

City Council Regular Meeting
Tuesday, November 14, 2023 7:00 PM

Hickman Community Center/City Hall 115
Locust Street, Room 128 Hickman, Nebraska

1. Call to Order

1.A. This is an Open Meeting of the Hickman Nebraska Governing Body. The City of Hickman abides by the Nebraska Open Meetings Act in conducting business. A copy of the Nebraska Open Meetings Act is on display in this meeting room as required by Nebraska State Law. Notice of meeting and copies of this agenda have been publicly posted prior to the meeting at the Hickman City Hall, Hickman U.S. Post Office, U-Stop Market and the City of Hickman website.

1.B. Participant Sign-In Sheet Available & Disclosure of Meeting Recording Process Notice Posted.

1.C. Registered Agenda Speakers: All individuals requesting to be Registered Agenda Speakers must fill out a Registered Speaker Card & submit to Recording Clerk. The Mayor or Presiding Meeting Officer reserves the right to deny this request, or will call you to the podium when your agenda Item is ready to be heard. Presentations, if allowed, may be limited to five (5) minutes per person, with a limit of three (3) individuals speaking per topic position. Please come to the podium, and clearly state your name and address for the record and the agenda topic you wish to speak upon in a professional manner. All individuals requesting to hand out documents to City Council Members must deliver them directly to the City Clerk for distribution.

1.D. The City Council may vote to go into Executive Closed Session on any agenda item as allowed by Nebraska State Law. The Governing Body may be excused and re-enter the City Council meeting room at any time after reconvening open session.

2. Pledge of Allegiance

3. Roll Call

4. Mayor Communications

5. Consent Agenda

5.A. Approval of October 24, 2023 & October 27, 2023 City Council Meeting Minutes

5.B. Claims and Accounts Payable Report

6. Proclamations, Presentations, Appointments, Affirmations & Introductions - None

7. Reports
 - 7.A. Lancaster County Sheriff's Office Report
 - 7.B. Community Center Report

8. Public Hearings
 - 8.A. The purpose of the hearing is to provide an opportunity for public comment on a replat of a future developable outlot into buildable lots for three multi-family units, garage unit(s), and outlot(s) in Hickman's municipal limits using 4.28 acres, as shown on the Preliminary Plat for Barber Estates Addition. Legal Description: Tower Ridge Addition, Outlot A, Hickman, NE 68372. Located in the SW ¼ of S27, T8, R7, 6th Principal Meridian, Lancaster County, Nebraska.

 - 8.B. The purpose of the hearing is to provide an opportunity for public comment on a replat of a future developable outlot into lots and outlot(s) in Hickman's municipal limits using 4.28 acres, as shown on the Final Plat for Barber Estates Addition. Legal Description: Tower Ridge Addition, Outlot A, Hickman, NE 68372. Located in the SW ¼ of S27, T8, R7, 6th Principal Meridian, Lancaster County, Nebraska.

 - 8.C. The purpose of the hearing is to provide an opportunity for Public Comment on the City of Hickman's acquisition of land for the expansion of the City's Municipal Wells for the Water Department. Legal Description: The South Half of the Northeast Quarter of Section 15, Township 7 North, Range 7 East of the 6th P.M. Lancaster County, Nebraska.

9. Unfinished Business
 - 9.A. Ordinance 2023-14, Annexation of Wizkidz Addition (2nd Reading)

10. New Business
 - 10.A. Certificate of Payment No. 1 to Midwest Mechanical Industrial Services, LLC for Hickman Water Treatment Plant 2nd Train Project in the amount of \$98,325.00.

 - 10.B. Master Agreement Work Order: Agreement for Professional Services with Olsson for Buel Phase 3 Apartment Complex Addition Power Distribution Design

 - 10.C. Resolution 2023-22, Keno Sales Outlet

- 10.D. Resolution 2022-23, Signing of the Year-End Certification of City Street Superintendent Form 2022
- 10.E. Resolution 2023-24, Barber Estates Addition Preliminary Plat
- 10.F. Resolution 2023-25, Authorizing the Acquisition of Certain Real Property for Municipal Wells, Water Department
- 10.G. Ordinance 2023-15, Final Plat Barber Estates Addition
- 11. City Administrator's Report
- 12. Governing Body Comments & Council Correspondence
 - 12.A. City Office Closed for Thanksgiving Holiday November 23 & 24, 2023
- 13. Meeting Adjournment

MINUTES OF THE HICKMAN CITY COUNCIL MEETING HELD OCTOBER 24, 2023

Mayor Phil Goering called the meeting to order at 7:00 pm on October 24, 2023 and referenced the meeting recording process, optional sign in sheet, and open meeting law posting. All those present stood and recited The Pledge of Allegiance. Council Members Chad Parker, John Meese, Steve Noren, Doug Wagner, Justina Ziemann, and Travis Borchardt were present for Roll Call. Prior notice of the meeting and agenda were provided to the Mayor and all members of the Governing Body. Notice of the meeting was distributed and posted at Hickman City Hall, U.S. Post Office-Hickman, U-Stop Market and the City of Hickman Website.

Mayor Communications - None

Consent Agenda

The City Administrator presented and discussed the October 10, 2023 Meeting Minutes, line-item content of Claims Report, Statement of Accounts, Budget Cash Report, and Monthly Sales Tax Report with the Governing Body. Motion by Council Member Wagner and a second by Noren to approve the consent agenda. The following Council Members voted "YEA": Parker, Meese, Noren, Wagner, Ziemann, and Borchardt. The following Council Members voted "NAY": None. Motion passed 6-0.

Proclamations, Presentations, Appointments, Affirmations & Introductions – None

Reports

The City Administrator presented and discussed the Public Works and Parks and Recreation Department Report, City Code Violations, Abatements, Nuisances and Permits Report, Water Plant Improvements Update, and Wastewater Plant Improvements Update. Motion by Council Member Noren and a second by Ziemann to approve Reports Agenda. The following Council Members voted "YEA": Parker, Meese, Noren, Wagner, Ziemann, and Borchardt. The following Council Members voted "NAY": None. Motion passed 6-0.

Public Hearings

Mayor presented the Public Hearing for request from Wizkidz, LLC and Rebecca & Van O'Connor for the annexation of properties generally located North of Hickman Road and East of 68th Street, with the legal descriptions as follows: Parcel ID: 1527300002000 Legal Description: S27, T8, R7, 6th Principal Meridian, Lot 3 SW; Parcel ID: 1527321001000 Site Address: 18610 S 68TH ST, HICKMAN, NE 68372 Legal Description: Wizkidz Addition, Lot 1; Parcel ID: 1527321002000 Legal Description: Wizkidz Addition, Lot 2. And to extend the Extraterritorial Jurisdiction (ETJ) upon approval of the annexation of said properties, and to amend the Official Zoning Map of the City of Hickman to reflect said changes.

Mayor Goering opened the Public Hearing at 7:16 PM.

Mr. Mike Ekert with Civil Design Group spoke in favor of the request from Wizkidz, LLC and Rebecca & Van O'Connor for the annexation of properties generally located North of Hickman Road and East of 68th Street.

No comments by the public in a neutral compacity or against the Public Hearing.

Motion by Council Member Parker and a second by Wagner to close the Public Hearing at 7:19 PM. The following Council Members voted "YEA": Parker, Meese, Noren, Wagner, Ziemann, and Borchardt. The following Council Members voted "NAY": None. Motion passed 6-0.

Mayor presented the Public Hearing for One & Six Year Street Improvement Plan.

Mayor Goering opened the Public Hearing at 7:19 PM and invited Mr. Shane Nuxoll with Olsson's to address the Governing Body. Mr. Nuxoll discussed that the 2024 One & Six Year Plan will remove the 68th Street Roundabout project and the Terrace View 5th Addition streets now that they are

completed. Mr. Nuxoll discussed that there are three street improvement plans added for 2024, 68th Street North of Hickman Road, 68th Street South of Hickman Road, and 68th & Woodland roundabout. The carryover from last year is the Wagon Train to 1st Street.

No public comments received for the One & Six Year Street Improvement Plan Public Hearing. Motion by Council Member Noren and a second by Meese to close the Public Hearing at 7:20 PM. The following Council Members voted "YEA": Parker, Meese, Noren, Wagner, Ziemann, and Borchardt. The following Council Members voted "NAY": None. Motion passed 6-0.

Unfinished Business

The City Administrator discussed Resolution 2023-15, Interlocal Agreement between the City of Lincoln on behalf of the Lincoln-Lancaster County Health Department and City of Hickman for the purpose of providing health regulation and enforcement within the extra-territorial jurisdiction of the City of Hickman. City Administrator stated the agreement would remain unchanged and read a letter from Lincoln-Lancaster County Health Department that stated they would not be involved with any Health Board decisions and that the topic is not included in this agreement. The City Attorney also agreed that the agreement does not include that the Lincoln-Lancaster County Health Department can or will impose a mandate during a pandemic and that he is in support of the agreement. City Council Members discussed that with the letter from Lincoln-Lancaster County Health Department stating that they will not involve themselves with any Health Board decisions regarding a pandemic and the agreement being able to be voided with a sixty-day notice, they feel the agreement is important for the city.

Mayor Goering invited agenda topic speaker Denise Shaw at 6101 Roca Road. Ms. Shaw requested that the resolution be tabled again for more time to review. Ms. Shaw discussed that the length of time for the agreement should be adjusted to 3-5 years and that the city should hire for the needed inspections to keep the funds local and not become an extension of Lincoln.

Motion by Council Member Wagner and a second by parker to approve Resolution 2023-15, Interlocal Agreement Between the City of Lincoln, Nebraska, on behalf of the Lincoln-Lancaster County Health Department, ("CITY"), and the CITY OF HICKMAN, NEBRASKA, having an address of 115 Locust Street, Hickman, Nebraska 68372, for the purpose of providing health regulation inspection and enforcement within the corporate limits of the City of Hickman and its extra-territorial jurisdiction. WHEREAS, the City of Hickman is desirous of contracting with the CITY, through the Lincoln-Lancaster County Health Department, in the interest of: Protecting the public's health and the environment from pollution; Providing minimum standards regulating design, construction, installation, maintenance, and operation of individual sewage disposal systems within Lancaster County; and Providing investigation of public health nuisance conditions as defined by City of Hickman ordinances; Reviewing transfers of properties that are served by individual domestic water wells or onsite wastewater treatment systems to assure they meet minimum standards regulating design, construction, installation, maintenance, and operation established in City of Hickman ordinances as applicable; and Reviewing newly proposed subdivisions that will not be served by public water supply or community wastewater treatment for water, wastewater and environmental hazards. WHEREAS, the CITY is agreeable to rendering such services on the terms and conditions hereinafter set forth; and WHEREAS, such services shall be provided within the corporate limits of the City of Hickman and its extra-territorial jurisdiction; WHEREAS, such Interlocal Agreements are authorized and provided for by the provisions of Neb. Rev. Stat. §13-901 et. seq. hereinafter referred to as the Interlocal Cooperation Act; and WHEREAS, the parties to this Interlocal Agreement enter into this cooperative Interlocal Agreement for the mutual benefit of the parties and to provide services in a manner that will accord best with geographic, economic, population, and other factors influencing the needs and development of local communities. Each party agrees that it shall remain a distinct and separate entity with its own rights and authorities and that no separate board shall be created to fulfill the obligations of this Interlocal Agreement. NOW, THEREFORE, it is agreed as follows: SERVICES The City of Hickman and the CITY enter into this Interlocal Agreement for the City of Hickman to: Provide to the CITY any and all ordinances and regulations duly adopted by the City of Hickman

related to individual sewage disposal systems, water supply systems, solid wastes, nuisances, air quality, open burning, and other health and safety hazards; and Act as the party primarily responsible for enforcement of the City of Hickman's ordinances, rules, and regulations related to the health and safety of the public. The City of Hickman and the CITY enter into this Interlocal Agreement for the CITY to: Investigate complaints presented by the City Clerk related to public health nuisance conditions, and other health and safety hazards; Generate necessary reports related to the findings of investigations conducted pursuant to this Interlocal Agreement and provide such reports to the City Clerk upon completion of each investigation; Cooperate with the City of Hickman Attorney in any enforcement actions brought by the City of Hickman involving any investigation conducted by the CITY according to the terms of this Interlocal Agreement; Appear as requested as a witness regarding the findings of investigations conducted according to the terms of this Interlocal Agreement. Review and permit all newly built or repaired on-site wastewater treatment systems within the corporate limits of the City of Hickman and its extra-territorial jurisdiction, assuring they meet minimum standards for design, construction, installation, maintenance, and operation as adopted by Ordinance. Review transfers of properties that are served by individual domestic water wells or onsite wastewater treatment systems to assure they meet minimum standards regulating design, construction, installation, maintenance, and operation as adopted by Ordinance. Review newly proposed subdivisions that will not be served by public water supply or community wastewater treatment for water, wastewater and environmental hazards. Review and permit open burning requests to assure they do not create health risks and meet minimum standards as adopted by Ordinance. The CITY retains the right to limit the amount of staff time and other resources it expends to provide services identified in this Interlocal Agreement.

TERM – The term of this Interlocal Agreement shall commence upon execution and shall continue until completion all obligations of this Interlocal Agreement but in no event longer than ten (10) years after the date of execution by the City.

TERMINATION FOR CONVENIENCE – Either party may terminate this Interlocal Agreement for any reason for its own convenience. If either party elects to terminate this Interlocal Agreement prior to its expiration, the terminating party shall provide the other party with sixty (60) days written notice of the termination.

DUTIES GENERALLY – Both parties to this Interlocal Agreement agree as follows:

To timely and professionally complete the services as described for both parties above, and to furnish their labor and pay all their own costs, including any taxes, required to complete their services.

To furnish everything reasonably necessary to complete the services unless specifically provided otherwise in this Interlocal Agreement.

To apply for and obtain any and all necessary permits, certifications, licenses, variances, and approvals required by any applicable law or regulations that relate to the services.

To conduct all activities related to the services in a lawful manner.

To provide and perform all necessary labor in a professional and workmanlike manner and in accordance with the provisions of this Interlocal Agreement.

5. INDEPENDENT ENTITIES – CITY has sole and exclusive charge and control of the manner and means of performance of the tasks required of it by this Interlocal Agreement. The CITY shall perform as an independent contractor, and it is expressly understood that neither the CITY nor any of its staff are employees of the City of Hickman and, thus they are not entitled to any City of Hickman benefits including, but not limited to, overtime, retirement benefits, workers' compensation insurance, sick leave, or injury leave. The CITY shall be responsible for maintaining workers' compensation insurance, unemployment insurance for its employees, and for all federal, state, local, and any other payroll taxes with respect to the CITY or its employees' compensation.

6. INSURANCE

The City of Hickman shall maintain General Liability Insurance at its own expense during the life of this Interlocal Agreement, naming and protecting the City of Hickman and the City of Lincoln, its officials, employees, and volunteers as insured, against claims for damages resulting from (1) all acts or omissions, (2) bodily injury, including wrongful death, (3) personal injury liability, and (d) property

damage which may arise from operations under this Interlocal Agreement whether such operations are by the City of Hickman and its employees, or those directly or indirectly employed by the City of Hickman. The minimum acceptable limits of liability to be provided by such insurance shall be as follows:

All Acts or Omissions - \$1,000,000 each Occurrence; \$2,000,000 Aggregate; and
Bodily Injury/Property Damage - \$1,000,000 each Occurrence; \$2,000,000 Aggregate; and
Personal Injury Damage - \$1,000,000 each Occurrence; and
Contractual Liability - \$1,000,000 each Occurrence; and
Products Liability and Complete Operations - \$1,000,000 each Occurrence; and
Medical Expenses (any one person) - \$10,000.

The following shall be provided and attached to this Interlocal Agreement by the City of Hickman: A Certificate of Insurance for its General Liability Insurance. The City of Lincoln shall be specifically named as an additional insurance on the General Liability Insurance Policy. The City of Hickman may present evidence of equivalent self-insurance in place of a certificate of insurance for General Liability Insurance. The City of Lincoln shall be treated as an additional insured as if the City of Hickman possessed General Liability Insurance.

Proof of Workers' Compensation Insurance, where appropriate.

The City of Hickman is required to provide the CITY with thirty (30) days notice of cancellation, non-renewal, or any material reduction in insurance as required by this Interlocal Agreement. Further any General Liability Insurance Policy maintained in order to comply with this Interlocal Agreement shall specifically provide that the company from whom the policy is purchased will also provide the City of Lincoln thirty (30) days notice of cancellation, non-renewal, or any material reduction in insurance on the part of the City of Hickman.

If the City of Hickman obtains General Liability Insurance during the term of this Interlocal Agreement, it shall add the City of Lincoln as an additional insured and provide a copy of the Certificate of Insurance and specific endorsement on the policy naming the City of Lincoln as an additional insured.

INDEMNIFICATION – To the fullest extent permitted by law, the City of Hickman shall indemnify, defend, and hold harmless the City of Lincoln, its officers, agents, and employees from and against claims, damages, losses, and expenses, including but not limited to attorney's fees, arising out of or resulting from performance of this Interlocal Agreement, that results in any claim for damage whatsoever, including without limitation, any bodily injury, sickness, disease, death, or any injury to or destruction of tangible or intangible property, including any loss of use resulting therefrom that is caused in whole or in part by the intentional or negligent act or omission of the City of Hickman or anyone for whose acts any of them may be liable. This section will not require the City of Hickman to indemnify or hold harmless the City of Lincoln for any losses, damages, claims, and expenses arising out of or resulting from the sole negligence of the City of Lincoln. The City of Lincoln does not waive its governmental immunity by entering into this Interlocal Agreement and fully retains all immunities and defenses provided by law. This section survives termination of this Interlocal Agreement.

AUDIT PROVISION – The City of Hickman shall be subject to audit pursuant to Chapter 4.66 of the Lincoln Municipal Code and shall make available to a contract auditor, as defined therein, copies of all financial and performance records and materials germane to this Interlocal Agreement, as allowed by law.

FAIR EMPLOYMENT – The City of Hickman shall not discriminate against any employee (or applicant for employment) with respect to compensation, terms, advancement potential, conditions, or privileges of employment, because of such person's race, color, religion, sex, disability, national origin ancestry, age, or marital status pursuant to the requirements of Lincoln Municipal Code Chapter 11.08 and Neb. Rev. Stat. §48-1122, as amended.

FAIR LABOR STANDARDS – The City of Hickman shall maintain Fair Labor Standards in the performance of this Interlocal Agreement, as required by Chapter 73, Nebraska Revised Statutes, as amended.

NEBRASKA LAW – This Interlocal Agreement shall be governed and interpreted by the Laws of the State of Nebraska without reference to the principles of conflicts of law.

INTEGRATION, AMENDMENTS, ASSIGNMENT – This Interlocal Agreement represents the entire Interlocal Agreement between the parties and all prior negotiations and representations are hereby expressly excluded from this Interlocal Agreement. This Interlocal Agreement may be amended only by written Interlocal Agreement of both parties. This Interlocal Agreement may not be assigned without the prior written consent of the other party.

NEW EMPLOYEE VERIFICATION - In accordance with Neb. Rev. Stat. 4-108 through 4-114, the City of Hickman agrees to register with and use a federal immigration verification system, to determine the work eligibility status of new employees performing services within the state of Nebraska. A federal immigration verification system means the electronic verification of the work authorization program of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, 8 U.S.C. 1324 a, otherwise known as the E-Verify Program, or an equivalent federal program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility status of a newly hired employee pursuant to the Immigration Reform and Control Act of 1986. City of Hickman shall not discriminate against any employee or applicant for employment to be employed in the performance of this section pursuant to the requirements of state law and 8 U.S.C.A. 1324b. The City of Hickman may require any subcontractor to comply with the provisions of this section. For information on the E-Verify Program, go to www.uscis.gov/everify.

SEVERABILITY & SAVINGS CLAUSE – Each section and each subdivision of a section of this Interlocal Agreement is hereby declared to be independent of every other section or subdivision of a section so far as inducement for the acceptance of this Interlocal Agreement and invalidity of any section or subdivision of a section of this Interlocal Agreement shall not invalidate any other section or subdivision of a section thereof.

CAPACITY – The undersigned persons representing the City of Hickman and the City of Lincoln do hereby agree and represent that he or she is legally capable and authorized to sign this Interlocal Agreement and to lawfully bind the City of Hickman or the City of Lincoln to this Interlocal Agreement.

IN WITNESS WHEREOF, the City of Hickman and the City of Lincoln do hereby execute this Interlocal Agreement.

The following Council Members voted “YEA”: Parker, Meese, Noren, Wagner, and Ziemann. The following Council Members voted “NAY”: Borchardt. Motion passed 5-1.

Mayor Goering presented Ordinance 2023-12, 2023 Orders Ordinance 2023-12 - An ordinance to adopt the standards and regulations of Lincoln- Lancaster County Health Department regarding on-site wastewater treatment systems, solid waste, property transfers and air pollution control, in order to meet the requirements for an interlocal agreement with the Lincoln-Lancaster County Health Department, for the purpose of providing health regulation inspection and enforcement within the corporate limits of the City of Hickman and its extra-territorial jurisdiction (ETJ).

Motion by Council Member Wagner and a second by Noren to waive the three-reading rule for Ordinance 2023-12. The following Council Members voted “YEA”: Parker, Meese, Noren, Wagner, and Ziemann. The following Council Members voted “NAY”: Borchardt. Motion passed 5-1.

Motion by Council Member Noren and a second by Wagner to pass Ordinance 2023-12 on the first and final reading. The following Council Members voted “YEA”: Parker, Meese, Noren, Wagner, and Ziemann. The following Council Members voted “NAY”: Borchardt. Motion passed 5-1.

New Business

The City Administrator discussed that she has been approached by many broadband companies requesting a franchise agreement with the City of Hickman and presented Council Members with a document with a list of considerations with bringing in more broadband to the city. It was also discussed that the broadband companies can place broadband in the city without approval from council. No action was taken.

Mayor Goering presented Resolution 2023-19, WHEREAS, The City of Hickman, Nebraska, has conducted a public hearing in accordance with the requirements of the Board of Public Roads Classification and Standards, NOW, THEREFORE, be it resolved by the Mayor and City Council that the One and Six Year Plan for streets as presented at said public hearing has been accepted and approved. Public hearing for said plan was held on October 24, 2023. CERTIFICATE OF RECORDING OFFICER The undersigned, duly qualified and acting City Clerk of the City of Hickman, Nebraska, does hereby certify that the above resolution was adopted at a legally convened meeting of the City held on the 24th day of October 2023 and further, that such a resolution has been fully recorded in the proceedings and records in the office of the City Clerk. IN WITNESS WHEREOF, I have hereunto set my hand this 24th day of October 2023. Notice of the public hearing was posted in three (3) public places in the City in the locations listed below at least ten (10) days prior to the public hearing. Locations where the Public Hearing Notice was posted: Hickman U.S. Post Office, Hickman City Hall, and Hickman U-Stop. The notices were posted on October 5, 2023.

Motion by Council Member Noren and a second by Council Member Wagner to approve Resolution 2023-19, with adding South 68th Street improvement to extend down to Wagon Train Road and not stop at 1st Street. The following Council Members voted "YEA": Parker, Meese, Noren, Wagner, Ziemann, and Borchardt. The following Council Members voted "NAY": None. Motion passed 6-0.

Mayor Goering presented Resolution 2023-20, Appointment to NMPP members' council now, therefore, be it resolved by the Mayor and City Council of the City of Hickman, State of Nebraska, that: The City of Hickman, Nebraska is a member of the Nebraska Municipal Power Pool; The Mayor of the City of Hickman does hereby appoint Doug Wagner as a representative* of the City of Hickman to the Members' Council of the Nebraska Municipal Power Pool; The Mayor of the City of Hickman does hereby appoint Travis Borchardt as an alternative representative* of the City of Hickman to the Members' Council of the Nebraska Municipal Power Pool; *Pursuant to Article V of the Amended and Restated Bylaws of the Nebraska Municipal Power Pool, "Any person appointed as Representative or Alternate Representative shall be a resident of the area receiving services from the appointing Member." This is to certify that the appointments set out above were approved by the Mayor and City Council of the City of Hickman, State of Nebraska at their meeting on May 14, 2019. passed and approved this 24th day of October, 2023. Motion by Council Member Parker and a second by Council Member Ziemann to approve Resolution 2023-20, with text edit striking Kelly Oelke, City Administrator and adding Council Member Travis Borchardt. The following Council Members voted "YEA": Parker, Meese, Noren, and Ziemann. The following Council Members voted "NAY": None. The following Council Members voted "Abstain": Wagner and Borchardt. Motion passed 4-0 with 2 abstained.

Mayor Goering presented Resolution 2023-21, a resolution of the mayor and city council of the city of Hickman, Nebraska authorizing the acquisition of permanent easement on real property for use by the city. Recitals

A. LOHILL, LLC, a Nebraska Limited Liability Corporation, owns certain real property located in Hickman, Lancaster County and more particularly described as follows: a tract of land composed of a portion of lot 39 i.t. and a portion of lot 74 i.t, located in the northeast quarter of section 33, township 8 north, range 7 east of the 6th p.m., city of Hickman, Lancaster county, Nebraska, and more particularly described as follows: commencing at the southwest corner of said lot 39 i.t.; thence, north on the west line of said lot 39 i.t., on an assumed bearing of n00°33'16"w, a distance of 46.96' to the true point of beginning; thence continuing, n00°33'16"w, on said line, a distance of 10.16' to a point; thence s80°26'28"e, a distance of 21.71' to a point; thence n88°34'35"e, a distance of 30.85' to a point; thence n89°55'27"e, a distance of 42.84' to a point; thence n83°15'17"e, a distance of 39.85' to a point; thence n59°36'53"e, a distance of 38.32' to a point; thence n41°01'09"e, a distance of 53.17' to a point; thence n29°24'32"e, a distance of 22.86' to a point; thence n31°02'50"e, a distance of 8.37' to a point; thence n26°38'47"e, a distance of 11.00' to a point; thence n23°26'05"e, a distance of

55.80' to a point; thence n19°35'31"e, a distance of 29.49' to a point; thence s70°24'29"e, a distance of 10.00' to a point; thence s19°35'31"w, a distance of 29.82' to a point; thence s23°26'05"w, a distance of 56.42' to a point; thence s26°38'47"w, a distance of 11.67' to a point; thence s31°02'50"w, a distance of 10.36' to a point; thence s42°12'03"e, a distance of 4.08' to a point; thence s69°03'27"e, a distance of 85.78' to a point on the east line of said lot 74 i.t.; thence s00°21'58"e, on the east line of said lot 74 i.t., said line being the west line of lots 3 and 4, block 2, McNeese addition, a distance of 10.73' to a point; thence n69°03'27"w, a distance of 92.07' to a point; thence n42°12'03"w, a distance of 3.09' to a point; thence s29°24'32"w, a distance of 11.43' to a point; thence s41°01'09"w, a distance of 55.82' to a point; thence s59°36'53"w, a distance of 42.05' to a point; thence s83°15'17"w, a distance of 42.53' to a point; thence s89°55'27"w, a distance of 43.30' to a point; thence s88°34'35"w, a distance of 31.69' to a point; thence n80°26'28"w, a distance of 20.89' to the point of beginning, said tract contains a calculated area of 4,528.72 square feet or 0.10 acres, more or less. map attached as exhibit a.

B. The City's permanent easement acquisition of the above-described real property for the purpose of the right to use, construct, build, maintain, and repair utilities, together with all appurtenances, which will benefit the City of Hickman for the purposes of, but not limited to, inspection, observation, measurement, repair, and maintenance of any portion of the electrical works lying within said easement.

C. Neb. Rev. Stat. §76-2,128 authorizes the City to acquire permanent easement upon approval of the acquisition by action taken in a public meeting after notice.

D. The City desires to acquire permanent easement on the real property and held the public meeting on October 24, 2023. NOW THEREFORE, be it resolved by the City of Hickman, Nebraska:

1. The City hereby approves the acquisition of permanent easement on real property from LOHILL, LLC, a Nebraska Limited Liability Corporation, in accordance with the authority under Nebraska law and the Hickman Municipal Code.

2. The Mayor of the City is hereby authorized to execute and to take all actions necessary to effectuate the acquisition of permanent easement on real property from LOHILL, LLC, a Nebraska Limited Liability Corporation. This has been approved as of the 24th day of October, 2023. CITY OF HICKMAN, NEBRASKA Motion by Council Member Wagner and a second by Council Member Meese to approve Resolution 2023-21. The following Council Members voted "YEA": Parker, Meese, Noren, Wagner, Ziemann, and Borchardt. The following Council Members voted "NAY": None. Motion passed 6-0.

Mayor Goering presented Ordinance 2023-14, Annexation of Wizkidz Addition.

Council Member Wagner introduced Ordinance 2023-14 and asked City Clerk to read by title, An ordinance to annex certain property to the city of Hickman, Lancaster county, Nebraska; to provide for publication; and to provide for the effective date hereof.

Motion by Council Member Noren and a second by Wagner to pass Ordinance 2023-14 on the first reading. The following Council Members voted "YEA": Parker, Meese, Noren, Wagner, Ziemann, and Borchardt. The following Council Members voted "NAY": None. Motion passed 6-0.

Mayor Goering presented Consideration of Land Acquisition for Municipal Wells, Water Department and recommended a motion to go into closed executive session.

Council Member Ziemann made a motion for City Council to go into Executive Session at 8:21pm with the Mayor and City Administrator for the purpose of a strategy session to provide negotiation guidance with respect to potential acquisition of real estate and for the and for the protection of the public interest for a period of thirty minutes, second by council Member Parker. The following Council Members voted "YEA": Parker, Meese, Noren, Wagner, Ziemann, and Borchardt. The following Council Members voted "NAY": None. Motion passed 6-0.

No formal action was taken in the Closed Executive Session.

Mayor Goering announced that Open Session reconvened at 8:47pm. Motion by Council Member Wagner and a second by Ziemann to direct City Administrator to negotiate the value discussed in closed session and authorizing Mayor Goering to sign Final pay Certificate and direct staff to issue final payment before September 30, 2023.

Mayor Goering presented Resolution 2023-17, Surplus Property Declaration WHEREAS, The City of Hickman has authority under Nebraska State Statute 17-503.01 and Section 6-111 of the Municipal Code of Hickman, to order the sale of City owned personal property through the adoption of a resolution by the City Council directing the sale and the manner and terms of the sale, and WHEREAS, The City of Hickman has personal property with a fair market value of less than \$5,000.00, described as follows, that is hereby declared to be surplus property and the same is hereby directed to be sold at or above the stated minimum bids: 2016 Gravely Pro Turn 460 Commercial Mower, Model No. 992274, Serial No. 050191, Hours:1,059, Minimum Bid: \$2,250.00 - 2016 Gravely Pro Turn 460 Commercial Mower, Model No. 992274, Serial No. 050193, Hours: 875, Minimum Bid: \$2,250.00 - Rubber Speed Bumps: 6-foot Black/Yellow Reflective Striped (Qty 8) with Lag Bolts (4 per strip); End Caps (Qty 16) with Spike (Qty16). Manufactured from earth-friendly, 100% recycled tires. Embedded "cat-eye" reflectors to enhance visibility. Pre-drilled for anchoring spike or lag bolts. NEW not used, sold as lot. Minimum Bid: \$1,500.00 WHEREAS, The City of Hickman has established the following terms and conditions for the sale of the above described property: Bids must be submitted via auctions on eBay at www.ebay.com; Property is being sold "as-is" without warranty; Item will be sold to the highest bidder; if the highest bidder fails to make payment it will result in either a) the City accepting the next highest bid on eBay, or b) the City rejecting all bids and canceling the sale; Payment must be made via PayPal, Money Order, personal check or cash; Sold property must be paid for within ten (10) business days after the date of auction ending; Property will not be released until payment clears the City's bank or upon payment with cash; Upon notification of payment clearing the City's bank, arrangements must be made within six (6) business days to remove the property from the City property between normal business hours (Monday through Friday; 7:30 am to 3:30 pm); NOW, THEREFORE, BE IT RESOLVED by the Mayor and Governing Body of the City of Hickman that the above described surplus property be sold by the City of Hickman after notice of such sale has been posted in three prominent places within the municipality for a period of not less than seven (7) business days prior to the sale of such property via eBay. Said notice shall give general description of the surplus property offered for sale and state the terms and conditions of such sale. PASSED AND APPROVED this 26th day of September 2023. Motion by Council Member Noren and a second by Council Member Wagner to approve Resolution2023-17. The following Council Members voted "YEA": Ziemann, Borchardt, Parker, Meese, Noren, and Wagner, The following Council Members voted "NAY": None. Motion passed 6-0.

City Administrator's Report

City Administrator discussed that the conduit for electrical infrastructure at Terrace View was being bored this week, but some additional conduit was needed to complete the project. The surplus lawnmowers and speedbumps were placed on eBay and going live October 26th. Motion by Council Member Ziemann and a second by Noren to approve the City Administrator's Report. The following Council Members voted "YEA": Ziemann, Borchardt, Parker, Meese, Noren & Wagner. The following Council Members voted "NAY": None. Motion passed 6-0.

Governing Body Comments and Correspondence

Mayor Goering discussed Annual Trick or Treat on the Trail will be Thursday October 26, 2023 and that the City Office Closed for Veterans' Day November 10, 2023. No action taken. Adjournment

Adjournment

Motion by Council Member Parker and a second by Ziemann to adjourn the meeting at 9:04 PM. The following Council Members voted "YEA": Parker, Meese, Noren, Wagner, Ziemann, and Borchardt. The following Council Members voted "NAY": None. Motion passed 6-0.

Council President Doug Wagner

Jaala Johnson, CMC, City Clerk

DRAFT

MINUTES OF THE HICKMAN CITY COUNCIL SPECIAL MEETING HELD OCTOBER 27, 2023

Mayor Phil Goering called the meeting to order at 5:30pm on October 27, 2023 and referenced the meeting recording process, optional sign in sheet, and open meeting law posting. Council Members John Meese, Steve Noren, Doug Wagner, Justina Ziemann, Travis Borchardt, and Chad Parker were present for Roll Call. Prior notice of the meeting and agenda were provided to the Mayor and all members of the Governing Body. Notice of the meeting was distributed and posted at Hickman City Hall, U.S. Post Office-Hickman, U-Stop Market and the City of Hickman Website.

New Business

Mayor Goering presented Consideration of Land Acquisition for Municipal Wells, Water Department and recommended a motion to go into closed executive session.

Council Member Wagner made a motion for City Council to go into Executive Session at 5:32pm with the Mayor and City Administrator for the purpose of a strategy session to provide negotiation guidance with respect to potential acquisition of real estate and for the and for the protection of the public interest for a period of thirty minutes, second by council Member Ziemann. The following Council Members voted "YEA": Meese, Noren, Wagner, Ziemann, Borchardt, and Parker. The following Council Members voted "NAY": None. Motion passed 6-0. No formal action was taken in the Closed Executive Session.

Mayor Goering announced that Open Session reconvened at 5:30pm.

Motion by Council Member Parker and a second by Wagner to direct City Administrator to direct City Administrator & City Attorney to draft a purchase agreement as discussed in closed session for acquisitions of real estate for municipal wells and prepare for all other legally required notifications of such acquisition to be brought forth at a future council meeting.

The following Council Members voted "YEA": Meese, Noren, Wagner, Ziemann, Borchardt, and Parker. The following Council Members voted "NAY": None. Motion passed 6-0.

Adjournment

Motion by Council Member Parker and a second by Wagner to adjourn the meeting at 6:05pm. The following Council Members voted "YEA": Meese, Noren Wagner, Ziemann, Borchardt, and Parker. The following Council Members voted "NAY": None. Motion passed 6-0.

Council President Doug Wagner

Kelly Oelke, City Administrator

**City Council Meeting November 14, 2023
Accounts Payable as of November 13, 2023**

Vendor	Memo	Open Balance	Check No.
AKRS Equipment (John Deere)	Inv# 3679865 - Tractor Rental Sludge Removal	\$ 553.16	
All Copy Products	INV # AR4137572- Monthly Printing Services	\$ 271.20	
All Roads Barricades, Inc.	Inv#SALE018333 - Signs for Roundabout	\$ 691.35	
Bizco Technologies	Inv# 00460657 - Dell Latitude 3540 15.6" monitor Laptops CC Members & City Staff	\$ 11,737.48	
BOK Financial	HICKMANGOR21B - Refunding Bond, 2021, Water Dept. Interest & principal Payment	\$ 229,065.00	
BOK Financial	HICKMANGOR21 - Refunding Bond, 2021, Water Dept.	\$ 144,623.75	
Border States	Inv# 927261828 - Electrical Line Conduit for Terrace View 5th Addition 8,000ft	\$ 8,436.40	
Border States	Inv# 927141668 - Splice kit SID(remainder 4 delivered)	\$ 163.16	
Border States	Inv# 927141656 - Cowhide Gloves, Cold Shrink Splice	\$ 637.16	
Border States	Inv# 926877928 - Innerduct 4K Reels	\$ 4,332.28	
Border States	Inv# 926877922 - Splice Kit Electrical System	\$ 1,162.56	
Brown, Chelsey	Inv # INV00063 - Oct, 2023 City Hall Monthly Cleaning	\$ 1,250.00	
Cummins Central Power	Inv # J3-10604 - WWTP Generator Preventative Maintenance	\$ 918.82	
Dale's Consulting & Inspection Services	Building Inspections (18) Oct.	\$ 1,650.00	
Dawgs Hut	Inv# 9742 - PW Winter Coats	\$ 796.00	
DHHS Drinking Water Division	Inv# 39584 - Brads Water License Grade 4 Renewal	\$ 115.00	
DHHS Drinking Water Division	Inv# 39584 - Jeffs Water License Grade 4 Renewal	\$ 115.00	
Electronic Contracting Company	Inv# 50115- Genetec Advantage Renewal 1 Additional Camera 3 years	\$ 1,446.69	
Electronic Contracting Company	Skate Park Camera Equipment - Final Payment	\$ 2,362.89	
Electronic Contracting Company	Inv# 49317- Community Center/City Hall Fire Alarm System Trouble Alarm Repairs	\$ 437.50	
Farmers Cooperative	October 2023 Bulk Fuel W/Discount	\$ 1,481.26	
Faron Niles Construction	Construction Deposit Return # 2022-222	\$ 500.00	
Goetsch, Troy	Tree Rebate 11.2.2023	\$ 50.00	
Great Plains Power	Inv# 491 - Replace Electrical Lines (229.50 hours of labor)	\$ 90,652.50	
HBE, LLP	INV # 202634- Budget Assistance 2023-2024	\$ 1,740.00	
Hickman True Value	Trail Light GFIs, Cement	\$ 53.98	
Hickman True Value	Toilet Repair Water Plant Funnel Quick Fill	\$ 15.99	
Hickman True Value	Toilet Flush Lever Main Park & Inter Breaker Shed @ Park	\$ 18.98	
Hickman True Value	Wire Connectors (shop)	\$ 2.99	
Hochstetler, David Sr.	HVAC Inspection (4) October	\$ 200.00	
Hoffschneider Law, PC., LLO	Inv # 3389- Oct. Legal Monthly Service Agreement	\$ 2,000.00	
Hydro Optimization & Automation Solutions	Inv #11471- Water Plant Phoenix Contact DPDT Relay	\$ 365.84	
Kelly Supply Company	Inv# S4366173 - 3inch Banjo Clamp & Coupling WTP	\$ 161.39	
Kreifels, Jeffrey	Plumbing Inspection (13) Oct..	\$ 900.00	
Lancaster County Sheriff's Office	Inv# C3351 - November Contractual Services	\$ 11,792.00	
Lancaster County Sheriff's Office	Inv# C3350- October 2023 Extra Duty	\$ 641.24	
League of Nebraska Municipalities	12.5.2023 Water Operators Workshop, Chris & Trent	\$ 130.00	
League of Nebraska Municipalities	INV# 8974 - PW Director Backflow Workshop	\$ 60.00	
Lincoln Winwater Works	Inv# 09750201 - Chlorine Pump Parts WTP	\$ 38.80	
Lottman Concrete Construction	Inv# 09302023 - Paving Repair (directly in front of 905 Larkspur Dr.)	\$ 18,154.61	
Meals Construction, LLC	New Construction Deposit Return, Bldg. Permit # 2022-122	\$ 500.00	
Menard's	Inv# 20801 - Shop Towels, Antifreeze	\$ 172.56	
Midwest Laboratories, Inc.	Inv# 1157474 - Testing & Bottles for Wastewater Testing	\$ 467.15	
Midwest Turf & Irrigation	Landpride Seeder	\$ 4,500.00	
Moser Well Drilling & Service, Inc.	Inv# 15696 - Well Pump Sensor Installed Main Park	\$ 358.75	
Nebraska Public Health Environmental Lab	Inv # 570508 - Water Sampling, Water Dept.	\$ 367.00	
Nebraska Snow Equipment	Inv# 21293 - Deflector Snow Plow for 2022 Chevy Truck	\$ 276.00	
Norland Pure	Account xxxx005195 Monthly Water City Office	\$ 119.88	
Norris Public Power	Acct# 0214782 October2023 Wholesale	\$ 96,052.35	
Norris Public Power	Acct# 2375 - Utilities - Waste Water Trmt Plant, Sewer Dept. Water Plant & Wells, Water Dept.	\$ 4,222.50	
Norris Public Power	Inv# 10859 On-Call Repair Electrical System Sept. 14-18, 2023	\$ 3,831.26	
Norris School District 160	Liquor License Fee - American Legion (Paid online & sent to city office)	\$ 300.00	
Norris School District 160	Liquor License Fee - Hickman Bar & Grill (Paid online & sent to city office)	\$300.00	
Olsson	Inv# 474929 - Project # 017-32130 Roundabout Intersection Improvement	\$2,107.53	
Olsson	Inv# 475794 - Project # 022-02777 WTP Improvement	\$ 2,616.64	
Olsson	Inv# 475786 - Project # 020-31290 Phase 710 Water Model Consult Services	\$ 1,828.20	
Olsson	Inv# 475822 - Project # 021-01497 WRRF Headworks & Final Clarifier	\$ 8,413.20	
One Call Concepts, Inc.	Inv# 3100145 - October 2023 Diggers Hotline Notifications, Elec Dept.	\$ 108.82	
Paper Tiger Shredding	Inv #189054 - Monthly Service	\$ 30.00	
Paulson, Ray	Electrical Inspections (22) Oct.	\$ 1,300.00	
Russell Remodeling LLC	New Construction Deposit Return Permit # 2022-197	\$ 500.00	
Spickelmier & Son Inc.	Phase 2 Electrical Line Repair Bore 3x2 Conduits 2-3 Men Per Hour(with discount)	\$ 5,320.00	
Spickelmier & Son Inc.	Phase 2 Electrical Line Repair Bore 3x2 Conduits 2-3 Men Per Hour(with discount)	\$1,263.50	
Spickelmier & Son Inc.	Phase 2 Electrical Line Repair Bore 3x2 Conduits 2-3 Men Per Hour(with discount)	\$10,369.25	
Spickelmier & Son Inc.	Phase 2 Electrical Line Repair Bore 3x2 Conduits 2-3 Men Per Hour	\$ 11,138.75	
Voice News	October Publications/ Advertisements	\$ 742.63	
Wesco	Inv# 270255 Electrical Repair Elbows	\$930.00	
Williamson, Ryan	Deposit Return (Deposited into Community Center Rentals)	\$300.00	
TOTAL		\$698,160.95	

**City Council Meeting November 14, 2023
Accounts Payable as of November 12, 2023**

Vendor	Memo	Payment	Check No
Ameritas Life Ins., Corp.	Employee Pension Plans (partial paid by forfeitures)	\$4,306.24	ACH
Black Hills Energy	Utilities - 588 Chestnut & 5th St. Street Shop, Community Center	\$152.23	ACH
Blue Cross/Blue Shield of NE	November 2023 Employee Premiums	\$7,272.17	ACH
IRS	Payroll Taxes	\$9,111.86	EFTPS
ICMA Mission Square	Employee Retirement Contribution	\$557.50	ACH
Nebraska Dept.Revenue	Quarterly Keno Tax	\$1,622.00	ACH
State of NE	Employee Liabilities	\$217.85	ACH
Payroll Distribution (Net Pay)	City Staff 10.20.2023, 11.03.2023 & CC 11.1.2023	\$30,220.14	ACH
Quadient Finance - Neofunds - Postag	Acct # xxxx8315 - Postage, Water/Electric/Sewer Dept.	\$1,200.00	ACH
Verizon Wireless	City Mobile Phones & New Phone Purchase	\$261.60	ACH
Wells Fargo - VISxxx4676	Prof. Development & Supplies	\$2,819.64	ACH
Wells Fargo - VISxxx8509	Subscriptions, Prof. Development & Supplies	\$2,215.74	ACH
Windstream	Acct# xxxx2029 - City Office Phone & Internet	\$907.84	ACH
Windstream	Acct# xxxx9853 - Wastewater Plant Phone	\$74.01	ACH
TOTAL		\$ 60,938.82	
TOTAL CLAIMS REPORT		\$ 759,099.77	

Reviewed and Approved on November 14, 2023

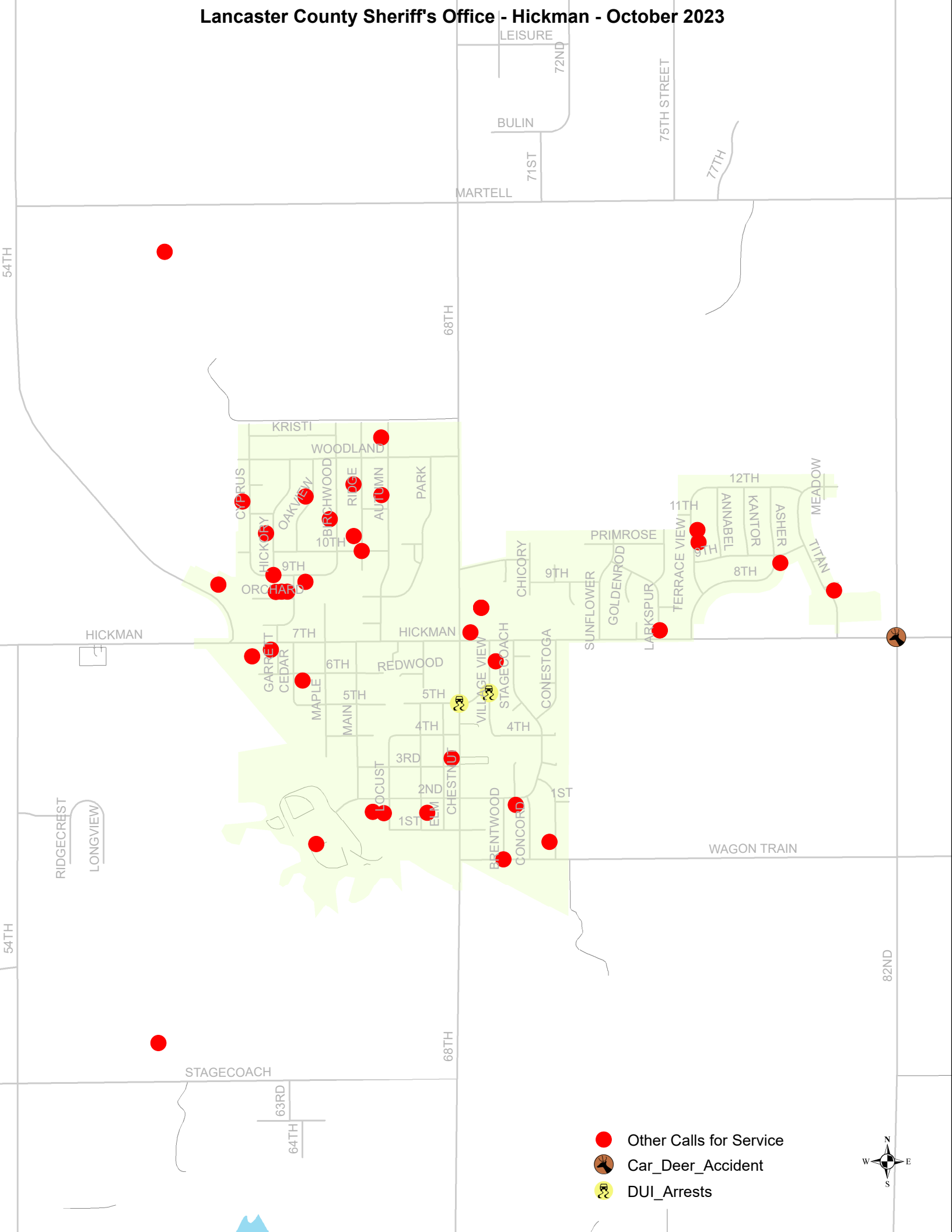
MayorPhil Goering Council Member Ziemann

Council President Wagner Council Member Noren

Council Member Parker Council Member Borchardt

Council Member Meese Jr.

Lancaster County Sheriff's Office - Hickman - October 2023



Lancaster County Sheriff's Office - Hickman - October 2023

LOCATION	CASE	INC	INC_ABBR	DATE	TREC	DEPNAME
S 82ND ST & HICKMAN RD	C3007938	3112	ACC PROP DMG W/DEER	10/19/2023	2000	22214 DOWHOWER
1203 AUTUMN RD	C3007477	4111	ALARM RESIDENTIAL	10/3/2023	524	22191 EWBANK
1305 AUTUMN RD	C3007505	4111	ALARM RESIDENTIAL	10/4/2023	559	22191 EWBANK
115 LOCUST ST	C3007645	4222	ALARM COMMERCIAL	10/9/2023	1519	22214 DOWHOWER
18940 S 68TH ST	C3008206	4222	ALARM COMMERCIAL	10/29/2023	2327	22139 BRYANT
880 TITAN DR	C3007729	4444	ALARM FALSE	10/12/2023	2036	22208 SCHENDT
1032 TERRACE VIEW DR	C3008023	4444	ALARM FALSE	10/23/2023	1300	22173 FUNK
6800 HICKMAN RD	C3008067	4444	ALARM FALSE	10/24/2023	2308	22208 SCHENDT
18940 S 68TH ST	C3008123	4444	ALARM FALSE	10/27/2023	4	22215 SAWTELLE
1007 RIDGE RD	C3008039	5100	ASSAULT DOMESTIC	10/23/2023	2230	22155 BUTTERS
1025 HICKORY ST	C3007633	8333	WEAPONS BY PROHIBITED PERSON	10/9/2023	922	22114 SCHWARZ
615 GARRETT PL	C3007515	9000	CHILD AB/NEG OTHER	10/4/2023	1543	22214 DOWHOWER
1012 TERRACE VIEW DR	C3007471	9600	CHILD AB/NEG EMOTION	10/2/2023	1824	22155 BUTTERS
730 LARKSPUR DR	C3007500	11200	DEATH NATURAL	10/3/2023	2129	22188 BONK
730 LARKSPUR DR	C3007766	11200	DEATH NATURAL	10/14/2023	2	22196 UZZELL
1207 RIDGE RD	C3007844	12000	DISTURBANCE OTHER	10/16/2023	2325	22191 EWBANK
1235 OAKVIEW DR	C3007981	13000	DISTURBANCE DOMESTIC	10/21/2023	2019	22214 DOWHOWER
CHESTNUT ST & E 5TH ST	C3007433	14100	TRAFFIC DUI	10/1/2023	206	22205 CASTANEDA
VILLAGE VIEW DR & E 5TH ST	C3007966	14100	TRAFFIC DUI	10/21/2023	55	22205 CASTANEDA
1215 CYPRUS BLVD	C3007521	16000	FIRE	10/4/2023	1925	22217 CALDWELL
5760 STAGECOACH RD	C3007947	24000	MISC OTHER	10/20/2023	818	22173 FUNK
5901 MARTELL RD	C3008002	24000	MISC OTHER	10/22/2023	1339	22147 STURDY
106 WALNUT ST	C3008085	24000	MISC OTHER	10/25/2023	1637	22214 DOWHOWER
321 CHESTNUT ST	C3007824	31222	OPS OTHER	10/16/2023	923	22118 BARNETT
BRENTWOOD AVE & WAGON TRAIN RD	C3007818	35222	SUSPICIOUS PERSON	10/15/2023	2320	22139 BRYANT
401 W 7TH ST	C3007923	35222	SUSPICIOUS PERSON	10/19/2023	1022	22187 LATHROP
RIDGE RD & W 10TH ST	C3007845	35333	SUSPICIOUS VEHICLE	10/17/2023	19	22139 BRYANT
220 ORCHARD PL	C3007764	40222	SPEC SVC CHECK WELF	10/13/2023	2252	22196 UZZELL
103 W 9TH ST	C3007875	40333	SPEC SVC OTHER	10/17/2023	1953	22105 OSTERHAUS
18840 S 54TH ST	C3007790	44000	ANIMAL OTHER	10/14/2023	2255	22208 SCHENDT
761 E 2ND ST	C3008145	44111	ANIMAL DOG BARKING	10/27/2023	1508	22214 DOWHOWER
230 ORCHARD PL	C3008142	44122	ANIMAL DOG AT LARGE	10/27/2023	1427	22214 DOWHOWER
107 LOCUST ST	C3007545	48000	SPEC SVC CRIME PREV	10/5/2023	1644	22208 SCHENDT
18940 S 68TH ST	C3007733	48000	SPEC SERVICE CRIME PREVENTION	10/12/2023	2326	22208 SCHENDT
105 WAGON TRAIN AVE	C3007852	48000	SPEC SVC CRIME PREV	10/17/2023	736	22180 SCHNIEDER
1009 BIRCHWOOD DR	C3007724	56000	MEDICAL EMERG OTHER	10/12/2023	1846	22208 SCHENDT
210 ORCHARD PL	C3007976	56000	MEDICAL EMERG OTHER	10/21/2023	1612	22214 DOWHOWER
100 MAIN ST	C3007999	56000	MEDICAL EMERG OTHER	10/22/2023	1212	22147 STURDY
209 W 6TH ST	C3008150	56000	MEDICAL EMERG OTHER	10/27/2023	1721	22214 DOWHOWER
5300 HICKMAN RD	C3007629	70111	WARRANT	10/9/2023	725	22203 DIMAS
908 ASHER AVE	C3008084	82000	TRAFFIC PARK OTHER	10/25/2023	1636	22214 DOWHOWER
634 VILLAGE VIEW DR	C3008086	82000	TRAFFIC PARK OTHER	10/25/2023	1925	22214 DOWHOWER
W 9TH ST & HICKORY ST	C3007977	94000	TRAFFIC OTHER	10/21/2023	1742	22214 DOWHOWER

October 2023 Community Center Report

15 Inquiries

3 Tours

67 Participants Sign in for Open Gym Time

In Meeting Room, A&B

- 8 Nonprofit Meetings
- 1 Family Reunion
- 1 Meet and Greet for Lighthouse Baptist Church
- 1 Hickman Reading Centre Event for the Hickman Maker's Market

In the Multipurpose Room

- 4 Women's Volleyball League Games
- 1 Birthday Party
- 1 Norris FFA Fall Party
- 1 Rehearsal Dinner
- 3 Norris Football End of Season Banquets
- 8 NYBA Basketball Practices
- 1 Hickman Maker's Market

Upcoming Events for Community in November

- HACFF Women's Volleyball League Games
- NYBA Basketball Practices
- Norris Football End of Season Banquets
- Volleyball End of Season Banquet

Damage to report: Countertop within kitchen was burned during the Hickman Maker's Market.

PUBLIC NOTICE
City of Hickman, Nebraska
City Council Meeting

Notice is hereby given the Hickman City Council will be holding a public hearing on Tuesday, November 14, 2023, during the regular meeting beginning at 7:00 pm at the Hickman Community Center/City Hall
115 Locust Street, Room 128
Hickman, Nebraska.

The purpose of the hearing is to provide an opportunity for public comment on a replat of a future developable outlot into buildable lots for three multi-family units, garage unit(s), and outlot(s) in Hickman's municipal limits using 4.28 acres, as shown on the Preliminary Plat for Barber Estates Addition. The application, on behalf of Fun LLC and Matthew Barber, is provided by REGA Engineering Group Inc.

The lot is generally located north of 7th Street (Hickman Road) and approximately 828 feet east of Chestnut Street (S. 68th Street).
Parcel ID: 15273190020000 Legal Description: Tower Ridge Addition, Outlot A, Hickman, NE 68372.
Located in the SW ¼ of S27, T8, R7, 6th Principal Meridian, Lancaster County, Nebraska.

Jaala Johnson, CMC
City Clerk

The Voice News

P.O. Box 148
Hickman, NE 68372-0148
402-792-2255

INVOICE - AFFIDAVIT OF PUBLICATION

INVOICE #	3029830	DUE DATE	11/25/2023
-----------	---------	----------	------------

BILL TO
City of Hickman ATTN: Clerk 115 Locust Street Hickman, NE 68372

THE STATE OF NEBRASKA } Darren P. Ivy, being duly sworn,
County of Lancaster } ss. says that he is the publisher of

VOICE NEWS

News of Otoe, Johnson, Gage, Cass, Lancaster & Scotts Bluff, Douglas, Sarpy & Saunders Counties,
a legal newspaper which is published and is in general circulation in Lancaster, Gage, Johnson, Otoe, Cass, Scotts Bluff, Douglas, Sarpy, and Saunders Counties, Nebraska, and is printed in the English Language weekly at its office in Hickman, Nebraska; that said newspaper has been so published for more than fifty-two successive weeks prior to the publication of the annexed notice, and has a bona fide circulation of more than three hundred copies each issue. That to affiant's personal knowledge, the annexed notice was published in said newspaper:

PUBLIC NOTICE CITY OF HICKMAN, NEBRASKA CITY COUNCIL MEETING

Notice is hereby given the Hickman City Council will be holding a public hearing on Tuesday, November 14, 2023, during the regular meeting beginning at 7:00 pm at the Hickman Community Center/City Hall
115 Locust Street, Room 128 Hickman, Nebraska.

The purpose of the hearing is to provide an opportunity for public comment on a replat of a future developable outlot into buildable lots for three multi-family units, garage unit(s), and outlot(s) in Hickman's municipal limits using 4.28 acres, as shown on the Preliminary Plat for Barber Addition. The application, on behalf of Fun LLC and Matthew Barber, is provided by REGA Engineering Group Inc.

The lot is generally located north of 7th Street (Hickman Road) and approximately 828 feet east of Chestnut Street (S. 68th Street). Parcel ID: 15273190020000 Legal Description: Tower Ridge Addition, Outlot A, Hickman, NE 68372. Located in the SW ¼ of S27, T8, R7, 6th Principal Meridian, Lancaster County, Nebraska.

Jaala Johnson, CMC
City Clerk

Oct. 26 - 35 lns
ZNEZ

1	Successive Week(s)
Beginning with the issue of:	10/26/2023
and ending with the issue of:	10/26/2023
Publisher's fee at Legal Rate is:	\$15.28

Handwritten signature of Darren P. Ivy

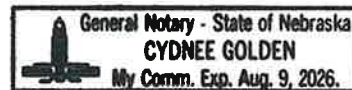
Darren P. Ivy, Publisher

Summary Information	Weekly Cost
Notice of Nov. 14 Public Hearing Preliminary Plat Barber Addition - Oct. 26	15.28
	0.00

Subscribed and sworn before me, this 26 day
of

October, 20 23

Handwritten signature of Notary Public
Notary Public





115 Locust Street, P.O. Box 127,
Hickman, NE 68372-0127
Phone 402.792.2212 - Fax 402.792.2210
www.hickman.ne.gov

APPLICATION FOR PRELIMINARY PLAT # 2023-125

Legal Description and Location: TOWER RIDGE ADDITION, OUTLOT A

Subdivider:

Name: Matt Barber
Address: 20777 S 64 CT
Hickman, NE 68372
Telephone: 402-889-3665

Agent: (Authorized to act on Subdivider's behalf)

Name: Rega Engineering
Address: 601 Old Cheney Road, Suite A
Lincoln, NE 68512
Telephone: 402-484-7342

Name of Preliminary Plat: Barber Addition Number of Lots: 3 Lots

Subdivision Preliminary Plat Fee \$1,000.00 + \$10.00 per Lot Fee Total: \$1030.00

A. Does the subdivider have any interest in the land surrounding the preliminary plat? Yes No
If yes, please describe the nature of such interest:

B. Will the preliminary plat require any zoning or other action (rezoning, planned development, conditional use or vacations) to complete the development? Yes No . If yes please describe the nature of action:

C. Does the preliminary plat deviate from the requirements of the Land Subdivision Ordinance of the City of Hickman or the City's Design Standards: Yes No . If yes, please state each deviation, how the proposal meets the intent of the subdivision ordinance and why the proposal should be accepted (Additional sheets may be added):
See attached waiver list document for explanation of each waiver being requested.

D. Is any part of the land within the preliminary plat within a flood plain? Yes No . If yes, please include the following information: Hydrological and grade information to determine frequency and extent of inundation of flood waters; location of proposed use and type of use; areas of habitation and employment to include location, size and floor elevation of any structures, location and elevation of parking areas, use, location and elevation of open space; all plans and other information conform to Development Standards; limits of the flood plain; amount of Fill Material brought into the flood plain; a certificate that grading will not result in any increase in the flood plain. (Additional sheets may be added):

<u>Nathaniel P. Burnett</u> Signature of Applicant	On Behalf of Subdivider	<u>Nathaniel P. Burnett</u> Printed Name	<u>9-27-2023</u> Date
<u>[Signature]</u> Signature of City Staff		<u>[Signature]</u> Printed Name	<u>9.27-23</u> Date

Office Use Only
 Receipt No. 7811 Date: 10-5-2023 Preliminary Plat #: 2023-125 Fee paid \$ 700.00
7696 Date 8-31-2023 Plat 2023-125 \$ 250.00
paid in full \$ 1030.00



115 Locust Street, P.O. Box 127
Hickman, NE 68372-0127
Phone 402.792.2212 - Fax 402.792.2210
www.hickman.ne.gov

APPLICATION FOR FINAL PLAT

Legal Description and Location: TOWER RIDGE ADDITION, OUTLOT A Permit # 2023-126

Subdivider:	Agent: (Authorized to act on Subdivider's behalf)
Name: <u>Matt Barber</u>	Name: <u>Rega Engineering</u>
Address: <u>20777 S 64 CT</u>	Address: <u>601 Old Cheney Road, Suite A</u>
<u>Hickman, NE 68372</u>	<u>Lincoln, NE 68512</u>
Telephone: <u>402-889-3665</u>	Telephone: <u>402-484-7342</u>

Name of Final Plat: Barber Addition Number of Lots: 3 Lots
Subdivision Final Plat Fee \$1,000.00 + \$10.00 per Lot Fee Total: \$1030.00

- A. Does the subdivider have any interest in the land surrounding the final plat? Yes No If yes, please describe the nature of such interest: N/A
- B. Will the final plat require any zoning or other action (rezoning, planned development, conditional use or vacations) to complete the development? Yes No If yes please describe the nature of action: N/A
- C. The final plat is based upon the preliminary plat for Barber Addition, approved by the City Council on _____, 20____, Resolution No. _____.
- D. Is the final plat consistent with the approved preliminary plat? Yes No If not, please explain the proposed changes and the reasons on an additional sheet.
- E. Have all the improvements required by the preliminary plat been completed? Yes No (Please check the Planning Commission's letter indicating the approval of the preliminary plat.) If not, which improvements have not been completed: _____

Nathaniel P. Burnett On Behalf of Subdivider

Nathaniel P. Burnett

9-27-2023

Signature of Applicant

Printed Name

Date

[Signature]
Signature of City Staff

Heidi Hoglund
Printed Name

9-27-23
Date

City Use Only

Receipt No. 1011 Date: 10-5-23 Final Plat #: 2023-126 Fee paid \$ 1030.00
paid in full

PUBLIC NOTICE
City of Hickman, Nebraska
City Council Meeting

Notice is hereby given the Hickman City Council will be holding a public hearing on Tuesday, November 14, 2023, during the regular meeting beginning at 7:00 pm at the Hickman Community Center/City Hall
115 Locust Street, Room 128
Hickman, Nebraska.

The purpose of the hearing is to provide an opportunity for public comment on a replat of a future developable outlot into lots and outlot(s) in Hickman's municipal limits using 4.28 acres, as shown on the Final Plat for Barber Estates Addition. The application, on behalf of Fun LLC and Matthew Barber, is provided by REGA Engineering Group Inc.

The lot is generally located north of 7th Street (Hickman Road) and approximately 828 feet east of Chestnut Street (S. 68th Street).
Parcel ID: 15273190020000 Legal Description: Tower Ridge Addition, Outlot A, Hickman, NE 68372.
Located in the SW ¼ of S27, T8, R7, 6th Principal Meridian, Lancaster County, Nebraska.

Jaala Johnson, CMC
City Clerk

The Voice News

P.O. Box 148
Hickman, NE 68372-0148
402-792-2255

INVOICE - AFFIDAVIT OF PUBLICATION

INVOICE #	3029831	DUE DATE	11/25/2023
-----------	---------	----------	------------

BILL TO
City of Hickman ATTN: Clerk 115 Locust Street Hickman, NE 68372

THE STATE OF NEBRASKA } Darren P. Ivy, being duly sworn,
County of Lancaster } ss. says that he is the publisher of

VOICE NEWS

News of Otoe, Johnson, Gage, Cass, Lancaster & Scotts Bluff, Douglas, Sarpy & Saunders Counties,
a legal newspaper which is published and is in general circulation in Lancaster, Gage, Johnson, Otoe, Cass, Scotts Bluff, Douglas, Sarpy, and Saunders Counties, Nebraska, and is printed in the English Language weekly at its office in Hickman, Nebraska; that said newspaper has been so published for more than fifty-two successive weeks prior to the publication of the annexed notice, and has a bona fide circulation of more than three hundred copies each issue. That to affiant's personal knowledge, the annexed notice was published in said newspaper:

**PUBLIC NOTICE
CITY OF HICKMAN, NEBRASKA
CITY COUNCIL MEETING**

Notice is hereby given the Hickman City Council will be holding a public hearing on Tuesday, November 14, 2023, during the regular meeting beginning at 7:00 pm at the Hickman Community Center/City Hall
115 Locust Street, Room 128 Hickman, Nebraska.

The purpose of the hearing is to provide an opportunity for public comment on a replat of a future developable outlot into lots and outlot(s) in Hickman's municipal limits using 4.28 acres, as shown on the Final Plat for Barber Addition. The application, on behalf of Fun LLC and Matthew Barber, is provided by REGA Engineering Group Inc.

The lot is generally located north of 7th Street (Hickman Road) and approximately 828 feet east of Chestnut Street (S. 68th Street). Parcel ID: 15273190020000 Legal Description: Tower Ridge Addition, Outlot A, Hickman, NE 68372. Located in the SW ¼ of S27, T8, R7, 6th Principal Meridian, Lancaster County, Nebraska.

Jaala Johnson, CMC
City Clerk

Oct. 26 - 35 Ins
ZNEZ

1	Successive Week(s)
Beginning with the issue of:	10/26/2023
and ending with the issue of:	10/26/2023
Publisher's fee at Legal Rate is:	\$15.28

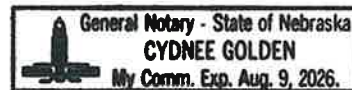
Darren P. Ivy, Publisher

Summary Information	Weekly Cost
Notice of Nov. 14 Public Hearing Final Plat Barber Addition - Oct. 26	15.28
	0.00

Subscribed and sworn before me, this 26 day
of

October, 20 23

Notary Public



Nebraska Department of Economic Development
Housing and Community Development Division

NOTIFICATION OF AUDIT FORM (NAA)

No later than **60 days** after the fiscal yearend, per Federal Register 2 CFR 200 Subpart F – Audit Requirements, recipients of federal grants (e.g., CDBG, HOME, HTF, CARES Act) from the Nebraska Department of Economic Development (DED) must complete this form. Form instructions are on the following page.

1. **Grantee:** Hickman

2. **Identify the end date of the fiscal year:**
09/30/2023

3. **List all Federal Expenditures in the above fiscal year.**


<i>Source/Grant#</i>	<i>Amount</i>
<u>18TD004</u>	<u>\$ 5,595.00</u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
TOTAL	\$ 5,595.00

4. **Single Audit not required for total federal expenditures under \$750,000, OR**
 Single Audit required for total federal expenditures \$750,000 or more
**If a single audit is required, the grantee must have it conducted in accordance with Generally Accepted Government Auditing Standards and 2 CFR 200 Subpart F. Please forward a copy of the audit report to the department within 180 days of the grantee's fiscal year end.*

5. **Contact person for audit submittal:**

Name Jaala Johnson Title Clerk
Phone 402-792-2212 Email cityclerk@hickman.ne.gov

6. **Certification – must be signed by the Chief Elected Official or the Chief Financial Officer**
I certify that the amounts shown on this report accurately reflect the federal funds expended for the fiscal year indicated in Item 2 above.

Signature  Date 11-6-2023
Printed Name Kelly Oelke Title City Administrator

Submit This Completed Form and Audit Report Via:
Email: ded.audit.naa@nebraska.gov, or
Mail: Nebraska Department of Economic Development, PO Box 94666, Lincoln, NE 68509-4666

NOTIFICATION OF ANNUAL AUDIT INSTRUCTIONS

Who must complete NAA Form: all governmental entities and organizations receiving Community Development Block Grant (CDBG), Home Investment Partnerships (HOME), National Housing Trust Funds (HTF) and/or Coronavirus Aid, Relief, and Economic Security Act (CARES Act).

The federal act and 2 CFR 200 Part F require entities that expend \$750,000 or more during the entity's fiscal year in federal funds (from all sources) conduct a single audit for that fiscal year by an independent public accountant and provide a copy to DED. For more information regarding audit requirements, refer to Chapter 15 of the CDBG Administration Manual.

When due: 60 days after fiscal yearend to DED.

Where to submit: ded.audit.naa@nebraska.gov or Nebraska Department of Economic Development, PO Box 94666, Lincoln NE 68509-4666.

NAA FORM COMPLETION TIPS

Item 1: Identify the governmental entity or organization name.

Item 2: Indicate the entity or organization fiscal yearend date.

Item 3: Tabulate the expenditures within the last fiscal year of all federal sources of funds, including any local program funds considered federal funds (e.g., program income, revolving loan funds, etc.).

EXAMPLE: CDBG 15-DTR-106 \$180,000, FEMA/Disaster 4325 \$200,000, Highway Safety \$50,000, USDA \$500,000, SBA \$50,000, US Department of Transportation \$1,000,000, and/or other.

Item 4: Based upon the total federal expenditures indicated in Item 3 above, mark one box in this section to inform DED of the level of all federal expenditures. If federal expenditures exceed \$750,000, an audit report will be required to be submitted to DED within **180 days** after fiscal yearend.

Item 5: Indicate the person responsible for audit submittal.

Item 6: This signature must be the entity/organization Chief Elected Official or Chief Financial Officer.

**PUBLIC NOTICE
CITY OF HICKMAN, NEBRASKA
CITY COUNCIL MEETING**

Notice is hereby given the Hickman City Council will be holding a public hearing on Tuesday, November 14, 2023 during the regular meeting beginning at 7:00 pm at the Hickman Community Center/City Hall 115 Locust Street, Room 128 Hickman, Nebraska

The purpose of the hearing is to provide an opportunity for Public Comment on the City of Hickman's acquisition of land for the expansion of the City's Municipal Wells for the Water Department.

Property is located in Lancaster County more particularly described as:

THE SOUTH HALF OF THE NORTHEAST QUARTER OF SECTION 15, TOWNSHIP 7 NORTH, RANGE 7 EAST OF THE 6TH P.M. LANCASTER COUNTY, NEBRASKA.

Jaala Johnson
City Clerk

After recording please return to:
City of Hickman
115 Locust Street, P.O. Box 127
Hickman, NE 68372

ORDINANCE NO. 2023-14

AN ORDINANCE TO ANNEX CERTAIN PROPERTY TO THE CITY OF HICKMAN, LANCASTER COUNTY, NEBRASKA; TO PROVIDE FOR PUBLICATION; AND TO PROVIDE FOR THE EFFECTIVE DATE HEREOF.

BE IT ORDAINED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF HICKMAN, LANCASTER COUNTY, NEBRASKA:

Section 1. Pursuant to Neb. Rev. Stat. Section 18-3301, and at the request of the owners thereof, the real property described below is hereby annexed into the corporate limits of the City of Hickman, Lancaster County, Nebraska:

Property Description: The real property located and as described on the legal description of WIZKIDZ ADDITION, Lot 1 and Lot 2, and S27, T8, R7, 6th Principal Meridian, LOT 3 SW, Hickman, NE 68372 aka Parcel ID 1527321001000, 1527321002000, and 1527300002000, attached hereto and made a part hereof as Exhibit "A";

Section 2. The City Clerk is directed to file a certified copy of the ordinance and a map certified by the engineer or surveyor with the records of the Lancaster County Register of Deeds Office.

Section 3. Upon such filing, the property described above shall be deemed and held to be a part of the City of Hickman and entitled to the privileges and benefits and subject to the ordinances and regulations thereof.

Section 4. The Extraterritorial Jurisdiction (ETJ) shall be extended upon approval of annexation of said property and the Official Zoning Map of the City of Hickman shall be amended to reflect said changes.

Section 5. Effective Date. This ordinance shall be in full force and effect from and after passage, approval and publication as provided by law.

PASSED AND APPROVED THIS _____ DAY OF _____ 2023.

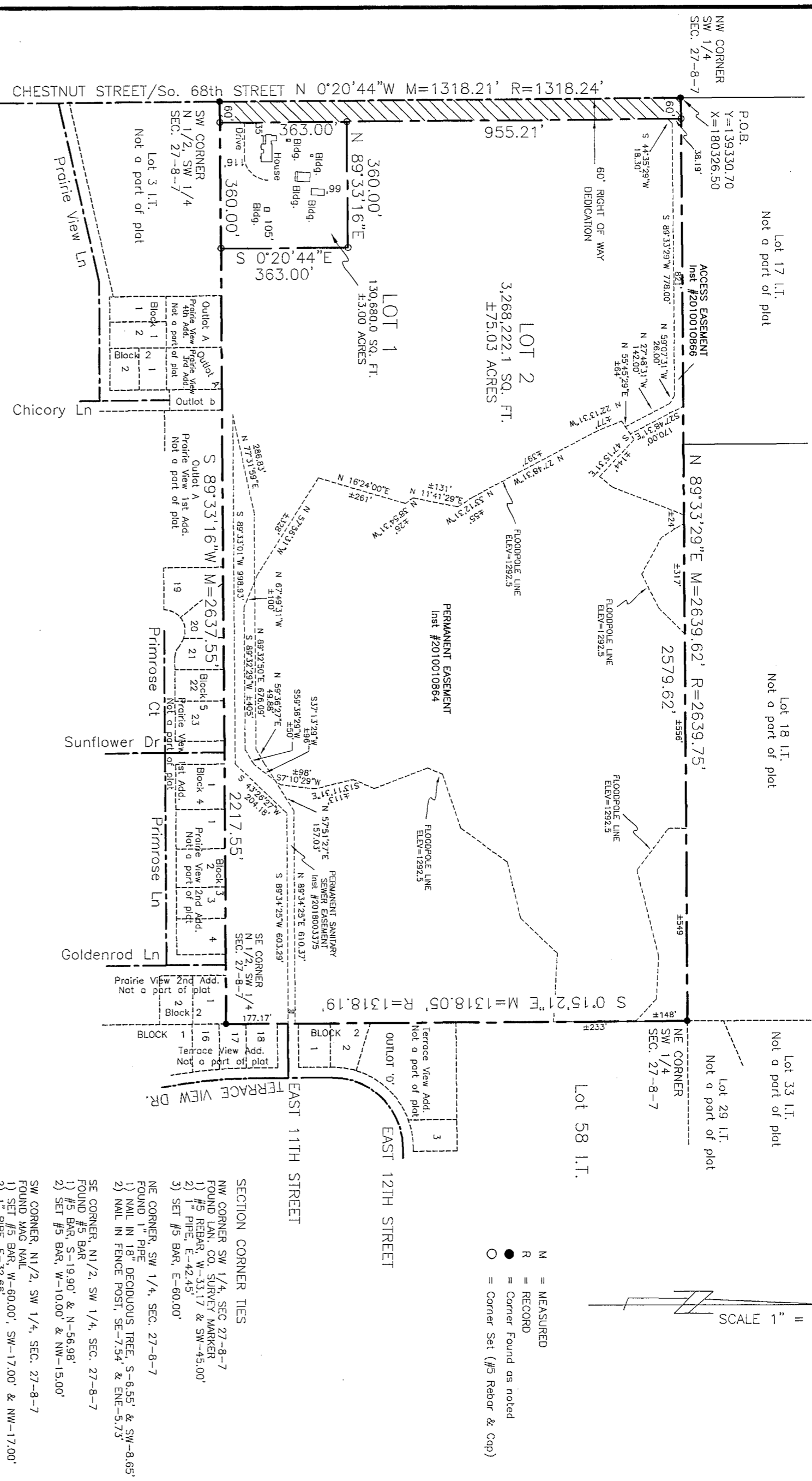
CITY OF HICKMAN

(SEAL)

Phil Goering, Mayor

ATTEST: Jaala Johnson, CMC City Clerk

WIZKIDZ ADDITION ADMINISTRATIVE PLAT



SCALE 1" = 300'

- M = MEASURED
- R = RECORDED
- = Corner Found as noted
- = Corner Set (#5 Rebar & Cap)

SECTION CORNER TIES

NW CORNER SW 1/4, SEC. 27-8-7
 FOUND LAN. CO. SURVEY MARKER
 1) #5 REBAR, W-33.17' & SW-45.00'
 2) SET #5 BAR, E-42.45'
 3) SET #5 BAR, E-60.00'

NE CORNER SW 1/4, SEC. 27-8-7
 FOUND 1" PIPE
 1) WALL IN 18" DECIDUOUS TREE, S-6.55' & SW-8.65'
 2) WALL IN FENCE POST, SE-7.54' & ENE-5.73'

SE CORNER, N1/2, SW 1/4, SEC. 27-8-7
 FOUND #5 BAR
 1) #5 BAR, S-19.90' & N-56.98'
 2) SET #5 BAR, W-10.00' & NW-15.00'

SW CORNER, N1/2, SW 1/4, SEC. 27-8-7
 FOUND MAG WALK
 1) SET #5 BAR, W-60.00', SW-17.00' & NW-17.00'
 2) 1" PIPE, E-32.86'

ACKNOWLEDGMENT OF NOTARY

STATE OF NEBRASKA
 LANCASTER COUNTY

ON THIS 21st DAY OF August 2023, BEFORE ME THE UNDERSIGNED, A NOTARY PUBLIC, DULY COMMISSIONED, QUALIFIED FOR AND RESIDING IN SAID COUNTY, PERSONALLY CAME TO ME, VAN A. O'CONNOR & REBECCA A. O'CONNOR, HUSBAND AND WIFE, KNOWN TO BE THE IDENTICAL PERSON WHOSE NAME IS FIXED TO THE DEDICATION TO THE FOREGOING PLAT AND THEY ACKNOWLEDGES THE SAME TO BE THEIR VOLUNTARY ACT AND DEED.

