NEXT ORDINANCE NO. 4.673

CITY COUNCIL MEETING
7010 NORTH HOLMES
GLADSTONE, MISSOURI
MONDAY, JUNE 10, 2024

The City Council will meet in Closed Executive Session at 6:15 pm, Monday, June 10, 2024, Gladstone City Hall, 7010 North Holmes, Gladstone, Missouri. The Closed Executive Session is closed pursuant to RSMo. Open Meeting Act Exemption 610.021 (1) for Litigation and Confidential or Privileged Communications with Legal Counsel, 610.021 (2) Real Estate, 610.021(3) Personnel, and 610.021 (12) Negotiated Contract.

OPEN STUDY SESSION 7:15 PM

1. **Technology Initiatives-** Finance/IT staff will discuss what has been going on from an IT perspective at the City, the importance of security, recovery, storage, and redundancy, along with current and future plans with budget and COP proceeds.

REGULAR MEETING 7:30 PM

TENTATIVE AGENDA

1. **Meeting Called to Order.**
2. **Roll Call.**
3. **Pledge of Allegiance to the Flag of the United States of America.**
4. **Approval of the Agenda.**
5. **Approval of the May 13, 2024, Regular City Council Meeting Minutes.**
6. **Approval of the May 13, 2024, Closed City Council Meeting Minutes.**

7. **PROCLAMATION:** World Elder Abuse Awareness Day.
8. **Communications from the Audience:** *Members of the public are invited to speak about any topic not listed on the agenda. While speaking, please state your name and address for the record and limit comments to 5 minutes.*
9. **Communications from City Council.**
10. **Communications from the City Manager.**
11. **CONSENT AGENDA**

CONSIDER SPECIAL EVENT PERMITS:

Carnival Time, Inc. Celebration, Happy Rock Park West, Friday, June 7, 2024, 6:00 to 9:00 pm.

Trivia Night, Linden Square, Thursday, June 20 and Wednesday, July 31, 2024, 7:00 to 11:00 pm.

Movie Night, Linden Square, Saturday, June 22 and Saturday, July 27, 2024, 7:00 to 11:00 pm.

Theatre in the Park, Oak Grove Park, Friday through Sunday, June 28, 29, 30, and August 2, 3, 4, 2024, 8:30-10:30 pm.

Independence Day Celebration, Oak Grove Park, Thursday, July 4, 2024, 5:00 to 11:00 pm.

Pickin' on the Front Porch, Atkins-Johnson Farm and Museum, Saturday, September 21, 2024, 6:00 to 8:00 pm.

Pumpkin Festival, Big Shoal Farm, Saturday, September 21, 2024, 10:00 am to 4:00 pm.

RESOLUTION R-24-25, A Resolution authorizing the City Manager to execute a contract with Gallagher, in the total amount of $27,621.42 for Cyber Liability coverage for the 2025 Fiscal Year.

RESOLUTION R-24-26, A Resolution authorizing acceptance of a proposal from CDW-G, in the amount of $32,999.84 for the purchase of sixteen (16) Aruba Switches.

RESOLUTION R-24-27, A Resolution authorizing Change Order No. 9 in the amount of $170,720.00 to the contract with Lan-Tel Communications Services Incorporated, for the FY23 Curb, Gutter, and Sidewalk Program – Phase 2 Project TP2305.

CONSIDER FINANCIAL REPORT FOR 10 MONTHS ENDING APRIL 30, 2024.

REGULAR AGENDA

12. **RESOLUTION R-24-28,** A Resolution adopting the 2025 Annual Operating Budget for the City of Gladstone, Missouri, and authorizing the expenditures of funds for Municipal Services.

13. **RESOLUTION R-24-29,** A Resolution authorizing the City Manager to execute an agreement with Maguire Iron, Incorporated, in the total amount not to exceed $15,700.00 for the design of water tank renovations, Project WP2492C.

14. **RESOLUTION R-24-30,** A Resolution authorizing the City Manager to execute a contract with Yates Electric Company, Incorporated, in the total amount not to exceed $378,124.00 for Downtown Gladstone Lighting, Project TO2311.

15. **RESOLUTION R-24-31,** A Resolution authorizing the City Manager to execute a Professional Engineering Services Agreement with Lamp Rynearson, Incorporated, in the total amount not to exceed $784,167.39 for the completion of design of Water Treatment Plant Improvements, Project WP2492B.

16. **FIRST READING BILL NO. 24-18,** An Ordinance directing the City Manager to execute a Cooperative Agreement with the North Kansas City School District for providing a School Resource Officer at Antioch Middle School.

17. **PUBLIC HEARING:** Site Plan Revision for property at 7200 North Broadway, Gladstone, Missouri.

18. **FIRST READING BILL NO. 24-19,** An Ordinance approving a Site Plan Revision for property at 7200 North Broadway.

19. **Other Business.**

20. **Adjournment.**

Representatives of the News Media may obtain copies of this notice by contacting:

City Clerk Kris Keller
City of Gladstone
7010 North Holmes
Gladstone, MO 64118

Posted at 3:00 pm
June 6, 2024
816-423-4096

Department of Finance
Memorandum

DATE: June 6, 2024

TO: Robert Baer

FROM: Keenan Ewing, IT Manager

RE: **Technology Initiatives**

One of the intangible items often forgotten is network infrastructure. It is always expected to work and usually does. What happens when it does not? Or worse yet, what happens if the network is compromised?

On Monday, June 10th, I will deliver a presentation outlining the City's ongoing and upcoming technology initiatives, as well as staff's philosophy regarding cybersecurity. Utilizing the 2024 COP fund allocation for IT infrastructure, our team has initialized strategic planning and purchasing efforts aimed at enhancing the City's capacity to respond to cybersecurity events. We will share non-sensitive information related to these initiatives with the City Council.

Additionally, the presentation will cover the impact on residents, sustainability, and the commitment of resources to these projects. There will also be some time for any questions that the City Council, staff, or the public may have about the items discussed after the presentation.

MINUTES
REGULAR CITY COUNCIL MEETING
GLADSTONE, MISSOURI
MAY 13, 2024

PRESENT: Mayor Tina Spallo
Mayor Pro Tem Les Smith
Councilmember Jean Moore
Councilman Bill Garnos
Councilman Spencer Davis

City Manager Bob Baer
Assistant City Manager Austin Greer
City Attorney Chris Williams
City Clerk Kris Keller

Item No. 1. On the Agenda. Meeting Called to Order.

Mayor Spallo opened the Regular City Council Meeting Monday, May 13, 2024, at 7:36 pm.

Item No. 2. On the Agenda. Roll Call.

Mayor Spallo stated that all Councilmembers were present and there was a quorum.

Item No. 3. On the Agenda. Pledge of Allegiance to the Flag of the United States of America.

Mayor Spallo asked all to stand and join in the Pledge of Allegiance to the Flag of the United States of America.

Item No. 4. On the Agenda. Approval of the Agenda.

The agenda was approved as published.

Item No. 5. On the Agenda. Approval of the April 22, 2024, Closed City Council Meeting Minutes.

Councilmember Moore moved to approve the minutes of the April 22, 2024, Closed City Council meeting as presented. **Mayor Pro Tem Smith** seconded. The Vote: "aye", Councilman Davis, Councilman Garnos, Councilmember Moore, Mayor Pro Tem Smith, and Mayor Spallo. (5-0)

Item No. 6. On the Agenda. Approval of the April 22, 2024, Regular City Council Meeting Minutes.

Councilmember Moore moved to approve the minutes of the April 22, 2024, Regular City Council meeting as presented. **Mayor Pro Tem Smith** seconded. The Vote: "aye", Councilman Davis, Councilman Garnos, Councilmember Moore, Mayor Pro Tem Smith, and Mayor Spallo. (5-0)

Item No. 7. On the Agenda. PROCLAMATION: NATIONAL POLICE WEEK.

Mayor Spallo read the Proclamation recognizing National Police Week and presented it to Chief Fred Farris, Captain Karl Burris, and Captain Bryan Boydston. She shared her appreciation for the professionalism and the service the Police Department provides.

Item No. 8. On the Agenda. PROCLAMATION: NATIONAL EMERGENCY MEDICAL SERVICES WEEK.

Mayor Spallo recognized National Emergency Medical Services Week and presented it to Chief Mike Desautels, Colin Chang, Jackson Nelson, Sam Smith, Craig Richey, Kevin Davis, and Dayton Holtcamp. She thanked the Fire Department/EMS for all the services they provide.

Item No. 9. On the Agenda. Communications from the Audience.

David Nelson, 5735 North Clinton Lane, congratulated Council on the recent election and the new facilities. He shared his thoughts on the rich history of immigration and how it's greatly influenced our nations identity. As a volunteer at the Atkins-Johnson Farm and Museum, he expressed his pride and appreciation for the Council's support of the farm and museum. He shared information about the upcoming exhibit, "Immigration: An American Story" July 10th through August 3, 2024. He described the exhibit and importance of recognizing the contributions of immigrants and expressed that they should be welcomed as our ancestors were welcomed. He invited all to join him at 9:30 am on July 4th at the Atkins-Johnson Farm and Museum for a reading of the Declaration of Independence and the US Constitution, in preparation for our nation's 250th Anniversary. He encouraged those who speak a foreign language to participate in the July 4th reading event.

Item No. 10. On the Agenda. Communications from City Council.

Councilmember Moore thanked Public Works and other City staff for the recent spring beautification and shredding events that are made seamless and simple for our residents.

Mayor Pro Tem Smith reported that he attended the recent meeting at Northland Neighbors Inc., and shared there was interest outside the City limits for making the connection of the Vivion Trail.

Mayor Spallo announced that she attended the recent Neighborhood Commission meeting and reported the commission is taking on some new responsibilities and shared there will be some exiting news in the next few months for our residents and homeowners. She reminded everyone about the Gladstone Area Chamber of Commerce's annual Bluesfest this Friday and Saturday evening. She thanked Public Works for the recent events for residents.

Item No. 11. On the Agenda. Communications from the City Manager.

City Manager Baer announced the Spring edition of the Gladstone magazine was published and will be mailed to residents. He reported that the Citywide garage sales will be held May 17th-19th; no permit is required during this time period and more information is available on the City's website.

Item No. 12. On the Agenda. CONSENT AGENDA.

Following the Clerks' reading:

Mayor Pro Tem Smith moved to approve the Consent Agenda as published. **Councilmember Moore** seconded. The Vote: "aye", Councilman Davis, Councilman Garnos, Councilmember Moore, Mayor Pro Tem Smith, and Mayor Spallo. (5-0)

Mayor Pro Tem Smith moved to approve the Special Event Permits:

Food, Art, Drink, Linden Square, Saturday, June 1, 2024, 12:00 to 10:00 pm.

Sounds on the Square, Linden Square, (see attached document for dates), 5:00 to10:00 pm.

Shores Real Estate Professionals, Client Appreciation Event, Oak Grove Park, Tuesday, June 18, 2024, 5:30 to 7:30 pm.

Children's Garden Day, Atkins-Johnson Farm and Museum, Saturday, July 13, 2024, 9:00 am to 12:00 pm.

Cutie Pie Tri/Kids Fest, Linden Square, Saturday, July 27, 2024, 8:00 am to 1:00 pm.

Big Shoal Farm Sunflower Festival, Atkins-Johnson Farm and Museum, Saturday, August 17, 2024, 9:00 am to 3:00 pm.

Fiesta on the Square, Linden Square, Saturday, September 7, 2024, 5:00 to 9:00 pm.

Whiskey Fest, Linden Square, Saturday, October 12, 2024, 4:00 to 10:00 pm.

Councilmember Moore seconded. The Vote: "aye", Councilman Davis, Councilman Garnos, Councilmember Moore, Mayor Pro Tem Smith, and Mayor Spallo. (5-0)

Mayor Pro Tem Smith moved to approve **RESOLUTION R-24-21**, A Resolution authorizing the City Manager to execute a contract with A. T. Switzer Painting Company, Incorporated, in the total amount not to exceed $26,881.00 for the Community Center Leisure Pool Repainting Project CC2463. **Councilmember Moore** seconded. The Vote: "aye", Councilman Davis, Councilman Garnos, Councilmember Moore, Mayor Pro Tem Smith, and Mayor Spallo. (5-0)

Mayor Pro Tem Smith moved to approve **RESOLUTION R-24-22**, A Resolution authorizing the City Manager to execute a contract with Confluence Commercial Pool Equipment in the total amount not to exceed $45,600.00 for the replacement of twelve (12) starting blocks for the Community Center Pools Project CC2462. **Councilmember Moore** seconded. The Vote: "aye", Councilman Davis, Councilman Garnos, Councilmember Moore, Mayor Pro Tem Smith, and Mayor Spallo. (5-0)

Mayor Pro Tem Smith moved to approve **RESOLUTION R-24-23**, A Resolution authorizing the City Manager to execute a first amendment to the lease agreement by and between the City of Gladstone, Missouri and Evergy Metro Inc., for lease of property located at the 72nd Street North Evergy Substation. **Councilmember Moore** seconded. The Vote: "aye", Councilman Davis, Councilman Garnos, Councilmember Moore, Mayor Pro Tem Smith, and Mayor Spallo. (5-0)

Mayor Pro Tem Smith moved to approve **RESOLUTION R-24-24**, A Resolution declaring certain City property surplus and authorizing the donation of surplus items to the Midwest Recycling Center. **Councilmember Moore** seconded. The Vote: "aye", Councilman Davis, Councilman Garnos, Councilmember Moore, Mayor Pro Tem Smith, and Mayor Spallo. (5-0)

REGULAR AGENDA.

