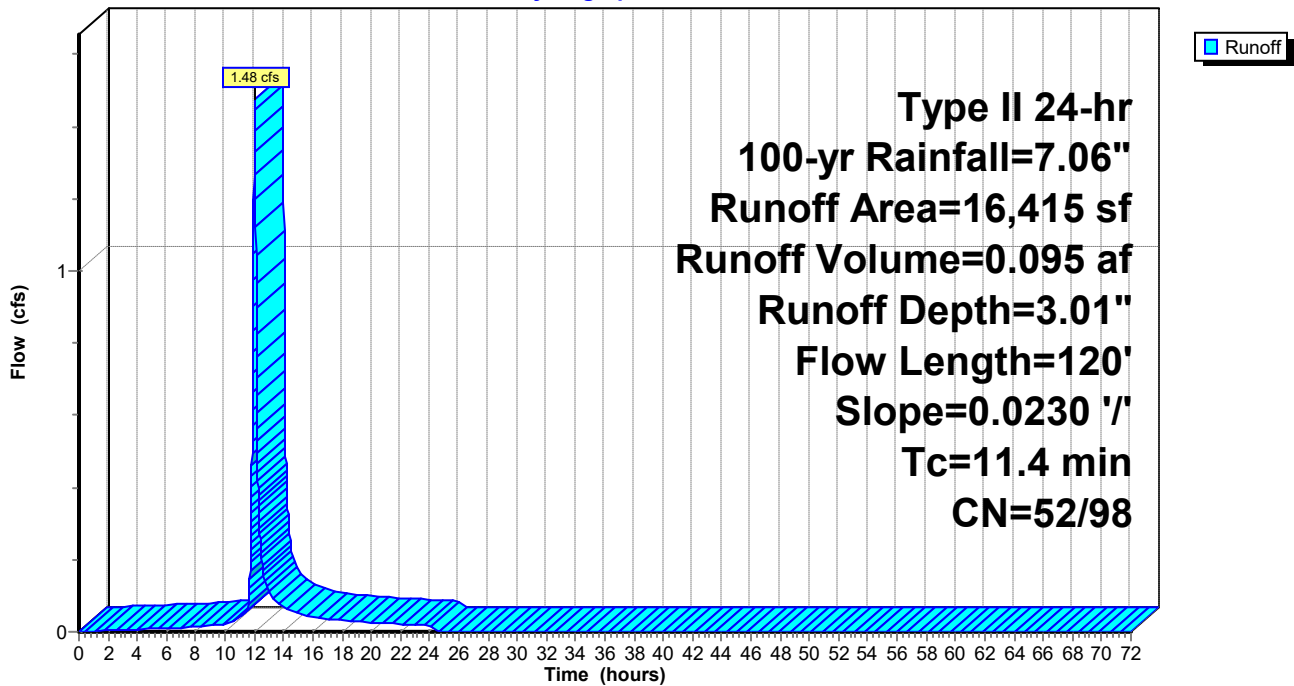
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-yr Rainfall=7.06"

Area (sf)	CN	Description
3,750	98	Paved parking, HSG B
7,665	61	>75% Grass cover, Good, HSG B
5,000	39	>75% Grass cover, Good, HSG A
16,415	63	Weighted Average
12,665	52	77.16% Pervious Area
3,750	98	22.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.4	120	0.0230	0.18		Sheet Flow, Grass: Short n= 0.150 P2= 2.85"

Subcatchment 3S: TO INFILTRATION A

Hydrograph



Summary for Subcatchment 4S: TO INFILTRATION B

Runoff = 3.01 cfs @ 12.00 hrs, Volume= 0.169 af, Depth= 2.75"

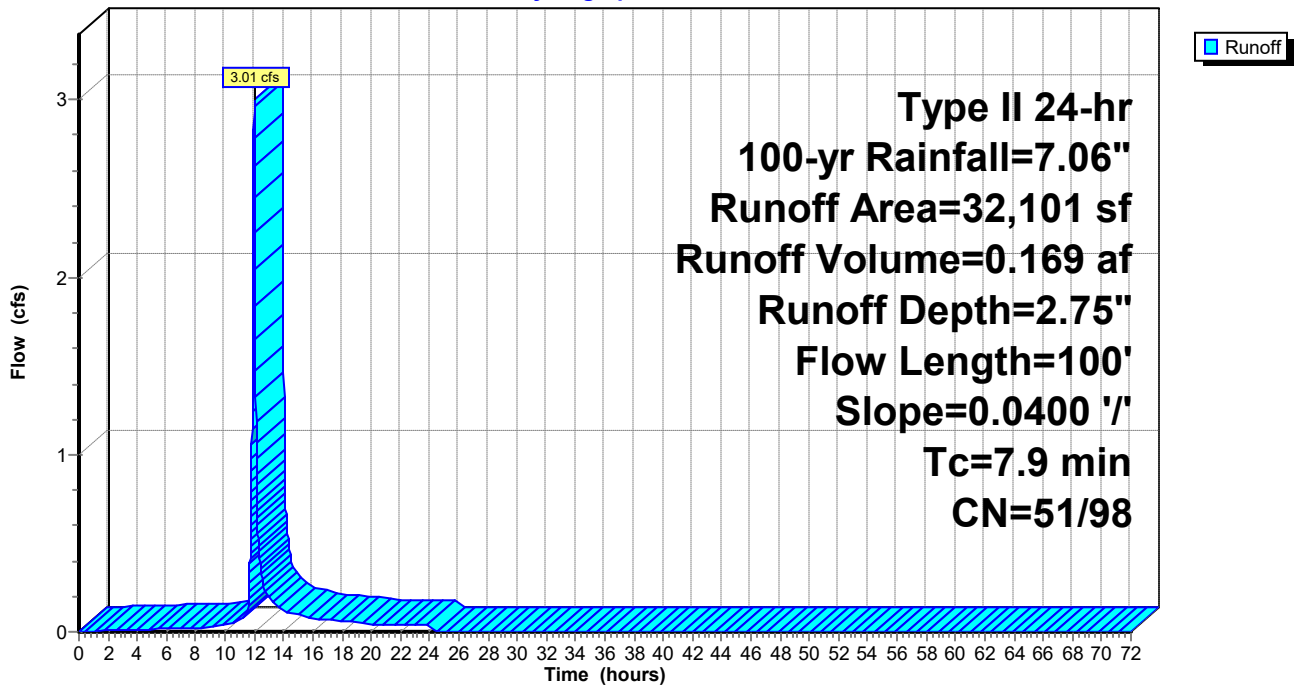
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-yr Rainfall=7.06"

Area (sf)	CN	Description
6,115	98	Paved parking, HSG B
12,000	39	>75% Grass cover, Good, HSG A
13,986	61	>75% Grass cover, Good, HSG B
32,101	60	Weighted Average
25,986	51	80.95% Pervious Area
6,115	98	19.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.9	100	0.0400	0.21		Sheet Flow, Grass: Short n= 0.150 P2= 2.85"

Subcatchment 4S: TO INFILTRATION B

Hydrograph



Summary for Pond 1P: WETLAND

Inflow Area = 5.009 ac, 1.58% Impervious, Inflow Depth = 3.21" for 100-yr event
 Inflow = 24.63 cfs @ 12.02 hrs, Volume= 1.339 af
 Outflow = 2.01 cfs @ 12.77 hrs, Volume= 1.336 af, Atten= 92%, Lag= 44.7 min
 Discarded = 0.67 cfs @ 12.77 hrs, Volume= 1.055 af
 Primary = 1.35 cfs @ 12.77 hrs, Volume= 0.281 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 883.73' @ 12.77 hrs Surf.Area= 35,965 sf Storage= 29,634 cf

Plug-Flow detention time= 529.7 min calculated for 1.336 af (100% of inflow)
 Center-of-Mass det. time= 528.8 min (1,367.4 - 838.6)

Volume	Invert	Avail.Storage	Storage Description
#1	880.00'	40,401 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
880.00	372	0	0
882.00	2,380	2,752	2,752
883.00	14,516	8,448	11,200
884.00	43,886	29,201	40,401