MY COMMISSION EXPIRES THE 26th DAY OF June 2025

GENERAL NOTARY - State of Nebraska
 SETH PATRICK
 My Comm. Exp. June 26, 2025

ACKNOWLEDGMENT OF NOTARY

STATE OF NEBRASKA
 LANCASTER COUNTY

ON THIS 21st DAY OF August 2023, BEFORE ME THE UNDERSIGNED, A NOTARY PUBLIC, DULY COMMISSIONED, QUALIFIED FOR AND RESIDING IN SAID COUNTY, PERSONALLY CAME TO ME, JEFF WISKER, WIZKIDZ, MANAGING MEMBER, KNOWN TO BE THE IDENTICAL PERSON WHOSE NAME IS FIXED TO THE FOREGOING PLAT AND HE ACKNOWLEDGES THE SAME TO BE HIS VOLUNTARY ACT AND DEED.

MY COMMISSION EXPIRES THE 26th DAY OF June 2025

GENERAL NOTARY - State of Nebraska
 SETH PATRICK
 My Comm. Exp. June 26, 2025

ACKNOWLEDGMENT OF NOTARY

STATE OF NEBRASKA
 LANCASTER COUNTY

ON THIS 21st DAY OF August 2023, BEFORE ME THE UNDERSIGNED, A NOTARY PUBLIC, DULY COMMISSIONED, QUALIFIED FOR AND RESIDING IN SAID COUNTY, PERSONALLY CAME TO ME, BARBARA K. PESTER, WIZKIDZ, MANAGING MEMBER, KNOWN TO BE THE IDENTICAL PERSON WHOSE NAME IS FIXED TO THE DEDICATION TO THE FOREGOING PLAT AND SHE ACKNOWLEDGES THE SAME TO BE HER VOLUNTARY ACT AND DEED.

MY COMMISSION EXPIRES THE 26th DAY OF June 2025

GENERAL NOTARY - State of Nebraska
 SETH PATRICK
 My Comm. Exp. June 26, 2025

ACKNOWLEDGMENT OF NOTARY

STATE OF NEBRASKA
 LANCASTER COUNTY

ON THIS 21st DAY OF August 2023, BEFORE ME THE UNDERSIGNED, A NOTARY PUBLIC, DULY COMMISSIONED, QUALIFIED FOR AND RESIDING IN SAID COUNTY, PERSONALLY CAME TO ME, BARBARA K. PESTER, WIZKIDZ, MANAGING MEMBER, KNOWN TO BE THE IDENTICAL PERSON WHOSE NAME IS FIXED TO THE DEDICATION TO THE FOREGOING PLAT AND SHE ACKNOWLEDGES THE SAME TO BE HER VOLUNTARY ACT AND DEED.

MY COMMISSION EXPIRES THE 26th DAY OF June 2025

GENERAL NOTARY - State of Nebraska
 SETH PATRICK
 My Comm. Exp. June 26, 2025

Inst # 2023025426 Thu Aug 24 11:34:12 CDT 2023
 Filing Fee: \$52.00
 Lancaster County, NE Assessor/Register of Deeds Office
 Section 27, Township 8 North, Range 7 East of the 6th P.M., Lancaster County, Nebraska, Plat
 Pages: 1

WIZKIDZ

6230

PERMETER DESCRIPTIONS

ALL OF LOTS 50 AND 51 IRREGULAR TRACTS, LOCATED IN THE NORTH HALF OF THE SOUTHWEST QUARTER OF SECTION 27, TOWNSHIP 8 NORTH, RANGE 7 EAST OF THE 6th P.M., LANCASTER COUNTY, NEBRASKA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF THE SOUTHWEST QUARTER OF SAID SECTION 27; THENCE EASTERLY ON THE NORTH LINE OF SAID LOT 51, AND THE NORTH LINE OF SAID SOUTHWEST QUARTER, ON AN ASSIGNED BEARING OF N 89°33'29"E, 2639.62', TO THE NORTHEAST CORNER OF SAID SOUTHWEST QUARTER; THENCE SOUTHERLY ON THE EAST LINE OF SAID SOUTHWEST QUARTER, S 0°15'21"E, 1318.05', TO THE SOUTHEAST CORNER OF THE NORTH HALF OF SAID SOUTHWEST QUARTER; THENCE WESTERLY ON THE SOUTH LINE OF SAID NORTH HALF, S 89°33'16"W, 2637.55', TO THE SOUTHWEST CORNER OF SAID NORTH HALF; THENCE NORTHERLY ON THE WEST LINE OF SAID SOUTHWEST QUARTER, N 0°20'44"W, 1318.21', TO THE POINT OF BEGINNING, SAID TRACT CONTAINING AN AREA OF 5,477,994.62 SQUARE FEET OR 73.84 ACRES, MORE OR LESS.

OWNERS CERTIFICATION

I THE UNDERSIGNED, VAN A. O'CONNOR & REBECCA A. O'CONNOR, OWNERS; BARBARA K. PESTER AND JEFF WISKER, WIZKIDZ LLC, MANAGING MEMBERS, OWNERS; OF THE REAL ESTATE SHOWN AND DESCRIBED HEREIN CERTIFY THAT I HAVE LAID OUT, PLATTED, AND SUBDIVIDED, AND DO HEREBY LAY OUT, PLAT AND SUBDIVIDE SAID REAL ESTATE IN ACCORDANCE WITH THIS PLAT.

CLEAR TITLE TO THE LAND CONTAINED IN THIS PLAT IS GUARANTEED. ANY ENCUMBRANCES OR SPECIAL ASSESSMENTS ARE EXPLAINED AS FOLLOWS:

THERE ARE STRIPS OF GROUND SHOWN OR DESCRIBED ON THIS PLAT AND MARKED EASEMENT, RESERVED FOR THE USE OF PUBLIC UTILITIES AND SUBJECT TO THE PARAMOUNT RIGHT OF UTILITY OR CITY TO INSTALL, REPAIR, REPLACE, AND MAINTAIN ITS INSTALLATIONS.

THE 60' WIDE RIGHT OF WAY SHOWN ALONG CHESTNUT STREET AND OR SOUTH 68th STREET IS HEREBY DEDICATED TO THE PUBLIC.

DIRECT VEHICLE ACCESS INTO LOT 2, FROM EAST 11TH STREET, GOLDENROD LANE, SUNFLOWER DRIVE, AND OUTLOT B, PRAIRIE VIEW 3RD ADDITION IS NOT ALLOWED UNTIL LOT 2 IS SUBDIVIDED.

THE CONSTRUCTION OR LOCATION OF ANY FENCE OR OTHER IMPROVEMENT WHICH OBSTRUCTS DRAINAGE SHALL BE PROHIBITED OVER, UPON, OR UNDER ANY DRAINAGE EASEMENT SHOWN THEREON.

THE BUILDING SETBACKS WILL COMPLY WITH THE ZONING DISTRICT IN WHICH THE STRUCTURE WILL BE LOCATED.

ONE NEW COMMERCIAL/RESIDENTIAL ACCESS POINT OFF CHESTNUT STREET AND OR SOUTH 68th STREET IS ALLOWED.

NATIONAL WETLANDS INVENTORY SHOWS FRESHWATER WETLANDS THROUGHOUT LOT 2.

LOT 2 CONTAINS THE UPPER SALT CREEK DAM AND PERMANENT EASEMENT THIS EASEMENT IS GRANTED FOR THE PURPOSE OF AND IN CONNECTION WITH THE CONSTRUCTION, RECONSTRUCTION, OPERATION, MAINTENANCE, REPAIR, AND INSPECTION OF A FLOODWATER RETARDING STRUCTURE, TO INCLUDE A SITE WHERE THE SUITABLE BORROW MATERIALS CAN BE OBTAINED, FOR THE INSTALLATION AND MAINTENANCE OF WILDLIFE HABITAT; AND FOR THE PURPOSE OF THE FLOWAGE OF ANY WATERS IN, OVER, UPON, OR THROUGH SUCH STRUCTURE; AND FOR THE PERMANENT STORAGE AND TEMPORARY DETENTION, EITHER OR BOTH, OF ANY WATERS THAT ARE IMPOUNDED, STORED OR DETAINED BY SUCH FLOODWATER RETARDING STRUCTURE DESIGNATED AS SITE 35-A OF THE UPPER SALT CREEK WATERSHED PROJECT.

Van A O'Connor
 VAN A. O'CONNOR, husband

Rebecca O'Connor
 REBECCA A. O'CONNOR, wife

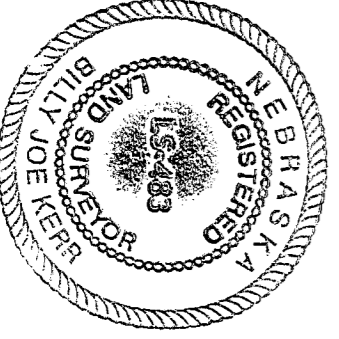
Jeff Wisker
 WIZKIDZ LLC, MANAGING MEMBER

Barbara K Pester
 WIZKIDZ LLC, MANAGING MEMBER

SURVEYORS CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL SURVEYOR, REGISTERED IN COMPLIANCE WITH THE LAWS OF THE STATE OF NEBRASKA, THAT THIS PLAT CORRECTLY REPRESENTS A SURVEY CONDUCTED BY ME OR UNDER MY DIRECT SUPERVISION ON JANUARY 27, 2023, THAT ANY CHANGES FROM THE DESCRIPTION APPEARING IN THE LAST RECORDED TRANSMISSION OF LAND CONTAINED IN THE FINAL PLAT ARE SO INDICATED, THAT ALL MONUMENTS SHOWN THEREON ACTUALLY EXIST AS DESCRIBED OR WILL BE INSTALLED AND THEIR POSITION IS CORRECTLY SHOWN AND THAT ALL DIMENSIONAL AND GEODETIC DATA IS CORRECT.

SIGNED THIS 18th DAY OF AUGUST, 2023.



Billy Joe Kier
 BILLY JOE KIER, LS #483
 K & M LAND SURVEYING INC.

APPROVAL OF CITY OF HICKMAN

THIS ADMINISTRATIVE PLAT WAS APPROVED BY THE CITY OF HICKMAN ON THIS 21st DAY OF August 2023

Luigi Ilesca
 ZONING ADMINISTRATOR

ACCEPTANCE BY HICKMAN CITY ENGINEER

THIS ADMINISTRATIVE PLAT WAS REVIEWED AND APPROVED BY THE HICKMAN CITY ENGINEER ON THIS 24th DAY OF August 2023

John R. Stahl
 HICKMAN CITY ENGINEER

ACCEPTANCE BY LANCASTER COUNTY REGISTER OF DEEDS

LANCASTER COUNTY REGISTER OF DEEDS

REVIEW OF LANCASTER COUNTY SURVEYOR

THIS ADMINISTRATIVE PLAT OF ADDITION WAS REVIEWED BY THE LANCASTER COUNTY SURVEYOR ON THIS 22nd DAY OF Aug. 2023

David B. B...
 LANCASTER COUNTY SURVEYOR

COUNTY TREASURER'S CERTIFICATIONS

THIS IS TO CERTIFY THAT I FIND NO REGULAR OR SPECIAL TAXES DUE OR DELINQUENT AGAINST THE PROPERTY DESCRIBED IN THE SURVEYOR'S CERTIFICATE AND EMBRACED IN THIS PLAT AS SHOWN BY RECORDS OF LANCASTER COUNTY TREASURER

COUNTY TREASURER DATE AUG 24 2023



CERTIFICATE OF PAYMENT NO. 1



Date of Issuance: November 3, 2023

Project: Hickman WTP – 2nd Train, 2022, Hickman, Nebraska
Project No. 022-02777

Contractor: Midwest Mechanical (MWM) Industrial Services, LLC, PO Box 16, 2602 Niagara Trail, Logan, IA 51546

DETAILED ESTIMATE

Description	Unit Prices	Extension
Base Bid plus Alternate		
See Attached.		
PLEASE REMIT PAYMENT TO: Midwest Mechanical Industrial Services, LLC, PO Box 16, 2602 Niagara Trail, Logan, IA 51546		

Value of Work Completed: \$103,500.00

Original Contract Cost: \$386,000.00
 Approved Change Orders:
 No. _____ \$ 0.00
 Total Contract Cost: \$386,000.00

Value of completed work and materials stored..... \$103,500.00
 Less retained percentage (5%)..... \$ 5175.00
 Net amount due including this estimate..... \$ 98,325.00
 Less: Estimates previously approved:

No. 1 \$ _____ No. 2 \$ _____ No. 3 \$ _____

Total Previous Estimates \$ 0.00

NET AMOUNT DUE THIS ESTIMATE \$ 98,325.00

The undersigned hereby certifies, based upon periodic observations as set forth in scope of work and the data included in all applicable payment applications that, to the best of its knowledge, information and belief: (1) the work has progressed as indicated in the applicable payment applications; (2) the work performed and materials delivered by Contractor are in conformance with the plans and specifications; and (3) the Contractor, in accordance with the contract, is entitled to payment as indicated above.

This certification does not constitute a warranty or guarantee of any type. Client shall hold its Contractor solely responsible for the quality and completion of the Project, including construction in accordance with the construction documents. Any duty or obligation of Olsson hereunder is for the sole benefit of the Client and not for any third party, including the Contractor or any Subcontractor.

cc: City of Hickman, Owner
 MWM Industrial, Contractor
 Olsson Project File

OLSSON
 By: 

Contractor's Application for Payment No.

	Application Period: Start-10/31/2023	Application Date: 10/25/2023
To (Owner): City of Hickman Nebraska	From (Contractor): Midwest Mechanical Industrial Services	Via (Engineer): Olsson
Project: Hickman WTP 2nd Train Expansion	Contract:	Application Number: 01
Owner's Contract No.:	Contractor's Project No.: T4421	Engineer's Project No.: 022-02777

Application For Payment Change Order Summary

Approved Change Orders		
Number	Additions	Deductions
TOTALS	\$ -	\$ -
NET CHANGE BY CHANGE ORDERS	\$ -	

1. ORIGINAL CONTRACT PRICE	\$	386,000.00
2. Net change by Change Orders	\$	-
3. Current Contract Price (Line 1 ± 2)	\$	386,000.00
4. TOTAL COMPLETED AND STORED TO DATE (Column F total on Progress Estimates).....	\$	103,500.00
5. RETAINAGE:		
a. \$ 37,500.00 X 5% Work Completed.....	\$	1,875.00
b. \$ 66,000.00 X 5% Stored Material.....	\$	3,300.00
c. Total Retainage (Line 5.a + Line 5.b).....	\$	5,175.00
6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5.c)	\$	98,325.00
7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application)	\$	-
8. AMOUNT DUE THIS APPLICATION	\$	98,325.00
9. BALANCE TO FINISH, PLUS RETAINAGE (Column G total on Progress Estimates + Line 5.c above).....	\$	287,675.00

Contractor's Certification

The undersigned Contractor certifies, to the best of its knowledge, the following:

(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;

(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all Liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such Liens, security interest, or encumbrances); and

(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

By: _____ Date: _____

Payment of: _____
(Line 8 or other - attach explanation of the other amount)

is recommended by: _____
(Engineer) (Date)

Payment of: _____
(Line 8 or other - attach explanation of the other amount)

is approved by: _____
(Owner) (Date)

Approved by: _____
Funding or Financing Entity (if applicable) (Date)



Trusted insurance advisors

Online Payment · fnicgroup.epaypolicy.com

P.O. Box 3875 · Omaha, NE 68103-0875

402.861.7000 · 800.344.5624

T4421 - Hickman WTP

----- INVOICE -----

Midwest Mechanical Industrial Services
P.O. Box 164
Logan, IA 51546

Invoice Date 06/09/23
Invoice No. 196709
Bill-To Code MIDWEMEC
Client Code MIDWEMEC
Inv Order No. 100*222629

Named Insured: Midwest Mechanical Industrial Services

Amount Remitted: \$

Please return this portion with your payment.

Make checks payable to: FNIC

Effective Date	Policy Period	Coverage Description	Transaction Amount
06/09/23	06/09/23 to 06/09/24	United Fire & Casualty Policy No. 54251635 *New - Performance Bond The City of Hickman, NE Hickman WTP - 2nd Train \$386,000.00 Invoice Number: 196709	4,606.00
		Amount Due:	4,606.00

*Premiums Due and Payable on Effective Date



INVOICE

Invoice #: 6495165
Invoice Date: 10/09/2023
Date Due: 11/08/2023
Customer #: 10727
Customer PO: T4421-PO-005
Sales Order #: 6539919
Order Date: 08/17/2023
Shipment #: 1152238
Ship Date: 10/09/2023

Malloy Electric (Omaha West) (#8)
 13208 Cary Cir
 Omaha, NE 68138-6618
 (402) 342-1191

Sold To: Midwest Mechanical Industrial Services (#10727) **Ship To:** City of Hickman Water Treatment Facility
 Po Box 164
 Logan, IA 51546-0164
 23100 S 68th St
 Hickman, NE 68372-9409

Placed By: **Ship Via:** BEST WAY
Application: Hickman, NE WTP 2nd Train **Tracking:**
Tax Region: LANCASTER County, Hickman, NE 68372-9426

ORDER RELEASED ON 8/17

Seq	Qty Ordered	Qty Invoiced	Qty B/O	Item #	Part #	Description	Price	Extended	Tax
30	1.00	1.00	0.00	242102	ACQ580-PC-023A-4+B058	VFD 15/10HP N3R 460V R2 FRAME INTEGRAL CB & DISCONNECT	7,356.79	7,356.79	Y
ABB Inc FOB DESTINATION, PREPAY & ALLOW ORDER RELEASED ON 8/17									
40	1.00	1.00	0.00	137002	FENA-21-KIT	ETHERNET (EIP, MB/TCP, PROFINET) FIELD KIT - DUAL PORT	547.56	547.56	Y

ABB Inc

Please remit payment to:
DMG Inc dba Malloy Electric
809 W. Russell Street
Sioux Falls, SD 57104

Contact information:
Phone: 605-336-3693
Fax: 605-336-1545

Subtotal: 7,904.35
Freight: 94.99
Tax: 439.96
Invoice Total: USD 8,439.30

Terms: NET 30 DAYS

Service charge of 1 1/2% per month (18% annual rate) will be applied the first of each month on the unpaid balance.
 Minimum service charge is \$1.00.



INVOICE

1830 Craig Park Court
St. Louis, MO 63146

Invoice # T559443
Invoice Date 10/13/23
Account # 224423
Sales Rep MICHAEL LOFFER
Phone # 402-817-1800
Branch #267 Lincoln, NE
Total Amount Due \$5,397.15

Remit To:
CORE & MAIN LP
PO BOX 28330
ST LOUIS, MO 63146

MIDWEST MECHANICAL INDUSTRIAL 000/0000
PO BOX 164 00000
LOGAN IA 51546 0164


Shipped To:
23100 S 68th STREET
HICKMMAN WTP 2ND TRAIN EXP
HICKMAN, NE

CUSTOMER JOB- HICKMAN HICKMAN WATER

Thank you for the opportunity to serve you! We appreciate your prompt payment.

Date Ordered 9/11/23 Date Shipped 10/12/23 Customer PO # SEE BELOW Job Name HICKMAN WATER Job # HICKMAN Bill of Lading CORE & MAIN LP Shipped Via Invoice# T559443

Product Code	Description	Quantity		B/O	Price	UM	Extended Price
		Ordered	Shipped				
	CUSTOMER PO#- T4421-PO-006-REV1						
/19517498741	12 MJXWCXPE PR IMP BID SEQ# 90	1	1		1185.72000	EA	1,185.72
/19217498742	10 FLGXFLG DI PIPE PR W/-1/2" TAP BID SEQ# 200	1	1		2171.43000	EA	2,171.43
97TAPSERVICE	TAPPING SERVICES 6" BLIND TAPT 3" MIP BID SEQ# 280	1	1		195.41000	EA	195.41
25I06FF0308	6 FLGXFLG DI PIPE 3'8" IMP BID SEQ# 590	1	1		647.03000	EA	647.03
25I06FF0100PR	6 FLGXFLG DI PIPE PR 1' PRIMED IMP BID SEQ# 610	1	1		414.29000	EA	414.29
25I06FP0200PR	6 FLGXPE DI PIPE PR 2' PRIMED IMP BID SEQ# 650	1	1		332.47000	EA	332.47
24I06FBPR	6 BLIND FLG DI PR IMP	1	1		97.72000	EA	97.72

Proof of Delivery
Signed by: 
TRAVIS
10/12/2023 14:03

Freight Delivery Handling Restock Misc

Terms: NET 30
Ordered By: TRAVIS

Subtotal: 5,044.07
Other: .00
Tax: 353.08
Invoice Total: \$5,397.15

This transaction is governed by and subject to Core & Main's standard terms and conditions, which are incorporated by reference and accepted.
To review these terms and conditions, please visit: <http://tandc.coreandmain.com/>



INVOICE

1830 Craig Park Court
St. Louis, MO 63146

Invoice # T588626
Invoice Date 10/13/23
Account # 224423
Sales Rep MICHAEL LOFFER
Phone # 402-817-1800
Branch #267 Lincoln, NE
Total Amount Due \$4,716.80

Remit To:
CORE & MAIN LP
PO BOX 28330
ST LOUIS, MO 63146

MIDWEST MECHANICAL INDUSTRIAL 000/0000
PO BOX 164 00000
LOGAN IA 51546 0164

Shipped To:
23100 S 68th STREET
HICKMMAN WTP 2ND TRAIN EXP
HICKMAN, NE

CUSTOMER JOB- HICKMAN HICKMAN WATER

Thank you for the opportunity to serve you! We appreciate your prompt payment.

Date Ordered 9/14/23 Date Shipped 10/12/23 Customer PO # SEE BELOW Job Name HICKMAN WATER Job # HICKMAN Bill of Lading CORE & MAIN LP Shipped Via Invoice# T588626

Product Code	Description	Quantity		B/O	Price	UM	Extended Price
		Ordered	Shipped				
	CUSTOMER PO#- T4421-PO-006-REV1						
2903080AHM	3 PVC S80 MALE ADPT 836-030 BID SEQ# 270	3	3		20.20000	EA	60.60
2908080FHVS	8 PVC S80 VANSTONE FLG SW SOCKET W/PVC RING 854-080 BID SEQ# 430	16	16		65.13000	EA	1,042.08
29080804HH	8 PVC S80 45 HXH 817-080 BID SEQ# 440	2	2		123.36000	EA	246.72
29080809HH	8 PVC S80 90 HXH 806-080 BID SEQ# 450	5	5		130.50000	EA	652.50
2910080RS080H	10X8 PVC S80 BUSHING SPXHUB 837-628 BID SEQ# 790	1	1		380.26000	EA	380.26
2910080FHVS	10 PVC S80 VANSTONE FLG SW SOCKET W/PVC RING 854-100 BID SEQ# 800	1	1		161.06000	EA	161.06
29010809HH	1 PVC S80 90 HXH 806-010 BID SEQ# 1080	1	1		2.41000	EA	2.41
2901080TH010H	1 PVC S80 TEE HXH 801-010 BID SEQ# 1090	1	1		4.32000	EA	4.32
2902080RS010F	2X1 PVC S80 BU SXFIPT 838-249 BID SEQ# 1100	1	1		6.07000	EA	6.07
29030809HH	3 PVC S80 90 HXH 806-030 BID SEQ# 1180	8	8		10.94000	EA	87.52
29030804HH	3 PVC S80 45 HXH 817-030 BID SEQ# 1190	1	1		25.10000	EA	25.10
2903080RM015F	3X1-1/2 PVC S80 BU MXF 839-337 BID SEQ# 1210	1	1		13.86000	EA	13.86



INVOICE

1830 Craig Park Court
St. Louis, MO 63146

Invoice # T588626
Invoice Date 10/13/23
Account # 224423
Sales Rep MICHAEL LOFFER
Phone # 402-817-1800
Branch #267 Lincoln, NE
Total Amount Due \$4,716.80

Remit To:
CORE & MAIN LP
PO BOX 28330
ST LOUIS, MO 63146

MIDWEST MECHANICAL INDUSTRIAL 000/0000
PO BOX 164 00000
LOGAN IA 51546 0164


Shipped To:
23100 S 68th STREET
HICKMAN WTP 2ND TRAIN EXP
HICKMAN, NE

CUSTOMER JOB- HICKMAN HICKMAN WATER

Thank you for the opportunity to serve you! We appreciate your prompt payment.

Date Ordered 9/14/23 Date Shipped 10/12/23 Customer PO # SEE BELOW Job Name HICKMAN WATER Job # HICKMAN Bill of Lading Shipped Via CORE & MAIN LP Invoice# T588626

Product Code	Description	Quantity		B/O	Price	UM	Extended Price
		Ordered	Shipped				
	CUSTOMER PO#- T4421-PO-006-REV1						
2901080TH005H	1X1/2 PVC S80 TEE HXH 801-130 BID SEQ# 1220	1	1		3.64000	EA	3.64
29APPQPC32	PRIMER- PC32 CLEAR - QUART BID SEQ# 1260	10	10		18.76000	EA	187.60
29APQT	PVC SOLVENT CEMENT-QT BID SEQ# 1270	10	10		39.71000	QT	397.10
2902080AHM	2 PVC S80 MALE ADPT MIPTXH 836-020 BID SEQ# 1300	3	3		11.43000	EA	34.29
29020809HH	2 PVC S80 90 HXH 806-020 BID SEQ# 1310	9	9		4.16000	EA	37.44
29012809HH	1-1/4 PVC S80 90 HXH 806-012 BID SEQ# 1390	17	17		3.23000	EA	54.91
2908080CTH040H	8X4 CPVC SCH80 TEE HXH 801-582C BID SEQ# 1530	1	1		452.71000	EA	452.71
2904080RM020F	4X2 PVC S80 BU MXF 839-420 BID SEQ# 1540	1	1		28.58000	EA	28.58
/30017504522	3" THREADED SCH80 BALL VLV	1	1		529.46000	EA	529.46

Proof of Delivery
Signed by: 
TRAVIS
10/12/2023 14:03

Freight Delivery Handling Restock Misc

Terms: NET 30
Ordered By: TRAVIS

Subtotal: 4,408.23
Other: .00
Tax: 308.57
Invoice Total: \$4,716.80

This transaction is governed by and subject to Core & Main's standard terms and conditions, which are incorporated by reference and accepted.
To review these terms and conditions, please visit: <http://tandc.coreandmain.com/>



INVOICE

1830 Craig Park Court
St. Louis, MO 63146

Invoice # T589936
Invoice Date 10/13/23
Account # 224423
Sales Rep MICHAEL LOFFER
Phone # 402-817-1800
Branch #267 Lincoln, NE
Total Amount Due \$1,809.82

Remit To:
CORE & MAIN LP
PO BOX 28330
ST LOUIS, MO 63146

MIDWEST MECHANICAL INDUSTRIAL 000/0000
PO BOX 164 00000
LOGAN IA 51546 0164

Shipped To:
23100 S 68th STREET
HICKMMAN WTP 2ND TRAIN EXP
HICKMAN, NE

CUSTOMER JOB- HICKMAN HICKMAN WATER

Thank you for the opportunity to serve you! We appreciate your prompt payment.

Date Ordered 9/14/23 Date Shipped 10/12/23 Customer PO # SEE BELOW Job Name HICKMAN WATER Job # HICKMAN Bill of Lading CORE & MAIN LP Shipped Via CORE & MAIN LP Invoice# T589936

Product Code	Description	Quantity		B/O	Price	UM	Extended Price
		Ordered	Shipped				
	CUSTOMER PO#- T4421-PO-006-REV1						
24AFBNKS06304	6 304SS HEX BOLT & NUT KIT BID SEQ# 320	8	8		31.11000	EA	248.88
24AFGF06NSF	6X1/8 FLG FF EPDM GASKET NSF61 POTABLE WATER BID SEQ# 330	10	10		14.32000	EA	143.20
24AFBNKS10304	10 304SS HEX BOLT & NUT KIT BID SEQ# 370	3	3		78.32000	EA	234.96
24AFGF010NSF	10X1/8 FLG FF EPDM GSK NSF61 POTABLE WATER BID SEQ# 380	3	3		21.50000	EA	64.50
24AFBS0735304	3/4X3-1/2 HEX HEAD BOLT 304SS BID SEQ# 470	48	48		3.36000	EA	161.28
24AFBNKS08304	8 304SS HEX BOLT & NUT KIT BID SEQ# 480	13	13		35.75000	EA	464.75
24AFGF08NSF	8X1/8 FLG FF EPDM GASKET NSF61 POTABLE WATER BID SEQ# 490	15	15		21.35000	EA	320.25
24AFBS0780304	3/4X8 HEX HEAD BOLT 304SS BID SEQ# 860	8	8		5.98000	EA	47.84
24AFHN07S304	3/4 HEX NUT 304SS BID SEQ# 870	8	8		5.76000	EA	46.08

Proof of Delivery
Signed by:
TRAVIS
10/12/2023 14:03

Freight Delivery Handling Restock Misc

Terms: NET 30
Ordered By: TRAVIS

Subtotal: 1,691.42
Other: .00
Tax: 118.40
Invoice Total: \$1,809.82

This transaction is governed by and subject to Core & Main's standard terms and conditions, which are incorporated by reference and accepted. To review these terms and conditions, please visit: <http://tandc.coreandmain.com/>



INVOICE

1830 Craig Park Court
St. Louis, MO 63146

Invoice # T590360
Invoice Date 10/13/23
Account # 224423
Sales Rep MICHAEL LOFFER
Phone # 402-817-1800
Branch #267 Lincoln, NE
Total Amount Due \$15,264.77

Remit To:
CORE & MAIN LP
PO BOX 28330
ST LOUIS, MO 63146

MIDWEST MECHANICAL INDUSTRIAL 000/0000
PO BOX 164 00000
LOGAN IA 51546 0164

Shipped To:
23100 S 68th STREET
HICKMMAN WTP 2ND TRAIN EXP
HICKMAN, NE

CUSTOMER JOB- HICKMAN HICKMAN WATER

Thank you for the opportunity to serve you! We appreciate your prompt payment.

Date Ordered 9/14/23 Date Shipped 10/12/23 Customer PO # SEE BELOW Job Name HICKMAN WATER Job # HICKMAN Bill of Lading CORE & MAIN LP Shipped Via CORE & MAIN LP Invoice# T590360

Product Code	Description	Quantity		B/O	Price	UM	Extended Price
		Ordered	Shipped				
	CUSTOMER PO#- T4421-PO-006-REV1						
04122614	12 PVC SDR26 HW SWR PIPE (G) 14' BID SEQ# 70	154	154		34.20000	FT	5,266.80
131216GES	12 CMP 16GA END SECTION BID SEQ# 80	1	1		210.72000	EA	210.72
21IAMMJR12	12 MJ REGULAR ACC SET (I) BID SEQ# 110	1	1		57.72000	EA	57.72
21AMG512	12 MJXIPS PVC TRANS GASKET BID SEQ# 120	1	1		14.29000	EA	14.29
67T03S	3X1000' DET TAPE SEWER GREEN BID SEQ# 130	1	1		51.76000	EA	51.76
24I10R08F	10X8 FLG RED C110 IMP BID SEQ# 220	1	1		392.00000	EA	392.00
24I08T080FPR	8 FLG TEE C110 PR IMP BID SEQ# 230	1	1		523.43000	EA	523.43
24I08T060FPR	8X6 FLG TEE C110 PR IMP BID SEQ# 240	1	1		452.00000	EA	452.00
54622111006003	622-111006-003 10X6 TAP SLV EPOXY ALLOY B&N 11.03-11.47 OD BID SEQ# 250	1	1		536.62000	EA	536.62
3005N030I	1/2X3 BRASS NIPPLE NO LEAD (I) BID SEQ# 340	4	4		5.43000	EA	21.72
3405HBST	1/2 HOSE BIBB SAMPLING TAP BID SEQ# 350	2	2		37.32000	EA	74.64
3405B2032T2	1/2" FIP BRASS BALL VALVE BID SEQ# 360	2	2		10.56000	EA	21.12



INVOICE

1830 Craig Park Court
St. Louis, MO 63146

Invoice # T590360
Invoice Date 10/13/23
Account # 224423
Sales Rep MICHAEL LOFFER
Phone # 402-817-1800
Branch #267 Lincoln, NE
Total Amount Due \$15,264.77

Remit To:
CORE & MAIN LP
PO BOX 28330
ST LOUIS, MO 63146

MIDWEST MECHANICAL INDUSTRIAL 000/0000
PO BOX 164 00000
LOGAN IA 51546 0164

Shipped To:
23100 S 68th STREET
HICKMMAN WTP 2ND TRAIN EXP
HICKMAN, NE

CUSTOMER JOB- HICKMAN HICKMAN WATER

Thank you for the opportunity to serve you! We appreciate your prompt payment.

Date Ordered 9/14/23 Date Shipped 10/12/23 Customer PO # SEE BELOW Job Name HICKMAN WATER Job # HICKMAN Bill of Lading CORE & MAIN LP Shipped Via Invoice# T590360

Product Code	Description	Quantity		B/O	Price	UM	Extended Price
		Ordered	Shipped				
	CUSTOMER PO#- T4421-PO-006-REV1						
24I069BFPR	6 FLG BASE 90 C110 PR IMP BID SEQ# 620	1	1		345.44000	EA	345.44
2406F210600	6 EBAA MEGAFLANGE 2106 BID SEQ# 640	1	1		191.41000	EA	191.41
24I069FPR	6 FLG 90 C110 PR IMP BID SEQ# 660	1	1		214.86000	EA	214.86
24I06FCS	6 COMP FLG DI F/STL IMP BID SEQ# 670	1	1		55.23000	EA	55.23
31060IS	6" SS INSECT SCREEN BID SEQ# 680	1	1		44.78000	EA	44.78
24AFBNKS06304	6 304SS HEX BOLT & NUT KIT BID SEQ# 690	7	7		31.11000	EA	217.77
96LS400C	LINK SEAL LS-400-C BID SEQ# 710	7	7		18.57000	EA	129.99
24I089BFPR	8 FLG BASE 90 C110 PR IMP BID SEQ# 940	1	1		724.58000	EA	724.58
70306H086309C	306-H-0863 RM 8X1CC SADDLE BID SEQ# 950	1	1		450.83000	EA	450.83
3010N030I	1X3 BRASS NIPPLE NO LEAD (I) BID SEQ# 960	1	1		9.57000	EA	9.57
3410B5544ABNL	1 R&W F/P BALL VALVE 5544AB NO LEAD BRASS BID SEQ# 970	1	1		30.16000	EA	30.16
0508080P	8 PVC SCH80 PIPE PE 20' BID SEQ# 1010	40	40		23.74000	FT	949.60
0501080	1 PVC SCH80 PIPE SWB 20' BID SEQ# 1060	20	20		1.87000	FT	37.40



INVOICE

1830 Craig Park Court
St. Louis, MO 63146

Invoice # T590360
Invoice Date 10/13/23
Account # 224423
Sales Rep MICHAEL LOFFER
Phone # 402-817-1800
Branch #267 Lincoln, NE
Total Amount Due \$15,264.77

Remit To:
CORE & MAIN LP
PO BOX 28330
ST LOUIS, MO 63146

MIDWEST MECHANICAL INDUSTRIAL 000/0000
PO BOX 164 00000
LOGAN IA 51546 0164

Shipped To:
23100 S 68th STREET
HICKMMAN WTP 2ND TRAIN EXP
HICKMAN, NE

CUSTOMER JOB- HICKMAN HICKMAN WATER

Thank you for the opportunity to serve you! We appreciate your prompt payment.

Date Ordered 9/14/23 Date Shipped 10/12/23 Customer PO # SEE BELOW Job Name HICKMAN WATER Job # HICKMAN Bill of Lading Shipped Via CORE & MAIN LP Invoice# T590360

Product Code	Description	Quantity		B/O	Price	UM	Extended Price
		Ordered	Shipped				
	CUSTOMER PO#- T4421-PO-006-REV1						
29010BVTU	1" TRUE UNION BALL VLV PVC 2329-010 BID SEQ# 1100	1	1		45.62000	EA	45.62
0503080P	3 PVC SCH80 PIPE PE 20' BID SEQ# 1150	60	60		6.38000	FT	382.80
80BUGSCRN220M	2 IN MALE BUG SCREEN 20 MESH BID SEQ# 1310	6	6		38.97000	EA	233.82
0502080P	2 PVC SCH80 PIPE PE 20' BID SEQ# 1320	80	80		3.20000	FT	256.00
0501280P	1-1/4 PVC SCH80 PIPE PE 20' BID SEQ# 1370	120	120		1.88000	FT	225.60
74DJ4008	DJ400-8 8 DISMANTLING JT BID SEQ# 1420	1	1		1106.37000	EA	1,106.37
713895081.5C	AYM 3895 8X1-1/2 CC SADDLE BID SEQ# 1430	1	1		199.38000	EA	199.38
3615H10003N	H10003N 1-1/2 CORP STOP CCXMIP 1-1/2 CC X 2 INC MIP NO LEAD BID SEQ# 1440	1	1		400.32000	EA	400.32
3015N040D	1-1/2X4 BRASS NIPPLE USA NL NO LEAD BID SEQ# 1450	2	2		18.92000	EA	37.84
30I159NL	1-1/2 BRASS 90 NO LEAD (I) BID SEQ# 1470	1	1		13.43000	EA	13.43
87223347	UBW 70P 1-1/2 SIGHT GLASS HP BID SEQ# 1480	1		1	182.38000	EA	.00



INVOICE

1830 Craig Park Court
St. Louis, MO 63146

Invoice # T590360
Invoice Date 10/13/23
Account # 224423
Sales Rep MICHAEL LOFFER
Phone # 402-817-1800
Branch #267 Lincoln, NE
Total Amount Due \$15,264.77

Remit To:
CORE & MAIN LP
PO BOX 28330
ST LOUIS, MO 63146

MIDWEST MECHANICAL INDUSTRIAL 000/0000
PO BOX 164 00000
LOGAN IA 51546 0164


Shipped To:
23100 S 68th STREET
HICKMAN WTP 2ND TRAIN EXP
HICKMAN, NE

CUSTOMER JOB- HICKMAN HICKMAN WATER

Thank you for the opportunity to serve you! We appreciate your prompt payment.

Date Ordered 9/14/23 Date Shipped 10/12/23 Customer PO # SEE BELOW Job Name HICKMAN WATER Job # HICKMAN Bill of Lading Shipped Via CORE & MAIN LP Invoice# T590360

Product Code	Description	Quantity		B/O	Price	UM	Extended Price
		Ordered	Shipped				
	CUSTOMER PO#- T4421-PO-006-REV1						
13HANES76085	HANES SCOURSTOP 4'X4' PANEL TRANSITION MAT 76085 BID SEQ# 1600	1	1		340.52000	EA	340.52
96080S92	8 S92 STANDON SADDLE SUPPORT PIPE STAND BID SEQ# 1610	5		5	297.90000	EA	.00
96060S92	6 S92 STANDON SADDLE SUPPORT PIPE STAND BID SEQ# 1620	1		1	297.90000	EA	.00

Proof of Delivery
Signed by: 
TRAVIS
10/12/2023 14:03

Freight Delivery Handling Restock Misc

Terms: NET 30
Ordered By: TRAVIS

Subtotal: 14,266.14
Other: .00
Tax: 998.63
Invoice Total: \$15,264.77

This transaction is governed by and subject to Core & Main's standard terms and conditions, which are incorporated by reference and accepted.
To review these terms and conditions, please visit: <http://tandc.coreandmain.com/>



INVOICE

1830 Craig Park Court
St. Louis, MO 63146

Invoice # T780238
Invoice Date 10/20/23
Account # 224423
Sales Rep MICHAEL LOFFER
Phone # 402-817-1800
Branch #267 Lincoln, NE
Total Amount Due \$2,107.67

Backordered from:
10/13/23 T590360

Remit To:
CORE & MAIN LP
PO BOX 28330
ST LOUIS, MO 63146

MIDWEST MECHANICAL INDUSTRIAL 000/0000
PO BOX 164 00000
LOGAN IA 51546 0164


Shipped To:
23100 S 68th STREET
HICKMMAN WTP 2ND TRAIN EXP
HICKMAN, NE

CUSTOMER JOB- HICKMAN HICKMAN WATER

Thank you for the opportunity to serve you! We appreciate your prompt payment.

Date Ordered 9/14/23 Date Shipped 10/19/23 Customer PO # SEE BELOW Job Name HICKMAN WATER Job # HICKMAN Bill of Lading Shipped Via CORE & MAIN LP Invoice# T780238

Product Code	Description	Quantity		B/O	Price	UM	Extended Price
		Ordered	Shipped				
	CUSTOMER PO#- T4421-PO-006-REV1						
96080S92	8 S92 STANDON SADDLE SUPPORT PIPE STAND BID SEQ# 1610	5	5		297.90000	EA	1,489.50
87223347	UBW 70P 1-1/2 SIGHT GLASS HP BID SEQ# 1480	1	1		182.38000	EA	182.38
96060S92	6 S92 STANDON SADDLE SUPPORT PIPE STAND BID SEQ# 1620	1	1		297.90000	EA	297.90

Proof of Delivery
Signed by: 
BOB
10/19/2023 19:32

Freight Delivery Handling Restock Misc

Terms: NET 30
Ordered By: TRAVIS

Subtotal: 1,969.78
Other: .00
Tax: 137.89
Invoice Total: \$2,107.67

This transaction is governed by and subject to Core & Main's standard terms and conditions, which are incorporated by reference and accepted.
To review these terms and conditions, please visit: <http://tandc.coreandmain.com/>



INVOICE		
DATE	NUMBER	PAGE
9/5/2023	034567	1 of 1

B MWM100
 I MIDWEST MECHANICAL INDUSTRIAL
 L SERVICES
 L PO BOX 164
 T LOGAN, IA 51546
 O

S MIDWEST MECHANICAL INDUSTRIAL
 H C/O CITY OF HICKMAN WTF
 I 21300 S 68TH ST
 P HICKMAN, NE 68372
 T
 O

ATTENTION:

CUSTOMER REF/PO #	JOB #	JOB TITLE	SLP	SHIPPING TYPE	TERMS
T4421-PO-004	0040967		RPL/GWM	FREIGHT ALLOWED	NET 30

QUANTITY		PART NO.	DESCRIPTION	UNIT PRICE	EXTENDED
B/O	Ship				
0.00	3	VBDB8F11M806	DEZURIK, VALVE, BUTTERFLY, BAW BAW, 8, F1, CI, NBRN, NBR, 150B, DI-S2*GS-6B-CW8, CMC, 8" FLANGED ANSI 125 CAST IRON BODY, BUNA SELF ADJUSTING PACKING NBR BUNA SEAT, AWWA CLASS 150B, DUCTILE IRON DISC, 316 STAINLESS STEEL SHAFT G-SERIES WORM GEAR OPERATOR WITH CHAINWHEEL, 8" CERTIFICATE OF MATERIAL CONFORMANCE	\$2,733.00	\$8,199.00
0.00	90	ACC*CN103	CHAIN, GALV, PER FOOT		

PLEASE REMIT TO:
MELLEN & ASSOCIATES
3404 SOUTH 11TH STREET
COUNCIL BLUFFS, IA 51501

This invoice is subject to and incorporates by reference Mellen & Associates ("Mellen") Terms & Conditions and Customer Warranty available at www.melleninc.com which will be provided by email upon written request. Buyer expressly agrees to the provisions set forth in the Terms & Conditions and Customer Warranty posted on Mellen's website. *TERMS OF PAYMENT ARE NET 30 DAYS FROM DATE OF INVOICE *A 7% PER ANNUM SERVICE CHARGE SHALL BE APPLIED TO ANY BALANCE *PAST DUE INVOICES WILL BE SUBJECT TO A SERVICE CHARGE OF 1/5% PER MONTH	SUBTOTAL:	\$ 8,199.00
	TAX:	\$ 573.94
	TOTAL:	\$ 8,772.94

3404 South 11th Street Council Bluffs, IA 51501 - Phone: 712-322-9333 - Fax: 712-322-6557

www.Melleninc.com



INVOICE		
DATE	NUMBER	PAGE
9/22/2023	034695	1 of 1

B MWM100
I MIDWEST MECHANICAL INDUSTRIAL
L SERVICES
L PO BOX 164
T LOGAN, IA 51546
O

S MIDWEST MECHANICAL INDUSTRIAL
H C/O CITY OF HICKMAN WTF
I 21300 S 68TH ST
P HICKMAN, NE 68372
T
O

ATTENTION:

CUSTOMER REF/PO #	JOB #	JOB TITLE	SLP	SHIPPING TYPE	TERMS
T4421-PO-004	0040967		RPL/GWM	FREIGHT ALLOWED	NET 30

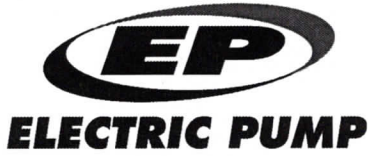
QUANTITY		PART NO.	DESCRIPTION	UNIT PRICE	EXTENDED
B/O	Ship				
0.00	1	50-90BPYKC(6")	CLA-VAL 6" PRESSURE SUSTAINING VALVE, DI BODY, SS TRIM, 150# FLANGE, GLOBE PATTERN, SS TUBING AND FITTINGS, STANDARD BUNA-N RUBBERS, EPOXY COATING, GAUGES ON INLET/OUTLET	\$8,655.00	\$8,655.00

PLEASE REMIT TO:
MELLEN & ASSOCIATES
3404 SOUTH 11TH STREET
COUNCIL BLUFFS, IA 51501

<small>This invoice is subject to and incorporates by reference Mellen & Associates ("Mellen") Terms & Conditions and Customer Warranty available at www.melleninc.com which will be provided by email upon written request. Buyer expressly agrees to the provisions set forth in the Terms & Conditions and Customer Warranty posted on Mellen's website.</small> *TERMS OF PAYMENT ARE NET 30 DAYS FROM DATE OF INVOICE *A 7% PER ANNUM SERVICE CHARGE SHALL BE APPLIED TO ANY BALANCE *PAST DUE INVOICES WILL BE SUBJECT TO A SERVICE CHARGE OF 1/5% PER MONTH	SUBTOTAL:	\$ 8,655.00
	TAX:	\$ 605.86
	TOTAL:	\$ 9,260.86

3404 South 11th Street Council Bluffs, IA 51501 - Phone: 712-322-9333 - Fax: 712-322-6557

www.Melleninc.com



INVOICE

4280 E 14th Street
Des Moines IA 50313-2604 USA

Telephone: (515) 265-2222 / FAX (515) 265-8079
Toll Free 1-800-383-PUMP

www.electricpump.com

INVOICE NUMBER: 0902807-IN

INVOICE DATE: 8/30/2023

ORDER NUMBER: 0153204

SHIPMENT DATE: 6/21/2023

SALESPERSON: JIM D.GRAY

CUSTOMER NO: 6442711

SOLD BY: TLB

SOLD TO:
MIDWEST MECHANICAL INDUSTRIAL SERVICES, LL
2602 NIAGARA TRAIL
LOGAN, IA 51546
United States

SHIP TO:
MIDWEST MECHANICAL INDUSTRIAL SERVICES, LLC
2602 NIAGARA TRAIL
LOGAN, IA 51546
United States

CONFIRM TO:

REFERENCE:
HICKMAN, NE - WTP

CUSTOMER P.O.: T4421-PO-002

FOB: ORIGIN

SHIP VIA: GROUND

Terms: Net 30 Days

ITEM NO.	ORDERED	SHIPPED	BACK ORD	AMOUNT
			HICKMAN, NE - WTP	
*12682718	1.00	1.00	0.00 WEG MOTOR - 213/5JP 15HP	
/FR	1.00	1.00	0.00 FREIGHT INCLUDED	

IF YOU WOULD LIKE YOUR INVOICES AND STATEMENTS EMAILED PLEASE LET US KNOW AT: accountsreceivable@electricpump.com

***** 3% CONVENIENCE FEE FOR CREDIT CARD CHARGE OVER \$5,000.00 *****

**All return goods must have written approval from Electric Pump, before returning.
Credit will not be issued without written approval : if applicable there will be a Restock Fee.**

A 1.5% LATE CHARGE WILL BE ADDED TO ACCOUNTS 30 DAYS AND OLDER.

Net Invoice:	1,585.00
Freight:	0.00
Sales Tax:	110.96
Invoice Total:	1,695.96

ORIGINAL



MASTER AGREEMENT WORK ORDER

This exhibit dated October 30, 2023, is hereby attached to and made a part of the Master Agreement for Professional Services dated August 31, 2020, between City of Hickman (“Client”) and Olsson, Inc. (“Olsson”) providing for professional services. Olsson’s Scope of Services for the Agreement is as indicated below.

GENERAL

Olsson has acquainted itself with the information provided by Client relative to the project and based upon such information offers to provide the services described below for the project. Client warrants that it is either the legal owner of the property to be improved by this Project or that Client is acting as the duly authorized agent of the legal owner of such property.

PROJECT DESCRIPTION AND LOCATION

Project will be located at: Hickman, NE

Project Description: Buel Phase III Apartment Complex Addition Power Distribution Design

SCOPE OF SERVICES

Olsson shall provide the following services (Scope of Services) to Client for the Project:

Design Services

- 1.1 A project initiation meeting will be conducted virtually online with all parties involved to refine project scope, identify and review the project site, identify specific goals, establish schedule for completion, and establish channels of communication.
- 1.2 Coordinate with Client’s representative for the project. Olsson shall attend two (2) 1-hour virtual meetings.
- 1.3 Provide general administrative services to manage and support the design of the project.
- 1.4 Receive the Final Plat data in AutoCAD file format from the Client or client’s representative. Prepare a site plan of the addition.
- 1.5 Prepare detailed drawings and technical specifications for the proposed construction work and for all equipment and materials required under the contract. The documents will be prepared for construction by a private contractor as contracted with by the Client. It is anticipated that the project drawings shall consist of the following:
 - Cover Sheet

- Electrical Site Plan
 - Electrical Details
 - Trench Details
 - Staking Sheets
- 1.6 Provide an electronic set of drawings to the Client for review at 60 and 90 percent. As part of the review of each submittal, a quality check will be performed to review all plans and specifications, and virtual meetings with the Client or Client's Designee will be held to discuss their review comments and resolve any questions.
- 1.7 Present to the Client - Olsson shall present complete plans and specifications to the Client or Client's Designee for review and approval. Any comments shall be incorporated into the sealed drawings issued for construction.
- 1.9 All deliverables will be provided electronically in PDF format.

Assumptions and Exclusions

- 2.1 Olsson assumes that the Client has easements or permits in place already and can reuse those existing rights. Client will be responsible for any permit payments or application fees.
- 2.2 If the Client requests Olsson to attend on-site meetings, it shall be considered an addition to the Scope of Services and will be invoiced as time, material, & expenses according to the attached rate tables.
- 2.3 Olsson assumes that the Client-provided Final Plat data will be accurate and that no survey or on-site locating is required. If survey or site locating is necessary, it shall be considered an addition to the Scope of Services and will be invoiced as time, material, & expenses according to the attached rate tables.
- 2.4 Construction staking is not included in this scope. If the Client requests staking to be done, it shall be considered an addition to the Scope of Services and will be invoiced as time, materials, & expenses according to the attached rate tables.
- 2.5 Olsson assumes that all electronic files shared will be compatible with its corresponding software, including AutoCAD 2023 Civil 3D, Microsoft Office Suite, and PDF Reader. Olsson will provide a Sharefile folder for the online transfer of project files between the Client and Olsson. All files, (with the exception of PE sealed documents or signed contracts), shall not be encrypted or read/write protected with a password.
- 2.6 As-Built Designs are not included in this scope of services.

Bidding Services

- 3.1 Olsson will prepare bid documents package for the client to provide to prospective bidders. The documents will include bidding forms, contracts, qualification requirements, bond forms, technical specifications, general conditions, and any addenda or attachments referenced in the documents.
- 3.2 Olsson will coordinate with the Client to answer questions raised by bidders. Any request for changes to the design will need to be approved by the Client and will be billed as an additional service at the standard hourly billing labor rate charged for those employees actually performing the work, plus reimbursable expenses if any.
- 3.3 Olsson will assist with the Client with the review of qualified bids. Inconsistencies or irregularities found in the bids will be reported to the Client. Olsson will provide recommendation to the client for the award of contract.

Construction Services

- 4.1 Olsson will answer questions from the contractors about the design and other construction documents. Questions and interpretations can be answered with a written Request for Information (RFI) or a phone call. If an on-site visit is needed, it will be billed at the standard hourly rate for those employees attending the meeting.

Should Client request work in addition to the Scope of Services, Olsson shall invoice Client for such additional services (Optional Additional Services) at the standard hourly billing labor rate charged for those employees actually performing the work, plus reimbursable expenses if any. Olsson shall not commence work on Optional Additional Services without Client's prior written approval.

Olsson agrees to provide all of its services in a timely, competent and professional manner, in accordance with applicable standards of care, for projects of similar geographic location, quality and scope. Olsson's services for this scope are estimated at **\$15,000**.

SCHEDULE FOR OLSSON'S SERVICES

Unless otherwise agreed, Olsson expects to perform its services under the Agreement as follows:

Anticipated Start Date: 10/30/2023.
Anticipated Completion Date: 1/26/2024

Olsson will endeavor to start its services on the Anticipated Start Date and to complete its services on the Anticipated Completion Date. However, the Anticipated Start Date, the Anticipated Completion Date, and any milestone dates are approximate only, and Olsson reserves the right to adjust its schedule and any or all of those dates at its sole discretion, for any reason, including, but not limited to, delays caused by Client or delays caused by third parties.

COMPENSATION

Time and Materials – Billing Rate (TM): Billing will be based on an hourly fee using the 2023 Power Delivery Billing Rate Schedule.

Client shall pay to Olsson for the performance of the Scope of Services, the actual time of personnel performing such services in accordance with the Labor Billing Rate Schedule(s), and all actual reimbursable expenses in accordance with the Reimbursable Expense Schedule attached to this agreement. Olsson shall submit invoices on a monthly basis, and payment is due within 30 calendar days of invoice date.

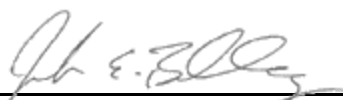
TERMS AND CONDITIONS OF SERVICE

We have discussed with you the risks, rewards and benefits of the Project, the Scope of Services, and our fees for such services and the Agreement represents the entire understanding between Client and Olsson with respect to the Project. The Agreement may only be modified in writing signed by both parties.


Client's designated Project Representative shall be Kelly Oelke.

If this Work Order satisfactorily sets forth your understanding of our agreement, please sign in the space provided below. Retain a copy for your files and return an executed original to Olsson, 601 P Street, Suite 200, Lincoln, Nebraska 68508. This proposal will be open for acceptance for a period of 30 days from the date set forth above, unless changed by us in writing.

OLSSON, INC.

By 

Jacob Bradley PE, Team Leader

By 

Erik Eihusen PE, Team Leader

By signing below, you acknowledge that you have full authority to bind Client to the terms of the Agreement. If you accept this Work Order, please sign:

City of Hickman, NE

By _____
Signature

Print Name _____

Title _____

Dated: _____

Attachments
2023 Power Delivery Labor Billing Rate Schedule
Reimbursable Expense Schedule

OLSSON POWER DELIVERY BILLING RATE SCHEDULE

2023 LABOR RATES

<u>Description</u>	<u>Range</u>
Technical Leader.....	225 – 315
Team Leader.....	230 – 325
Senior Engineer.....	200 – 280
Project Engineer	170 – 240
Associate Engineer	125 – 200
Assistant Engineer	90 – 175
Design Technical Manager.....	115 – 250
Senior Technician.....	100 – 140
Associate Technician.....	75 – 125
Assistant Technician.....	75 – 115
Senior Project Specialist.....	110 – 175
Project Specialist.....	95 – 130
Junior Technician Level 1	55 – 75
Junior Technician Level 2.....	65 – 95
Junior Technician Level 3.....	75 – 110
Senior Administrative Coordinator	75 – 110
Administrative Coordinator	60 – 90

Note:

1. Special Services not included in above categories will be provided on a Special Labor Rate Schedule.
2. Special This Power Delivery Billing Rate Schedule will be updated every year of the contract. Olsson will submit the updated rate schedule approximately January 15th of each year.

Please contact the Project Manager for special services not included above (Survey, Field Operations, Special Inspection, Construction Observation, Geotechnical, Non-Destructive Testing, Drilling, etc.) and they will provide their Special Services Labor Rate Schedule for you.

REIMBURSABLE EXPENSE SCHEDULE

The expenses incurred by Olsson or Olsson's independent professional associates or consultants directly or indirectly in connection with the Project shall be included in periodic billing as follows:

<u>Classification</u>	<u>Cost</u>
Automobiles (Personal Vehicle)	\$0.655/mile*
Suburban's and Pick-Ups	\$0.75/mile*
Automobiles (Olsson Vehicle)	\$95.00/day
Other Travel or Lodging Cost	Actual Cost
Meals	Actual Cost
Printing and Duplication including Mylars and Linens	
In-House	Actual Cost
Outside	Actual Cost+10%
Postage & Shipping Charges for Project Related Materials including Express Mail and Special Delivery	Actual Cost
Film and Photo Developing	Actual Cost+10%
Telephone and Fax Transmissions	Actual Cost+10%
Miscellaneous Materials & Supplies Applicable to this Project	Actual Cost+10%
Copies of Deeds, Easements or other Project Related Documents	Actual Cost+10%
Fees for Applications or Permits	Actual Cost+10%
Sub-Consultants	Actual Cost+10%
Taxes Levied on Services and Reimbursable Expenses	Actual Cost

*Rates consistent with the IRS Mileage Rate Reimbursement Guidelines (Subject to Change).

**RESOLUTION NO. 2023-22
LOCAL APPROVAL OF LOTTERY/KENO SALES OUTLET**

**A RESOLUTION APPROVING J & K DREAMS dba THE HICKMAN BAR & GRILL
AS A KENO SALES OUTLET FOR THE CITY OF HICKMAN KENO LOTTERY.**

**BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF HICKMAN,
NEBRASKA:**

SECTION 1. Subject to the granting of all necessary state licenses and approvals, the City hereby approves J & K Dreams dba The Hickman Bar & Grill as a Keno Sales Outlet in the City of Hickman at 107 Locust Street, Hickman, Nebraska.

SECTION 2. Zeilinger Keno Inc., the City's approved lottery operator (Resolution 2014-13), will facilitate and coordinate all necessary forms and applications for J & K Dreams dba The Hickman Bar & grill for Keno Sales at 107 Locust Street, Hickman, Nebraska.

SECTION 3. This resolution shall be in full force and effect from and following the passage and publication hereof as required by law.

PASSED AND APPROVED this 14th day of November, 2023.

Doug Wagner, Council President

ATTEST:

Jaala Johnson, CMC, City Clerk

(SEAL)

Do not recreate or revise this document. Revisions and recreations will not be accepted. Failure to complete and return the necessary documents per instructions will result in your municipality not receiving an Incentive Payment for Calendar Year 2023. Documents include the original Signing Resolution, Year-End Certification(s), and a copy of documentation of the appointment(s) of the City Street Superintendent(s). These must be received at the NDOT by December 31, 2023.

RESOLUTION
SIGNING OF THE
YEAR-END CERTIFICATION OF CITY STREET SUPERINTENDENT
2023

Resolution No. 2023-23

Whereas: State of Nebraska Statutes, sections 39-2302, and 39-2511 through 39-2515 details the requirements that must be met in order for a municipality to qualify for an annual Incentive Payment; and

Whereas: The State of Nebraska Department of Transportation (NDOT) requires that each incorporated municipality must annually certify (by December 31st of each year) the appointment(s) of the City Street Superintendent(s) to the NDOT using the Year-End Certification of City Street Superintendent form; and

Whereas: The NDOT requires that each certification shall also include a copy of the documentation of the city street superintendent's appointment, i.e., meeting minutes; showing the appointment of the City Street Superintendent by their name as it appears on their License (if applicable), their License Number (if applicable), and Class of License (if applicable), and type of appointment, i.e., employed, contract (consultant, or interlocal agreement with another incorporated municipality and/or county), and the beginning date of the appointment; and

Whereas: The NDOT also requires that such Year-End Certification of City Street Superintendent form shall be signed by the Mayor or Village Board Chairperson and shall include a copy a resolution of the governing body authorizing the signing of the Year-End Certification of City Street Superintendent form by the Mayor or Village Board Chairperson.

Be it resolved that the Mayor Village Board Chairperson of City of Hickman
(Check one box) (Print Name of Municipality)
is hereby authorized to sign the attached Year-End Certification of City Street Superintendent completed form(s).

Adopted this _____ day of _____, 20____ at _____, Nebraska.
(Date) (Month)

City Council/Village Board Members

City Council/Village Board Member _____
Moved the adoption of said resolution
Member _____ Seconded the Motion
Roll Call Yes _____ No _____ Abstained _____ Absent _____
Resolution adopted, signed, and billed as adopted.

Attest:

(Signature of Clerk)

Do not recreate or revise this document. Revisions and recreations will not be accepted. Copying this form is acceptable; see (3) below. Failure to complete and return the necessary documents per instructions will result in your municipality not receiving an Incentive Payment for Calendar Year 2023. Documents include the original Signing Resolution, Year-End Certification(s), and a copy of documentation of the appointment(s) of the City Street Superintendent(s). These must be received at the NDOT by December 31, 2023.

Year-End Certification of City Street Superintendent For Determining Incentive Payment in Calendar Year 2023

Separate forms may be needed to account for the entire year, see (3) below

This Form Covers the Following Period: _____, 2023 to _____, 2023
(Month) (Day) (Month) (Day)

*(1)(a) The municipality of _____ certifies that: _____
(Print name of City or Village) (Print name of Superintendent as it appears on license card if applicable)
was the appointed City Street Superintendent during the above period. **IF A NAME IS NOT ENTERED ABOVE (NO APPOINTED CITY STREET SUPERINTENDENT FOR THIS PERIOD), SKIP TO (2) BELOW.**

(b) the superintending services of the above listed individual were provided by: (Check one box)

- Employment with this Municipality
- Contract (consultant) with this Municipality
- Contract (interlocal agreement) between this Municipality and the following listed Municipality(ies) and/or County(ies) _____

(c) and the above listed individual **assisted** in the following: Reference Neb. Rev. Stat. §39-2512

1. Developing and annually updating a long-range plan based on needs and coordinated with adjacent local governmental units,
2. Developing an annual program for design, construction, and maintenance,
3. Developing an annual budget based on programmed projects and activities,
4. Submitting such plans, programs, and budgets to the local governing body for approval; and
5. Implementing the capital improvements and maintenance activities provided in the approved plans, programs, and budgets,

(d) the above listed individual also served as (Check all boxes that apply) city engineer village engineer
public works director city manager city administrator street commissioner

(e) If the above listed individual is a Licensed City Street Superintendent, enter their Superintendent's License Number S- _____ and Class of License _____, and/or

(f) If the above listed individual is a Licensed Engineer in Nebraska, enter their Engineer's License Number E- _____

(2) _____
Signature of Mayor Village Board Chairperson
(Check one box)

*(3) If during the calendar year your municipality (a) did not have an appointed City Street Superintendent for any portion(s) of the year; or (b) had one or more appointed City Street Superintendent(s) that were not licensed for any portion(s) of the year; or (c) had one or more appointed licensed City Street Superintendent(s) for any portion(s) of the year, please complete a separate Year-End Certification form for each period. **Copy this form as needed to account for these separate periods.**

(4) The payment amount will be computed based on (a) your most recent Federal Census as certified by the Tax Commissioner; (b) the number of full calendar months served by the appointed City Street Superintendent who is licensed or exempted from licensure under the Superintendents Act; (c) class of license, A or B if applicable; and (d) if the appointed City Street Superintendent assisted with the required duties in (1)(c) above. Reference Neb. Rev. Stat. §§39-2302 and 39-2511 through 39-2515.

(5) **Failure to return by December 31, 2023, the Year-End Certification(s), Signing Resolution, and a copy of documentation of the appointment(s) of the superintendent(s) per the instructions will result in your municipality not receiving an Incentive Payment.**



Return the completed original resolution and certification(s), and a copy of the documentation of appointment(s) by December 31, 2023 to:
Highway Local Liaison Coordinator
Boards-Liaison Services Section
Local Assistance Division
Nebraska Department of Transportation
PO Box 94759
Lincoln NE 68509-4759

Attach Documentation of the City Street Superintendent(s) Appointment(s) for 2023 here:

For most municipalities this information may be found in the November or December 2022 or the January 2023 meetings minutes. Some may involve mayoral appointments, or interlocal agreement (relinquishment of funds). Call 402-479-4436 if you have any questions about what to submit for documentation.

RESOLUTION NO. 2023-24

WHEREAS, Rega Engineering Group, Inc. on behalf of FUN, LLC, Mr. Matthew Barber, has submitted a preliminary plat to the City of Hickman, Nebraska, for Barber Estates Addition Subdivision, property legally described as TIMBER RIDGE ADDITION, OUTLOT A (SW ¼ OF S27, T8, R7, 6TH PRINCIPAL MERIDIAN, LANCASTER COUNTY, NEBRASKA). and generally located North of 7th Street (Hickman Road) and approximately 828 feet East of Chestnut Street (South 68th Street); and,

WHEREAS, the Planning Commission of the City of Hickman met on October 3, 2023 to hold a public hearing and review said preliminary plat, and voted to recommend to the City Council conditional approval of Barber Estates Addition Preliminary Plat with the following conditions:

1. To allow internal lots to have a zero-foot setback for principal and accessory buildings, if the minimum distance between buildings complies with building codes and state fire marshal requirements, and in no case shall a building be constructed over a lot line.
2. To allow a twenty-foot building setback around the south side of property and amend the waiver to state a twenty foot setback on the south side only.
3. To allow off-street parking to be constructed to a minimum requirement is 1.5 stalls per dwelling unit.
4. To allow the pedestrian sidewalk to loop internally.
5. To provide a sidewalk connection to Seventh Street.
6. To provide additional study and development into the retention pond drainage.
7. To provide vegetation, opposed to a fence, for screening on the north side in the open spaces where the garage is not located.

WHEREAS, the City Council of the City of Hickman has reviewed the preliminary plat and has determined it is in the best interest of the City of Hickman, Nebraska to grant acceptance of the preliminary plat, with the inclusion of the recommendations of the Planning Commission as stated above, and allow the developer to prepare and submit a final plat in conformance with the approved preliminary plat drawn; and,

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Hickman, Nebraska, that Barber Estates Addition Subdivision, property legally described as TIMBER RIDGE ADDITION, OUTLOT A (SW ¼ OF S27, T8, R7, 6TH PRINCIPAL MERIDIAN, LANCASTER COUNTY, NEBRASKA) and generally located North of 7th Street (Hickman Road) and approximately 828 feet East of Chestnut Street (South 68th Street) is hereby approved, with the conditions of incorporating the recommendations from the City Engineer and any permitting and building requirements of all governing and regulatory bodies, prior to submitting the final plat for Barber Estates Addition Subdivision.

PASSED AND APPROVED THIS 14TH DAY OF NOVEMBER 2023.

Doug Wagner, Council President

Attest:

Jaala Johnson, CMC, City Clerk

(SEAL)

BARBER ESTATES ADDITION

PRELIMINARY PLAT

An addition to the City of Hickman in the Southwest Quarter of Section 27, Township 8 North, Range 8 East of the Sixth Principal Meridian, Lancaster County, Nebraska.

- LEGEND**
- CORNER FOUND (as Shown)
 - CORNER SET (3/4"x24" Bar w/Cap)
 - ⊕ SECTION CORNER
 - (M) MEASURED DISTANCE
 - (R) RECORDED DISTANCE
 - c CHORD DIMENSION
 - S.B. SETBACK
 - ⊘ POWER POLE
 - ▨ ADDITIONAL RIGHT OF WAY DEDICATION
 - PROPERTY LINE
 - - - 20' PERIMETER SETBACK

OWNERS OF RECORD:
 MATT BARBER
 20777 S 64 CT
 HICKMAN, NE 68372
 (402) 889-3665

DEVELOPER:
 MATT BARBER
 20777 S 64 CT
 HICKMAN, NE 68372
 (402) 889-3665

NO.	REVISIONS		
	DESCRIPTION	DATE	BY

PROJECT
211242

REGA ENGINEERING

601 OLD CHENEY RD., SUITE A
 LINCOLN, NEBRASKA 68512
 (402) 484-7342

- ENGINEERING
- PLANNING
- LANDSCAPE ARCHITECTURE
- LAND SURVEYING
- IRRIGATION

LANDSCAPE ARCHITECT:
 COREY HASELHORST
 REGA ENGINEERING GROUP INC.
 601 OLD CHENEY ROAD, SUITE 'A'
 LINCOLN, NE 68512 (402) 484-7342

ENGINEER:
 NATHANIEL P. BURNETT
 REGA ENGINEERING GROUP INC.
 601 OLD CHENEY ROAD, SUITE 'A'
 LINCOLN, NE 68512 (402) 484-7342

SURVEYOR:
 LYLE L. LOTH
 REGA ENGINEERING GROUP INC.
 601 OLD CHENEY ROAD, SUITE 'A'
 LINCOLN, NE 68512 (402) 484-7342

Curve Table

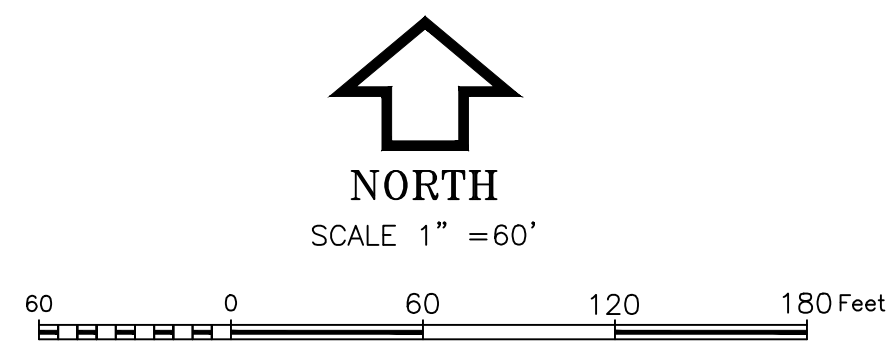
Curve #	Delta	Radius	Length	Chord Direction	Chord Length
C1	47°15'05"	60.00'	49.48'	S49° 07' 15"W	48.09'
C2	88°43'13"	30.00'	46.45'	S28° 23' 13"W	41.95'
C3	15°30'19"	530.00'	143.43'	S08° 12' 04"E	142.99'

GENERAL NOTES

- THIS PRELIMINARY PLAT CONTAINS 4.28 ACRES.
- THIS PRELIMINARY PLAT PERMITS 3 MULTI FAMILY RESIDENCE LOTS. EACH LOT SHALL CONTAIN A MAXIMUM OF ONE PRINCIPAL BUILDING, ALL LOCATED WITHIN THE BUILDING ENVELOPES AS SHOWN AND/OR NOTED.
- THIS PRELIMINARY PLAT PERMITS 2 OUTLOTS. OUTLOT 'A' IS FOR PARKING AND COMMON ACCESS. OUTLOT 'B' IS FOR FOR STORM WATER MANAGEMENT.
- CURRENTLY ZONED 'R-3'. NO REZONING IS BEING REQUESTED AT THIS TIME.
- THE MAXIMUM BUILDING HEIGHT SHALL NOT EXCEED 45 FEET, AS PER 'R-3' ZONING.
- THE DEVELOPER/OWNER RESERVES THE RIGHT TO BUILD WITHIN THE PROPOSED LOT LINES AS LONG AS THE PROPOSED BUILDING ENVELOPE DOES NOT ENCROACH ON THE PROPOSED PERIMETER SETBACK AND OUTLOTS AS SHOWN. THE PROPERTY DENSITY SHALL NOT EXCEED .03 UNITS PER ACRE.
- ACCESS TO EAST 7TH STREET (HICKMAN ROAD) IS HEREBY RELINQUISHED EXCEPT AT THE LOCATION OF A PRIVATE DRIVE ACCESSING OUTLOT 'A'.
- THE ADDITIONAL RIGHT OF WAY SHOWN HEREON IS HEREBY DEDICATED TO THE PUBLIC.
- UTILITY EASEMENTS SHALL BE GRANTED TO CITY OF HICKMAN, OTHER PUBLIC UTILITY COMPANIES TO PROVIDE SERVICES TO THE PROPOSED LOTS.
- DEVELOPER SHALL INSTALL STREET IDENTIFICATION SIGNS, "ONE STOP SIGN" AND ONE "NO OUTLET" SIGN AS REQUIRED.
- ALL CURVILINEAR DIMENSIONS ARE CHORD LENGTHS, UNLESS OTHERWISE NOTED.

WAIVERS

- CITY OF HICKMAN 2007 ZONING REGULATIONS (SECTION 5.08.06 - HEIGHT AND LOT REQUIREMENTS)
- CITY OF HICKMAN 2007 ZONING REGULATIONS SCHEDULE OF MINIMUM OFF-STREET PARKING AND LOADING REQUIREMENTS (SECTION 7.02 - MULTI-FAMILY/APARTMENTS)



- SHEET LEGEND:**
- COVER SHEET
 - SITE PLAN
 - UTILITY PLAN
 - EXISTING GRADING & DRAINAGE PLAN
 - PROPOSED GRADING & DRAINAGE PLAN
 - EROSION CONTROL PLAN
 - FIRETRUCK ACCESS PATH

MONUMENT SYMBOL LEGEND

- FOUND 1" PIPE
- FOUND 5/8" REBAR
- FOUND CAPPED REBAR 654
- FOUND CAPPED REBAR 695
- FOUND CAPPED REBAR 825

LEGAL DESCRIPTION:

A parcel of land being all of Outlot A, Tower Ridge Addition, located in the SW 1/4 of Section 27, T.8N, R.7E of the 6th P.M., City of Hickman Lancaster County, Nebraska, being more particularly described as follows:

Beginning at the NW corner of said Outlot A;
 Thence on the North boundary of said Outlot A, N89°39'23"E, 613.39 feet to the NE corner of said Outlot A, all bearings hereon are relative thereto;
 Thence on the boundaries of said Outlot A the following nine (9) courses:
 Thence, S00°29'08"E, 231.00 feet;
 Thence, S89°39'12"W, 143.28 feet to the beginning of a non-tangential curve, to the right having a delta of 47°15'05", having a radius of 60.00 feet, and whose long chord bears S49°07'15"W for a distance of 48.09 feet;
 Thence on said curve 49.48 feet to the a point of reverse curvature to the left having a delta of 88°43'13", having a radius of 30.00 feet, and whose long chord bears S28°23'13"W for a distance of 41.95 feet;
 Thence on said curve 46.45 feet to the a point of reverse curvature to the right having a delta of 15°30'19", having a radius of 530.00 feet, and whose long chord bears S08°12'04"E for a distance of 142.99 feet;
 Thence on said curve 143.43 feet;
 Thence, S00°26'55"E, 72.18 feet to the North Right-of-Way of Hickman Rd;
 Thence on said North Right-of-Way, S89°34'52"W, 180.00 feet;
 Thence departing, N00°21'01"W, 93.22 feet;
 Thence, N31°28'41"W, 490.55 feet to the **Point of Beginning**.
 Containing 186,384 Square Feet or 4.28 Acres more or less.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS BOUNDARY SURVEY WAS MADE UNDER MY SUPERVISION AND THAT I AM A REGISTERED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF NEBRASKA.

DATE _____
 LYLE L. LOTH L.S. #314

ENGINEER'S CERTIFICATE

I hereby certify that these plans were prepared by me or under my direct supervision and that I am a Registered Professional Engineer under the laws of the State of Nebraska. These plans meet the requirements of the City Engineer's office design requirements.

Date _____ Nathaniel Burnett E-15612

REVIEWED BY LANCASTER COUNTY SURVEYOR

This preliminary plat of Barber Estates Addition was reviewed and approved by the office of Lancaster County Surveyor on this _____ day of _____ 20____.

Lancaster County Surveyor (SEAL)

ACCEPTANCE BY THE HICKMAN CITY ENGINEER

This preliminary plat of Barber Estates Addition was reviewed and approved by the Hickman City Engineer on this _____ day of _____ 20____.

Hickman City Engineer

APPROVAL OF HICKMAN CITY CITY COUNCIL

This preliminary plat of Barber Estates Addition was reviewed and approved by the Hickman Planning Commission on this _____ day of _____ 20____.