Item No. 13. On the Agenda. PUBLIC HEARING: Budget Fiscal Year 2024-2025

Mayor Spallo opened the Public Hearing at 7:56 pm

Finance Director Dominic Accurso approached the Council and presented the Budget Fiscal Year 2024-2025. Please see attached presentation for detailed information. Mayor Spallo requested an explanation regarding the equity transfers and Director Accurso provided the response. He then

reported that if the budget is approved, it will be placed on the June 10, 2024, City Council meeting agenda.

There was no one in favor or opposition of the Budget Fiscal Year 2024-2025.

Mayor Spallo closed the Public Hearing at 8:18 pm.

Item No. 14. On the Agenda. PUBLIC HEARING: Amending Section 6.110.570, Levying sewer service charges and commodity rate charges in the City.

Mayor Spallo opened the Public Hearing at 8:18 pm.

Director of Finance, Dominic Accurso, addressed the Council and reported we currently pay $5.10 per 1,000 gallons of water usage and $10.00 a month service charge. Staff proposes to change the water monthly service charge to $10.25 and the water usage rate will remain the same. Sewer usage is currently $12.20 and the service charge is $17.15. Staff is proposing the sewer usage to increase to $12.40 per 1,000 gallons and the sewer service charge to $18.18. He shared the survey results for a cost comparison with surrounding cities. He reported the proposed rates will go into effect June 1, 2024, if the City Council approves the Ordinance on tonight's agenda.

There was no one in favor or opposition of the application.

Mayor Spallo closed the public hearing at 8:04 pm.

Item No. 15. On the Agenda. FIRST READING BILL NO. 24-15, An Ordinance amending Section 6.110.570 of the Code of Ordinances of the City of Gladstone, Missouri, Levying Sewer Service Charges and Commodity Rate Charges in the City.

Councilman Garnos moved **BILL NO. 24-15** be placed on its First Reading. **Councilmember Moore** seconded. The Vote: "aye", Councilman Davis, Councilman Garnos, Councilmember Moore, Mayor Pro Tem Smith, and Mayor Spallo. (5-0) The Clerk read the Bill.

Councilman Garnos moved to accept the First Reading of **BILL NO. 24-15**, waive the rule and place the Bill on its Second and Final Reading. **Councilmember Moore** seconded. The Vote: "aye", Councilman Davis, Councilman Garnos, Councilmember Moore, Mayor Pro Tem Smith, and Mayor Spallo. (5-0) The Clerk read the Bill.

Councilman Garnos moved to accept the Second and Final Reading of **BILL NO. 24-15** and enact the Bill as **Ordinance 4.670**. **Councilmember Moore** seconded.

Roll Call vote: "aye", Councilman Davis, Councilman Garnos, Councilmember Moore, Mayor Pro Tem Smith, and Mayor Spallo. (5-0) **Mayor Spallo** stated **BILL NO. 24-15** stands enacted as **Ordinance Number 4.670.**

Item No. 16. On the Agenda. FIRST READING BILL NO. 24-16, An Ordinance amending Section 6.110.100 of the Code of Ordinances of the City of Gladstone, Missouri, regarding Water Service Rates in the City.

Mayor Pro Tem Smith moved **BILL NO. 24-16** be placed on its First Reading. **Councilman Davis** seconded. The Vote: "aye", Councilman Davis, Councilman Garnos, Councilmember Moore, Mayor Pro Tem Smith, and Mayor Spallo. (5-0) The Clerk read the Bill.

Mayor Pro Tem Smith moved to accept the First Reading of **BILL NO. 24-16**, waive the rule and place the Bill on its Second and Final Reading. **Councilman Davis** seconded. The Vote: "aye",

Councilman Davis, Councilman Garnos, Councilmember Moore, Mayor Pro Tem Smith, and Mayor Spallo. (5-0) The Clerk read the Bill.

Mayor Pro Tem Smith moved to accept the Second and Final Reading of **BILL NO. 24-16** and enact the Bill as **Ordinance 4.671**. **Councilman Davis** seconded.

Roll Call vote: "aye", Councilman Davis, Councilman Garnos, Councilmember Moore, Mayor Pro Tem Smith, and Mayor Spallo. (5-0) **Mayor Spallo** stated **BILL NO. 24-16** stands enacted as **Ordinance Number 4.671.**

Item No. 17. On the Agenda. **FIRST READING BILL NO. 24-17**, An Ordinance of the City of Gladstone, Missouri, to establish a procedure to disclose potential conflicts of interest and substantial interests for certain Municipal Officials pursuant to the State of Missouri Ethics law.

Councilmember Moore moved **BILL NO. 24-17** be placed on its First Reading. **Councilman Garnos** seconded. The Vote: "aye", Councilman Davis, Councilman Garnos, Councilmember Moore, Mayor Pro Tem Smith, and Mayor Spallo. (5-0) The Clerk read the Bill.

Councilmember Moore moved to accept the First Reading of **BILL NO. 24-17**, waive the rule and place the Bill on its Second and Final Reading. **Councilman Garnos** seconded. The Vote: "aye", Councilman Davis, Councilman Garnos, Councilmember Moore, Mayor Pro Tem Smith, and Mayor Spallo. (5-0) The Clerk read the Bill.

Councilmember Moore moved to accept the Second and Final Reading of **BILL NO. 24-17** and enact the Bill as **Ordinance 4.672**. **Councilman Garnos** seconded.

Roll Call vote: "aye", Councilman Davis, Councilman Garnos, Councilmember Moore, Mayor Pro Tem Smith, and Mayor Spallo. (5-0) **Mayor Spallo** stated **BILL NO. 24-17** stands enacted as **Ordinance Number 4.672.**

Item No. 18. On the Agenda. Other Business.

There was no other business.

Item No. 19. On the Agenda. Adjournment.

Mayor Spallo adjourned the May 13, 2024, Regular City Council meeting at 8:29 pm.

Respectfully submitted:

_____
Kris Keller, City Clerk

Approved as presented: _____

Approved as modified: _____

_____
Tina M. Spallo, Mayor

PROCLAMATION

WHEREAS, older adults deserve to be treated with respect and dignity to enable them to serve as leaders, mentors, volunteers, and vital participating members of our communities; and

WHEREAS, in 2006, the International Network for the Prevention of Elder Abuse, in support of the United Nations International Plan of Action, proclaimed a day to recognize the significance of elder abuse as a public health and human rights issue; and

WHEREAS, June 15th, 2024, marks the 19th Annual World Elder Abuse Awareness Day. Its recognition will promote a better understanding of abuse and neglect of older adults; and

WHEREAS, The National Center on Elder Abuse (NCEA) and the City of Gladstone recognize the importance of taking action to raise awareness, prevent, and address elder abuse; and

WHEREAS, as our population lives longer, we are presented with an opportunity to think about our collective needs and future as a nation; and

WHEREAS, Ageism and social isolation are major causes of elder abuse in the United States; and

WHEREAS, recognizing that it is up to all of us to ensure that proper social structures exist so people can retain community and societal connections, reducing the likelihood of abuse; and

WHEREAS, preventing abuse of older adults through maintaining and improving social supports like senior centers, human services and transportation will allow everyone to continue to live as independently as possible and contribute to the life and vibrancy of our communities; and

WHEREAS, where there is justice there can be no abuse; therefore, NCEA urges all people to restore justice by honoring older adults and join us in our engaging and empowering movement, and putting an end to abuse.

NOW, THEREFORE, I, Tina M. Spallo, Mayor of the City of Gladstone, Missouri, on behalf of the members of the Gladstone City Council and all Gladstone residents, do hereby proclaim June 15th, as

WORLD ELDER ABUSE AWARENESS DAY

in Gladstone, Missouri, and encourage all of our communities to recognize and celebrate older adults and their ongoing contributions to the success and vitality of our country.

Signed this day of 10th Day of June, 2024.

Request for Council Action

RES ☐ # City Clerk Only **BILL** ☐ # City Clerk Only **ORD** ☐ # City Clerk Only

Date: 5/14/2024 Department: Community Development

Meeting Date Requested: 6/10/2024

Public Hearing: Yes ☐ Date: Click here to enter a date.

Subject: Special Event Permit

Background: Carnival Time, Inc., a Kansas City based business located in the northland, is celebrating its twenty-fifth (25th) anniversary. They are requesting a Special Event Permit for Happy Rock Park West on Friday, June 7, 2024 from 6:00 pm to 9:00 pm; the event will be free of charge. They are advertising the event on their webpage and with the northland schools.

There will be three (3) inflatables and free popcorn, cotton candy, hotdogs, and snow cones to the first three-hundred (300) guests. They will set up a 20' x 20' tent in the grass area. The event will be staffed by Carnival Time employees.

Budget Discussion: N/A

Public/Board/Staff Input: See attached letter of transmittal.

Provide Original Contracts, Leases, Agreements, etc. to: City Clerk and Vendor.

Alan Napoli Department Director/Administrator	JM City Attorney	BB City Manager

LETTER OF TRANSMITTAL

CITY OF GLADSTONE
Community Development Department
P.O. Box 10719
Gladstone, Missouri 64188-0719
Tel. (816) 436-2200 Fax (816) 436-2228

TO: *CITY COUNCIL*
FROM: *COMMUNITY DEVELOPMENT*
DATE: **MAY 14, 2024**
PERMIT NO.: **SEP24-00047**
RE: **TYPE 4 OUTDOOR SPECIAL EVENT**

NAME OF EVENT: **CARNIVAL TIME CELEBRATION**
LOCATION OF EVENT: **7512 NE ANTIOCH ROAD**
HAPPY ROCK PARK WEST
DATE OF EVENT: **FRIDAY, JUNE 7, 2024**
TIME OF EVENT: **6:00 PM TO 9:00 PM**
EST. ATTENDANCE: **?**

REQUESTED TEMPORARY VARIANCE:

[X] Section 2.120.050 Noise prohibited.
[X] Section 2.130.010(2) Park rules and regulations (hours).
[ ] Section 2.130.010(13) Park rules and regulations (alcoholic beverages).
[ ] Section 2.135.040 Prohibition of smoking on or within all public park grounds.
[ ] Section 2.140.040 Public fireworks display prohibited, exceptions.
[ ] Section 5.110.1800 Drinking in public.
[ ] Section 5.160.230(a) Street use permit (street use permit allowed).
[X] Section 9.1600.110 Temporary signs.
[ ] Section 2.100.250(1) Outdoor display, sale and storage
[ ] Section 2.100.250(3) Sales transactions