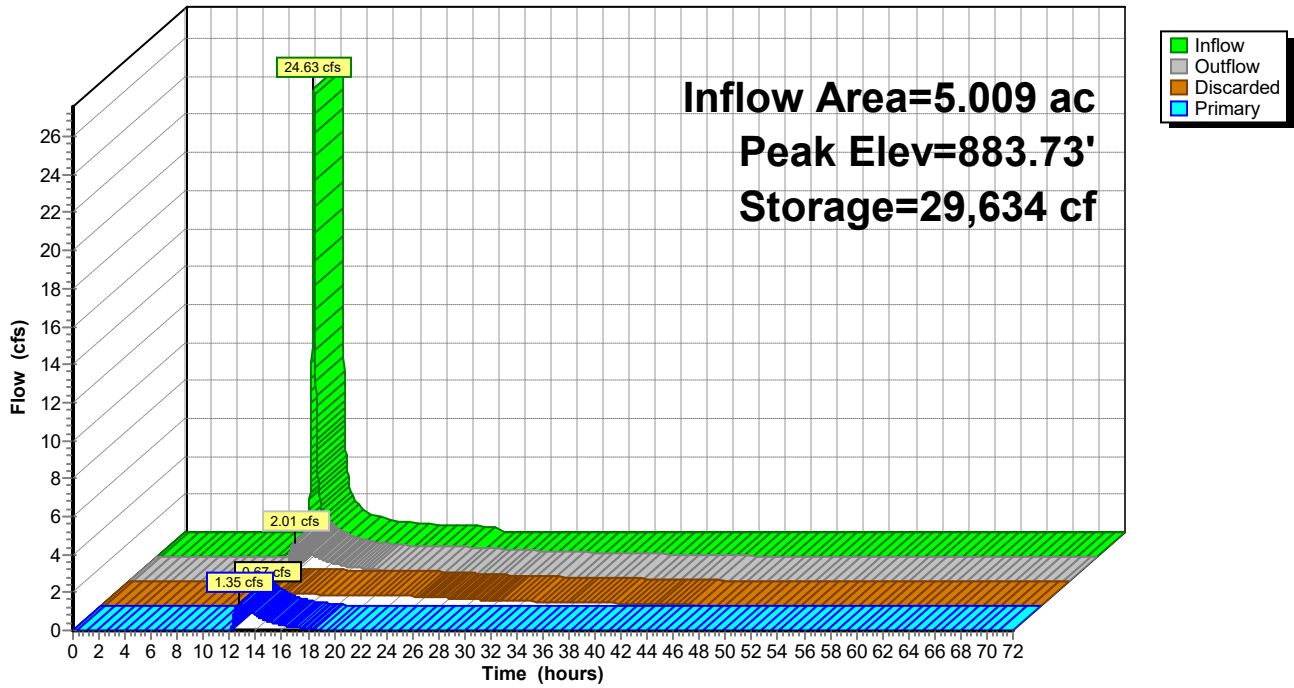
Device	Routing	Invert	Outlet Devices
#1	Discarded	880.00'	0.800 in/hr Exfiltration over Surface area
#2	Primary	883.50'	Custom Weir/Orifice, Cv= 2.62 (C= 3.28)
			Head (feet) 0.00 0.50
			Width (feet) 0.00 20.00

Discarded OutFlow Max=0.67 cfs @ 12.77 hrs HW=883.73' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.67 cfs)

Primary OutFlow Max=1.33 cfs @ 12.77 hrs HW=883.73' (Free Discharge)
 ↑2=Custom Weir/Orifice (Weir Controls 1.33 cfs @ 1.26 fps)

Pond 1P: WETLAND

Hydrograph



Summary for Pond 2P: WETLAND

Inflow Area = 3.961 ac, 6.28% Impervious, Inflow Depth = 3.10" for 100-yr event
 Inflow = 17.16 cfs @ 12.03 hrs, Volume= 1.023 af
 Outflow = 1.23 cfs @ 13.17 hrs, Volume= 1.020 af, Atten= 93%, Lag= 68.4 min
 Discarded = 0.46 cfs @ 13.17 hrs, Volume= 0.842 af
 Primary = 0.78 cfs @ 13.17 hrs, Volume= 0.178 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 883.68' @ 13.17 hrs Surf.Area= 24,586 sf Storage= 23,947 cf

Plug-Flow detention time= 624.2 min calculated for 1.020 af (100% of inflow)
 Center-of-Mass det. time= 622.9 min (1,462.1 - 839.2)

Volume	Invert	Avail.Storage	Storage Description
#1	880.00'	32,485 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
880.00	372	0	0
882.00	2,380	2,752	2,752
883.00	13,756	8,068	10,820
884.00	29,573	21,665	32,485

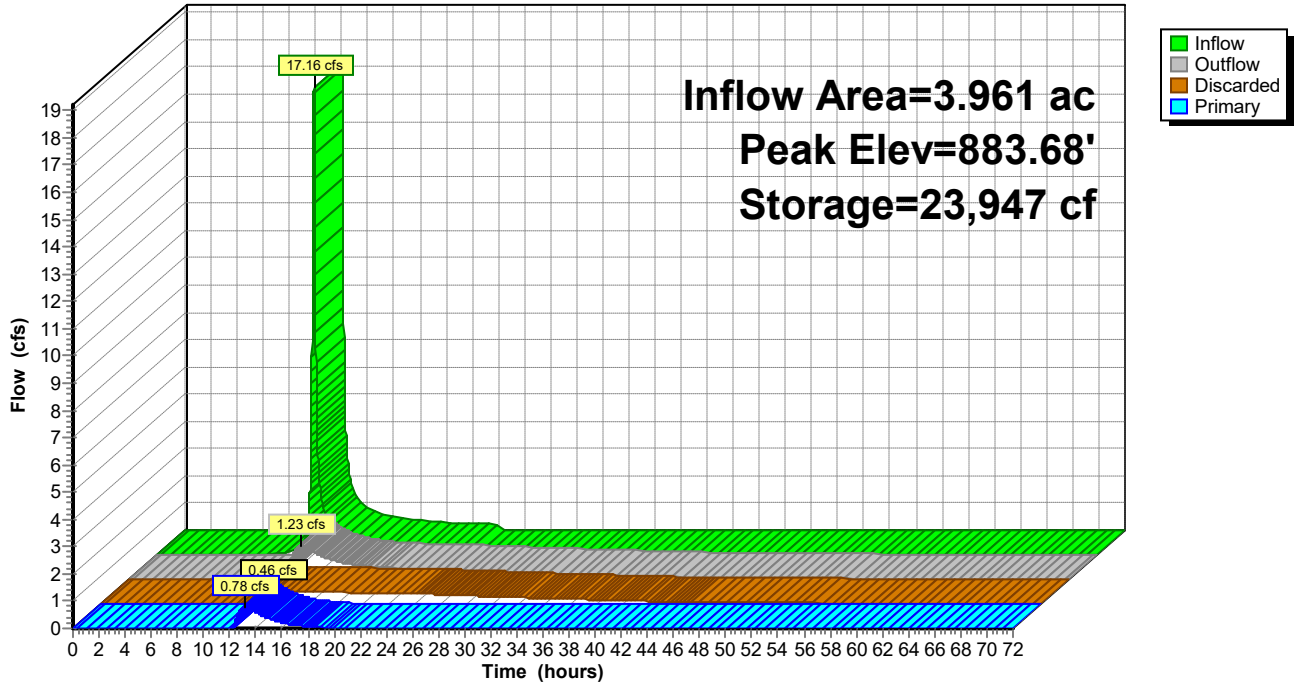
Device	Routing	Invert	Outlet Devices
#1	Discarded	880.00'	0.800 in/hr Exfiltration over Surface area
#2	Primary	883.50'	Custom Weir/Orifice, Cv= 2.62 (C= 3.28) Head (feet) 0.00 0.50 Width (feet) 0.00 20.00

Discarded OutFlow Max=0.46 cfs @ 13.17 hrs HW=883.68' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.46 cfs)

Primary OutFlow Max=0.77 cfs @ 13.17 hrs HW=883.68' (Free Discharge)
 ↑2=Custom Weir/Orifice (Weir Controls 0.77 cfs @ 1.13 fps)

Pond 2P: WETLAND

Hydrograph



Summary for Pond 3P: INFILTRATION BASIN A

Inflow Area = 0.377 ac, 22.84% Impervious, Inflow Depth = 3.01" for 100-yr event
 Inflow = 1.48 cfs @ 12.04 hrs, Volume= 0.095 af
 Outflow = 1.45 cfs @ 12.05 hrs, Volume= 0.092 af, Atten= 2%, Lag= 1.1 min
 Discarded = 0.00 cfs @ 11.77 hrs, Volume= 0.017 af
 Primary = 1.45 cfs @ 12.05 hrs, Volume= 0.076 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 3
 Peak Elev= 884.37' @ 12.05 hrs Surf.Area= 906 sf Storage= 707 cf

Plug-Flow detention time= 265.4 min calculated for 0.092 af (98% of inflow)
 Center-of-Mass det. time= 252.1 min (1,059.4 - 807.4)

Volume	Invert	Avail.Storage	Storage Description
#1	883.00'	3,253 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
883.00	155	0	0
884.00	675	415	415
885.00	1,300	988	1,403
886.00	2,400	1,850	3,253