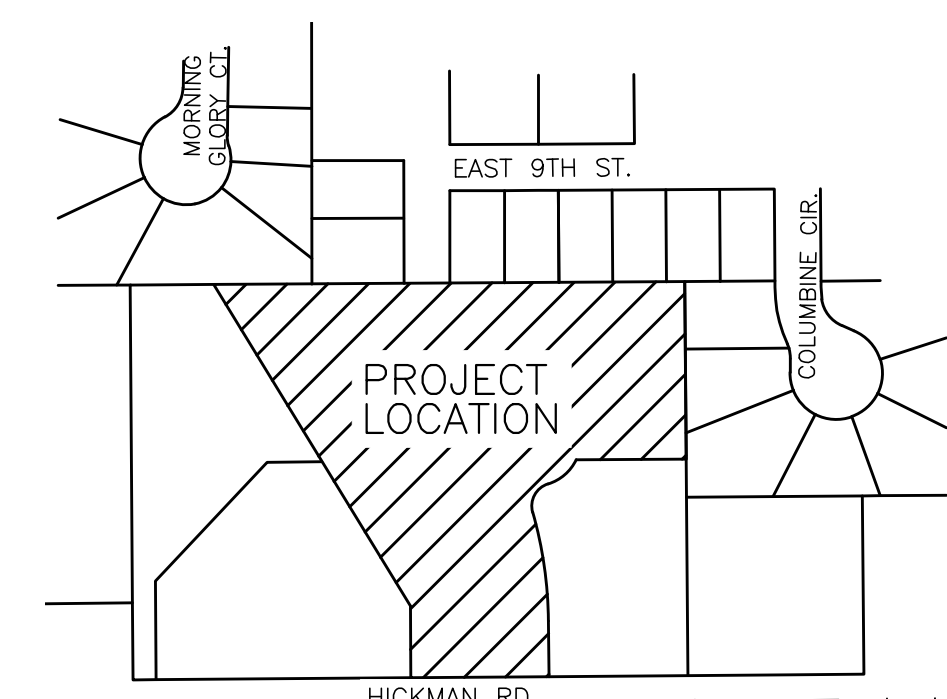
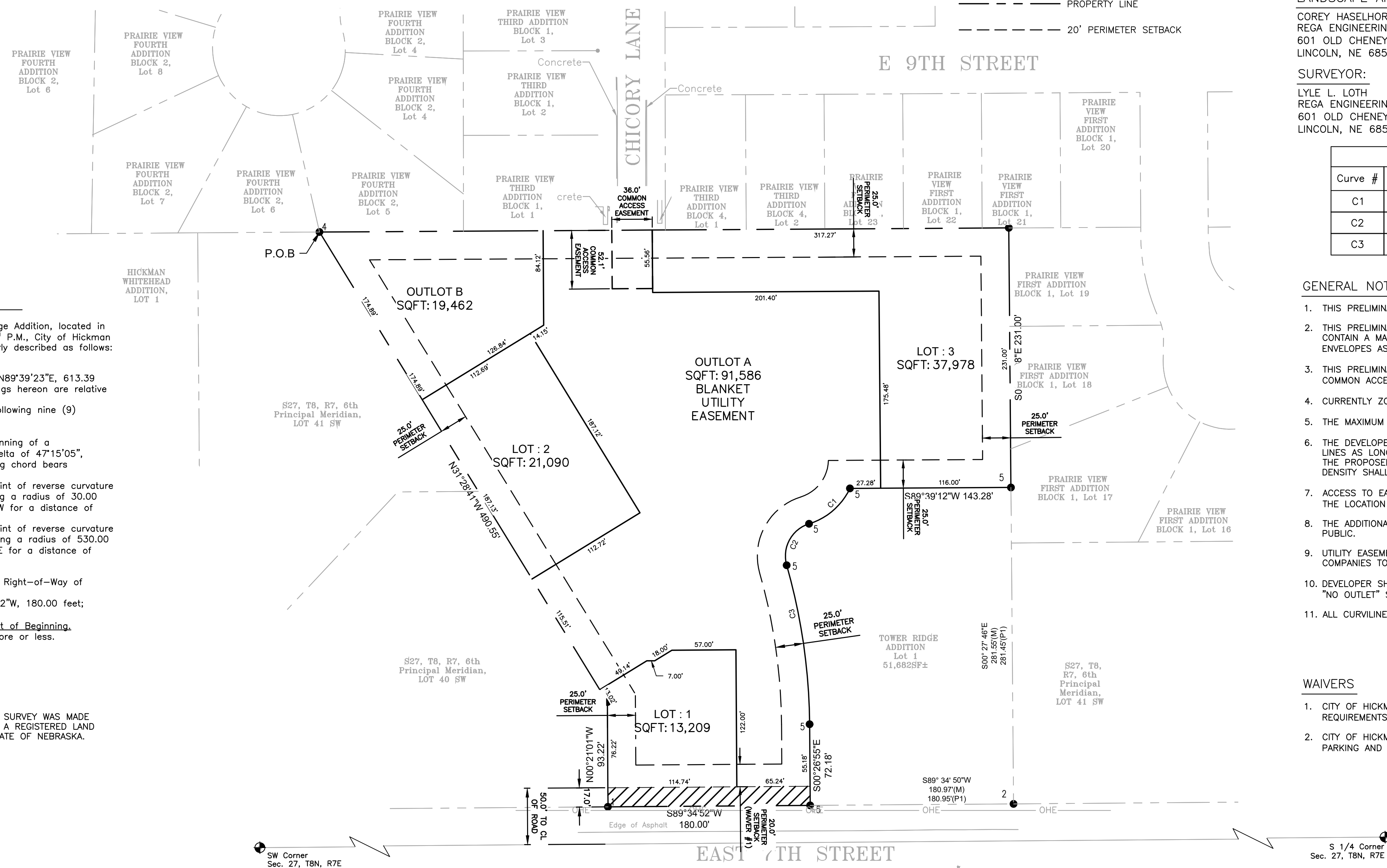
 Mayor (city of Hickman Seal)

 City Clerk

APPROVAL OF PLANNING COMMISSION OF HICKMAN, NEBRASKA

This preliminary plat of Barber Estates Addition was reviewed and approved by the Hickman Planning Commission on this _____ day of _____ 20____ in accordance with the State Statutes of Nebraska.

 Chairperson, Hickman Planning Commission



BARBER ESTATES ADDITION - PRELIMINARY PLAT
 COVER SHEET
 HICKMAN, NEBRASKA

PRELIMINARY PLAN
 NOT FOR CONSTRUCTION

BARBER ESTATES ADDITION PRELIMINARY PLAT

NO.	REVISIONS	DESCRIPTION	DATE	BY

PROJECT
211242

REGA ENGINEERING

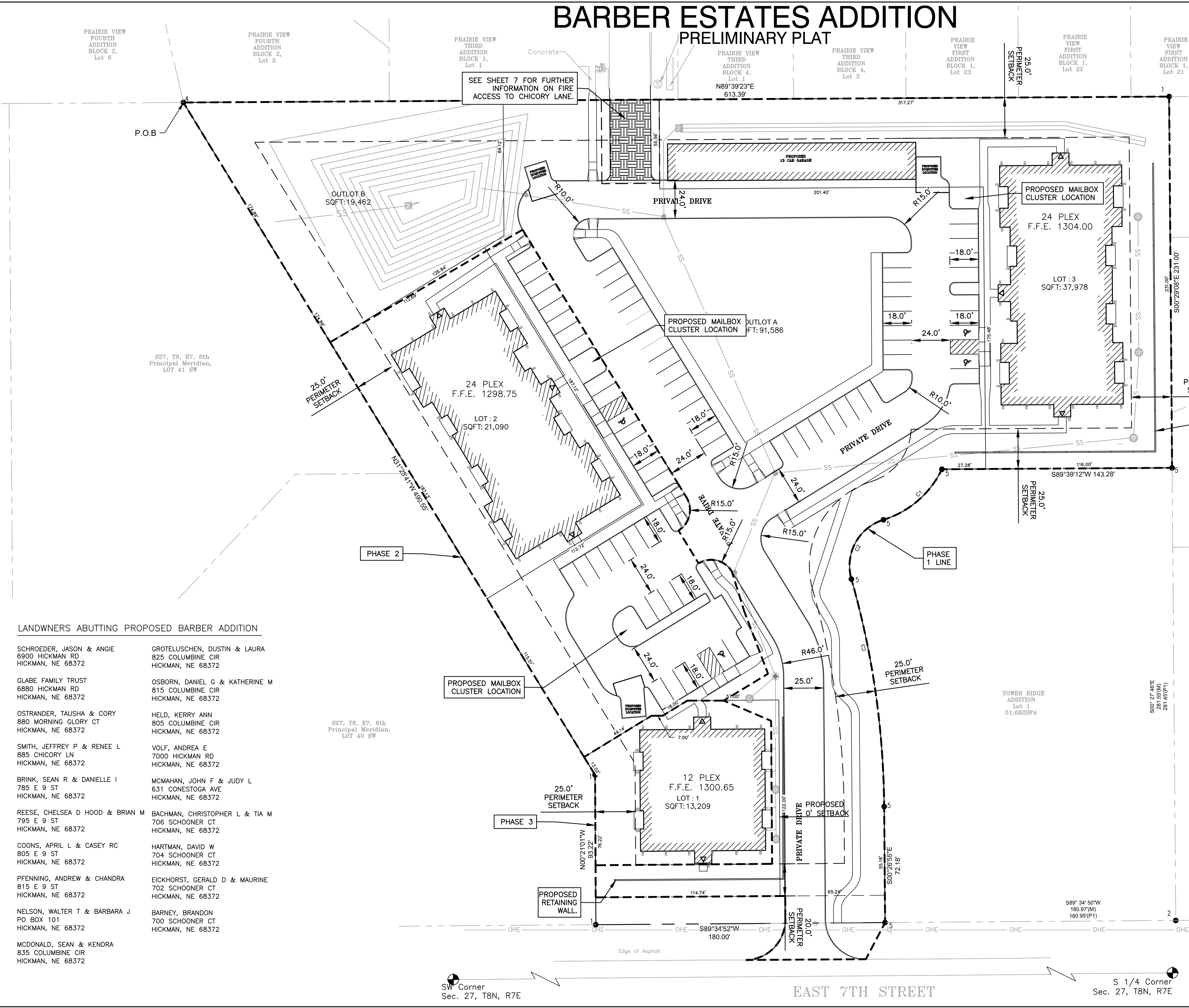
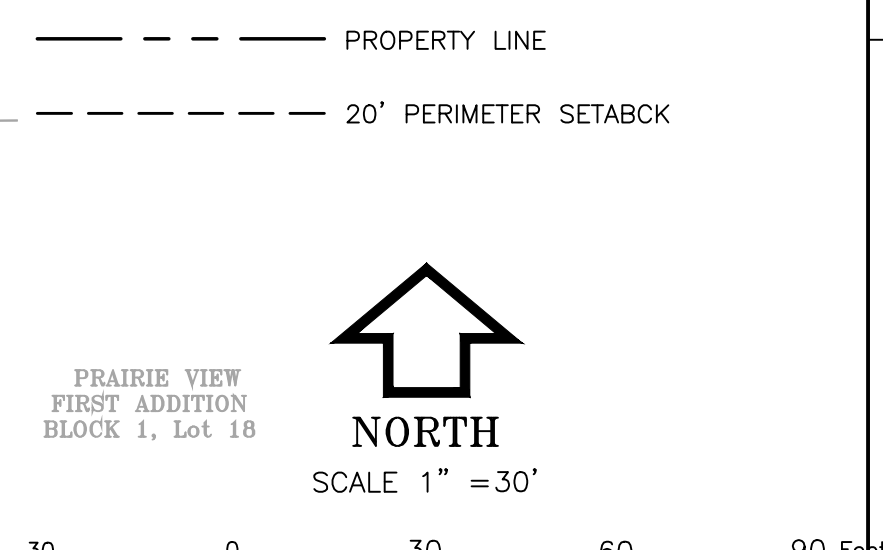
601 OLD CHENEY RD., SUITE A
LINCOLN, NEBRASKA 68512
(402) 484.7342

- ENGINEERING
- PLANNING
- LANDSCAPE ARCHITECTURE
- LAND SURVEYING
- IRRIGATION

LEGEND

- CORNER FOUND (as Shown)
- CORNER SET (3/4"x24" Bar w/Cap)
- ⊙ SECTION CORNER
- (M) MEASURED DISTANCE
- (R) RECORDED DISTANCE
- c CHORD DIMENSION
- S.B. SETBACK
- ⊕ POWER POLE

--- PROPERTY LINE
- - - 20' PERIMETER SETBACK



LANDWNERS ABUTTING PROPOSED BARBER ADDITION

SCHROEDER, JASON & ANGIE 6900 HICKMAN RD HICKMAN, NE 68372	GROTELUSCHEN, DUSTIN & LAURA 825 COLUMBINE CIR HICKMAN, NE 68372
GLABE FAMILY TRUST 6880 HICKMAN RD HICKMAN, NE 68372	OSBORN, DANIEL G & KATHERINE M 815 COLUMBINE CIR HICKMAN, NE 68372
OSTRANDER, TAUSHA & CORY 880 MORNING GLORY CT HICKMAN, NE 68372	HELD, KERRY ANN 805 COLUMBINE CIR HICKMAN, NE 68372
SMITH, JEFFREY P & RENEE L 885 CHICORY LN HICKMAN, NE 68372	VOLF, ANDREA E 7000 HICKMAN RD HICKMAN, NE 68372
BRINK, SEAN R & DANIELLE I 785 E 9 ST HICKMAN, NE 68372	MCMAHAN, JOHN F & JUDY L 631 CONESTOGA AVE HICKMAN, NE 68372
REESE, CHELSEA D HOOD & BRIAN M 795 E 9 ST HICKMAN, NE 68372	BACHMAN, CHRISTOPHER L & TIA M 706 SCHOONER CT HICKMAN, NE 68372
COONS, APRIL L & CASEY RC 805 E 9 ST HICKMAN, NE 68372	HARTMAN, DAVID W 704 SCHOONER CT HICKMAN, NE 68372
PFENNING, ANDREW & CHANDRA 815 E 9 ST HICKMAN, NE 68372	EICKHORST, GERALD D & MAURINE 702 SCHOONER CT HICKMAN, NE 68372
NELSON, WALTER T & BARBARA J PO BOX 101 HICKMAN, NE 68372	BARNEY, BRANDON 700 SCHOONER CT HICKMAN, NE 68372
MCDONALD, SEAN & KENDRA 835 COLUMBINE CIR HICKMAN, NE 68372	

BARBER ESTATES ADDITION - PRELIMINARY PLAT
SITE PLAN
HICKMAN, NEBRASKA

PRELIMINARY PLAN
NOT FOR CONSTRUCTION

BARBER ESTATES ADDITION

PRELIMINARY PLAT

NO.	REVISIONS		
	DESCRIPTION	DATE	BY

PROJECT
211242

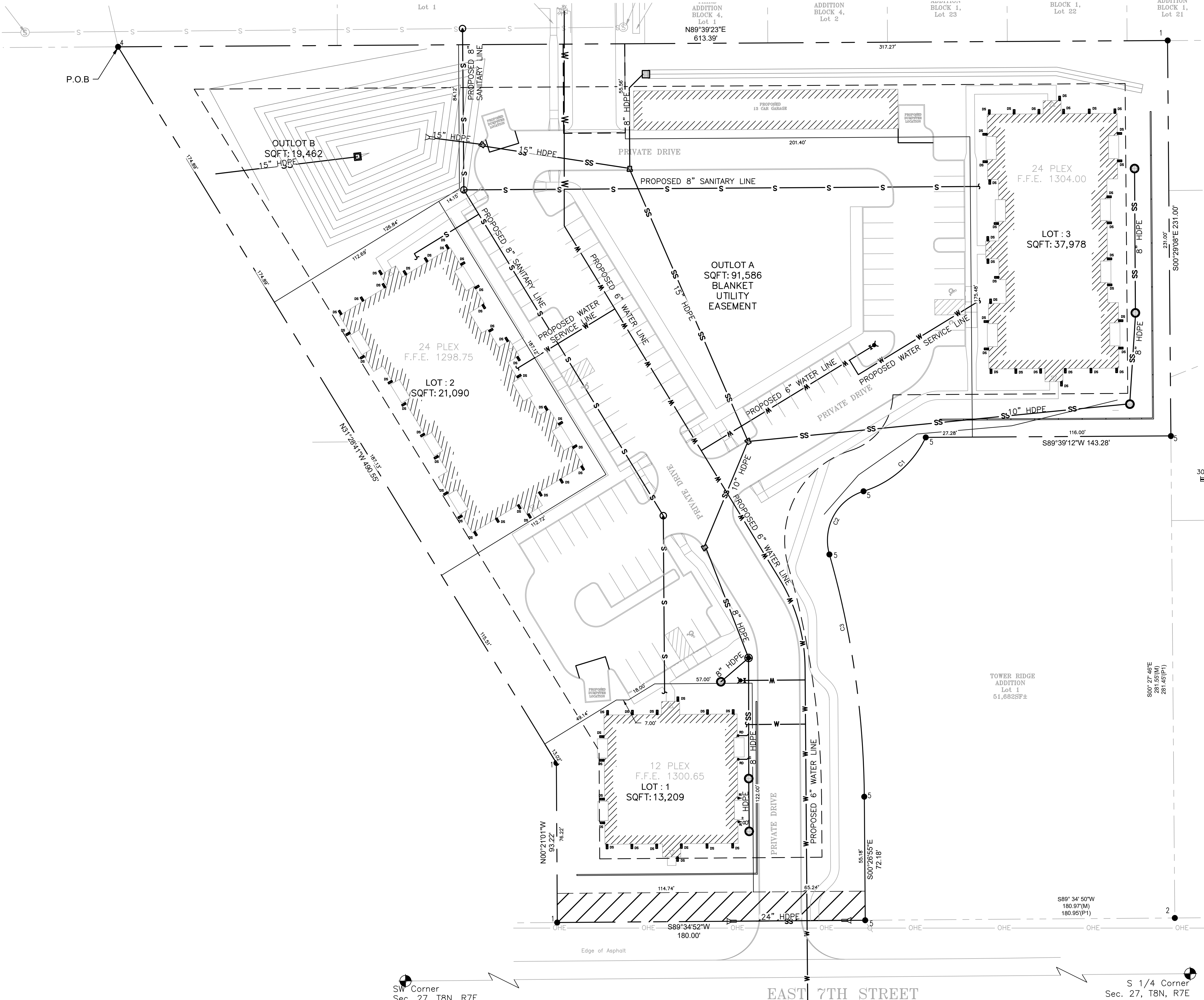
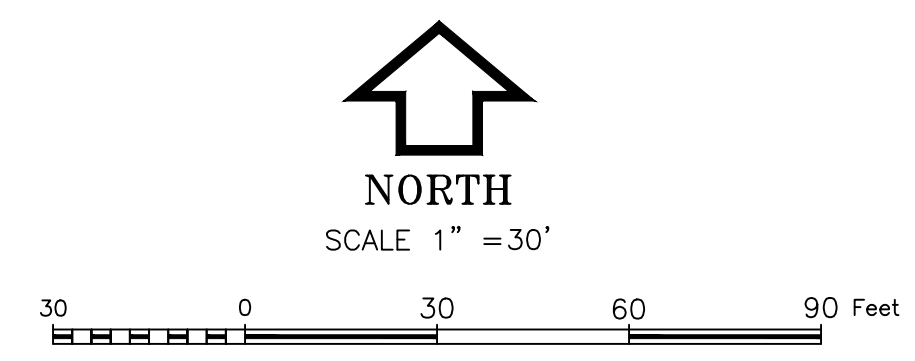
REGA ENGINEERING

601 OLD CHENEY RD., SUITE A
LINCOLN, NEBRASKA 68512
(402) 484.7342

- ENGINEERING
- PLANNING
- LANDSCAPE ARCHITECTURE
- LAND SURVEYING
- IRRIGATION

LEGEND

---	PROPERTY LINE
---	20' PERIMETER SETBACK
-S-S-	SANITARY SEWER LINE
-W-W-	WATER LINE
-SS-	PROPOSED STORM SEWER LINE
⦿	FIRE HYDRANT
⊙	PROPOSED STORM SEWER MANHOLE
⊞	PROPOSED STORM SEWER INLET
⊕	PROPOSED AREA INLET
⊙	SANITARY MANHOLE
DS	DOWN SPOUTS
RD	ROOF DRAINS



BARBER ESTATES ADDITION - PRELIMINARY PLAT
 UTILITY PLAN
 HICKMAN, NEBRASKA

PRELIMINARY PLAN
 NOT FOR CONSTRUCTION

SHEET NO.
3 of 7

BARBER ESTATES ADDITION

PRELIMINARY PLAT

NO.	REVISIONS		
	DESCRIPTION	DATE	BY

PROJECT
211242

REGA ENGINEERING

601 OLD CHENEY RD., SUITE A
LINCOLN, NEBRASKA 68512
(402) 484.7342

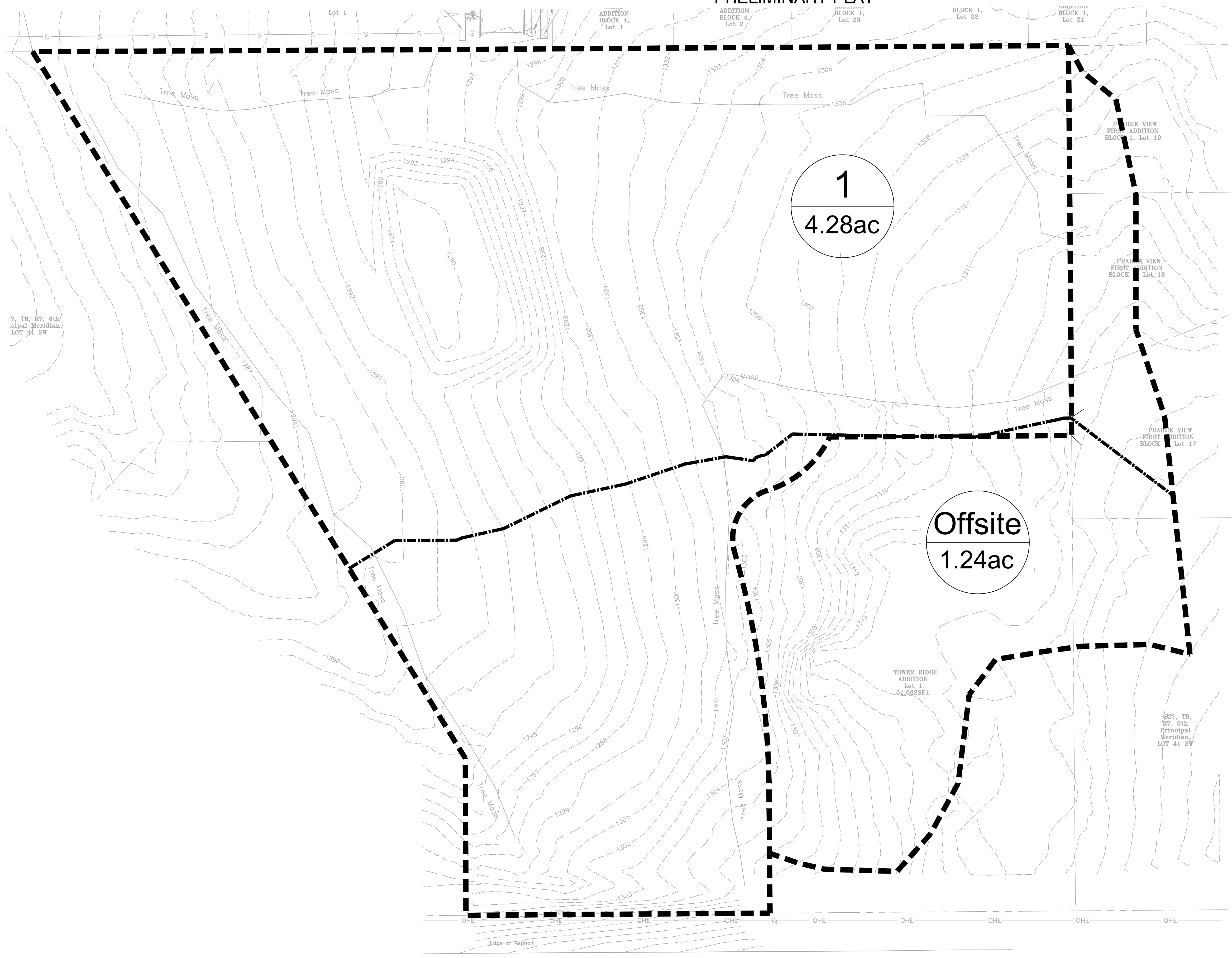
- ENGINEERING
- PLANNING
- LANDSCAPE ARCHITECTURE
- LAND SURVEYING
- IRRIGATION

- LEGEND**
- PROPERTY LINE
 - - - 20' PERIMETER SETBACK
 - - - EXISTING CONTOURS
 - - - 1300 - PROPOSED CONTOURS
 - DRAINAGE AREA
 - TIME OF CONCENTRATION

GENERAL NOTE
1. SEE DRAINAGE STUDY FOR FURTHER DETAILS ON PRE AND POST DEVELOPMENT DRAINAGE AREAS AND REQUIREMENTS.



SCALE 1" = 30'



BARBER ESTATES ADDITION - PRELIMINARY PLAT
 EXISTING GRADING & PRE DEVELOPMENT PLAN
 HICKMAN, NEBRASKA

PRELIMINARY PLAN
 NOT FOR CONSTRUCTION

SHEET NO.
4 of 7

BARBER ESATES ADDITION

PRELIMINARY PLAT

NO.	REVISIONS	DESCRIPTION	DATE	BY

PROJECT
211242

REGA ENGINEERING

601 OLD CHENEY RD., SUITE A
LINCOLN, NEBRASKA 68512
(402) 484.7342

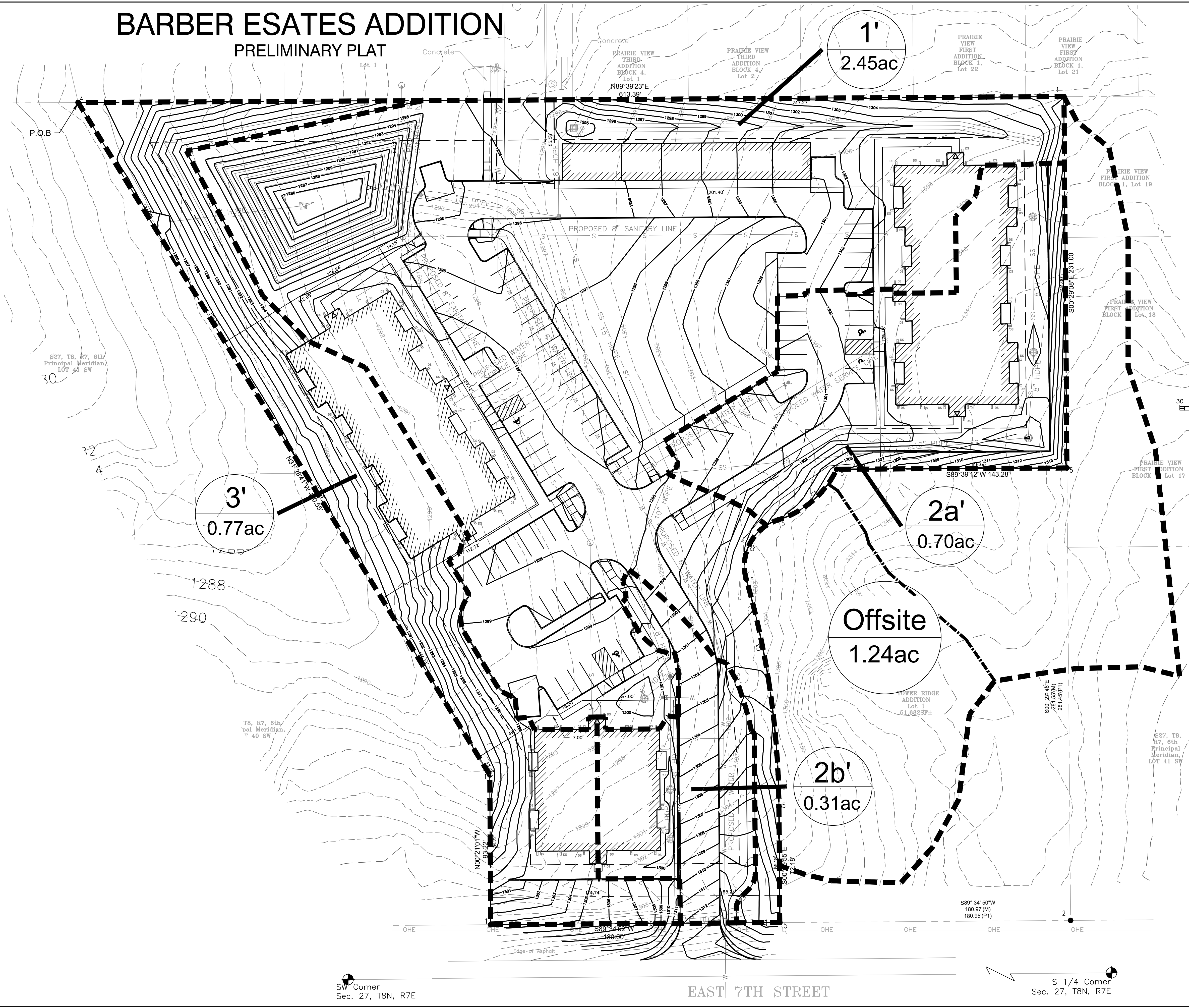
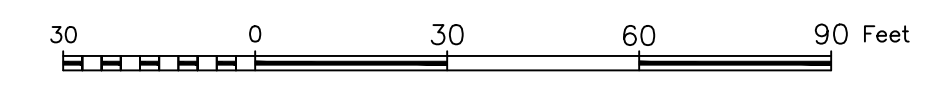
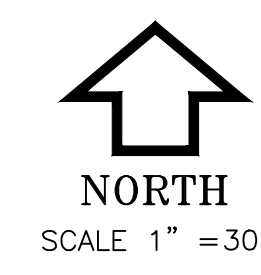
- ENGINEERING
- PLANNING
- LANDSCAPE ARCHITECTURE
- LAND SURVEYING
- IRRIGATION

LEGEND

- PROPERTY LINE
- - - 20' PERIMETER SETBACK
- - - 1300 - EXISTING CONTOURS
- 1300 — PROPOSED CONTOURS
- - - DRAINAGE AREA

GENERAL NOTE

1. SEE DRAINAGE STUDY FOR FURTHER DETAILS ON PRE AND POST DEVELOPMENT DRAINAGE AREAS AND REQUIREMENTS.



BARBER ESATES ADDITION - PRELIMINARY PLAT

PROPOSED GRADING & DRAINAGE PLAN

HICKMAN, NEBRASKA

**PRELIMINARY PLAN
NOT FOR CONSTRUCTION**

SW Corner
Sec. 27, T8N, R7E

EAST 7TH STREET

S 1/4 Corner
Sec. 27, T8N, R7E

SHEET NO.
5 of 7

BARBER ESTATES ADDITION

PRELIMINARY PLAT

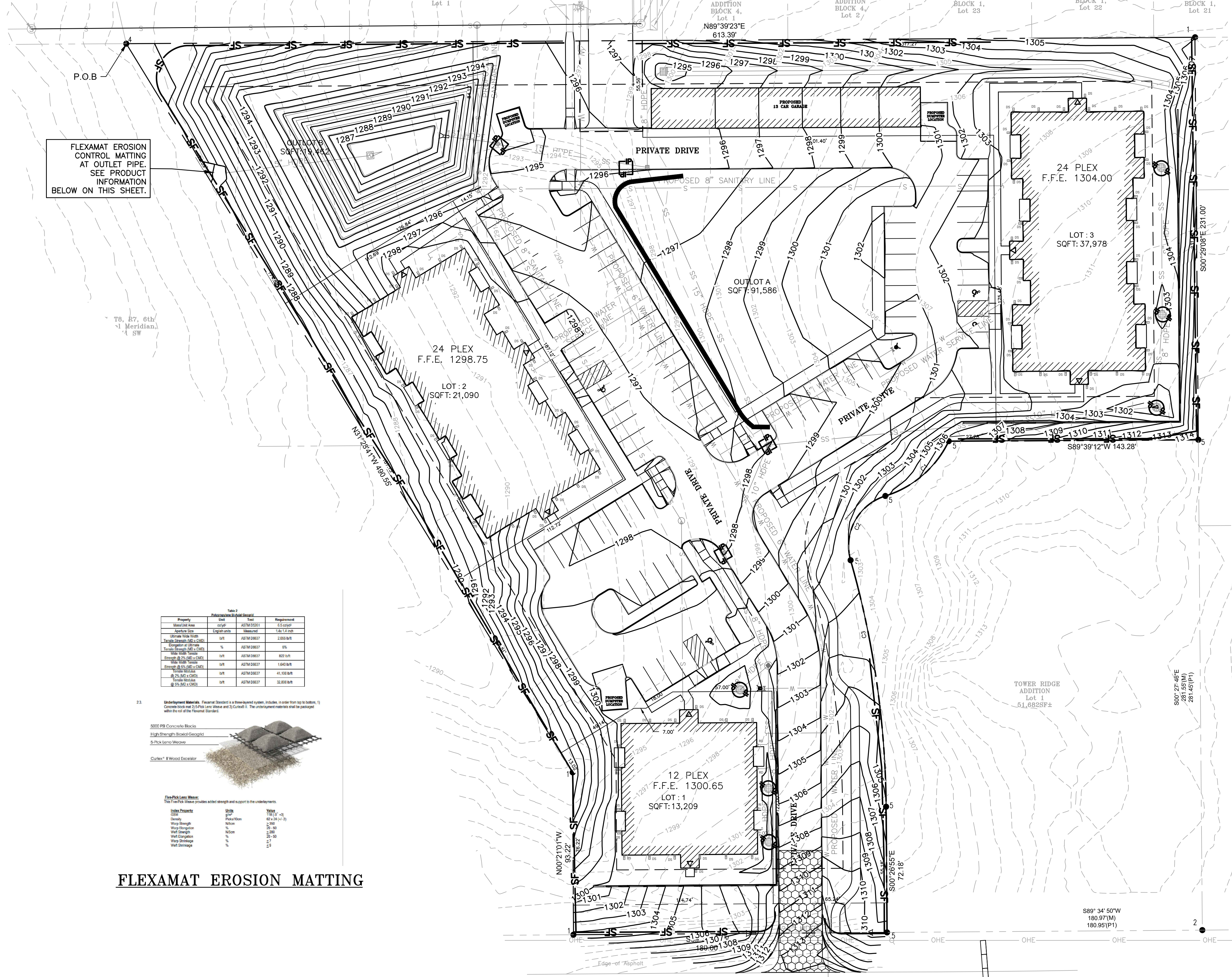
NO.	REVISIONS		
	DESCRIPTION	DATE	BY

PROJECT
211242

REGA ENGINEERING

601 OLD CHENEY RD., SUITE A
LINCOLN, NEBRASKA 68512
(402) 484.7342

- ENGINEERING
- PLANNING
- LANDSCAPE ARCHITECTURE
- LAND SURVEYING
- IRRIGATION



FLEXAMAT EROSION CONTROL MATTING AT OUTLET PIPE. SEE PRODUCT INFORMATION BELOW ON THIS SHEET.

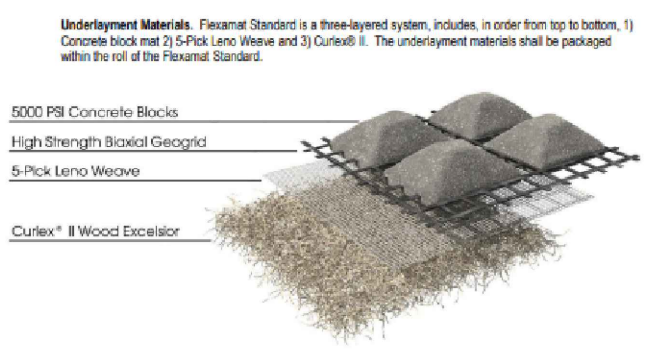
LEGEND

- PROPERTY LINE
- - - 1300 - EXISTING CONTOURS
- 1300 — PROPOSED CONTOURS
- [Hatched Box] CONSTRUCTION ENTRANCE
- [Diagonal Hatched Box] CURLEX 1 QUICK GRASS (USED FOR SLOPES GREATER THAN 10%)
- SF — SILT FENCE
- DIVERSION DIKE
- IP — INLET PROTECTION

- SWPPP NOTES**
- THE CONTRACTOR IS RESPONSIBLE FOR KEEPING AN ACCURATE SET OF STORM WATER PREVENTION POLLUTION PLANS (SWPPP) ON SITE DURING THE TIME OF THEIR WORK.
 - THE CONTRACTOR SHALL ADHERE TO TERMS AND CONDITIONS AS OUTLINED IN THE GENERAL NPDES PERMIT FOR STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES ON THIS SITE.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES THROUGHOUT THE PROJECT. ANY AND ALL FINES ASSOCIATED WITH EROSION CONTROL VIOLATIONS WILL BE THE CONTRACTOR'S RESPONSIBILITY.
 - ALL MEASURES SHOWN ON THE STORM WATER PREVENTION POLLUTION PLAN (SWPPP) SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE.
 - ALL SEDIMENT AND EROSION CONTROL PRACTICES SHALL BE INSPECTED AT LEAST ONCE EVERY 14 CALENDAR DAYS AND WITHIN 24 HOURS OF THE OCCURRENCE OF A STORM EVENT OF 0.25 INCHES OR GREATER, OR THE OCCURRENCE OF RUNOFF FROM SNOWMELT SUFFICIENT TO CAUSE A DISCHARGE, EXCLUDING NON BUSINESS HOURS, BY THE CONTRACTOR AND MUST BE DOCUMENTED AND KEPT ON SITE FOR ACCESSIBILITY. THE CONTRACTOR SHALL COMPLETE WEEKLY REPORT AND PROVIDE REPORT TO ARCHITECT, ANY CHANGES MADE TO THE SWPPP SHALL BE REDLINED AND INITIALED ON THE PLANS BY THE CONTRACTOR.
 - ANY NECESSARY REPAIRS OR CLEAN UP TO MAINTAIN THE EFFECTIVENESS OF THE BEST MANAGEMENT PRACTICES SHALL BE MADE IMMEDIATELY BY THE CONTRACTOR ON SITE.
 - INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
 - SILT FENCE SHALL BE REPAIRED TO THEIR ORIGINAL CONDITION IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCE WHEN IT REACHES ONE HALF THE HEIGHT OF THE SILT FENCE.
 - THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED BY THE CONTRACTOR ON SITE, IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOW OF MUD ON THE PUBLIC RIGHT OF WAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITION DEMANDS.

Table 2
Performance Specifications

Property	Unit	Test	Requirement
Minimum Area	sq yd	ASTM F2051	6.5 sq yd
Application Rate	sq yd/acre	Measured	1.56 (1.2 min)
UV-Radiation Resistance	hrs	ASTM D6837	2,000 hrs
Strength at 0.1% Strain	%	ASTM D6837	9%
Water Uptake	hrs	ASTM D6837	800 hrs
Strength at 0.1% Strain	%	ASTM D6837	1,640 hrs
Strength at 0.1% Strain	hrs	ASTM D6837	41,100 hrs
Strength at 0.1% Strain	hrs	ASTM D6837	32,000 hrs

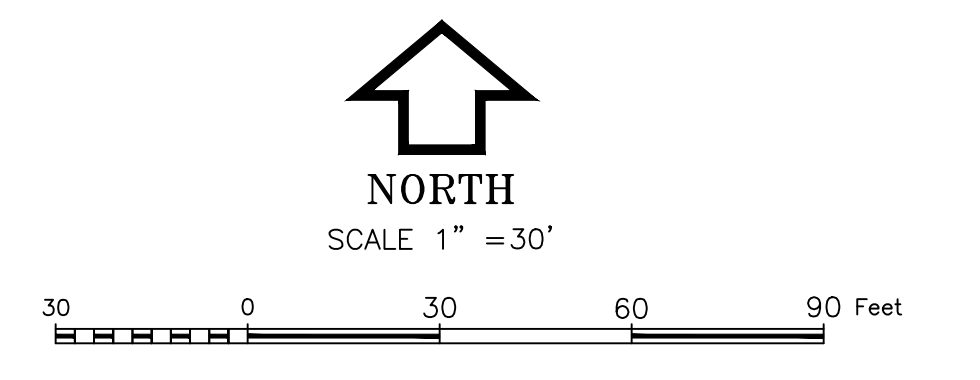


Flex-Pak Leno Mats

This Flex-Pak Leno mat provides added strength and support to the underlayments.

Index Property	Units	Value
Color	mm	170 (6.7)
Stitch	mm	12.7 (0.5)
Warp Strength	mm	82 x 24 (3.2)
Warp Elongation	%	3.0
Warp Shrinkage	%	2.0
Warp Dimension	mm	25 - 100
Warp Damage	%	2
Warp Shrinkage	%	2
Warp Damage	%	2

FLEXAMAT EROSION MATTING



BARBER ESTATES ADDITION - PRELIMINARY PLAT
 EROSION CONTROL PLAN
 HICKMAN, NEBRASKA

PRELIMINARY PLAN
 NOT FOR CONSTRUCTION

SW Corner
Sec. 27, T8N, R7E

EAST 7TH STREET

S 1/4 Corner
Sec. 27, T8N, R7E

BARBER ESATES ADDITION

PRELIMINARY PLAT

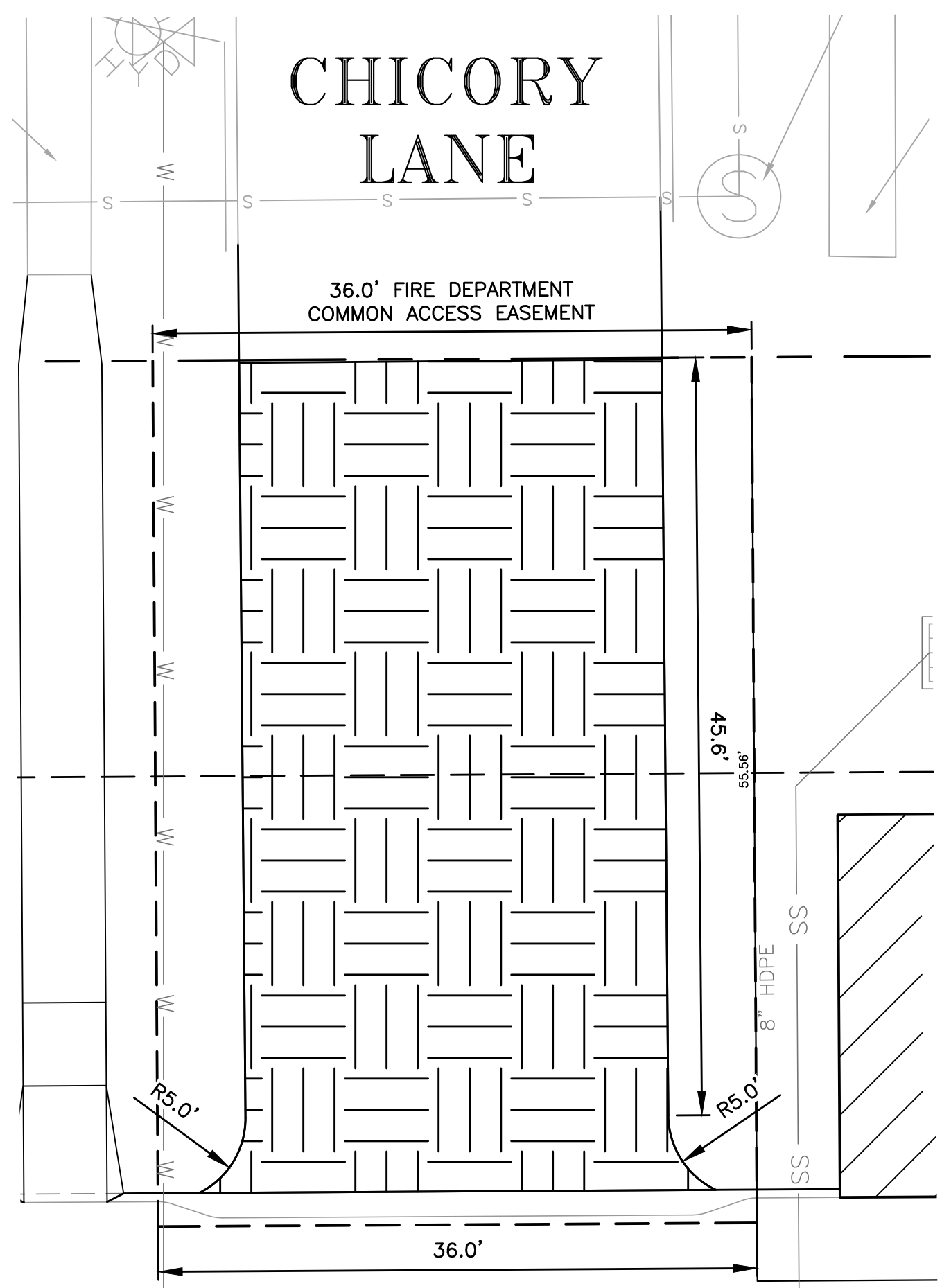
NO.	REVISIONS		
	DESCRIPTION	DATE	BY

PROJECT
211242

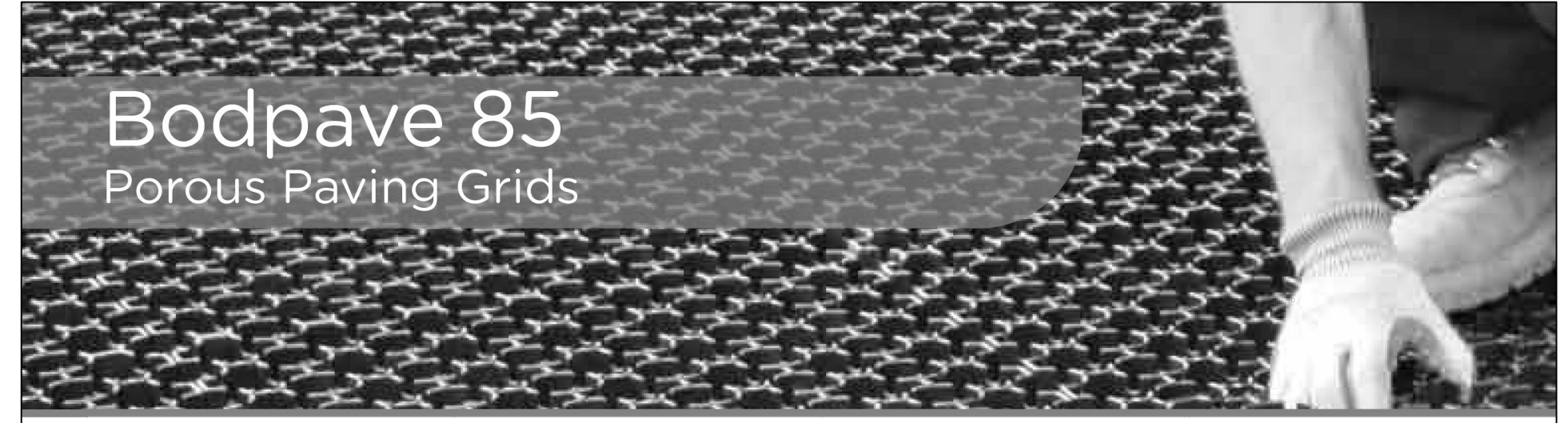
REGA ENGINEERING

601 OLD CHENEY RD., SUITE A
LINCOLN, NEBRASKA 68512
(402) 484-7342

- ENGINEERING
- PLANNING
- LANDSCAPE ARCHITECTURE
- LAND SURVEYING
- IRRIGATION



BODPAVE 85 FIRE ACCESS PATH
SCALE : NO SCALE



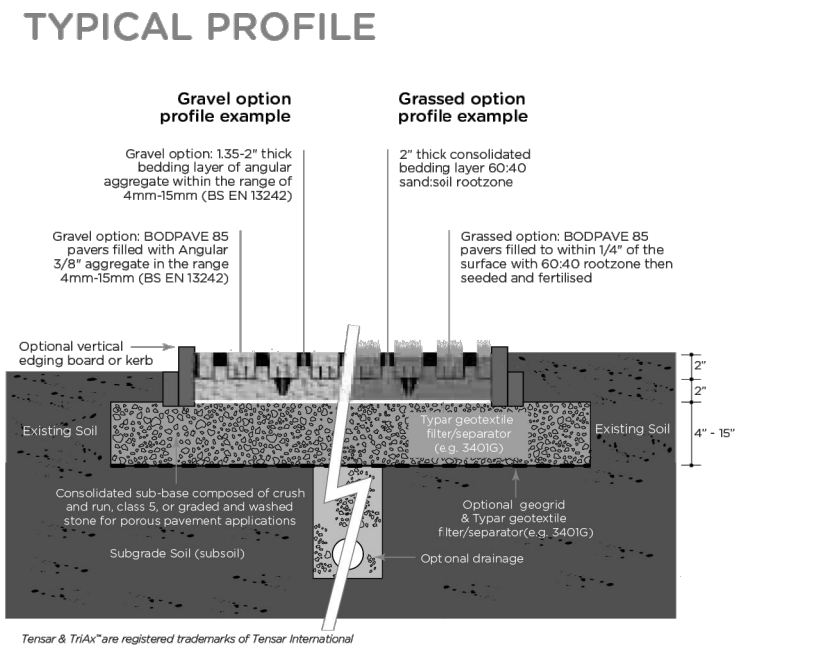
Bodpave 85
Porous Paving Grids

BODPAVE®85 pavers should be installed onto a well prepared, free draining, firm and relatively level sub-base (typically a Class 5 or reduced fines Class 7) using either a reduced-dig system or by employing a full sub-base construction.

The panels (a pre-assembly of four pavers) connect together and are then filled with either a sand:soil rootzone and seeded or turfed for a grass surface, or filled with an angular aggregate for a gravel surface as determined by the application. Construction profiles for each application will be determined by the specific site conditions and load bearing criteria. Detailed design literature and technical support are available to download online from www.typargeosynthetics.com

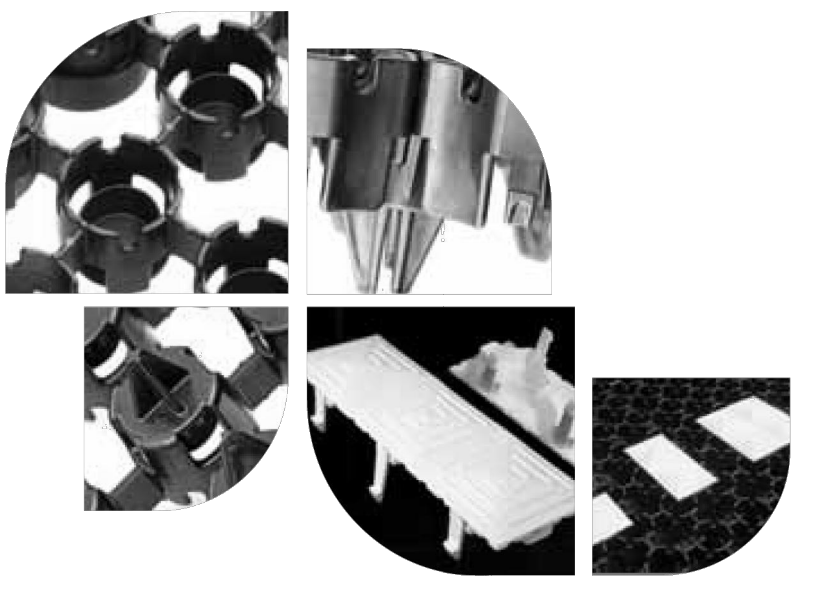
All BODPAVE 85 paver applications must be provided with sufficient and adequate drainage facilities in order to function as intended. Failure to ensure this may compromise overall performance.

They can be permanently fixed in place by applying a suitable high strength plastic (HDPE) glue or an outdoor frame sealant to the underside of the marker. If required, the markers can be reduced in size to create single-cell or double-cell sized units by cutting accurately along the lines between each textured square/pyramidal section. It is recommended that these are bonded into place to resist displacement.



The open cell structure provides high surface water infiltration and is suitable for source control within a LID/LEED profile.

Plastic markers are available for marking parking bays and lines within areas of the BODPAVE 85 cellular paving system. The markers are designed to clip positively into the plaque shaped cells of the BODPAVE 85 pavers and can be fitted in various orientations to create solid or dotted lines and 'T' or 'L' shapes for parking bay heads, aisles and junctions.



Fiberweb Minneapolis
1611 County Road B West #102
Roseville, MN 55113
USA
T: +1 651 330 2920

BODPAVE®85

Product Data Sheet Issue: 02.B8513 Date: 06.25.12 Page: 1 of 1

Physical Properties	
Structure	Rigid-walled, flexible semi-closed cell combination
Polymer	100% recycled polyethylene (HDPE)
Color Options	(1) Black, Green and Natural
Grid Connection Type	Overlapping edge loop and cell connection
Grid Interlock Type	Integral self locking snap-fit clips
Dimensional Characteristics	
Paver Size	19.7" x 19.7"
Installed Paver Size	19.7" x 19.7" (4 gr ds per 1.2 yd ²)
Height	1.97"
Ground Spike Length	1.37"
Weight	3.4lbs/paver
Nominal Internal Cell Size	Castellated 2.6" Plaque & 1.8" Round shaped
Cell Wall Thickness	0.1" - 0.2"
Open Cell %	Top 92% / Base 75%
Technical Characteristics	
Load Bearing Capacity (Filled)	< 367 tons/ yd ²
Crush Resistance (Unfilled)	(2) < 275 tons
Basal Support & Anti Shear	Integral 1.35" long cross & 'T' section ground spikes (18 per paver)
Chemical Resistance	Excellent
UV Resistance	High
Toxicity	Non Toxic

Notes:
(1) Green and Natural subject to minimum order requirements
(2) Research carried out by Sheffield University UK Department of Mechanical Engineering, (Rennison/Allen March 2009)

As part of its continual improvement process, Fiberweb, Inc. reserves the right to change the properties listed on this data sheet without prior notice.
* indicates a registered trademark of Fiberweb, Inc. or a Fiberweb Group company, many of which are registered in a number of countries around the world.

A fiberweb BUSINESS

BARBER ESATES ADDITION - PRELIMINARY PLAT
FIRETRUCK ACCESS PATH
HICKMAN, NEBRASKA

PRELIMINARY PLAN
NOT FOR CONSTRUCTION

DRAINAGE STUDY REPORT

BARBER ESTATES ADDITION

Hickman, Nebraska

October 24th, 2023

REGA PROJECT 211242

PREPARED FOR:

City of Hickman, Nebraska

PREPARED BY:

REGA ENGINEERING GROUP, INC.

LINCOLN, NEBRASKA



TABLE OF CONTENTS

<i>PURPOSE</i>	3
<i>PROJECT LOCATION & DESCRIPTION</i>	3
Figure 1: Pre-development conditions for Barber Estates Addition	3
<i>STUDY PROCEDURE</i>	4
Table 1: Pre-development Sub-basin Information	4
Table 2: Post-development Sub-basin Information	4
Table 3: City of Hickman, NE 24-hour design rainfall	5
<i>PRE-DEVELOPMENT RUNOFF CONDITIONS</i>	5
<i>POST-DEVELOPMENT RUNOFF CONDITIONS</i>	5
<i>STORM SEWER CALCULATIONS</i>	6
Figure 2: Pre-Development Drainage Plan	7
Figure 3: Post-Development Drainage Plan	8
<i>HYDROCAD MODEL</i>	9
Table 4: Post-development Peak Runoff Rates	9
Table 5: Post-development Peak Runoff Rates	9
<i>HYDRAULIC ANALYSIS</i>	10
Table 6: Pond Elevation Heights	10
<i>FINDINGS</i>	10
Table 7: Overall Drainage Results	10
APPENDICES	
APPENDIX A: USDA WEB SOIL SURVEY	
APPENDIX B: STORM SEWER CALCULATIONS	
APPENDIX C: HYDROCAD MODELS (2-, 10-, and 100-Year)	
APPENDIX D: DETENTION POND DETAILS	
APPENDIX E: FLOODPLAIN FIGURE	

DRAINAGE SUMMARY

BARBER ESTATES ADDITION DRAINAGE STUDY

PURPOSE

The primary objective of this study was to analyze pre- and post-development drainage areas for the proposed Barber Estates Addition. This study incorporates the runoff of the existing site, the runoff/discharge of the proposed site and the stormwater sewer system. The requirements of the City of Lincoln have been used for the drainage calculations/detention pond configuration. This shows the mitigation of the 2-, 10-, and 100-year storm events for post-development conditions.

PROJECT LOCATION & DESCRIPTION

The proposed project is located within a residential area on the north side of Hickman Road to the east of the existing gas station, and to the west of Sunflower Drive, connecting to the existing Chicory Lane. The parcel, approximately 4.28 acres, is currently a woodland area within the residential neighborhood. Pre-development conditions are shown in **Figure 1: Pre-development Conditions for Barber Estates Addition**. The proposed site consists of 3 apartment buildings, an open greenspace at the center of the lot, and a detention cell at the northwest corner of the site. Most of the existing site drains from east to west towards the adjacent property and gas station.

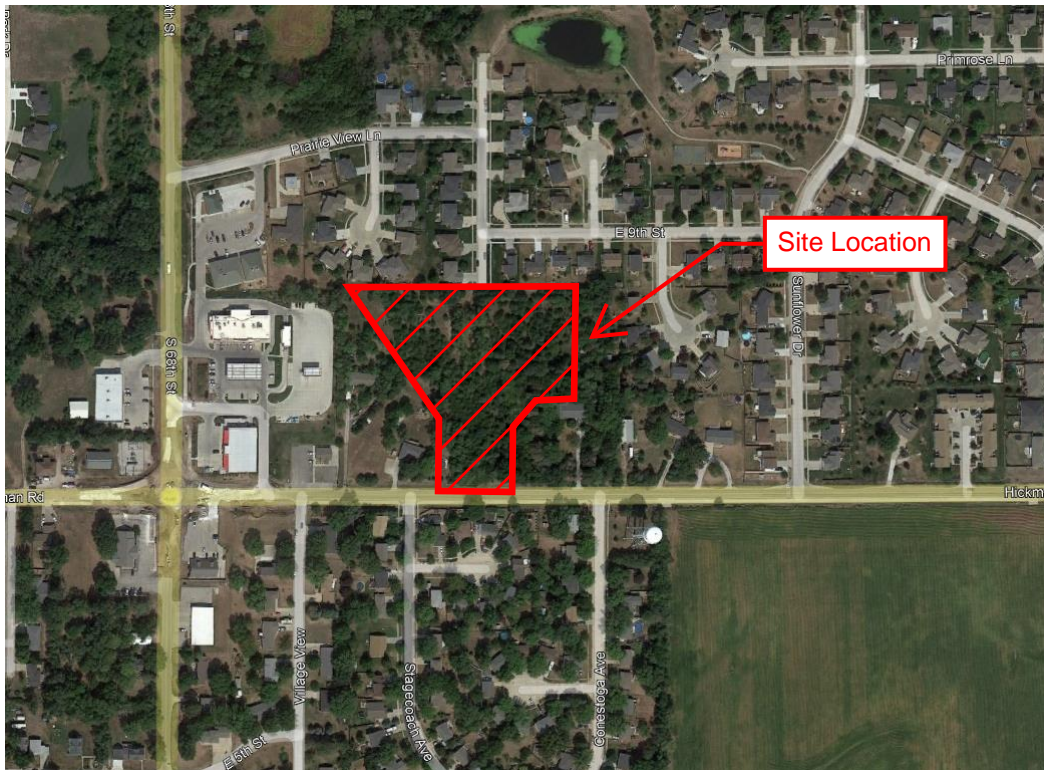


Figure 1: Pre-development conditions for Barber Estates Addition

STUDY PROCEDURE

A hydrologic analysis was performed using HydroCAD to determine the impacts of the proposed drainage on post-construction conditions. The SCS Method was used to model storm events and estimate hydrologic conditions for this study. This method relates runoff rates to precipitation depths, land use and topography. The peak runoff rate is determined by an empirical equation that relates the quantity of runoff from a given area to a total rainfall falling at a uniform rate on the same area. Inputs required for the SCS method include:

- Drainage area (acres)
- Curve Number (CN)
- Time of concentration (Tc)
- Storm distribution

SCS curve numbers, used for predicting peak runoff, are based on the various land uses and soil types as determined by the National Cooperative Soil Survey published by the United States Department of Agriculture Natural Resources Conservation Service. In the case of multiple land uses, a weighted average is calculated. The low curve number of 80 was used for the proposed pervious areas that contain >75% of grass with type D soils. The high curve number of 90 was used for the weighted value of Designation 2' containing areas with >75% of grass with type D soils, paved streets, roofs of the apartment buildings, and sidewalks. The hydrologic soil groups for this site can be found in **Appendix A: USDA Web Soil Survey**. The sub basin area, land use, hydrologic soil group, curve number and time of concentration for each sub-basin were calculated and are shown below in **Table 1: Pre-development Sub-basin Information** and **Table 2: Post-development Sub-basin Information**.

Table 1: Pre-development Sub-basin Information

Designation	Area	Land Use	Curve Number*	Time of Concentration**
	(Acres)			(minutes)
1	4.28	Woodland Area	86	21.7
Offsite	1.24	Woodland Area	86	21.7

* Calculations for the Curve Number were calculated in HydroCAD

** Time of concentration was calculated in HydroCAD

Table 2: Post-development Sub-basin Information

Designation	Area	Land Use	Curve Number*	Time of Concentration**
	(Acres)			(minutes)
1'	2.51	Open Greenspace/Pavement	88	8.0
2'	2a'	Residential	87	9.8
	2b'	Residential	96	9.8
	Comb.	Residential	90	9.8
3'	0.78	Offsite Drainage	80	8.0
Offsite'	1.24	Offsite Coming in to Site	86	25.2

* Calculations for the Curve Number were calculated in HydroCAD

** Time of concentration was calculated in Storm Sewer Calculation Spreadsheet

A minimum time of concentration value of 8 minutes was used based off the requirements in section 2.4.1 Hydrology in the City of Lincoln Drainage Criteria Manual.

Time of concentration was calculated using the TR-55 method, which considers the average basin slope and hydraulic length for each subarea. The hydraulic length is the distance required from the most remote point in the drainage area to the catchment point. Time of concentration was calculated both in HydroCAD and the Storm Sewer Calculation Spreadsheet. The maximum sheet flow distance used was 100 feet, with the maximum shallow concentrated flow being 360'. The time of concentration calculated in the Preliminary Pipe Sizing Spreadsheet (9.7 minutes) governed a higher time of concentration value for both 2a' and 2b'.

A type II rainfall distribution, which has a storm duration of 24 hours, was used to model the 2-, 10- and 100-year storm events. The design rainfall intensity rates were from the NOAA National Weather Service site and are shown below in **Table 3: City of Hickman, NE 24-hour design rainfall.**

Table 3: City of Hickman, NE 24-hour design rainfall

Frequency	24-hr Rainfall (in.)
2-Year	3.10
10-Year	4.62
100-Year	7.56

PRE-DEVELOPMENT RUNOFF CONDITIONS

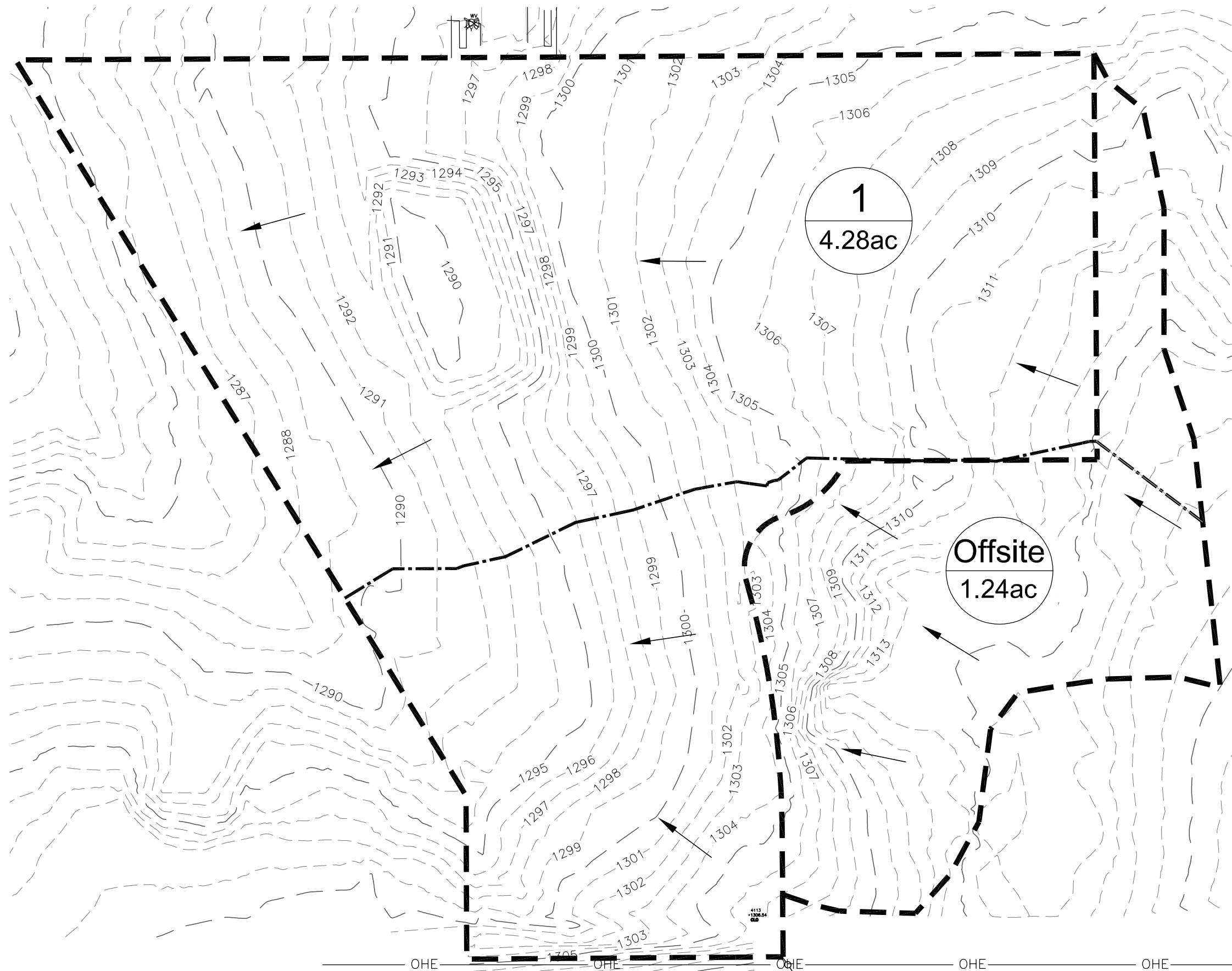
Pre-development conditions are comprised of one (1) basin within the site and one outside of the site. This onsite area is labeled 1. Drainage Basin 1 consists of 4.28 acres of land that drains primarily from east to west across the site. Drainage Basin Offsite contains 1.24 acres of land that flows directly onto our site. These drainage areas and the site's flow path are illustrated in **Figure 2: Pre-development Drainage Plan.**

POST-DEVELOPMENT RUNOFF CONDITIONS

Post-development conditions consist of three (3) main drainage areas, with subsections within them. Drainage Basin 1' consists of 2.51 acres of land that drains to two curb inlets and an area inlet located on the northern end of the site that leads into the proposed detention cell. Basin 2' is split into two areas, 2a' (0.68 acres) and 2b' (0.31 acres). Area 2a' drains to area inlets on the east side of the east 24-Plex apartment building and the curb inlet on the south side of greenspace in the middle of the site. Area 2b' drains towards the area inlets on the east side of the south 12-Plex apartment building and the curb inlet on the west side of the drive entering the site from the south. Area 3' contains all offsite drainage and has a total area of 0.78 acres. Area Offsite' consists of the same area as portrayed in the Pre-Development Runoff Conditions with the same drainage pattern. The post development drainage areas and flow paths are illustrated in **Figure 3: Post-development Drainage Plan.**

STORM SEWER CALCULATIONS

For this site, there is a total of seven area inlets and 4 curb inlets that are all connected via storm sewer system leading into the proposed detention cell at the northwest corner of the site. In the occasion of overflow at the inlets and at the detention area, an overflow drainage map has been provided to show the path of water at these locations along with a more detailed map of the concentrated flow discharging from the detention cell and its impact on the neighboring properties. At Curb Inlet 1, any overflow drainage would bypass the inlet and carry down towards the detention cell. Overflow at Curb Inlet 2 would result in the same location for drainage not intercepted by the inlet. At Curb Inlet 3, the water would similarly bypass on its way to Curb Inlet 4 where it would over top the curb and inlet the detention cell if any overflow occurred in that area. The spreadsheet calculating the pipe sizes correlating to the 10-year storm event, along with a drainage area map, a drainage overflow map, and a storm sewer exhibit, have been placed in ***Appendix B: Storm Sewer Calculations***.













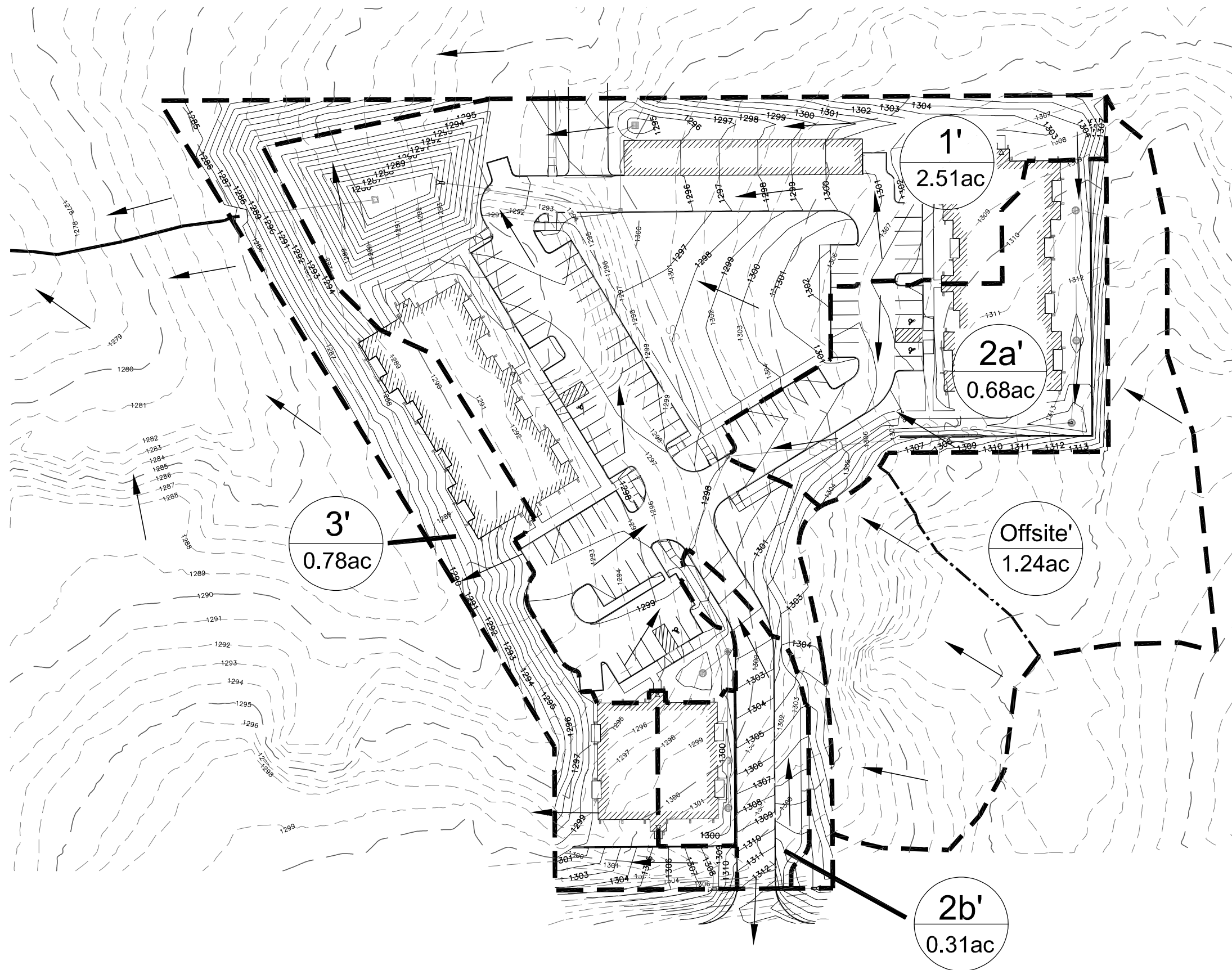

NORTH
 SCALE 1" = 60'

FIGURE 2: PRE-DEVELOPMENT DRAINAGE PLAN

JOB NAME: BARBER ESTATES ADDITION LOCATION: CHICORY LANE AND HICKMAN ROAD											
DESCRIPTION: PRE DRAINAGE PATTERNS											
<table border="0" style="width: 100%;"> <tr> <th colspan="2" style="text-align: center; border-bottom: 1px solid black;">LEGEND</th> </tr> <tr> <td style="text-align: center; border-right: 1px solid black;">  </td> <td style="padding-left: 10px;">DRAINAGE BASIN</td> </tr> <tr> <td style="text-align: center; border-right: 1px solid black;">  </td> <td style="padding-left: 10px;">WATER PATH</td> </tr> <tr> <td style="text-align: center; border-right: 1px solid black;">  </td> <td style="padding-left: 10px;">TIME OF CONCENTRATION</td> </tr> <tr> <td style="text-align: center; border-right: 1px solid black;">  </td> <td style="padding-left: 10px;">EXISTING CONTOURS</td> </tr> </table>		LEGEND			DRAINAGE BASIN		WATER PATH		TIME OF CONCENTRATION		EXISTING CONTOURS
LEGEND											
	DRAINAGE BASIN										
	WATER PATH										
	TIME OF CONCENTRATION										
	EXISTING CONTOURS										
<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">DRAWN BY:JE</td> <td style="width: 50%;">CHECKED BY:NB</td> </tr> <tr> <td colspan="2">SCALE: 1"=60'</td> </tr> <tr> <td colspan="2">DATE:10/19/2023</td> </tr> <tr> <td>JOB NUMBER</td> <td>SHEET</td> </tr> <tr> <td style="text-align: center;">211242</td> <td style="text-align: center;">1 OF 2</td> </tr> </table>		DRAWN BY:JE	CHECKED BY:NB	SCALE: 1"=60'		DATE:10/19/2023		JOB NUMBER	SHEET	211242	1 OF 2
DRAWN BY:JE	CHECKED BY:NB										
SCALE: 1"=60'											
DATE:10/19/2023											
JOB NUMBER	SHEET										
211242	1 OF 2										
<table border="0" style="width: 100%;"> <tr> <td style="font-size: 2em; font-weight: bold; vertical-align: middle;">REGA</td> <td style="font-size: 1.2em; font-weight: bold; vertical-align: middle;">ENGINEERING</td> </tr> <tr> <td colspan="2" style="font-size: 0.8em;"> 601 OLD CHENEY RD., SUITE A LINCOLN, NEBRASKA 68512 (402).484.7342 </td> </tr> <tr> <td colspan="2" style="font-size: 0.8em;"> <ul style="list-style-type: none"> ● ENGINEERING ● PLANNING ● LANDSCAPE ARCHITECTURE ● LAND SURVEYING ● IRRIGATION </td> </tr> </table>		REGA	ENGINEERING	601 OLD CHENEY RD., SUITE A LINCOLN, NEBRASKA 68512 (402).484.7342		<ul style="list-style-type: none"> ● ENGINEERING ● PLANNING ● LANDSCAPE ARCHITECTURE ● LAND SURVEYING ● IRRIGATION 					
REGA	ENGINEERING										
601 OLD CHENEY RD., SUITE A LINCOLN, NEBRASKA 68512 (402).484.7342											
<ul style="list-style-type: none"> ● ENGINEERING ● PLANNING ● LANDSCAPE ARCHITECTURE ● LAND SURVEYING ● IRRIGATION 											




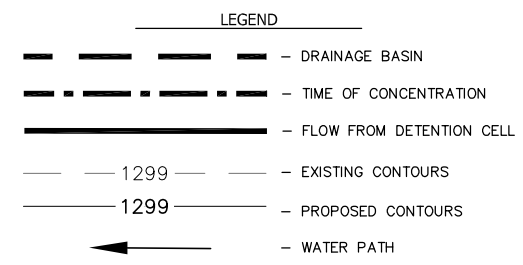


 NORTH
 SCALE 1" = 70'

FIGURE 3: POST-DEVELOPMENT DRAINAGE PLAN

JOB NAME: BARBER ESTATES ADDITION LOCATION: CHICORY LANE AND HICKMAN ROAD	
DESCRIPTION: POST DRAINAGE PATTERNS	
LEGEND 	 601 OLD CHENEY RD., SUITE A LINCOLN, NEBRASKA 68512 (402).484.7342
DRAWN BY: JE	CHECKED BY: NB
SCALE: 1"=70'	
DATE: 10/19/2023	
JOB NUMBER	SHEET
211242	2 OF 2

- ENGINEERING
- PLANNING
- LANDSCAPE ARCHITECTURE
- LAND SURVEYING
- IRRIGATION

HYDROCAD MODEL

Hydrologic pond routing was used to model the proposed detention cell in HydroCAD. The proposed grading plan was used to create the elevation versus storage volume curves representing the detention pond. The resulting hydrograph summaries for the post-development sub-basins and detention area are provided in ***Appendix C: HydroCAD Models***. In this model, some of the areas shown in Figures 2 and 3 have been combined due to them draining towards the same area. Areas 2a' and 2b' combine into the label 2' in HydroCAD because both travel to the same place via storm sewer system. The peak runoff rates were calculated based on the inflow into the proposed detention cell at the northwest area of the site. An outlet structure has been implemented within the cell to control the flow leaving the site. This structure contains one 15" HDPE outlet pipe, one 18"x6" opening on the face of it for lower pond water elevations, and one 24" x 24" horizontal grate on top of the structure. A cross-section of the pond along with dimensions of the structure have been detailed in ***Appendix D: Detention Details***. The resulting flow rates for the pre-development and post-development sub-basins and detention ponds are summarized in **Table 4: Pre-development peak Runoff Rates** and **Table 5: Post-development Peak Runoff Rates**.

Table 4: Pre-development Peak Runoff Rates

Peak Runoff Rates (CFS)			
Sub-Basin	2-Year Storm	10-Year Storm	100-Year Storm
1	8.0	13.4	26.2
Offsite	2.3	4.1	7.6

Table 5: Post-development Peak Runoff Rates

Peak Runoff Rates (CFS)			
Sub-Basin	2-Year Storm	10-Year Storm	100-Year Storm
1'	7.9	13.4	23.9
2'	3.1	5.1	8.9
3'	1.7	3.3	6.6
Offsite'	2.1	3.8	7.0

HYDRAULIC ANALYSIS

A hydraulic analysis was performed to estimate the flow capacity of the proposed culverts within the study area and the pond storage capacities for the 2-, 10-, and 100-year storm events. HydroCAD software was used to perform this analysis, including Manning's equation was utilized which relates the flow capacity to pipe size, roughness, and slope. By using this technique, one can model and evaluate a detention pond used to attenuate peak runoff rates exceeding the capacity of the outlet structure. The outputs of the model include the total storage volume and upstream high-water elevation. Following the specifications displayed in the City of Lincoln Drainage Criteria Manual, a minimum of 1' of freeboard is achieved by the proposed detention cell with the actual amount of freeboard being 2.09'. The 2-, 10-, and 100-year water elevations are shown below in **Table 6: Pond Elevation Heights**.