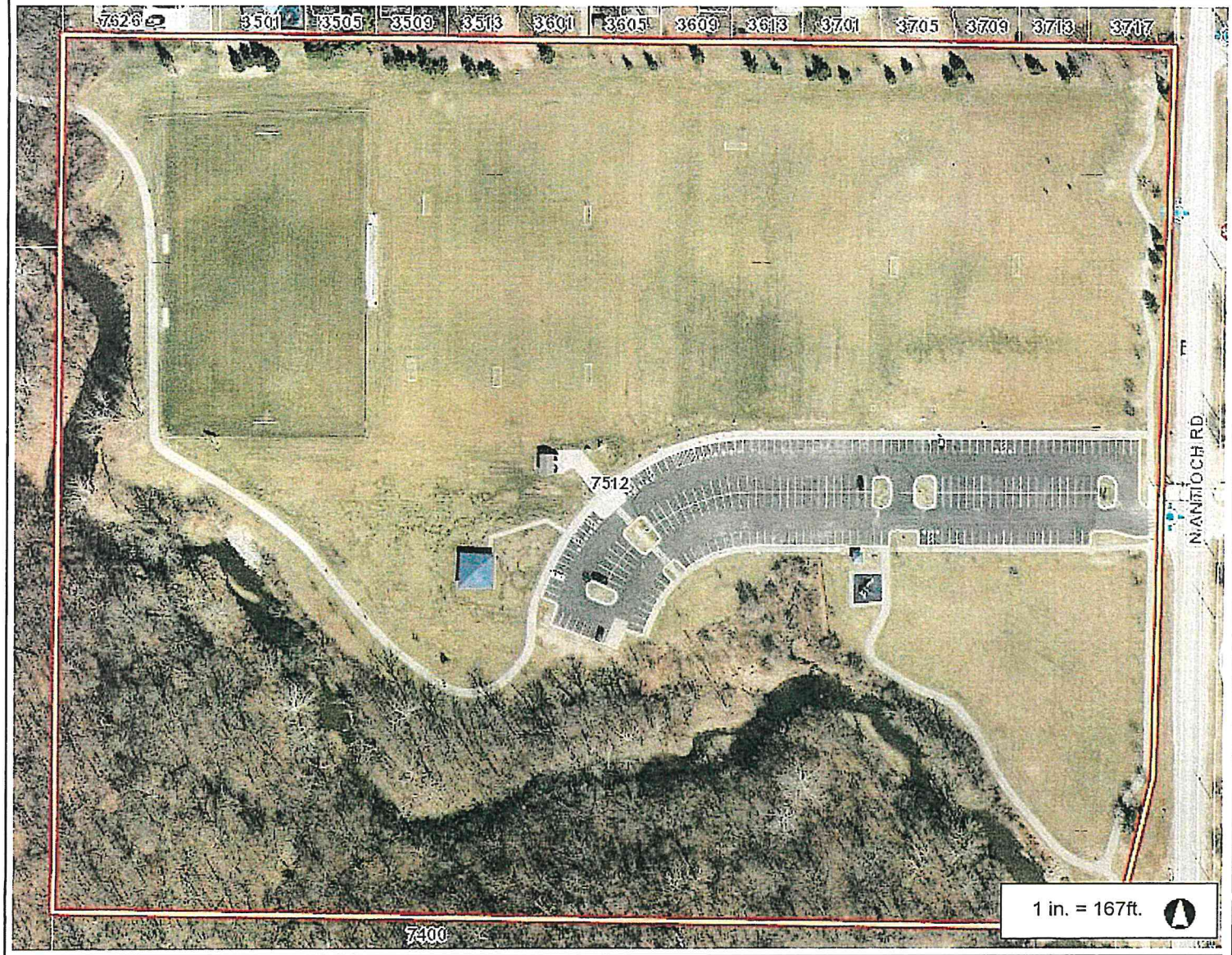
REMARKS: City staff has reviewed the application and finds that the variance(s) are appropriate for this venue.

Signed:
Alan D. Napoli, C.B.O.
Community Development Administrator | Building Official

ATTACHMENT(S):

[X] Map
[X] Flyer

Gladstone, MO



Legend

- Stop Sign
- KCPL Lights
- Gladstone Lights
- School Point
- Bike Parking
- Bus Stop
- Point of Interest
- Church
- Apartment Point
- Street Centerline
- Edge Of Pavement
- Driveway
- City Limits
- Parcel
- House Number
- School Polygon
- Villages
- Apartment Polygon

Notes

333.3 0 166.67 333.3 Feet


YOU'RE INVITED!
FRIDAY JUNE 7TH 6-9PM
25TH
ANNIVERS
FREE PARTY IN THE PARK
FREE
ATTRACTION
Carnival Times
YOUR PREMIERE PROVIDER OF ALL THINGS INFLATABLE & MORE
FREE
HOT DOGS, COTTON CANDY, SNOKONES & NACH
Location: Happy Rock Park, 7565 NE Antioch Rd, Gladstone, MO
Date and Time: Friday, June 7th 6-9pm

Request for Council Action

RES ☐ # City Clerk Only **BILL** ☐ # City Clerk Only **ORD** ☐ # City Clerk Only

Date: 4/19/2024 Department: Community Development

Meeting Date Requested: 6/10/2024

Public Hearing: Yes ☐ Date: Click here to enter a date.

Subject: Special Event Permit

Background: The Parks, Recreation, and Cultural Arts Department will host the City's Annual Trivia Night; this year there will be two (2) trivia nights. Teams will be comprised of 2-4 people who will compete against other teams. A movie screen/projector and sound system will be used for the trivia questions. Beverages will be available for purchase.

The event will take place at Linden Square from 7:00 pm to 11:00 pm on the following nights:

- Thursday, June 20, 2024 (Pop Culture Trivia)
- Wednesday, July 31, 2024 (Harry Potter Trivia)

Budget Discussion: N/A

Public/Board/Staff Input: See attached letter of transmittal.

Provide Original Contracts, Leases, Agreements, etc. to: City Clerk and Vendor.

Alan Napoli Department Director/Administrator	JM City Attorney	BB City Manager

LETTER OF TRANSMITTAL

CITY OF GLADSTONE
Community Development Department
P.O. Box 10719
Gladstone, Missouri 64188-0719
Tel. (816) 436-2200 Fax (816) 436-2228

TO: *CITY COUNCIL*
FROM: *COMMUNITY DEVELOPMENT*
DATE: APRIL 19, 2024
PERMIT NO.: SEP24-00034
RE: TYPE 4 OUTDOOR SPECIAL EVENT

NAME OF EVENT: TRIVIA IN THE SQUARE
LOCATION OF EVENT: 602 NE 70TH STREET
LINDEN SQUARE
DATE OF EVENT: THURSDAY, JUNE 20, 2024 (POP CULTURE)
WEDNESDAY, JULY 31, 2024 (HARRY POTTER)
TIME OF EVENT: 7:00 PM TO 11:00 PM
EST. ATTENDANCE: 25±

REQUESTED TEMPORARY VARIANCE:

[X] Section 2.120.050 Noise prohibited.
[X] Section 2.130.010(2) Park rules and regulations (hours).
[X] Section 2.130.010(13) Park rules and regulations (alcoholic beverages).
[X] Section 2.135.040 Prohibition of smoking on or within all public park grounds.
[ ] Section 2.140.040 Public fireworks display prohibited, exceptions.
[X] Section 5.110.1800 Drinking in public.
[ ] Section 5.160.230(a) Street use permit (street use permit allowed).
[X] Section 9.1600.110 Temporary signs.
[X] Section 2.100.250(1) Outdoor display, sale and storage
[X] Section 2.100.250(3) Sales transactions

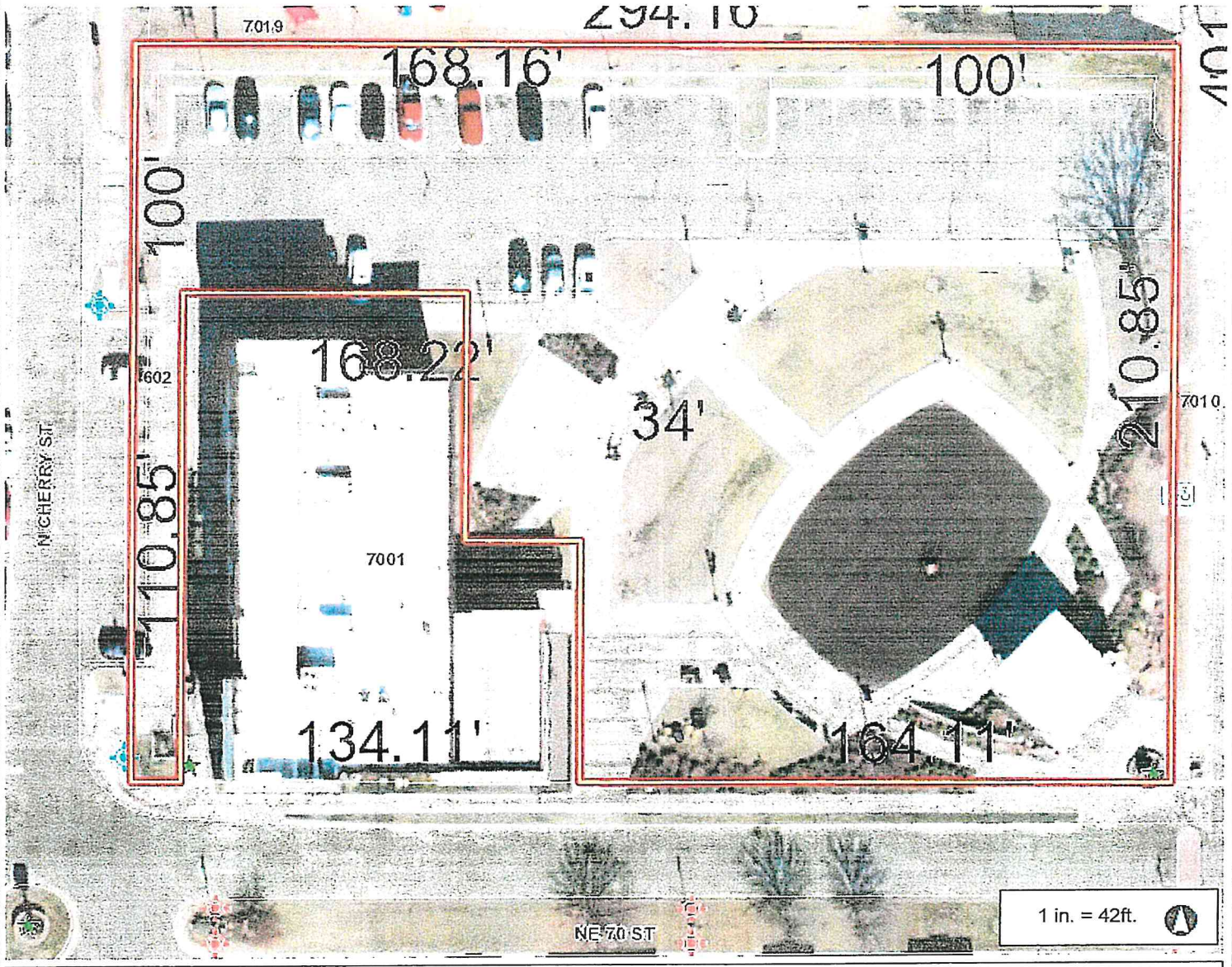
REMARKS: City staff has reviewed the application and finds that the variance(s) are appropriate for this venue.

Signed: _____
Alan D. Napoli, C.B.O.
Community Development Administrator | Building Official

ATTACHMENT(S):

[X] Map
[ ] Other _____

Gladstone, MO



Legend

- Stop Sign
- KCPL Lights
- Gladstone Lights
- School Point
- Bike Parking
- Bus Stop
- Point of Interest
- Church
- Apartment Point
- Street Centerline
- Edge Of Pavement
- Driveway
- City Limits
- Parcel
- House Number
- Villages
- Apartment Polygon

1 in. = 42ft.

Notes

83.3 0 41.67 83.3 Feet

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

Request for Council Action

RES ☐ # City Clerk Only **BILL** ☐ # City Clerk Only **ORD** ☐ # City Clerk Only

Date: 4/19/2024 Department: Community Development

Meeting Date Requested: 6/10/2024

Public Hearing: Yes ☐ Date: Click here to enter a date.

Subject: Special Event Permit

Background: The Parks, Recreation, and Cultural Arts Department will host the City's Annual Movie Night; there will be two (2) movie nights. This event is free to the public.

The event will take place at Linden Square from 7:00 pm to 11:00 pm on the following nights:

- Saturday, June 22, 2024 (Grease)
- Saturday, July 27, 2024 (Kung Fu Panda 4)

Budget Discussion: N/A

Public/Board/Staff Input: See attached letter of transmittal.

Provide Original Contracts, Leases, Agreements, etc. to: City Clerk and Vendor.