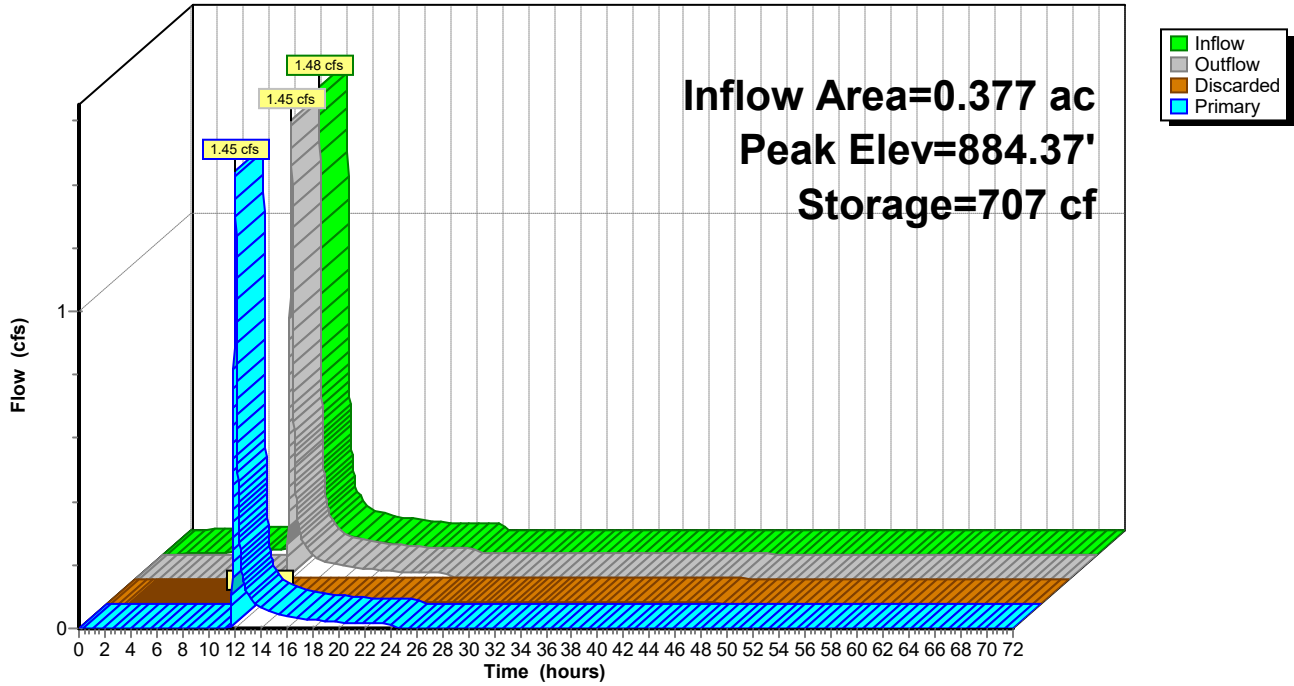
Device	Routing	Invert	Outlet Devices
#1	Primary	884.20'	Custom Weir/Orifice, Cv= 2.62 (C= 3.28) Head (feet) 0.00 0.80 Width (feet) 6.00 10.00
#2	Discarded	883.00'	0.300 in/hr Exfiltration over Surface area from 883.00' - 884.20' Excluded Surface area = 155 sf

Discarded OutFlow Max=0.00 cfs @ 11.77 hrs HW=884.21' (Free Discharge)
 ↑**2=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=1.44 cfs @ 12.05 hrs HW=884.37' (Free Discharge)
 ↑**1=Custom Weir/Orifice** (Weir Controls 1.44 cfs @ 1.33 fps)

Pond 3P: INFILTRATION BASIN A

Hydrograph



Summary for Pond 4P: INFILTRATION BASIN B

Inflow Area = 0.737 ac, 19.05% Impervious, Inflow Depth = 2.75" for 100-yr event
 Inflow = 3.01 cfs @ 12.00 hrs, Volume= 0.169 af
 Outflow = 0.98 cfs @ 12.14 hrs, Volume= 0.142 af, Atten= 67%, Lag= 8.5 min
 Discarded = 0.01 cfs @ 12.02 hrs, Volume= 0.046 af
 Primary = 0.97 cfs @ 12.14 hrs, Volume= 0.096 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 885.69' @ 12.14 hrs Surf.Area= 3,218 sf Storage= 3,197 cf

Plug-Flow detention time= 603.1 min calculated for 0.142 af (84% of inflow)
 Center-of-Mass det. time= 526.0 min (1,337.7 - 811.7)

Volume	Invert	Avail.Storage	Storage Description
#1	884.30'	8,301 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
884.30	1,375	0	0
885.00	2,250	1,269	1,269
885.50	3,040	1,323	2,591
886.00	3,500	1,635	4,226
887.00	4,650	4,075	8,301

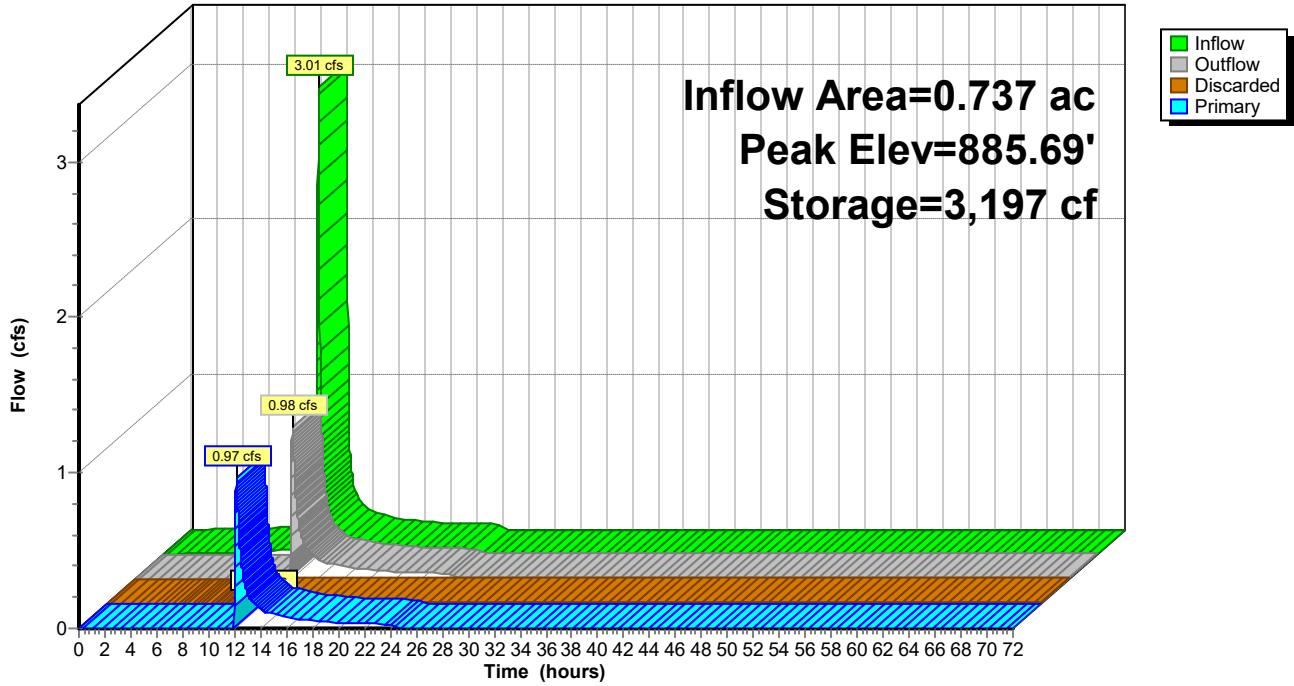
Device	Routing	Invert	Outlet Devices
#1	Primary	885.50'	Custom Weir/Orifice, Cv= 2.62 (C= 3.28) Head (feet) 0.00 0.50 Width (feet) 3.00 6.00
#2	Discarded	884.30'	0.300 in/hr Exfiltration over Surface area from 884.30' - 885.50' Excluded Surface area = 1,375 sf

Discarded OutFlow Max=0.01 cfs @ 12.02 hrs HW=885.52' (Free Discharge)
 ↑**2=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.97 cfs @ 12.14 hrs HW=885.69' (Free Discharge)
 ↑**1=Custom Weir/Orifice** (Weir Controls 0.97 cfs @ 1.39 fps)

Pond 4P: INFILTRATION BASIN B

Hydrograph



CITY OF RAMSEY LAND USE APPLICATION
TECHNICAL REVIEW FILE

DATE	6/9/17	PROJECT ADDRESS	10-32-25-31-0002, 10-32-25-32-0006, 10-32-25-32-0005
PROJECT. TITLE	COLE ADDITION, SKETCH PLAN REVIEW		
ESCROW #			
DEPARTMENT:	Community Development: Planning Division (Zoning Code)		
TECHNICAL REVIEWER:	Name: Alec Henderson, Planning Intern Phone: (763) 576-4314 Email: AHenderson@ci.ramsey.mn.us		

Sketch Plan Review

We offer the following comments regarding the Sketch Plan submittal for Cole Addition as it relates to the City's Zoning Code. The Sketch plan submittal consists of seven (7) sheets, prepared by LANDFORM dated May 23, 2017.

Planning Staff provides the following comments that require revision for the Preliminary Plat:

Revisions of Sketch Plan Needed for Preliminary Plat

1. Needs legend on each sheet of used symbols.

Sheet C0.1

1. Correct sheet label to match sheet index

Sheet C2.1

1. Legend needed
2. Sidewalk should be provided along the north side of 168th Lane to the new cul-de-sac bulb. The City is willing to discuss cost for the portion of sidewalk outside the boundary of the Property (between Kamacite Street the existing concrete sidewalk).
3. Cul-de-sac to be built to minimum design standards.

Sheet C3.1

1. Need to show tree save fencing and should differentiate line type from silt fence.
2. North east EOF- no easement, can't run water through there.

Sheet C4.1

1. Is existing home connected to utilities? Show stubs.

Staff provides the following comments for general review of applications:

General. The Sketch Plan proposes to re-plat the following legally described land into eight (8) lots:

PID #s: 10-32-25-320005, 10-32-25-32-0006 and 10-32-25-31-0002).