Table 6: Pond Elevation Heights

Post-development Sub-Basin	2-Year Water Elevation (ft. above sea level)	10-Year Water Elevation (ft. above sea level)	100-Year Water Elevation (ft. above sea level)	Top of Storage (ft. above sea level)
Pond 1P	1288.47	1290.15	1292.91	1295.00

FINDINGS

The primary objective of this study is to ensure that the post-development conditions were at or below the pre-development conditions. Ultimately, most of the flow ends up at the proposed detention cell with some draining to adjacent areas. As shown below in **Table 7: Overall Drainage Results**, the combined post-development 2-, 10-, and 100-year storm runoff rates are below existing runoff rates. This demonstrates total reduction in development runoff. Based off the Floodplain Figure shown in **Appendix E: Floodplain Figure**, the site is not within any floodplain. To the immediate southwest lies the floodplain within the city of Hickman, and based on our site's drainage, it flows into the tributary leading into it.

Table 7: Overall Drainage Results

Peak Runoff Rate (CFS)			
	2-Year Storm Event	10-Year Storm Event	100-Year Storm Event
Pre-Development Total	10.4	18.3	33.8
Post-Development Total	9.8	13.7	19.8

APPENDIX A

USDA WEB SOIL SURVEY



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Lancaster County, Nebraska**



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Preface	2
How Soil Surveys Are Made	5
Soil Map	8
Soil Map.....	9
Legend.....	10
Map Unit Legend.....	11
Map Unit Descriptions.....	11
Lancaster County, Nebraska.....	13
7666—Mayberry silty clay loam, 3 to 6 percent slopes, eroded.....	13
7684—Wymore silty clay loam, 3 to 6 percent slopes, eroded.....	14
References	16

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map




Map Scale: 1:1,080 if printed on A portrait (8.5" x 11") sheet.

0 15 30 60 90 Meters
0 50 100 200 300 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)


Soils


 Soil Map Unit Polygons


 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit


 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot


 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water


 Perennial Water

 Rock Outcrop


 Saline Spot

 Sandy Spot

 Severely Eroded Spot


 Sinkhole

 Slide or Slip


 Sodic Spot


 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals


Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

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

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

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Lancaster County, Nebraska
 Survey Area Data: Version 27, Sep 8, 2022

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

Date(s) aerial images were photographed: Aug 21, 2021—Aug 28, 2021

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
7666	Mayberry silty clay loam, 3 to 6 percent slopes, eroded	0.2	4.5%
7684	Wymore silty clay loam, 3 to 6 percent slopes, eroded	3.5	95.5%
Totals for Area of Interest		3.7	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

Custom Soil Resource Report

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Lancaster County, Nebraska

7666—Mayberry silty clay loam, 3 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: 1ts07

Elevation: 1,000 to 1,500 feet

Mean annual precipitation: 30 to 32 inches

Mean annual air temperature: 52 to 55 degrees F

Frost-free period: 160 to 180 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Mayberry and similar soils: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mayberry

Setting

Landform: Hillslopes

Down-slope shape: Concave, convex

Across-slope shape: Linear

Parent material: Reworked weathered till

Typical profile

H1 - 0 to 12 inches: silty clay loam

H2 - 12 to 48 inches: clay

H3 - 48 to 60 inches: stratified sandy loam to clay

Properties and qualities

Slope: 2 to 7 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 12 to 36 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): 4e

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: D

Ecological site: R106XY074NE - Clayey Upland

Forage suitability group: Clayey Subsoil (G106XY210NE)

Other vegetative classification: Clayey Subsoil (G106XY210NE)

Hydric soil rating: No

7684—Wymore silty clay loam, 3 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2qskg
Elevation: 730 to 1,700 feet
Mean annual precipitation: 28 to 40 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 158 to 203 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Wymore, eroded, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wymore, Eroded

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess

Typical profile

Ap - 0 to 6 inches: silty clay loam
Bt1 - 6 to 11 inches: silty clay
Bt2 - 11 to 40 inches: silty clay loam
BC - 40 to 51 inches: silty clay loam
C - 51 to 79 inches: silty clay loam

Properties and qualities

Slope: 3 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 12 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.5 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: R106XY074NE - Clayey Upland

Custom Soil Resource Report

Hydric soil rating: No

Minor Components

Baileyville

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R106XY074NE - Clayey Upland
Hydric soil rating: No

Pawnee

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R106XY074NE - Clayey Upland
Hydric soil rating: No

Irwin

Percent of map unit: 4 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R106XY074NE - Clayey Upland
Hydric soil rating: No

Aquolls

Percent of map unit: 1 percent
Landform: Drainageways
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R106XY032NE - Subirrigated
Hydric soil rating: Yes

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

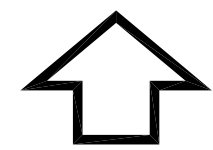
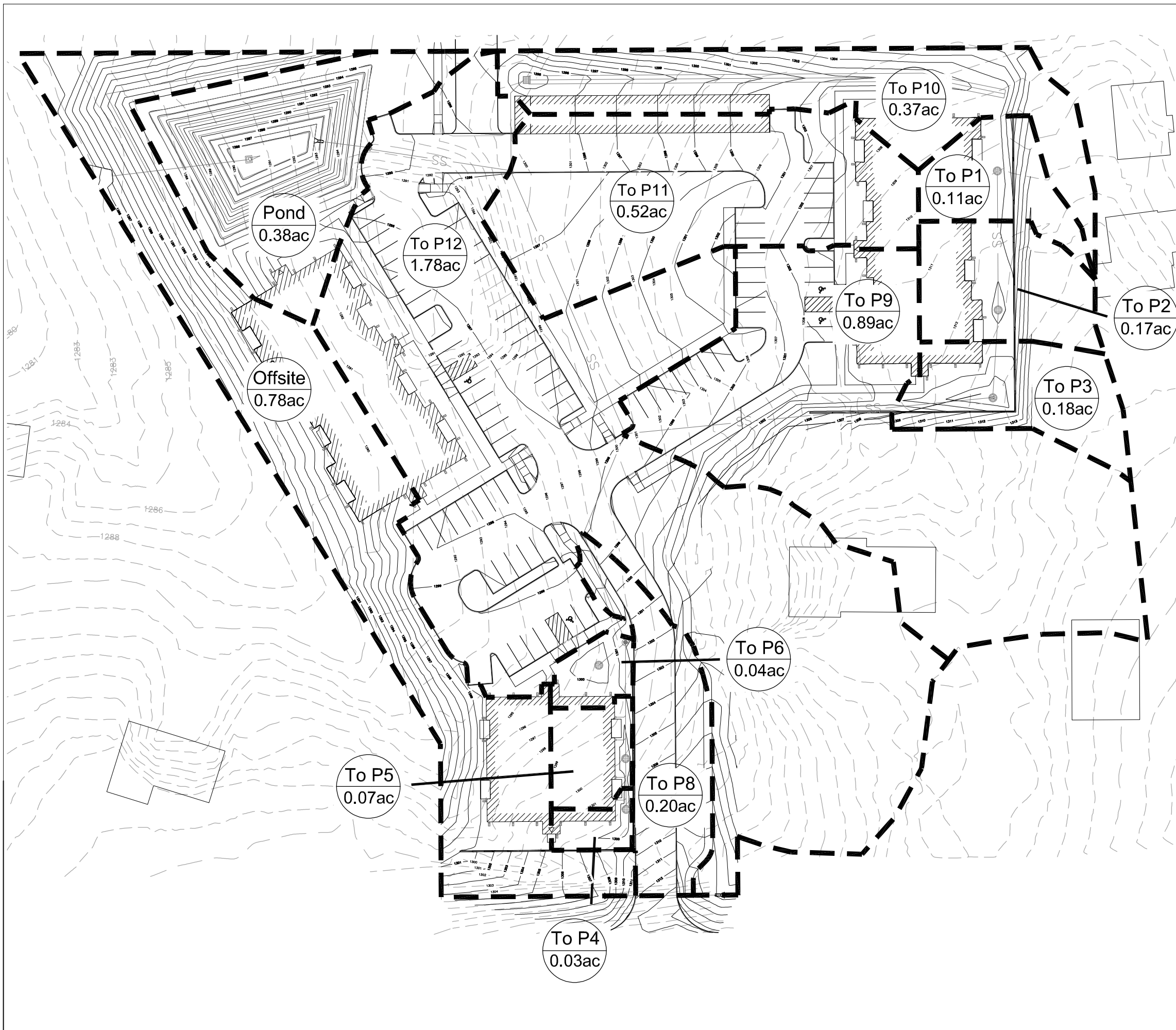
United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

APPENDIX B

STORM SEWER CALCULATIONS



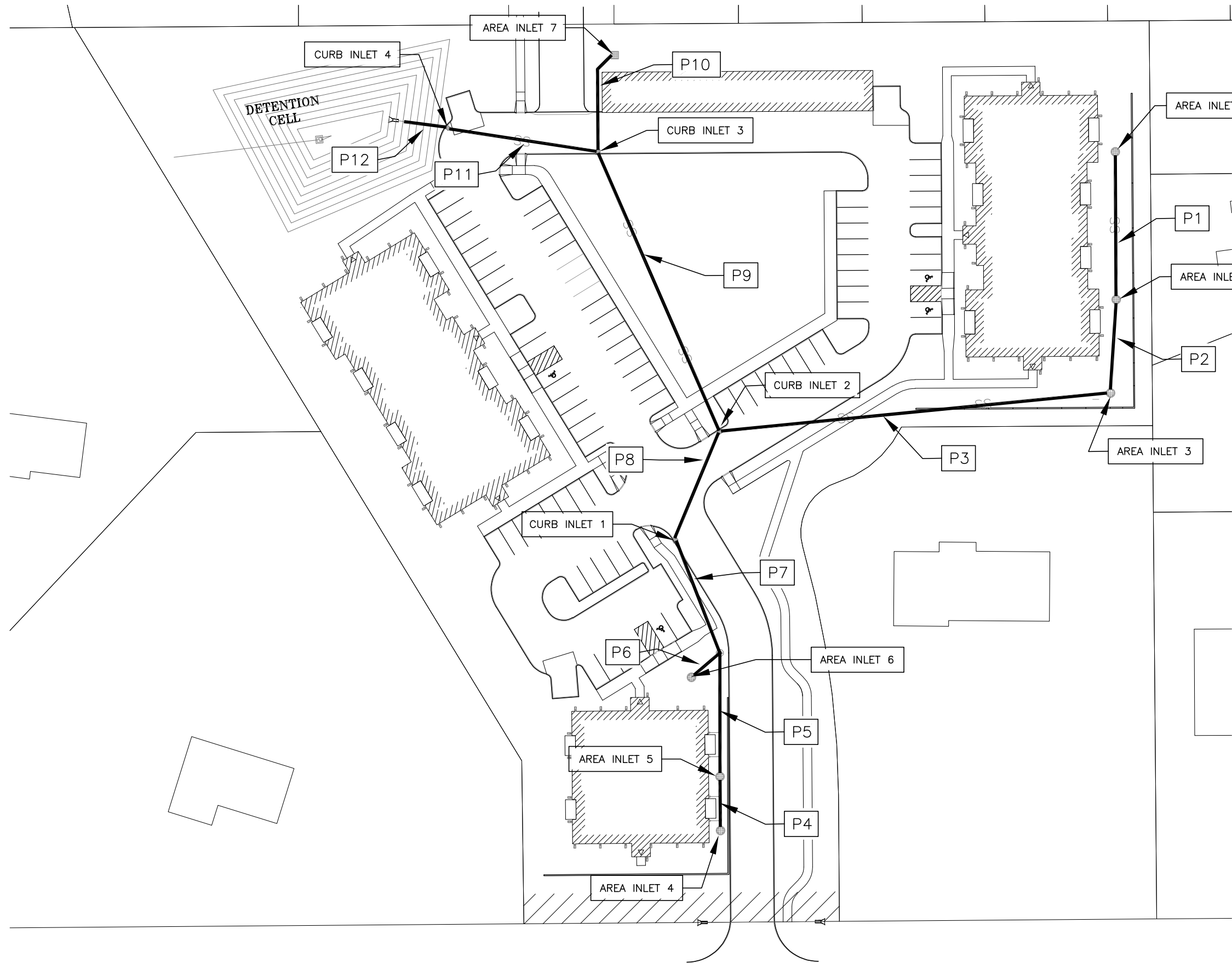
NORTH
SCALE 1" = 60'


JOB NAME: BARBER ESTATES ADDITION	
LOCATION: CHICORY LANE AND HICKMAN ROAD	
DESCRIPTION: DRAINAGE AREAS MAP	
<p>LEGEND</p> <p>--- DRAINAGE AREA</p> <p>--- 1299 --- EXISTING CONTOURS</p> <p>--- 1299 --- PROPOSED CONTOURS</p>	
DRAWN BY:JE	CHECKED BY:NB
SCALE: 1"=60'	
DATE:10/19/2023	
JOB NUMBER	
211242	


REGA ENGINEERING

601 OLD CHENEY RD., SUITE A
LINCOLN, NEBRASKA 68512
(402).484.7342

- ENGINEERING
- PLANNING
- LANDSCAPE ARCHITECTURE
- LAND SURVEYING
- IRRIGATION

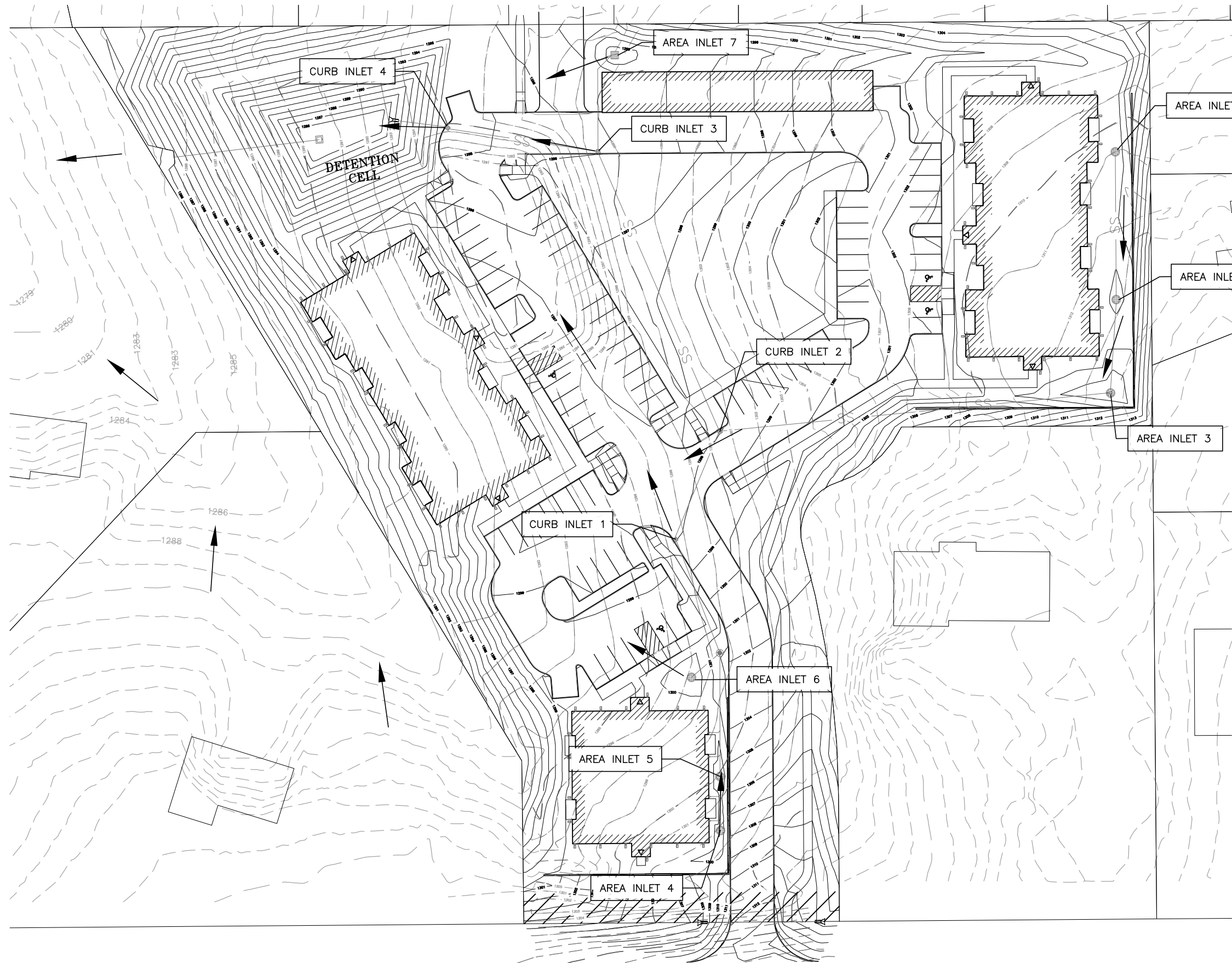




 NORTH
 SCALE 1" = 60'




JOB NAME: BARBER ESTATES ADDITION LOCATION: CHICORY LANE AND HICKMAN ROAD	
DESCRIPTION: STORM SEWER EXHIBIT	
<p style="text-align: center;">LEGEND</p> <p style="text-align: center;">  - STORM PIPE </p>	<p style="font-size: 1.2em; font-weight: bold; margin: 0;">REGA</p> <p style="font-weight: bold; margin: 0;">ENGINEERING</p> <p style="font-size: 0.8em; margin: 0;">601 OLD CHENEY RD., SUITE A LINCOLN, NEBRASKA 68512 (402).484.7342</p> <ul style="list-style-type: none"> ● ENGINEERING ● PLANNING ● LANDSCAPE ARCHITECTURE ● LAND SURVEYING ● IRRIGATION
DRAWN BY: JE	CHECKED BY: NB
SCALE: 1"=60'	
DATE: 10/19/2023	
JOB NUMBER	
211242	

Preliminary Pipe Sizing Calculations - Barber Estates Addition

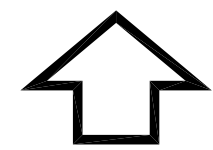
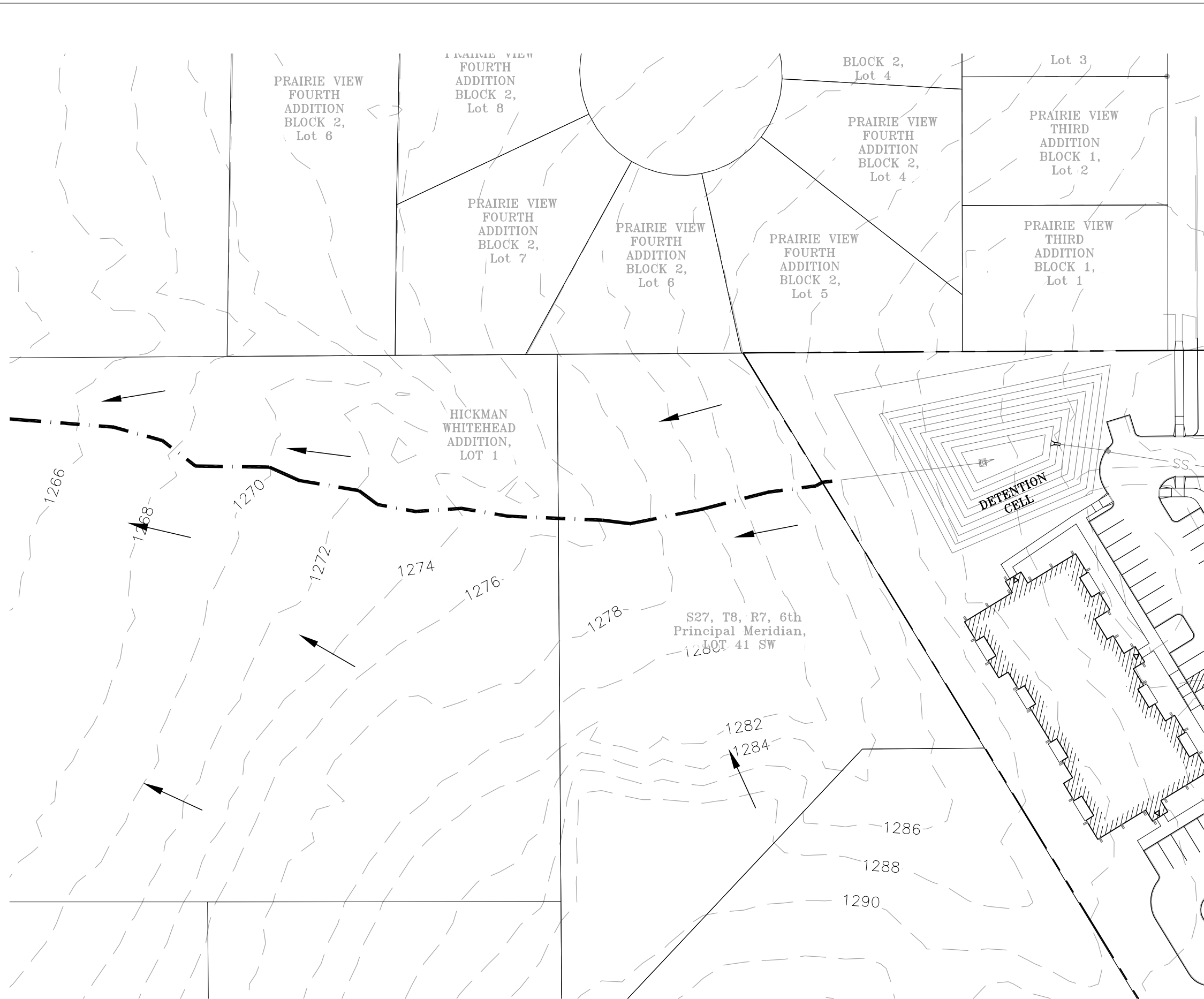
Minor Storm System Conveyance Analysis														Major Storm System Conveyance Analysis								
Minor Storm Average Return Frequency						10 Years		Major Storm Average Return Frequency														
Location	Area, A	Coefficient, C	A*C	Sum, A*C	Time of Concentration, Tc	Intensity I	Runoff, Qr	Pipe Slope, Sp	Pipe Length, L	Pipe Diameter D	Pipe Capacity Qp	Pipe Velocity Vp	Time in Section Tp	Intensity I100	Flow, Q100	Overflow Route Slope	Street Width	Street Capacity	Swale Width	Swale Capacity	Overflow + Pipe Capacity	Comments
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
P1	0.11	0.40	0.04	0.04	8.0	5.76	0.3	0.0200	80	8	1.9	5.3	0.25	11.25	0.50	0.0167					1.9	Flow from Area Inlet 1
+P2	0.17	0.40	0.07	0.11	8.3	5.70	0.6	0.0200	49	8	1.9	5.3	0.15	11.15	1.25	0.0167					1.9	Combined flow from P1 and Area Inlet 2
+P3	0.18	0.40	0.07	0.18	8.4	5.67	1.0	0.0200	221	10	3.4	6.2	0.60	11.09	2.04	1.0167					3.4	Combined flow from P2 and Area Inlet 3
P4	0.03	0.60	0.02	0.02	8.0	5.76	0.1	0.0100	27	8	1.3	3.8	0.12	11.25	0.20	2.0167					1.3	Flow from Area Inlet 4
+P5	0.07	0.60	0.04	0.06	8.1	5.73	0.3	0.0100	68	8	1.3	3.8	0.30	11.21	0.67	3.0167					1.3	Combined flow from P4 and Area Inlet 5
P6	0.04	0.60	0.02	0.02	8.0	5.76	0.1	0.0235	21	8	2.0	5.8	0.06	11.25	0.27	4.0167					2.0	Flow from Area Inlet 6
+P7(P5+P6)	0.00	0.90	0.00	0.08	8.4	5.67	0.5	0.0100	68	8	1.3	3.8	0.30	11.09	0.93	4.0167					1.3	Combined flow from P5 and P6
+P8	0.20	0.90	0.18	0.26	8.7	5.61	1.5	0.0288	65	10	4.0	7.4	0.15	10.97	2.90	5.0167					4.0	Combined flow from P7 and Curb Inlet 1
+P9(P3+P8)	0.89	0.60	0.53	0.98	9.0	5.56	5.5	0.0100	173	15	7.0	5.7	0.51	10.86	10.67	6.0167					7.0	Combined flow from P3, P8, and Curb Inlet 2
P10	0.37	0.60	0.22	0.22	8.0	5.76	1.3	0.0100	57	8	1.3	3.8	0.25	11.25	2.50	7.0167					1.3	Flow from Area Inlet 7
+P11(P10+P9)	0.52	0.90	0.47	1.67	9.5	5.46	9.1	0.0200	85	15	9.9	8.1	0.18	10.68	17.86	7.0167					9.9	Combined flow from P9, P10 and Curb Inlet 3
+P12	1.78	0.75	1.34	3.01	9.7	5.43	16.3	0.0550	33	15	16.4	13.4	0.04	10.62	31.92	8.0167					16.4	Combined flow from P11 and Curb Inlet 4




 NORTH
 SCALE 1" = 60'

JOB NAME: BARBER ESTATES ADDITION LOCATION: CHICORY LANE AND HICKMAN ROAD	
DESCRIPTION: OVERFLOW DRAINAGE MAP	
<p style="text-align: center;">LEGEND</p> <p>  - OVERFLOW PATH  - EXISTING CONTOURS  - PROPOSED CONTOURS </p>	<p style="font-size: 24pt; font-weight: bold; margin: 0;">REGA</p> <p style="font-weight: bold; margin: 0;">ENGINEERING</p> <p style="font-size: 10pt; margin: 0;">601 OLD CHENEY RD., SUITE A LINCOLN, NEBRASKA 68512 (402).484.7342</p>
DRAWN BY: JE	CHECKED BY: NB
SCALE: 1"=60'	
DATE: 10/19/2023	
JOB NUMBER	
211242	

- ENGINEERING
- PLANNING
- LANDSCAPE ARCHITECTURE
- LAND SURVEYING
- IRRIGATION



NORTH
SCALE 1" = 60'

JOB NAME: BARBER ESTATES ADDITION	
LOCATION: CHICORY LANE AND HICKMAN ROAD	
DESCRIPTION: OFFSITE IMPACT FROM DETENTION CELL	
<p>LEGEND</p> <p>--- WATER PATH</p> <p>- - - EXISTING CONTOURS</p> <p>← WATER FLOW DIRECTION</p>	
DRAWN BY: JE	CHECKED BY: NB
SCALE: 1"=60'	
DATE: 10/19/2023	
JOB NUMBER	SHEET
211242	

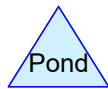
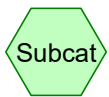
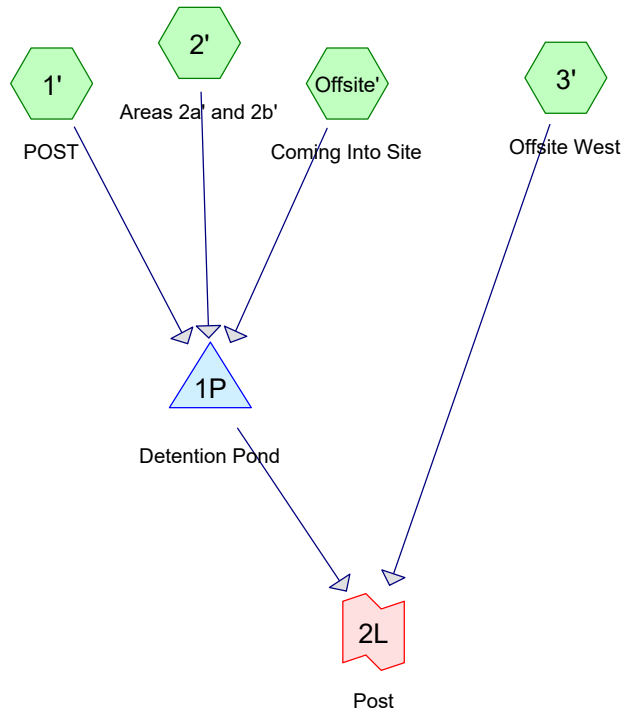
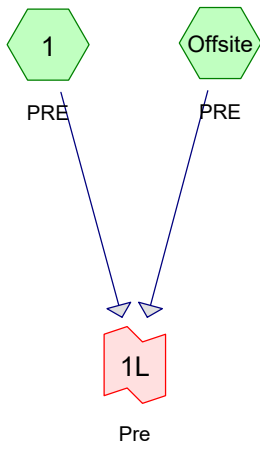
REGA ENGINEERING

601 OLD CHENEY RD., SUITE A
LINCOLN, NEBRASKA 68512
(402).484.7342

- ENGINEERING
- PLANNING
- LANDSCAPE ARCHITECTURE
- LAND SURVEYING
- IRRIGATION

APPENDIX C

HYDROCAD MODELS (2-year, 10-year, 100-year)



Routing Diagram for 211242 Barber Addition
 Prepared by REGA Engineering, Printed 10/24/2023
 HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

Printed 10/24/2023

Page 2

Project Notes

Rainfall events imported from "NRCS-Rain.txt" for 6453 NE Lancaster

211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

Printed 10/24/2023

Page 3

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-Year	MSE 24-hr	3	Default	24.00	1	3.10	2
2	10-Year	MSE 24-hr	3	Default	24.00	1	4.62	2
3	100-Year	MSE 24-hr	3	Default	24.00	1	7.56	2

211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

Printed 10/24/2023

Page 4

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.560	80	>75% Grass cover, Good, HSG D (1', 2', 3')
1.720	98	Paved roads w/curbs & sewers, HSG D (1', 2')
6.760	86	Woods/grass comb., Poor, HSG D (1, Offsite, Offsite')
11.040	86	TOTAL AREA

211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

Printed 10/24/2023

Page 5

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
11.040	HSG D	1, 1', 2', 3', Offsite, Offsite'
0.000	Other	
11.040		TOTAL AREA

211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

Printed 10/24/2023

Page 6

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	2.560	0.000	2.560	>75% Grass cover, Good	1', 2', 3'
0.000	0.000	0.000	1.720	0.000	1.720	Paved roads w/curbs & sewers	1', 2'
0.000	0.000	0.000	6.760	0.000	6.760	Woods/grass comb., Poor	1, Off site , Off site ,
0.000	0.000	0.000	11.040	0.000	11.040	TOTAL AREA	

211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

Printed 10/24/2023

Page 7

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)	Node Name
1	1P	1,285.75	1,285.16	83.5	0.0071	0.010	0.0	15.0	0.0	

211242 Barber Addition

MSE 24-hr 3 2-Year Rainfall=3.10"

Prepared by REGA Engineering

Printed 10/24/2023

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

Page 8

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1: PRE Runoff Area=4.280 ac 0.00% Impervious Runoff Depth>1.67"
 Flow Length=421' Tc=21.7 min CN=86 Runoff=8.04 cfs 0.596 af

Subcatchment1': POST Runoff Area=2.510 ac 47.01% Impervious Runoff Depth>1.83"
 Tc=8.0 min CN=88 Runoff=7.89 cfs 0.383 af

Subcatchment2': Areas 2a' and 2b' Runoff Area=0.990 ac 54.55% Impervious Runoff Depth>2.00"
 Tc=9.8 min CN=90 Runoff=3.09 cfs 0.165 af

Subcatchment3': Offsite West Runoff Area=0.780 ac 0.00% Impervious Runoff Depth>1.26"
 Tc=8.0 min CN=80 Runoff=1.72 cfs 0.082 af

SubcatchmentOffsite: PRE Runoff Area=1.240 ac 0.00% Impervious Runoff Depth>1.67"
 Flow Length=421' Tc=21.7 min CN=86 Runoff=2.33 cfs 0.173 af

SubcatchmentOffsite': Coming Into Site Runoff Area=1.240 ac 0.00% Impervious Runoff Depth>1.67"
 Flow Length=163' Slope=0.0552 '/' Tc=25.2 min CN=86 Runoff=2.14 cfs 0.172 af

Pond 1P: Detention Pond Peak Elev=1,288.47' Storage=3,582 cf Inflow=12.06 cfs 0.720 af
 Outflow=8.55 cfs 0.719 af

Link 1L: Pre Inflow=10.37 cfs 0.768 af
 Primary=10.37 cfs 0.768 af

Link 2L: Post Inflow=9.80 cfs 0.801 af
 Primary=9.80 cfs 0.801 af

Total Runoff Area = 11.040 ac Runoff Volume = 1.571 af Average Runoff Depth = 1.71"
84.42% Pervious = 9.320 ac 15.58% Impervious = 1.720 ac

211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 2-Year Rainfall=3.10"

Printed 10/24/2023

Page 9

Summary for Subcatchment 1: PRE

Runoff = 8.04 cfs @ 12.32 hrs, Volume= 0.596 af, Depth> 1.67"
 Routed to Link 1L : Pre

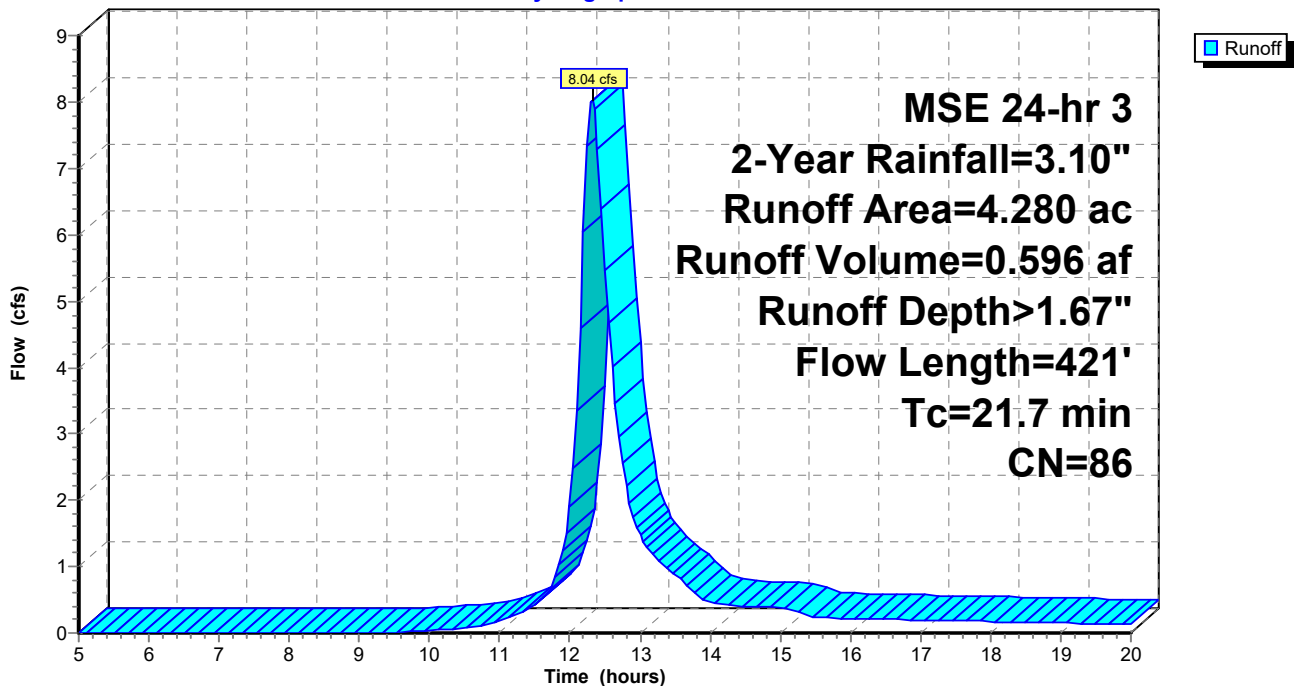
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 2-Year Rainfall=3.10"

Area (ac)	CN	Description
4.280	86	Woods/grass comb., Poor, HSG D
4.280		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.4	100	0.0350	0.10		Sheet Flow, Sheet Flow
					Woods: Light underbrush n= 0.400 P2= 3.10"
4.3	321	0.0628	1.25		Shallow Concentrated Flow, Shallow Concentrated
					Woodland Kv= 5.0 fps
21.7	421	Total			

Subcatchment 1: PRE

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 2-Year Rainfall=3.10"

Printed 10/24/2023

Page 10

Summary for Subcatchment 1': POST

Runoff = 7.89 cfs @ 12.15 hrs, Volume= 0.383 af, Depth> 1.83"
 Routed to Pond 1P : Detention Pond

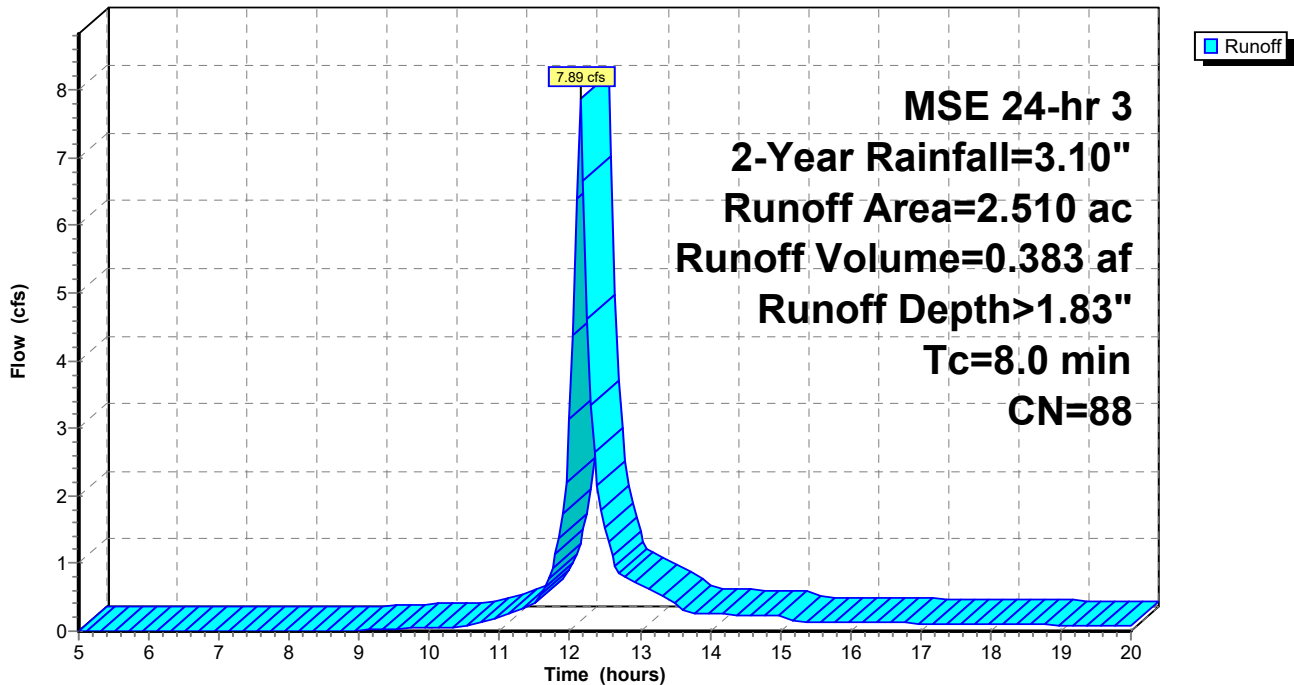
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 2-Year Rainfall=3.10"

Area (ac)	CN	Description
1.330	80	>75% Grass cover, Good, HSG D
1.180	98	Paved roads w/curbs & sewers, HSG D
2.510	88	Weighted Average
1.330		52.99% Pervious Area
1.180		47.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0					Direct Entry, COL Drainage Criteria Minimum

Subcatchment 1': POST

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering
 HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 2-Year Rainfall=3.10"

Printed 10/24/2023

Page 11

Summary for Subcatchment 2': Areas 2a' and 2b'

Runoff = 3.09 cfs @ 12.17 hrs, Volume= 0.165 af, Depth> 2.00"
 Routed to Pond 1P : Detention Pond

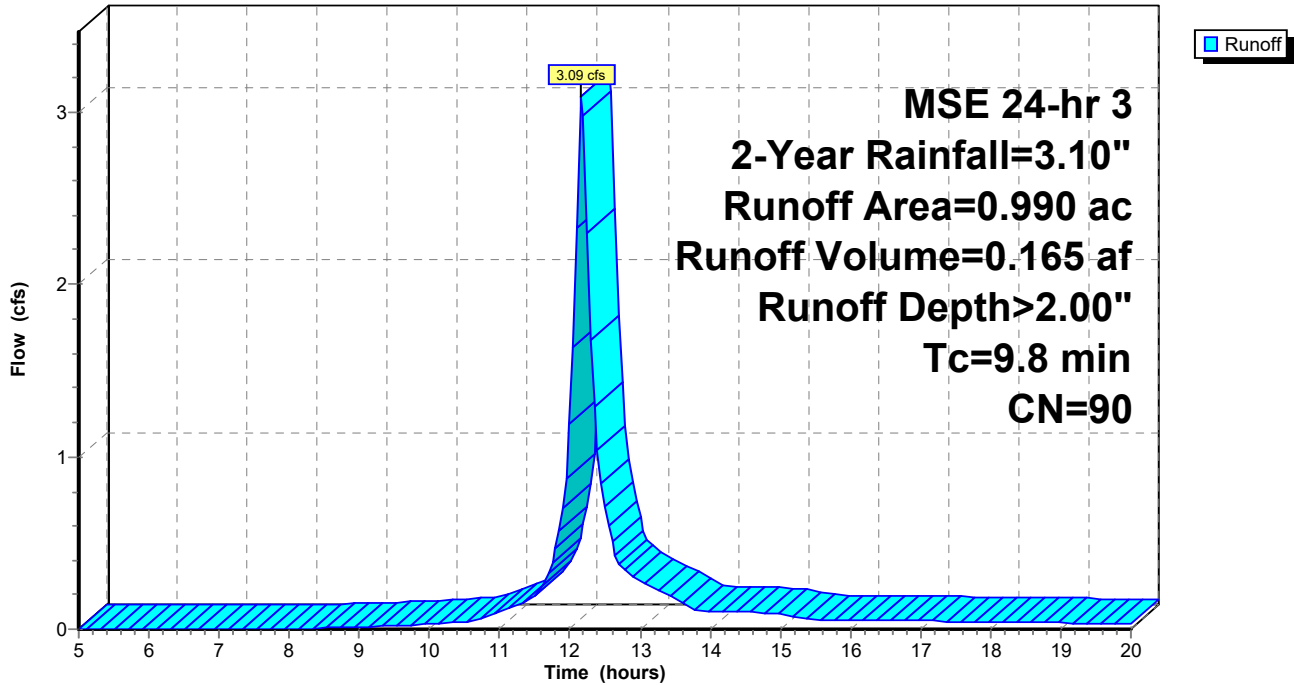
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 2-Year Rainfall=3.10"

Area (ac)	CN	Description
0.450	80	>75% Grass cover, Good, HSG D
0.540	98	Paved roads w/curbs & sewers, HSG D
0.990	90	Weighted Average
0.450		45.45% Pervious Area
0.540		54.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8					Direct Entry, Storm Sewer Network

Subcatchment 2': Areas 2a' and 2b'

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 2-Year Rainfall=3.10"

Printed 10/24/2023

Page 12

Summary for Subcatchment 3': Offsite West

Runoff = 1.72 cfs @ 12.16 hrs, Volume= 0.082 af, Depth> 1.26"

Routed to Link 2L : Post

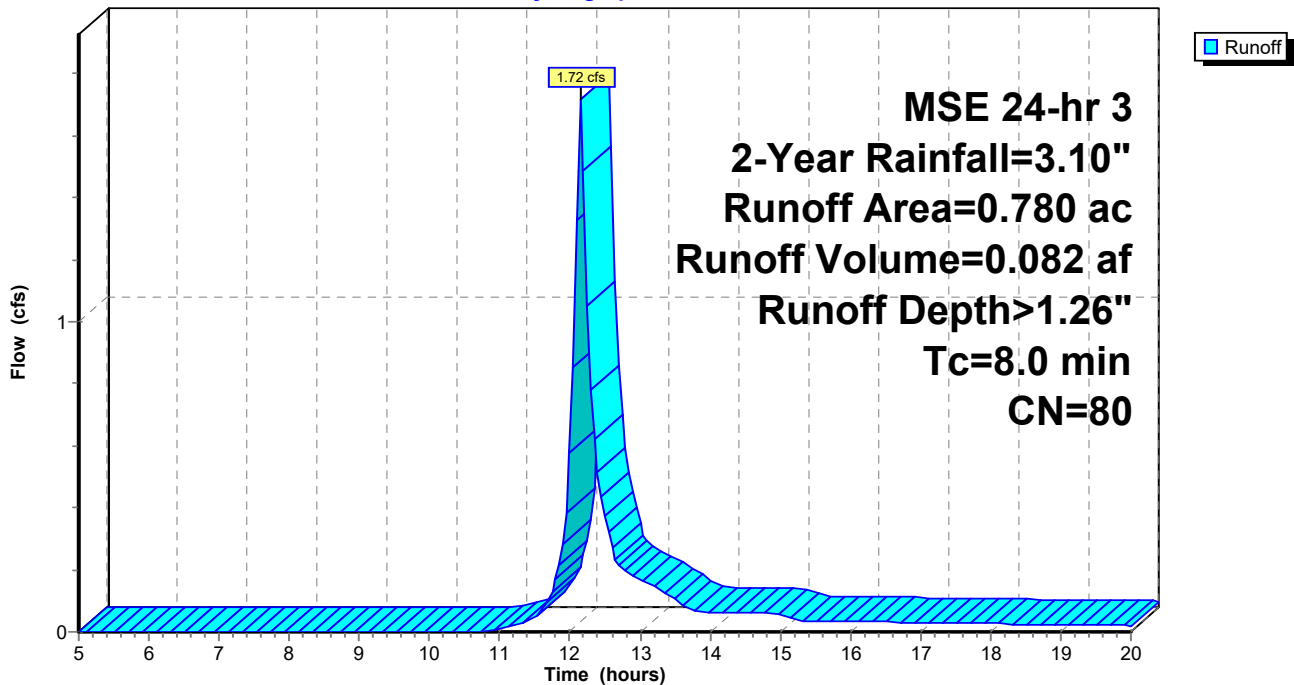
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=3.10"

Area (ac)	CN	Description
0.780	80	>75% Grass cover, Good, HSG D
0.780		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0					Direct Entry, COL Criteria Manual

Subcatchment 3': Offsite West

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering
 HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 2-Year Rainfall=3.10"

Printed 10/24/2023

Page 13

Summary for Subcatchment Offsite: PRE

Runoff = 2.33 cfs @ 12.32 hrs, Volume= 0.173 af, Depth> 1.67"
 Routed to Link 1L : Pre

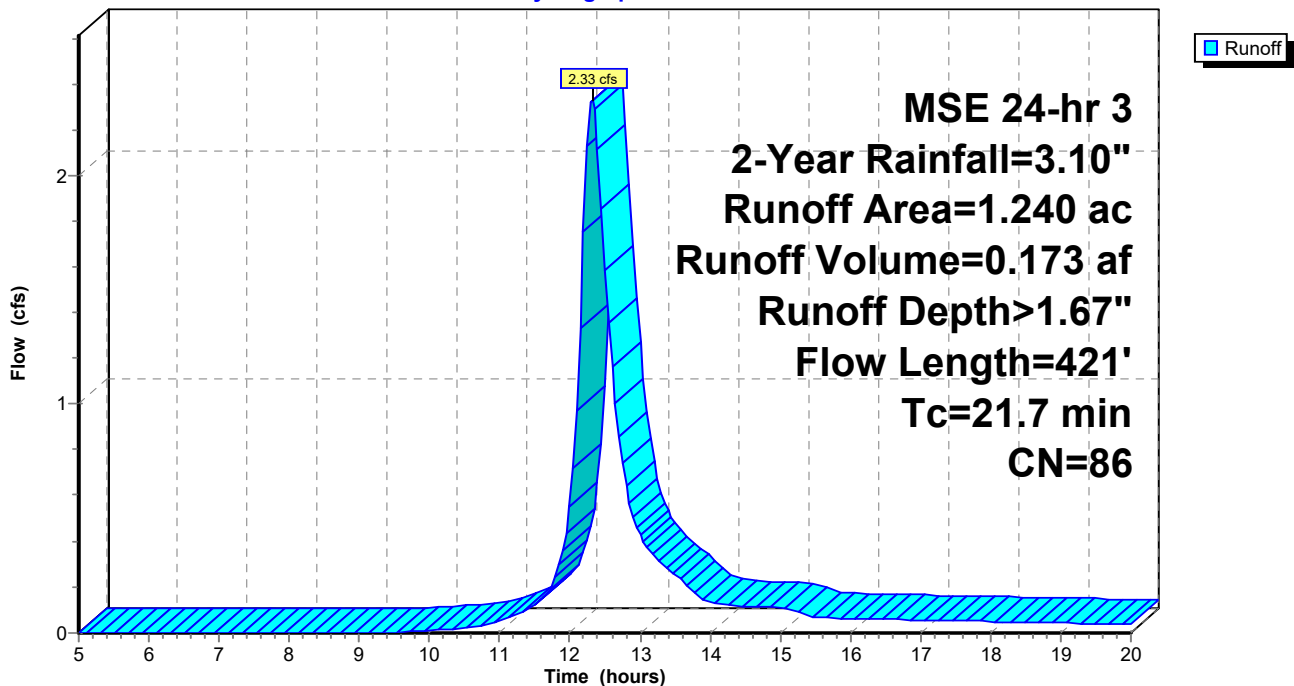
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 2-Year Rainfall=3.10"

Area (ac)	CN	Description
1.240	86	Woods/grass comb., Poor, HSG D
1.240		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.4	100	0.0350	0.10		Sheet Flow, Sheet Flow
					Woods: Light underbrush n= 0.400 P2= 3.10"
4.3	321	0.0628	1.25		Shallow Concentrated Flow, Shallow Concentrated
					Woodland Kv= 5.0 fps
21.7	421	Total			

Subcatchment Offsite: PRE

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 2-Year Rainfall=3.10"

Printed 10/24/2023

Page 14

Summary for Subcatchment Offsite': Coming Into Site

Runoff = 2.14 cfs @ 12.36 hrs, Volume= 0.172 af, Depth> 1.67"
 Routed to Pond 1P : Detention Pond

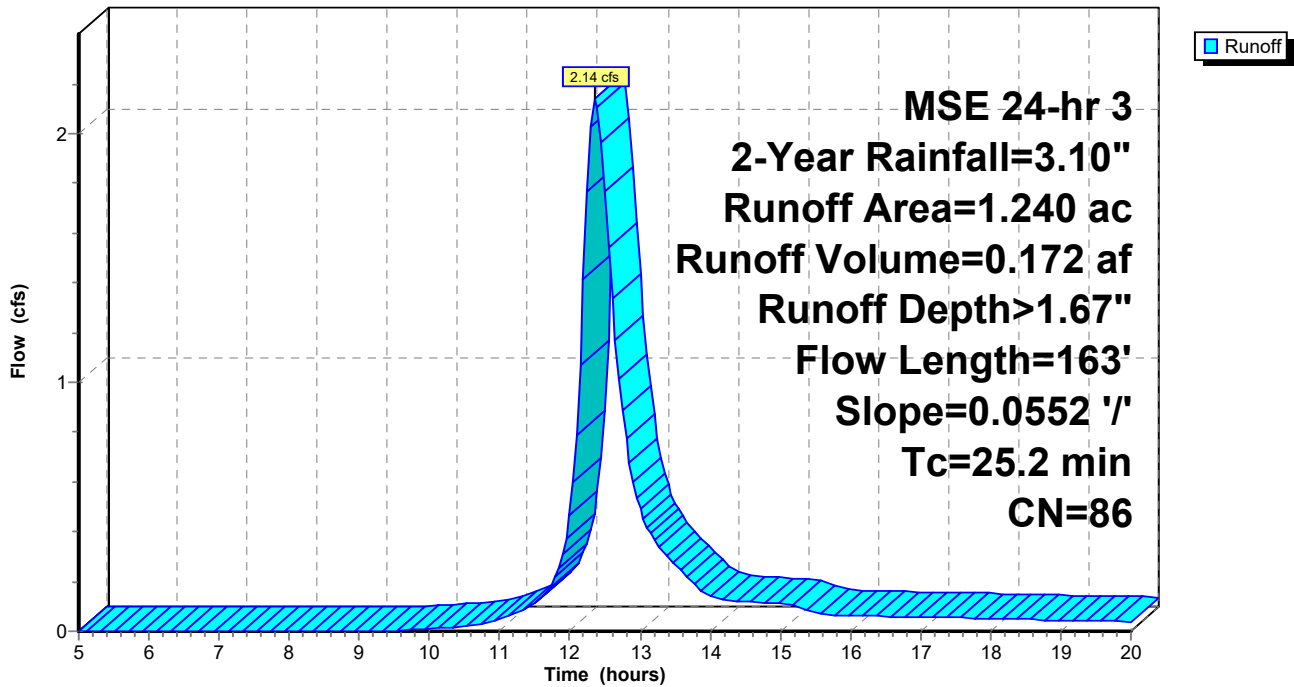
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 2-Year Rainfall=3.10"

Area (ac)	CN	Description
1.240	86	Woods/grass comb., Poor, HSG D
1.240		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8					Direct Entry, Storm Sewer Network
14.5	100	0.0552	0.11		Sheet Flow, Sheet Flow Woods: Light underbrush n= 0.400 P2= 3.10"
0.9	63	0.0552	1.17		Shallow Concentrated Flow, Shallow Concentrated Flow Woodland Kv= 5.0 fps
25.2	163	Total			

Subcatchment Offsite': Coming Into Site

Hydrograph



211242 Barber Addition

MSE 24-hr 3 2-Year Rainfall=3.10"

Prepared by REGA Engineering

Printed 10/24/2023

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

Page 15

Summary for Pond 1P: Detention Pond

Inflow Area = 4.740 ac, 36.29% Impervious, Inflow Depth > 1.82" for 2-Year event
 Inflow = 12.06 cfs @ 12.16 hrs, Volume= 0.720 af
 Outflow = 8.55 cfs @ 12.26 hrs, Volume= 0.719 af, Atten= 29%, Lag= 5.9 min
 Primary = 8.55 cfs @ 12.26 hrs, Volume= 0.719 af
 Routed to Link 2L : Post

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 1,288.47' @ 12.26 hrs Surf.Area= 2,177 sf Storage= 3,582 cf

Plug-Flow detention time= 5.4 min calculated for 0.719 af (100% of inflow)
 Center-of-Mass det. time= 4.8 min (785.5 - 780.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1,285.75'	37,664 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,285.75	7	0	0
1,286.00	756	95	95
1,287.00	1,243	1,000	1,095
1,288.00	1,845	1,544	2,639
1,289.00	2,553	2,199	4,838
1,290.00	3,366	2,960	7,797
1,291.00	4,283	3,825	11,622
1,292.00	5,305	4,794	16,416
1,293.00	6,432	5,869	22,284
1,294.00	7,664	7,048	29,332
1,295.00	9,000	8,332	37,664

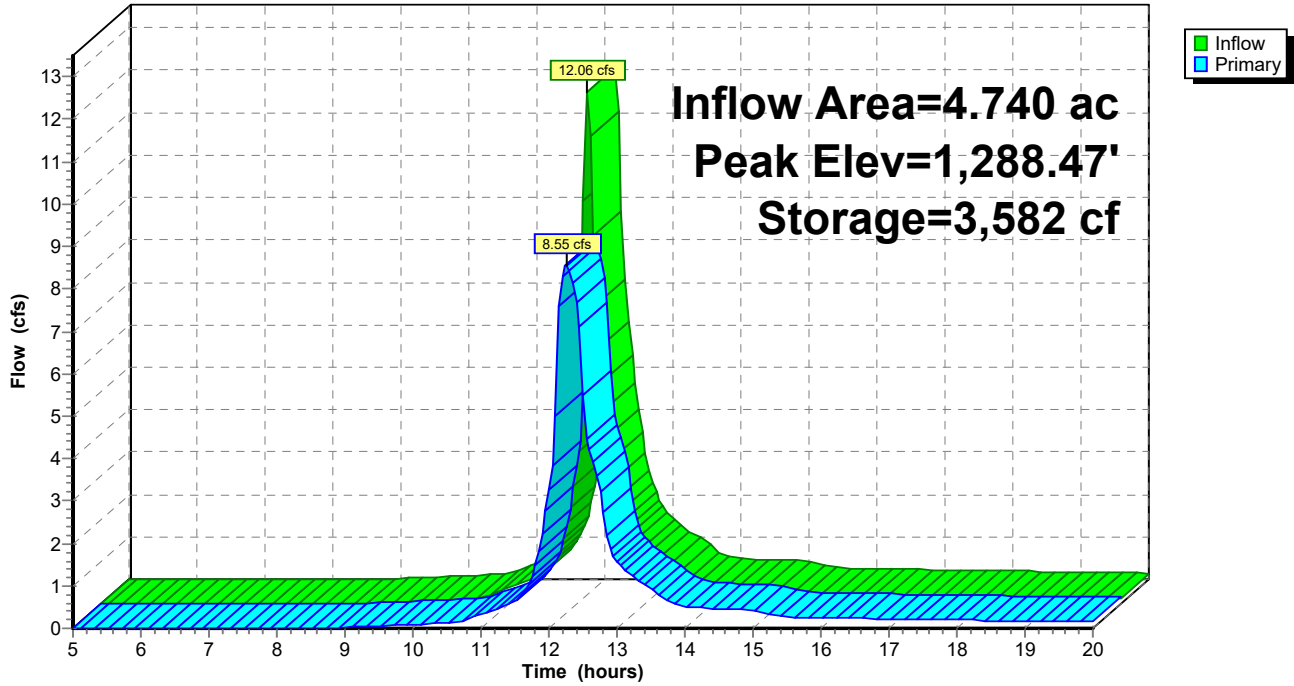
Device	Routing	Invert	Outlet Devices
#1	Primary	1,285.75'	15.0" Round Culvert L= 83.5' CMP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,285.75' / 1,285.16' S= 0.0071 ' /' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf
#2	Device 1	1,285.75'	Custom Weir/Orifice, Cv= 2.62 (C= 3.28) Head (feet) 0.00 0.50 Width (feet) 1.50 1.50
#3	Device 1	1,287.50'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=8.52 cfs @ 12.26 hrs HW=1,288.46' (Free Discharge)

- 1=Culvert (Inlet Controls 8.52 cfs @ 6.94 fps)
- 2=Custom Weir/Orifice (Passes < 5.77 cfs potential flow)
- 3=Orifice/Grate (Passes < 18.82 cfs potential flow)

Pond 1P: Detention Pond

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 2-Year Rainfall=3.10"

Printed 10/24/2023

Page 17

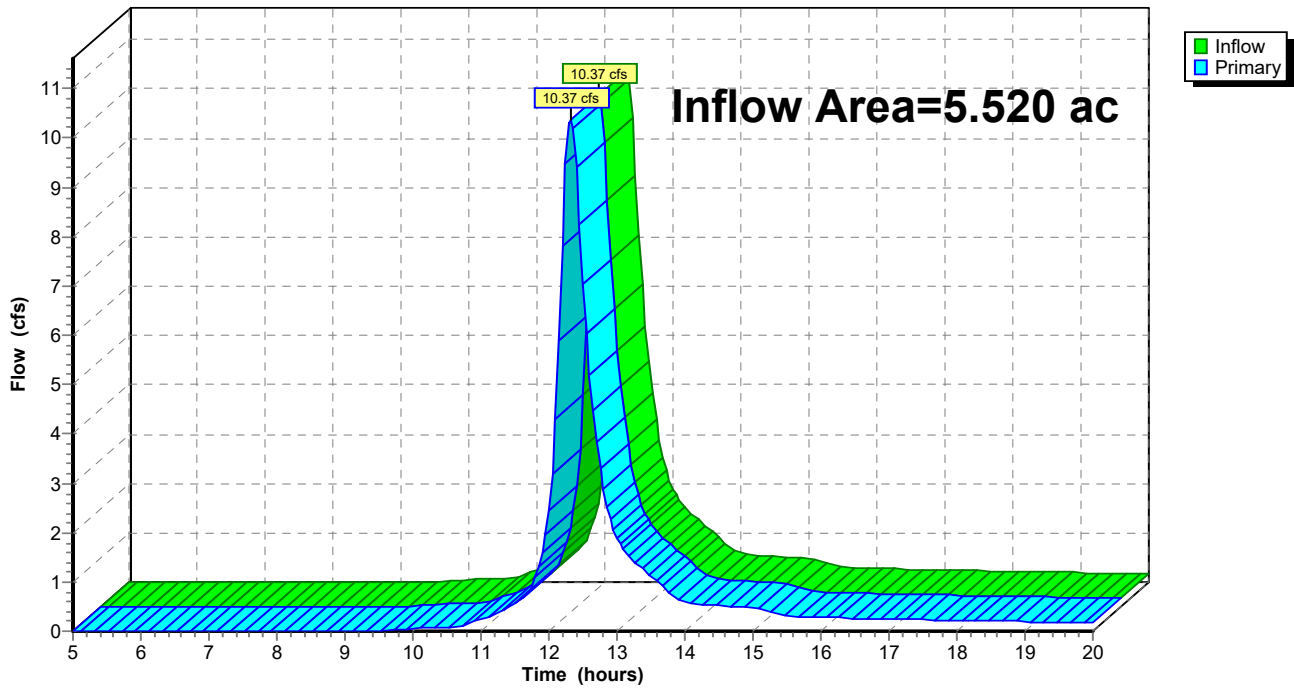
Summary for Link 1L: Pre

Inflow Area = 5.520 ac, 0.00% Impervious, Inflow Depth > 1.67" for 2-Year event
Inflow = 10.37 cfs @ 12.32 hrs, Volume= 0.768 af
Primary = 10.37 cfs @ 12.32 hrs, Volume= 0.768 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 1L: Pre

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 2-Year Rainfall=3.10"

Printed 10/24/2023

Page 18

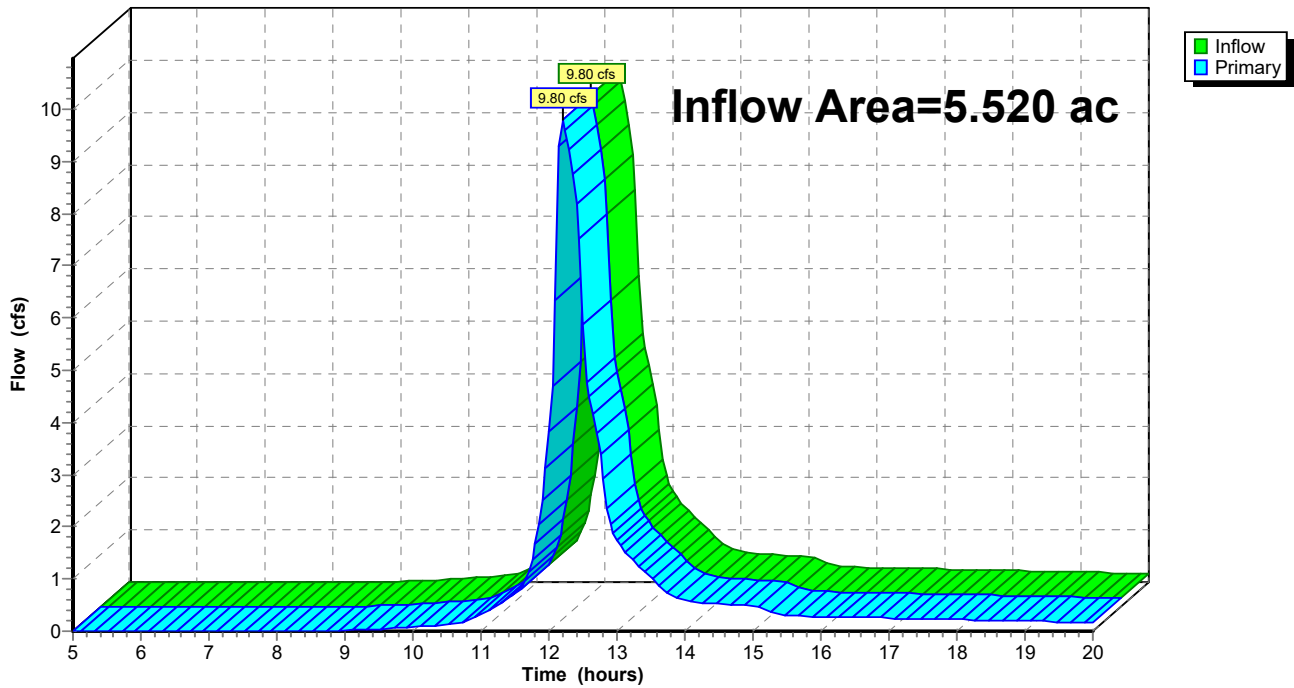
Summary for Link 2L: Post

Inflow Area = 5.520 ac, 31.16% Impervious, Inflow Depth > 1.74" for 2-Year event
Inflow = 9.80 cfs @ 12.21 hrs, Volume= 0.801 af
Primary = 9.80 cfs @ 12.21 hrs, Volume= 0.801 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 2L: Post

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 10-Year Rainfall=4.62"

Printed 10/24/2023

Page 19

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1: PRE	Runoff Area=4.280 ac 0.00% Impervious Runoff Depth>2.99" Flow Length=421' Tc=21.7 min CN=86 Runoff=14.18 cfs 1.066 af
Subcatchment1': POST	Runoff Area=2.510 ac 47.01% Impervious Runoff Depth>3.19" Tc=8.0 min CN=88 Runoff=13.36 cfs 0.667 af
Subcatchment2': Areas 2a' and 2b'	Runoff Area=0.990 ac 54.55% Impervious Runoff Depth>3.39" Tc=9.8 min CN=90 Runoff=5.10 cfs 0.280 af
Subcatchment3': Offsite West	Runoff Area=0.780 ac 0.00% Impervious Runoff Depth>2.46" Tc=8.0 min CN=80 Runoff=3.32 cfs 0.160 af
SubcatchmentOffsite: PRE	Runoff Area=1.240 ac 0.00% Impervious Runoff Depth>2.99" Flow Length=421' Tc=21.7 min CN=86 Runoff=4.11 cfs 0.309 af
SubcatchmentOffsite': Coming Into Site	Runoff Area=1.240 ac 0.00% Impervious Runoff Depth>2.99" Flow Length=163' Slope=0.0552 '/' Tc=25.2 min CN=86 Runoff=3.78 cfs 0.309 af
Pond 1P: Detention Pond	Peak Elev=1,290.15' Storage=8,307 cf Inflow=20.48 cfs 1.256 af Outflow=11.48 cfs 1.254 af
Link 1L: Pre	Inflow=18.29 cfs 1.375 af Primary=18.29 cfs 1.375 af
Link 2L: Post	Inflow=13.67 cfs 1.414 af Primary=13.67 cfs 1.414 af
Total Runoff Area = 11.040 ac Runoff Volume = 2.790 af Average Runoff Depth = 3.03"	
84.42% Pervious = 9.320 ac 15.58% Impervious = 1.720 ac	

211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 10-Year Rainfall=4.62"

Printed 10/24/2023

Page 20

Summary for Subcatchment 1: PRE

Runoff = 14.18 cfs @ 12.31 hrs, Volume= 1.066 af, Depth> 2.99"
 Routed to Link 1L : Pre

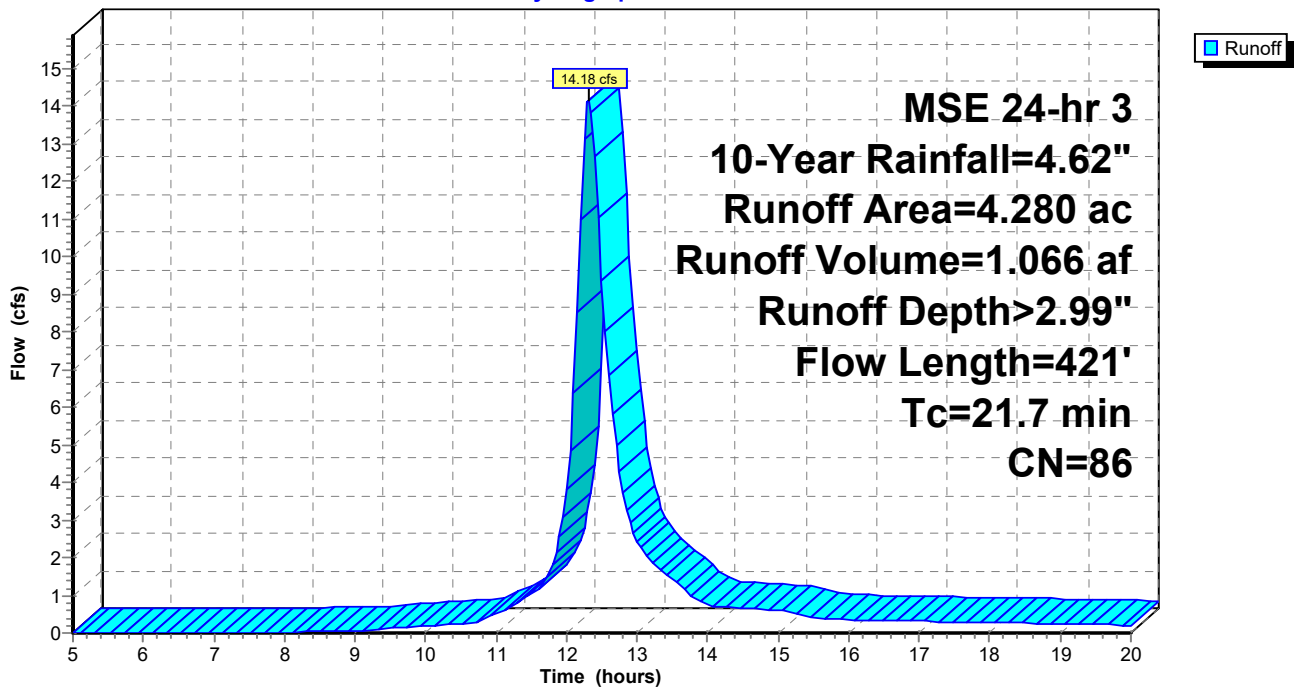
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 10-Year Rainfall=4.62"

Area (ac)	CN	Description
4.280	86	Woods/grass comb., Poor, HSG D
4.280		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.4	100	0.0350	0.10		Sheet Flow, Sheet Flow
					Woods: Light underbrush n= 0.400 P2= 3.10"
4.3	321	0.0628	1.25		Shallow Concentrated Flow, Shallow Concentrated
					Woodland Kv= 5.0 fps
21.7	421	Total			

Subcatchment 1: PRE

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 10-Year Rainfall=4.62"

Printed 10/24/2023

Page 21

Summary for Subcatchment 1': POST

Runoff = 13.36 cfs @ 12.15 hrs, Volume= 0.667 af, Depth> 3.19"
 Routed to Pond 1P : Detention Pond

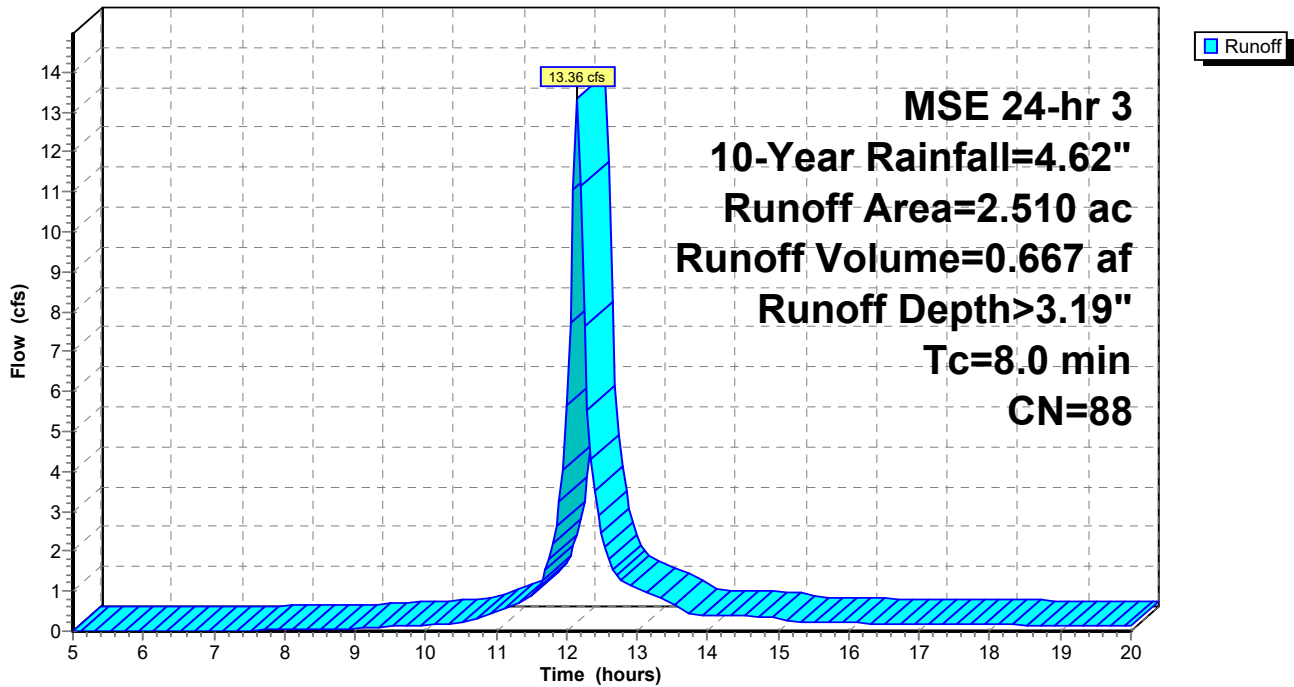
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 10-Year Rainfall=4.62"

Area (ac)	CN	Description
1.330	80	>75% Grass cover, Good, HSG D
1.180	98	Paved roads w/curbs & sewers, HSG D
2.510	88	Weighted Average
1.330		52.99% Pervious Area
1.180		47.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0					Direct Entry, COL Drainage Criteria Minimum

Subcatchment 1': POST

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 10-Year Rainfall=4.62"

Printed 10/24/2023

Page 22

Summary for Subcatchment 2': Areas 2a' and 2b'

Runoff = 5.10 cfs @ 12.17 hrs, Volume= 0.280 af, Depth> 3.39"
 Routed to Pond 1P : Detention Pond

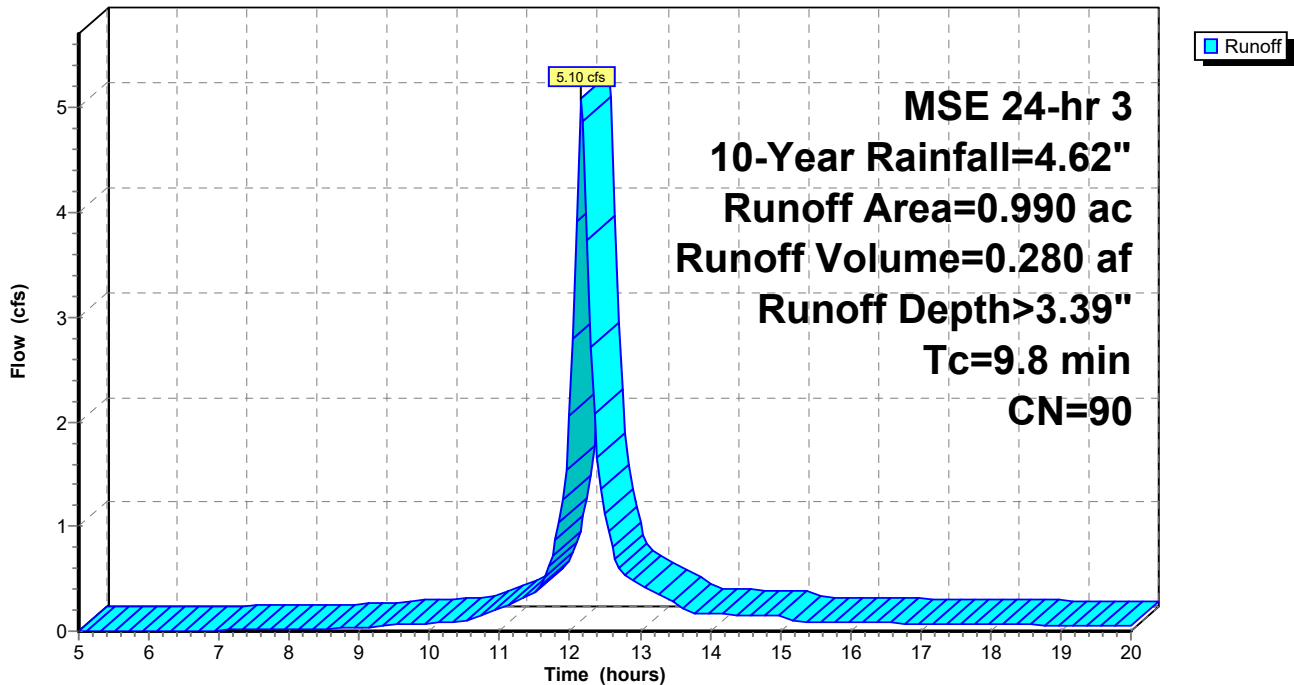
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 10-Year Rainfall=4.62"

Area (ac)	CN	Description
0.450	80	>75% Grass cover, Good, HSG D
0.540	98	Paved roads w/curbs & sewers, HSG D
0.990	90	Weighted Average
0.450		45.45% Pervious Area
0.540		54.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8					Direct Entry, Storm Sewer Network

Subcatchment 2': Areas 2a' and 2b'

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 10-Year Rainfall=4.62"

Printed 10/24/2023

Page 23

Summary for Subcatchment 3': Offsite West

Runoff = 3.32 cfs @ 12.15 hrs, Volume= 0.160 af, Depth> 2.46"
Routed to Link 2L : Post