Alan Napoli Department Director/Administrator	JM City Attorney	BB City Manager

LETTER OF TRANSMITTAL

CITY OF GLADSTONE
Community Development Department
P.O. Box 10719
Gladstone, Missouri 64188-0719
Tel. (816) 436-2200 Fax (816) 436-2228

TO: *CITY COUNCIL*
FROM: *COMMUNITY DEVELOPMENT*
DATE: APRIL 19, 2024
PERMIT NO.: SEP24-00035
RE: TYPE 4 OUTDOOR SPECIAL EVENT

NAME OF EVENT: MOVIES IN THE SQUARE
LOCATION OF EVENT: 602 NE 70TH STREET
LINDEN SQUARE
DATE OF EVENT: SATURDAY, JUNE 22, 2024 (GREASE)
SATURDAY, JULY 27, 2024 (KUNG FU PANDA 4)
TIME OF EVENT: 7:00 PM TO 11:00 PM
EST. ATTENDANCE: 100±

REQUESTED TEMPORARY VARIANCE:

[X] Section 2.120.050 Noise prohibited.
[X] Section 2.130.010(2) Park rules and regulations (hours).
[ ] Section 2.130.010(13) Park rules and regulations (alcoholic beverages).
[ ] Section 2.135.040 Prohibition of smoking on or within all public park grounds.
[ ] Section 2.140.040 Public fireworks display prohibited, exceptions.
[ ] Section 5.110.1800 Drinking in public.
[ ] Section 5.160.230(a) Street use permit (street use permit allowed).
[X] Section 9.1600.110 Temporary signs.
[ ] Section 2.100.250(1) Outdoor display, sale and storage
[ ] Section 2.100.250(3) Sales transactions

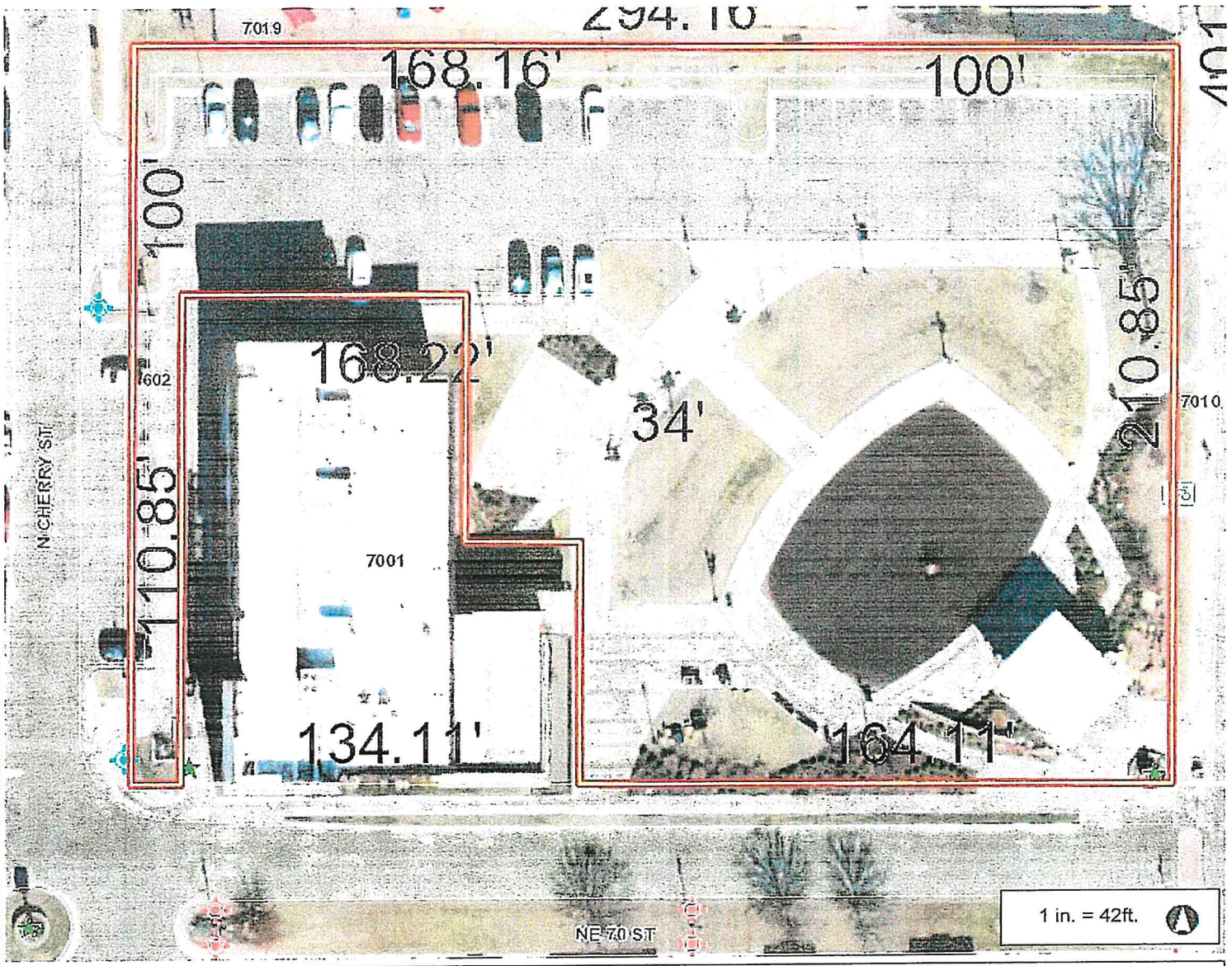
REMARKS: City staff has reviewed the application and finds that the variance(s) are appropriate for this venue.

Signed: _____
Alan D. Napoli, C.B.O.
Community Development Administrator | Building Official

ATTACHMENT(S):

[X] Map
[ ] Other _____

Gladstone, MO



Legend

- Stop Sign
- KCPL Lights
- Gladstone Lights
- School Point
- Bike Parking
- Bus Stop
- Point of Interest
- Church
- Apartment Point
- Street Centerline
- Edge Of Pavement
- Driveway
- City Limits
- Parcel
- House Number
- Villages
- Apartment Polygon

1 in. = 42ft.

83.3 0 41.67 83.3 Feet

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THIS MAP IS NOT TO BE USED FOR NAVIGATION

Notes

Request for Council Action

RES ☐ # City Clerk Only **BILL** ☐ # City Clerk Only **ORD** ☐ # City Clerk Only

Date: 5/1/2024 Department: Community Development

Meeting Date Requested: 6/10/2024

Public Hearing: Yes ☐ Date: Click here to enter a date.

Subject: Special Event Permit

Background: The Parks, Recreation, and Cultural Art Department will host the City's Annual Theatre in the Park series at Oak Grove Park. This year's productions are Fiddler on the Roof and Something Rotten. The park will open at 5:00 pm and close at 11:30 pm. The shows will start at 8:30 pm and conclude at 10:30 pm on the following dates:

- Fiddler on the Roof
  - Friday, June 28th
  - Saturday, June 29th
  - Sunday, June 30th

- Something Rotten
  - Friday, August 2nd
  - Saturday, August 3rd
  - Sunday, August 4th

The Gladstone Rotary Club will be selling concessions from the concession stand.

Budget Discussion: N/A

Public/Board/Staff Input: See attached letter of transmittal.

Provide Original Contracts, Leases, Agreements, etc. to: City Clerk and Vendor.

Alan Napoli Department Director/Administrator	JM City Attorney	BB City Manager

LETTER OF TRANSMITTAL

CITY OF GLADSTONE
Community Development Department
P.O. Box 10719
Gladstone, Missouri 64188-0719
Tel. (816) 436-2200 Fax (816) 436-2228

TO: *CITY COUNCIL*
FROM: *COMMUNITY DEVELOPMENT*
DATE: MAY 1, 2024
PERMIT NO.: SEP24-00041
RE: TYPE 4 OUTDOOR SPECIAL EVENT

NAME OF EVENT: THEATRE IN THE PARK
LOCATION OF EVENT: 7600 N TROOST AVENUE
OAK GROVE PARK
DATE OF EVENT: FIDDLER ON THE ROOF-
FRIDAY, JUNE 28, 2024
SATURDAY, JUNE 29, 2024
SUNDAY, JUNE 30, 2024
SOMETHING ROTTEN-
FRIDAY, AUGUST 2, 2024
SATURDAY, AUGUST 3, 2024
SUNDAY, AUGUST 4, 2024
TIME OF EVENT: THE PARK WILL OPEN AT 5:00 PM AND CLOSE AT 11:30 PM EACH NIGHT.
SHOW BEGIN AT 8:30 PM AND CONCLUDE AT 10:30 PM
EST. ATTENDANCE: 4000±

REQUESTED TEMPORARY VARIANCE:

[X] Section 2.120.050 Noise prohibited.
[X] Section 2.130.010(2) Park rules and regulations (hours).
[ ] Section 2.130.010(13) Park rules and regulations (alcoholic beverages).
[X] Section 2.135.040 Prohibition of smoking on or within all public park grounds.
[ ] Section 2.140.040 Public fireworks display prohibited, exceptions.
[ ] Section 5.110.1800 Drinking in public.
[ ] Section 5.160.230(a) Street use permit (street use permit allowed).
[X] Section 9.1600.110 Temporary signs.
[ ] Section 2.100.250(1) Outdoor display, sale and storage
[ ] Section 2.100.250(3) Sales transactions

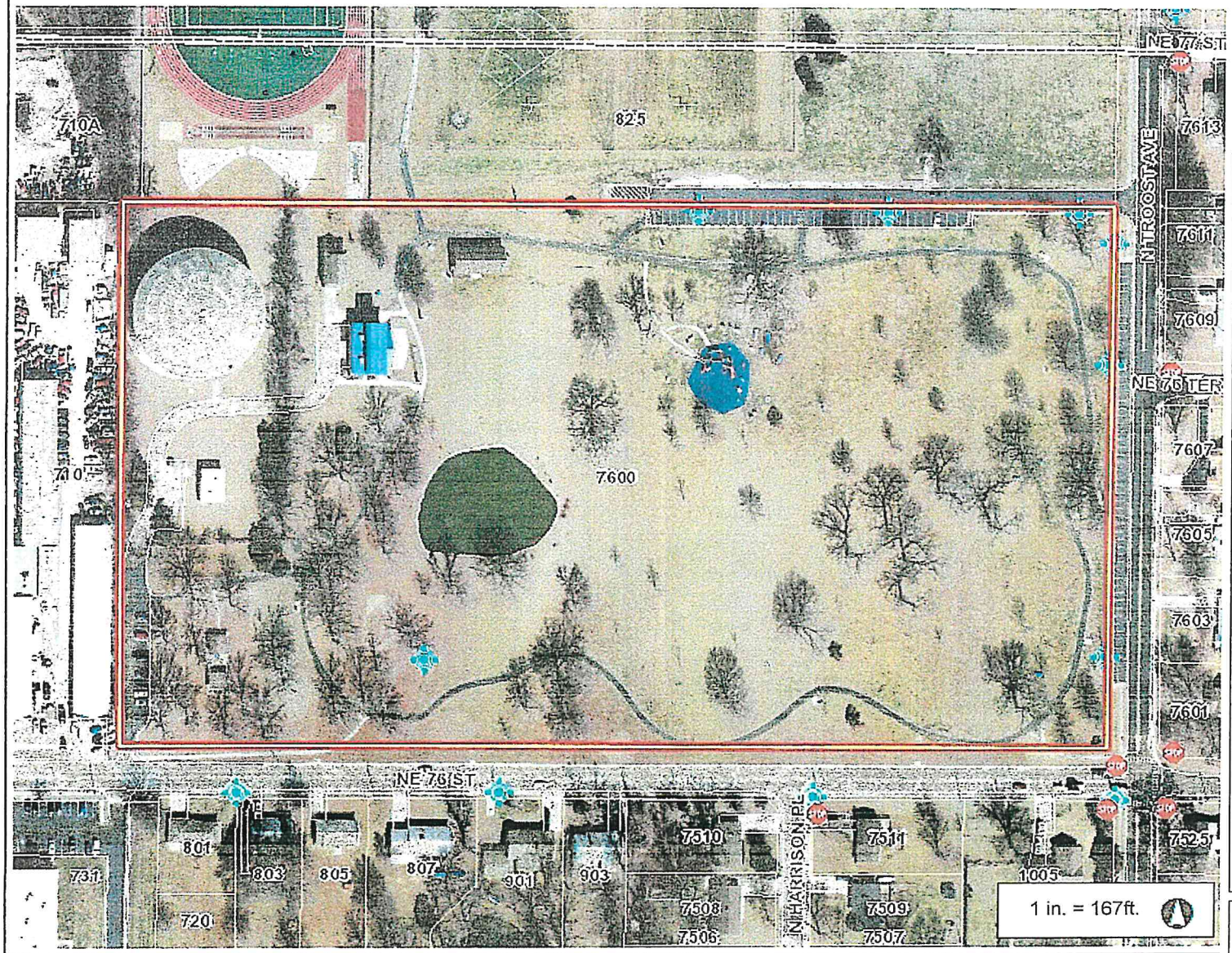
REMARKS: City staff has reviewed the application and finds that the variance(s) are appropriate for this venue.

Signed: _____
Alan D. Napoli, C.B.O.
Community Development Administrator | Building Official

ATTACHMENT(S):

[X] Map
[ ] Other _____

Gladstone, MO



Legend

- Stop Sign
- KCPL Lights
- Gladstone Lights
- School Point
- Bike Parking
- Bus Stop
- Point of Interest
- Church
- Apartment Point
- Street Centerline
- Edge Of Pavement
- Driveway
- City Limits
- Parcel
- House Number
- Villages
- Apartment Polygon

1 in. = 167ft.