The proposed subdivision is bordered by 168th Avenue NW along the existing south property line and existing residential developments along all other property lines. The plan is proposing access to six (6) of the new lots by the extension of 168th Lane NW. The existing home and Lot 4, Block 2 will retain access on 168th Avenue NW.

The Sketch Plan is being reviewed under the R-1 Residential (MUSA) standards.

Lot Sizes. The minimum lot size in the R-1 Residential (MUSA) District is 10,800 square feet with a minimum lot width of 80 feet (90 feet for corner lots), measured at the building setback line. City ordinance now also requires that each lot have an area sixty (60) feet wide by one hundred (100) feet deep not encumbered by wetland, wetland setback area, floodway, or other unbuildable areas. Note that lot width is measured at the property line abutting a street at the minimum setback line of the applicable zoning district.

Setbacks and Dimensional Standards.

MUSA	
Required	Proposed
Front yard: 30 feet	30 feet
Side yard uninhabitable: 6 feet	6 feet
Side yard habitable: 10 feet	10 feet
Side yard corner lot: 30 feet	N/A
Rear yard: 30 feet	30 feet
Minimum lot width*: 80 feet/corner lot 90 feet	80 feet
Lot depth**: 100 feet with a minimum width of 60 feet	Not shown
Wetland/Stormwater Pond: 16.5 feet	Not shown

**Note: Minimum Lot Width is measured at front yard setback line, property must abut built street.*

*** Lot depth required is 100 feet for a width of 60 feet that is not encumbered by wetland, wetland setback area, floodway, or other unbuildable areas.*

Density: The R-1 Residential regulations for the MUSA area allows a net density of up to 3 units per acre (excluding wetlands and major road rights-of-way). The proposed density is calculated to be 3 units per acre.

Floodplains. There are no floodplains in the project area.

Wetlands: There do not appear to be any wetlands on the Property.

Landscaping: Each lot is required to have two (2) front yard trees installed. The plan currently does not show new proposed trees, but the plan narrative indicates that 27.25 inches of newly planted trees are required due to the number of significant tree inches being removed (exceeds threshold). Deciduous trees shall be at least one (1) inch in diameter and coniferous trees shall be at least five (5) feet in height. Each lot is subject to the City’s topsoil requirement.

The Tree Inventory and Protection Plan show the total number of (DBH) inches removed and total number of (DHB) inches saved.

There are no oaks present in the tree inventory.

Density Transitioning: As proposed, the development is not subject to the density transitioning standards based on the zoning of the adjacent properties.

Streets and Access: The proposed Sketch Plan shows the extension of 168th Lane NW into a temporary cul-de-sac. The cul-de-sac shall be built to comply with the minimum design standards in City Code. The proposed subdivision is bordered by 168th Avenue NW along the existing south property line and existing residential developments along all other property lines. The plan is proposing access to six (6) of the new lots by the extension of 168th Lane NW, which would comply with allowable cul-de-sac length. Lots 4 and 5, Block 2 will be accessed from 168th Avenue Northwest.

Sidewalks: Sidewalk will be required along the north side of 168th Lane NW to the new cul-de-sac bulb. A portion of this sidewalk would extend beyond the boundaries of the Plat to connect back to Kamacite St NW. The City is open to discussing cost allocations for that portion of sidewalk.

Utilities and Municipal Services: All new lots will be serviced with municipal utilities. The plans must show the existing utility stubs for the existing house and clearly show that the existing home will connect to municipal utilities as part of this project.

Grading and Drainage Plans: A permit from the LRRWMO will be required. There is a significant drainage easement over a portion of the Property that is proposed to be vacated. While a memorandum has been prepared outlining how this drainage will be accounted for, Staff has not had sufficient time to review that data in great detail. Addressing this drainage issue will need to be resolved for this project to move forward.

The lower floor of each home must follow LRRWMO rules. Lowest floor must be at least three (3) feet above the water table, two (2) feet above the 100-year event, and one (1) foot above emergency overflow. Distance from ground water must be verified. See engineering review for more detailed grading and drainage comments.

Development Fees: Development Fees will be due with the Plat including, but not limited to, Park Dedication, Trail Development, Storm water Management, Trunk Water and Trunk Sanitary Sewer, and Lateral Benefit Charges for Sewer and Water (only applicable for Lots 4-5, Block 2). These fees are collected at the time the Final Plat is recorded and at the rate in effect when the final plat is recorded.

Development Agreement: An executed Development Agreement will be required prior to releasing the plat for recording. An engineer's estimate for public improvements will be required with the submitted final plat

Miscellaneous: Temporary construction easements will be needed from the property owners of the lots where the existing cul-de-sac will be removed. See engineering review for more detailed comments.

Special Planning Commission

5. 2.

Meeting Date: 06/12/2017

Submitted For: Tim Gladhill, Community Development

By: Eric Maass, Community Development

Information

Title:

Consider Sketch Plan Review for Northfork Meadows Located Near Puma Street and Alpine Drive; Case of Paxmar (Project #17-126)

Purpose/Background:

The purpose of this case is to review a sketch plan for a 149 lot subdivision (56 detached single-family lots with 65 foot wide lots, and 93 detached townhome lots).

A Sketch Plan affords the Planning Commission the opportunity to review a project before it enters the official Preliminary Plat stage. The Preliminary Plat (future step) is the most important step in the review process and gives the project 'entitlement' to the project.

Please note that the request requires a Comprehensive Plan Amendment. The City can approve said amendment, but is not obligated to approve said amendment. The City has discretion on how to move forward with the request.

Notification:

Staff attempted to notify all Property Owners within 700 feet of the Subject Property of the Sketch Plan Review.

Observations/Alternatives:

There are a number of layers to the review of this project. Please see the attached review letter for specific review. Topics include, but are not limited to, the following:

- Comprehensive Plan Amendment
- Compliance with Zoning and Subdivision Code

In this case, Sketch Plan Review is a critical path for this project given that a Comprehensive Plan Amendment is required. There is known opposition to the project. The project also appears to have a level of support as well. There is not strong consensus in either direction. Staff needs Planning Commission direction in order to respond to the request. At this time, Staff can only layout pros and cons to the project.

Pros

- Additional residential units/tax base/demographics for retail growth.
- Completion of Puma Street concurrently to existing project (Riverstone Addition/Bunker Lake Industrial Park).
- Potential for a quality residential project. Potential to be similar to adjacent project that has existing support from community.
- Manages growth of community into strategic locations (concentrate development near The COR, preserve rural residential areas in other areas identified in the Comprehensive Plan).
- Perceived diversification of builders for sustained growth.

Cons

- Weaker density transitioning than previously planned.
- Not consistent with Comprehensive Plan that was confirmed after public engagement process in 2013, refreshed in 2016.
- Known/assumed opposition from neighboring property owners.
- Extends risk to City related to cost-share of Puma Street construction.

- Perceived saturation of product type in small geographic area.

Funding Source:

All costs associated with processing the Application are the responsibility of the Developer.

Recommendation:

Staff does not have enough policy direction at this time to make a formal recommendation. Staff will need policy direction pertaining to the Comprehensive Plan Amendment before being able to respond further to the request.

Staff would recommend that the proposed development be modified to increase depth and width of lots on western border with existing residential if the Planning Commission does direct the Developer to move forward with Preliminary Plat.

Action:

No action required. Provide feedback on the overall project prior to Preliminary Plat review, specifically to the Comprehensive Plan Amendment increasing density from Low Density Residential to Medium Density Residential.