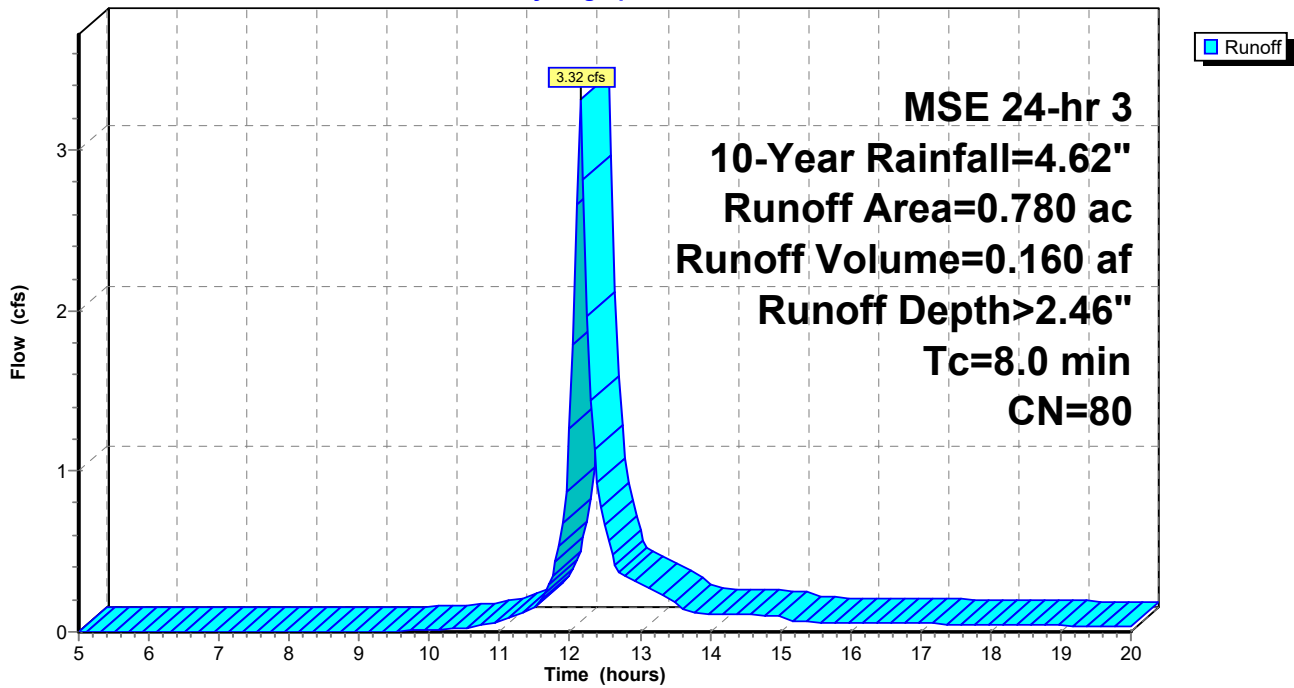
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-Year Rainfall=4.62"

Area (ac)	CN	Description
0.780	80	>75% Grass cover, Good, HSG D
0.780		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0					Direct Entry, COL Criteria Manual

Subcatchment 3': Offsite West

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 10-Year Rainfall=4.62"

Printed 10/24/2023

Page 24

Summary for Subcatchment Offsite: PRE

Runoff = 4.11 cfs @ 12.31 hrs, Volume= 0.309 af, Depth> 2.99"
 Routed to Link 1L : Pre

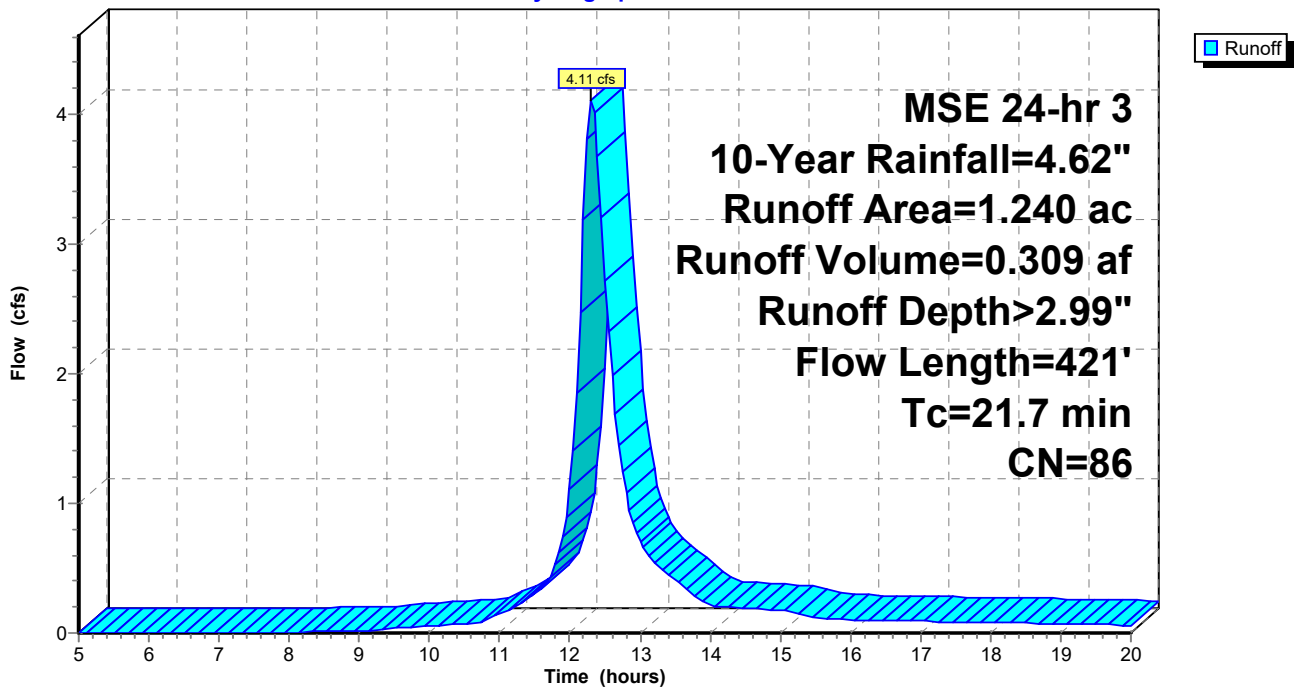
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 10-Year Rainfall=4.62"

Area (ac)	CN	Description
1.240	86	Woods/grass comb., Poor, HSG D
1.240		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.4	100	0.0350	0.10		Sheet Flow, Sheet Flow
					Woods: Light underbrush n= 0.400 P2= 3.10"
4.3	321	0.0628	1.25		Shallow Concentrated Flow, Shallow Concentrated
					Woodland Kv= 5.0 fps
21.7	421	Total			

Subcatchment Offsite: PRE

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 10-Year Rainfall=4.62"

Printed 10/24/2023

Page 25

Summary for Subcatchment Offsite': Coming Into Site

Runoff = 3.78 cfs @ 12.36 hrs, Volume= 0.309 af, Depth> 2.99"
 Routed to Pond 1P : Detention Pond

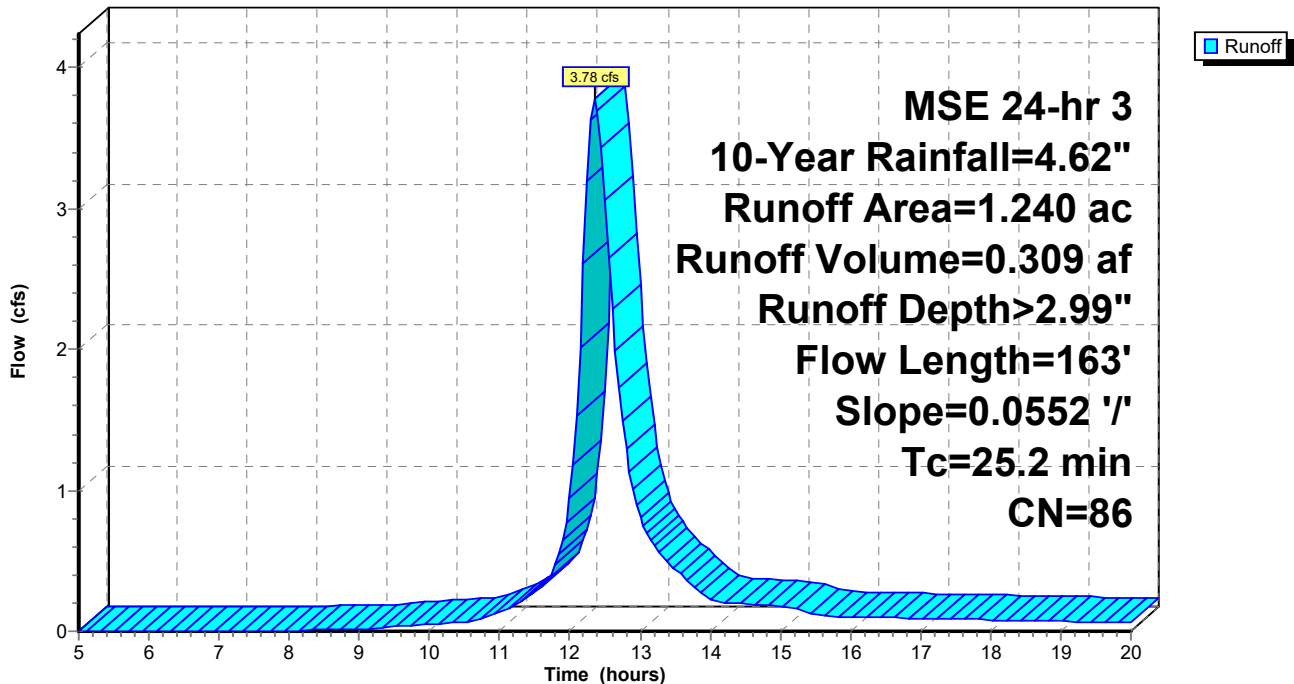
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 10-Year Rainfall=4.62"

Area (ac)	CN	Description
1.240	86	Woods/grass comb., Poor, HSG D
1.240		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8					Direct Entry, Storm Sewer Network
14.5	100	0.0552	0.11		Sheet Flow, Sheet Flow Woods: Light underbrush n= 0.400 P2= 3.10"
0.9	63	0.0552	1.17		Shallow Concentrated Flow, Shallow Concentrated Flow Woodland Kv= 5.0 fps
25.2	163	Total			

Subcatchment Offsite': Coming Into Site

Hydrograph



211242 Barber Addition

MSE 24-hr 3 10-Year Rainfall=4.62"

Prepared by REGA Engineering

Printed 10/24/2023

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

Page 26

Summary for Pond 1P: Detention Pond

Inflow Area = 4.740 ac, 36.29% Impervious, Inflow Depth > 3.18" for 10-Year event
 Inflow = 20.48 cfs @ 12.16 hrs, Volume= 1.256 af
 Outflow = 11.48 cfs @ 12.32 hrs, Volume= 1.254 af, Atten= 44%, Lag= 9.4 min
 Primary = 11.48 cfs @ 12.32 hrs, Volume= 1.254 af
 Routed to Link 2L : Post

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 1,290.15' @ 12.32 hrs Surf.Area= 3,502 sf Storage= 8,307 cf

Plug-Flow detention time= 7.2 min calculated for 1.250 af (100% of inflow)
 Center-of-Mass det. time= 6.7 min (778.1 - 771.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,285.75'	37,664 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,285.75	7	0	0
1,286.00	756	95	95
1,287.00	1,243	1,000	1,095
1,288.00	1,845	1,544	2,639
1,289.00	2,553	2,199	4,838
1,290.00	3,366	2,960	7,797
1,291.00	4,283	3,825	11,622
1,292.00	5,305	4,794	16,416
1,293.00	6,432	5,869	22,284
1,294.00	7,664	7,048	29,332
1,295.00	9,000	8,332	37,664

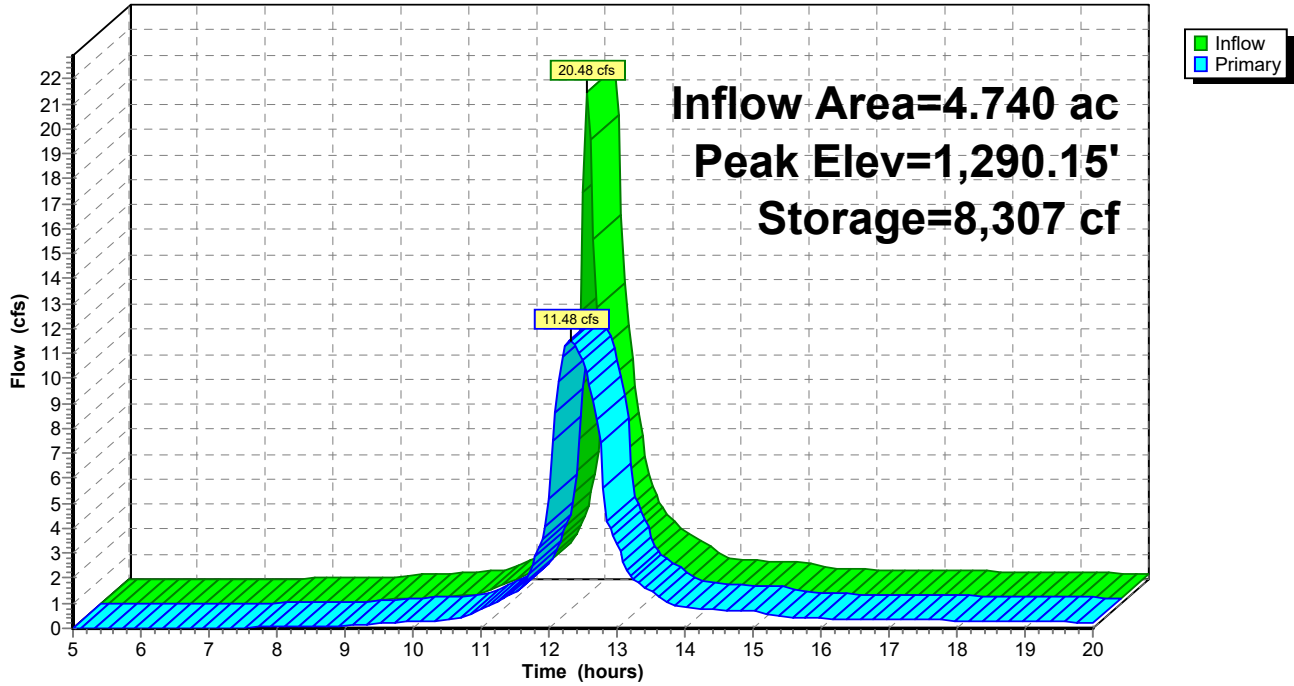
Device	Routing	Invert	Outlet Devices
#1	Primary	1,285.75'	15.0" Round Culvert L= 83.5' CMP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,285.75' / 1,285.16' S= 0.0071 ' /' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf
#2	Device 1	1,285.75'	Custom Weir/Orifice, Cv= 2.62 (C= 3.28) Head (feet) 0.00 0.50 Width (feet) 1.50 1.50
#3	Device 1	1,287.50'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=11.46 cfs @ 12.32 hrs HW=1,290.14' (Free Discharge)

- 1=Culvert (Inlet Controls 11.46 cfs @ 9.34 fps)
- 2=Custom Weir/Orifice (Passes < 7.49 cfs potential flow)
- 3=Orifice/Grate (Passes < 31.27 cfs potential flow)

Pond 1P: Detention Pond

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 10-Year Rainfall=4.62"

Printed 10/24/2023

Page 28

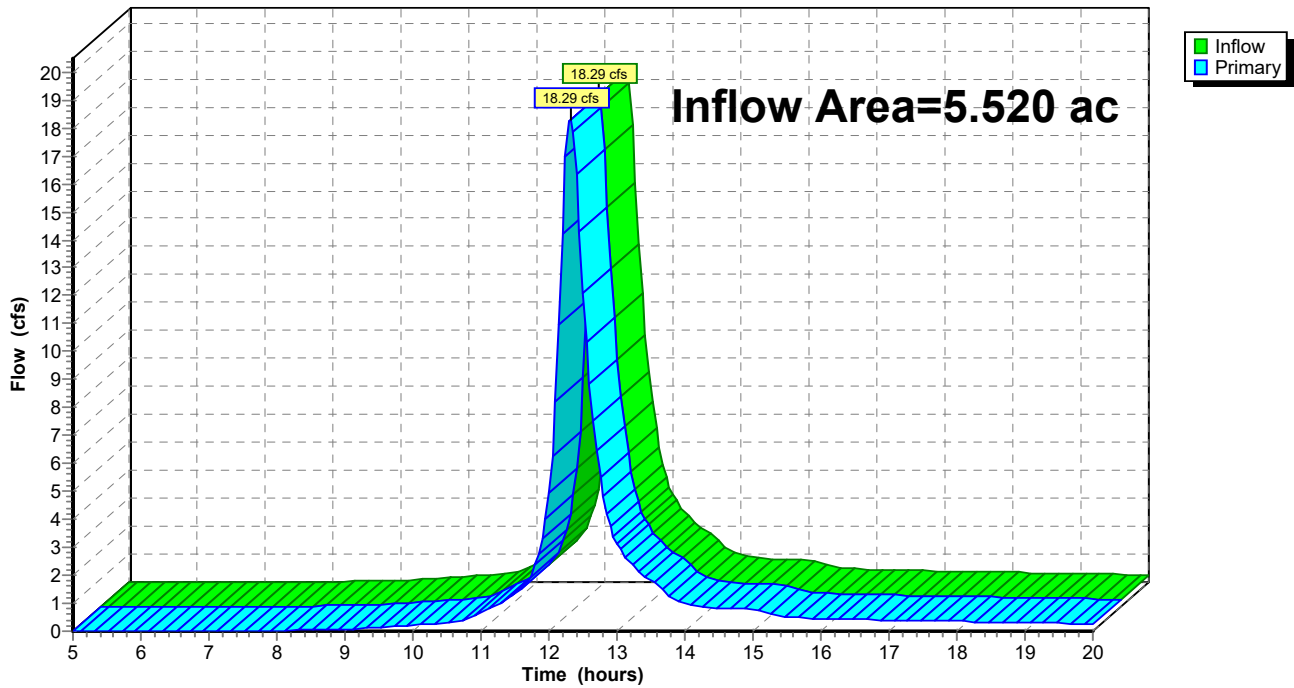
Summary for Link 1L: Pre

Inflow Area = 5.520 ac, 0.00% Impervious, Inflow Depth > 2.99" for 10-Year event
Inflow = 18.29 cfs @ 12.31 hrs, Volume= 1.375 af
Primary = 18.29 cfs @ 12.31 hrs, Volume= 1.375 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 1L: Pre

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 10-Year Rainfall=4.62"

Printed 10/24/2023

Page 29

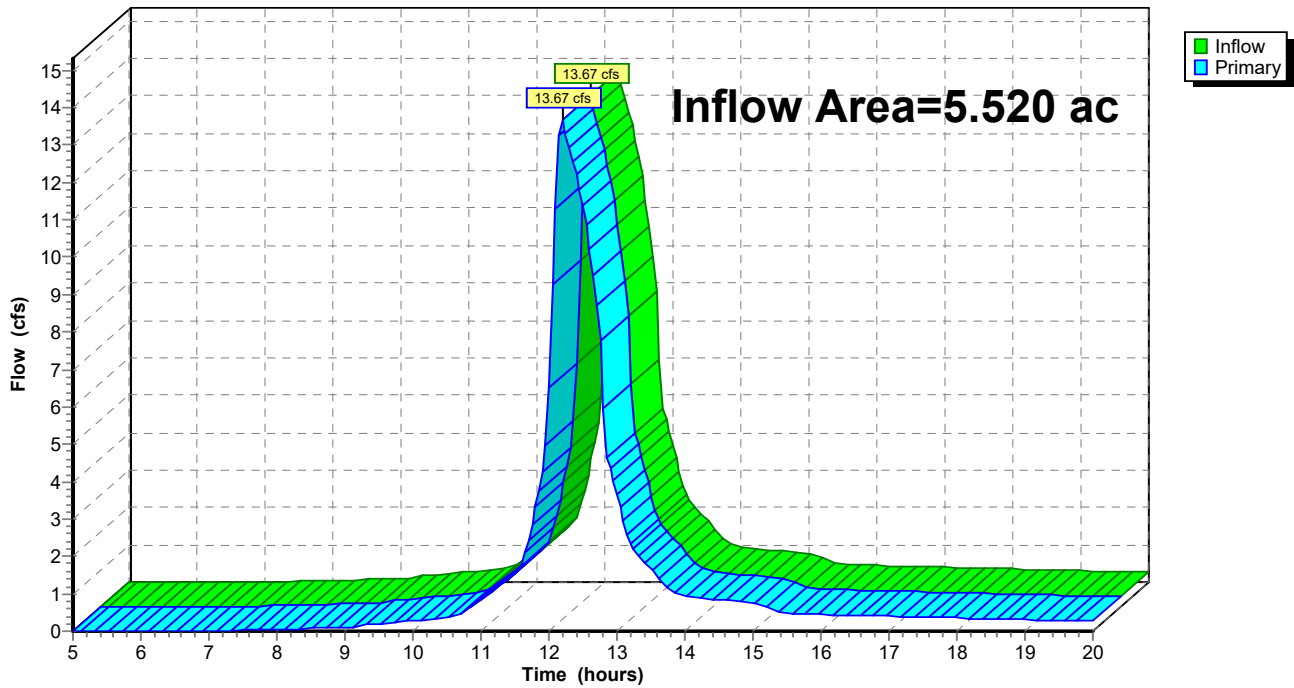
Summary for Link 2L: Post

Inflow Area = 5.520 ac, 31.16% Impervious, Inflow Depth > 3.07" for 10-Year event
Inflow = 13.67 cfs @ 12.20 hrs, Volume= 1.414 af
Primary = 13.67 cfs @ 12.20 hrs, Volume= 1.414 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 2L: Post

Hydrograph



211242 Barber Addition

MSE 24-hr 3 100-Year Rainfall=7.56"

Prepared by REGA Engineering

Printed 10/24/2023

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

Page 30

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1: PRE Runoff Area=4.280 ac 0.00% Impervious Runoff Depth>5.69"
 Flow Length=421' Tc=21.7 min CN=86 Runoff=26.22 cfs 2.030 af

Subcatchment1': POST Runoff Area=2.510 ac 47.01% Impervious Runoff Depth>5.94"
 Tc=8.0 min CN=88 Runoff=23.89 cfs 1.242 af

Subcatchment2': Areas 2a' and 2b' Runoff Area=0.990 ac 54.55% Impervious Runoff Depth>6.17"
 Tc=9.8 min CN=90 Runoff=8.93 cfs 0.509 af

Subcatchment3': Offsite West Runoff Area=0.780 ac 0.00% Impervious Runoff Depth>5.02"
 Tc=8.0 min CN=80 Runoff=6.59 cfs 0.326 af

SubcatchmentOffsite: PRE Runoff Area=1.240 ac 0.00% Impervious Runoff Depth>5.69"
 Flow Length=421' Tc=21.7 min CN=86 Runoff=7.60 cfs 0.588 af

SubcatchmentOffsite': Coming Into Site Runoff Area=1.240 ac 0.00% Impervious Runoff Depth>5.69"
 Flow Length=163' Slope=0.0552 '/' Tc=25.2 min CN=86 Runoff=7.01 cfs 0.588 af

Pond 1P: Detention Pond Peak Elev=1,292.91' Storage=21,711 cf Inflow=36.74 cfs 2.339 af
 Outflow=15.11 cfs 2.336 af

Link 1L: Pre Inflow=33.82 cfs 2.618 af
 Primary=33.82 cfs 2.618 af

Link 2L: Post Inflow=19.81 cfs 2.662 af
 Primary=19.81 cfs 2.662 af

Total Runoff Area = 11.040 ac Runoff Volume = 5.283 af Average Runoff Depth = 5.74"
84.42% Pervious = 9.320 ac 15.58% Impervious = 1.720 ac

211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 100-Year Rainfall=7.56"

Printed 10/24/2023

Page 31

Summary for Subcatchment 1: PRE

Runoff = 26.22 cfs @ 12.31 hrs, Volume= 2.030 af, Depth> 5.69"
 Routed to Link 1L : Pre

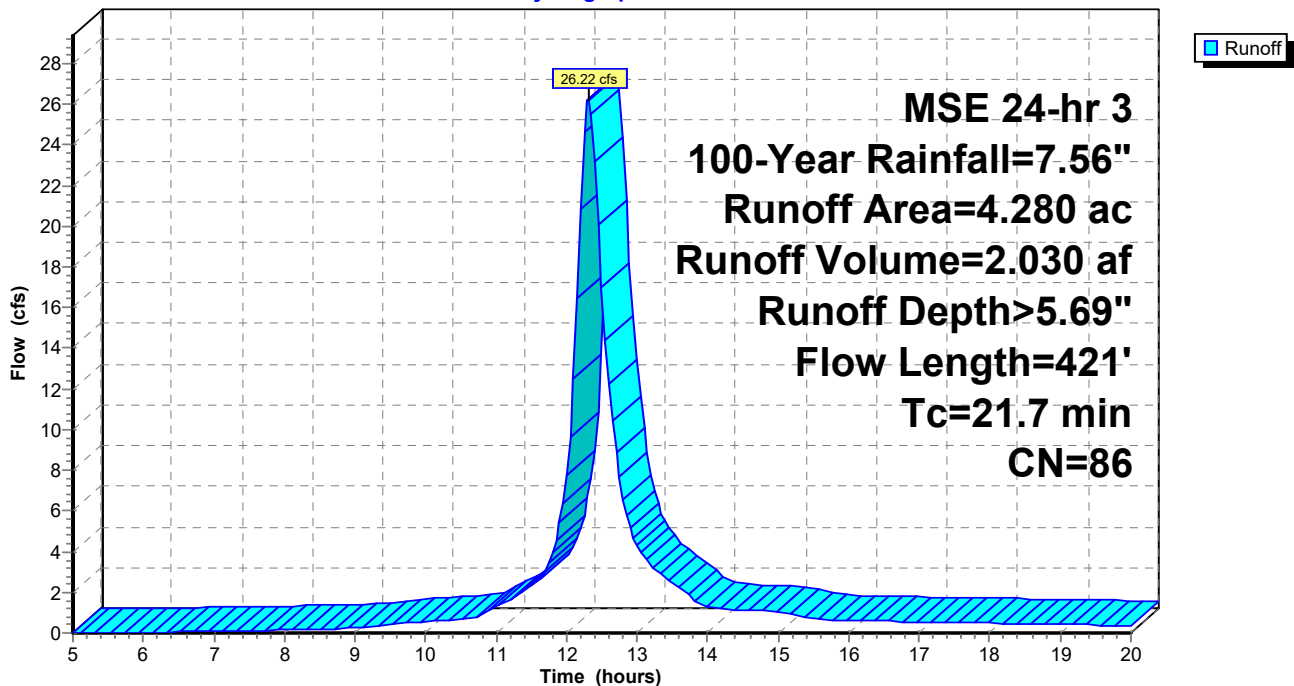
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 100-Year Rainfall=7.56"

Area (ac)	CN	Description
4.280	86	Woods/grass comb., Poor, HSG D
4.280		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.4	100	0.0350	0.10		Sheet Flow, Sheet Flow Woods: Light underbrush n= 0.400 P2= 3.10"
4.3	321	0.0628	1.25		Shallow Concentrated Flow, Shallow Concentrated Woodland Kv= 5.0 fps
21.7	421	Total			

Subcatchment 1: PRE

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 100-Year Rainfall=7.56"

Printed 10/24/2023

Page 32

Summary for Subcatchment 1': POST

Runoff = 23.89 cfs @ 12.15 hrs, Volume= 1.242 af, Depth> 5.94"
 Routed to Pond 1P : Detention Pond

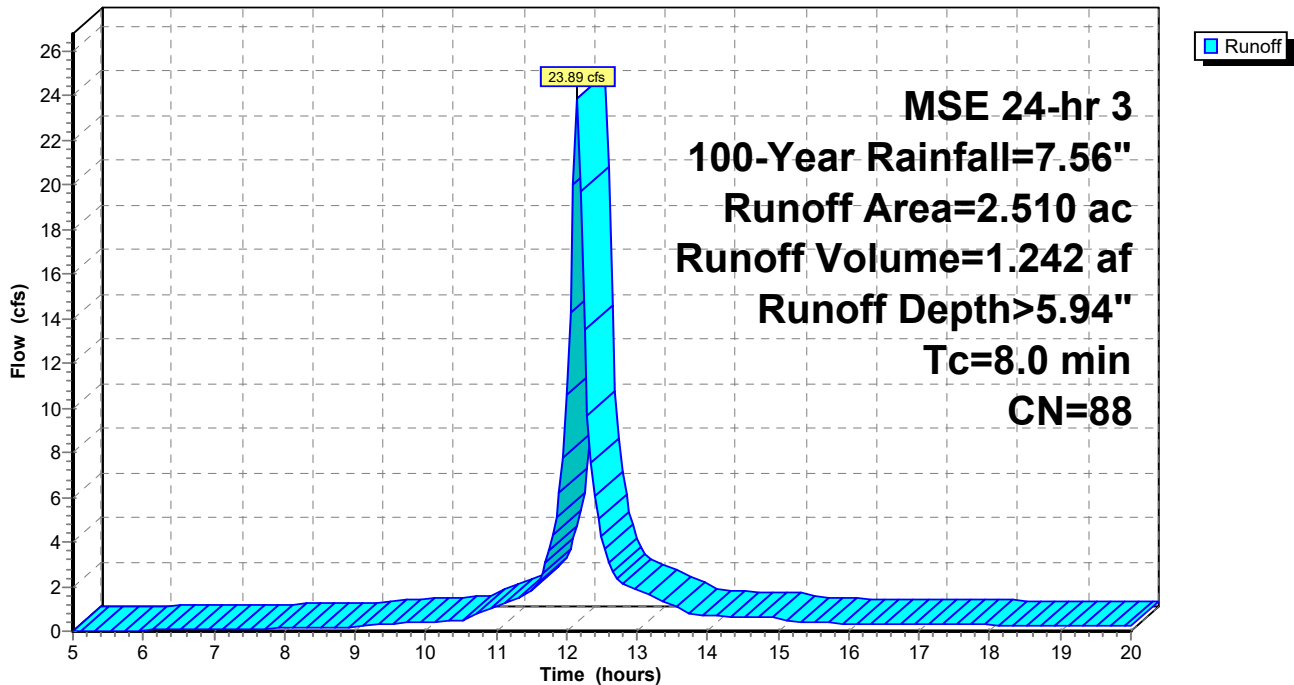
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 100-Year Rainfall=7.56"

Area (ac)	CN	Description
1.330	80	>75% Grass cover, Good, HSG D
1.180	98	Paved roads w/curbs & sewers, HSG D
2.510	88	Weighted Average
1.330		52.99% Pervious Area
1.180		47.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0					Direct Entry, COL Drainage Criteria Minimum

Subcatchment 1': POST

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 100-Year Rainfall=7.56"

Printed 10/24/2023

Page 33

Summary for Subcatchment 2': Areas 2a' and 2b'

Runoff = 8.93 cfs @ 12.17 hrs, Volume= 0.509 af, Depth> 6.17"
 Routed to Pond 1P : Detention Pond

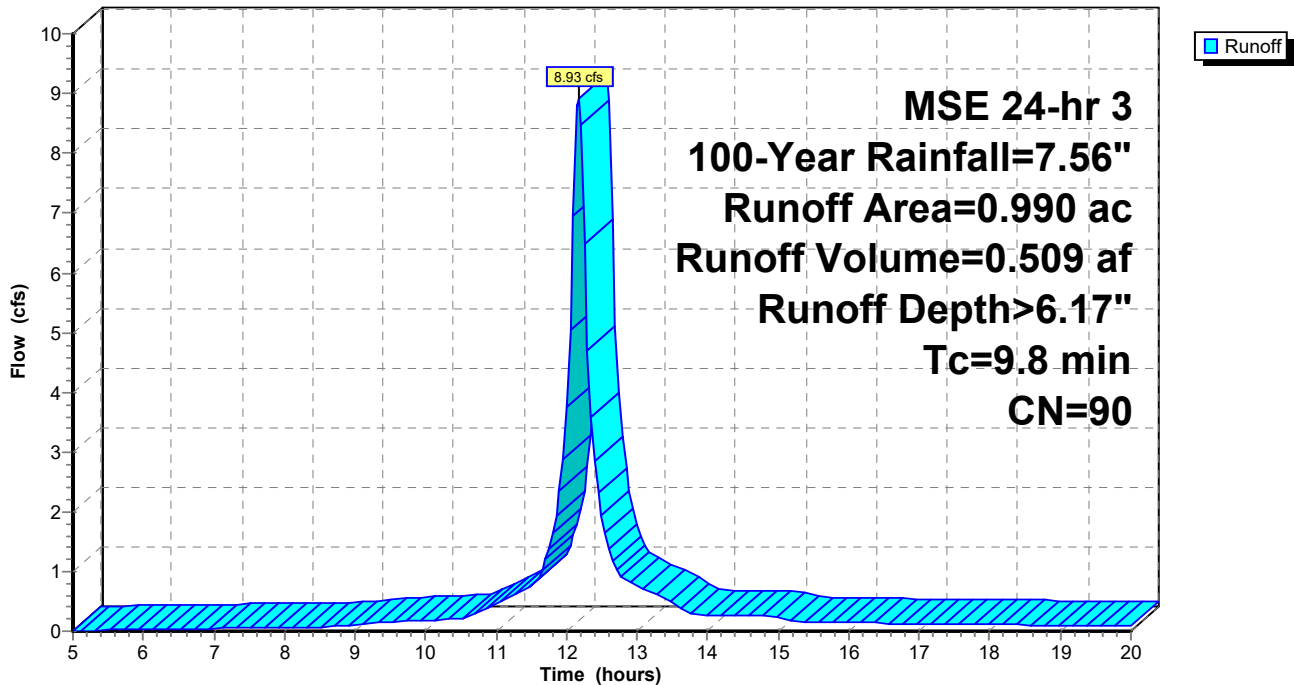
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 100-Year Rainfall=7.56"

Area (ac)	CN	Description
0.450	80	>75% Grass cover, Good, HSG D
0.540	98	Paved roads w/curbs & sewers, HSG D
0.990	90	Weighted Average
0.450		45.45% Pervious Area
0.540		54.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8					Direct Entry, Storm Sewer Network

Subcatchment 2': Areas 2a' and 2b'

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 100-Year Rainfall=7.56"

Printed 10/24/2023

Page 34

Summary for Subcatchment 3': Offsite West

Runoff = 6.59 cfs @ 12.15 hrs, Volume= 0.326 af, Depth> 5.02"
Routed to Link 2L : Post

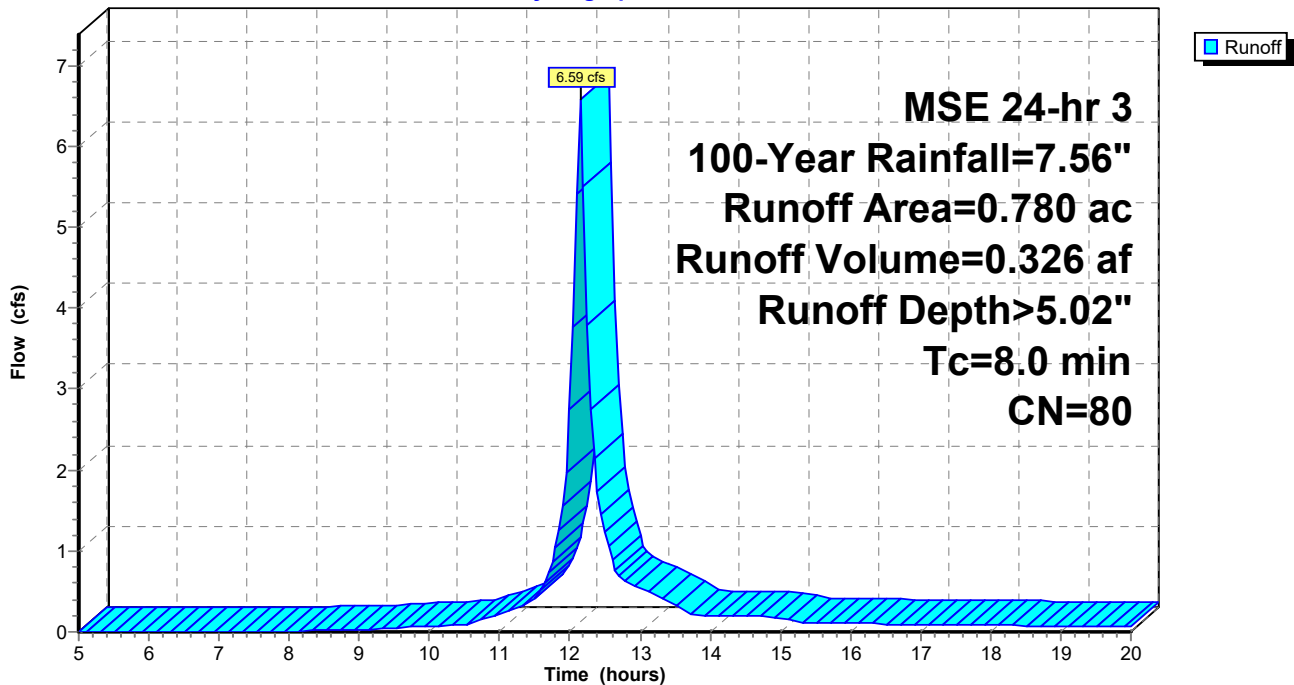
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=7.56"

Area (ac)	CN	Description
0.780	80	>75% Grass cover, Good, HSG D
0.780		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0					Direct Entry, COL Criteria Manual

Subcatchment 3': Offsite West

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 100-Year Rainfall=7.56"

Printed 10/24/2023

Page 35

Summary for Subcatchment Offsite: PRE

Runoff = 7.60 cfs @ 12.31 hrs, Volume= 0.588 af, Depth> 5.69"
 Routed to Link 1L : Pre

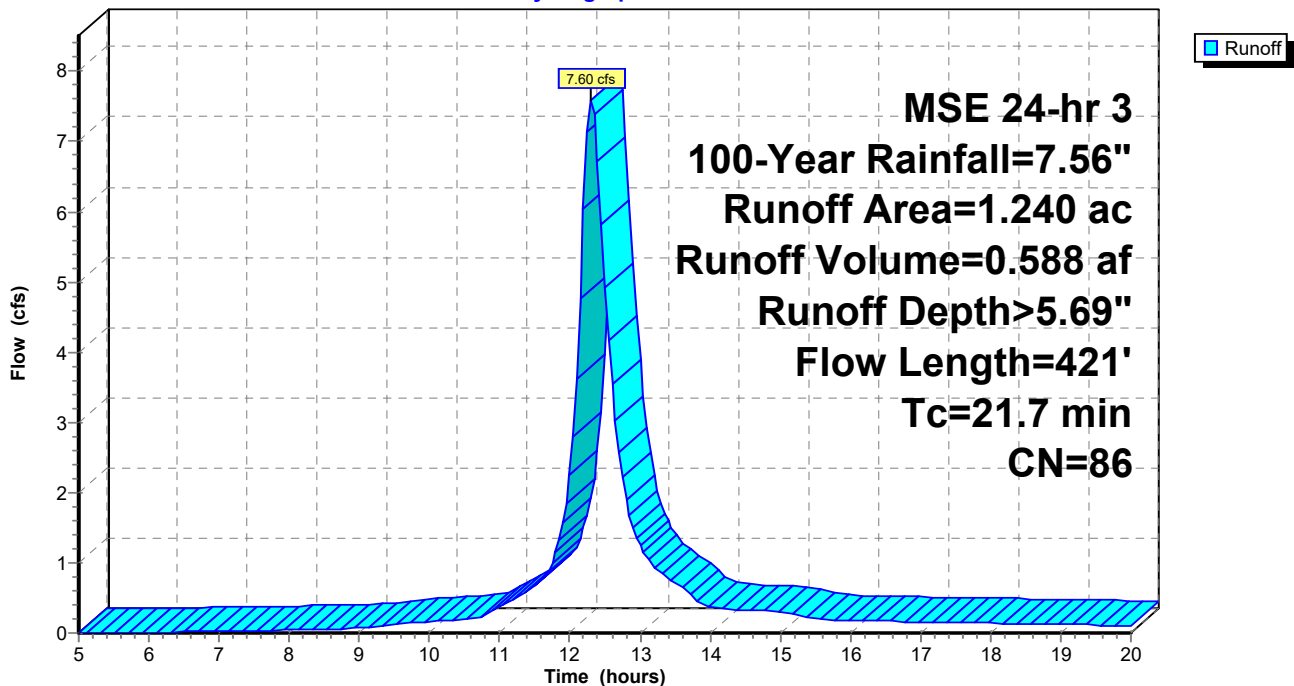
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 100-Year Rainfall=7.56"

Area (ac)	CN	Description
1.240	86	Woods/grass comb., Poor, HSG D
1.240		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.4	100	0.0350	0.10		Sheet Flow, Sheet Flow Woods: Light underbrush n= 0.400 P2= 3.10"
4.3	321	0.0628	1.25		Shallow Concentrated Flow, Shallow Concentrated Woodland Kv= 5.0 fps
21.7	421	Total			

Subcatchment Offsite: PRE

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 100-Year Rainfall=7.56"

Printed 10/24/2023

Page 36

Summary for Subcatchment Offsite': Coming Into Site

Runoff = 7.01 cfs @ 12.35 hrs, Volume= 0.588 af, Depth> 5.69"
 Routed to Pond 1P : Detention Pond

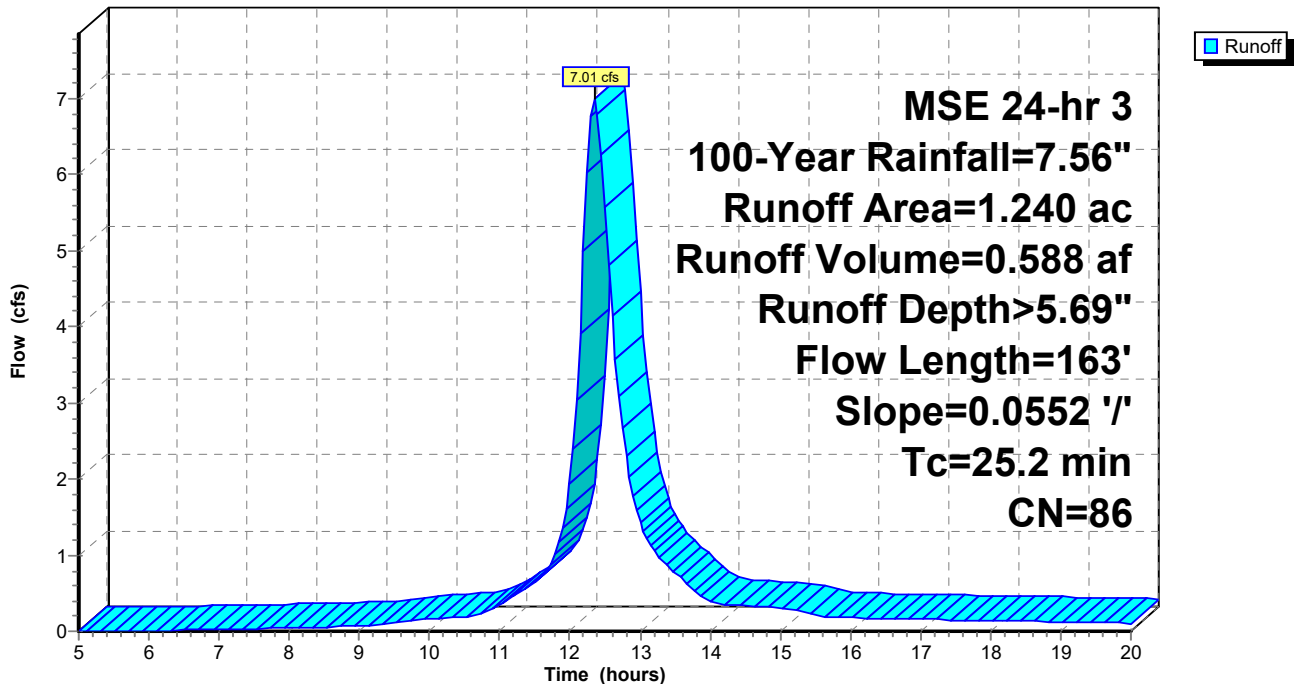
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 100-Year Rainfall=7.56"

Area (ac)	CN	Description
1.240	86	Woods/grass comb., Poor, HSG D
1.240		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8					Direct Entry, Storm Sewer Network
14.5	100	0.0552	0.11		Sheet Flow, Sheet Flow Woods: Light underbrush n= 0.400 P2= 3.10"
0.9	63	0.0552	1.17		Shallow Concentrated Flow, Shallow Concentrated Flow Woodland Kv= 5.0 fps
25.2	163	Total			

Subcatchment Offsite': Coming Into Site

Hydrograph



211242 Barber Addition

MSE 24-hr 3 100-Year Rainfall=7.56"

Prepared by REGA Engineering

Printed 10/24/2023

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

Page 37

Summary for Pond 1P: Detention Pond

Inflow Area = 4.740 ac, 36.29% Impervious, Inflow Depth > 5.92" for 100-Year event
 Inflow = 36.74 cfs @ 12.16 hrs, Volume= 2.339 af
 Outflow = 15.11 cfs @ 12.42 hrs, Volume= 2.336 af, Atten= 59%, Lag= 15.5 min
 Primary = 15.11 cfs @ 12.42 hrs, Volume= 2.336 af
 Routed to Link 2L : Post

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 1,292.91' @ 12.42 hrs Surf.Area= 6,331 sf Storage= 21,711 cf

Plug-Flow detention time= 12.2 min calculated for 2.328 af (100% of inflow)
 Center-of-Mass det. time= 11.6 min (772.4 - 760.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,285.75'	37,664 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

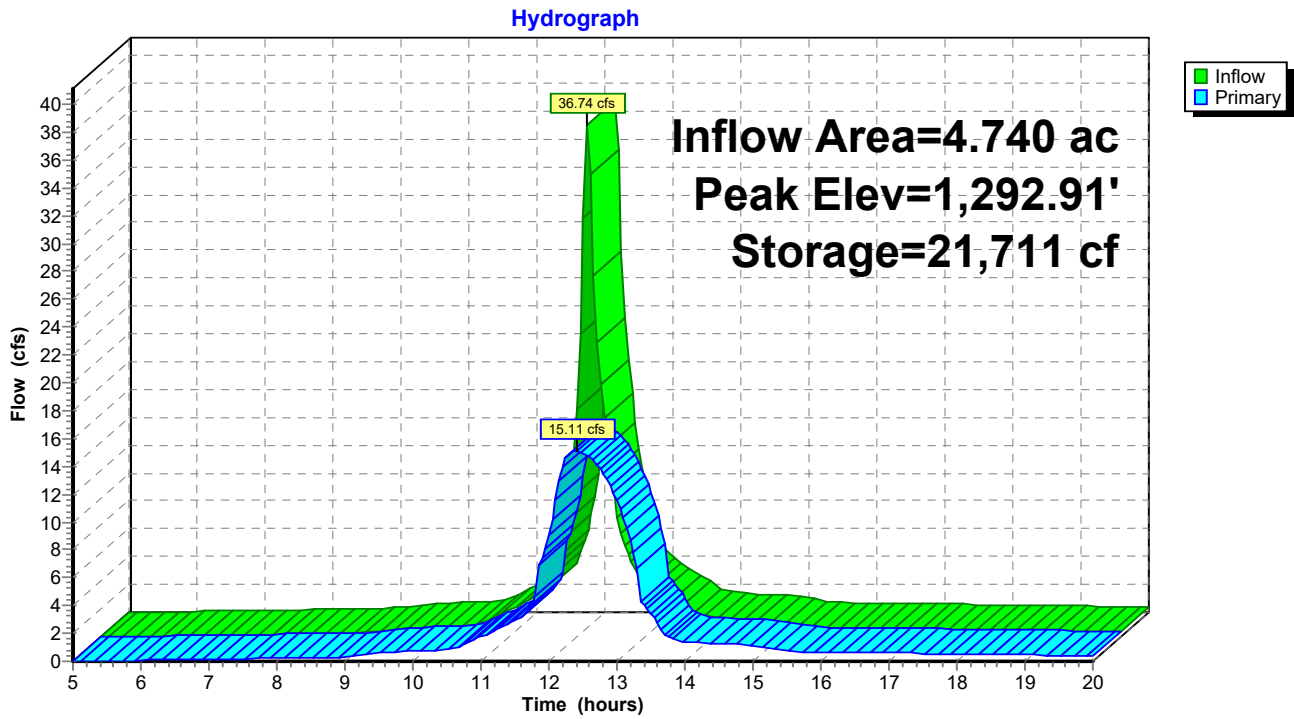
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,285.75	7	0	0
1,286.00	756	95	95
1,287.00	1,243	1,000	1,095
1,288.00	1,845	1,544	2,639
1,289.00	2,553	2,199	4,838
1,290.00	3,366	2,960	7,797
1,291.00	4,283	3,825	11,622
1,292.00	5,305	4,794	16,416
1,293.00	6,432	5,869	22,284
1,294.00	7,664	7,048	29,332
1,295.00	9,000	8,332	37,664

Device	Routing	Invert	Outlet Devices
#1	Primary	1,285.75'	15.0" Round Culvert L= 83.5' CMP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,285.75' / 1,285.16' S= 0.0071 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf
#2	Device 1	1,285.75'	Custom Weir/Orifice, Cv= 2.62 (C= 3.28) Head (feet) 0.00 0.50 Width (feet) 1.50 1.50
#3	Device 1	1,287.50'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=15.10 cfs @ 12.42 hrs HW=1,292.90' (Free Discharge)

- 1=Culvert (Inlet Controls 15.10 cfs @ 12.30 fps)
- 2=Custom Weir/Orifice (Passes < 9.68 cfs potential flow)
- 3=Orifice/Grate (Passes < 44.77 cfs potential flow)

Pond 1P: Detention Pond



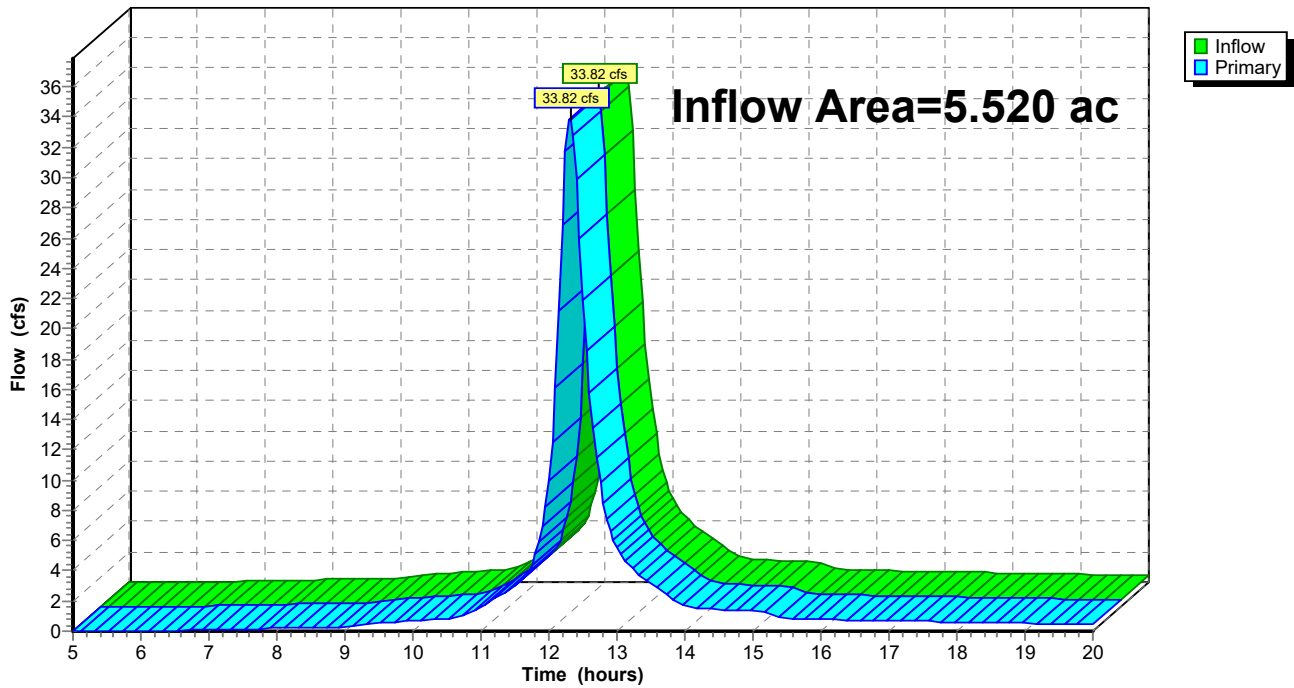
Summary for Link 1L: Pre

Inflow Area = 5.520 ac, 0.00% Impervious, Inflow Depth > 5.69" for 100-Year event
Inflow = 33.82 cfs @ 12.31 hrs, Volume= 2.618 af
Primary = 33.82 cfs @ 12.31 hrs, Volume= 2.618 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 1L: Pre

Hydrograph



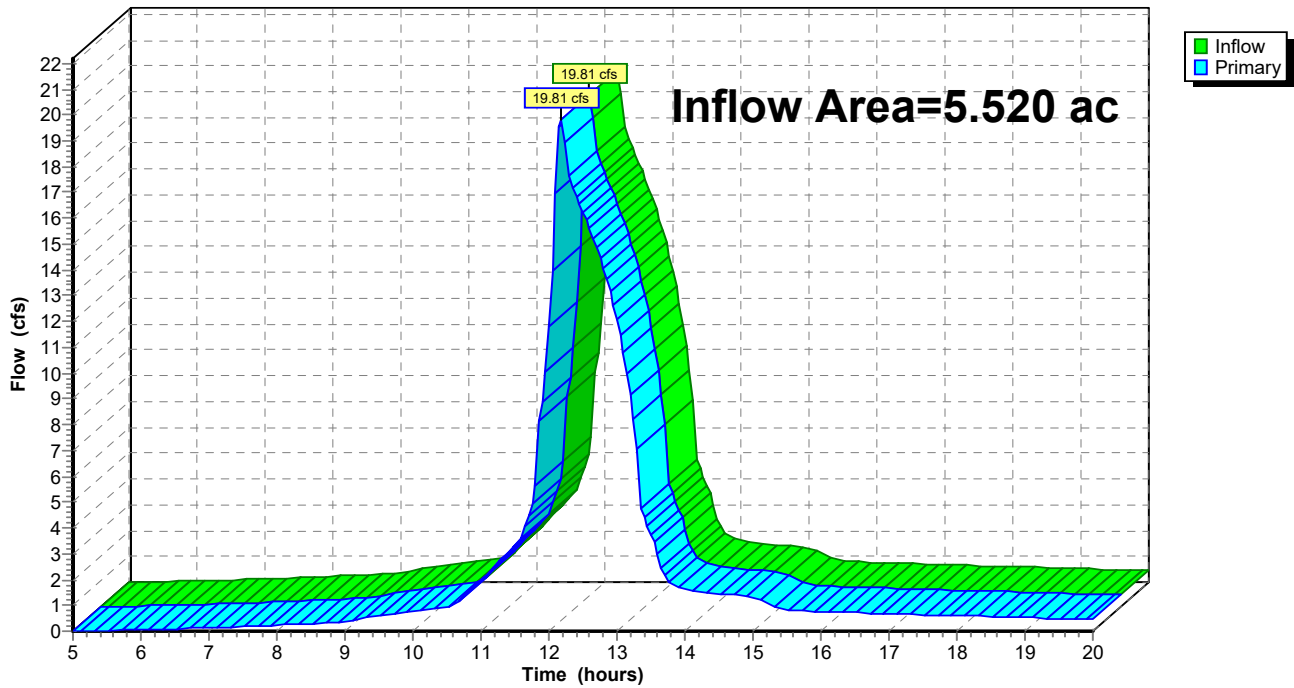
Summary for Link 2L: Post

Inflow Area = 5.520 ac, 31.16% Impervious, Inflow Depth > 5.79" for 100-Year event
Inflow = 19.81 cfs @ 12.17 hrs, Volume= 2.662 af
Primary = 19.81 cfs @ 12.17 hrs, Volume= 2.662 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

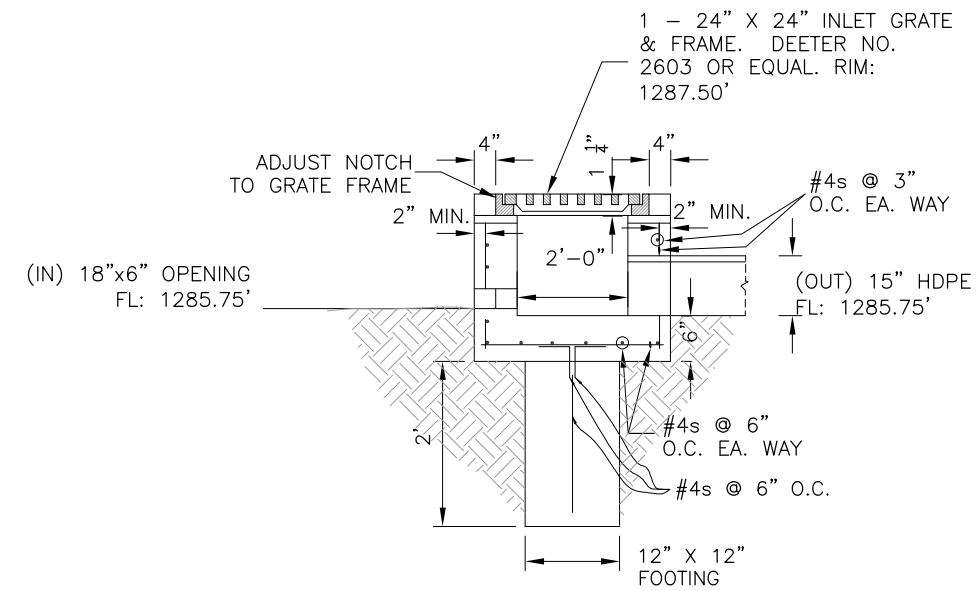
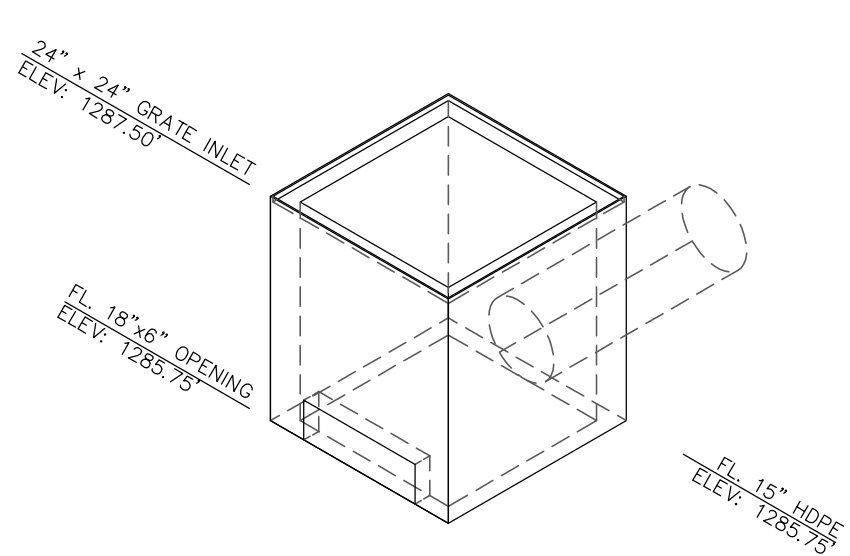
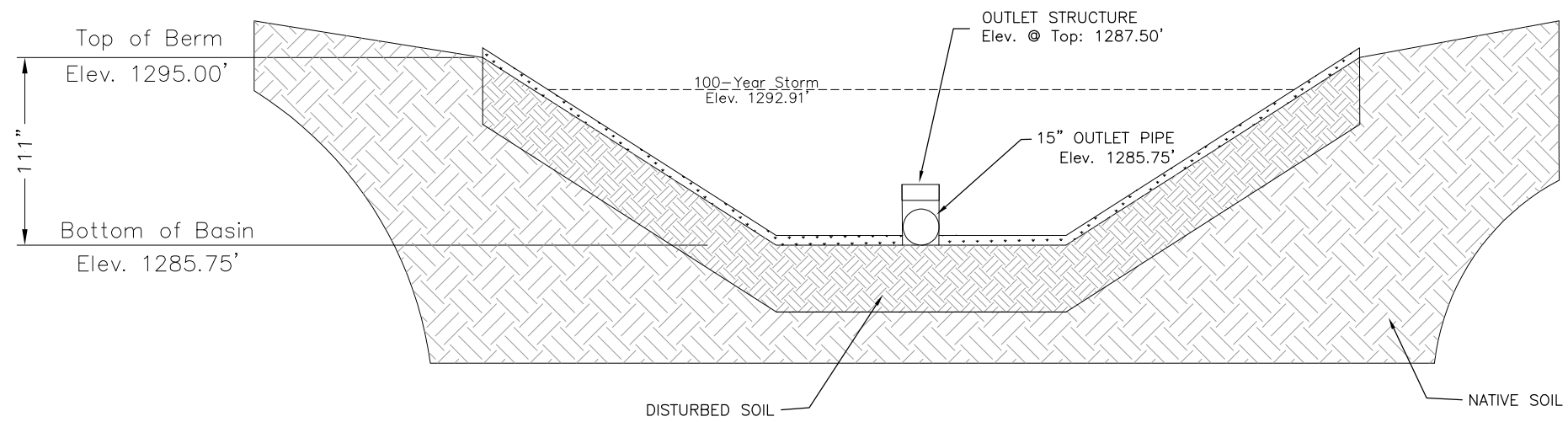
Link 2L: Post

Hydrograph



APPENDIX D

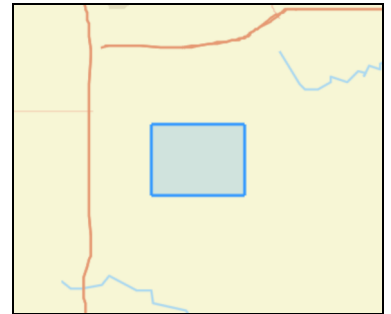
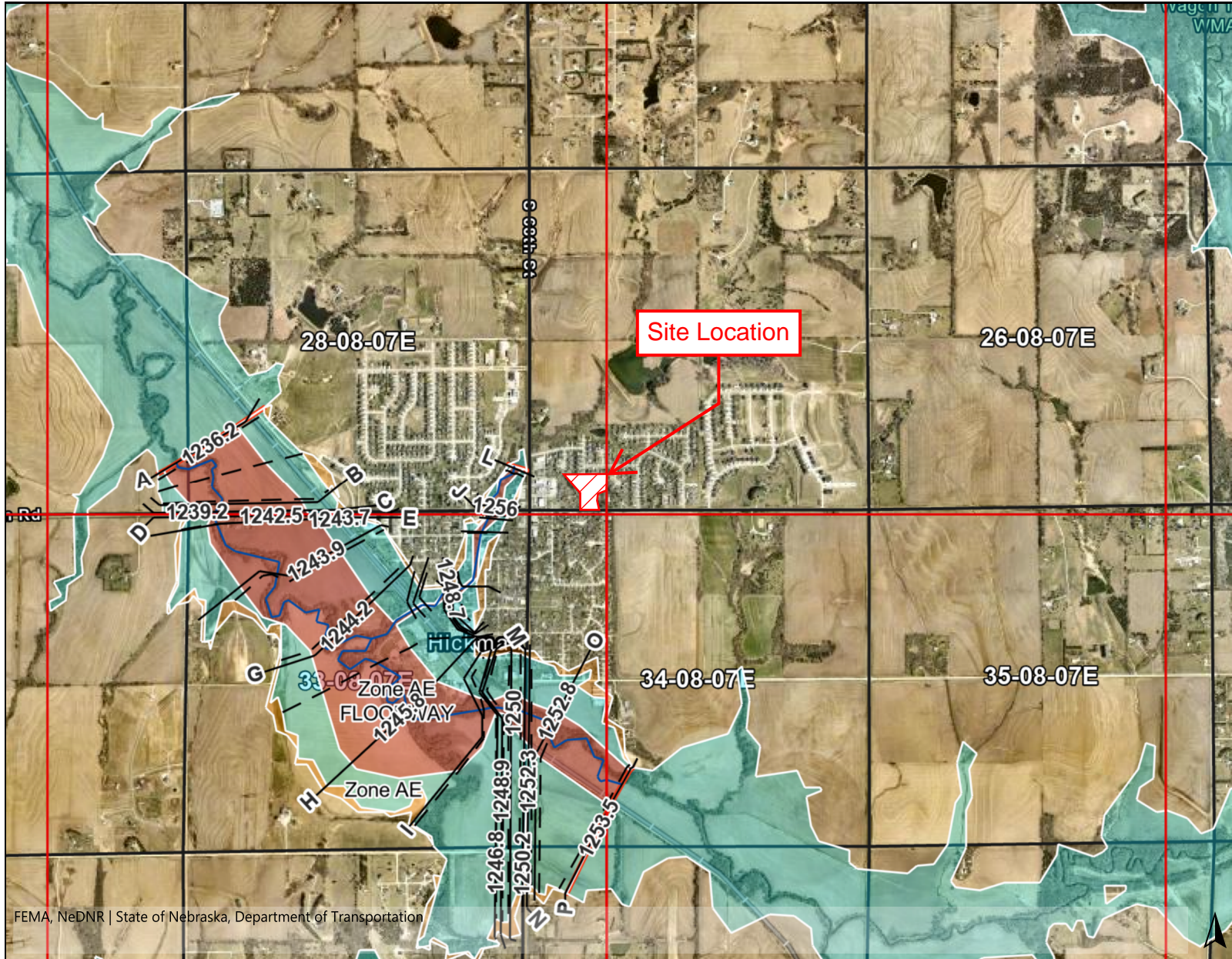
DETENTION POND DETAILS



DETENTION POND CROSS-SECTION AND OUTLET STRUCTURE

APPENDIX E

FLOODPLAIN FIGURE



Legend

BFE Determinations

- Valid BFE

Effective Paper Maps

- Effective Flood Zone

Effective Paper Maps

- 1% Annual Chance
- Regulatory Floodway
- 0.2% Annual Chance
- Reduced Risk Due to Levee

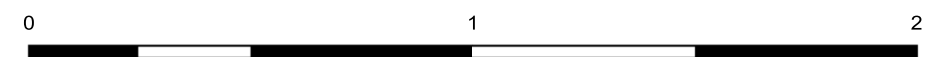
Flood Hazard Zones

- FIRM panels
- Cross-Sections
- Limit-Lines

Other Map Layers

- Sections
- Communities
- NRDs

FEMA, NeDNR | State of Nebraska, Department of Transportation



Date Printed: 8/28/2023

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Notes



115 Locust Street, P.O. Box 127,
Hickman, NE 68372-0127
Phone 402.792.2212 - Fax 402.792.2210
www.hickman.ne.gov

APPLICATION FOR PRELIMINARY PLAT # 2023-125

Legal Description and Location: TOWER RIDGE ADDITION, OUTLOT A

Subdivider:

Name: Matt Barber
Address: 20777 S 64 CT
Hickman, NE 68372
Telephone: 402-889-3665

Agent: (Authorized to act on Subdivider's behalf)

Name: Rega Engineering
Address: 601 Old Cheney Road, Suite A
Lincoln, NE 68512
Telephone: 402-484-7342

Name of Preliminary Plat: Barber Addition Number of Lots: 3 Lots

Subdivision Preliminary Plat Fee \$1,000.00 + \$10.00 per Lot Fee Total: \$1030.00

A. Does the subdivider have any interest in the land surrounding the preliminary plat? Yes No
If yes, please describe the nature of such interest:

B. Will the preliminary plat require any zoning or other action (rezoning, planned development, conditional use or vacations) to complete the development? Yes No . If yes please describe the nature of action:

C. Does the preliminary plat deviate from the requirements of the Land Subdivision Ordinance of the City of Hickman or the City's Design Standards: Yes No . If yes, please state each deviation, how the proposal meets the intent of the subdivision ordinance and why the proposal should be accepted (Additional sheets may be added):
See attached waiver list document for explanation of each waiver being requested.

D. Is any part of the land within the preliminary plat within a flood plain? Yes No . If yes, please include the following information: Hydrological and grade information to determine frequency and extent of inundation of flood waters; location of proposed use and type of use; areas of habitation and employment to include location, size and floor elevation of any structures, location and elevation of parking areas, use, location and elevation of open space; all plans and other information conform to Development Standards; limits of the flood plain; amount of Fill Material brought into the flood plain; a certificate that grading will not result in any increase in the flood plain. (Additional sheets may be added):

<u>Nathaniel P. Burnett</u> Signature of Applicant	On Behalf of Subdivider	<u>Nathaniel P. Burnett</u> Printed Name	<u>9-27-2023</u> Date
<u>[Signature]</u> Signature of City Staff		<u>[Signature]</u> Printed Name	<u>9.27-23</u> Date

Office Use Only
 Receipt No. 7811 Date: 10-5-2023 Preliminary Plat #: 2023-125 Fee paid \$ 700.00
7696 Date 8-31-2023 Plat 2023-125 \$ 250.00
paid in full \$ 1030.00



115 Locust Street, P.O. Box 127
Hickman, NE 68372-0127
Phone 402.792.2212 - Fax 402.792.2210
www.hickman.ne.gov

APPLICATION FOR FINAL PLAT

Legal Description and Location: TOWER RIDGE ADDITION, OUTLOT A Permit # 2023-126

Subdivider:	Agent: (Authorized to act on Subdivider's behalf)
Name: <u>Matt Barber</u>	Name: <u>Rega Engineering</u>
Address: <u>20777 S 64 CT</u>	Address: <u>601 Old Cheney Road, Suite A</u>
<u>Hickman, NE 68372</u>	<u>Lincoln, NE 68512</u>
Telephone: <u>402-889-3665</u>	Telephone: <u>402-484-7342</u>

Name of Final Plat: Barber Addition Number of Lots: 3 Lots
Subdivision Final Plat Fee \$1,000.00 + \$10.00 per Lot Fee Total: \$1030.00

- A. Does the subdivider have any interest in the land surrounding the final plat? Yes No If yes, please describe the nature of such interest: N/A
- B. Will the final plat require any zoning or other action (rezoning, planned development, conditional use or vacations) to complete the development? Yes No If yes please describe the nature of action: N/A
- C. The final plat is based upon the preliminary plat for Barber Addition, approved by the City Council on _____, 20____, Resolution No. _____.
- D. Is the final plat consistent with the approved preliminary plat? Yes No If not, please explain the proposed changes and the reasons on an additional sheet.
- E. Have all the improvements required by the preliminary plat been completed? Yes No (Please check the Planning Commission's letter indicating the approval of the preliminary plat.) If not, which improvements have not been completed: _____

Nathaniel P. Burnett On Behalf of Subdivider

Nathaniel P. Burnett

9-27-2023

Signature of Applicant

Printed Name

Date

[Signature]
Signature of City Staff

Heidi Hoglund
Printed Name

9-27-23
Date

City Use Only

Receipt No. 1011 Date: 10-5-23 Final Plat #: 2023-126 Fee paid \$ 1030.00
paid in full

CITY OF HICKMAN
STAFF REPORT FOR PLANNING COMMISSION
OCTOBER 3, 2023, MEETING

APPLICATION/FACTS

PROJECT: #2023-125 PRELIMINARY PLAT APPLICATION FOR BARBER ADDITION SUBDIVISION
#2023-126 FINAL PLAT APPLICATION FOR BARBER ADDITION SUBDIVISION

APPLICANT: REGA ENGINEERING GROUP INC
601 OLD CHENEY RD LINCOLN, NEBRASKA 68512

OWNER: FUN LLC
MATTHEW BARBER
20777 S. 64th COURT HICKMAN, NE 68372

LOCATION: ONE PARCEL GENERALLY LOCATED NORTH OF 7TH STREET (HICKMAN ROAD) AND APPROXIMATELY 828 FEET EAST OF CHESTNUT STREET (S. 68TH STREET). SW ¼ OF S27, T8, R7, 6TH PRINCIPAL MERIDIAN, LANCASTER COUNTY, NEBRASKA.

PARCEL ID: 15273190020000

LEGAL DESCRIPTION: TIMBER RIDGE ADDITION, OUTLOT A (future developable), HICKMAN NE 68372

LAND AREA: 4.28 ACRES

PROPOSAL: REQUEST APPROVAL OF A PRELIMINARY PLAT AND A FINAL PLAT SUBMITTED FOR THE PURPOSE OF SUBDIVIDING A PARCEL, MAKING THREE BUILDABLE LOTS AND TWO OUTLOTS WITHIN HICKMAN’S CITY LIMITS.

EXISTING ZONING: R-3 (HIGH DENSITY RESIDENTIAL)
EXISTING LAND USE: UNDEVELOPED GROUND

SURROUNDING LAND USE AND ZONING:

North:	Medium Density	R-2	South:	Medium Density	R-2
East:	High Density	R-3	West:	High Density	R-3

Zoning History and Land Use:

The land use map from 2005 shows the parcel zoned R-3 and used as an acreage with a single-family home. In 2020 the house was split off from the rest of the land through an administrative final plat named Timber Ridge Addition, Lot 1 and Outlot A (future developable). The plats and applications presented are for Outlot A of Timber Ridge Addition.

Comprehensive Plan Specifications:

The Future Land Use Map shows the parcels to be HDR or High Density Residential, which is consistent with multi-family apartment units. The property is zoned High density R-3. The 2016 Comprehensive Plan and 2016 Housing Study both address the multiple family housing shortage and the need for housing development at diverse price points and styles. The Housing Study asserts “Hickman should encourage high-density multi-family developments in the High Density Residential and Mixed-Use land uses”.

City of Hickman 2007 Subdivision Regulations:

The subdivision regulations will not allow for another administrative plat as the lot has been previously split. Therefore, a Replat is required. The City Engineer reviewed the plans and has given approval for both the preliminary plat and final plat to be brought to the same meeting.

Replat and 2007 Subdivision Regulations:

REPLAT is the act of platting the lots, parcels and easements in a recorded subdivision to achieve a reconfiguration of existing subdivision or to increase or decrease the number of lots in the subdivision.

Section 3.08 Replats

Whenever a re-subdivision of a parcel consists of four or fewer lots, the City may waive the separate submission requirements for the Preliminary and Final Plats to expedite the subdivision review process if, in the judgment of the City Engineer, separate submission will not serve the public interest and will not conflict with the intent of this Ordinance. Concurrent Plats shall be:

- 3.08.01 Replats shall be discussed with the City at a scheduled pre-application Conference, as set out in Section 3.01.
- 3.08.02 Be submitted to the City at least 21 days prior to the meeting in which it is to be considered or in accordance with the review schedule;
- 3.08.03 Be accompanied by the applications fees and completed application forms as required;
- 3.08.04 Follow the procedure set forth for herein and contain the required information Preliminary and Final Plats;
- 3.08.05 Include a drainage plan showing how run-off generated by the proposed development impacts drainage on downstream drainage systems.
- 3.08.06 Changes required by the Planning Commission shall be made prior to submission to City Council. Final plans shall be submitted to the City at least seven days prior to the next regular meeting of the City Council.
- 3.08.07 A final plat, in conformance with Section 3.05, shall be submitted to the City.
- 3.08.08 All requirements of Section 3.05 shall be met and a revised preliminary platting shall be required if the guidelines of section 3.09.03, 1 through 8 are found.

City of Hickman 2007 Subdivision Regulations:

ARTICLE 3: PROCEDURES

Section 3.02 Procedures for Approval of a Preliminary Plat

3.02.04 The Planning Commission will consider the Preliminary Plat at a public hearing, of which notice is given in a newspaper of general circulation within the City of Hickman, and will:

- 1. Review the preliminary plat and other material submitted for conformity thereof to this Ordinance,*
- 2. Review any recommendations of the above agencies and other agencies, and*
- 3. Recommend to the subdivider changes deemed advisable and the kind and extent of improvements to be made by him/her.*

The Planning Commission shall act on the plat as submitted or modified, and if approved, the Planning Commission shall express its approval as conditional approval and state the conditions of such approval, if any, or if disapproved, shall express its disapproval and its reasons thereof in writing.

3.02.05 Conditional approval of a preliminary plat shall not constitute an acceptance of the plat, but shall be deemed an expression of approval of the layout submitted on the preliminary plat.

3.02.06 If the Planning Commission recommends disapproval or approval, then the City Clerk will order Notice of Public Hearing before the City Council to be published. The notice must be published at least 10 days prior to the Public Hearing in a paper of general circulation within the City of Hickman. The City Council may (a) Concur with the Planning Commission's Recommendation; (b) Reverse the Planning Commission's recommendation; or (c) Refer the Preliminary Plat back to the Planning Commission for reconsideration with specific instructions to the Planning Commission; (d) approve with some modification from the Planning Commission's recommendation.

3.02.07 Approval of the Preliminary Plat shall become void after 12 months from the date of such approval by City Council, if no Final Plat has been filed or a Final Plat of previously proposed phases has not been filed or unless extension of approval has been granted by City Council, such extension shall not 12 months.

Section 3.04 Procedure for Approval of Final Plat.

- 3.04.01 *The Final Plat shall conform to the Preliminary Plat as approved and may be comprised of only that portion of the approved Preliminary Plat which the subdivider proposed to record and develop at the time.*
- 3.04.02 *The Final Plat shall be submitted in accordance with the review schedule to the city for Planning Commission and City Council review.*
- 3.04.03 *Prior to approval of the City Council, at least one reproducible copy (Mylar) of the final plat and 20 copies of the plat ((3) full size and (17) 11 x 17) shall be prepared as specified in this Ordinance and submitted to the city at least 21 days prior to the meeting at which it is to be considered.*
- 3.04.04 *The Planning Commission shall approve or reject the Final Plat and have prepared a recommendation to the City Council recommending approval or rejection. All reasons and findings for rejection shall be clearly stated.*
- 3.04.05 *The final approval by the City Council shall be by Ordinance after receiving the recommendation of the Planning Commission together with a letter stating that the subdivider has complied with the requirements of these regulations. Notification of approval or rejection by the Planning Commission or City Council shall be given the subdivider within 60 days after submission of the Final Plat to the Planning Commission.*

Open Space:

Outlots A & B total 104,964 sq. ft. of open space, or 56% of the total final plat area (186,431 sq. ft.)