333.3 0 166.67 333.3 Feet

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Notes

Request for Council Action

RES ☐ # City Clerk Only **BILL** ☐ # City Clerk Only **ORD** ☐ # City Clerk Only

Date: 5/1/2024 Department: Community Development

Meeting Date Requested: 6/10/2024

Public Hearing: Yes ☐ Date: Click here to enter a date.

Subject: Special Event Permit

Background: The Parks, Recreation, and Cultural Arts Department will host the City's Annual Independence Day Celebration. The event will take place at Oak Grove Park on Thursday, July 4, 2024 from 5:00 pm to 11:00 pm The following is a breakdown of the event (times may vary):

- 5:00 pm – Park will open up for the event
- 7:00 pm – The band Flashback will take the stage
- 9:00 pm – Mayor's welcome with presentation of the Colors, followed by the National Anthem
- 9:25 pm – Fireworks display presented by Premier Pyrotechnics

The Gladstone Rotary Club will be selling concessions at the concession stand.

Budget Discussion: N/A

Public/Board/Staff Input: See attached letter of transmittal.

Provide Original Contracts, Leases, Agreements, etc. to: City Clerk and Vendor.

Alan Napoli Department Director/Administrator	JM City Attorney	BB City Manager

LETTER OF TRANSMITTAL

CITY OF GLADSTONE
Community Development Department
P.O. Box 10719
Gladstone, Missouri 64188-0719
Tel. (816) 436-2200 Fax (816) 436-2228

TO: *CITY COUNCIL*
FROM: *COMMUNITY DEVELOPMENT*
DATE: MAY 1, 2024
PERMIT NO.: SEP24-00042
RE: TYPE 4 OUTDOOR SPECIAL EVENT

NAME OF EVENT: INDEPENDENCE DAY CELEBRATION
LOCATION OF EVENT: 7600 N TROOST AVENUE
OAK GROVE PARK
DATE OF EVENT: THURSDAY, JULY 4, 2024
TIME OF EVENT: 5:00 PM TO 11:00 PM (TIMES MAY VARY)
5:00 PM – PARK WILL OPEN UP FOR THE EVENT
7:00 PM – THE BAND FLASHBACK WILL TAKE THE STAGE
9:00 PM – MAYOR'S WELCOME WITH PRESENTATION OF THE COLORS, FOLLOWED BY THE NATIONAL ANTHEM
9:35 PM – FIREWORKS DISPLAY PRESENTED BY PREMIER PYROTECHNICS

EST. ATTENDANCE: 10,000±

REQUESTED TEMPORARY VARIANCE:

[X] Section 2.120.050 Noise prohibited.
[X] Section 2.130.010(2) Park rules and regulations (hours).
[ ] Section 2.130.010(13) Park rules and regulations (alcoholic beverages).
[X] Section 2.135.040 Prohibition of smoking on or within all public park grounds.
[X] Section 2.140.040 Public fireworks display prohibited, exceptions.
[ ] Section 5.110.1800 Drinking in public.
[X] Section 5.160.230(a) Street use permit (street use permit allowed).
[X] Section 9.1600.110 Temporary signs.
[ ] Section 2.100.250(1) Outdoor display, sale and storage
[ ] Section 2.100.250(3) Sales transactions

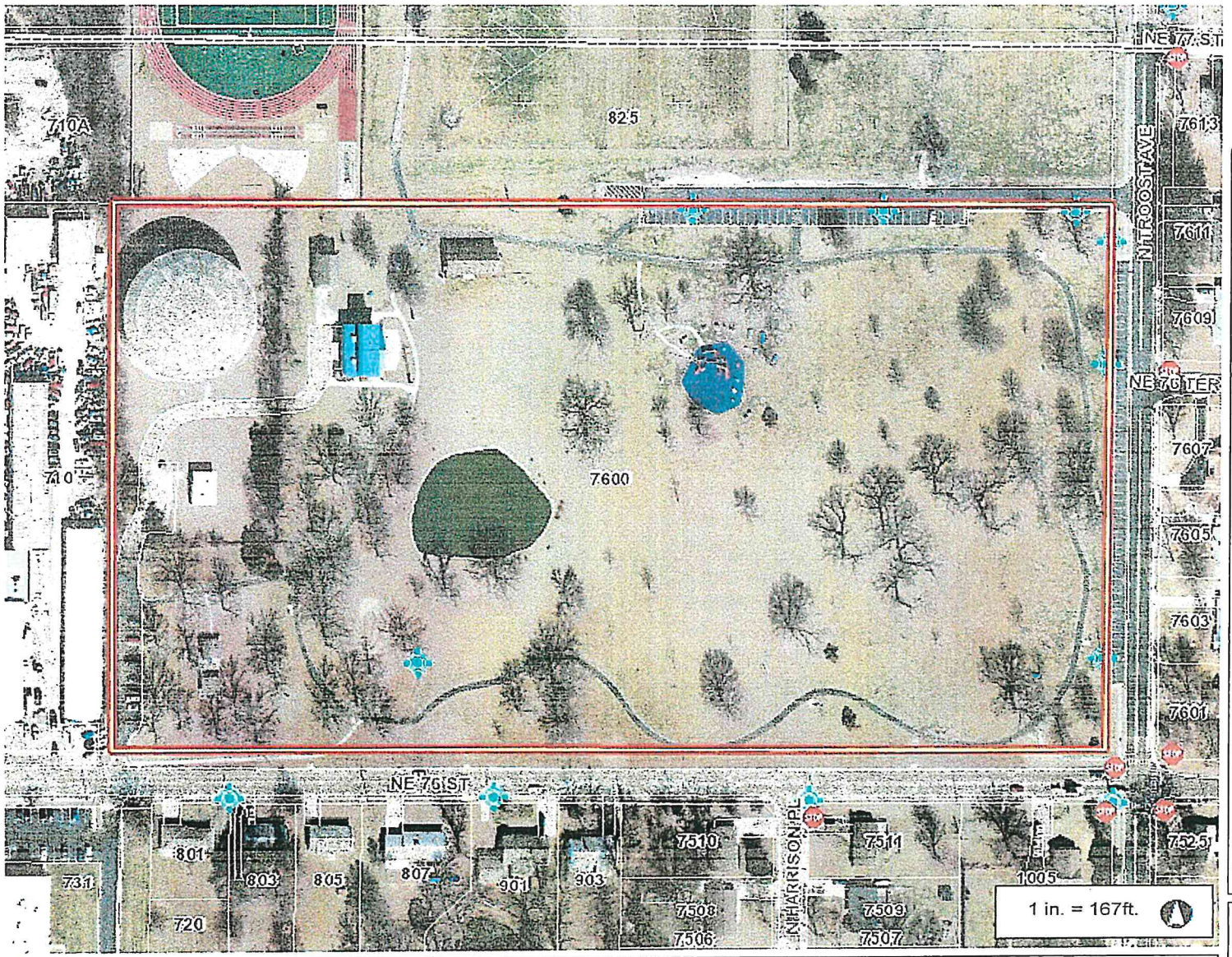
REMARKS: City staff has reviewed the application and finds that the variance(s) are appropriate for this venue.

Signed: _____
Alan D. Napoli, C.B.O.
Community Development Administrator | Building Official

ATTACHMENT(S):

[X] Map
[ ] Other _____

Gladstone, MO



Legend

- Stop Sign
- KCPL Lights
- Gladstone Lights
- School Point
- Bike Parking
- Bus Stop
- Point of Interest
- Church
- Apartment Point
- Street Centerline
- Edge Of Pavement
- Driveway
- City Limits
- Parcel
- House Number
- Villages
- Apartment Polygon

Notes

333.3 0 166.67 333.3 Feet

Request for Council Action

RES ☐ # City Clerk Only **BILL** ☐ # City Clerk Only **ORD** ☐ # City Clerk Only

Date: 5/1/2024 Department: Community Development

Meeting Date Requested: 6/10/2024

Public Hearing: Yes ☐ Date: Click here to enter a date.

Subject: Special Event Permit

Background: The Parks, Recreation, and Cultural Arts Department will host the City's Annual Pickin' on the Front Porch. This is a Bluegrass concert that will be performed on the front porch of the Atkins-Johnson Farm and Museum. Visitors will be invited to sit on the front lawn of the farm.

The event will be held on Saturday, September 21, 2024 from 6:00 pm to 8:00 pm.

Budget Discussion: N/A

Public/Board/Staff Input: See attached letter of transmittal.

Provide Original Contracts, Leases, Agreements, etc. to: City Clerk and Vendor.

Alan Napoli Department Director/Administrator	JM City Attorney	BB City Manager

LETTER OF TRANSMITTAL

CITY OF GLADSTONE
Community Development Department
P.O. Box 10719
Gladstone, Missouri 64188-0719
Tel. (816) 436-2200 Fax (816) 436-2228

TO: *CITY COUNCIL*
FROM: *COMMUNITY DEVELOPMENT*
DATE: MAY 1, 2024
PERMIT NO.: SEP24-00043
RE: TYPE 4 OUTDOOR SPECIAL EVENT

NAME OF EVENT: PICKIN' ON THE FRONT PORCH
LOCATION OF EVENT: 4109 NE PLEASANT VALLEY ROAD
ATKINS-JOHNSON FARM & MUSEUM
DATE OF EVENT: SATURDAY, SEPTEMBER 21, 2024
TIME OF EVENT: 6:00 PM TO 8:00 PM
EST. ATTENDANCE: 200±

REQUESTED TEMPORARY VARIANCE:

[X] Section 2.120.050 Noise prohibited.
[X] Section 2.130.010(2) Park rules and regulations (hours).
[ ] Section 2.130.010(13) Park rules and regulations (alcoholic beverages).
[ ] Section 2.135.040 Prohibition of smoking on or within all public park grounds.
[ ] Section 2.140.040 Public fireworks display prohibited, exceptions.
[ ] Section 5.110.1800 Drinking in public.
[ ] Section 5.160.230(a) Street use permit (street use permit allowed).
[ ] Section 9.1600.110 Temporary signs.
[X] Section 2.100.250(1) Outdoor display, sale and storage
[ ] Section 2.100.250(3) Sales transactions

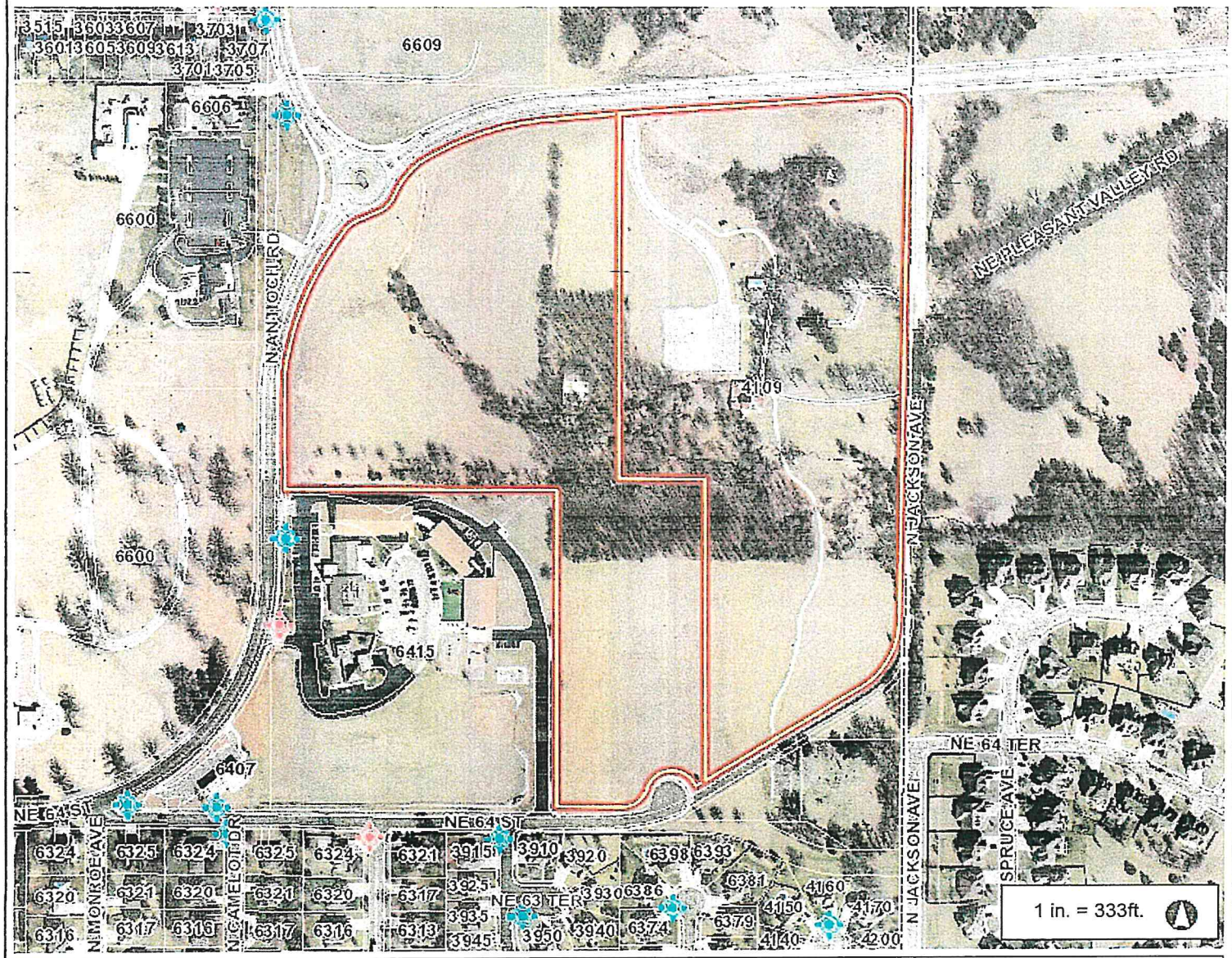
REMARKS: City staff has reviewed the application and finds that the variance(s) are appropriate for this venue.