Attachments

Site Location Map

Northfork Meadows Sketch Plan

Northfork Meadows Sketch Plan

Planning Staff Review Letter

Adjacent Project Context Map

Developer Narrative

Letters of Support

Letters of Opposition

Form Review

Inbox

Tim Gladhill

Form Started By: Eric Maass

Final Approval Date: 06/09/2017

Reviewed By

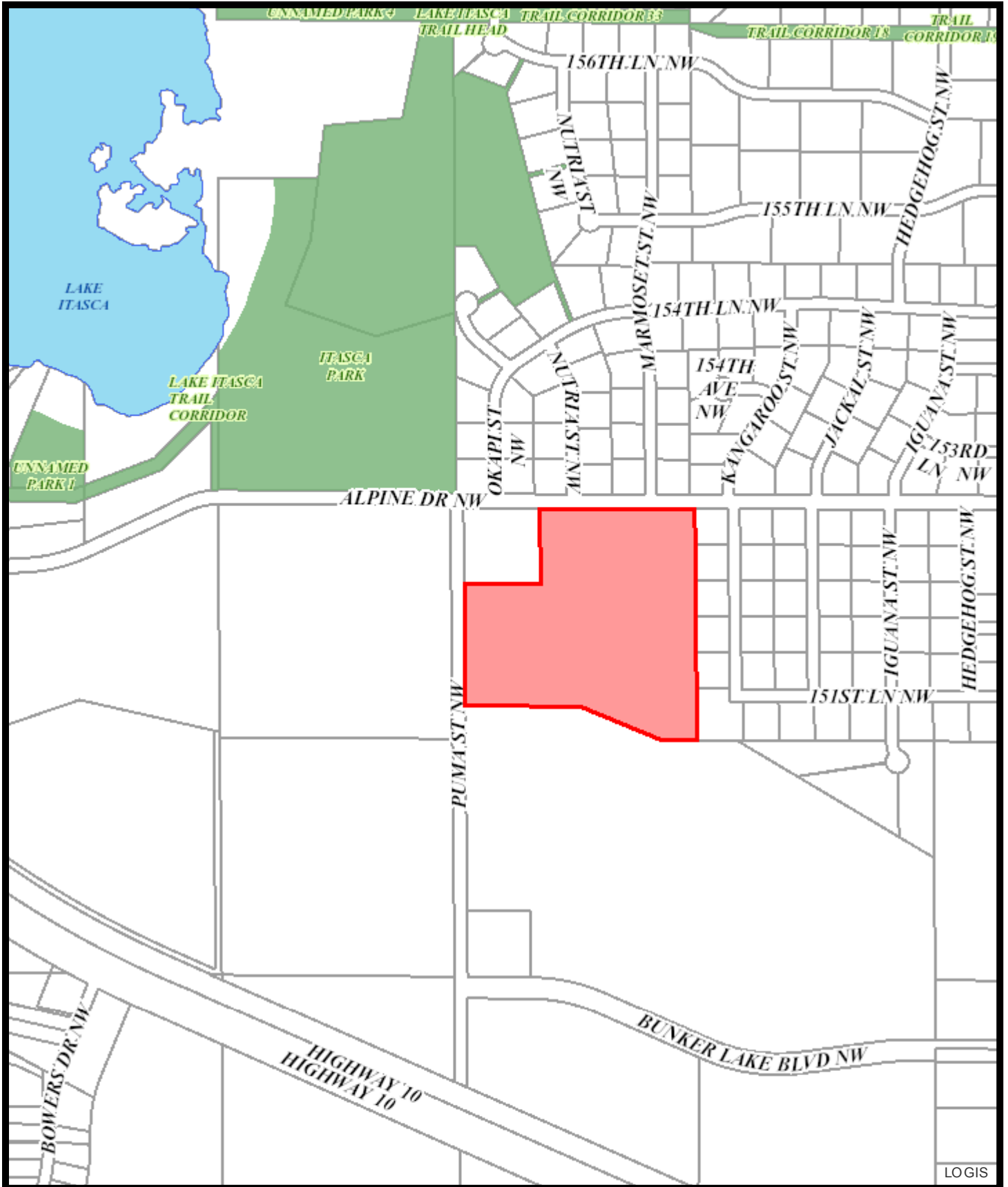
Tim Gladhill

Date

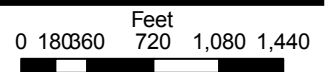
06/09/2017 02:28 PM

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Site Location Map

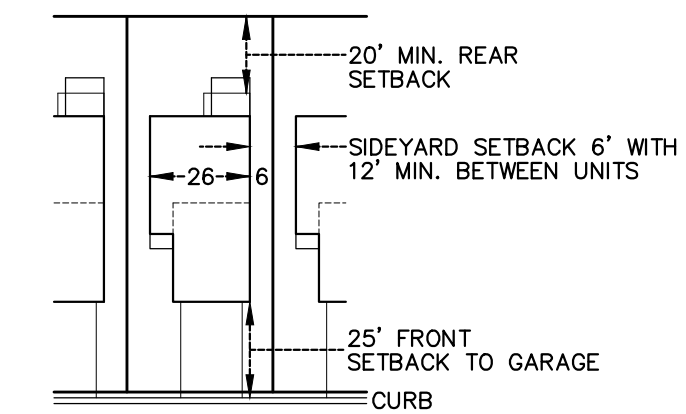


LOGIS

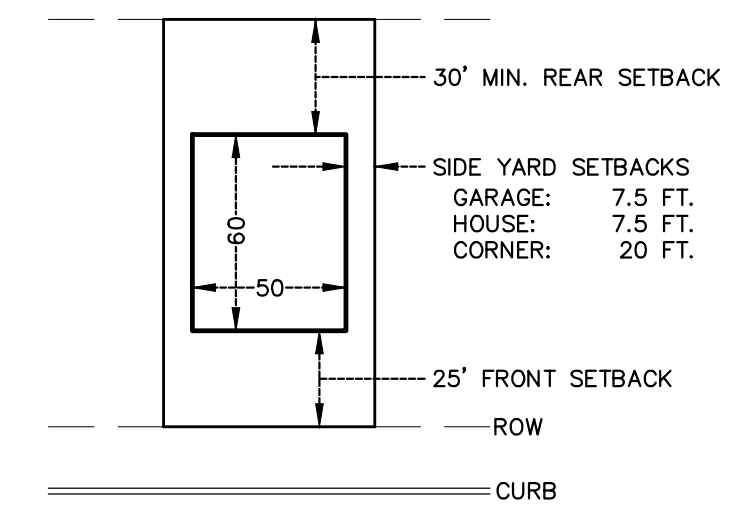




DETACHED TOWNHOME DETAIL



65' LOT DETAIL



LEGAL DESCRIPTION

Outlot A and part of Outlot C, ALPHA DEVELOPMENT, Anoka County, Minnesota
 (Outlot C legal description subject to change at a future date.)

NOTES

- 1) No field work has been completed at this time.
- 2) Subject property address – Southeast quadrant of Puma Street & Alpine Drive NW, Ramsey, MN 55303.
- 3) Topography shown is LIDAR which was provided by the Minnesota Department of Natural Resources.
- 4) Boundary and wetlands shown taken from ALTA/NSPS LAND TITLE SURVEY prepared by Anderson Engineering, dated September 28, 2016.
- 5) No Title Work has been furnished for this survey, property is subject to all easements of record, if any.

SITE DATA

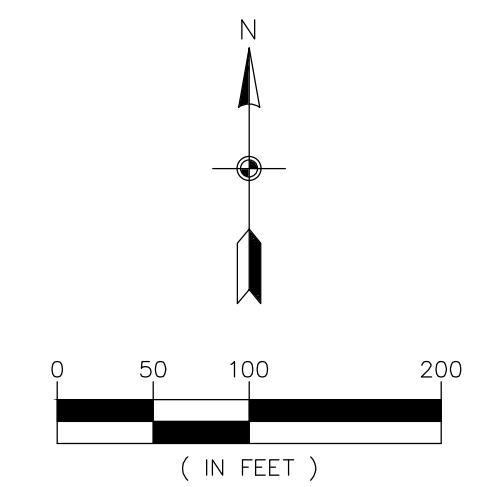
TOTAL BOUNDARY AREA \pm 33.5 AC.
 TOTAL NUMBER OF LOTS 149
 65 FT. LOTS 56
 DETACHED TOWNHOME LOTS 93
 NET DENSITY 5.22 LOTS/AC
 (EXCLUDES ROW AND WETLAND)

65ft. BUILDING SETBACK DATA

FRONT: 25 FT.
 SIDE: 7.5 FT.
 REAR: 30 FT.
 CORNER: 20 FT.

DETACHED TOWNHOME SETBACK DATA

FRONT: GARAGE 25 FT.
 SIDE: 6.0 FT.
 REAR: 20 FT.
 CORNER: 20 FT.



CONCEPT PLAN

NORTH FORK MEADOWS
 Ramsey, Minnesota

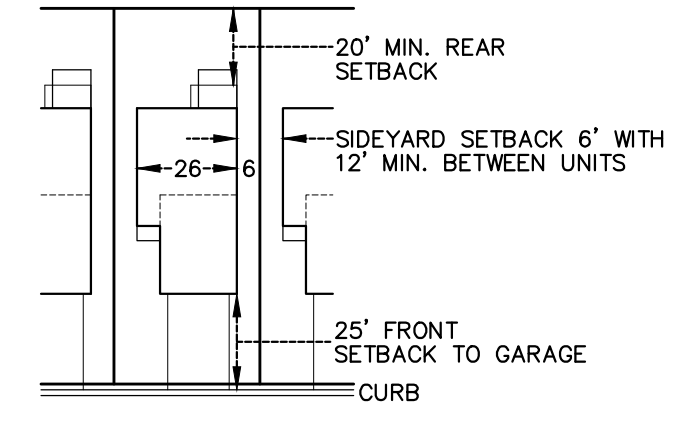
PAXMAR
 3495 Northdale, Suite 210
 Coon Rapids, Minnesota 55448

REVISIONS

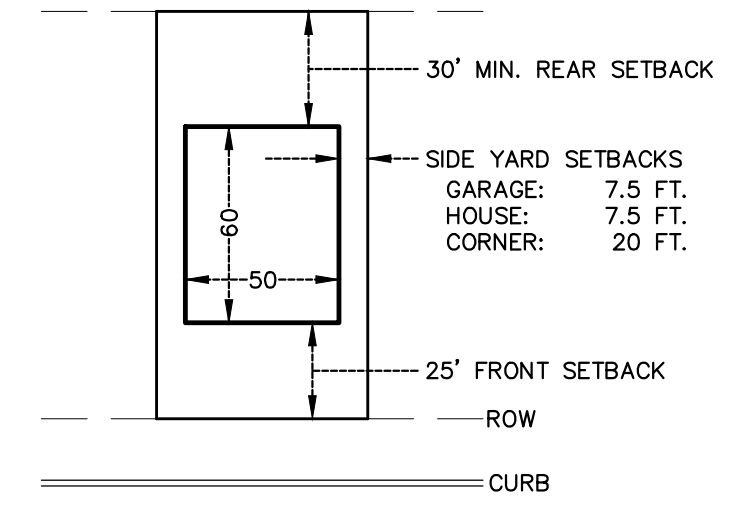
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6.	
DRAWN BY:	C#
ISSUE DATE:	06/03/17
FILE NO:	XXX



DETACHED TOWNHOME DETAIL



65' LOT DETAIL



LEGAL DESCRIPTION

Outlot A and part of Outlot C, ALPHA DEVELOPMENT, Anoka County, Minnesota
 (Outlot C legal description subject to change at a future date.)