Streets:

There is a private internal street layout.

Dedication of Right-of-Way for Existing Streets:

The County Surveyor recommended an additional 17' of ROW (right-of-way) to make a total of 50' from the centerline of (7th Street) Hickman Road to be dedicated to the public as shown on the final plat.

Access/Egress:

An access driveway exists off 7th Street. A connection for fire vehicles to enter from the north is shown in detail in the preliminary plat document.

Topography:

The preliminary plat design water runoff control is noted on the preliminary plat and should maintain adequate drainage and collection of storm water.

Corridor Overlay District:

This parcel is within the Corridor Overlay District.

Section 5.17 CO Corridor Overlay District (*Ordinance No. 2015-06, Adopted May 26, 2015*)

5.17.01 Intent: The City of Hickman has established basic site and building development criteria to be implemented within the boundaries of this overlay district. The Corridor Overlay District has been established in order to implement the policies and guidelines developed by the City of Hickman. These criteria include but are not limited to the following: landscaping, building material selection, lighting, and road development. The purpose for regulating these issues is to provide for a cohesive and properly developed corridor and entrance into Hickman along 68th Street and along Hickman Road. Guiding development in this manner promotes the general health, safety, and welfare of the residents within the zoning jurisdiction of Hickman by providing quality design and construction which will also aid in the protection of past and future investment in the corridors. The regulations in the overlay district are in addition to those of the underlying zoning district for the property and affect all new or expanded (20% or more of original footprint) public, commercial, industrial, multi-family residential, residential subdivisions (fencing), and mixed-use buildings and properties. Where regulations are in direct conflict with other regulations in this ordinance, the stricter shall apply.

1. PURPOSE: The purpose of these criteria is to establish a checklist of those items that affect the physical aspect of Hickman. Pertinent to appearance is the design of the site, building and structures, planting, signs, and miscellaneous other objects that are observed by the public.

The minimum criteria contained herein are not intended to restrict imagination, innovation, or variety but rather to assist in focusing on design principles that can result in creative solutions that will develop a satisfactory visual appearance within the city, preserve taxable values, and promote the public health, safety, and welfare.

2. GEOGRAPHIC AREA: The Corridor Overlay District extends generally 300 to 600 feet from the right-of-way line on either side of 68th Street and Hickman Road. Entrance nodes should also be recognized at the north, south and west sides of the city. In the event the standards of this overlay district are in conflict with those of the underlying zoning district, the standards of the overlay district shall apply. If a site or property is partially covered by said overlay district, then the entire portion of the site or property facing the corridor is to be covered by these regulations. For a graphically defined area, see the Official Zoning Map.

Utilities:

Electricity, Sewer, and Water are available from the City of Hickman, as these parcels are within City Limits.

Floodplain:

The plat area is not located within the 100-year Floodplain.

Trail Master Plan:

The Trail Master Plan does not show a trail through this parcel. As a private street system is put in place, the sidewalks are looped internally.

REGA Engineering submitted a Waivers Request for Barber Addition:

The following waivers are being requested as follows:

1. Waiver to the city of Hickman 2007 Zoning Regulations (Section 5.08.06 Height and Lot Requirements). We are requesting that each internal lot have a zero-foot setback on internal abutting lot lines. A 20-foot setback around the perimeter of the site is also being proposed and no building envelope may encroach on this setback. This will allow the development to ensure green space is provided for the development and the surrounding homes and businesses.
2. Waiver to City of Hickman Schedule of Minimum Off-Street Parking and Loading Requirements. (Section 7.02-Multi-Family/Apartments) The current requirement for parking calculations refers to a "sleeping unit" as a basis of the requirement. This is not a term that is defined anywhere in the zoning regulations and seems to have been loosely determined to be each bedroom within an apartment building. The term "dwelling unit" is used for all other remaining use types that would not be considered commercial in nature throughout the rest of the zoning regulations. There are 150 bedrooms among the 3 proposed apartment buildings which under the current calculation would require 150 parking stalls. If this were to stand then roughly 13% of the total site would be utilized for parking stalls alone (24,300 Sq Ft). This severely decreases the green space possibilities of the site and gives the development the feel of being only a parking lot. We are proposing that this development adopt the same parking calculation that the City of Lincoln has for a similar zoning requirement. This particular site is 4.28 acres and is proposed to have 60 dwelling units between all three buildings. This comes out to have a density calculation of 14 units per acre and would be considered a high-density development in Lincoln. This would then correlate best to the R-6 zoning regulations that we would like to base our waiver from. The R-6 zoning for Lincoln has a parking requirement of 1.5 stalls per dwelling unit which would bring our total parking requirement for these buildings to 90 stalls.
3. Waiver to city of Hickman 2007 Subdivision Regulations (Article 5: Design Standards and Section 5.21 and Article 6: Required Improvements Section 6.07) A sidewalk installation is non-essential or unnecessary on both sides of the street due to the extreme topography and slopes of the grades. A trail is located on the south side of 7th street which would also make this trail access redundant.

Off Street Parking Requirement:

Section 7.02 Schedule of Minimum Off-Street Parking and Loading Requirements

Uses	Parking Requirements (spaces)	Loading Requirements
Multi-family / Apartments	1 per sleeping unit – spaces to be sited in the general proximity of where the sleeping units are located	None required

The 2007 Zoning regulations do not define sleeping unit, as noted for parking requirements. The 2023 zoning regulations become effective October 2, 2023, and use 1.5 spaces per dwelling unit.

This development will use the 2007 zoning regulations as they were in effect at the time of pre-application conference and planning for the subdivision. The applications for the plats were received prior to the adoption of the 2023 zoning regulations.

Request for internal lots to have a zero-foot setback. As a private development which could be all on one lot with no setbacks other than what the Build Code and Fire Marshal require between buildings. It is reasonable to consider the buildings could have a zero-foot setback but could not be placed over the lot lines.

Request for a 20-foot setback around the perimeter of the site. Generally, a 25-foot buffer between different types of uses such as commercial and residential is requested. In this case a 5-foot reduction could be considered as reasonable between medium density residential and high density residential.

The waiver request for 1.5 off-street parking stalls per unit is acceptable. 90 stalls are to be constructed for the 60 units shown on the preliminary plat.

The waiver request for the internal sidewalk may be granted as the sidewalk with loop internally.

Other Entities comments for the Final Plat as of September 28, 2023:

- A. September 11, 2023, John V. Berry RLS #535 Lancaster County Surveyor reviewed the plat.
 - 1. On page 1, in the Surveyors Cert. Section 27 is shown, in the Owners Cert. (Dedication Statement) Section 28 is shown.
 - 2. In the Owners Cert. (Dedication Statement), add the statement, "Access to East 7th Street (Hickman Road) is hereby relinquished except at the location of a Private Drive accessing Outlot A"
 - 3. In the Owners Cert. (Dedication Statement), add the statement, "The additional right of way shown hereon is hereby dedicated to the Public".
 - 4. On Sheet 1 of the Preliminary plans, add the statements in Comments 2 and 3 to the general notes, also change the "R-O-W to be vacated" statement in the Legend to "additional right of way"
 - 5. On Sheet 2 of the Final Plat, add "17.00' of right-of-way dedication" to the drawing not just in the Legend.
 - 6. On the plat, it would appear that there are small numbers next to the found monuments with the # 5 next to them.
- B. September 8, 2023, Chad Kendall Lancaster County GIS Dept "GIS finds no issues."
- C. September 8, 2023, Christopher Ladegard, Property Appraisal Technician, Lancaster County Assessor/Register of Deeds
 - 1. Ownership title should be Dedication.
 - 2. Outlots A & B need Use designation labels (open space, future development, etc.)
 - 3. Township 28 should be Township 8.
- D. September 27, 2023, Hickman City Engineer Justin Stark. See attached.
- E. September 8, 2023, Christopher Ladegard, Property Appraisal Technician, Lancaster County Assessor/Register of Deeds, noted the Barber Addition subdivision name was previously used on a plat in

2012. The name will need to be amended prior to City Council approval and filing with the County.

- F. September 28, 2023, John V. Berry RLS #535 Lancaster County Surveyor, noted all of his comments have been addressed. The subdivision name will need to be addressed prior to City Council approval and filing with the County.
- G. September 29, 2023, Chad Kendall Lancaster County GIS Dept “GIS finds no issues with the updated version of the preliminary and final plats.”

Conclusion:

- 1. Barber Addition name to be amended to “Barber Estates Addition”.
- 2. Request for internal lot lines to have a zero-foot setback is reasonable. Minimum distance between buildings to comply with building codes and state fire marshal requirements. In no case, can a building be built over a lot line.
- 3. Request for a 20-foot setback around the perimeter of the site is reasonable.
- 4. The waiver request for parking requirement of 1.5 stalls per dwelling unit is acceptable. 90 parking stalls will give a give a maximum of 60 units. Which is consistent with new regulations.
- 5. The Trail Master Plan does not show a trail through this parcel. As a private street system is put in place, the sidewalks are looped internally through the private development.

Staff Recommended Motion:

Recommend conditional approval by the Planning Commission to the City Council on the Preliminary Plat and Final Plat for Barber Addition Subdivision, amending the subdivision name on both plats to “Barber Estates Addition” with the following conditions:

- 1. To allow internal lots to have a zero-foot setback for principal and accessory buildings, if, the minimum distance between buildings complies with building codes and state fire marshal requirements, and in no case shall a building be constructed over a lot line.
- 2. To allow a 20-foot building setback around the exterior perimeter as shown on the final plat.
- 3. To allow off-street parking to be constructed to a minimum requirement is 1.5 stalls per dwelling unit.
- 4. To allow the pedestrian sidewalk to loop internally.

**RESOLUTION NO. 2023-25
CITY OF HICKMAN, NEBRASKA**

A RESOLUTION OF THE MAYOR AND CITY COUNCIL OF THE CITY OF HICKMAN, NEBRASKA AUTHORIZING THE ACQUISITION OF CERTAIN REAL PROPERTY FOR USE BY THE CITY.

Recitals

A. KENNETH J. HESSER REVOCABLE TRUST, owns certain real property located in Lancaster County more particularly described as:

S15, T7, R7, 6TH PRINCIPAL MERIDIAN, S1/2 NE

B. The City's acquisition of the above-described real property will benefit the City and its residents as the property will be used for expansion of the City's Municipal Well's for the Water Department.

C. Neb. Rev. Stat. § 18-1755 and Hickman Municipal Code § 6-110 authorize the City to acquire real property upon approval of the acquisition by action taken in a public meeting after notice and public hearing.

D. The City has held a public hearing and desires to purchase the real property.

NOW THEREFORE, be it resolved by the City of Hickman, Nebraska:

1. The City hereby approves the acquisition of real property from Kenneth J. Hesser Revocable Trust, in accordance with the authority under Nebraska law and the Hickman Municipal Code.

2. The Mayor and City Administrator of the City is hereby authorized to execute a Purchase Agreement and to take all actions necessary to effectuate the acquisition of real property from Kenneth J. Hesser Revocable Trust.

This has been approved on November 14, 2023.

CITY OF HICKMAN, NEBRASKA

By: _____
Doug Wagner, City Council President

ATTEST: _____
Jaala Johnson, City
Clerk

(Seal)

ORDINANCE NO. 2023-15

AN ORDINANCE TO APPROVE THE SUBDIVISION AGREEMENT AND FINAL PLAT OF BARBER ESTATES ADDITION, A SUBDIVISION WITHIN THE ZONING JURISDICTION OF THE CITY OF HICKMAN, LANCASTER COUNTY, NEBRASKA; AND TO PROVIDE FOR AN EFFECTIVE DATE THEREOF.

BE IT ORDAINED BY THE MAYOR AND COUNCIL OF THE CITY OF HICKMAN, NEBRASKA:

- Section 1. Barber Estates Addition is a subdivision within the zoning jurisdiction of the City of Hickman, Lancaster County, Nebraska.
- Section 2. Pursuant to the subdivision ordinance of the City of Hickman, Lancaster County, Nebraska, Ordinance No. 2007-03, the final plat of Barber Estates Addition, a copy which is attached hereto and made a part of this ordinance, is hereby approved.
- Section 3. The City Clerk of Hickman, Nebraska is directed to endorse a certificate of approval on the final plat and to file the original with the Lancaster County Register of Deeds Office and do all other acts required by state statute and said ordinance.
- Section 4. The City of Hickman and the subdivider FUN, LLC shall enter into the Subdivision Agreement attached to this Ordinance. This Subdivision Agreement contains covenants that run with the real property contained in the Barber Estates Addition and are binding on all successor and assigns of the City of Hickman and FUN, LLC.
- Section 5. This ordinance shall be in full force and effect from and after its passage and publication according to law.

PASSED AND APPROVED THIS 14TH DAY OF NOVEMBER, 2023

Doug Wagner, Council President

ATTEST:

Jaala Johnson, CMC, City Clerk

(SEAL)

BARBER ESTATES ADDITION

FINAL PLAT

BASED ON TOWER RIDGE ADDITION

SURVEYOR'S CERTIFICATE

I hereby certify that I have accurately surveyed the subdivision as required in Section 26.19.041 of the Land Subdivision Ordinance to be known as "BARBER ESTATES ADDITION", a subdivision of Outlot A, Tower Ridge Addition located in the Southwest Quarter of Section 27, Township 8 North, Range 7 East, of the 6th P.M., Hickman, Lancaster County, Nebraska and more particularly described as follows:

A parcel of land being all of Outlot A, Tower Ridge Addition, located in the SW 1/4 of Section 27, T.8N, R.7E of the 6th P.M., City of Hickman Lancaster County, Nebraska, being more particularly described as follows:

Beginning at the NW corner of said Outlot A;
 Thence on the North boundary of said Outlot A, N89°39'23"E, 613.39 feet to the NE corner of said Outlot A, all bearings hereon are relative thereto;
 Thence on the boundaries of said Outlot A the following nine (9) courses:
 Thence, S00°29'08"E, 231.00 feet;
 Thence, S89°39'12"W, 143.28 feet to the beginning of a non-tangential curve, to the right having a delta of 47°15'05", having a radius of 60.00 feet, and whose long chord bears S49°07'15"W for a distance of 48.09 feet;
 Thence on said curve 49.48 feet a point of reverse curvature to the left having a delta of 88°43'13", having a radius of 30.00 feet, and whose long chord bears S28°23'13"W for a distance of 41.95 feet;
 Thence on said curve 46.45 feet to a point of reverse curvature to the right having a delta of 15°30'19", having a radius of 530.00 feet, and whose long chord bears S08°12'04"E for a distance of 142.99 feet;
 Thence on said curve 143.43 feet;
 Thence, S00°26'55"E, 72.18 feet to the North Right-of-Way of Hickman Rd;
 Thence on said North Right-of-Way, S89°34'52"W, 180.00 feet;
 Thence departing, N00°21'01"W, 93.22 feet;
 Thence, N31°28'41"W, 490.55 feet to the Point of Beginning.
 Containing 186,384 Square Feet or 4.28 Acres more or less.

Permanent monuments have been placed at each of the final plat corners on the periphery of the subdivision, on the centerline at each street intersection and at each point of tangency and curvature.

All curvilinear dimensions are chord measurements unless shown otherwise, and are in feet or decimals of a foot.

Signed this ____ day of _____, 20____.

Lyle L. Loth, L.S. 314
 REGA Engineering Group Inc.
 601 Old Cheney Road, Suite 'A'
 Lincoln, NE 68512
 402-484-7342

REVIEW OF LANCASTER COUNTY SURVEYOR

This final plat of BARBER ESTATES ADDITION was reviewed by the office of Lancaster

County Surveyor on this ____ day of _____, 20____.

 Lancaster County Surveyor

ACCEPTANCE OF HICKMAN CITY COUNCIL

This final plat of BARBER ESTATES ADDITION was approved by the City Council of the City of Hickman, Nebraska

on this this ____ day of _____, 20____, in accordance with the State Statutes of Nebraska.
 (City of Hickman SEAL)

 Mayor

ATTEST _____
 City Clerk

DEDICATION

The foregoing plat, known as BARBER ESTATES ADDITION, in the Southwest Quarter of Section 27, Township 8 North, Range 7 East of the 6th P.M., Hickman, Lancaster County, Nebraska, and being more fully described by metes and bounds in the Surveyor's Certificate.

This dedication is made with the free consent and in accordance with the desires of the undersigned, the sole owners, and the easements shown thereon are here by granted in perpetuity to The City of Hickman, Nebraska. Windstream Nebraska Inc., Time Warner Cable Midwest LLC., Black Hills Energy, and Norris Public Power District, their successors and assigns, to allow entry for the purpose of construction, reconstruction, repair, operation and maintenance of wires, cables, conduits, fixtures, poles, towers, pipes, and equipment for the distribution of electricity and gas; telephone and cable television; wastewater collectors; storm drains; water mains and all appurtenances thereto, over, upon, or under the easements as shown on the foregoing plat.

The construction or location of any building or structures, excluding fences, over, upon, or under any easement shown thereon shall be prohibited.

Access to East 7th Street (Hickman Road) is hereby relinquished except at the location of a Private Drive accessing Outlot A.

The additional Right-Of-Way shown hereon is dedicated to the Public.

The City of Hickman, Nebraska, its successors and assigns are hereby held harmless for the cost of replacement or damage to any improvement or vegetation over, upon, or under any easement shown thereon. Relocation of existing facilities will be at the owner/developers expense.

 Fun, LLC, Managing Member

ACKNOWLEDGMENT

STATE OF NEBRASKA)
) SS
 LANCASTER COUNTY)

On this ____ day of _____, 20____, before me, the undersigned, a notary public, duly commissioned, qualified for and residing in said county, personally came (name, position, company), to me personally known to be the identical person whose name is affixed to the dedication of the foregoing plat and he acknowledged the same to be his voluntary act and deed and the voluntary act and deed of said company.

 NOTARY PUBLIC

My commission expires the ____ day of _____, 20____.

ACCEPTANCE BY HICKMAN CITY ENGINEERS

This final plat of BARBER ESTATES ADDITION was reviewed and approved by the

Hickman City Engineer on this ____ day of _____, 20____.

 Hickman City Engineer

COUNTY TREASURER'S CERTIFICATION

This is to certify that I found no regular or special taxes due or delinquent against the property described in the Surveyor's Certificate and embraced in this plat as shown by the records of this office.

 County Treasurer

 Date

APPROVAL OF THE PLANNING COMMISSION OF HICKMAN, NEBRASKA

This final plat of BARBER ESTATES ADDITION was approved by the Hickman

Planning Commission this ____ day of _____, 20____.

 Chairperson, Hickman Planning Commission

LIEN HOLDER CONSENT AND SUBORDINATION

The undersigned holders of those certain liens against the real property described in the plat known as "BARBER ESTATES ADDITION" (hereinafter "Plat), said lien being recorded in the office of the Register of Deeds of Lancaster County, Nebraska, as Instrument No. 2017000297(hereinafter "Lien"), does hereby consent to the dedication of and subordinate the Lien to any utility (sewer, water, electric, cable TV, telephone, natural gas) easements of streets or roads, pedestrian way easements, and access easements and relinquishments of access, dedicated to the public, all shown on the Plat, but not otherwise. The undersigned confirms that it is the holder of the Lien and has not assigned the Lien to any other person.

First State Bank

 Trustee & Beneficiary By: _____
 Signature

 Print Title

 Print Name of individual

ACKNOWLEDGMENT

STATE OF NEBRASKA)
) SS
 LANCASTER COUNTY)

The foregoing instrument was acknowledged before me this ____ day of

_____, 20____, by _____,
 Print Name

_____ on behalf of said (Bank name)

 Print Title

 NOTARY PUBLIC

My commission expires the ____ day of _____, 20____.

LIEN HOLDER CONSENT AND SUBORDINATION

The undersigned holders of those certain liens against the real property described in the plat known as "BARBER ESTATES ADDITION" (hereinafter "Plat), said lien being recorded in the office of the Register of Deeds of Lancaster County, Nebraska, as Instrument No. 2021041691(hereinafter "Lien"), does hereby consent to the dedication of and subordinate the Lien to any utility (sewer, water, electric, cable TV, telephone, natural gas) easements of streets or roads, pedestrian way easements, and access easements and relinquishments of access, dedicated to the public, all shown on the Plat, but not otherwise. The undersigned confirms that it is the holder of the Lien and has not assigned the Lien to any other person.

Western Bank

 Trustee & Beneficiary By: _____
 Signature

 Print Title

 Print Name of individual

ACKNOWLEDGMENT

STATE OF NEBRASKA)
) SS
 LANCASTER COUNTY)

The foregoing instrument was acknowledged before me this ____ day of

_____, 20____, by _____,
 Print Name

_____ on behalf of said (Bank name)

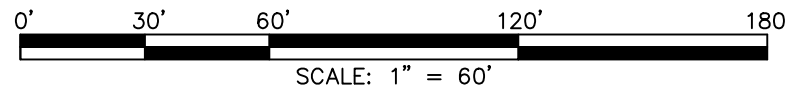
 Print Title

 NOTARY PUBLIC

My commission expires the ____ day of _____, 20____.



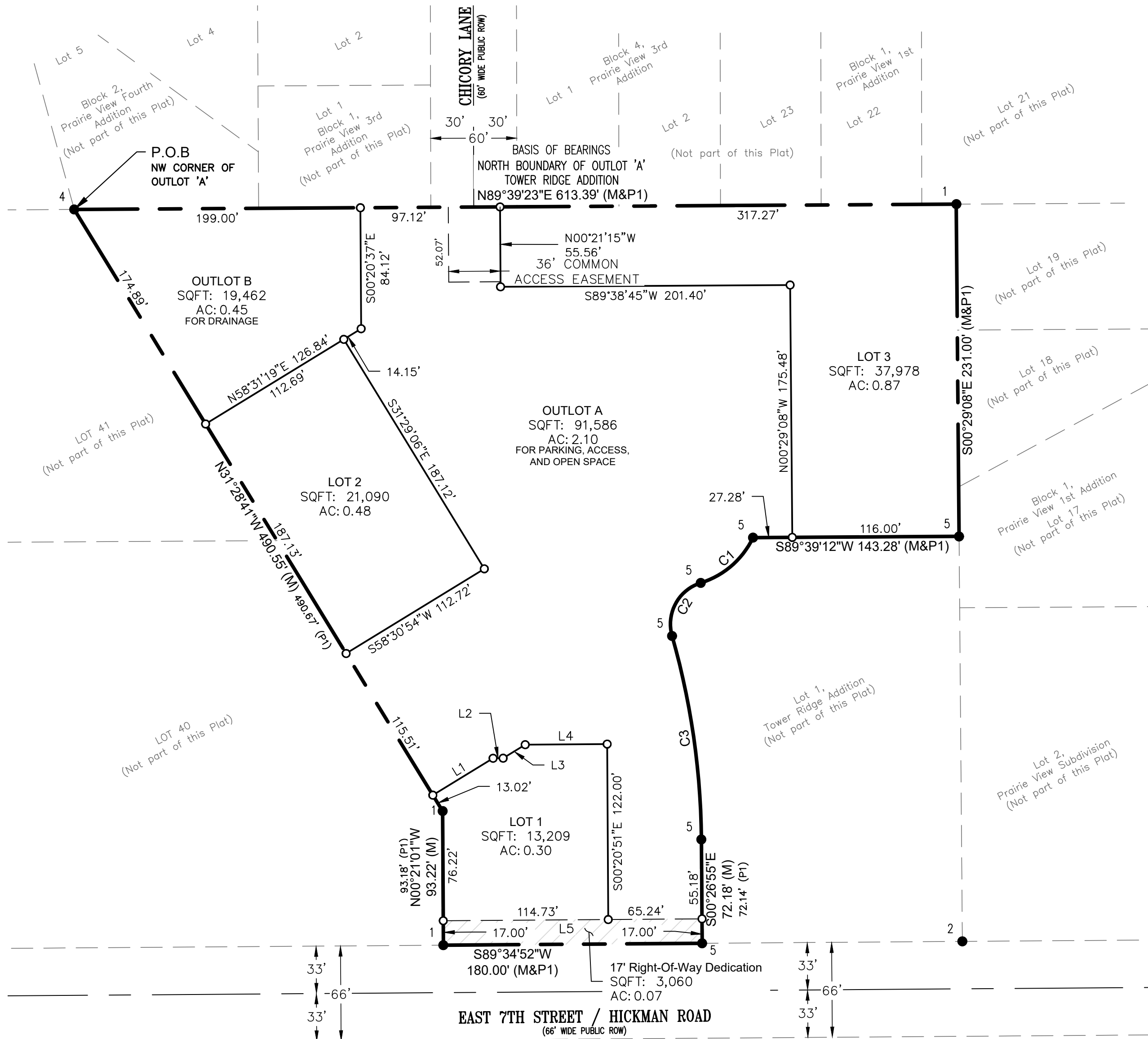
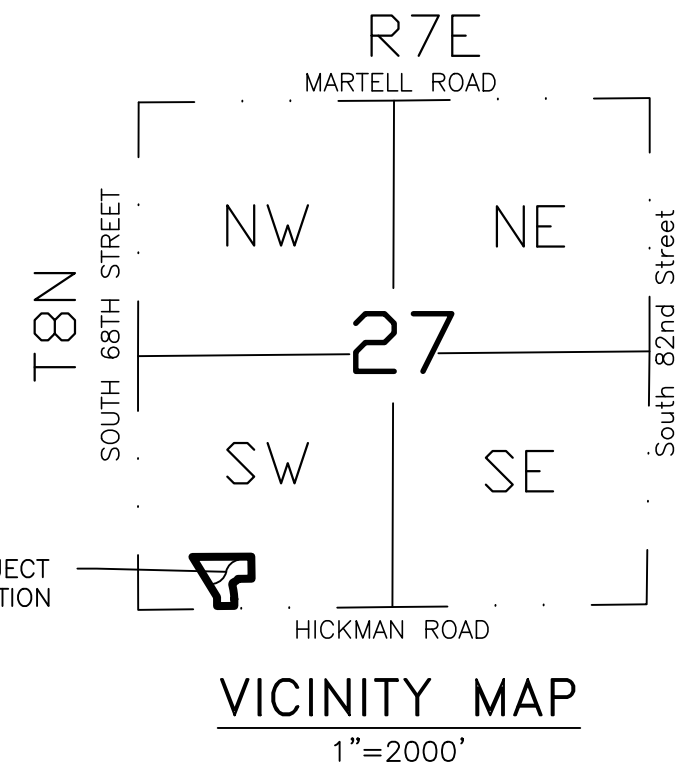
NORTH



BARBER ESTATES ADDITION

FINAL PLAT

BASED ON TOWER RIDGE ADDITION



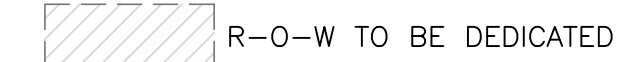
Curve #	Delta	Radius	Length	Chord Direction	Chord Length
C1	47°15'05"	60.00'	49.48'	S49° 07' 15"W	48.09'
C2	88°43'13"	30.00'	46.45'	S28° 23' 13"W	41.95'
C3	15°30'19"	530.00'	143.43'	S08° 12' 04"E	142.99'

Line #	Direction	Length
L1	N58°31'19"E	49.14'
L2	N89°38'59"E	7.00'
L3	N58°31'19"E	18.00'
L4	N89°34'51"E	57.00'
L5	S89°34'51"W	179.97'

MONUMENT SYMBOL LEGEND

- SET (3/4"x24" Bar w/ LS 314 Cap)
- 1 ● FOUND 1" PIPE
- 2 ● FOUND 5/8" REBAR
- 3 ● FOUND CAPPED REBAR 654
- 4 ● FOUND CAPPED REBAR 695
- 5 ● FOUND CAPPED REBAR 825

(P1) PLATTED DIMENSION PER TOWER RIDGE ADDITION
(M) MEASURED DIMENSION



BARBER ESTATES ADDITION

FINAL PLAT BASED ON TOWER RIDGE ADDITION

SURVEYOR'S CERTIFICATE

I hereby certify that I have accurately surveyed the subdivision as required in Section 26.19.041 of the Land Subdivision Ordinance to be known as "BARBER ESTATES ADDITION", a subdivision of Outlot A, Tower Ridge Addition located in the Southwest Quarter of Section 27, Township 8 North, Range 7 East, of the 6th P.M., Hickman, Lancaster County, Nebraska and more particularly described as follows:

A parcel of land being all of Outlot A, Tower Ridge Addition, located in the SW 1/4 of Section 27, T.8N, R.7E of the 6th P.M., City of Hickman Lancaster County, Nebraska, being more particularly described as follows:

Beginning at the NW corner of said Outlot A;
Thence on the North boundary of said Outlot A, N89°39'23"E, 613.39 feet to the NE corner of said Outlot A, all bearings hereon are relative thereto;
Thence on the boundaries of said Outlot A the following nine (9) courses:
Thence, S00°29'08"E, 231.00 feet;
Thence, S89°39'12"W, 143.28 feet to the beginning of a non-tangential curve, to the right having a delta of 47°15'05", having a radius of 60.00 feet, and whose long chord bears S49°07'15"W for a distance of 48.09 feet;
Thence on said curve 49.48 feet a point of reverse curvature to the left having a delta of 88°43'13", having a radius of 30.00 feet, and whose long chord bears S28°23'13"W for a distance of 41.95 feet;
Thence on said curve 46.45 feet to a point of reverse curvature to the right having a delta of 15°30'19", having a radius of 530.00 feet, and whose long chord bears S08°12'04"E for a distance of 142.99 feet;
Thence on said curve 143.43 feet;
Thence, S00°26'55"E, 72.18 feet to the North Right-of-Way of Hickman Rd;
Thence on said North Right-of-Way, S89°34'52"W, 180.00 feet;
Thence departing, N00°21'01"W, 93.22 feet;
Thence, N31°28'41"W, 490.55 feet to the **Point of Beginning**.
Containing 186,384 Square Feet or 4.28 Acres more or less.

Permanent monuments have been placed at each of the final plat corners on the periphery of the subdivision, on the centerline at each street intersection and at each point of tangency and curvature.

All curvilinear dimensions are chord measurements unless shown otherwise, and are in feet or decimals of a foot.

Signed this ___ day of _____, 20__.

Lyle L. Loth, L.S. 314
REGA Engineering Group Inc.
601 Old Cheney Road, Suite 'A'
Lincoln, NE 68512
402-484-7342

LIEN HOLDER CONSENT AND SUBORDINATION

The undersigned holders of those certain liens against the real property described in the plat known as "BARBER ESTATES ADDITION" (hereinafter "Plat"), said lien being recorded in the office of the Register of Deeds of Lancaster County, Nebraska, as Instrument No. 2017000297 (hereinafter "Lien"), does hereby consent to the dedication of and subordinate the Lien to any utility (sewer, water, electric, cable TV, telephone, natural gas) easements of streets or roads, pedestrian way easements, and access easements and relinquishments of access, dedicated to the public, all shown on the Plat, but not otherwise. The undersigned confirms that it is the holder of the Lien and has not assigned the Lien to any other person.

First State Bank Nebraska
By: _____
Trustee & Beneficiary Signature

Print Title Print Name of individual

ACKNOWLEDGMENT

STATE OF NEBRASKA }
LANCASTER COUNTY } SS

The foregoing instrument was acknowledged before me this ___ day of _____, 20__ by _____, Print Name

_____ on behalf of said First State Bank
Print Title

NOTARY PUBLIC

My commission expires the ___ day of _____, 20__.

LIEN HOLDER CONSENT AND SUBORDINATION

The undersigned holders of those certain liens against the real property described in the plat known as "BARBER ESTATES ADDITION" (hereinafter "Plat"), said lien being recorded in the office of the Register of Deeds of Lancaster County, Nebraska, as Instrument No. 2021041691 (hereinafter "Lien"), does hereby consent to the dedication of and subordinate the Lien to any utility (sewer, water, electric, cable TV, telephone, natural gas) easements of streets or roads, pedestrian way easements, and access easements and relinquishments of access, dedicated to the public, all shown on the Plat, but not otherwise. The undersigned confirms that it is the holder of the Lien and has not assigned the Lien to any other person.

Western National Bank
By: _____
Trustee & Beneficiary Signature

Print Title Print Name of individual

ACKNOWLEDGMENT

STATE OF NEBRASKA }
LANCASTER COUNTY } SS

The foregoing instrument was acknowledged before me this ___ day of _____, 20__ by _____, Print Name

_____ on behalf of said Western Bank
Print Title

NOTARY PUBLIC

My commission expires the ___ day of _____, 20__.

DEDICATION

The foregoing plat, known as BARBER ESTATES ADDITION, in the Southwest Quarter of Section 27, Township 8 North, Range 7 East of the 6th P.M., Hickman, Lancaster County, Nebraska, and being more fully described by metes and bounds in the Surveyor's Certificate.

This dedication is made with the free consent and in accordance with the desires of the undersigned, the sole owners, and the easements shown thereon are here by granted in perpetuity to The City of Hickman, Nebraska. Windstream Nebraska Inc., Time Warner Cable Midwest LLC., Black Hills Energy, and Norris Public Power District, their successors and assigns, to allow entry for the purpose of construction, reconstruction, repair, operation and maintenance of wires, cables, conduits, fixtures, poles, towers, pipes, and equipment for the distribution of electricity and gas; telephone and cable television; wastewater collectors; storm drains; water mains and all appurtenances thereto, over, upon, or under the easements as shown on the foregoing plat.

The construction or location of any building or structures, excluding fences, over, upon, or under any easement shown thereon shall be prohibited.

Access to East 7th Street (Hickman Road) is hereby relinquished except at the location of a Private Drive accessing Outlot A.

The additional Right-Of-Way shown hereon is dedicated to the Public.

The City of Hickman, Nebraska, its successors and assigns are hereby held harmless for the cost of replacement or damage to any improvement or vegetation over, upon, or under any easement shown thereon. Relocation of existing facilities will be at the owner/developers expense.

Fun, LLC. Managing Member

STATE OF NEBRASKA }
LANCASTER COUNTY } SS

On this ___ day of _____, 20__, before me, the undersigned, a notary public, duly commissioned, qualified for and residing in said county, personally came _____ as managing member of Fun, LLC, to me personally known to be the identical person whose name is affixed to the dedication of the foregoing plat and he acknowledged the same to be his voluntary act and deed and the voluntary act and deed of said company.

NOTARY PUBLIC

My commission expires the ___ day of _____, 20__.

ACCEPTANCE BY HICKMAN CITY ENGINEERS

This final plat of BARBER ESTATES ADDITION was reviewed and approved by the Hickman City Engineer on this ___ day of _____, 20__.

Hickman City Engineer

COUNTY TREASURER'S CERTIFICATION

This is to certify that I found no regular or special taxes due or delinquent against the property described in the Surveyor's Certificate and embraced in this plat as shown by the records of this office.

County Treasurer Date

APPROVAL OF THE PLANNING COMMISSION OF HICKMAN, NEBRASKA

This final plat of BARBER ESTATES ADDITION was approved by the Hickman Planning Commission this ___ day of _____, 20__.

Chairperson, Hickman Planning Commission

REVIEW OF LANCASTER COUNTY SURVEYOR

This final plat of BARBER ESTATES ADDITION was reviewed by the office of Lancaster

County Surveyor on this ___ day of _____, 20__.

Lancaster County Surveyor

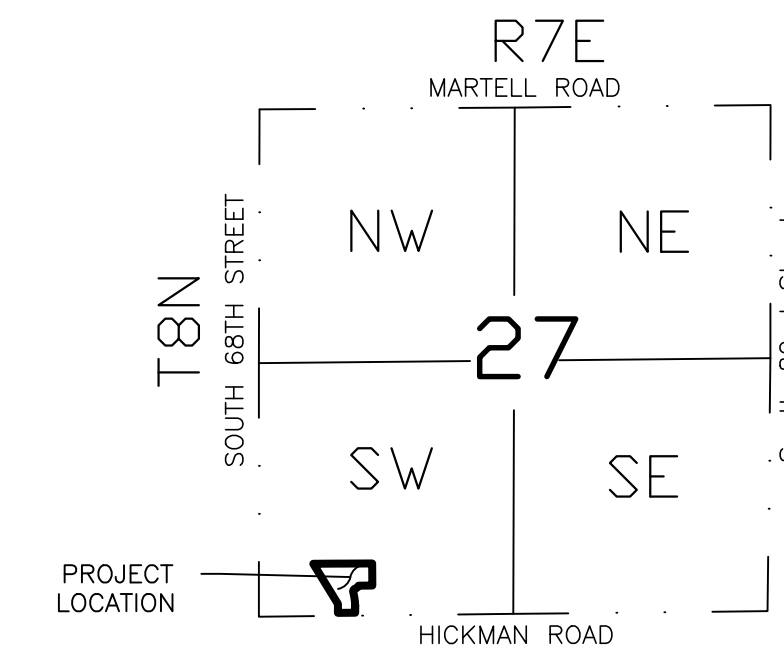
ACCEPTANCE OF HICKMAN CITY COUNCIL

This final plat of BARBER ESTATES ADDITION was approved by the City Council of the City of Hickman, Nebraska

on this this ___ day of _____, 20__, in accordance with the State Statutes of Nebraska.
(City of Hickman SEAL)

Mayor

ATTEST City Clerk



VICINITY MAP
1"=2000'

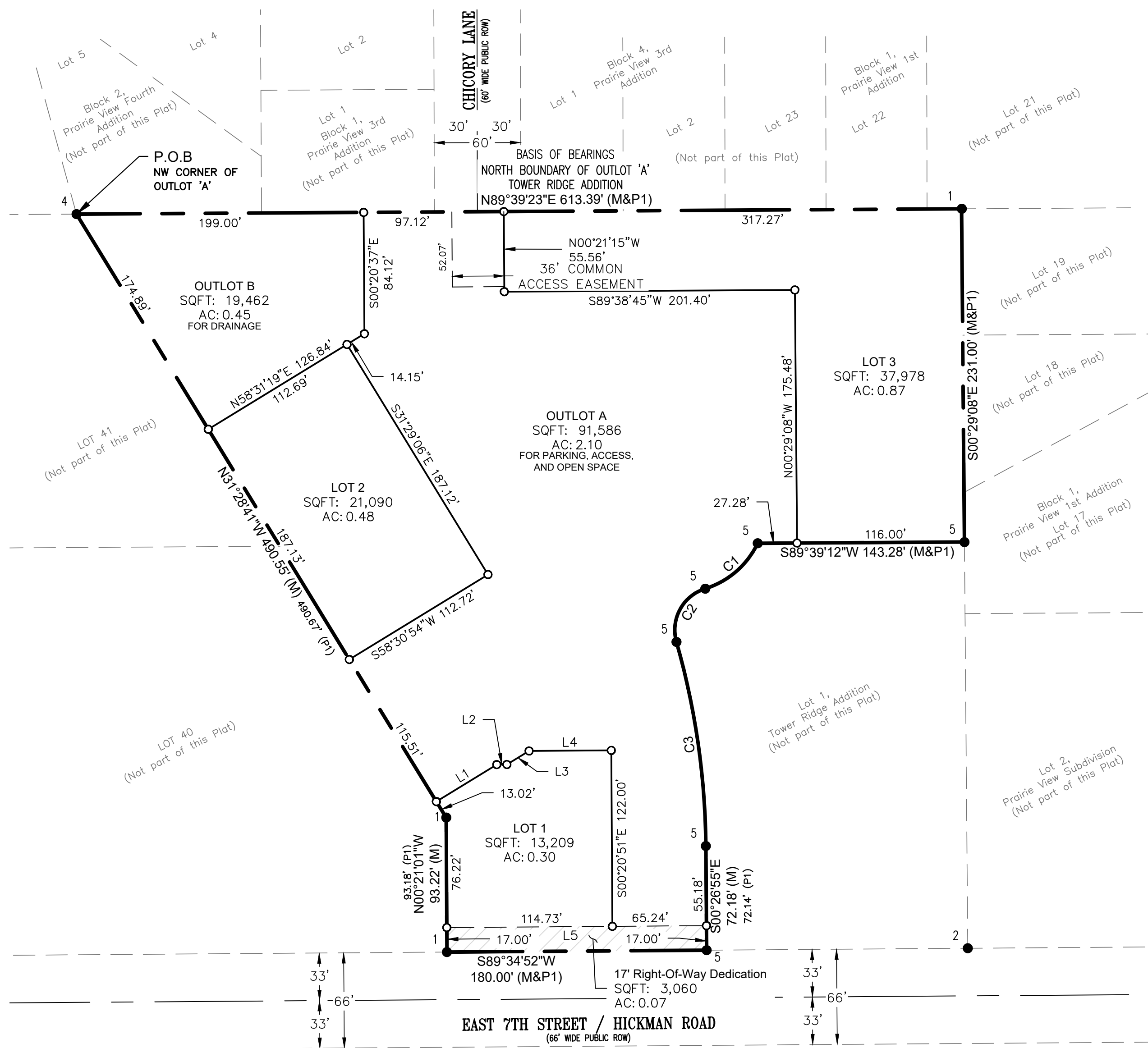
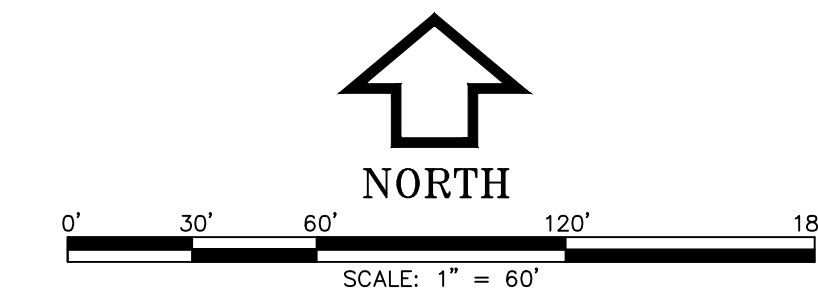
Curve Table				
Curve #	Delta	Radius	Length	Chord Direction
C1	47°15'05"	60.00'	49.48'	S49°07'15"W
C2	88°43'13"	30.00'	46.45'	S28°23'13"W
C3	15°30'19"	530.00'	143.43'	S08°12'04"E

Line Table		
Line #	Direction	Length
L1	N58°31'19"E	49.14'
L2	N89°38'59"E	7.00'
L3	N58°31'19"E	18.00'
L4	N89°34'51"E	57.00'
L5	S89°34'51"W	179.97'

- MONUMENT SYMBOL LEGEND
- SET (3/4"x24" Bar w/ LS 314 Cap)
 - FOUND 1" PIPE
 - FOUND 5/8" REBAR
 - FOUND CAPPED REBAR 654
 - FOUND CAPPED REBAR 695
 - FOUND CAPPED REBAR 825

(P1) PLATTED DIMENSION PER TOWER RIDGE ADDITION
(M) MEASURED DIMENSION

R-O-W TO BE DEDICATED



PROJECT
211242

REGA
ENGINEERING

601 OLD CHENEY RD., SUITE A
LINCOLN, NEBRASKA 68512
(402) 484-7342

- ENGINEERING
- PLANNING
- LANDSCAPE ARCHITECTURE
- LAND SURVEYING
- IRRIGATION

BARBER ESTATES ADDITION - FINAL PLAT
SW 1/4, SEC. 27, T.8N., R.7E., 6TH P.M.
HICKMAN, NEBRASKA

SHEET NO.

1 of 1

After recording please return to:
City of Hickman
115 Locust Street, P.O. Box 127
Hickman, NE 68372

SUBDIVISION AGREEMENT

THIS AGREEMENT is made and entered into by and between Fun, LLC, a Nebraska limited liability company (hereafter “Subdivider”), and the City of Hickman, Nebraska, a municipal corporation, (hereafter "City");

WHEREAS, Subdivider has made application to City for permission to subdivide and for approval of the final plat of Barber Estates Addition, a copy of which is attached to this Agreement as Exhibit 'A' (the 'Final Plat'); and

WHEREAS, Subdivider previously obtained approval of a Preliminary Plat for Barber Estates Addition, a Multi-Family Dwelling Subdivision with certain conditions, via Resolution 2023-24 on November 14, 2023, a copy of which is attached to this Agreement as Exhibit 'B' ('Preliminary Plat');

WHEREAS, the Final Plat contains certain provisions requiring an agreement between Subdivider and City relating to the Final Plat and the development thereof; and,

NOW, THEREFORE, IN CONSIDERATION of the City granting permission and approval of the Final Plat of Barber Estates Addition, it is agreed by and between Subdivider and City per the sections as follows:

1. Waiver and Conditions. Per City Council Resolution 2023-24 – Barber Estates Addition Preliminary Plat, a copy of which is attached to this Agreement as Exhibit 'B' (the 'Preliminary Plat'), the following waivers and conditions apply to the Barber Estates Addition Subdivision Final Plat:
 - a) To allow internal lots to have a zero-foot setback for principal and accessory buildings, if, the minimum distance between buildings complies with building codes and state fire marshal requirements, and in no case shall a building be constructed over a lot line.
 - b) To allow a twenty-foot building setback around the south side of property and amend the waiver to state a twenty foot setback on the south side only.
 - c) To allow off-street parking to be constructed to a minimum requirement is 1.5 stalls per dwelling unit.
 - d) To allow the pedestrian sidewalk to loop internally.
 - e) To provide a sidewalk connection to Seventh Street.
 - f) To provide additional study and development into the retention pond drainage.
 - g) To provide vegetation, opposed to a fence, for screening on the north side in the open spaces where the garage is not located.
2. Owner Maintenance of Lot ‘1’, Lot ‘2’, Lot ‘3’, and Outlot ‘A’ and Outlot ‘B’:

The Subdivider, at its sole cost, shall create under the laws of the State of Nebraska, a limited liability corporation under the name and style of Fun, LLC, to own, operate and maintain Lot ‘1’, Lot ‘2’, Lot ‘3’, and Outlot ‘A’ and Outlot ‘B’, including, but not limited to, the neighborhood sign, fencing, open space, snow removal and stormwater infrastructure, within the Final Plat.

3. Sidewalks. Internal sidewalks and crossings shall be ADA compliant and will remain privately owned by the developer.
4. Corridor Overlay District. The Subdivider agrees to meet the intent and requirements of the Hickman Zoning Ordinance, Section 5.17 CO Corridor Overlay District, regarding, but not limited to, landscaping, building material selection, and lighting.
5. Water Distribution System and Dedication of Easement. The Subdivider agrees to construct, at its sole cost, the public drinking water distribution system ~~within a perpetually dedicated public easement~~ to serve the properties located in the Final Plat, per the City Engineer's approved construction plans, upon the earlier of the following two (2) occurrences i) within five (5) years following the approval of the Final Plat, or ii) prior to the issuance of a Certificate of Occupancy for any structure within the Subdivision. Utility Easements shall be granted to the City of Hickman and other public utility companies to provide services to the properties in the Final Plat.
6. Wastewater Collection System and Dedication of Easement. The Subdivider agrees to construct, at its sole cost, the public wastewater collection system ~~within a perpetually dedicated public easement~~ to serve the properties located in the Final Plat, per the City Engineer's approved construction plans, upon the earlier of the following two (2) occurrences i) within five (5) years following the approval of the Final Plat, or ii) prior to the issuance of a Certificate of Occupancy for any structure within the Subdivision. Utility Easements shall be granted to the City of Hickman and other public utility companies to provide services to the properties in the Final Plat.
7. Electrical Infrastructure and Dedication of Easement. The City, at their sole cost, agrees to install, own, operate and maintain the electrical infrastructure to the subdivision upon completion of final grading of the property and within a reasonable amount of time. Subdivider shall provide, at no cost to the City, easements for all primary electrical infrastructure on Final Plat.
8. Stormwater and Detention Basins. Subdivider agrees to construct, at its sole cost, all stormwater drainage facilities necessary for the development to ensure no adverse effect to the development and roadway drainage. Permanent Detention Basins are initially used as Temporary Retention Sediment Basins until such time that the area draining into the basin is developed. Subdivider covenants and agrees that it assumes the sole obligation for the construction of the Temporary Basin(s), the maintenance thereof during the mass grading of the Subdivision including sediment removal from basins and traps. After completion of the mass grading, the ongoing maintenance of removing accumulated sediment, as may be required for both the Temporary and Permanent Basins, shall be borne by the Subdivider until such time as the property serviced by each basin have been completed. Subdivider, heirs, successors and assigns of Subdivider, and any lender of the Subdivider that subsequently acquires the property through judicial foreclosure, non-judicial foreclosure or by acceptance of a quitclaim deed in lieu of foreclosure, shall be responsible for the Permanent Basins once they have served their purpose as Temporary Basins and maintenance shall be in compliance with the Post-Construction Storm Water Management requirements of City. City shall not have any responsibility for maintenance or repair of any such facility located within the Subdivision and Subdivider shall not construct any permanent structures within Outlot 'B' beyond landscaping and improvements for stormwater management. Costs for landscaping the Permanent Basins shall be the responsibility of the Subdivider. The costs associated with Temporary Sediment Basin closures shall be the responsibility of Subdivider. The engineers for Subdivider shall notify City that, in their professional opinion, the basins and traps are no longer required as a sediment trap. The City shall make a determination that the above provisions have been met, and at such time, Subdivider or Homeowner's Association, their successors and assigns shall assume all maintenance responsibilities. See Sections 6.14 and 8.13 of the Subdivision Regulations.

9. Maintenance of Property and Dedication. All access points from E. 7th Street (Hickman Road), the parking lots and drive lane surfacing, sidewalks, lighting, culverts, snow removal, mowing and all additional improvements within the development shall be owned and maintained solely by the Subdivider and shall **not** be dedicated to or maintained by the City.
10. The Subdivider, at its sole cost, agrees to complete the installation of stop signs for traffic exiting the development onto E. 7th Street (Hickman Road) upon the earlier of the following two (2) occurrences i) within two (2) years following the approval of the Final Plat; or ii) the issuance of any building permits by the City for the Subdivision.
11. The Subdivider, at its sole cost, agrees to complete the installation of permanent markers (property pins) on all lots within the Final Plat by a Registered Land Surveyor upon the earlier of the following two (2) occurrences i) within two (2) years following the approval of the Final Plat; or ii) the issuance of any building permits by the City for the Subdivision.
12. Property Taxes. Subdivider, heirs, successors and assigns of Subdivider, agree to pay all property taxes due for all property, including Outlots not dedicated to the City, in a timely manner to prevent said property from being offered at the Lancaster County tax sale.
13. Recording with Register of Deeds. The Subdivider, upon City approval, shall record this Final Plat, Subdivision Agreement and all exhibits with the Lancaster County Register of Deeds at their sole cost.
14. Omissions. The Subdivider, at its sole cost, agrees to complete any public and private improvements or facility required by Article 6 of the Subdivision Regulations which have not been waived and which inadvertently may have been omitted from the above list of required improvements within four (4) years of the date of this Agreement.
15. Ownership Certificate. The Subdivider certifies property ownership of the parcel(s) outlined on the Final Plat per an Ownership Certificate, a copy of which is attached to this Agreement as Exhibit 'D' ('Ownership Certificate').
16. Non-Discrimination. Developer or its agents, contractors, and consultants shall not, in the performance of this Agreement, discriminate or permit discrimination in violation of federal or state laws or local ordinances because of race, color, sex, age, political or religious opinions, affiliations or national origin.
17. Entire Agreement. This Agreement, and the Exhibits and documents referenced in this Agreement (which are intended to be and hereby are specifically made a part of this Agreement whether or not so stated) express the entire understanding and all agreements of the Parties. Specifically, this Agreement supersedes any prior written or oral agreement or understanding between any of the Parties, whether individually or collectively concerning the subject matter hereof.
18. Assignment. Neither this Agreement nor any obligations hereunder shall be assigned without the express written consent of City, which may be withheld in City's sole discretion.
19. Succession Obligation. This Agreement and all exhibits, obligations and covenants contained herein of the Subdivider shall run with the land and shall be binding and obligatory upon the heirs, successors and assigns of Subdivider, including but not limited to, any lender of the Subdivider that subsequently acquires the property through judicial foreclosure, non-judicial foreclosure or by acceptance of a quitclaim deed in lieu of foreclosure, including all of the lots legally described in Exhibit 'C' ('Legal Descriptions') to this Agreement.

Dated this _____ day of _____, 2023.

SUBDIVIDER:
Fun, LLC
a Nebraska Limited Liability Corporation

Matthew Barber, Manager

STATE OF NEBRASKA)
) ss
COUNTY OF LANCASTER)

The foregoing instrument was acknowledged before me this ____ day of _____, 2023 by Matthew Barber, Manager of Fun, LLC, a Nebraska Limited Liability Corporation, on behalf of the company.

Notary Public

For the City:

City of Hickman, Nebraska

Attest:

By: Phil Goering, Mayor

By: Jaala Johnson, City Clerk

Approved as to Form:

SEAL

Kelly Hoffschneider, City Attorney

EXHIBIT 'A'
BARBER ESTATES ADDITION
FINAL PLAT

EXHIBIT 'B'
BARBER ESTATES ADDITION
PRELIMINARY PLAT

EXHIBIT 'C'
BARBER ESTATES ADDITION
LEGAL DESCRIPTION OF LOTS CONTAINED

LOTS:
Lot 1
Lot 2
Lot 3
OUTLOT 'A' FOR PARKING ACCESS AND OPEN SPACE
OUTLOT 'B' FOR DRAINAGE

EXHIBIT 'D'
BARBER ESTATES ADDITION
OWNERSHIP CERTIFICATE

DRAINAGE STUDY REPORT

BARBER ESTATES ADDITION

Hickman, Nebraska

October 24th, 2023

REGA PROJECT 211242

PREPARED FOR:

City of Hickman, Nebraska

PREPARED BY:

REGA ENGINEERING GROUP, INC.

LINCOLN, NEBRASKA



TABLE OF CONTENTS

<i>PURPOSE</i>	3
<i>PROJECT LOCATION & DESCRIPTION</i>	3
Figure 1: Pre-development conditions for Barber Estates Addition	3
<i>STUDY PROCEDURE</i>	4
Table 1: Pre-development Sub-basin Information	4
Table 2: Post-development Sub-basin Information	4
Table 3: City of Hickman, NE 24-hour design rainfall	5
<i>PRE-DEVELOPMENT RUNOFF CONDITIONS</i>	5
<i>POST-DEVELOPMENT RUNOFF CONDITIONS</i>	5
<i>STORM SEWER CALCULATIONS</i>	6
Figure 2: Pre-Development Drainage Plan	7
Figure 3: Post-Development Drainage Plan	8
<i>HYDROCAD MODEL</i>	9
Table 4: Post-development Peak Runoff Rates	9
Table 5: Post-development Peak Runoff Rates	9
<i>HYDRAULIC ANALYSIS</i>	10
Table 6: Pond Elevation Heights	10
<i>FINDINGS</i>	10
Table 7: Overall Drainage Results	10
APPENDICES	
APPENDIX A: USDA WEB SOIL SURVEY	
APPENDIX B: STORM SEWER CALCULATIONS	
APPENDIX C: HYDROCAD MODELS (2-, 10-, and 100-Year)	
APPENDIX D: DETENTION POND DETAILS	
APPENDIX E: FLOODPLAIN FIGURE	

DRAINAGE SUMMARY

BARBER ESTATES ADDITION DRAINAGE STUDY

PURPOSE

The primary objective of this study was to analyze pre- and post-development drainage areas for the proposed Barber Estates Addition. This study incorporates the runoff of the existing site, the runoff/discharge of the proposed site and the stormwater sewer system. The requirements of the City of Lincoln have been used for the drainage calculations/detention pond configuration. This shows the mitigation of the 2-, 10-, and 100-year storm events for post-development conditions.

PROJECT LOCATION & DESCRIPTION

The proposed project is located within a residential area on the north side of Hickman Road to the east of the existing gas station, and to the west of Sunflower Drive, connecting to the existing Chicory Lane. The parcel, approximately 4.28 acres, is currently a woodland area within the residential neighborhood. Pre-development conditions are shown in **Figure 1: Pre-development Conditions for Barber Estates Addition**. The proposed site consists of 3 apartment buildings, an open greenspace at the center of the lot, and a detention cell at the northwest corner of the site. Most of the existing site drains from east to west towards the adjacent property and gas station.

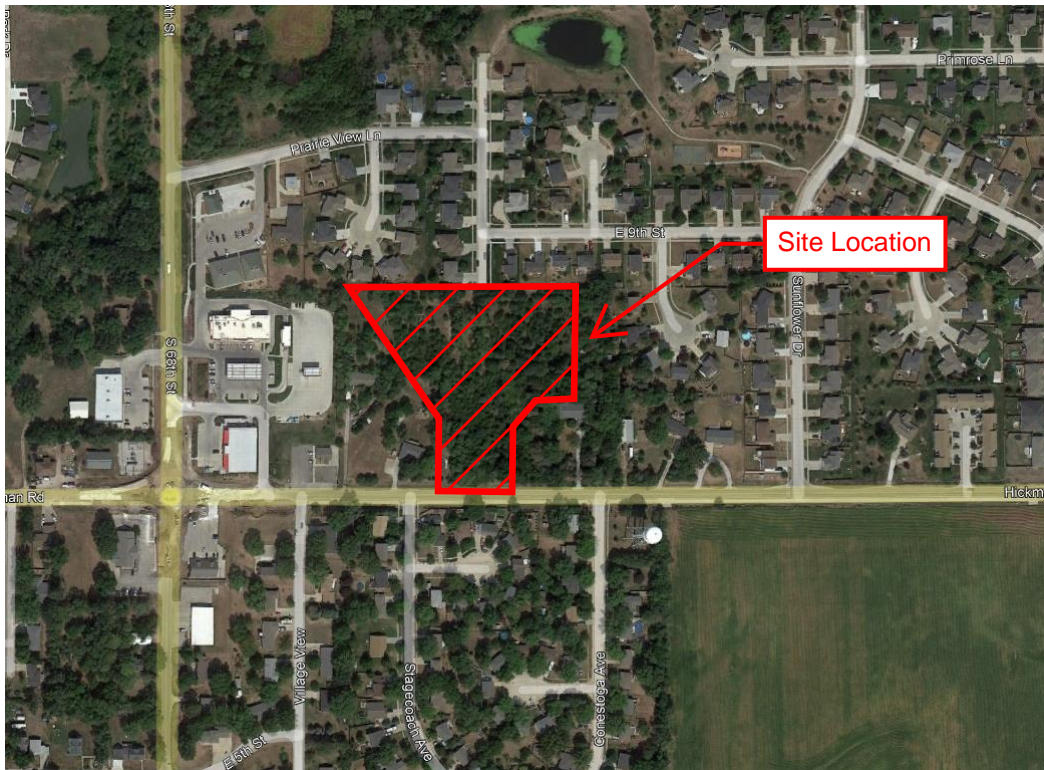


Figure 1: Pre-development conditions for Barber Estates Addition

STUDY PROCEDURE

A hydrologic analysis was performed using HydroCAD to determine the impacts of the proposed drainage on post-construction conditions. The SCS Method was used to model storm events and estimate hydrologic conditions for this study. This method relates runoff rates to precipitation depths, land use and topography. The peak runoff rate is determined by an empirical equation that relates the quantity of runoff from a given area to a total rainfall falling at a uniform rate on the same area. Inputs required for the SCS method include:

- Drainage area (acres)
- Curve Number (CN)
- Time of concentration (Tc)
- Storm distribution

SCS curve numbers, used for predicting peak runoff, are based on the various land uses and soil types as determined by the National Cooperative Soil Survey published by the United States Department of Agriculture Natural Resources Conservation Service. In the case of multiple land uses, a weighted average is calculated. The low curve number of 80 was used for the proposed pervious areas that contain >75% of grass with type D soils. The high curve number of 90 was used for the weighted value of Designation 2' containing areas with >75% of grass with type D soils, paved streets, roofs of the apartment buildings, and sidewalks. The hydrologic soil groups for this site can be found in **Appendix A: USDA Web Soil Survey**. The sub basin area, land use, hydrologic soil group, curve number and time of concentration for each sub-basin were calculated and are shown below in **Table 1: Pre-development Sub-basin Information** and **Table 2: Post-development Sub-basin Information**.

Table 1: Pre-development Sub-basin Information

Designation	Area	Land Use	Curve Number*	Time of Concentration**
	(Acres)			(minutes)
1	4.28	Woodland Area	86	21.7
Offsite	1.24	Woodland Area	86	21.7

* Calculations for the Curve Number were calculated in HydroCAD

** Time of concentration was calculated in HydroCAD

Table 2: Post-development Sub-basin Information

Designation	Area	Land Use	Curve Number*	Time of Concentration**
	(Acres)			(minutes)
1'	2.51	Open Greenspace/Pavement	88	8.0
2'	2a'	Residential	87	9.8
	2b'	Residential	96	9.8
	Comb.	Residential	90	9.8
3'	0.78	Offsite Drainage	80	8.0
Offsite'	1.24	Offsite Coming in to Site	86	25.2

* Calculations for the Curve Number were calculated in HydroCAD

** Time of concentration was calculated in Storm Sewer Calculation Spreadsheet

A minimum time of concentration value of 8 minutes was used based off the requirements in section 2.4.1 Hydrology in the City of Lincoln Drainage Criteria Manual.

Time of concentration was calculated using the TR-55 method, which considers the average basin slope and hydraulic length for each subarea. The hydraulic length is the distance required from the most remote point in the drainage area to the catchment point. Time of concentration was calculated both in HydroCAD and the Storm Sewer Calculation Spreadsheet. The maximum sheet flow distance used was 100 feet, with the maximum shallow concentrated flow being 360'. The time of concentration calculated in the Preliminary Pipe Sizing Spreadsheet (9.7 minutes) governed a higher time of concentration value for both 2a' and 2b'.

A type II rainfall distribution, which has a storm duration of 24 hours, was used to model the 2-, 10- and 100-year storm events. The design rainfall intensity rates were from the NOAA National Weather Service site and are shown below in **Table 3: City of Hickman, NE 24-hour design rainfall.**

Table 3: City of Hickman, NE 24-hour design rainfall

Frequency	24-hr Rainfall (in.)
2-Year	3.10
10-Year	4.62
100-Year	7.56

PRE-DEVELOPMENT RUNOFF CONDITIONS

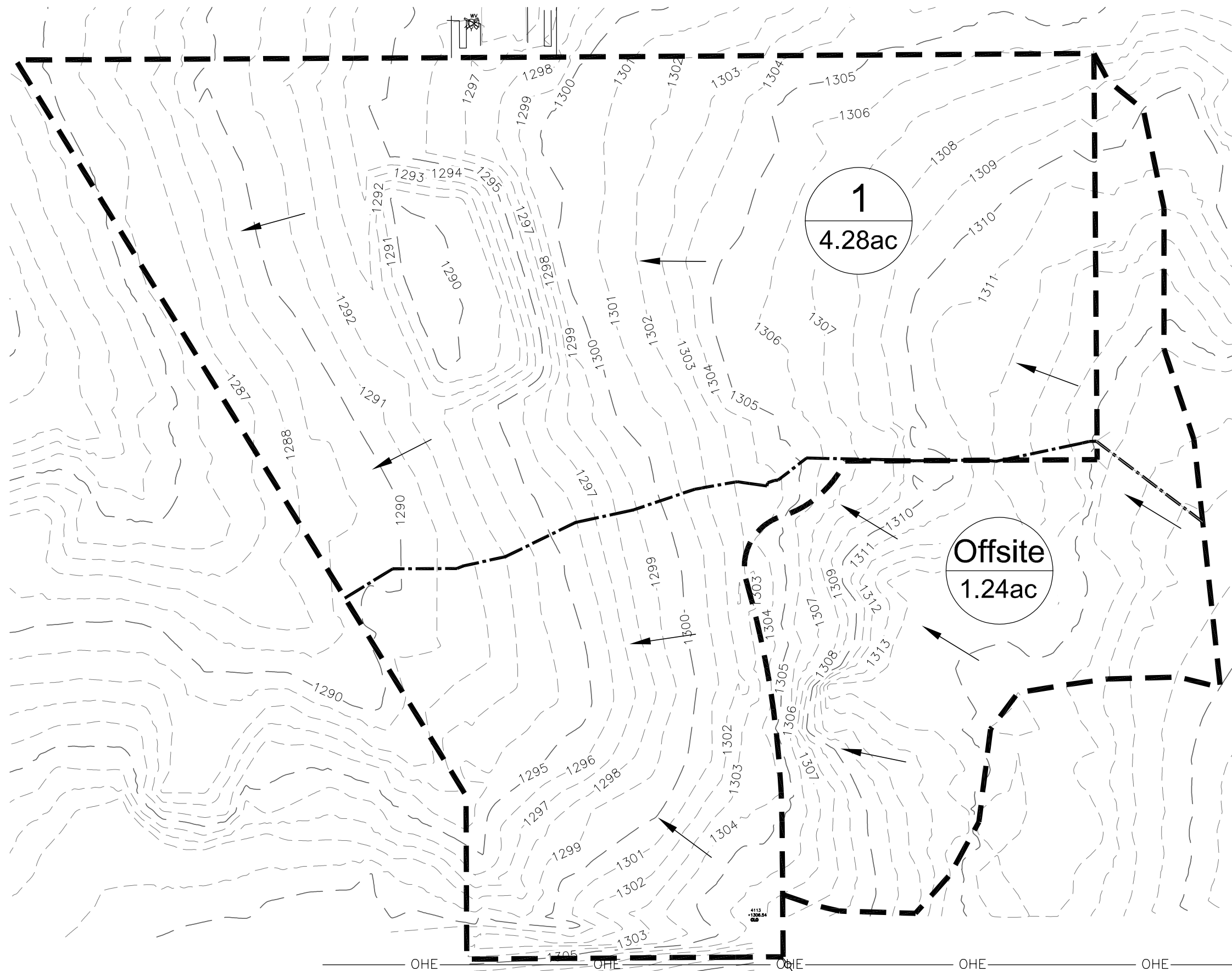
Pre-development conditions are comprised of one (1) basin within the site and one outside of the site. This onsite area is labeled 1. Drainage Basin 1 consists of 4.28 acres of land that drains primarily from east to west across the site. Drainage Basin Offsite contains 1.24 acres of land that flows directly onto our site. These drainage areas and the site's flow path are illustrated in **Figure 2: Pre-development Drainage Plan.**

POST-DEVELOPMENT RUNOFF CONDITIONS

Post-development conditions consist of three (3) main drainage areas, with subsections within them. Drainage Basin 1' consists of 2.51 acres of land that drains to two curb inlets and an area inlet located on the northern end of the site that leads into the proposed detention cell. Basin 2' is split into two areas, 2a' (0.68 acres) and 2b' (0.31 acres). Area 2a' drains to area inlets on the east side of the east 24-Plex apartment building and the curb inlet on the south side of greenspace in the middle of the site. Area 2b' drains towards the area inlets on the east side of the south 12-Plex apartment building and the curb inlet on the west side of the drive entering the site from the south. Area 3' contains all offsite drainage and has a total area of 0.78 acres. Area Offsite' consists of the same area as portrayed in the Pre-Development Runoff Conditions with the same drainage pattern. The post development drainage areas and flow paths are illustrated in **Figure 3: Post-development Drainage Plan.**

STORM SEWER CALCULATIONS

For this site, there is a total of seven area inlets and 4 curb inlets that are all connected via storm sewer system leading into the proposed detention cell at the northwest corner of the site. In the occasion of overflow at the inlets and at the detention area, an overflow drainage map has been provided to show the path of water at these locations along with a more detailed map of the concentrated flow discharging from the detention cell and its impact on the neighboring properties. At Curb Inlet 1, any overflow drainage would bypass the inlet and carry down towards the detention cell. Overflow at Curb Inlet 2 would result in the same location for drainage not intercepted by the inlet. At Curb Inlet 3, the water would similarly bypass on its way to Curb Inlet 4 where it would over top the curb and inlet the detention cell if any overflow occurred in that area. The spreadsheet calculating the pipe sizes correlating to the 10-year storm event, along with a drainage area map, a drainage overflow map, and a storm sewer exhibit, have been placed in ***Appendix B: Storm Sewer Calculations***.
















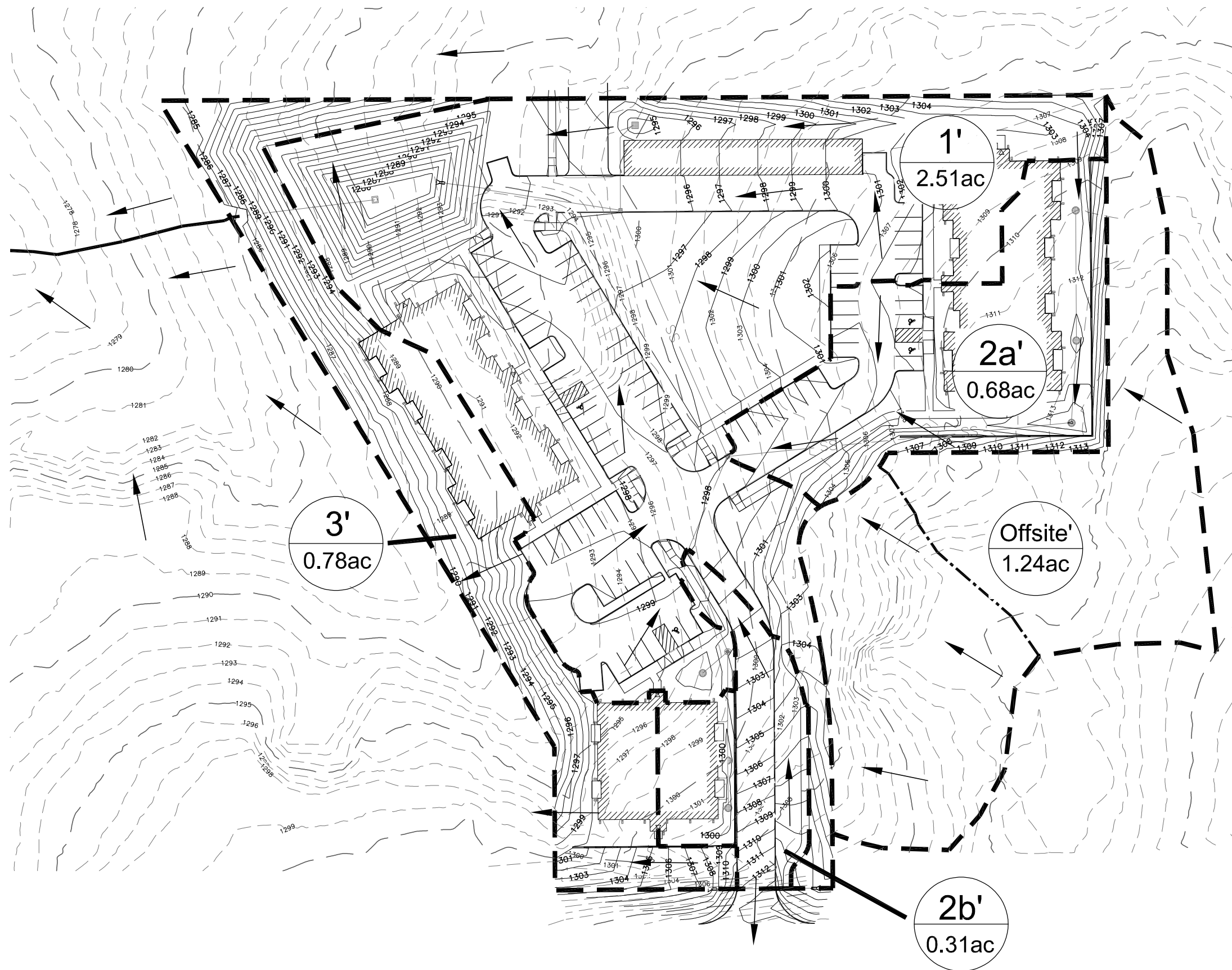

NORTH
 SCALE 1" = 60'

FIGURE 2: PRE-DEVELOPMENT DRAINAGE PLAN

JOB NAME: BARBER ESTATES ADDITION LOCATION: CHICORY LANE AND HICKMAN ROAD											
DESCRIPTION: PRE DRAINAGE PATTERNS											
<table style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center; border-bottom: 1px solid black;">LEGEND</th> </tr> <tr> <td style="text-align: center; border-right: 1px solid black;">  </td> <td style="padding: 2px;">DRAINAGE BASIN</td> </tr> <tr> <td style="text-align: center; border-right: 1px solid black;">  </td> <td style="padding: 2px;">WATER PATH</td> </tr> <tr> <td style="text-align: center; border-right: 1px solid black;">  </td> <td style="padding: 2px;">TIME OF CONCENTRATION</td> </tr> <tr> <td style="text-align: center; border-right: 1px solid black;">  </td> <td style="padding: 2px;">EXISTING CONTOURS</td> </tr> </table>		LEGEND			DRAINAGE BASIN		WATER PATH		TIME OF CONCENTRATION		EXISTING CONTOURS
LEGEND											
	DRAINAGE BASIN										
	WATER PATH										
	TIME OF CONCENTRATION										
	EXISTING CONTOURS										
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; border-right: 1px solid black; padding: 2px;">DRAWN BY: JE</td> <td style="padding: 2px;">CHECKED BY: NB</td> </tr> <tr> <td colspan="2" style="padding: 2px;">SCALE: 1"=60'</td> </tr> <tr> <td colspan="2" style="padding: 2px;">DATE: 10/19/2023</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 2px;">JOB NUMBER</td> <td style="padding: 2px;">SHEET</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 2px;">211242</td> <td style="padding: 2px;">1 OF 2</td> </tr> </table>		DRAWN BY: JE	CHECKED BY: NB	SCALE: 1"=60'		DATE: 10/19/2023		JOB NUMBER	SHEET	211242	1 OF 2
DRAWN BY: JE	CHECKED BY: NB										
SCALE: 1"=60'											
DATE: 10/19/2023											
JOB NUMBER	SHEET										
211242	1 OF 2										
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%; padding: 2px;"> REGA ENGINEERING 601 OLD CHENEY RD., SUITE A LINCOLN, NEBRASKA 68512 (402).484.7342 </td> <td style="width: 20%; padding: 2px; vertical-align: top;"> <ul style="list-style-type: none"> ● ENGINEERING ● PLANNING ● LANDSCAPE ARCHITECTURE ● LAND SURVEYING ● IRRIGATION </td> </tr> </table>		REGA ENGINEERING 601 OLD CHENEY RD., SUITE A LINCOLN, NEBRASKA 68512 (402).484.7342	<ul style="list-style-type: none"> ● ENGINEERING ● PLANNING ● LANDSCAPE ARCHITECTURE ● LAND SURVEYING ● IRRIGATION 								
REGA ENGINEERING 601 OLD CHENEY RD., SUITE A LINCOLN, NEBRASKA 68512 (402).484.7342	<ul style="list-style-type: none"> ● ENGINEERING ● PLANNING ● LANDSCAPE ARCHITECTURE ● LAND SURVEYING ● IRRIGATION 										





 NORTH
 SCALE 1" = 70'

FIGURE 3: POST-DEVELOPMENT DRAINAGE PLAN

JOB NAME: BARBER ESTATES ADDITION LOCATION: CHICORY LANE AND HICKMAN ROAD															
DESCRIPTION: POST DRAINAGE PATTERNS															
<table border="0" style="width: 100%;"> <tr> <th colspan="2" style="text-align: center; border-bottom: 1px solid black;">LEGEND</th> </tr> <tr> <td style="text-align: center;">- - - - -</td> <td>- DRAINAGE BASIN</td> </tr> <tr> <td style="text-align: center;">- . - . - .</td> <td>- TIME OF CONCENTRATION</td> </tr> <tr> <td style="text-align: center;">- - - - -</td> <td>- FLOW FROM DETENTION CELL</td> </tr> <tr> <td style="text-align: center;">— 1299 —</td> <td>- EXISTING CONTOURS</td> </tr> <tr> <td style="text-align: center;">— 1299 —</td> <td>- PROPOSED CONTOURS</td> </tr> <tr> <td style="text-align: center;">←</td> <td>- WATER PATH</td> </tr> </table>	LEGEND		- - - - -	- DRAINAGE BASIN	- . - . - .	- TIME OF CONCENTRATION	- - - - -	- FLOW FROM DETENTION CELL	— 1299 —	- EXISTING CONTOURS	— 1299 —	- PROPOSED CONTOURS	←	- WATER PATH	<div style="text-align: center; font-weight: bold; font-size: 1.2em;">REGA ENGINEERING</div> <p style="font-size: 0.8em;"> 601 OLD CHENEY RD., SUITE A LINCOLN, NEBRASKA 68512 (402).484.7342 </p> <ul style="list-style-type: none"> ● ENGINEERING ● PLANNING ● LANDSCAPE ARCHITECTURE ● LAND SURVEYING ● IRRIGATION
LEGEND															
- - - - -	- DRAINAGE BASIN														
- . - . - .	- TIME OF CONCENTRATION														
- - - - -	- FLOW FROM DETENTION CELL														
— 1299 —	- EXISTING CONTOURS														
— 1299 —	- PROPOSED CONTOURS														
←	- WATER PATH														
DRAWN BY: JE	CHECKED BY: NB														
SCALE: 1"=70'															
DATE: 10/19/2023															
JOB NUMBER	SHEET														
211242	2 OF 2														

HYDROCAD MODEL

Hydrologic pond routing was used to model the proposed detention cell in HydroCAD. The proposed grading plan was used to create the elevation versus storage volume curves representing the detention pond. The resulting hydrograph summaries for the post-development sub-basins and detention area are provided in ***Appendix C: HydroCAD Models***. In this model, some of the areas shown in Figures 2 and 3 have been combined due to them draining towards the same area. Areas 2a' and 2b' combine into the label 2' in HydroCAD because both travel to the same place via storm sewer system. The peak runoff rates were calculated based on the inflow into the proposed detention cell at the northwest area of the site. An outlet structure has been implemented within the cell to control the flow leaving the site. This structure contains one 15" HDPE outlet pipe, one 18"x6" opening on the face of it for lower pond water elevations, and one 24" x 24" horizontal grate on top of the structure. A cross-section of the pond along with dimensions of the structure have been detailed in ***Appendix D: Detention Details***. The resulting flow rates for the pre-development and post-development sub-basins and detention ponds are summarized in **Table 4: Pre-development peak Runoff Rates** and **Table 5: Post-development Peak Runoff Rates**.