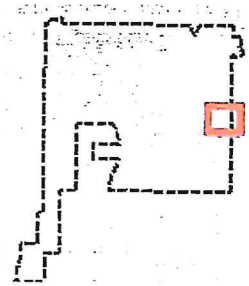
Signed: _____
Alan D. Napoli, C.B.O.
Community Development Administrator | Building Official

ATTACHMENT(S):

[X] Map
[ ] Other_____

Gladstone, MO





Legend

- KCPL Lights
- Gladstone Lights
- School Point
- Bike Parking
- Bus Stop
- Point of Interest
- Church
- Apartment Point
- Street Centerline
- Edge Of Pavement
- Driveway
- City Limits
- Parcel
- House Number
- Villages
- Apartment Polygon

Notes

666.7 0 333.33 666.7 Feet

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THIS MAP IS NOT TO BE USED FOR NAVIGATION

Request for Council Action

RES ☐ # City Clerk Only **BILL** ☐ # City Clerk Only **ORD** ☐ # City Clerk Only

Date: 5/1/2024 Department: Community Development

Meeting Date Requested: 6/10/2024

Public Hearing: Yes ☐ Date: Click here to enter a date.

Subject: Special Event Permit

Background: The Park, Recreation, and Cultural Arts Department will host the City's Annual Pumpkin Festival event at the Big Shoal Farm. Attendees can pick their own pumpkins in the pumpkin field, an art space, and games will be available for children. Vendors will have artwork and food for sale.

The event will be held on Saturday, September 21, 2024 from 10:00 am to 4:00 pm.

Budget Discussion: N/A

Public/Board/Staff Input: See attached letter of transmittal.

Provide Original Contracts, Leases, Agreements, etc. to: City Clerk and Vendor.

Alan Napoli Department Director/Administrator	JM City Attorney	BB City Manager

LETTER OF TRANSMITTAL

CITY OF GLADSTONE
Community Development Department
P.O. Box 10719
Gladstone, Missouri 64188-0719
Tel. (816) 436-2200 Fax (816) 436-2228

TO: *CITY COUNCIL*
FROM: *COMMUNITY DEVELOPMENT*
DATE: MAY 1, 2024
PERMIT NO.: SEP24-00044
RE: TYPE 4 OUTDOOR SPECIAL EVENT

NAME OF EVENT: BIG SHOAL FARM PUMPKIN FESTIVAL
LOCATION OF EVENT: 4109 NE PLEASANT VALLEY ROAD
BIG SHOAL FARM
DATE OF EVENT: SATURDAY, SEPTEMBER 21, 2024
TIME OF EVENT: 10:00 AM TO 4:00 PM
EST. ATTENDANCE: 1,200±

REQUESTED TEMPORARY VARIANCE:

[ ] Section 2.120.050 Noise prohibited.
[ ] Section 2.130.010(2) Park rules and regulations (hours).
[ ] Section 2.130.010(13) Park rules and regulations (alcoholic beverages).
[ ] Section 2.135.040 Prohibition of smoking on or within all public park grounds.
[ ] Section 2.140.040 Public fireworks display prohibited, exceptions.
[ ] Section 5.110.1800 Drinking in public.
[ ] Section 5.160.230(a) Street use permit (street use permit allowed).
[X] Section 9.1600.110 Temporary signs.
[X] Section 2.100.250(1) Outdoor display, sale and storage
[X] Section 2.100.250(3) Sales transactions

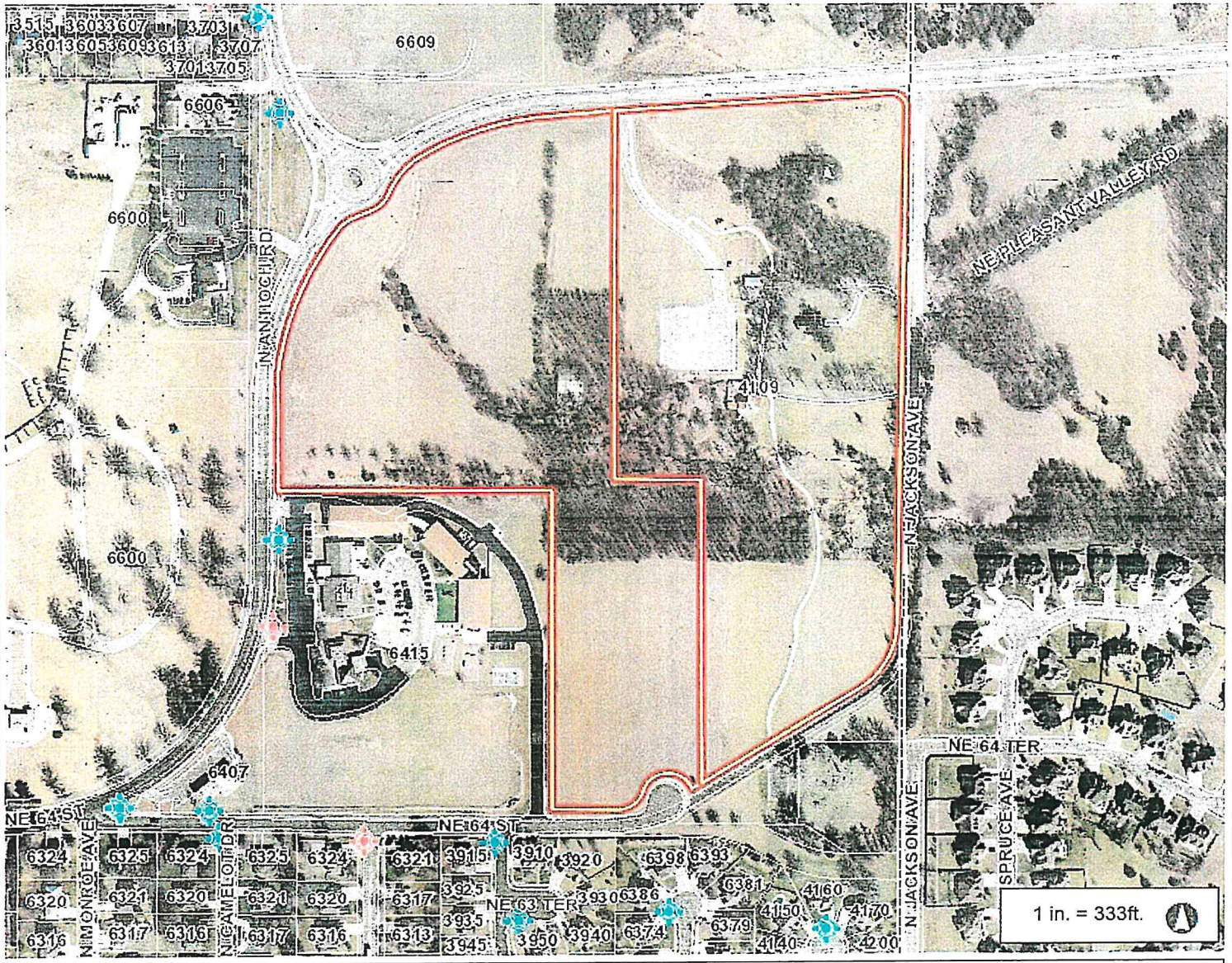
REMARKS: City staff has reviewed the application and finds that the variance(s) are appropriate for this venue.

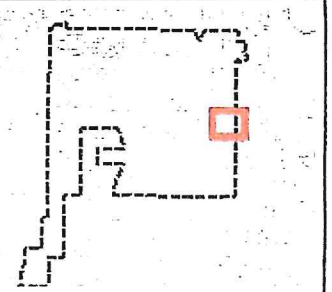
Signed: _____
Alan D. Napoli, C.B.O.
Community Development Administrator | Building Official

ATTACHMENT(S):

[X] Map
[ ] Other_____

Gladstone, MO





Legend

- KCPL Lights
- Gladstone Lights
- School Point
- Bike Parking
- Bus Stop
- Point of Interest
- Church
- Apartment Point
- Street Centerline
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- Villages
- Apartment Polygon

666.7 0 333.33 666.7 Feet

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Notes

Request for Council Action

RES ☒ # R-24-25 **BILL ☐ # City Clerk Only** **ORD ☐ # City Clerk Only**

Date: 6/3/2024 Department: Finance

Meeting Date Requested: 6/10/2024

Public Hearing: Yes ☐ Date: Click here to enter a date.

Subject: Cyber Liability Insurance

Background: The City has obtained cyber liability insurance since 2019 and desires to continue coverage for FY25. With the frequency of cyber-attacks increasing, the cost of cyber liability has increased exponentially. In 2019, the City paid under $5,000. In 2022 a similar policy cost the City over $29,000.

Budget Discussion: Funds are budgeted in the amount of $ 27,621.42 from the General Fund. Ongoing costs are estimated to be $ annually. Previous years' funding was $29,071.45.

Public/Board/Staff Input: Staff feels that it would be prudent to continue cyber liability insurance even with the dramatic increase of cost. Between the 2021 and 2022 fiscal years, the insurance premium increased by $23,000. Since then, the cost has leveled out between $27,000 and $30,000. Multiple local agencies have been targeted by cyber-attacks recently costing thousands, if not millions of dollars. The insurance policy is through Gallagher and is underwritten by Lloyd's London (as has been since 2019).

Provide Original Contracts, Leases, Agreements, etc. to: City Clerk and Vendor.

Dominic Accurso Department Director/Administrator	JM City Attorney	BB City Manager

RESOLUTION R-24-25

A RESOLUTION AUTHORIZING THE CITY MANAGER TO EXECUTE A CONTRACT WITH GALLAGHER, IN THE TOTAL AMOUNT OF $27,621.42 FOR CYBER LIABILITY COVERAGE FOR THE 2025 FISCAL YEAR.

WHEREAS, the City feels that it would be prudent to continue Cyber Liability insurance coverage; and

WHEREAS, the City has contracted insurance services with Midwest Public Risk and Gallagher for property, liability, and cyber liability.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF GLADSTONE, MISSOURI, AS FOLLOWS:

THAT, the City Manager of the City of Gladstone, Missouri, is hereby authorized to execute a contract with Gallagher, for cyber liability insurance as outlined in the agreement for a total amount of $27,621.42 for the 2025 fiscal year.

FURTHER, THAT, funds for such purpose are authorized from the General Fund.

INTRODUCED, READ, PASSED, AND ADOPTED BY THE COUNCIL OF THE CITY OF GLADSTONE, MISSOURI, THIS 10TH DAY OF JUNE 2024.

_____
Tina M. Spallo, Mayor

ATTEST:

_____
Kris Keller, City Clerk

Request for Council Action

RES ☒ # R-24-26 **BILL ☐ # City Clerk Only** **ORD ☐ # City Clerk Only**

Date: 6/6/2024 Department: Finance

Meeting Date Requested: 6/10/2024

Public Hearing: Yes ☐ Date: Click here to enter a date.

Subject: Purchase of New Network Switches

Background: The need for IT equipment and infrastructure is constantly changing and in need of improvement. With the recent addition to the Police station and remodeled City Hall, along with aging equipment, City staff is recommending purchasing new network switches.

Budget Discussion: Funds are budgeted in the amount of $ 32,999.84 from the General Fund. Ongoing costs are estimated to be $0 annually. Previous years' funding was $0.