NOTES

- 1) No field work has been completed at this time.
- 2) Subject property address – Southeast quadrant of Puma Street & Alpine Drive NW, Ramsey, MN 55303.
- 3) Topography shown is LIDAR which was provided by the Minnesota Department of Natural Resources.
- 4) Boundary and wetlands shown taken from ALTA/NSPS LAND TITLE SURVEY prepared by Anderson Engineering, dated September 28, 2016.
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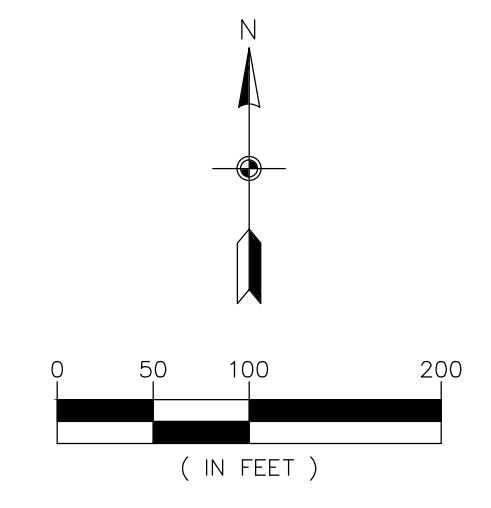
TOTAL BOUNDARY AREA ±33.5 AC.
 TOTAL NUMBER OF LOTS 149
 65 FT. LOTS 56
 DETACHED TOWNHOME LOTS 93
 NET DENSITY 5.22 LOTS/AC
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FRONT: GARAGE 25 FT.
 SIDE: 6.0 FT.
 REAR: 20 FT.
 CORNER: 20 FT.



CONCEPT PLAN

NORTH FORK MEADOWS
 Ramsey, Minnesota

PAXMAR
 3495 Northdale, Suite 210
 Coon Rapids, Minnesota 55448

REVISIONS

1.	
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3.	
4.	
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DRAWN BY: C#
 ISSUE DATE: 05/26/17
 FILE NO: XXX

**CITY OF RAMSEY LAND USE APPLICATION
TECHNICAL REVIEW FILE**

DATE	6/8/17	PROJECT ADDRESS	SOUTH OF ALPINE DRIVE AND EAST OF PUMA STREET
PROJECT. TITLE	NORTHFORK MEADOWS (SKETCH PLAN)		
PROJECT #	17-126		
DEPARTMENT:	Community Development – Planning Division		
TECHNICAL REVIEWER:	Name: Eric Maass, Planning Consultant Phone: 763-433-4306 Email: EMAass@wsbeng.com		

We offer the following comments regarding your land use application. This sketch plan phase is a conceptual review that focuses on layout and general development standards, but not detailed grading, stormwater, and utility review.

Comprehensive Plan

Action Item: Comprehensive Plan Amendment required to change areas of Low Density Residential to Medium Density Residential

As currently proposed the concept would not meet the requirements of the existing land use designation of “Low Density Residential”. It would fall more in line with the “Medium Density Residential” land use designation. The Comprehensive Plan defines Medium Density Residential as areas that are within the MUSA and intended to receive medium density housing including lower density multi-family housing and higher density single-family housing. Average density will be 6 units per acre [Zoning Code allows for range of 3 – 6 units per acre].

The fact that the project requires an amendment to the Comprehensive Plan and Planned Unit Development affords the City certain discretion in approving/not approving the project.

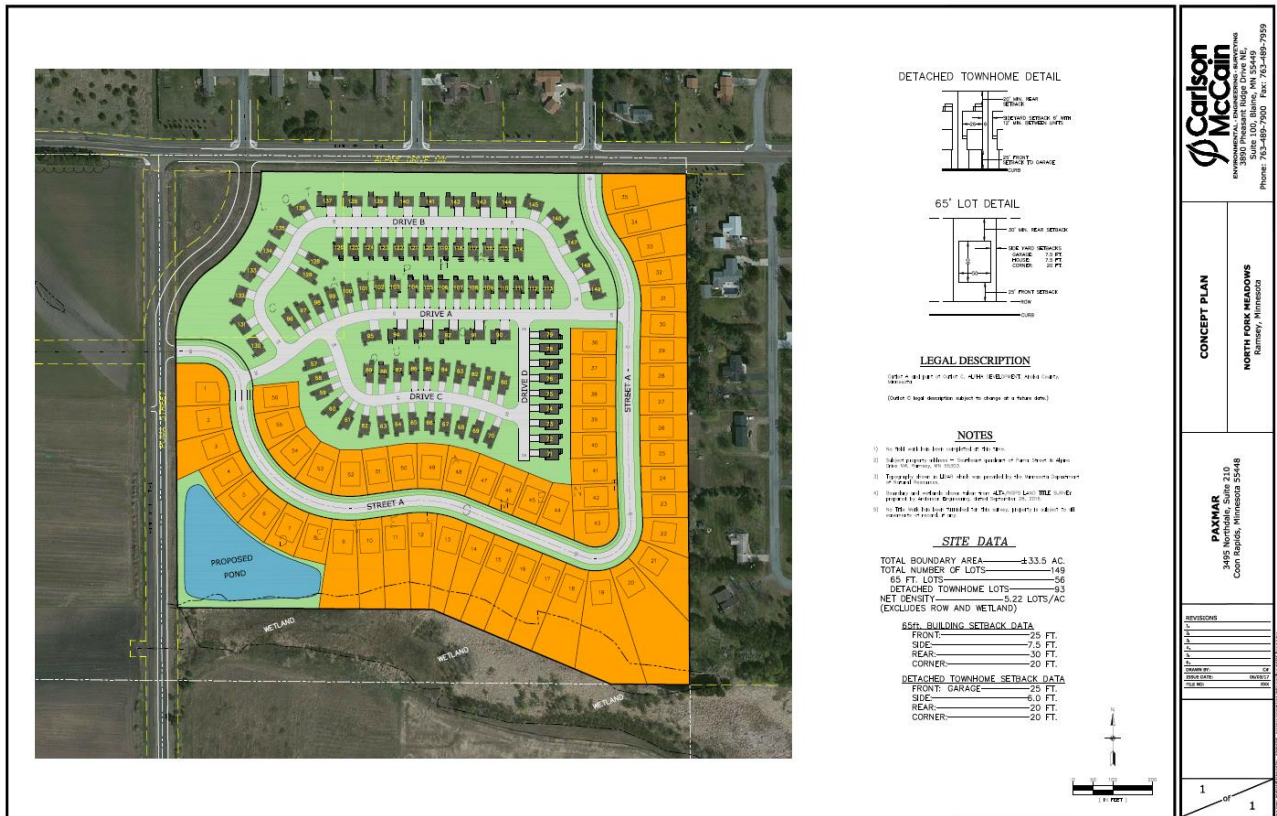
Permitted Uses

Action Item: Zoning Amendment required to be consistent with Comprehensive Plan Amendment noted above.

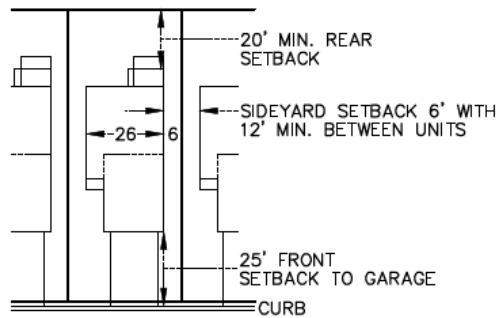
The sketch plan as presented generally fits under the standards of the R-2 Residential District (this district implements the Medium Density Residential (MDR) designation of the Comprehensive Plan. The intent of the R-2 Residential District is to accommodate multiple dwellings at a density of three to seven dwelling units per acre and multiple-dwelling complexes within the 2020 MUSA. All lots created by subdivision located within the 2020 MUSA shall be serviced by sanitary sewer and municipal water. However, there are multiple residential types

within the proposed project that make it difficult to apply one single zoning district to the project. Please note that one of the City's goal is to provide a variety of housing options for people at all life stages and income levels to encourage existing and future residents to stay in Ramsey throughout their lives and to achieve a balanced housing supply. One strategy identified in the Comprehensive Plan to achieve this is to continue to develop more affordable single family housing such as small-lot single family homes. The two (2) different types of housing proposed within the project include:

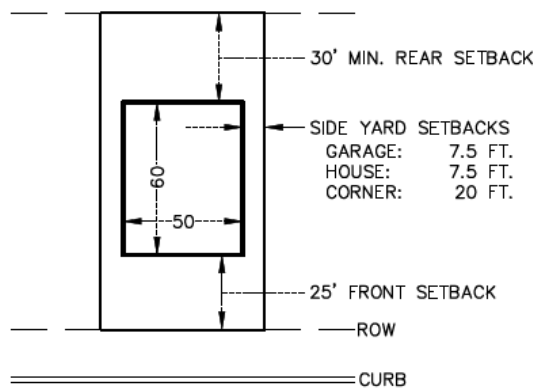
1. 65-foot-wide detached single family lots
2. Detached townhome lots



DETACHED TOWNHOME DETAIL



65' LOT DETAIL



Traditional Single-Family/Small-Lot Single Family Lots (65 foot width)

Detached single-family lots are traditionally guided by the R-1 Residential District. However, the minimum lot width is 80 feet. The City has on multiple occasions allowed this style of development through the PUD process. Most recently, this was utilized for the Villages of Sunfish Lake Development (mid-2000s). These proposed 65 foot wide single family units do not meet the specific definition of detached townhomes in the R-2 Residential District. If a public benefit can be identified, a Planned Unit Development (PUD) zoning may be an appropriate tool

Layout

The following design standards are required for the various housing types proposed within the development. Please note that due to the variety of housing types, it is difficult to apply a single-set of layout standards to the project.