Table 4: Pre-development Peak Runoff Rates

Peak Runoff Rates (CFS)			
Sub-Basin	2-Year Storm	10-Year Storm	100-Year Storm
1	8.0	13.4	26.2
Offsite	2.3	4.1	7.6

Table 5: Post-development Peak Runoff Rates

Peak Runoff Rates (CFS)			
Sub-Basin	2-Year Storm	10-Year Storm	100-Year Storm
1'	7.9	13.4	23.9
2'	3.1	5.1	8.9
3'	1.7	3.3	6.6
Offsite'	2.1	3.8	7.0

HYDRAULIC ANALYSIS

A hydraulic analysis was performed to estimate the flow capacity of the proposed culverts within the study area and the pond storage capacities for the 2-, 10-, and 100-year storm events. HydroCAD software was used to perform this analysis, including Manning's equation was utilized which relates the flow capacity to pipe size, roughness, and slope. By using this technique, one can model and evaluate a detention pond used to attenuate peak runoff rates exceeding the capacity of the outlet structure. The outputs of the model include the total storage volume and upstream high-water elevation. Following the specifications displayed in the City of Lincoln Drainage Criteria Manual, a minimum of 1' of freeboard is achieved by the proposed detention cell with the actual amount of freeboard being 2.09'. The 2-, 10-, and 100-year water elevations are shown below in **Table 6: Pond Elevation Heights**.

Table 6: Pond Elevation Heights

Post-development Sub-Basin	2-Year Water Elevation (ft. above sea level)	10-Year Water Elevation (ft. above sea level)	100-Year Water Elevation (ft. above sea level)	Top of Storage (ft. above sea level)
Pond 1P	1288.47	1290.15	1292.91	1295.00

FINDINGS

The primary objective of this study is to ensure that the post-development conditions were at or below the pre-development conditions. Ultimately, most of the flow ends up at the proposed detention cell with some draining to adjacent areas. As shown below in **Table 7: Overall Drainage Results**, the combined post-development 2-, 10-, and 100-year storm runoff rates are below existing runoff rates. This demonstrates total reduction in development runoff. Based off the Floodplain Figure shown in **Appendix E: Floodplain Figure**, the site is not within any floodplain. To the immediate southwest lies the floodplain within the city of Hickman, and based on our site's drainage, it flows into the tributary leading into it.

Table 7: Overall Drainage Results

Peak Runoff Rate (CFS)			
	2-Year Storm Event	10-Year Storm Event	100-Year Storm Event
Pre-Development Total	10.4	18.3	33.8
Post-Development Total	9.8	13.7	19.8

APPENDIX A

USDA WEB SOIL SURVEY



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Lancaster County, Nebraska**



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Preface	2
How Soil Surveys Are Made	5
Soil Map	8
Soil Map.....	9
Legend.....	10
Map Unit Legend.....	11
Map Unit Descriptions.....	11
Lancaster County, Nebraska.....	13
7666—Mayberry silty clay loam, 3 to 6 percent slopes, eroded.....	13
7684—Wymore silty clay loam, 3 to 6 percent slopes, eroded.....	14
References	16

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map


The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)




















Soils







 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features


Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

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

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

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Lancaster County, Nebraska
 Survey Area Data: Version 27, Sep 8, 2022

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

Date(s) aerial images were photographed: Aug 21, 2021—Aug 28, 2021

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
7666	Mayberry silty clay loam, 3 to 6 percent slopes, eroded	0.2	4.5%
7684	Wymore silty clay loam, 3 to 6 percent slopes, eroded	3.5	95.5%
Totals for Area of Interest		3.7	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

Custom Soil Resource Report

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Lancaster County, Nebraska

7666—Mayberry silty clay loam, 3 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: 1ts07

Elevation: 1,000 to 1,500 feet

Mean annual precipitation: 30 to 32 inches

Mean annual air temperature: 52 to 55 degrees F

Frost-free period: 160 to 180 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Mayberry and similar soils: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mayberry

Setting

Landform: Hillslopes

Down-slope shape: Concave, convex

Across-slope shape: Linear

Parent material: Reworked weathered till

Typical profile

H1 - 0 to 12 inches: silty clay loam

H2 - 12 to 48 inches: clay

H3 - 48 to 60 inches: stratified sandy loam to clay

Properties and qualities

Slope: 2 to 7 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 12 to 36 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): 4e

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: D

Ecological site: R106XY074NE - Clayey Upland

Forage suitability group: Clayey Subsoil (G106XY210NE)

Other vegetative classification: Clayey Subsoil (G106XY210NE)

Hydric soil rating: No

7684—Wymore silty clay loam, 3 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2qskg
Elevation: 730 to 1,700 feet
Mean annual precipitation: 28 to 40 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 158 to 203 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Wymore, eroded, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wymore, Eroded

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess

Typical profile

Ap - 0 to 6 inches: silty clay loam
Bt1 - 6 to 11 inches: silty clay
Bt2 - 11 to 40 inches: silty clay loam
BC - 40 to 51 inches: silty clay loam
C - 51 to 79 inches: silty clay loam

Properties and qualities

Slope: 3 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 12 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.5 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: R106XY074NE - Clayey Upland

Custom Soil Resource Report

Hydric soil rating: No

Minor Components

Baileyville

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R106XY074NE - Clayey Upland
Hydric soil rating: No

Pawnee

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R106XY074NE - Clayey Upland
Hydric soil rating: No

Irwin

Percent of map unit: 4 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: R106XY074NE - Clayey Upland
Hydric soil rating: No

Aquolls

Percent of map unit: 1 percent
Landform: Drainageways
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R106XY032NE - Subirrigated
Hydric soil rating: Yes

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

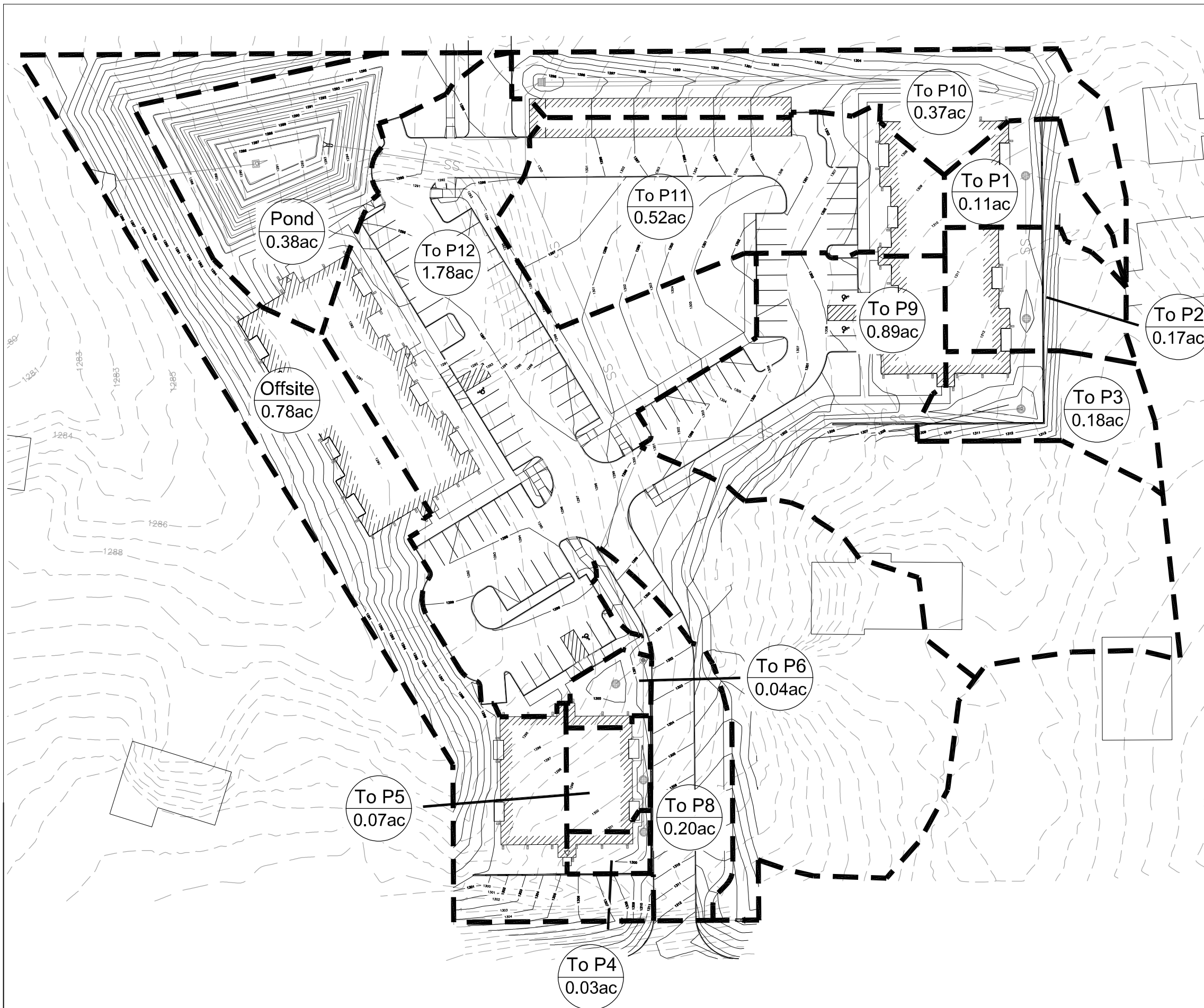
United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242


United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

APPENDIX B




STORM SEWER CALCULATIONS




 NORTH
 SCALE 1" = 60'

JOB NAME: BARBER ESTATES ADDITION
 LOCATION: CHICORY LANE AND HICKMAN ROAD

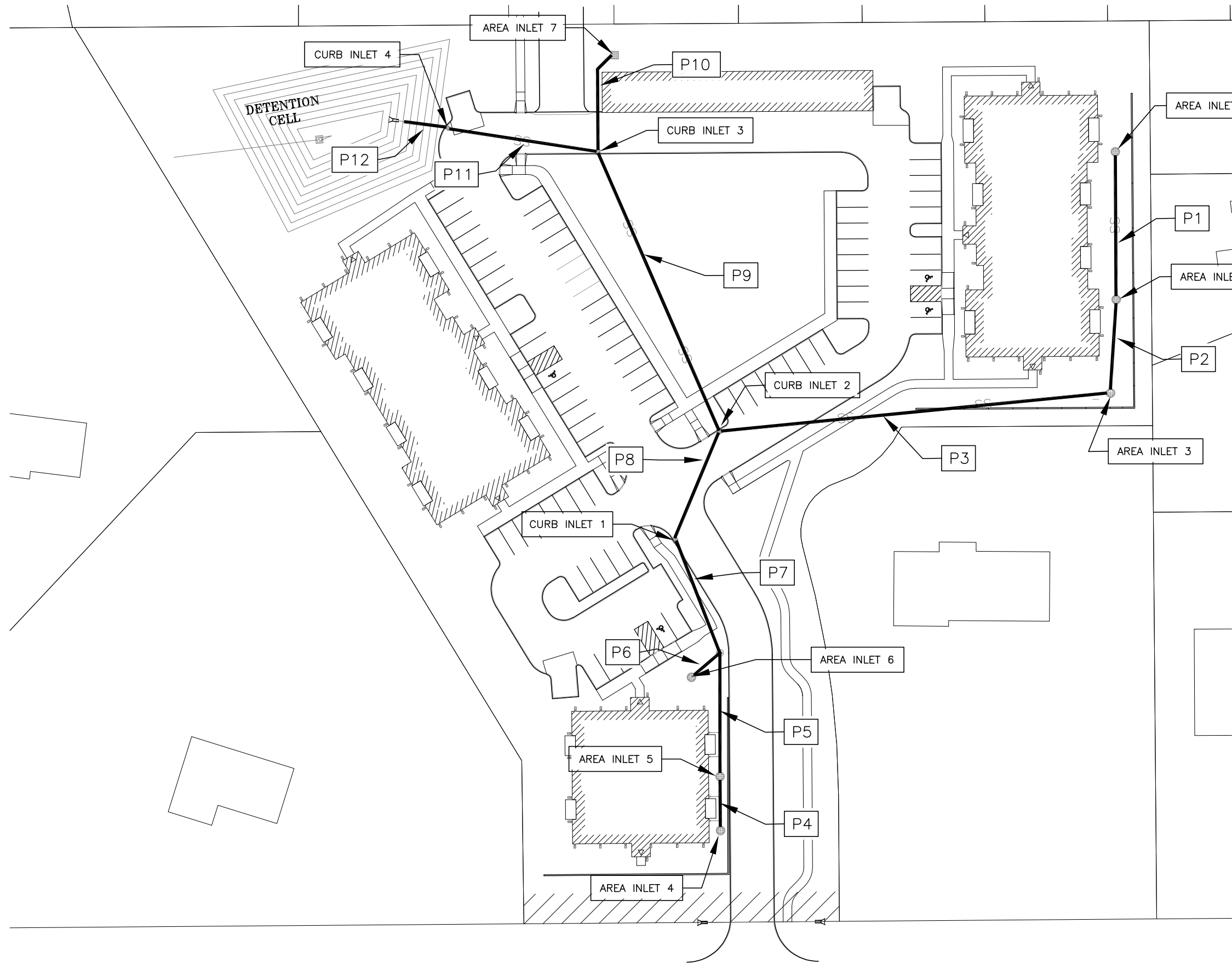
DESCRIPTION:
 DRAINAGE AREAS MAP


LEGEND	
	DRAINAGE AREA
	1299 - EXISTING CONTOURS
	1299 - PROPOSED CONTOURS


REGA ENGINEERING
 601 OLD CHENEY RD., SUITE A
 LINCOLN, NEBRASKA 68512
 (402).484.7342

DRAWN BY:JE	CHECKED BY:NB
SCALE: 1"=60'	
DATE:10/19/2023	
JOB NUMBER	
211242	

- ENGINEERING
- PLANNING
- LANDSCAPE ARCHITECTURE
- LAND SURVEYING
- IRRIGATION

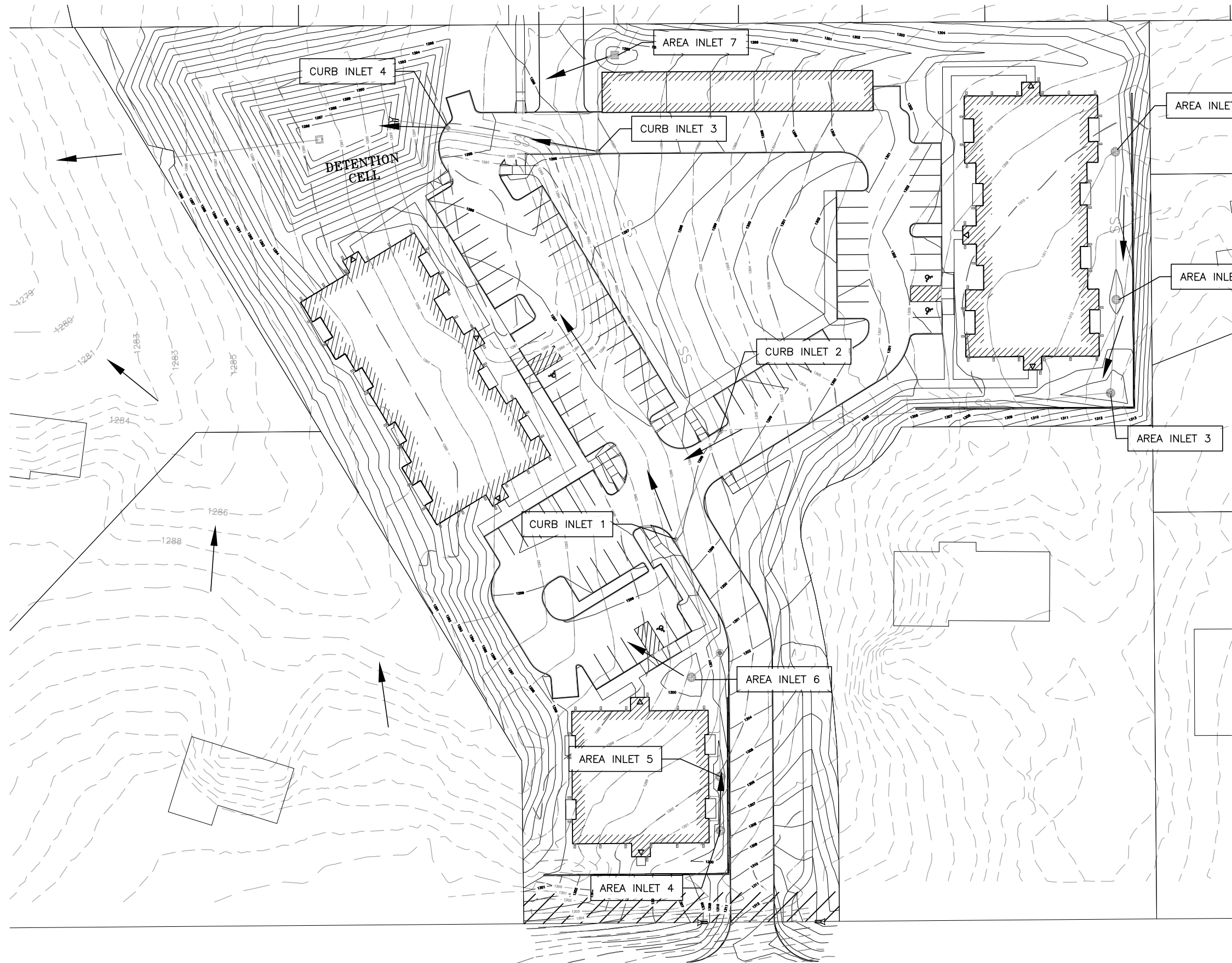




 NORTH
 SCALE 1" = 60'




JOB NAME: BARBER ESTATES ADDITION LOCATION: CHICORY LANE AND HICKMAN ROAD	
DESCRIPTION: STORM SEWER EXHIBIT	
<p style="text-align: center;">LEGEND</p> <p style="text-align: center;">  - STORM PIPE </p>	<p style="font-size: 1.2em; font-weight: bold; margin: 0;">REGA</p> <p style="font-weight: bold; margin: 0;">ENGINEERING</p> <p style="font-size: 0.8em; margin: 0;">601 OLD CHENEY RD., SUITE A LINCOLN, NEBRASKA 68512 (402).484.7342</p> <ul style="list-style-type: none"> ● ENGINEERING ● PLANNING ● LANDSCAPE ARCHITECTURE ● LAND SURVEYING ● IRRIGATION
DRAWN BY: JE	CHECKED BY: NB
SCALE: 1"=60'	
DATE: 10/19/2023	
JOB NUMBER	
211242	

Preliminary Pipe Sizing Calculations - Barber Estates Addition

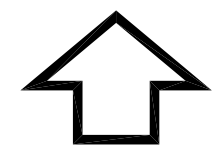
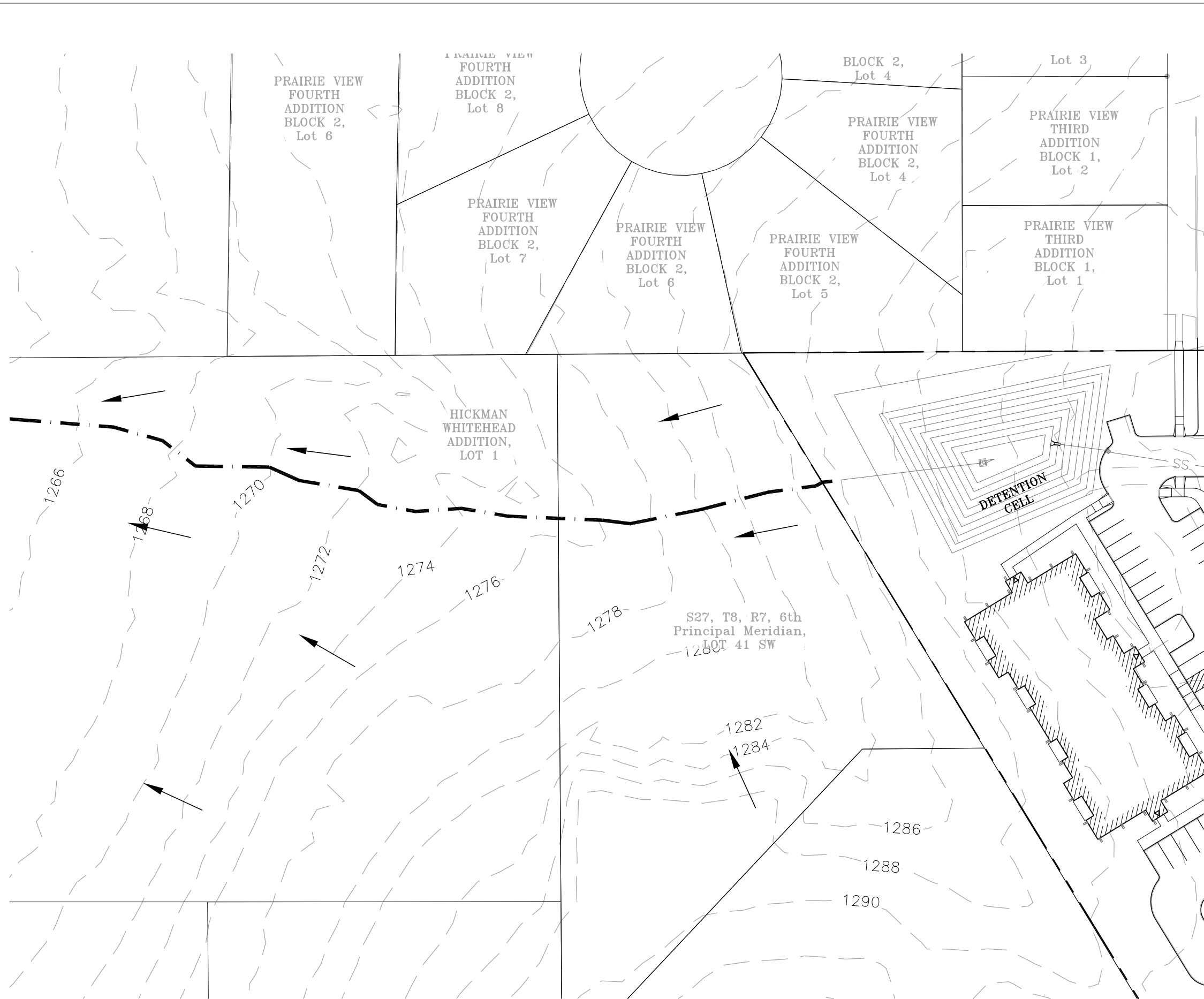
Minor Storm System Conveyance Analysis														Major Storm System Conveyance Analysis								Comments		
Minor Storm Average Return Frequency						10 Years		Major Storm Average Return Frequency															100 Years	
Location	Area, A	Coefficient, C	A*C	Sum, A*C	Time of Concentration, Tc	Intensity I	Runoff, Qr	Pipe Slope, Sp	Pipe Length, L	Pipe Diameter D	Pipe Capacity Qp	Pipe Velocity Vp	Time in Section Tp	Intensity I100	Flow, Q100	Overflow Route Slope	Street Width	Street Capacity	Swale Width	Swale Capacity	Overflow + Pipe Capacity			
	acre				min	in/hr	cfs	ft/ft	ft	in	cfs	f/s	min	in/hr	cfs	ft/ft	ft	cfs	ft	cfs	cfs			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)		
P1	0.11	0.40	0.04	0.04	8.0	5.76	0.3	0.0200	80	8	1.9	5.3	0.25	11.25	0.50	0.0167					1.9	Flow from Area Inlet 1		
+P2	0.17	0.40	0.07	0.11	8.3	5.70	0.6	0.0200	49	8	1.9	5.3	0.15	11.15	1.25	0.0167					1.9	Combined flow from P1 and Area Inlet 2		
+P3	0.18	0.40	0.07	0.18	8.4	5.67	1.0	0.0200	221	10	3.4	6.2	0.60	11.09	2.04	1.0167					3.4	Combined flow from P2 and Area Inlet 3		
P4	0.03	0.60	0.02	0.02	8.0	5.76	0.1	0.0100	27	8	1.3	3.8	0.12	11.25	0.20	2.0167					1.3	Flow from Area Inlet 4		
+P5	0.07	0.60	0.04	0.06	8.1	5.73	0.3	0.0100	68	8	1.3	3.8	0.30	11.21	0.67	3.0167					1.3	Combined flow from P4 and Area Inlet 5		
P6	0.04	0.60	0.02	0.02	8.0	5.76	0.1	0.0235	21	8	2.0	5.8	0.06	11.25	0.27	4.0167					2.0	Flow from Area Inlet 6		
+P7(P5+P6)	0.00	0.90	0.00	0.08	8.4	5.67	0.5	0.0100	68	8	1.3	3.8	0.30	11.09	0.93	4.0167					1.3	Combined flow from P5 and P6		
+P8	0.20	0.90	0.18	0.26	8.7	5.61	1.5	0.0288	65	10	4.0	7.4	0.15	10.97	2.90	5.0167					4.0	Combined flow from P7 and Curb Inlet 1		
+P9(P3+P8)	0.89	0.60	0.53	0.98	9.0	5.56	5.5	0.0100	173	15	7.0	5.7	0.51	10.86	10.67	6.0167					7.0	Combined flow from P3, P8, and Curb Inlet 2		
P10	0.37	0.60	0.22	0.22	8.0	5.76	1.3	0.0100	57	8	1.3	3.8	0.25	11.25	2.50	7.0167					1.3	Flow from Area Inlet 7		
+P11(P10+P9)	0.52	0.90	0.47	1.67	9.5	5.46	9.1	0.0200	85	15	9.9	8.1	0.18	10.68	17.86	7.0167					9.9	Combined flow from P9, P10 and Curb Inlet 3		
+P12	1.78	0.75	1.34	3.01	9.7	5.43	16.3	0.0550	33	15	16.4	13.4	0.04	10.62	31.92	8.0167					16.4	Combined flow from P11 and Curb Inlet 4		




 NORTH
 SCALE 1" = 60'

JOB NAME: BARBER ESTATES ADDITION LOCATION: CHICORY LANE AND HICKMAN ROAD	
DESCRIPTION: OVERFLOW DRAINAGE MAP	
<p style="text-align: center;">LEGEND</p> <p>  - OVERFLOW PATH  - EXISTING CONTOURS  - PROPOSED CONTOURS </p>	<p style="font-size: 1.2em; font-weight: bold; margin: 0;">REGA</p> <p style="font-weight: bold; margin: 0;">ENGINEERING</p> <p style="font-size: 0.8em; margin: 0;">601 OLD CHENEY RD., SUITE A LINCOLN, NEBRASKA 68512 (402).484.7342</p>
DRAWN BY: JE	CHECKED BY: NB
SCALE: 1"=60'	
DATE: 10/19/2023	
JOB NUMBER	
211242	

- ENGINEERING
- PLANNING
- LANDSCAPE ARCHITECTURE
- LAND SURVEYING
- IRRIGATION



NORTH
SCALE 1" = 60'

JOB NAME: BARBER ESTATES ADDITION	
LOCATION: CHICORY LANE AND HICKMAN ROAD	
DESCRIPTION: OFFSITE IMPACT FROM DETENTION CELL	
<p>LEGEND</p> <p>--- WATER PATH</p> <p>- - - EXISTING CONTOURS</p> <p>← WATER FLOW DIRECTION</p>	
DRAWN BY: JE	CHECKED BY: NB
SCALE: 1"=60'	
DATE: 10/19/2023	
JOB NUMBER	SHEET
211242	

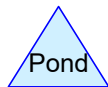
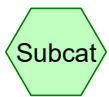
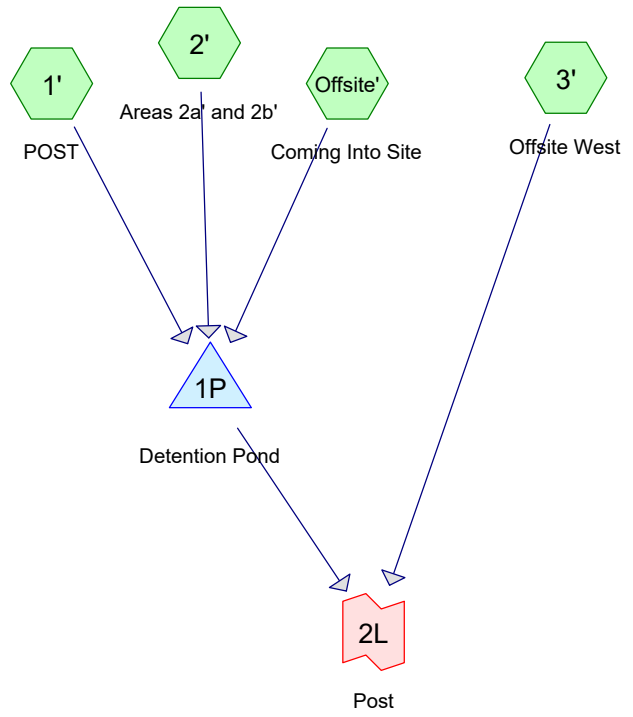
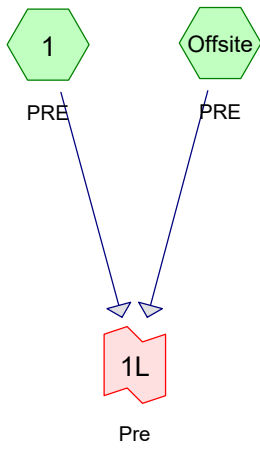
REGA ENGINEERING

601 OLD CHENEY RD., SUITE A
LINCOLN, NEBRASKA 68512
(402).484.7342

- ENGINEERING
- PLANNING
- LANDSCAPE ARCHITECTURE
- LAND SURVEYING
- IRRIGATION

APPENDIX C

HYDROCAD MODELS (2-year, 10-year, 100-year)



Routing Diagram for 211242 Barber Addition
 Prepared by REGA Engineering, Printed 10/24/2023
 HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

Printed 10/24/2023

Page 2

Project Notes

Rainfall events imported from "NRCS-Rain.txt" for 6453 NE Lancaster

211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

Printed 10/24/2023

Page 3

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-Year	MSE 24-hr	3	Default	24.00	1	3.10	2
2	10-Year	MSE 24-hr	3	Default	24.00	1	4.62	2
3	100-Year	MSE 24-hr	3	Default	24.00	1	7.56	2

211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

Printed 10/24/2023

Page 4

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.560	80	>75% Grass cover, Good, HSG D (1', 2', 3')
1.720	98	Paved roads w/curbs & sewers, HSG D (1', 2')
6.760	86	Woods/grass comb., Poor, HSG D (1, Offsite, Offsite')
11.040	86	TOTAL AREA

211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

Printed 10/24/2023

Page 5

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
11.040	HSG D	1, 1', 2', 3', Offsite, Offsite'
0.000	Other	
11.040		TOTAL AREA

211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

Printed 10/24/2023

Page 6

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	2.560	0.000	2.560	>75% Grass cover, Good	1', 2', 3'
0.000	0.000	0.000	1.720	0.000	1.720	Paved roads w/curbs & sewers	1', 2'
0.000	0.000	0.000	6.760	0.000	6.760	Woods/grass comb., Poor	1, Off site , Off site ,
0.000	0.000	0.000	11.040	0.000	11.040	TOTAL AREA	

211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

Printed 10/24/2023

Page 7

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)	Node Name
1	1P	1,285.75	1,285.16	83.5	0.0071	0.010	0.0	15.0	0.0	

211242 Barber Addition

MSE 24-hr 3 2-Year Rainfall=3.10"

Prepared by REGA Engineering

Printed 10/24/2023

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

Page 8

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1: PRE Runoff Area=4.280 ac 0.00% Impervious Runoff Depth>1.67"
 Flow Length=421' Tc=21.7 min CN=86 Runoff=8.04 cfs 0.596 af

Subcatchment1': POST Runoff Area=2.510 ac 47.01% Impervious Runoff Depth>1.83"
 Tc=8.0 min CN=88 Runoff=7.89 cfs 0.383 af

Subcatchment2': Areas 2a' and 2b' Runoff Area=0.990 ac 54.55% Impervious Runoff Depth>2.00"
 Tc=9.8 min CN=90 Runoff=3.09 cfs 0.165 af

Subcatchment3': Offsite West Runoff Area=0.780 ac 0.00% Impervious Runoff Depth>1.26"
 Tc=8.0 min CN=80 Runoff=1.72 cfs 0.082 af

SubcatchmentOffsite: PRE Runoff Area=1.240 ac 0.00% Impervious Runoff Depth>1.67"
 Flow Length=421' Tc=21.7 min CN=86 Runoff=2.33 cfs 0.173 af

SubcatchmentOffsite': Coming Into Site Runoff Area=1.240 ac 0.00% Impervious Runoff Depth>1.67"
 Flow Length=163' Slope=0.0552 '/' Tc=25.2 min CN=86 Runoff=2.14 cfs 0.172 af

Pond 1P: Detention Pond Peak Elev=1,288.47' Storage=3,582 cf Inflow=12.06 cfs 0.720 af
 Outflow=8.55 cfs 0.719 af

Link 1L: Pre Inflow=10.37 cfs 0.768 af
 Primary=10.37 cfs 0.768 af

Link 2L: Post Inflow=9.80 cfs 0.801 af
 Primary=9.80 cfs 0.801 af

Total Runoff Area = 11.040 ac Runoff Volume = 1.571 af Average Runoff Depth = 1.71"
84.42% Pervious = 9.320 ac 15.58% Impervious = 1.720 ac

211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 2-Year Rainfall=3.10"

Printed 10/24/2023

Page 9

Summary for Subcatchment 1: PRE

Runoff = 8.04 cfs @ 12.32 hrs, Volume= 0.596 af, Depth> 1.67"
 Routed to Link 1L : Pre

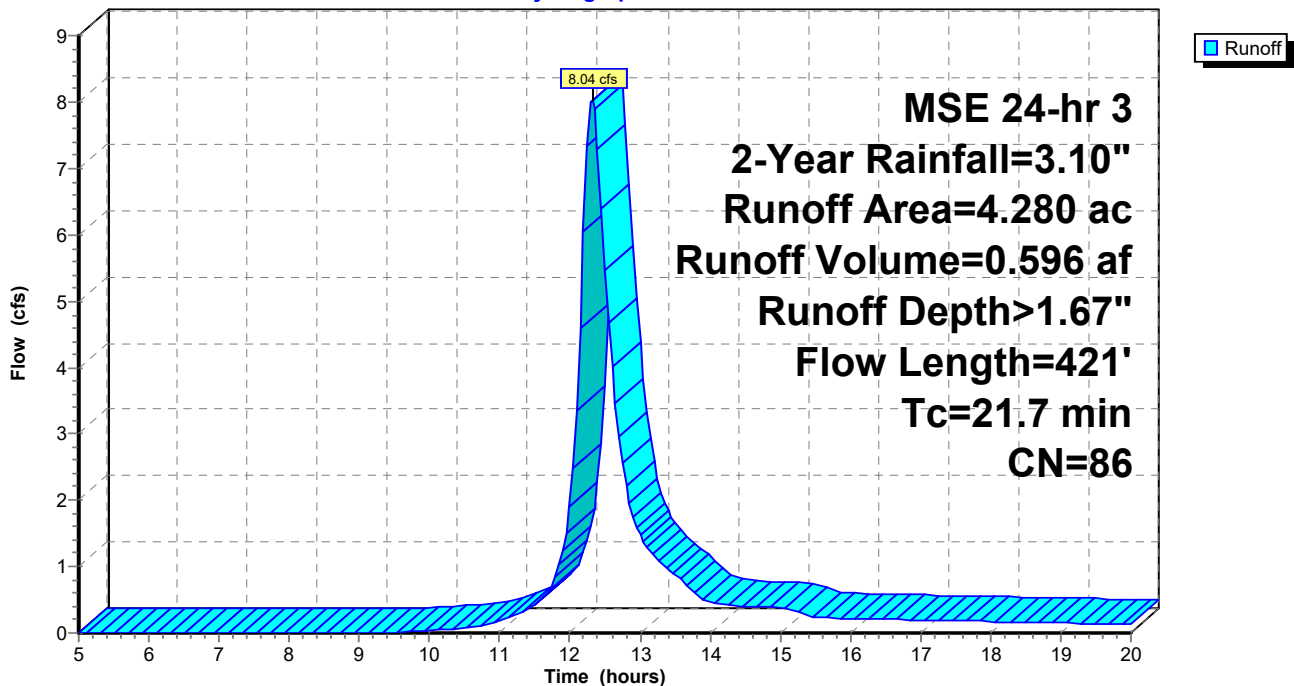
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 2-Year Rainfall=3.10"

Area (ac)	CN	Description
4.280	86	Woods/grass comb., Poor, HSG D
4.280		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.4	100	0.0350	0.10		Sheet Flow, Sheet Flow
					Woods: Light underbrush n= 0.400 P2= 3.10"
4.3	321	0.0628	1.25		Shallow Concentrated Flow, Shallow Concentrated
					Woodland Kv= 5.0 fps
21.7	421	Total			

Subcatchment 1: PRE

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering
 HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 2-Year Rainfall=3.10"

Printed 10/24/2023

Page 10

Summary for Subcatchment 1': POST

Runoff = 7.89 cfs @ 12.15 hrs, Volume= 0.383 af, Depth> 1.83"
 Routed to Pond 1P : Detention Pond

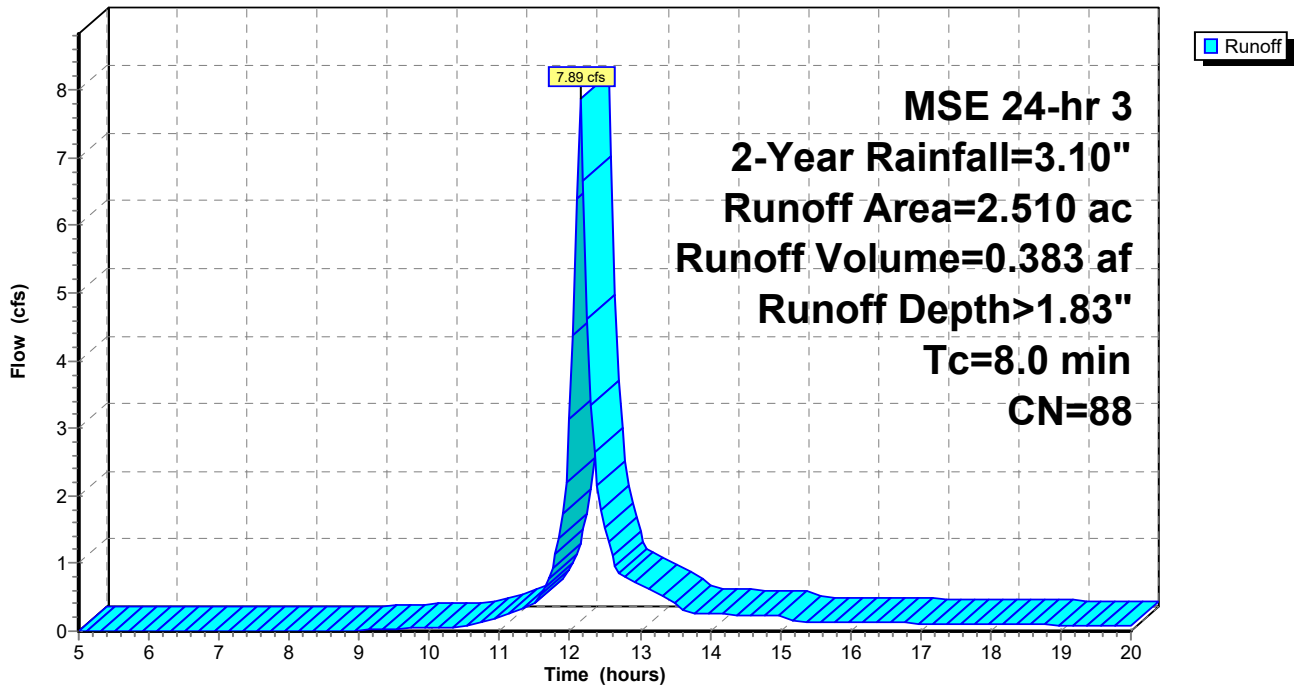
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 2-Year Rainfall=3.10"

Area (ac)	CN	Description
1.330	80	>75% Grass cover, Good, HSG D
1.180	98	Paved roads w/curbs & sewers, HSG D
2.510	88	Weighted Average
1.330		52.99% Pervious Area
1.180		47.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0					Direct Entry, COL Drainage Criteria Minimum

Subcatchment 1': POST

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering
 HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 2-Year Rainfall=3.10"

Printed 10/24/2023

Page 11

Summary for Subcatchment 2': Areas 2a' and 2b'

Runoff = 3.09 cfs @ 12.17 hrs, Volume= 0.165 af, Depth> 2.00"
 Routed to Pond 1P : Detention Pond

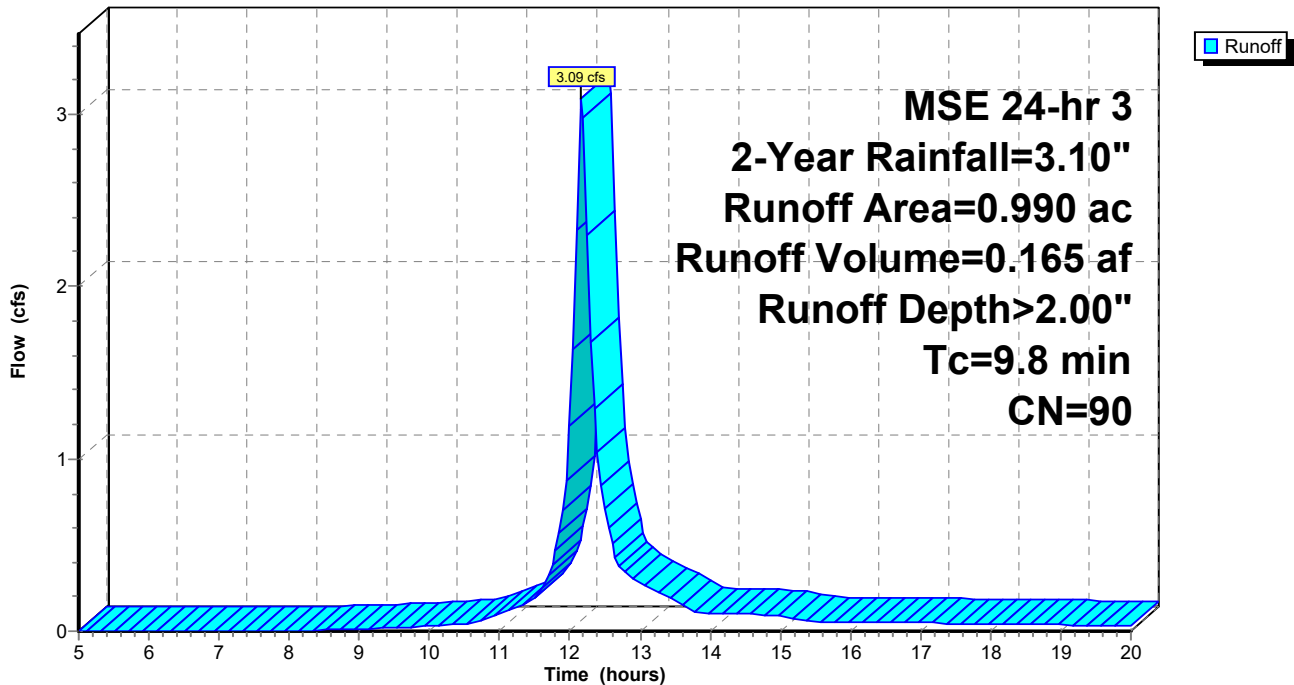
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 2-Year Rainfall=3.10"

Area (ac)	CN	Description
0.450	80	>75% Grass cover, Good, HSG D
0.540	98	Paved roads w/curbs & sewers, HSG D
0.990	90	Weighted Average
0.450		45.45% Pervious Area
0.540		54.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8					Direct Entry, Storm Sewer Network

Subcatchment 2': Areas 2a' and 2b'

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 2-Year Rainfall=3.10"

Printed 10/24/2023

Page 12

Summary for Subcatchment 3': Offsite West

Runoff = 1.72 cfs @ 12.16 hrs, Volume= 0.082 af, Depth> 1.26"

Routed to Link 2L : Post

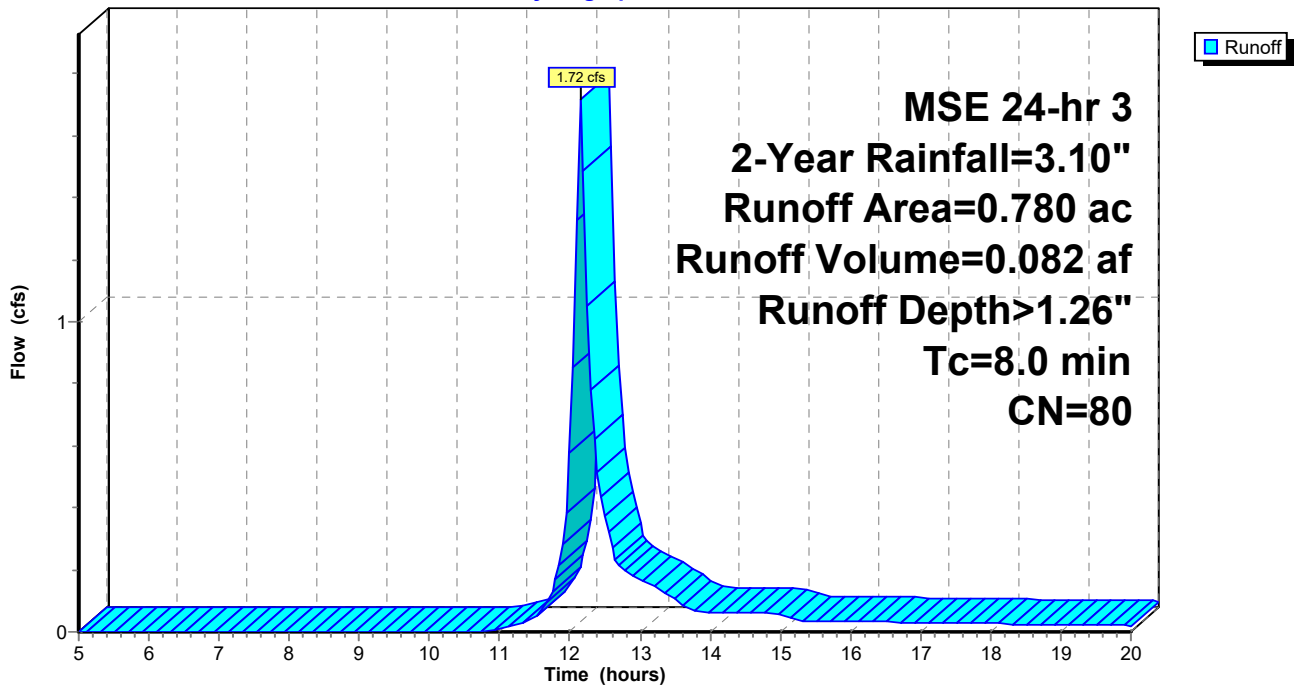
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=3.10"

Area (ac)	CN	Description
0.780	80	>75% Grass cover, Good, HSG D
0.780		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0					Direct Entry, COL Criteria Manual

Subcatchment 3': Offsite West

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering
 HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 2-Year Rainfall=3.10"

Printed 10/24/2023

Page 13

Summary for Subcatchment Offsite: PRE

Runoff = 2.33 cfs @ 12.32 hrs, Volume= 0.173 af, Depth> 1.67"
 Routed to Link 1L : Pre

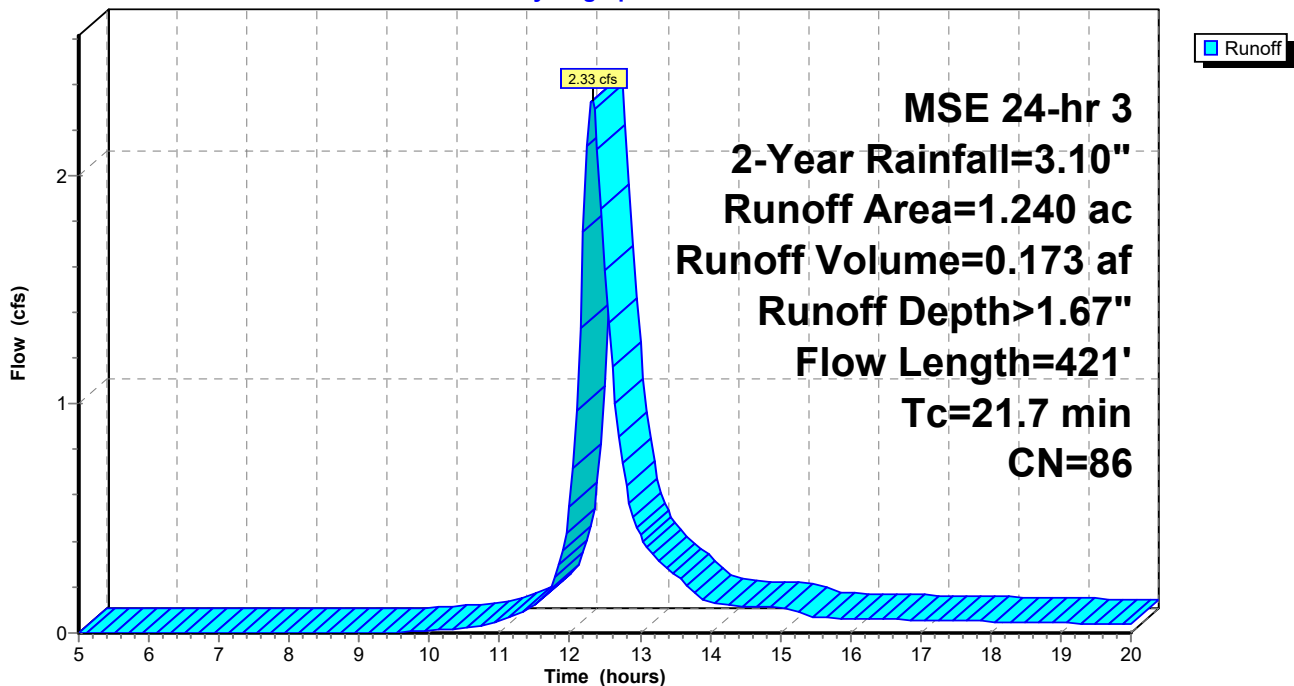
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 2-Year Rainfall=3.10"

Area (ac)	CN	Description
1.240	86	Woods/grass comb., Poor, HSG D
1.240		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.4	100	0.0350	0.10		Sheet Flow, Sheet Flow
					Woods: Light underbrush n= 0.400 P2= 3.10"
4.3	321	0.0628	1.25		Shallow Concentrated Flow, Shallow Concentrated
					Woodland Kv= 5.0 fps
21.7	421	Total			

Subcatchment Offsite: PRE

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering
 HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 2-Year Rainfall=3.10"

Printed 10/24/2023

Page 14

Summary for Subcatchment Offsite': Coming Into Site

Runoff = 2.14 cfs @ 12.36 hrs, Volume= 0.172 af, Depth> 1.67"
 Routed to Pond 1P : Detention Pond

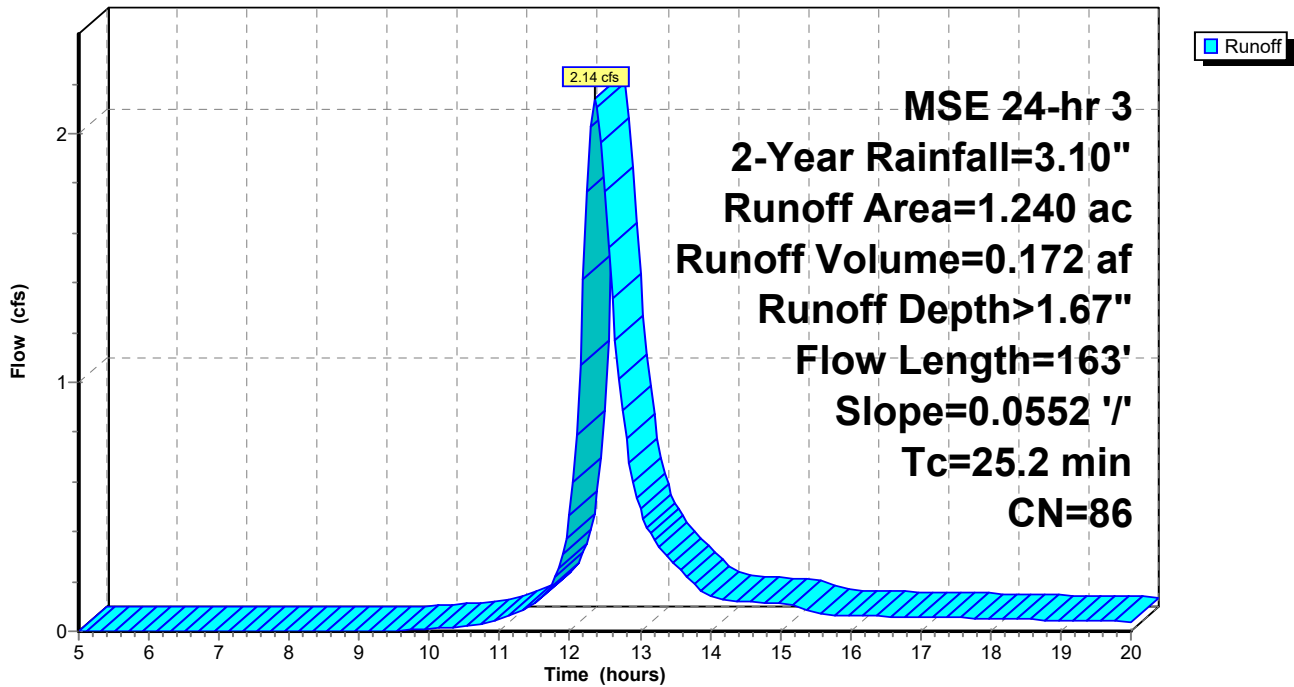
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 2-Year Rainfall=3.10"

Area (ac)	CN	Description
1.240	86	Woods/grass comb., Poor, HSG D
1.240		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8					Direct Entry, Storm Sewer Network
14.5	100	0.0552	0.11		Sheet Flow, Sheet Flow Woods: Light underbrush n= 0.400 P2= 3.10"
0.9	63	0.0552	1.17		Shallow Concentrated Flow, Shallow Concentrated Flow Woodland Kv= 5.0 fps
25.2	163	Total			

Subcatchment Offsite': Coming Into Site

Hydrograph



211242 Barber Addition

MSE 24-hr 3 2-Year Rainfall=3.10"

Prepared by REGA Engineering

Printed 10/24/2023

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

Page 15

Summary for Pond 1P: Detention Pond

Inflow Area = 4.740 ac, 36.29% Impervious, Inflow Depth > 1.82" for 2-Year event
 Inflow = 12.06 cfs @ 12.16 hrs, Volume= 0.720 af
 Outflow = 8.55 cfs @ 12.26 hrs, Volume= 0.719 af, Atten= 29%, Lag= 5.9 min
 Primary = 8.55 cfs @ 12.26 hrs, Volume= 0.719 af
 Routed to Link 2L : Post

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 1,288.47' @ 12.26 hrs Surf.Area= 2,177 sf Storage= 3,582 cf

Plug-Flow detention time= 5.4 min calculated for 0.719 af (100% of inflow)
 Center-of-Mass det. time= 4.8 min (785.5 - 780.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1,285.75'	37,664 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,285.75	7	0	0
1,286.00	756	95	95
1,287.00	1,243	1,000	1,095
1,288.00	1,845	1,544	2,639
1,289.00	2,553	2,199	4,838
1,290.00	3,366	2,960	7,797
1,291.00	4,283	3,825	11,622
1,292.00	5,305	4,794	16,416
1,293.00	6,432	5,869	22,284
1,294.00	7,664	7,048	29,332
1,295.00	9,000	8,332	37,664

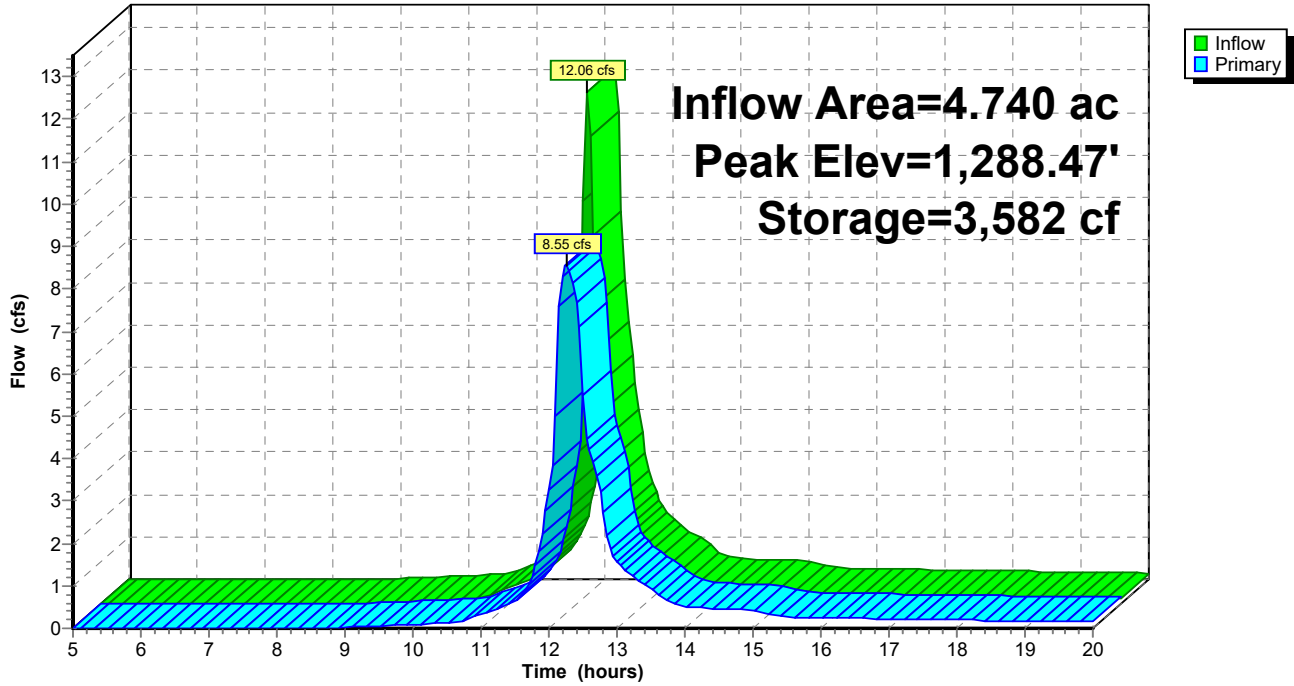
Device	Routing	Invert	Outlet Devices
#1	Primary	1,285.75'	15.0" Round Culvert L= 83.5' CMP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,285.75' / 1,285.16' S= 0.0071 ' /' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf
#2	Device 1	1,285.75'	Custom Weir/Orifice, Cv= 2.62 (C= 3.28) Head (feet) 0.00 0.50 Width (feet) 1.50 1.50
#3	Device 1	1,287.50'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=8.52 cfs @ 12.26 hrs HW=1,288.46' (Free Discharge)

- 1=Culvert (Inlet Controls 8.52 cfs @ 6.94 fps)
- 2=Custom Weir/Orifice (Passes < 5.77 cfs potential flow)
- 3=Orifice/Grate (Passes < 18.82 cfs potential flow)

Pond 1P: Detention Pond

Hydrograph



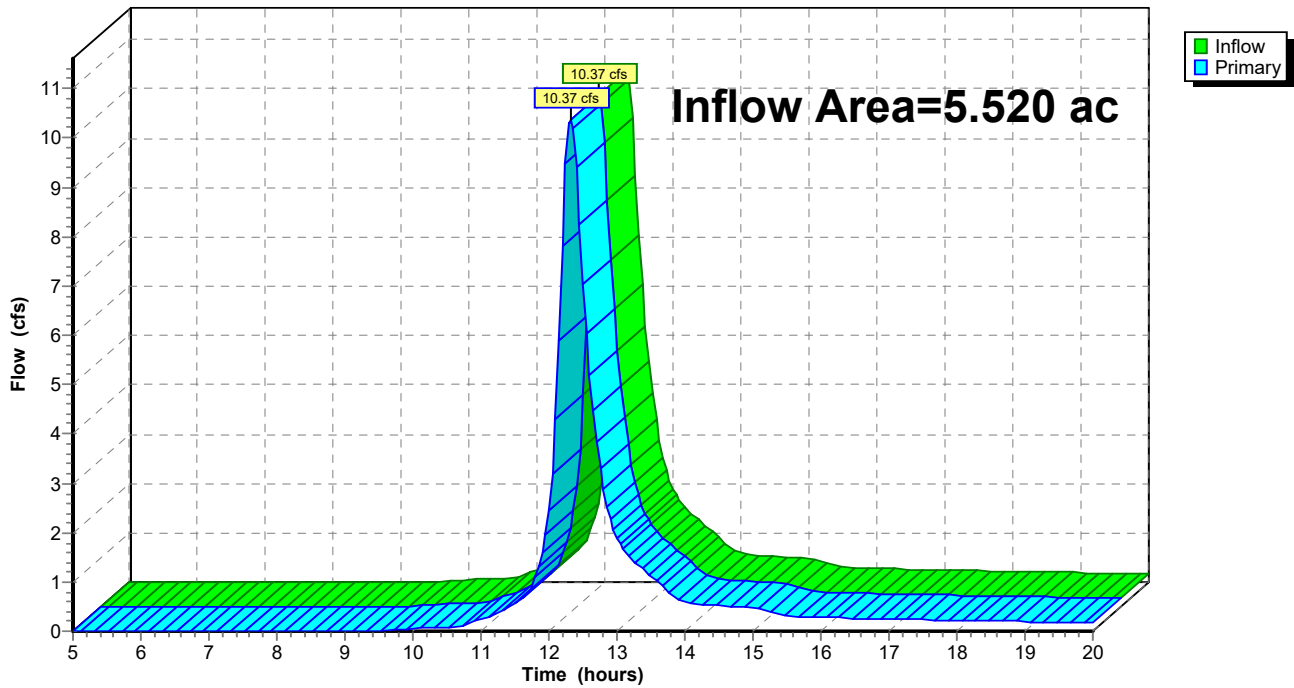
Summary for Link 1L: Pre

Inflow Area = 5.520 ac, 0.00% Impervious, Inflow Depth > 1.67" for 2-Year event
Inflow = 10.37 cfs @ 12.32 hrs, Volume= 0.768 af
Primary = 10.37 cfs @ 12.32 hrs, Volume= 0.768 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 1L: Pre

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 2-Year Rainfall=3.10"

Printed 10/24/2023

Page 18

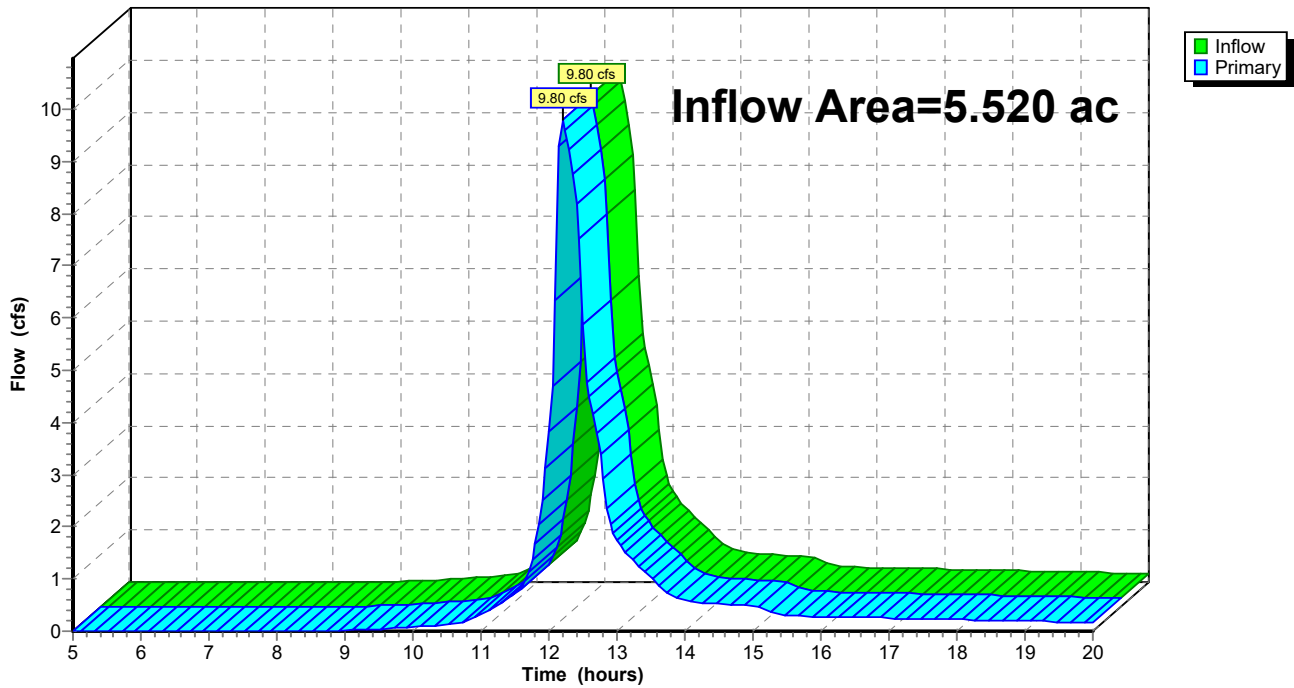
Summary for Link 2L: Post

Inflow Area = 5.520 ac, 31.16% Impervious, Inflow Depth > 1.74" for 2-Year event
Inflow = 9.80 cfs @ 12.21 hrs, Volume= 0.801 af
Primary = 9.80 cfs @ 12.21 hrs, Volume= 0.801 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 2L: Post

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 10-Year Rainfall=4.62"

Printed 10/24/2023

Page 19

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1: PRE	Runoff Area=4.280 ac 0.00% Impervious Runoff Depth>2.99" Flow Length=421' Tc=21.7 min CN=86 Runoff=14.18 cfs 1.066 af
Subcatchment1': POST	Runoff Area=2.510 ac 47.01% Impervious Runoff Depth>3.19" Tc=8.0 min CN=88 Runoff=13.36 cfs 0.667 af
Subcatchment2': Areas 2a' and 2b'	Runoff Area=0.990 ac 54.55% Impervious Runoff Depth>3.39" Tc=9.8 min CN=90 Runoff=5.10 cfs 0.280 af
Subcatchment3': Offsite West	Runoff Area=0.780 ac 0.00% Impervious Runoff Depth>2.46" Tc=8.0 min CN=80 Runoff=3.32 cfs 0.160 af
SubcatchmentOffsite: PRE	Runoff Area=1.240 ac 0.00% Impervious Runoff Depth>2.99" Flow Length=421' Tc=21.7 min CN=86 Runoff=4.11 cfs 0.309 af
SubcatchmentOffsite': Coming Into Site	Runoff Area=1.240 ac 0.00% Impervious Runoff Depth>2.99" Flow Length=163' Slope=0.0552 '/' Tc=25.2 min CN=86 Runoff=3.78 cfs 0.309 af
Pond 1P: Detention Pond	Peak Elev=1,290.15' Storage=8,307 cf Inflow=20.48 cfs 1.256 af Outflow=11.48 cfs 1.254 af
Link 1L: Pre	Inflow=18.29 cfs 1.375 af Primary=18.29 cfs 1.375 af
Link 2L: Post	Inflow=13.67 cfs 1.414 af Primary=13.67 cfs 1.414 af
Total Runoff Area = 11.040 ac Runoff Volume = 2.790 af Average Runoff Depth = 3.03"	
84.42% Pervious = 9.320 ac 15.58% Impervious = 1.720 ac	

211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 10-Year Rainfall=4.62"

Printed 10/24/2023

Page 20

Summary for Subcatchment 1: PRE

Runoff = 14.18 cfs @ 12.31 hrs, Volume= 1.066 af, Depth> 2.99"
 Routed to Link 1L : Pre

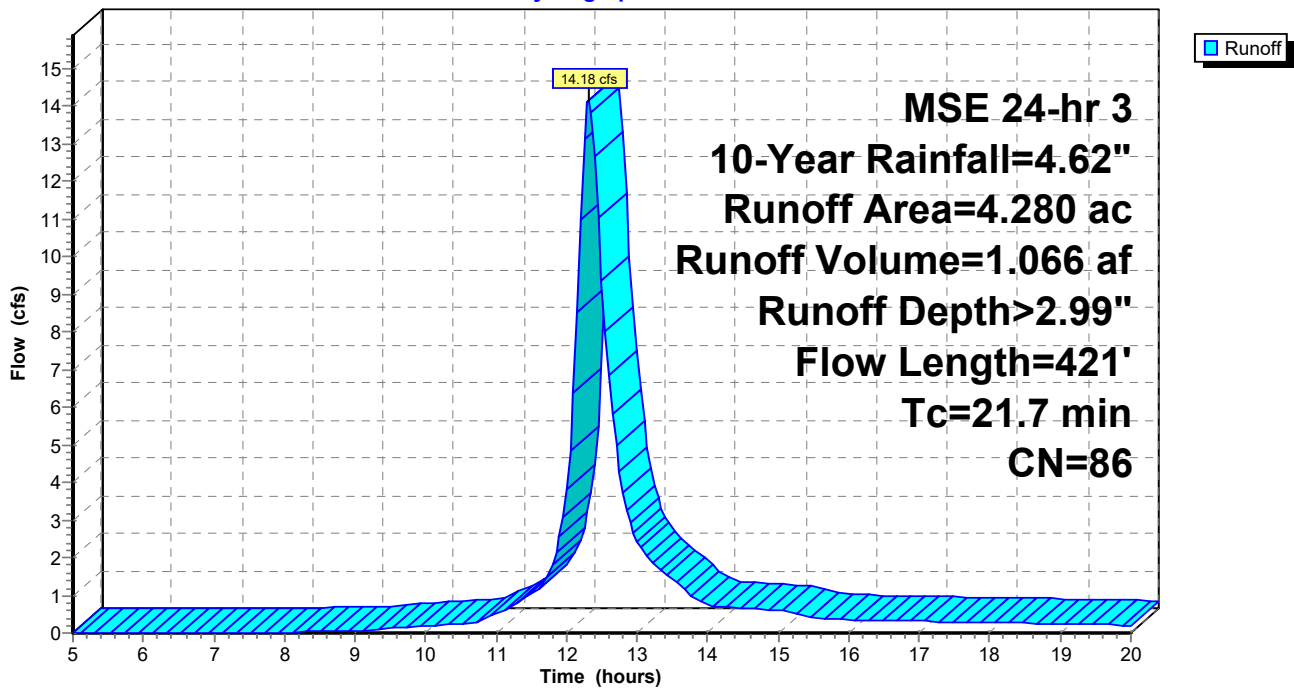
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 10-Year Rainfall=4.62"

Area (ac)	CN	Description
4.280	86	Woods/grass comb., Poor, HSG D
4.280		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.4	100	0.0350	0.10		Sheet Flow, Sheet Flow Woods: Light underbrush n= 0.400 P2= 3.10"
4.3	321	0.0628	1.25		Shallow Concentrated Flow, Shallow Concentrated Woodland Kv= 5.0 fps
21.7	421	Total			

Subcatchment 1: PRE

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 10-Year Rainfall=4.62"

Printed 10/24/2023

Page 21

Summary for Subcatchment 1': POST

Runoff = 13.36 cfs @ 12.15 hrs, Volume= 0.667 af, Depth> 3.19"
 Routed to Pond 1P : Detention Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 10-Year Rainfall=4.62"

Area (ac)	CN	Description
1.330	80	>75% Grass cover, Good, HSG D
1.180	98	Paved roads w/curbs & sewers, HSG D
2.510	88	Weighted Average
1.330		52.99% Pervious Area
1.180		47.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0					Direct Entry, COL Drainage Criteria Minimum

Subcatchment 1': POST

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 10-Year Rainfall=4.62"

Printed 10/24/2023

Page 22

Summary for Subcatchment 2': Areas 2a' and 2b'

Runoff = 5.10 cfs @ 12.17 hrs, Volume= 0.280 af, Depth> 3.39"
 Routed to Pond 1P : Detention Pond

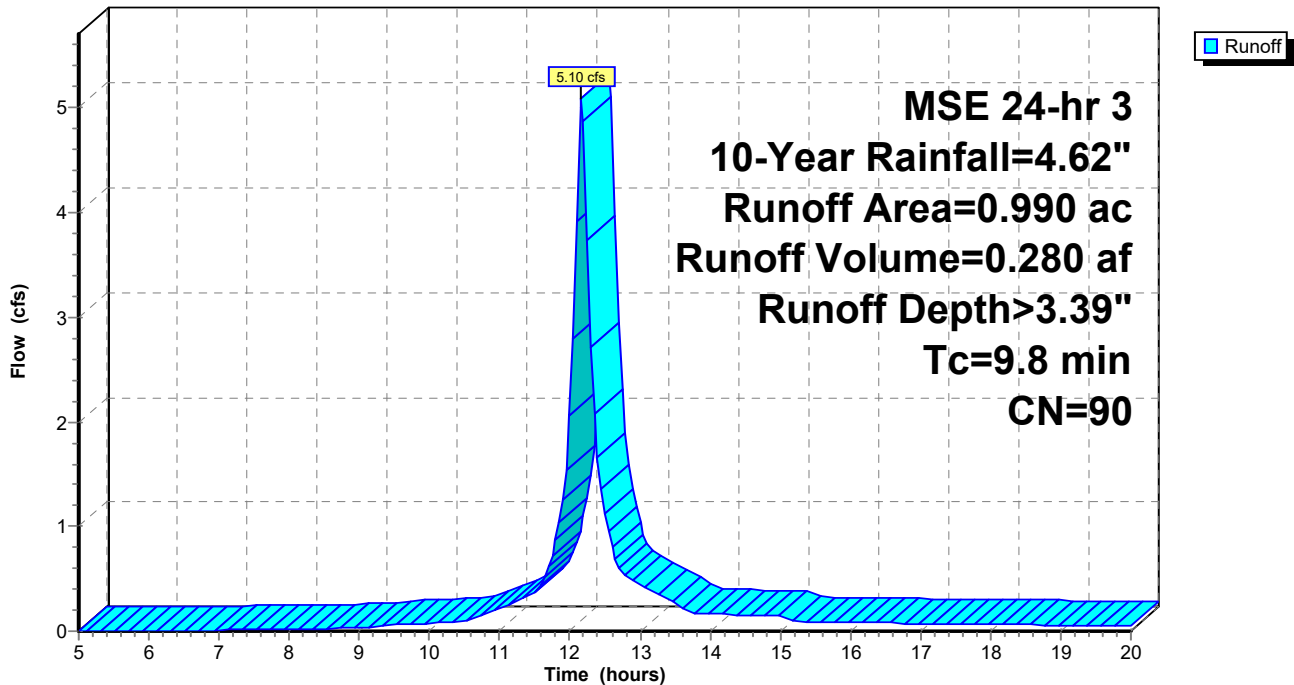
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 10-Year Rainfall=4.62"

Area (ac)	CN	Description
0.450	80	>75% Grass cover, Good, HSG D
0.540	98	Paved roads w/curbs & sewers, HSG D
0.990	90	Weighted Average
0.450		45.45% Pervious Area
0.540		54.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8					Direct Entry, Storm Sewer Network

Subcatchment 2': Areas 2a' and 2b'

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 10-Year Rainfall=4.62"

Printed 10/24/2023

Page 23

Summary for Subcatchment 3': Offsite West

Runoff = 3.32 cfs @ 12.15 hrs, Volume= 0.160 af, Depth> 2.46"
Routed to Link 2L : Post

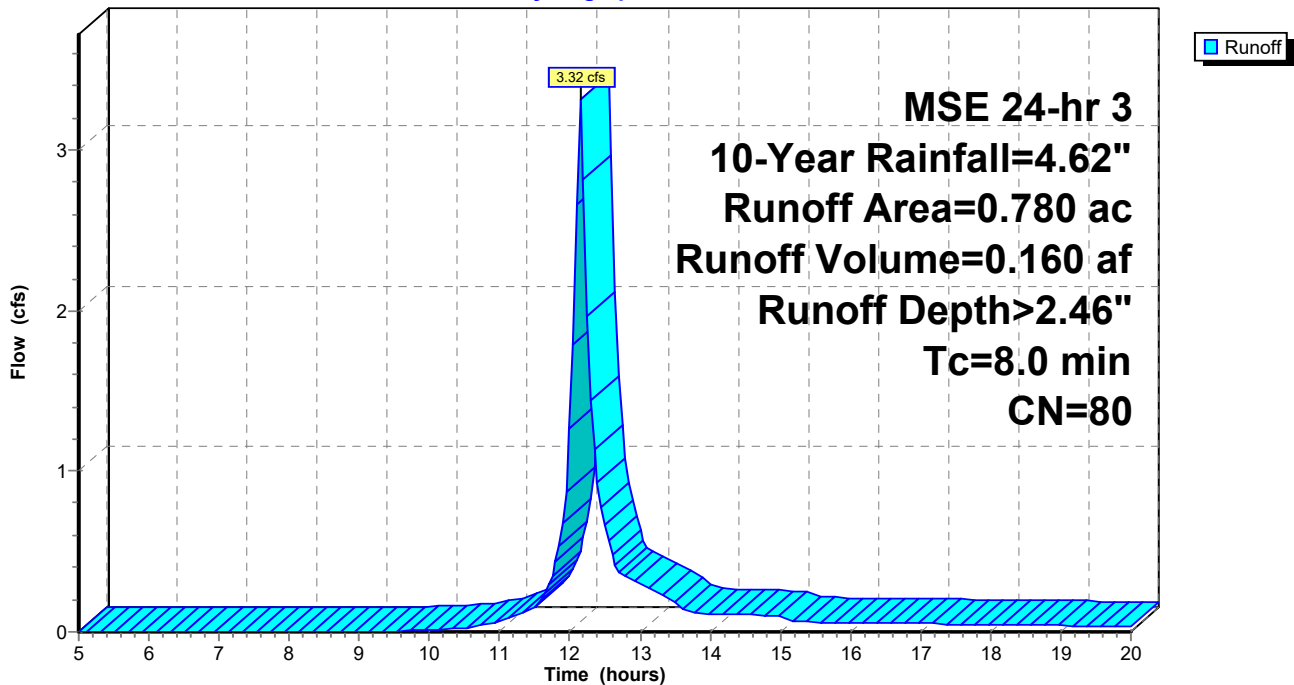
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-Year Rainfall=4.62"