Public/Board/Staff Input: As part of the 2024 COP, a project proposed for funding was the upgrading of the City's IT infrastructure and security. Due to some of the network switches being at the end of their useful life along with the addition of new work stations, staff is recommending the purchase of 16 new Aruba network switches. The recommended transaction will be completed through the Education Plus purchasing cooperative and CDW-G.

Provide Original Contracts, Leases, Agreements, etc. to: City Clerk and Vendor.

Dominic Accurso Department Director/Administrator	JM City Attorney	BB City Manager

RESOLUTION NO. R-24-26

A RESOLUTION AUTHORIZING ACCEPTANCE OF A PROPOSAL FROM CDW-G, IN THE AMOUNT OF $32,999.84 FOR THE PURCHASE OF SIXTEEN (16) ARUBA SWITCHES.

WHEREAS, the Missouri Education Plus purchasing cooperative holds hundreds of competitively bid cooperative contracts for use by government, education, and non-profit organizations; and

WHEREAS, the Information Technology Manager recommends the acceptance of a Missouri Education Plus proposal from CDW-G for sixteen (16) Aruba switches in the amount of $32,999.84.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF GLADSTONE, MISSOURI, AS FOLLOWS:

THAT, the City Manager of the City of Gladstone, Missouri is hereby authorized to accept the proposal from CDW-G, in the total amount of $32,999.84.

FURTHER, THAT, funds for such purpose are authorized from the General Fund (2024 COP proceeds).

INTRODUCED, READ, PASSED, AND ADOPTED BY THE COUNCIL OF THE CITY OF GLADSTONE, MISSOURI, THIS 10TH DAY OF JUNE 2024.

_____
Tina M. Spallo, Mayor

ATTEST:

_____
Kris Keller, City Clerk

Request for Council Action

RES ☒ # R-24-27 **BILL ☐#City Clerk Only** **ORD ☐# City Clerk Only**

Date: 6/4/24 Department: Public Works

Meeting Date Requested: 6/10/24

Public Hearing: Yes ☐ Date: Click here to enter a date.

Subject: Change Order 9 to the FY23 Curb, Gutter & Sidewalk - Phase 2, Project TP2305

Background: The contract for Project TP2305 was awarded to Lan-Tel Communications Services, Incorporated, as authorized by Resolution R-23-13. Change Orders 1 through 8 expanded the scope of that project to add additional concrete work across the City.

City staff recently met with the Gladstone Special Road District No. 3 who agreed to fund additional street maintenance on various streets across the City. Change Order 9 adds those streets to the original scope of work.

Budget Discussion: A financial breakdown of the contract is as follows:

Original Contract Amount:	$ 369,085.00
Change Orders 1 thru 8	553,225.50
Total Approved to Date	922,310.50
Change Order 9	170,720.00
Revised Contract Amount:	**$ 1,093,030.50**

Funds for this work are available from Gladstone Special Road District No. 3 and budgeted in the TST Fund.

Public/Board/Staff Input: City staff recommends approval of this change order.

Provide Original Contracts, Leases, Agreements, etc. to: City Clerk and Vendor

Tim Nebergall	JM	BB
Department Director/Administrator	City Attorney	City Manager

Department of Public Works
Memorandum

DATE: June 4, 2024

TO: Robert M. Baer, City Manager

FROM: Timothy A. Nebergall, Director of Public Works

RE: Final FY25 Mill & Overlay Streets

FY25 Mill & Overlay		
Street	**From**	**To**
NE 76th Street	N. Oak	Dead-End (West)
N. Wyandotte	NW 63rd St	NW 64th St
NE 63rd St	N. Broadway	N. Wyandotte
NE 67th Ter	NE 67th Pl	N. Holmes
NE 67th St	NE 67th Pl	N. Holmes
N. Holmes	NE 66th Ter	NE 68th St
NE Shady Lane	N. Bales	N. Mersington
NE 75th Ter	N. Tracy	N. Highland
N. Virginia	NE 75th Ter	NE 76th St
NE 73rd Ter	N. Broadway	N. Wyandotte
N. Euclid	NE 72nd Ter	NE 77th St
NE 70th Ter	N. Euclid	Dead-End (West)
N. Indiana	N. Bales	NE 70th Ter
NE 67th Ter	M-1	N. Agnes
NE 57th Ter	N. Flora	CDS (East)
NE 57th Ter	N. Flora	CDS (West)
N. Woodland	NE 62nd Ter	NE 65th St
NE 67th St	N. Bellefontaine	N. Indiana
NE 66th Ter	N. Bellefontaine	N. Indiana
NE 66th St	N. Bellefontaine	N. Indiana
NE 65th Ter	N. Bellefontaine	N. Walrond
NW 44th St	N. Belleview	City Limits (South)
Old Antioch	NE 72nd	NE 76th St
N. Norton Pl	NE 57th Pl	N Jackson
Pointe Drive	N. Belleview	N. Belleview
NE 69th St	N. Bellefontaine	N. Indiana

RESOLUTION NO. R-24-27

A RESOLUTION AUTHORIZING CHANGE ORDER NO. 9 IN THE AMOUNT OF $170,720.00 TO THE CONTRACT WITH LAN-TEL COMMUNICATIONS SERVICES INCORPORATED, FOR THE FY23 CURB, GUTTER, AND SIDEWALK PROGRAM – PHASE 2 PROJECT TP2305.

WHEREAS, additional work under the FY23 Curb, Gutter and Sidewalk Program – Phase 2 Project has been determined necessary and is recommended by the Director of Public Works.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF GLADSTONE, MISSOURI, AS FOLLOWS:

THAT, the City Manager of the City of Gladstone, Missouri, is hereby authorized to execute Change Order No. 9 to the FY23 Curb, Gutter and Sidewalk Program – Phase 2 Project TP2305 with Lan-Tel Communications Services, Incorporated, as follows:

Original Contract Amount:	$ 369,085.00
Change Orders 1 thru 8	553,225.50
Total Approved to Date:	922,310.50
Change Order 9	170,720.00
Revised Contract Amount:	**$ 1,093,030.50**

FURTHER, THAT, funds for such purpose are available from Gladstone Special Road District No. 3 and budgeted in the Transportation Sales Tax Fund.

INTRODUCED, READ, PASSED, AND ADOPTED BY THE COUNCIL OF THE CITY OF GLADSTONE, MISSOURI, THIS 10TH DAY OF JUNE 2024.

Tina M. Spallo, Mayor

ATTEST:

Kris Keller, City Clerk

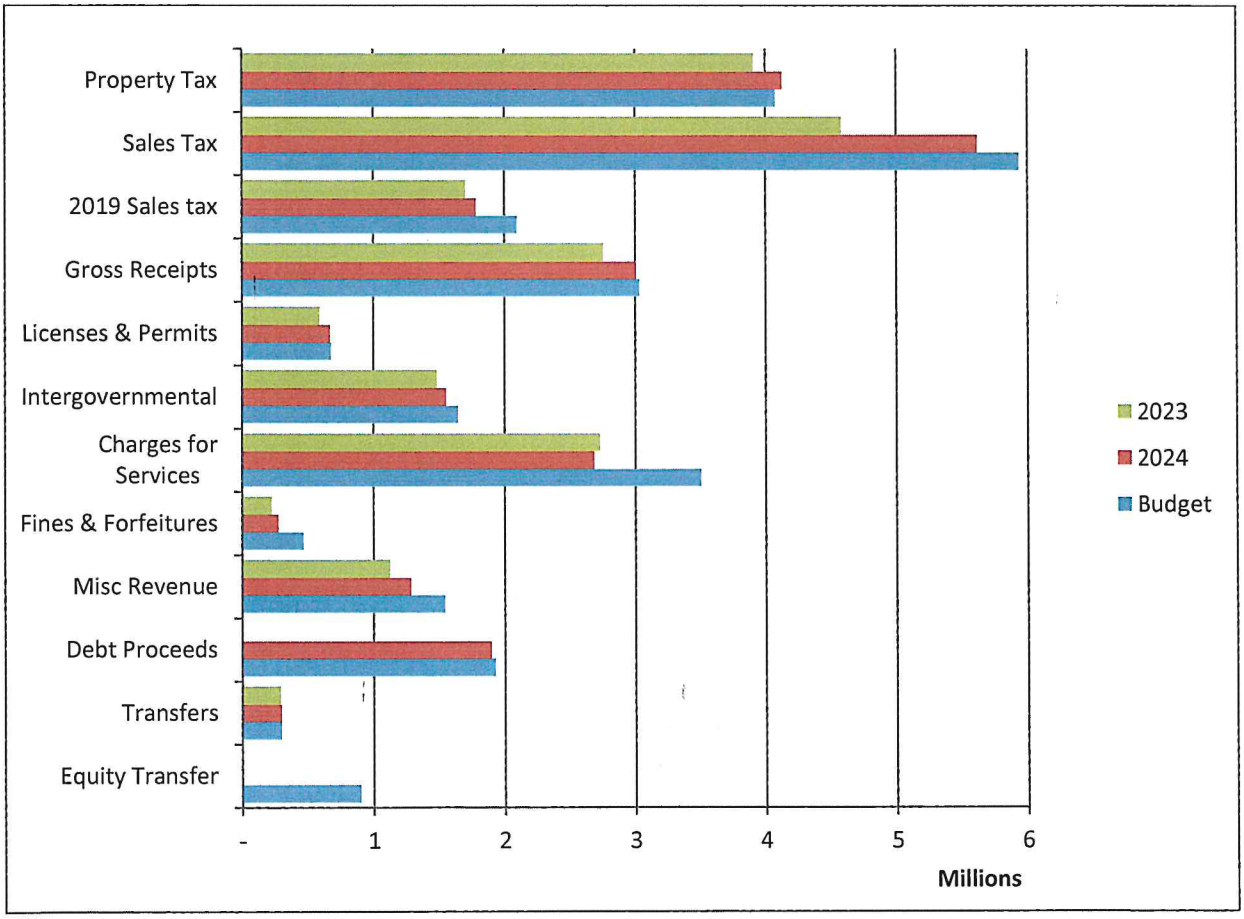
CITY OF GLADSTONE MISSOURI

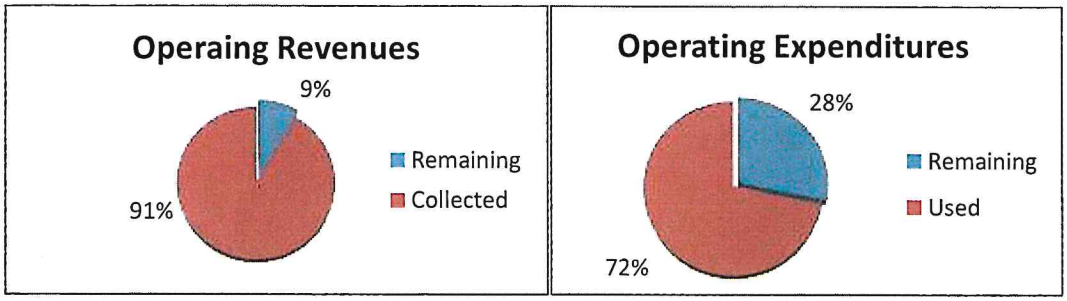
Financial Report for 10 Months Ending
April 30, 2024