Single Family Detached (R-1)

Miscellaneous Standards	Single Family Lots
Lot size	10,800 square feet
Maximum density (net)	3.0
Lot width	80 feet / corner lot 90 feet
Front yard setback	30 feet
Side yard setback (uninhabitable)	6 feet
Side yards setback (habitable)	10 feet
Rear yard setback	30 feet
Maximum lot coverage	35%
Maximum building height (measured from mean ground level to mean gable)	35 feet
Accessory structure setback (measured from the development boundary line)	30 feet

The known deficiencies are identified by yellow highlighting. The Applicant indicated on the sketch plan a net density of the overall proposed development to be 5.22 lots per acre.

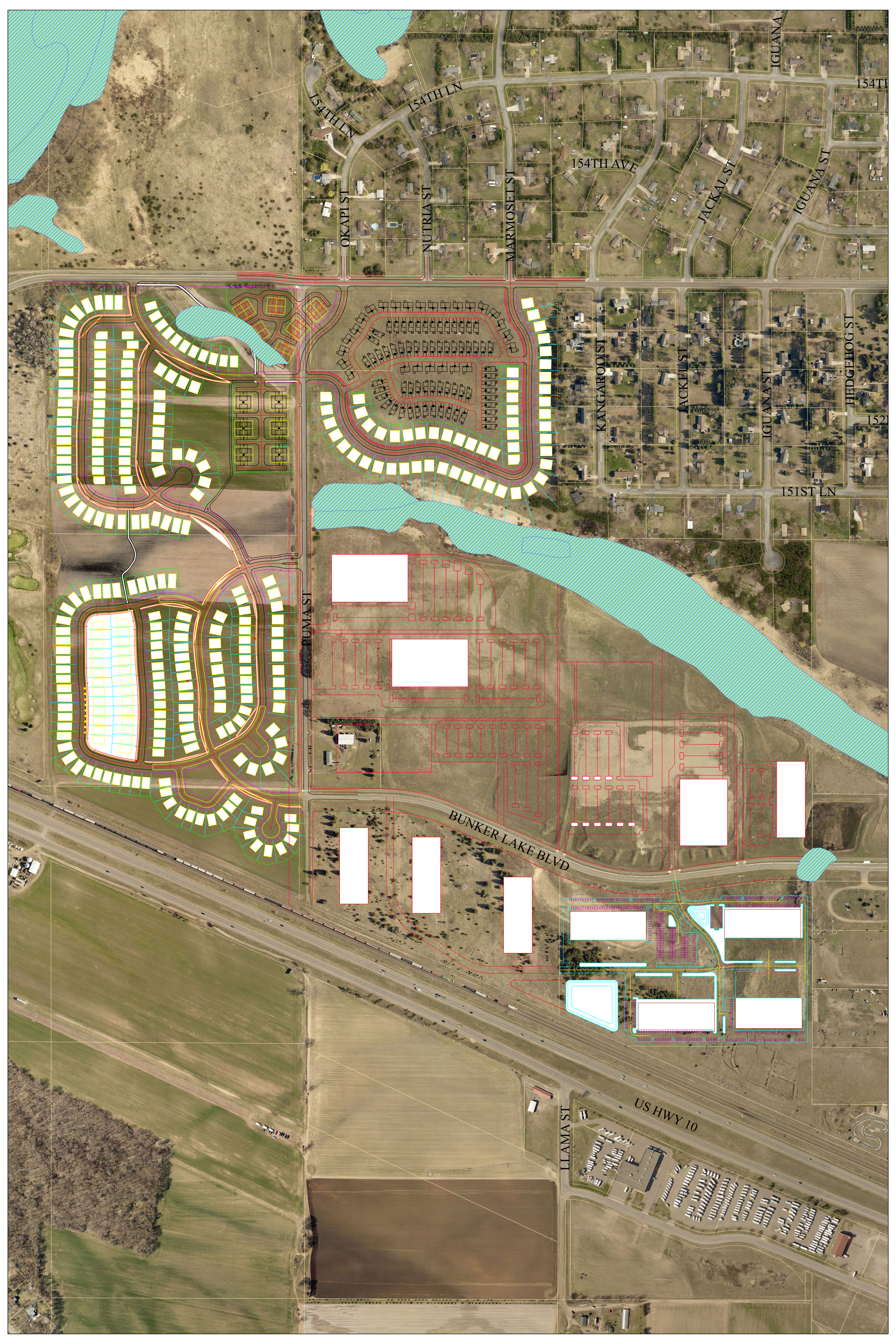
Detached Townhome Units (R-2 Residential)

Miscellaneous Standards	Attached and Detached Townhomes
Lot size	None
Minimum density (net)	3.0
Maximum density (net)	7.0
Lot width	None
Building setback from public street ROW	25 feet
Building setback from private street ROW	25 feet
Building setback from exterior development boundary line	30 feet (25 feet detached)
Minimum separation between buildings, including any appurtenances thereto (i.e., patios, decks)	20 feet (15 feet detached)
Maximum lot coverage for all principal and accessory buildings (excludes impervious or prepared surface)	35%
Maximum building height (measured from mean ground level to mean ground gable)	35 feet
Accessory structure setbacks:	
Front	30 feet or same as principal structure, whichever is greater
Rear	5 feet
Side	6 feet
Side corner	30 feet
Open space required	40% general open space 10% of which must be identifiable community space

The known deficiencies are identified by yellow highlighting. The Applicant indicated side yard setbacks of 6 feet, which when combined with an adjoining lot would only show 12 feet of separation.

Street Widths and Design

The sketch plan proposes both public and private streets within the development. The public streets are shown to have a right-of-way width of 60 feet (actual road width unknown) and the private streets are shown at a total width of 28 feet. The proposed street widths for private roads meet the requirements of the R-2 zoning district with parking permitted on one side of the street. It is unclear if the public roads meet city standards as the road widths were not explicitly identified.



154TH LN

154TH LN

154TH AVE

OKAPI ST

NUTRIA ST

MARMOSET ST

IGUANA ST

154TH LN

JACKAL ST

IGUANA ST

PUMA ST

KANGAROO ST

JACKAL ST

IGUANA ST

HEDGEHOG ST

152TH LN

151ST LN

BUNKER LAKE BLVD

LLAMA ST

US HWY 10

Paxmar Recommendations for City Support of Northfork Meadows Addition

The following talking points were provided by the Developer of Northfork Meadows (Paxmar) as suggestions for supporting a change to the Comprehensive Plan Amendment from Low Density Residential to Medium Density Residential.

Please note that City Staff does not necessary support nor endorse each of these items. City Staff is avoiding responding to each of these talking points to avoid a loop of 'point/counter-point'.

Reasons city should consider approval:

1. Have a developer who is willing to pay almost 60% up front for overall projected costs of Puma extension (total estimated costs puma street extension \$1.4 million- developer portion \$800,000). [Staff note: this cost-share agreement has not been reviewed by the City Council. It would still obligate the City to certain future expenses.]
2. Plan increases density, which will increase long-term tax revenue.
3. Not feasible to develop under straight [Low Density Residential/R-1 Residential District].
4. Plan fits to area- Not a lot of amenities to area and is basic flat field located next to business park to south, multi- family to west, busy street to north and single family to east.
5. Would increase rooftops to attract commercial/business users in new business park and existing COR.
6. Give community more choices on housing stock for area and not limit to [one] builder.
7. Decrease city exposure of failure to [recoup] fees by allowing multiple builders/product being built.
8. Finishes entire area with least amount of prolonged roads under construction.
9. Shows strong support to business leaders that city's growth is important- lots of housing options for workforce.
10. Would give city a surge of cash with lots of [fees], [Sewer Availability Charge (SAC) and [Water Availability Charge (WAC)] fees being paid. [Staff note: the goal for the City is not to maximize collection of fees. Fees are being collected to offset impacts of development and to pay for infrastructure needed to serve the proposed development. Staff would recommend that this not be a finding to support the request.]