Area (ac)	CN	Description
0.780	80	>75% Grass cover, Good, HSG D
0.780		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0					Direct Entry, COL Criteria Manual

Subcatchment 3': Offsite West

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 10-Year Rainfall=4.62"

Printed 10/24/2023

Page 24

Summary for Subcatchment Offsite: PRE

Runoff = 4.11 cfs @ 12.31 hrs, Volume= 0.309 af, Depth> 2.99"
 Routed to Link 1L : Pre

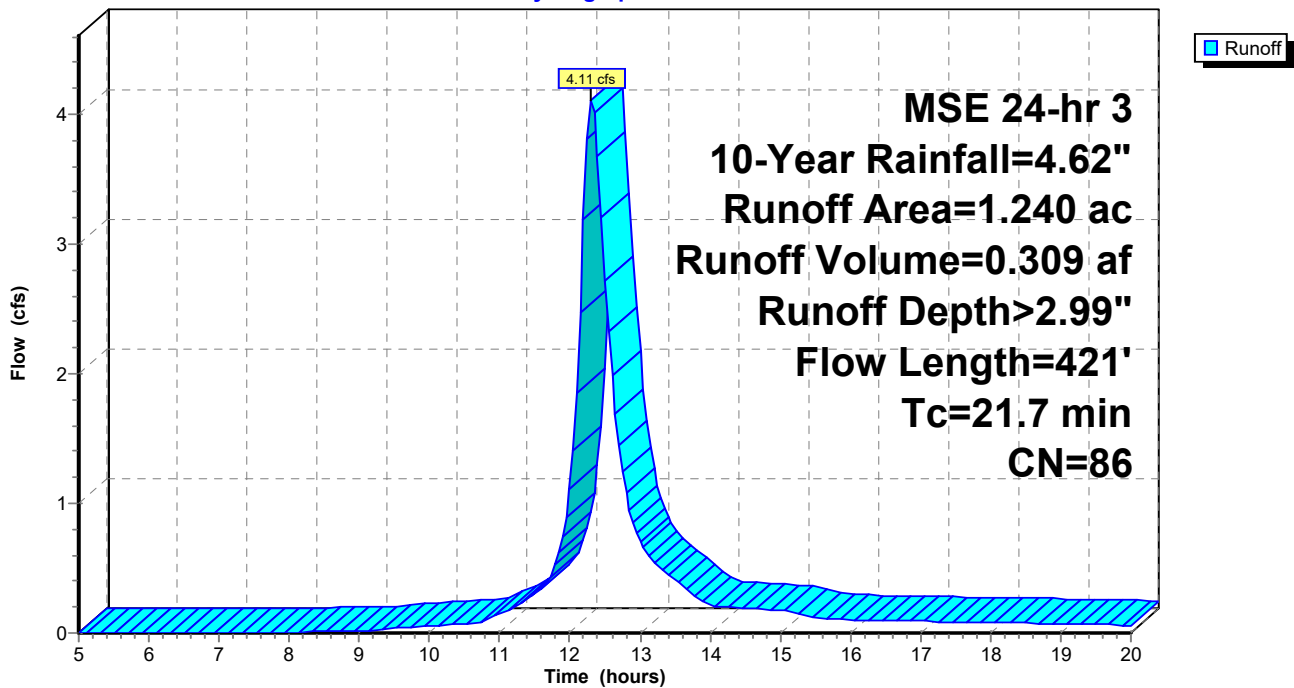
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 10-Year Rainfall=4.62"

Area (ac)	CN	Description
1.240	86	Woods/grass comb., Poor, HSG D
1.240		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.4	100	0.0350	0.10		Sheet Flow, Sheet Flow
					Woods: Light underbrush n= 0.400 P2= 3.10"
4.3	321	0.0628	1.25		Shallow Concentrated Flow, Shallow Concentrated
					Woodland Kv= 5.0 fps
21.7	421	Total			

Subcatchment Offsite: PRE

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 10-Year Rainfall=4.62"

Printed 10/24/2023

Page 25

Summary for Subcatchment Offsite': Coming Into Site

Runoff = 3.78 cfs @ 12.36 hrs, Volume= 0.309 af, Depth> 2.99"

Routed to Pond 1P : Detention Pond

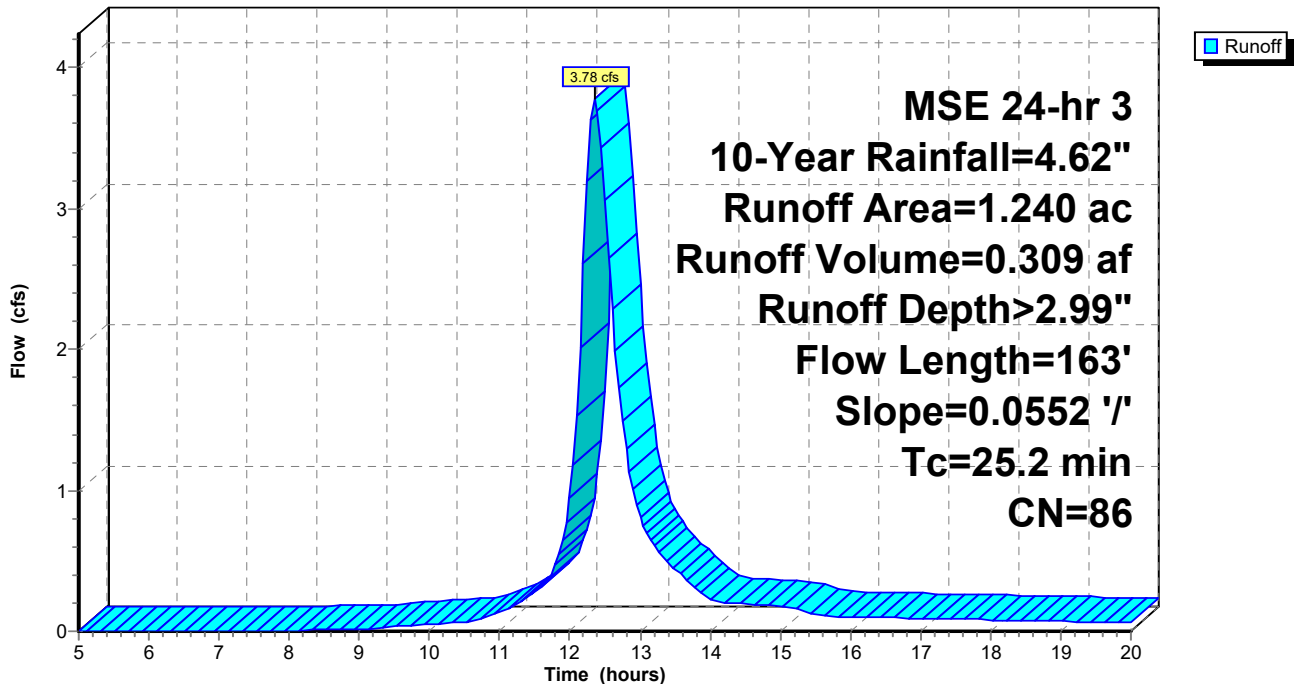
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-Year Rainfall=4.62"

Area (ac)	CN	Description
1.240	86	Woods/grass comb., Poor, HSG D
1.240		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8					Direct Entry, Storm Sewer Network
14.5	100	0.0552	0.11		Sheet Flow, Sheet Flow Woods: Light underbrush n= 0.400 P2= 3.10"
0.9	63	0.0552	1.17		Shallow Concentrated Flow, Shallow Concentrated Flow Woodland Kv= 5.0 fps
25.2	163	Total			

Subcatchment Offsite': Coming Into Site

Hydrograph



211242 Barber Addition

MSE 24-hr 3 10-Year Rainfall=4.62"

Prepared by REGA Engineering

Printed 10/24/2023

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

Page 26

Summary for Pond 1P: Detention Pond

Inflow Area = 4.740 ac, 36.29% Impervious, Inflow Depth > 3.18" for 10-Year event
 Inflow = 20.48 cfs @ 12.16 hrs, Volume= 1.256 af
 Outflow = 11.48 cfs @ 12.32 hrs, Volume= 1.254 af, Atten= 44%, Lag= 9.4 min
 Primary = 11.48 cfs @ 12.32 hrs, Volume= 1.254 af
 Routed to Link 2L : Post

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 1,290.15' @ 12.32 hrs Surf.Area= 3,502 sf Storage= 8,307 cf

Plug-Flow detention time= 7.2 min calculated for 1.250 af (100% of inflow)
 Center-of-Mass det. time= 6.7 min (778.1 - 771.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,285.75'	37,664 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,285.75	7	0	0
1,286.00	756	95	95
1,287.00	1,243	1,000	1,095
1,288.00	1,845	1,544	2,639
1,289.00	2,553	2,199	4,838
1,290.00	3,366	2,960	7,797
1,291.00	4,283	3,825	11,622
1,292.00	5,305	4,794	16,416
1,293.00	6,432	5,869	22,284
1,294.00	7,664	7,048	29,332
1,295.00	9,000	8,332	37,664

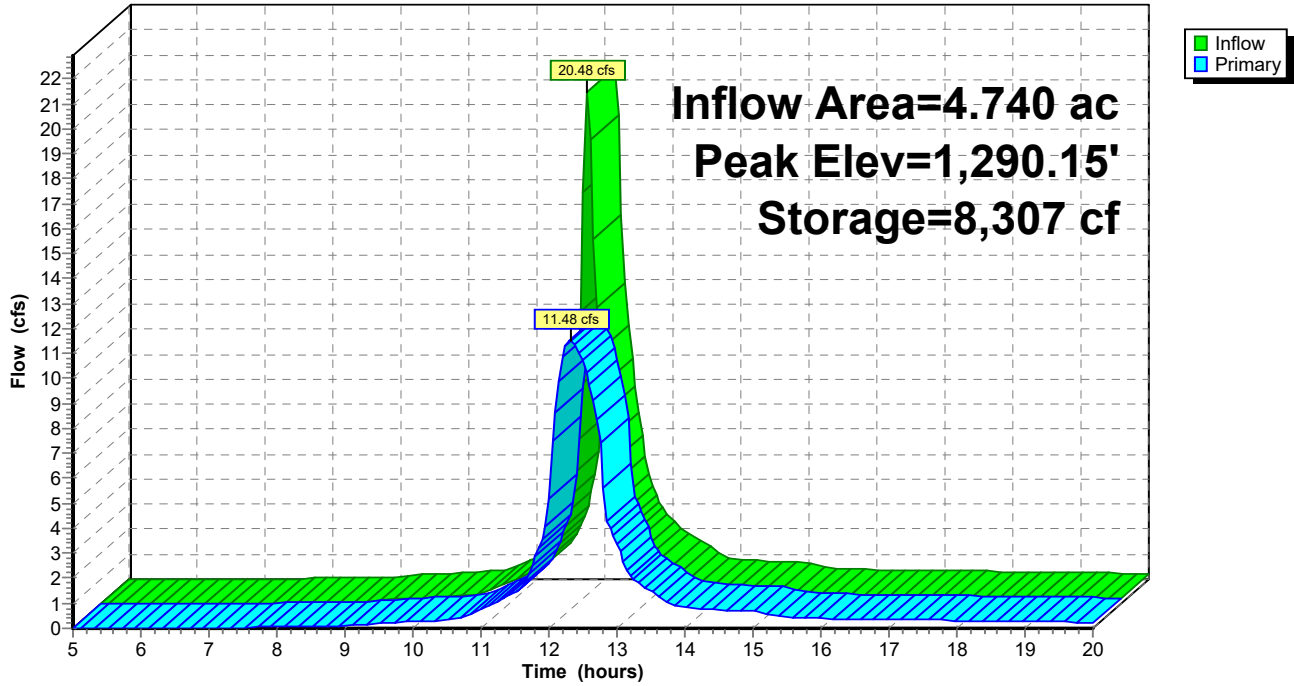
Device	Routing	Invert	Outlet Devices
#1	Primary	1,285.75'	15.0" Round Culvert L= 83.5' CMP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,285.75' / 1,285.16' S= 0.0071 ' /' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf
#2	Device 1	1,285.75'	Custom Weir/Orifice, Cv= 2.62 (C= 3.28) Head (feet) 0.00 0.50 Width (feet) 1.50 1.50
#3	Device 1	1,287.50'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=11.46 cfs @ 12.32 hrs HW=1,290.14' (Free Discharge)

- 1=Culvert (Inlet Controls 11.46 cfs @ 9.34 fps)
- 2=Custom Weir/Orifice (Passes < 7.49 cfs potential flow)
- 3=Orifice/Grate (Passes < 31.27 cfs potential flow)

Pond 1P: Detention Pond

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 10-Year Rainfall=4.62"

Printed 10/24/2023

Page 28

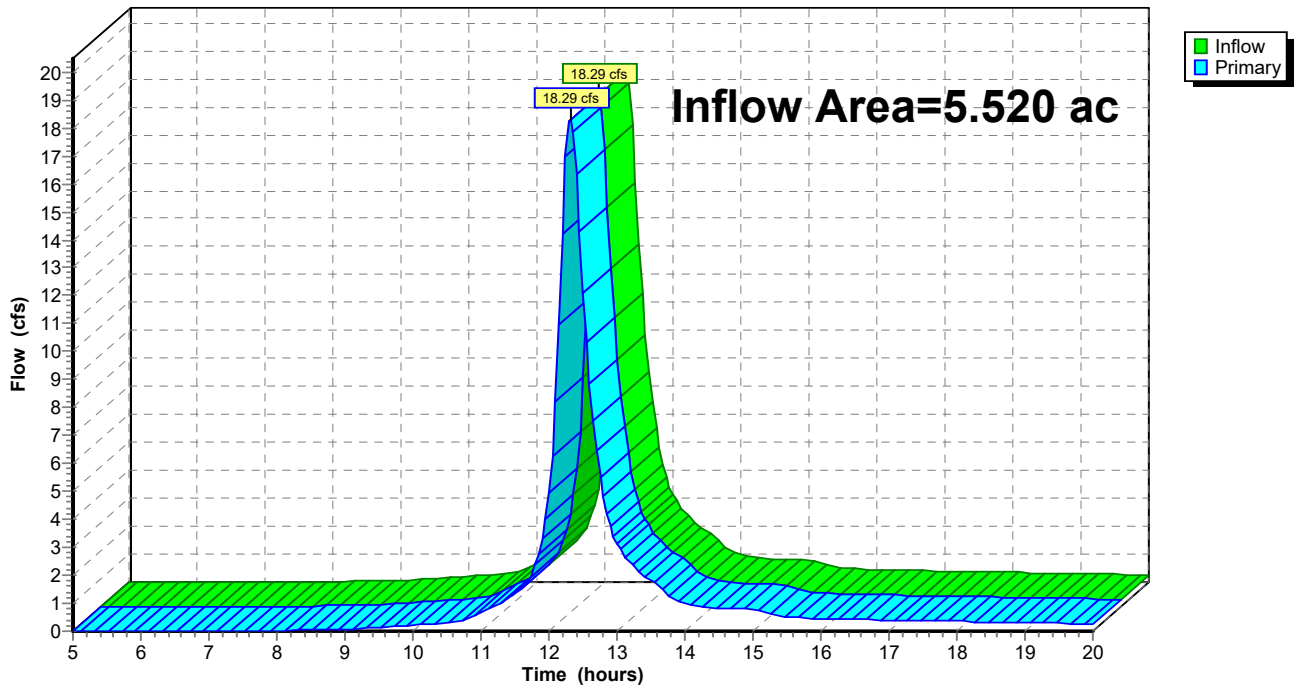
Summary for Link 1L: Pre

Inflow Area = 5.520 ac, 0.00% Impervious, Inflow Depth > 2.99" for 10-Year event
Inflow = 18.29 cfs @ 12.31 hrs, Volume= 1.375 af
Primary = 18.29 cfs @ 12.31 hrs, Volume= 1.375 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 1L: Pre

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 10-Year Rainfall=4.62"

Printed 10/24/2023

Page 29

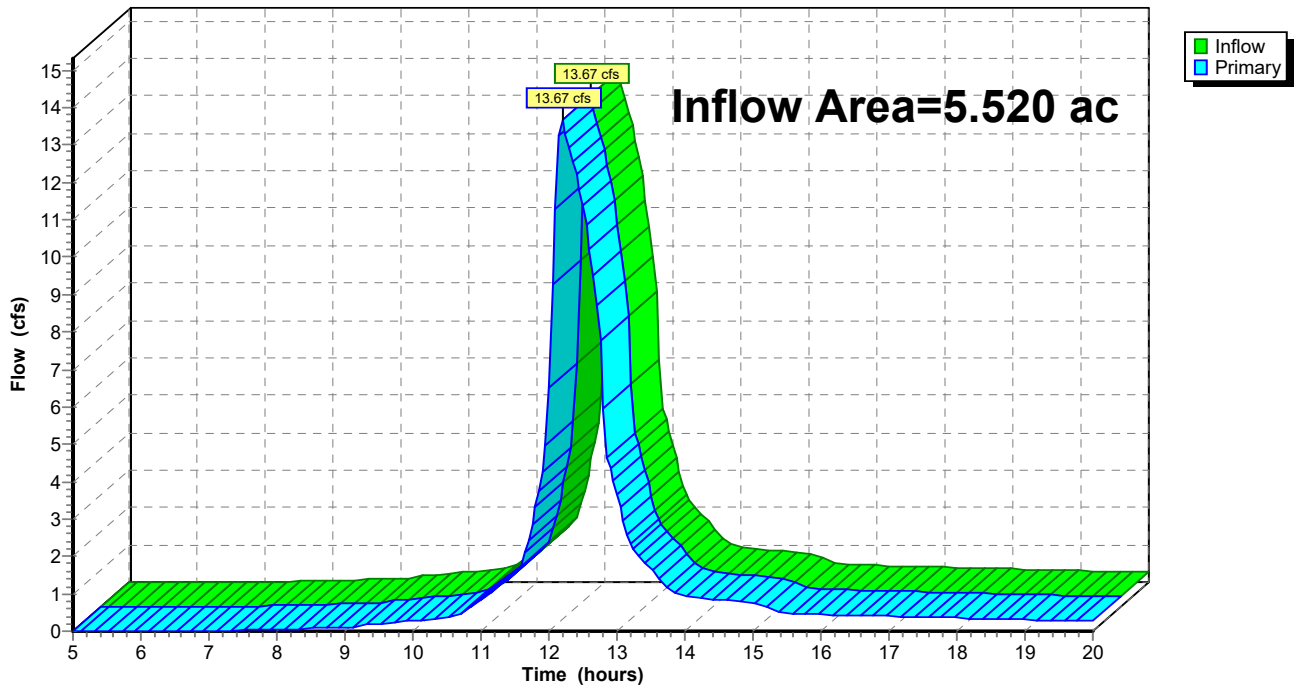
Summary for Link 2L: Post

Inflow Area = 5.520 ac, 31.16% Impervious, Inflow Depth > 3.07" for 10-Year event
Inflow = 13.67 cfs @ 12.20 hrs, Volume= 1.414 af
Primary = 13.67 cfs @ 12.20 hrs, Volume= 1.414 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 2L: Post

Hydrograph



211242 Barber Addition

MSE 24-hr 3 100-Year Rainfall=7.56"

Prepared by REGA Engineering

Printed 10/24/2023

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

Page 30

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1: PRE Runoff Area=4.280 ac 0.00% Impervious Runoff Depth>5.69"
 Flow Length=421' Tc=21.7 min CN=86 Runoff=26.22 cfs 2.030 af

Subcatchment1': POST Runoff Area=2.510 ac 47.01% Impervious Runoff Depth>5.94"
 Tc=8.0 min CN=88 Runoff=23.89 cfs 1.242 af

Subcatchment2': Areas 2a' and 2b' Runoff Area=0.990 ac 54.55% Impervious Runoff Depth>6.17"
 Tc=9.8 min CN=90 Runoff=8.93 cfs 0.509 af

Subcatchment3': Offsite West Runoff Area=0.780 ac 0.00% Impervious Runoff Depth>5.02"
 Tc=8.0 min CN=80 Runoff=6.59 cfs 0.326 af

SubcatchmentOffsite: PRE Runoff Area=1.240 ac 0.00% Impervious Runoff Depth>5.69"
 Flow Length=421' Tc=21.7 min CN=86 Runoff=7.60 cfs 0.588 af

SubcatchmentOffsite': Coming Into Site Runoff Area=1.240 ac 0.00% Impervious Runoff Depth>5.69"
 Flow Length=163' Slope=0.0552 '/' Tc=25.2 min CN=86 Runoff=7.01 cfs 0.588 af

Pond 1P: Detention Pond Peak Elev=1,292.91' Storage=21,711 cf Inflow=36.74 cfs 2.339 af
 Outflow=15.11 cfs 2.336 af

Link 1L: Pre Inflow=33.82 cfs 2.618 af
 Primary=33.82 cfs 2.618 af

Link 2L: Post Inflow=19.81 cfs 2.662 af
 Primary=19.81 cfs 2.662 af

Total Runoff Area = 11.040 ac Runoff Volume = 5.283 af Average Runoff Depth = 5.74"
84.42% Pervious = 9.320 ac 15.58% Impervious = 1.720 ac

211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 100-Year Rainfall=7.56"

Printed 10/24/2023

Page 31

Summary for Subcatchment 1: PRE

Runoff = 26.22 cfs @ 12.31 hrs, Volume= 2.030 af, Depth> 5.69"
 Routed to Link 1L : Pre

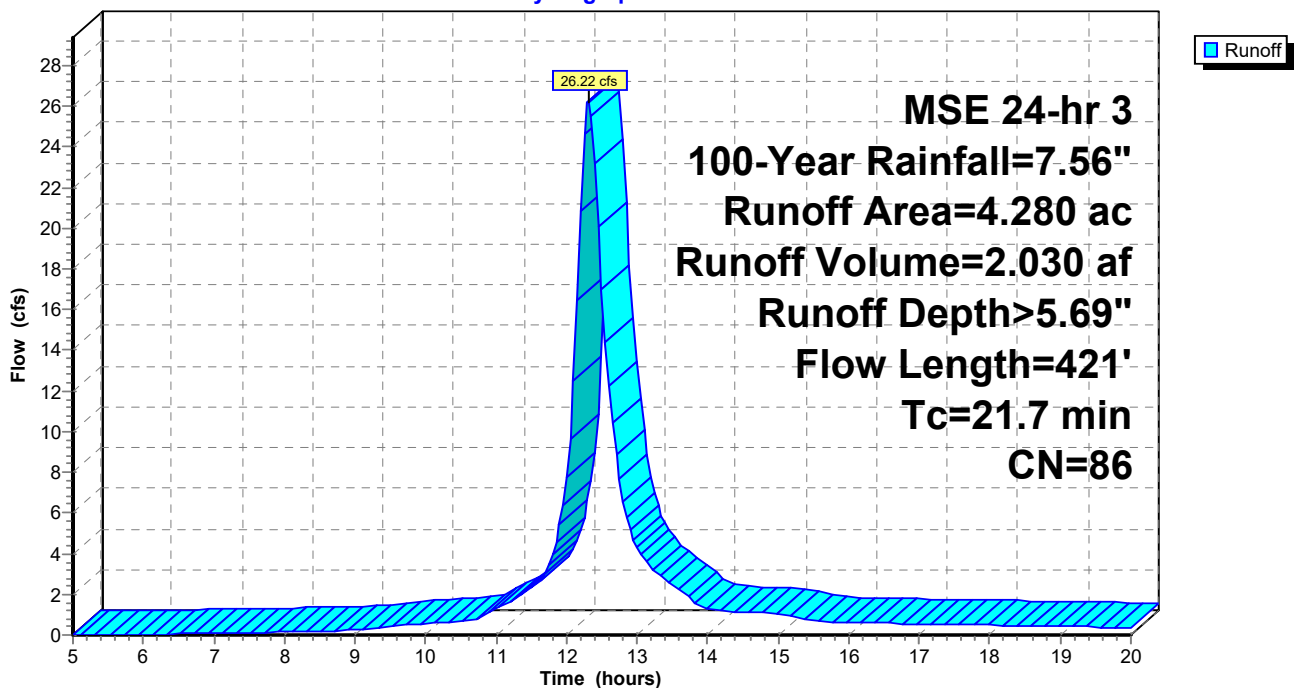
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 100-Year Rainfall=7.56"

Area (ac)	CN	Description
4.280	86	Woods/grass comb., Poor, HSG D
4.280		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.4	100	0.0350	0.10		Sheet Flow, Sheet Flow Woods: Light underbrush n= 0.400 P2= 3.10"
4.3	321	0.0628	1.25		Shallow Concentrated Flow, Shallow Concentrated Woodland Kv= 5.0 fps
21.7	421	Total			

Subcatchment 1: PRE

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 100-Year Rainfall=7.56"

Printed 10/24/2023

Page 32

Summary for Subcatchment 1': POST

Runoff = 23.89 cfs @ 12.15 hrs, Volume= 1.242 af, Depth> 5.94"
 Routed to Pond 1P : Detention Pond

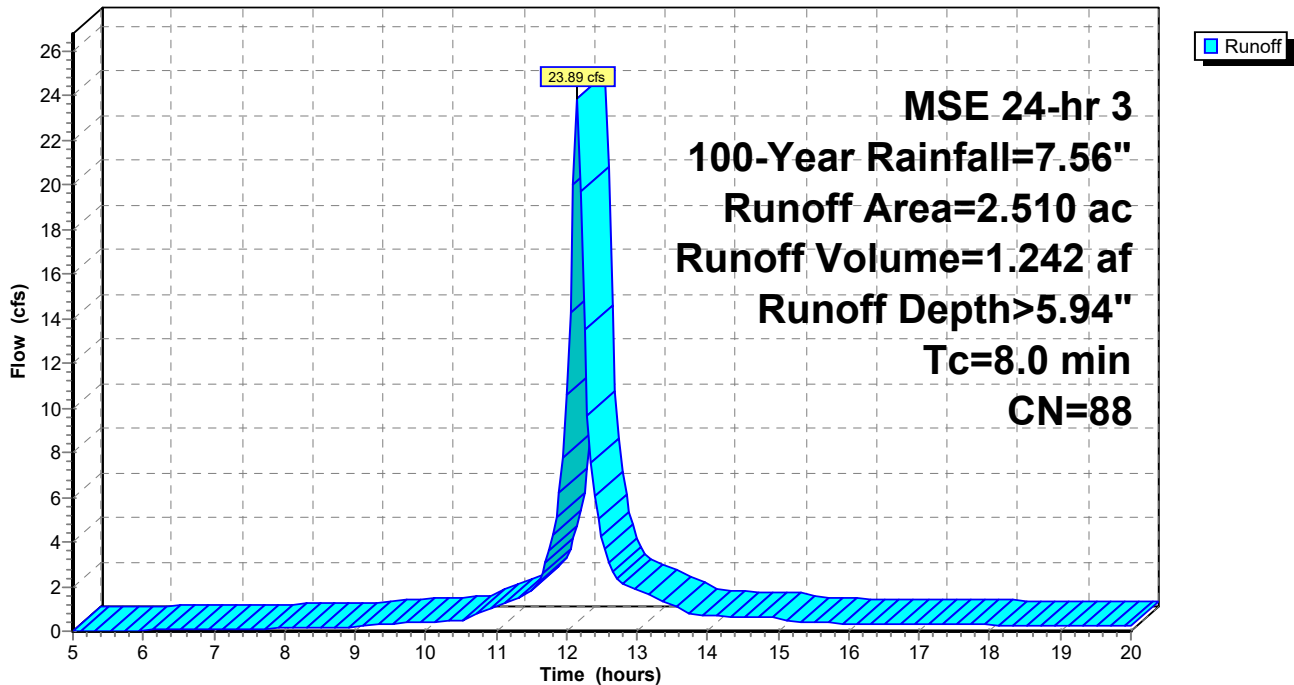
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 100-Year Rainfall=7.56"

Area (ac)	CN	Description
1.330	80	>75% Grass cover, Good, HSG D
1.180	98	Paved roads w/curbs & sewers, HSG D
2.510	88	Weighted Average
1.330		52.99% Pervious Area
1.180		47.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0					Direct Entry, COL Drainage Criteria Minimum

Subcatchment 1': POST

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 100-Year Rainfall=7.56"

Printed 10/24/2023

Page 33

Summary for Subcatchment 2': Areas 2a' and 2b'

Runoff = 8.93 cfs @ 12.17 hrs, Volume= 0.509 af, Depth> 6.17"
 Routed to Pond 1P : Detention Pond

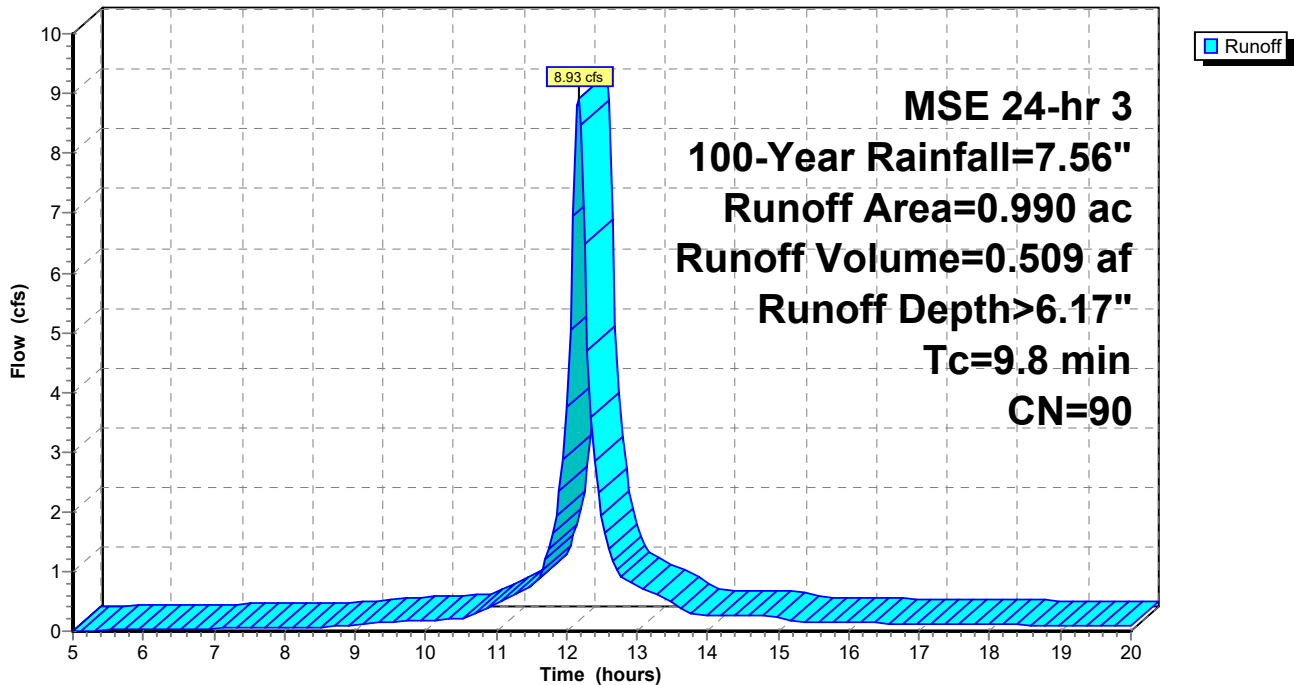
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 100-Year Rainfall=7.56"

Area (ac)	CN	Description
0.450	80	>75% Grass cover, Good, HSG D
0.540	98	Paved roads w/curbs & sewers, HSG D
0.990	90	Weighted Average
0.450		45.45% Pervious Area
0.540		54.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8					Direct Entry, Storm Sewer Network

Subcatchment 2': Areas 2a' and 2b'

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 100-Year Rainfall=7.56"

Printed 10/24/2023

Page 34

Summary for Subcatchment 3': Offsite West

Runoff = 6.59 cfs @ 12.15 hrs, Volume= 0.326 af, Depth> 5.02"
Routed to Link 2L : Post

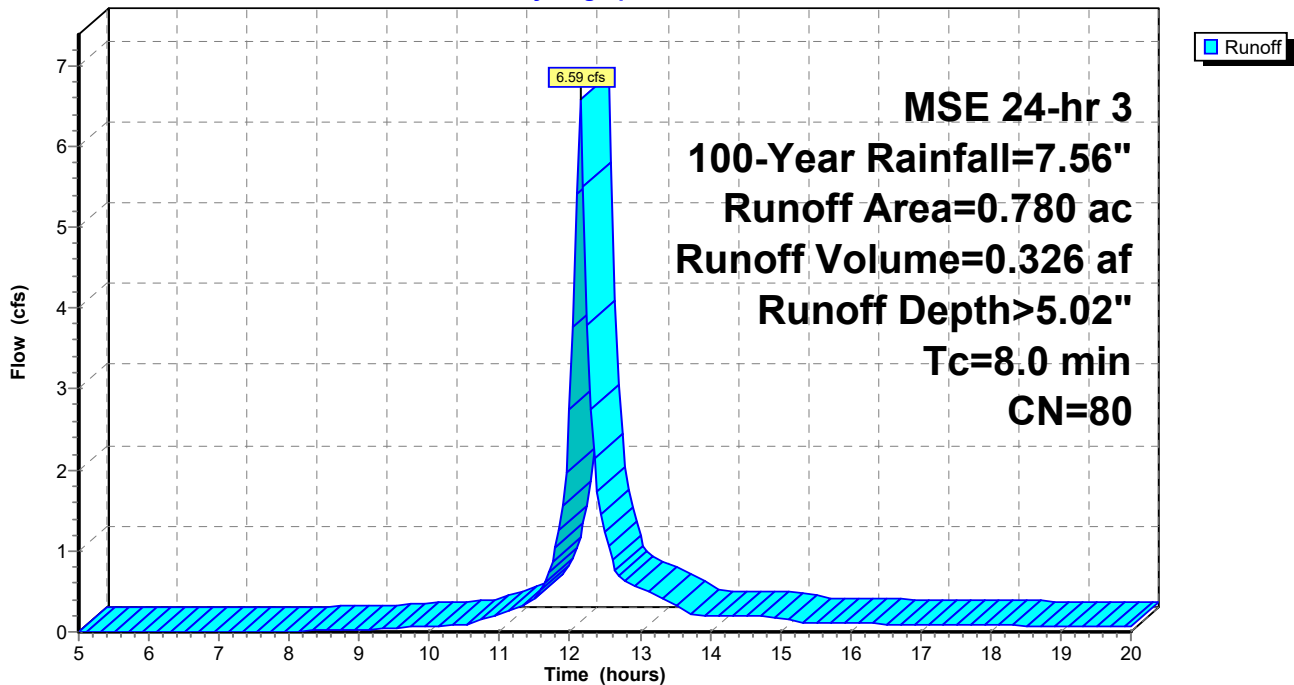
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=7.56"

Area (ac)	CN	Description
0.780	80	>75% Grass cover, Good, HSG D
0.780		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0					Direct Entry, COL Criteria Manual

Subcatchment 3': Offsite West

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 100-Year Rainfall=7.56"

Printed 10/24/2023

Page 35

Summary for Subcatchment Offsite: PRE

Runoff = 7.60 cfs @ 12.31 hrs, Volume= 0.588 af, Depth> 5.69"
 Routed to Link 1L : Pre

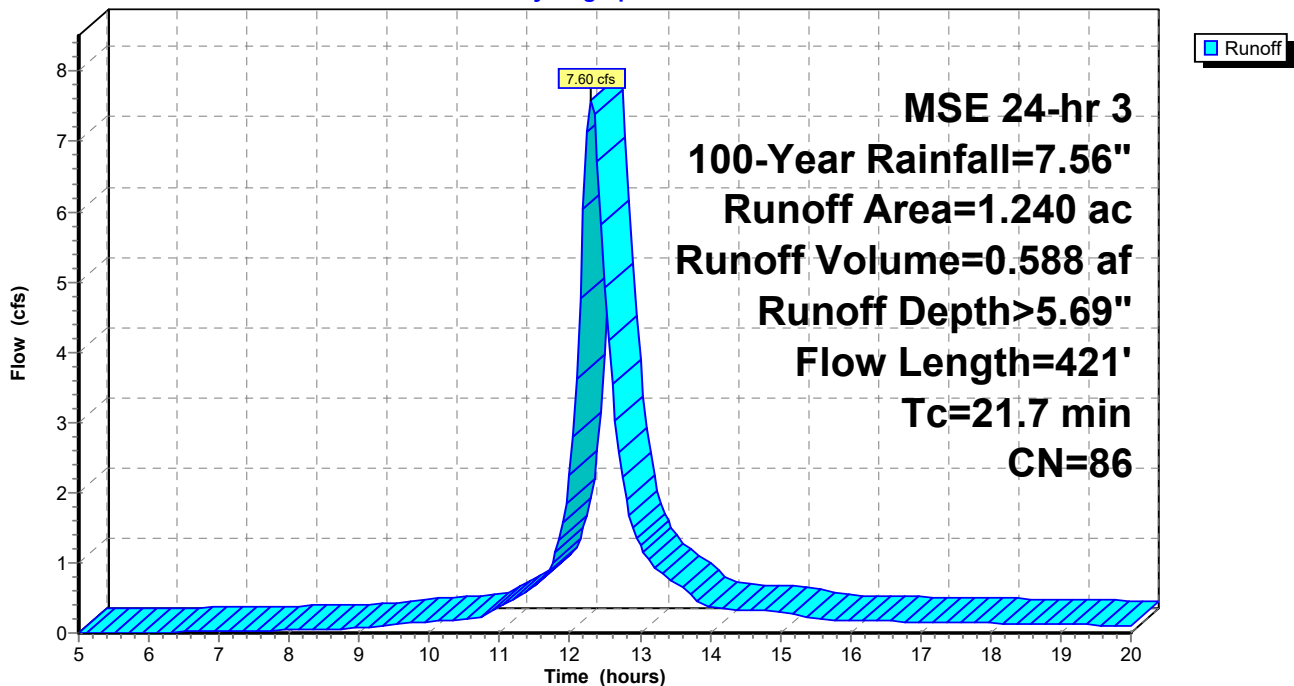
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 100-Year Rainfall=7.56"

Area (ac)	CN	Description
1.240	86	Woods/grass comb., Poor, HSG D
1.240		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.4	100	0.0350	0.10		Sheet Flow, Sheet Flow Woods: Light underbrush n= 0.400 P2= 3.10"
4.3	321	0.0628	1.25		Shallow Concentrated Flow, Shallow Concentrated Woodland Kv= 5.0 fps
21.7	421	Total			

Subcatchment Offsite: PRE

Hydrograph



211242 Barber Addition

Prepared by REGA Engineering

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

MSE 24-hr 3 100-Year Rainfall=7.56"

Printed 10/24/2023

Page 36

Summary for Subcatchment Offsite': Coming Into Site

Runoff = 7.01 cfs @ 12.35 hrs, Volume= 0.588 af, Depth> 5.69"
 Routed to Pond 1P : Detention Pond

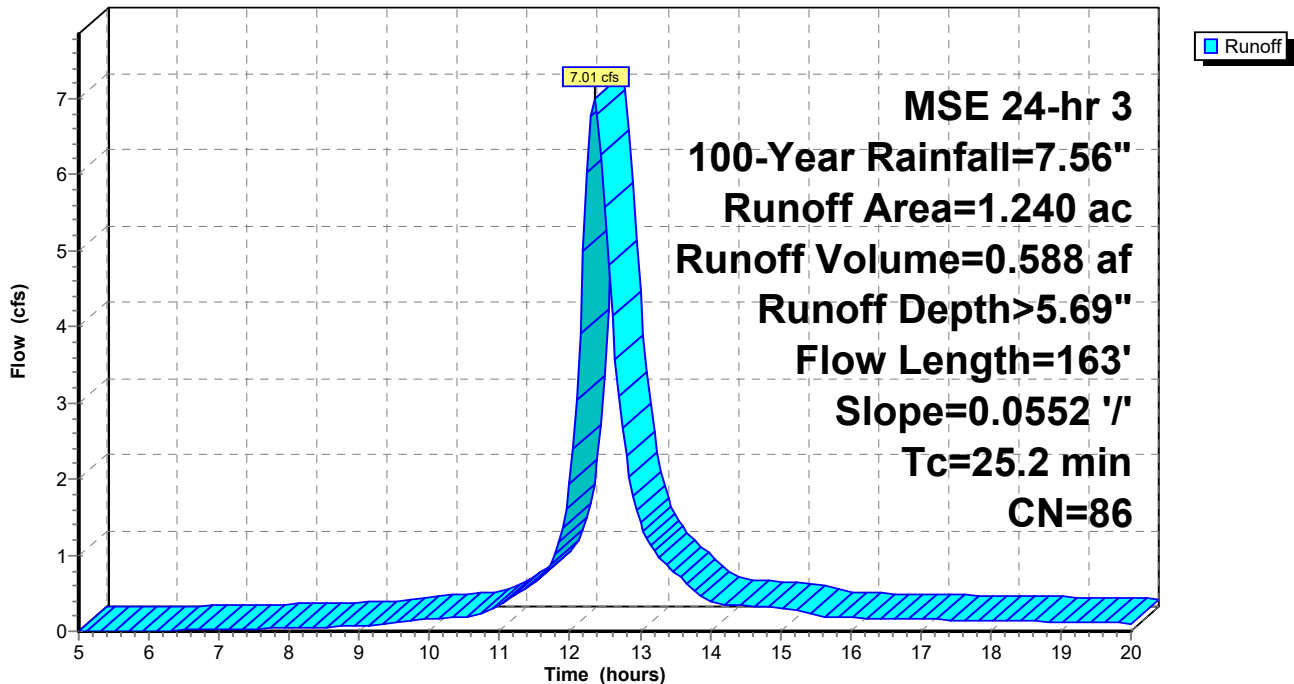
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 100-Year Rainfall=7.56"

Area (ac)	CN	Description
1.240	86	Woods/grass comb., Poor, HSG D
1.240		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8					Direct Entry, Storm Sewer Network
14.5	100	0.0552	0.11		Sheet Flow, Sheet Flow Woods: Light underbrush n= 0.400 P2= 3.10"
0.9	63	0.0552	1.17		Shallow Concentrated Flow, Shallow Concentrated Flow Woodland Kv= 5.0 fps
25.2	163	Total			

Subcatchment Offsite': Coming Into Site

Hydrograph



211242 Barber Addition

MSE 24-hr 3 100-Year Rainfall=7.56"

Prepared by REGA Engineering

Printed 10/24/2023

HydroCAD® 10.20-3c s/n 07808 © 2023 HydroCAD Software Solutions LLC

Page 37

Summary for Pond 1P: Detention Pond

Inflow Area = 4.740 ac, 36.29% Impervious, Inflow Depth > 5.92" for 100-Year event
 Inflow = 36.74 cfs @ 12.16 hrs, Volume= 2.339 af
 Outflow = 15.11 cfs @ 12.42 hrs, Volume= 2.336 af, Atten= 59%, Lag= 15.5 min
 Primary = 15.11 cfs @ 12.42 hrs, Volume= 2.336 af
 Routed to Link 2L : Post

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 1,292.91' @ 12.42 hrs Surf.Area= 6,331 sf Storage= 21,711 cf

Plug-Flow detention time= 12.2 min calculated for 2.328 af (100% of inflow)
 Center-of-Mass det. time= 11.6 min (772.4 - 760.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,285.75'	37,664 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

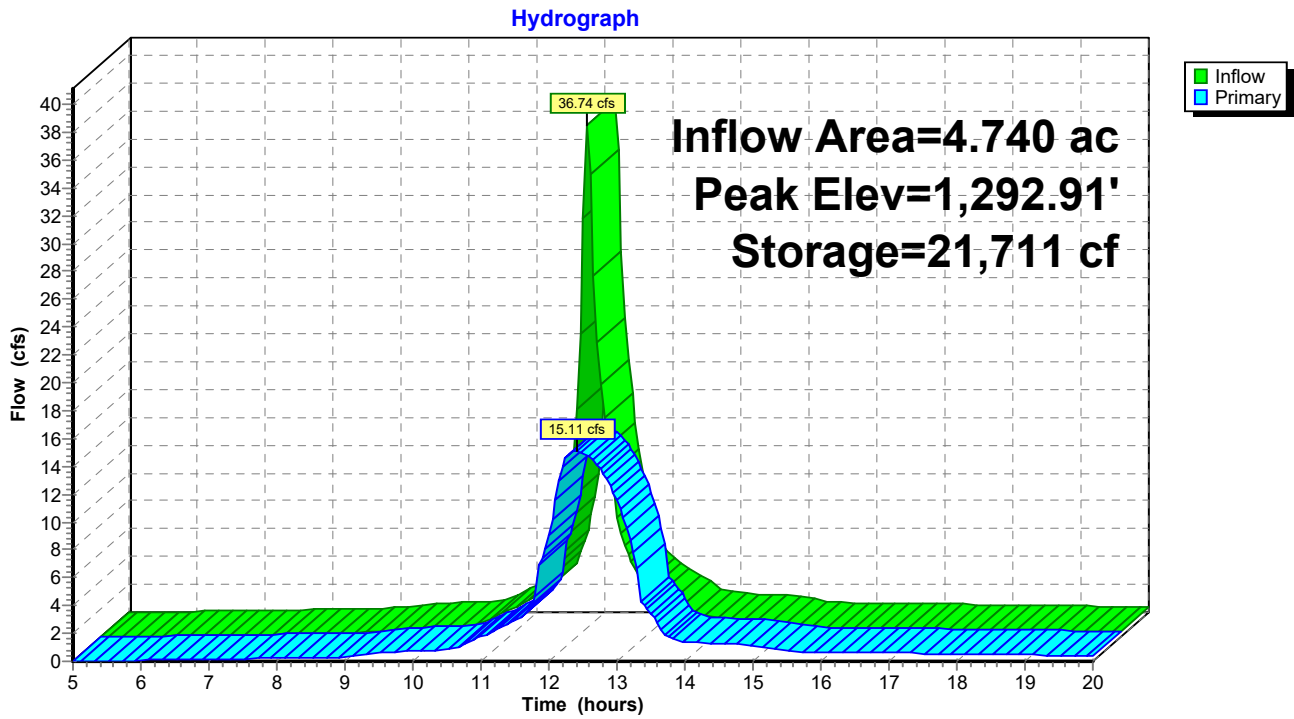
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,285.75	7	0	0
1,286.00	756	95	95
1,287.00	1,243	1,000	1,095
1,288.00	1,845	1,544	2,639
1,289.00	2,553	2,199	4,838
1,290.00	3,366	2,960	7,797
1,291.00	4,283	3,825	11,622
1,292.00	5,305	4,794	16,416
1,293.00	6,432	5,869	22,284
1,294.00	7,664	7,048	29,332
1,295.00	9,000	8,332	37,664

Device	Routing	Invert	Outlet Devices
#1	Primary	1,285.75'	15.0" Round Culvert L= 83.5' CMP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,285.75' / 1,285.16' S= 0.0071 ' /' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.23 sf
#2	Device 1	1,285.75'	Custom Weir/Orifice, Cv= 2.62 (C= 3.28) Head (feet) 0.00 0.50 Width (feet) 1.50 1.50
#3	Device 1	1,287.50'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=15.10 cfs @ 12.42 hrs HW=1,292.90' (Free Discharge)

- 1=Culvert (Inlet Controls 15.10 cfs @ 12.30 fps)
- 2=Custom Weir/Orifice (Passes < 9.68 cfs potential flow)
- 3=Orifice/Grate (Passes < 44.77 cfs potential flow)

Pond 1P: Detention Pond



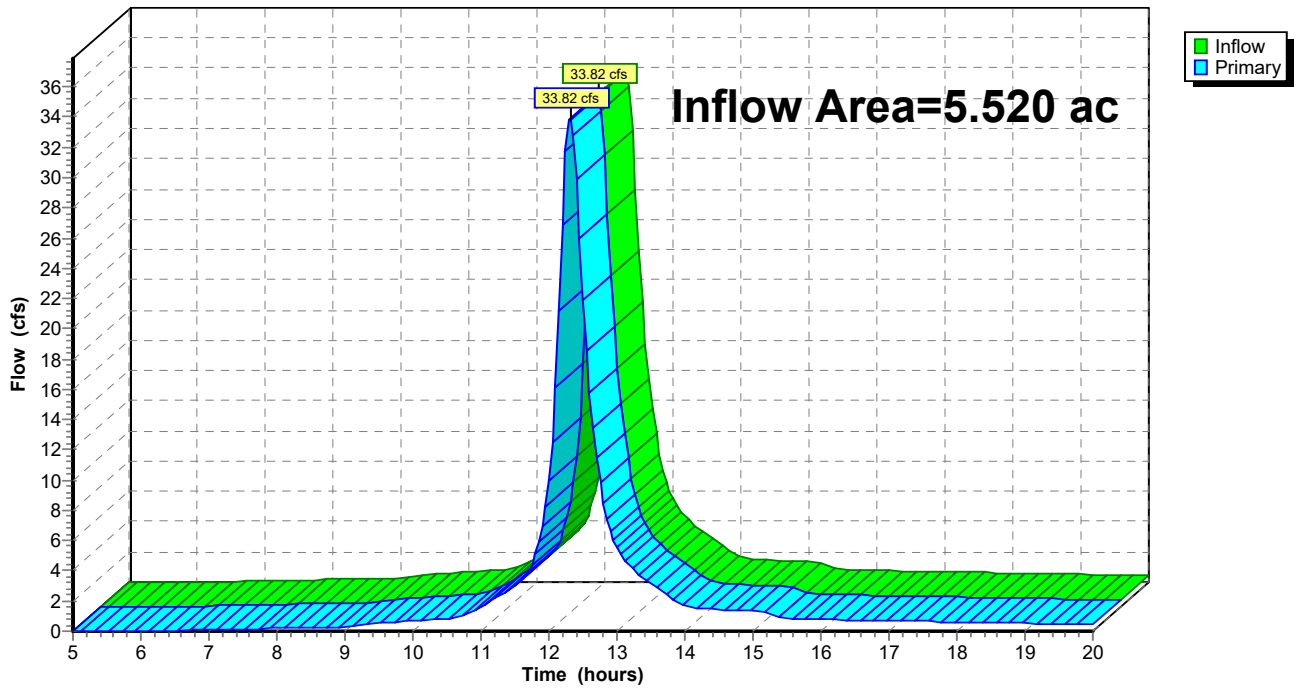
Summary for Link 1L: Pre

Inflow Area = 5.520 ac, 0.00% Impervious, Inflow Depth > 5.69" for 100-Year event
Inflow = 33.82 cfs @ 12.31 hrs, Volume= 2.618 af
Primary = 33.82 cfs @ 12.31 hrs, Volume= 2.618 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 1L: Pre

Hydrograph



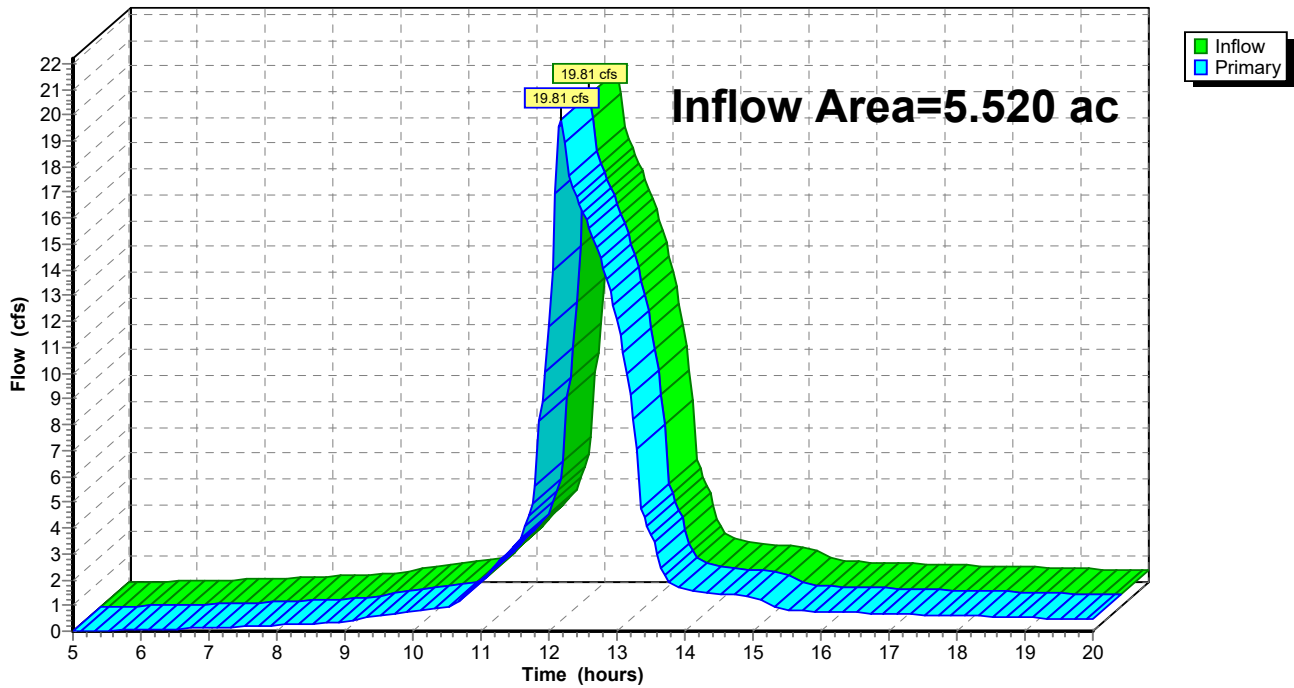
Summary for Link 2L: Post

Inflow Area = 5.520 ac, 31.16% Impervious, Inflow Depth > 5.79" for 100-Year event
Inflow = 19.81 cfs @ 12.17 hrs, Volume= 2.662 af
Primary = 19.81 cfs @ 12.17 hrs, Volume= 2.662 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

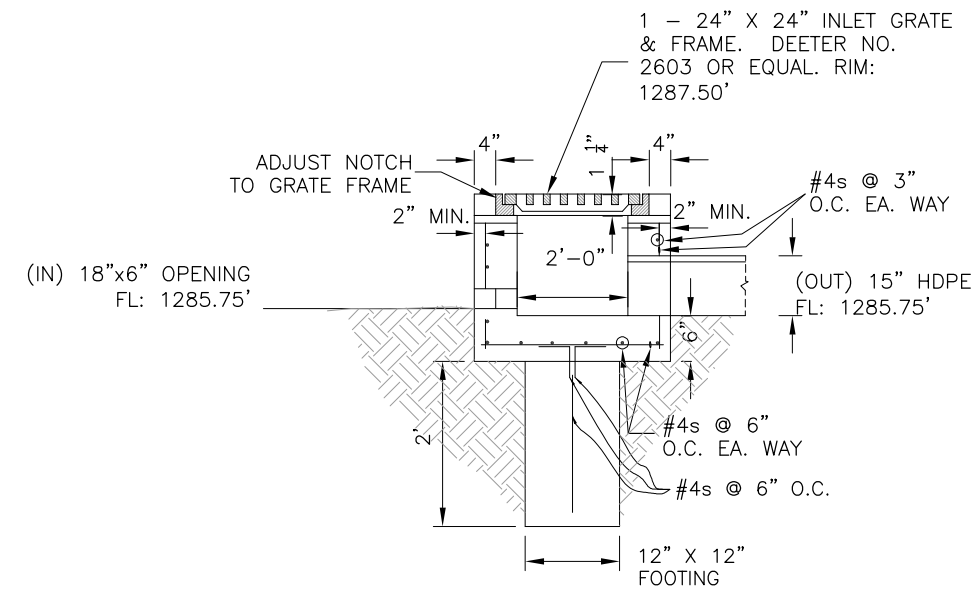
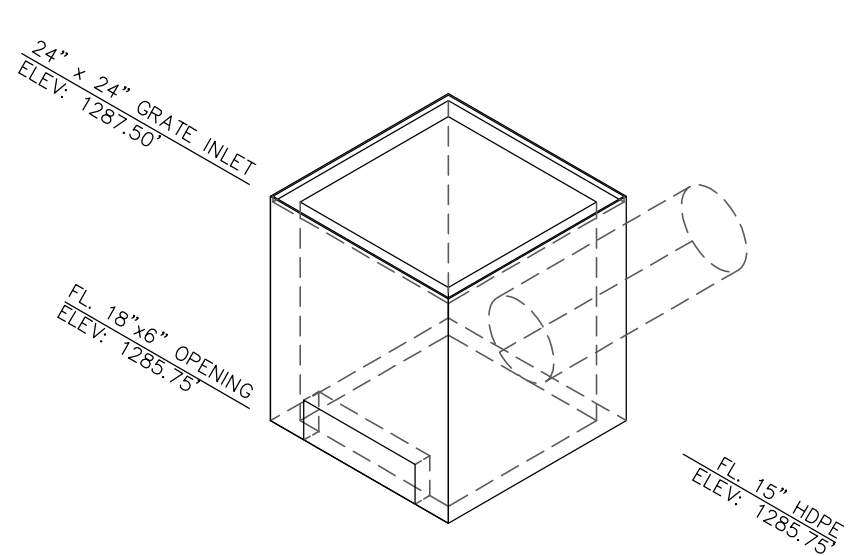
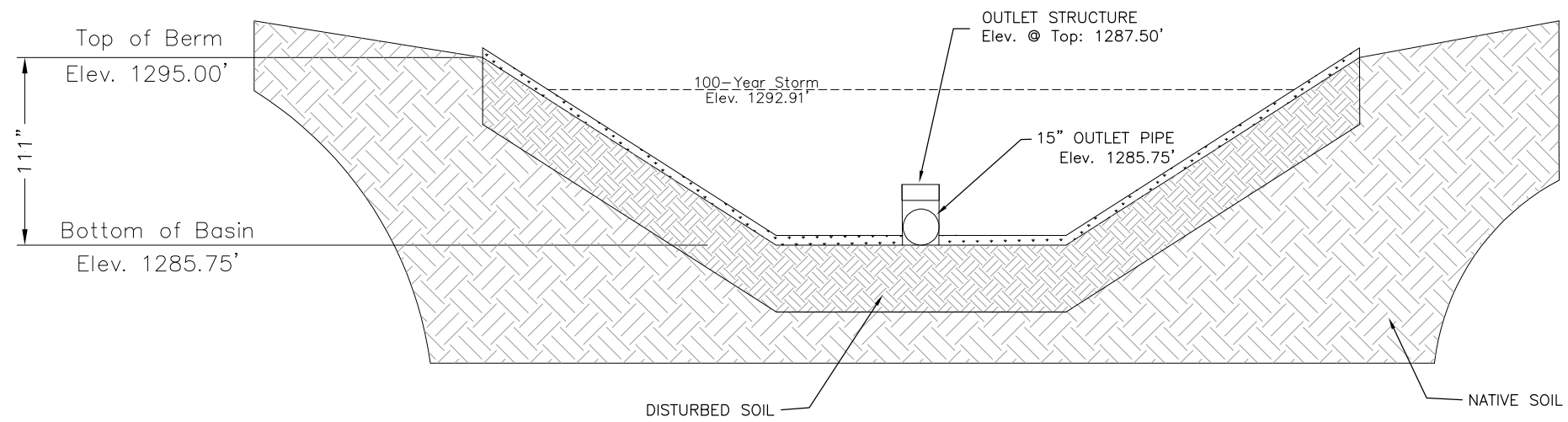
Link 2L: Post

Hydrograph



APPENDIX D

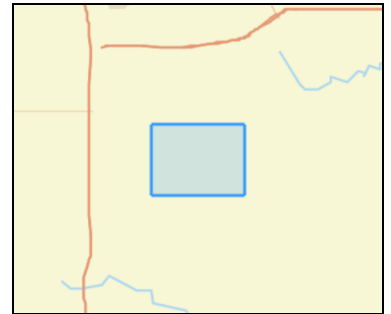
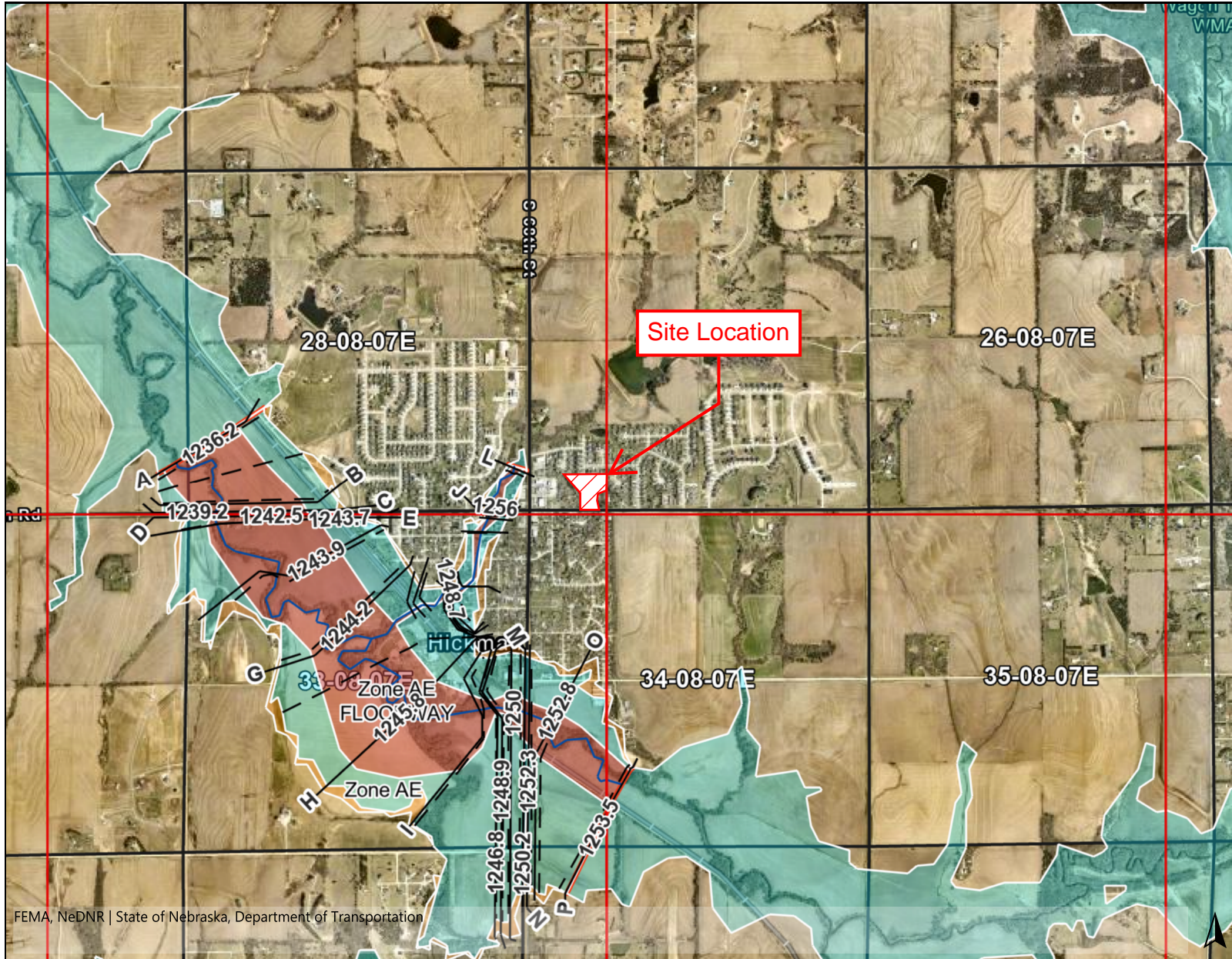
DETENTION POND DETAILS



DETENTION POND CROSS-SECTION AND OUTLET STRUCTURE

APPENDIX E

FLOODPLAIN FIGURE



Legend

BFE Determinations

- Valid BFE

Effective Paper Maps

- Effective Flood Zone

Effective Paper Maps

- 1% Annual Chance
- Regulatory Floodway
- 0.2% Annual Chance
- Reduced Risk Due to Levee

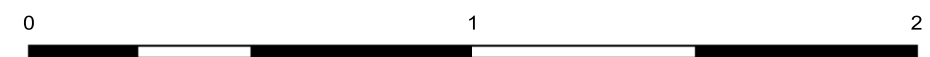
Flood Hazard Zones

- FIRM panels
- Cross-Sections
- Limit-Lines

Other Map Layers

- Sections
- Communities
- NRDs

FEMA, NeDNR | State of Nebraska, Department of Transportation



Date Printed: 8/28/2023

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Notes

NOTIFICATION OF ANNUAL AUDIT INSTRUCTIONS

Who must complete NAA Form: all governmental entities and organizations receiving Community Development Block Grant (CDBG), Home Investment Partnerships (HOME), National Housing Trust Funds (HTF) and/or Coronavirus Aid, Relief, and Economic Security Act (CARES Act).

The federal act and 2 CFR 200 Part F require entities that expend \$750,000 or more during the entity's fiscal year in federal funds (from all sources) conduct a single audit for that fiscal year by an independent public accountant and provide a copy to DED. For more information regarding audit requirements, refer to Chapter 15 of the CDBG Administration Manual.

When due: 60 days after fiscal yearend to DED.

Where to submit: ded.audit.naa@nebraska.gov or Nebraska Department of Economic Development, PO Box 94666, Lincoln NE 68509-4666.

NAA FORM COMPLETION TIPS

Item 1: Identify the governmental entity or organization name.

Item 2: Indicate the entity or organization fiscal yearend date.

Item 3: Tabulate the expenditures within the last fiscal year of all federal sources of funds, including any local program funds considered federal funds (e.g., program income, revolving loan funds, etc.).

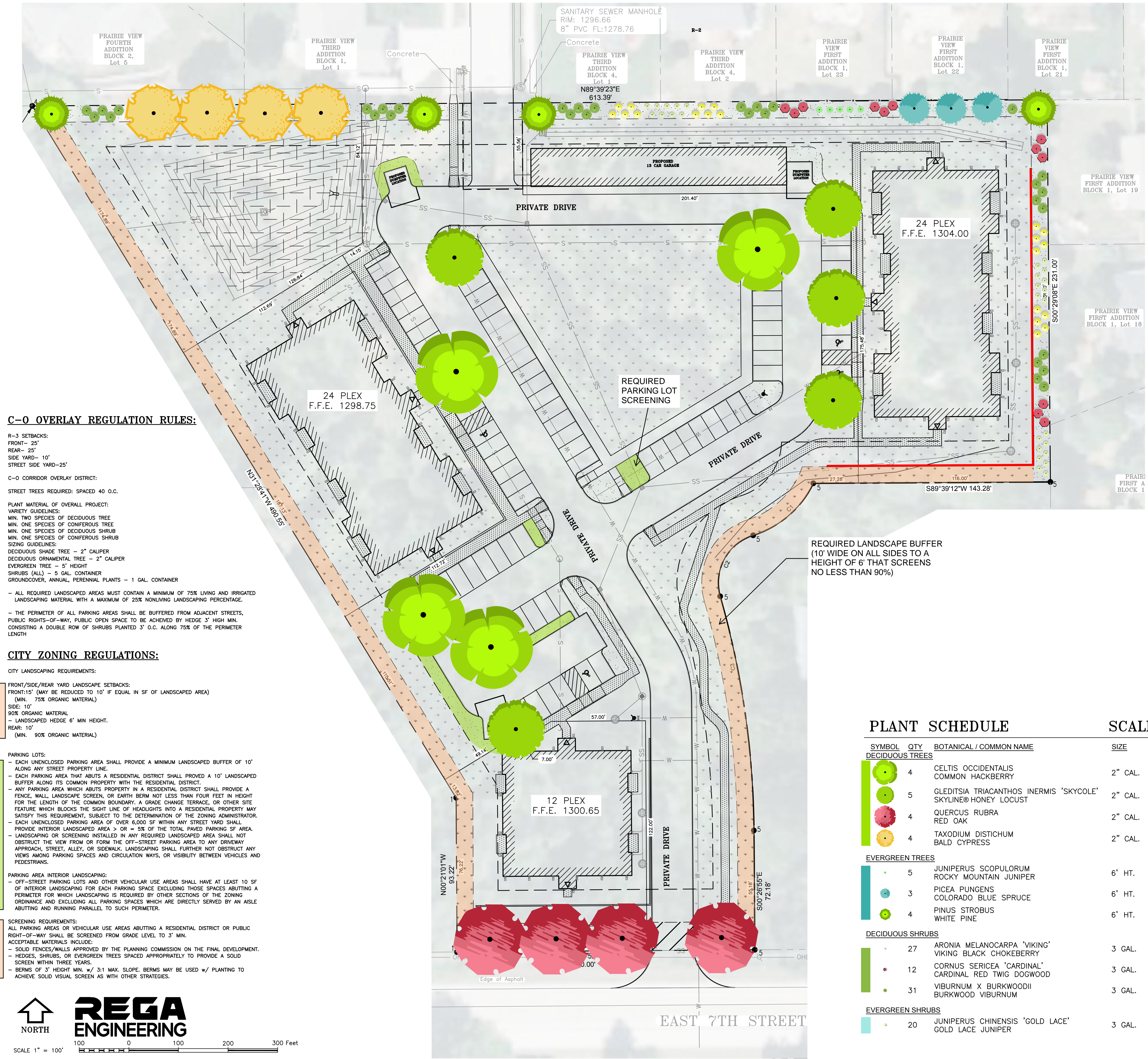
EXAMPLE: CDBG 15-DTR-106 \$180,000, FEMA/Disaster 4325 \$200,000, Highway Safety \$50,000, USDA \$500,000, SBA \$50,000, US Department of Transportation \$1,000,000, and/or other.

Item 4: Based upon the total federal expenditures indicated in Item 3 above, mark one box in this section to inform DED of the level of all federal expenditures. If federal expenditures exceed \$750,000, an audit report will be required to be submitted to DED within **180 days** after fiscal yearend.

Item 5: Indicate the person responsible for audit submittal.

Item 6: This signature must be the entity/organization Chief Elected Official or Chief Financial Officer.

BARBER ESTATES CONCEPTUAL LANDSCAPE PLAN



C-O OVERLAY REGULATION RULES:

R-3 SETBACKS:
 FRONT- 25'
 REAR- 25'
 SIDE YARD- 10'
 STREET SIDE YARD-25'

C-O CORRIDOR OVERLAY DISTRICT:
 STREET TREES REQUIRED: SPACED 40 O.C.

PLANT MATERIAL OF OVERALL PROJECT:
 VARIETY GUIDELINES:
 MIN. TWO SPECIES OF DECIDUOUS TREE
 MIN. ONE SPECIES OF CONIFEROUS TREE
 MIN. ONE SPECIES OF DECIDUOUS SHRUB
 MIN. ONE SPECIES OF CONIFEROUS SHRUB

SIZING GUIDELINES:
 DECIDUOUS SHADE TREE - 2" CALIPER
 DECIDUOUS ORNAMENTAL TREE - 2" CALIPER
 EVERGREEN TREE - 5' HEIGHT
 SHRUBS (ALL) - 5 GAL CONTAINER
 GROUNDCOVER, ANNUAL, PERENNIAL PLANTS - 1 GAL CONTAINER

- ALL REQUIRED LANDSCAPED AREAS MUST CONTAIN A MINIMUM OF 75% LIVING AND IRRIGATED LANDSCAPING MATERIAL WITH A MAXIMUM OF 25% NONLIVING LANDSCAPING PERCENTAGE.

- THE PERIMETER OF ALL PARKING AREAS SHALL BE BUFFERED FROM ADJACENT STREETS, PUBLIC RIGHTS-OF-WAY, PUBLIC OPEN SPACE TO BE ACHIEVED BY HEDGE 3' HIGH MIN. CONSISTING A DOUBLE ROW OF SHRUBS PLANTED 3' O.C. ALONG 75% OF THE PERIMETER LENGTH

CITY ZONING REGULATIONS:

CITY LANDSCAPING REQUIREMENTS:

FRONT/SIDE/REAR YARD LANDSCAPE SETBACKS:
 FRONT:15' (MAY BE REDUCED TO 10' IF EQUAL IN SF OF LANDSCAPED AREA)
 (MIN. 75% ORGANIC MATERIAL)
 SIDE: 10'
 90% ORGANIC MATERIAL
 - LANDSCAPED HEDGE 6' MIN HEIGHT.
 REAR: 10'
 (MIN. 90% ORGANIC MATERIAL)

PARKING LOTS:
 - EACH UNENCLOSED PARKING AREA SHALL PROVIDE A MINIMUM LANDSCAPED BUFFER OF 10' ALONG ANY STREET PROPERTY LINE.
 - EACH PARKING AREA THAT ABUTS A RESIDENTIAL DISTRICT SHALL PROVIDE A 10' LANDSCAPED BUFFER ALONG ITS COMMON PROPERTY WITH THE RESIDENTIAL DISTRICT.
 - ANY PARKING AREA WHICH ABUTS PROPERTY IN A RESIDENTIAL DISTRICT SHALL PROVIDE A FENCE, WALL, LANDSCAPE SCREEN, OR EARTH BERM NOT LESS THAN FOUR FEET IN HEIGHT FOR THE LENGTH OF THE COMMON BOUNDARY. A GRADE CHANGE TERRACE, OR OTHER SITE FEATURE WHICH BLOCKS THE SIGHT LINE OF HEADLIGHTS INTO A RESIDENTIAL PROPERTY MAY SATISFY THIS REQUIREMENT, SUBJECT TO THE DETERMINATION OF THE ZONING ADMINISTRATOR.
 - EACH UNENCLOSED PARKING AREA OF OVER 6,000 SF WITHIN ANY STREET YARD SHALL PROVIDE INTERIOR LANDSCAPED AREA > OR = 5% OF THE TOTAL PAVED PARKING SF AREA.
 - LANDSCAPING OR SCREENING INSTALLED IN ANY REQUIRED LANDSCAPED AREA SHALL NOT OBSTRUCT THE VIEW FROM OR FORM THE OFF-STREET PARKING AREA TO ANY DRIVEWAY, APPROACH, STREET, ALLEY, OR SIDEWALK. LANDSCAPING SHALL FURTHER NOT OBSTRUCT ANY VIEWS AMONG PARKING SPACES AND CIRCULATION WAYS, OR VISIBILITY BETWEEN VEHICLES AND PEDESTRIANS.

PARKING AREA INTERIOR LANDSCAPING:
 - OFF-STREET PARKING LOTS AND OTHER VEHICULAR USE AREAS SHALL HAVE AT LEAST 10 SF OF INTERIOR LANDSCAPING FOR EACH PARKING SPACE EXCLUDING THOSE SPACES ABUTTING A PERIMETER FOR WHICH LANDSCAPING IS REQUIRED BY OTHER SECTIONS OF THE ZONING ORDINANCE AND EXCLUDING ALL PARKING SPACES WHICH ARE DIRECTLY SERVED BY AN AISLE ABUTTING AND RUNNING PARALLEL TO SUCH PERIMETER.

SCREENING REQUIREMENTS:
 ALL PARKING AREAS OR VEHICULAR USE AREAS ABUTTING A RESIDENTIAL DISTRICT OR PUBLIC RIGHT-OF-WAY SHALL BE SCREENED FROM GRADE LEVEL TO 3' MIN.
 ACCEPTABLE MATERIALS INCLUDE:
 - SOLID FENCES/WALLS APPROVED BY THE PLANNING COMMISSION ON THE FINAL DEVELOPMENT.
 - HEDGES, SHRUBS, OR EVERGREEN TREES SPACED APPROPRIATELY TO PROVIDE A SOUND SCREEN WITHIN THREE YEARS.
 - BERMS OF 3' HEIGHT MIN. w/ 3:1 MAX. SLOPE. BERMS MAY BE USED w/ PLANTING TO ACHIEVE SOLID VISUAL SCREEN AS WITH OTHER STRATEGIES.



REQUIRED LANDSCAPE BUFFER
 (10' WIDE ON ALL SIDES TO A
 HEIGHT OF 6' THAT SCREENS
 NO LESS THAN 90%)

PLANT SCHEDULE

SCALE: 1" = 30'

SYMBOL	QTY	BOTANICAL / COMMON NAME	SIZE	CONTAINER	DETAIL	MATURE HEIGHT	MATURE WIDTH	SEASON OF BLOOM
DECIDUOUS TREES								
	4	CELTIS OCCIDENTALIS COMMON HACKBERRY	2" CAL.	B&B		40 - 65ft. ht.	40 - 65ft. w.	Early Spring, Mid-spring, Late Spring
	5	GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE' SKYLINE HONEY LOCUST	2" CAL.	B&B		40 - 65ft. ht.	25 - 40ft. w.	Mid-spring, Late Spring, Early Summer, Mid-summer
	4	QUERCUS RUBRA RED OAK	2" CAL.	B&B		40 - 65ft. ht.	40 - 65ft. w.	Mid-spring, Late Spring
	4	TAXODIUM DISTICHUM BALD CYPRESS	2" CAL.	B&B		40 - 65ft. ht.	25 - 40ft. w.	Non-blooming
EVERGREEN TREES								
	5	JUNIPERUS SCOPULORUM ROCKY MOUNTAIN JUNIPER	6' HT.	POT		10 - ' ht.	10 - 15ft. w.	Non-blooming
	3	PICEA PUNGENS COLORADO BLUE SPRUCE	6' HT.	B&B		40 - 65ft. ht.	15 - 25ft. w.	Non-blooming
	4	PINUS STROBUS WHITE PINE	6' HT.	B&B		40 - 65ft. ht.	25 - 40ft. w.	Non-blooming
DECIDUOUS SHRUBS								
	27	ARONIA MELANOCARPA 'VIKING' VIKING BLACK CHOKEBERRY	3 GAL.	POT		3 - 6ft. ht.	3 - 6ft. w.	Mid-spring
	12	CORNUS SERICEA 'CARDINAL' CARDINAL RED TWIG DOGWOOD	3 GAL.	POT		6 - 10ft. ht.	6 - 10ft. w.	Late Spring, Early Summer, Mid-summer, Mid-fall
	31	VIBURNUM X BURKWOODII BURKWOOD VIBURNUM	3 GAL.	POT		6 - 10ft. ht.	6 - 10ft. w.	Mid-spring, Late Spring
EVERGREEN SHRUBS								
	20	JUNIPERUS CHINENSIS 'GOLD LACE' GOLD LACE JUNIPER	3 GAL.	POT		3 - 6ft. ht.	3 - 6ft. w.	Non-blooming