6701 W 23rd St
St Louis Park, MN 55426
952-544-1561

June 2, 2017

City of Ramsey
7550 Sunwood Drive NW
Ramsey, MN 55303

Att'n: ✓ Tim Gladhill, Community Development Director
Patrick Brama, Economic Development Manager/Ass't City Administrator

Re: Paxmar/Hageman site
Our support for the development with higher density

Hi Tim and Patrick,

Thanks again for your time in our March meeting to discuss the progress of development in the City of Ramsey. It furthered my understanding of the value our parcel may add for all parties.

It has come to my attention of another proposed residential development on the Hageman property near our parcel on Armstrong Blvd and Bunker Lake Blvd. I want to express my support **for** this residential development. The R-1 zoning should be changed to allow for a higher density for this Hageman parcel.

It fits well with the City of Ramsey to have higher density residential development near the City center, which supports further retail business development. Such development provides a sound property tax base, strengthen the ability for commercial/retail establishments to locate in the area with a stable property tax base. The vehicular traffic generated from this site to Highway 10 via Bunker Lake Blvd and Armstrong Blvd is not an issue for our parcel, and will most likely be considered a benefit for the business(s) that ultimately locate on our site.

Again, I **support** the higher density residential development as represented for the Paxmar/Hageman site.

Feel free to contact me with any questions or concerns. I will continue to keep you informed as we proceed with the sale of our parcel.

Sincerely,



Scott A. Weicht
President

Enclosures

cc: David Adolfson, Jr.
Alan Roessler, Paxmar

Rodney A Lee
City of Ramsey Commercial Property Owner

Tim Gladhill
Community Development Director
City of Ramsey
7550 Sunwood Dr. NW
Ramsey, MN 55303

Mr. Gladhill,

The basis of this letter is to show support for the proposed development by Paxmar. As a property owner, I see many benefits to the City, Residents and Businesses.

The proposed development has multiple housing styles and price points. A variety of housing product types and builders in the community will be a great draw to potential buyers/residents. Ramsey has many great attributes and an increased housing stock seems to be needed to meet demand. The proposed development has a bit more density than the R-1 zoning, but it fits the location. A development with multiple housing types would complement not only the existing Single Family to the east, but the business park to the south, busy Alpine Road to the north, and proposed multifamily to the west.

Along with a higher density, also comes an increase in City fees and property tax revenues. With the City having a per lot/unit fee structure, every additional unit means increased fee revenue. The tax valuation will also be higher with the increased density, leading to more property taxes.

The proposed development would also speed up the Puma Street project. Any reductions in the amount Puma is under construction should be welcomed by the City.

All in all, the proposed development seems like a great fit for the location and I urge the City representatives to approve the project.

Sincerely,



Rodney A Lee
Broker/Owner
Premier Commercial Properties



May 25, 2017

Tim Gladhill
Community Development Director
City of Ramsey
7550 Sunwood Dr. NW
Ramsey, MN 55303

Mr. Gladhill,

We are writing this letter to ask your support for the development proposal by Paxmar that will be discussed at the Planning Commission meeting on June 1, 2017.

As a large land owner in Ramsey, I'd like to urge the City Council to consider the development proposal by Paxmar in a favorable manner. Paxmar's proposal will provide a variety of housing types and increase the tax base for City of Ramsey while improving the Puma St/Alpine corridor. Hageman Holdings has worked with the City providing flexibility to zoning and improvements in the Bunker Lake/Puma corridor to support growth. The proposed density increase, we feel, fits into the overall growth vision of Hageman Holdings and City of Ramsey.

As a business owner, I know we look favorable on a community that has a growing variety of housing stock. It is not only valuable from a workforce point of view, but also addition potential customers. The City of Ramsey has invested a large amount of money into the business park and COR areas which by approving this housing project will do nothing but help these areas grow and thrive.

Additional reasons for the support of the PAXMAR development include:

Puma Street extension:

The Puma Street extension is an estimated \$1.4 million-dollar project. Paxmar is willing to pay 60% of that cost, reducing the City and adjacent landowners share of the project.

City Fee/ Tax Revenue:

The proposed plan will increase the density of the site. This will, in turn, increase the amount of fees the city will collect from the normal building process. It will also increase the tax base and tax revenue the City gets on a yearly basis.

Surrounding Area:

The site has certain aesthetic limitations. It is a mostly flat field abutting to a future Business Park to the South, Multi-family to the West (Capstone proposed increased density), Alpine Drive to the North, and Single family to the East. There is little to no elevation changes and very marginal tree cover. The diversified housing of single family and detached townhomes is a good fit for its surrounding.

Variety of Housing Price Points:

Per Minnesota Housing Finance Agency, Median home prices in the Twin Cities Metro area are \$245,000. The community needs for sale housing at affordable prices and a portion of this plan would be directed at those types of products. It also has a product for a traditional "move-up" buyer.

Roof Tops:

An increase of housing activity is sure to bring additional interest for the commercial/business park/COR retail developments in the City of Ramsey. Housing for workers and additional customers are very important for prospective offices/businesses and increasing the retail business like restaurants.

Builder Diversity:

Having additional builders in the community will help the buyers considering purchasing in Ramsey by offering multiple choices and price points. Only having 1 builder in this corridor may hamstring the city by artificially delaying development of multiple parcels.

Pace of development:

This proposal would finish the area with the least amount of prolonged road construction and all work would be completed at the same time. Opening Puma street multiple times for varying lengths of time is not beneficial to surrounding residents or businesses and increases the overall costs to parties involved.

Business Support:

Giving the proposal approval would be a strong sign of support to business leaders of the community, showing Ramsey's commitment to a growing work force and customer base.

The potential for this development to also decrease the City's contribution to the Puma Street project should not be overlooked. If Paxmar is willing to go above and beyond 50% of the cost, it should be seriously considered by the City, not to mention that more infrastructure around adds value and interest to the surrounding properties.

Development is needed in this part of the City. More building will mean more interest, demand, and value of the surrounding properties. If you would like to further discuss please let us know.

Best Regards,

A handwritten signature in black ink, appearing to read "Michael Altimari", with a long horizontal flourish extending to the right.

Michael Altimari

Executive Director of Campus Development
Hageman Holdings, LLC



May 25, 2017

Tim Gladhill
Community Development Director
City of Ramsey
7550 Sunwood Drive NW
Ramsey, MN 55303

Dear Tim –

We have reviewed the Paxmar concept plan on the Hageman property, located at the southeast corner of Alpine Drive and Puma Street. Although we favor residential growth in this area of Ramsey, we cannot support the concept plan in its current configuration. It seems this layout was completed with sole purpose of maximizing the number of units, without regard for good land planning or thoughtful growth for the City. The current City zoning of this parcel is R1, but the concept shows twice that number of units. These units are very small compared to R1 standards and do not fit the character of the existing single family homes, adjacent to the site.

If a plat were to be brought forward using the R1 zoning standards currently in place, it would present a great opportunity for success in the current marketplace; very similar to the success we are seeing in the Brookfield neighborhood. Not only would R1 housing be a complement to the existing neighborhood, it would also balance nicely with the residential lots in the Riverstone neighborhood offering a wider range of home styles for those seeking to purchase a new home in Ramsey. This would allow the City's current zoning plan to be implemented according to current policy.

Typically, R1 single family lots (80' wide) on a standard parcel of land will produce 2.3 units per acre gross. Paxmar's proposal is requesting a density of 4.5 units per acre and would add 74 additional units on this 33-acre parcel. In comparison, the Riverstone plat is 3.3 units per acre and is zoned mid density. For Paxmar, that would be a significant increase in density that certainly works well for the developer, but doesn't appear to be in the best interest of the overall zoning plan of the City.

For the City, this plan would flood the market with mid density housing, making it increasingly susceptible to market conditions and in turn, pushing home prices down below market levels. The Riverstone plat alone has 293 mid density units, and this concept proposal would add an additional 151 units. 444 mid density units, only separated by a single street.

In addition, we have reviewed the proposal by Paxmar to construct Phase 2 of Puma Street. Simply stated, it seems Paxmar's current proposal to build the Puma Street infrastructure is being offered in return for the developer receiving 74 additional units through rezoning.

It is our request that the City follow the current zoning plan and require R1 housing units on this parcel of land. We are happy to discuss this further, and it is our goal to create the strongest possible land use plan for this area of Ramsey.

Sincerely,

Stephen A. Bona
Vice President of Land Development

Capstone Homes, Inc.
14015 Sunfish Lake Blvd NW, Suite 400
Ramsey, MN 55303
Office: (763) 427-3090 Fax: (763) 712 -9060

Tim

We as the city of Ramsey put a lot of work and money into developing the Comp Plan and we feel it needs to remain as it is and would not like to see it amended.

We as a [border land-owner] would not like to see the mid density that is desired on the Hageman Holdings NW acres on Puma and Alpine instead of the low density that the Comp Plan calls for.

I, Al, personally, when on the City Council, did a lot of work years ago on the Comprehensive Plan so I have a vested interest in the plan and would not want to see it amended.

We as a family 100% support land owners right to develop their own land, but we believe development needs to comply with what fits the area.

Alan Pearson & Family