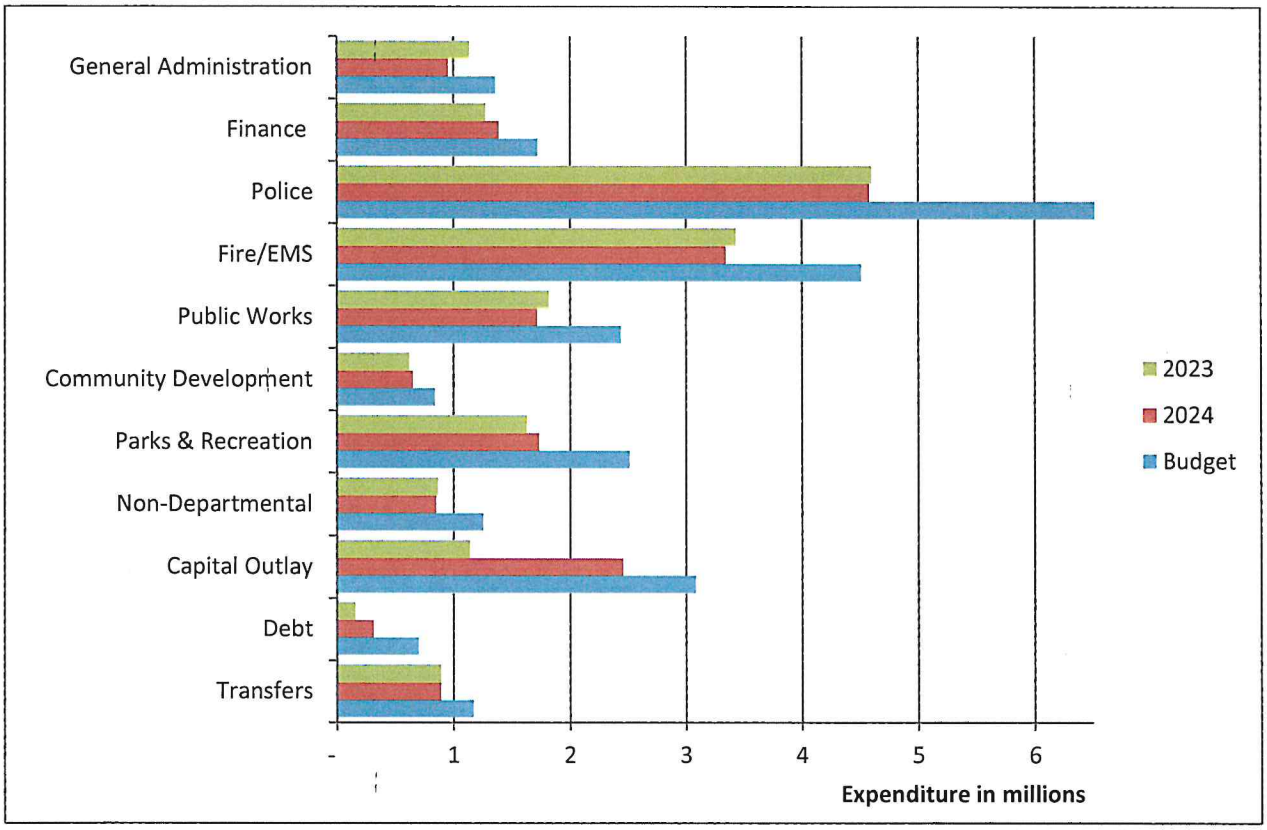
GENERAL FUND

General Fund Revenues

Total revenues for the General Fund through 10 months or 83% of this fiscal year are $23,242,211 compared to total budgeted revenues for the year of $26,161,815 or 89% of budgeted revenue (Operating revenue is $21,041,505 or 91% without debt proceeds, transfers, or equity transfer). Property tax revenue is $4,131,662, an increase of 6% over the previous year. Sales tax on a cash basis is $5,620,830 or $1,037,371 (23%) more than last year due to increases from use tax. The 2019 sales tax (1/2 cent sales tax passed in 2019) is $1,786,316, an increase of 5%. Gross receipts taxes are $3,013,819, an increase of $252,648 or 9%. License and Permit revenues are $673,718, 13% or $79,225 more than FY23 due to business license renewals and building permits. Intergovernmental revenue is $1,556,530 or $70,065 (5%) over previous year due to increases in the gas tax. Charges for Services are $2,690,463 a decrease of 2% or $43,596 compared to the previous year. Fines and Forfeitures have increased from the same time last year to $280,095 or 23%. Miscellaneous Revenue is $1,288,072, an increase of $162,786 due to interest income. Debt proceeds for the General Fund are $1,900,706. Transfers into the fund are $300,000. An equity transfer of $903,470 is budgeted for the 2024 fiscal year.



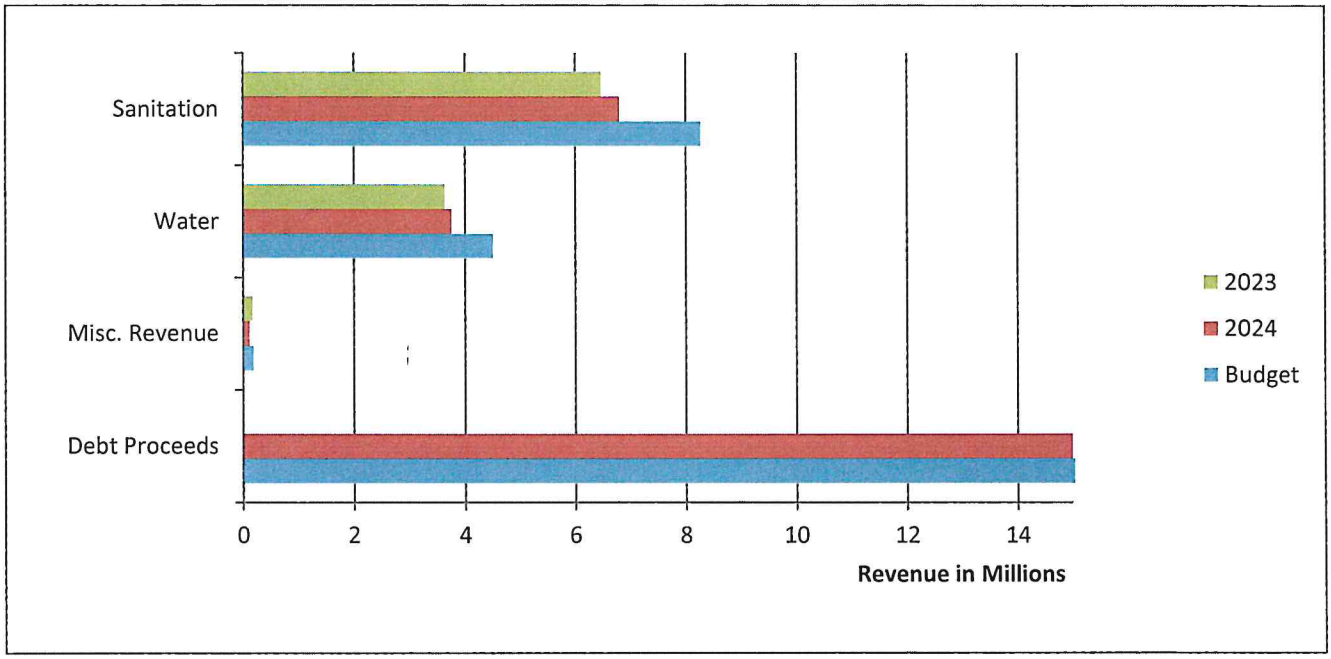


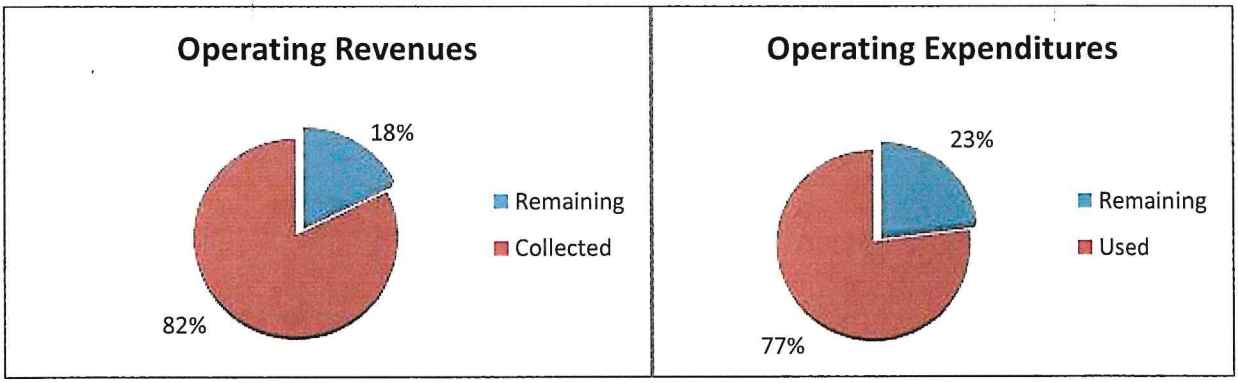


Expenditures through 10 months or 83% of this fiscal year amounted to $18,924,351 or 72% of FY24 budgeted expenditures of $26,161,815 (operating expenditures are $15,253,171 or 72% of operating expenditures). This indicates that actual expenditures are 7% or $1,317,278 more than last year's expenditures of $17,607,073. General Administration expenditures are $957,016, a decrease of $183,641 or 16% due to changes in personnel. Finance expenditures have increased $113,005 to $1,391,463 also due to changes in personnel. Police expenditures are $4,585,397, a decrease of $17,917. Fire/EMS expenditures have decreased 3% to $3,345,849 due to open positions and a decrease in fleet maintenance. Public Works expenditures are $1,722,765 or 5% less than the prior year due to open positions. Community Development expenditures are $656,403 or an increase of 5%. Parks & Recreation expenditures are $1,738,646, an increase of $106,955 (7%) from the same time last year due to changes in personnel. Non-Departmental expenditures are $855,632, a decrease of $16,371 due to the reallocation of cyber security insurance to the HR safety/loss control line item and completion of the comprehensive plan during the previous year. Capital Outlay is $2,457,528. Payment for debt has increased by $158,380 to $318,652 due to 2024 lease purchase. Transfers from the General Fund are $895,000 (same as previous year). Current revenues exceed current expenditures in the amount of $4,317,860 (due to the receipt of property tax and lease proceeds).

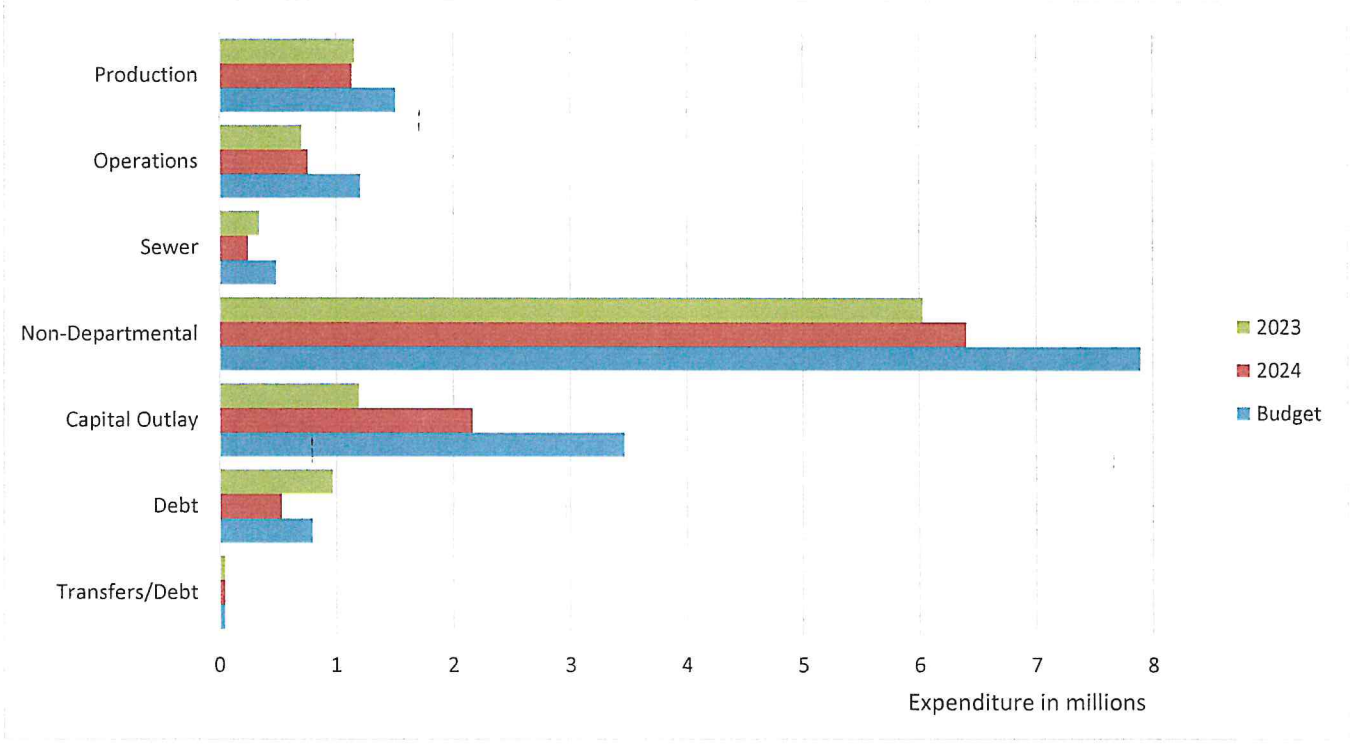
COMBINED WATER AND SEWERAGE SYSTEM FUND

Total budgeted revenues for the fiscal year are $28,426,435. Total revenues through 10 months or 83% of this fiscal year, amounted to $25,703,460 or 90% of FY24 budgeted revenues (82% excluding debt proceeds). Increases in both sanitation and water revenues are due to increased water and sewer rates. Debt proceeds of $15,007,264 were received for the 2024 equipment lease purchase and COP.

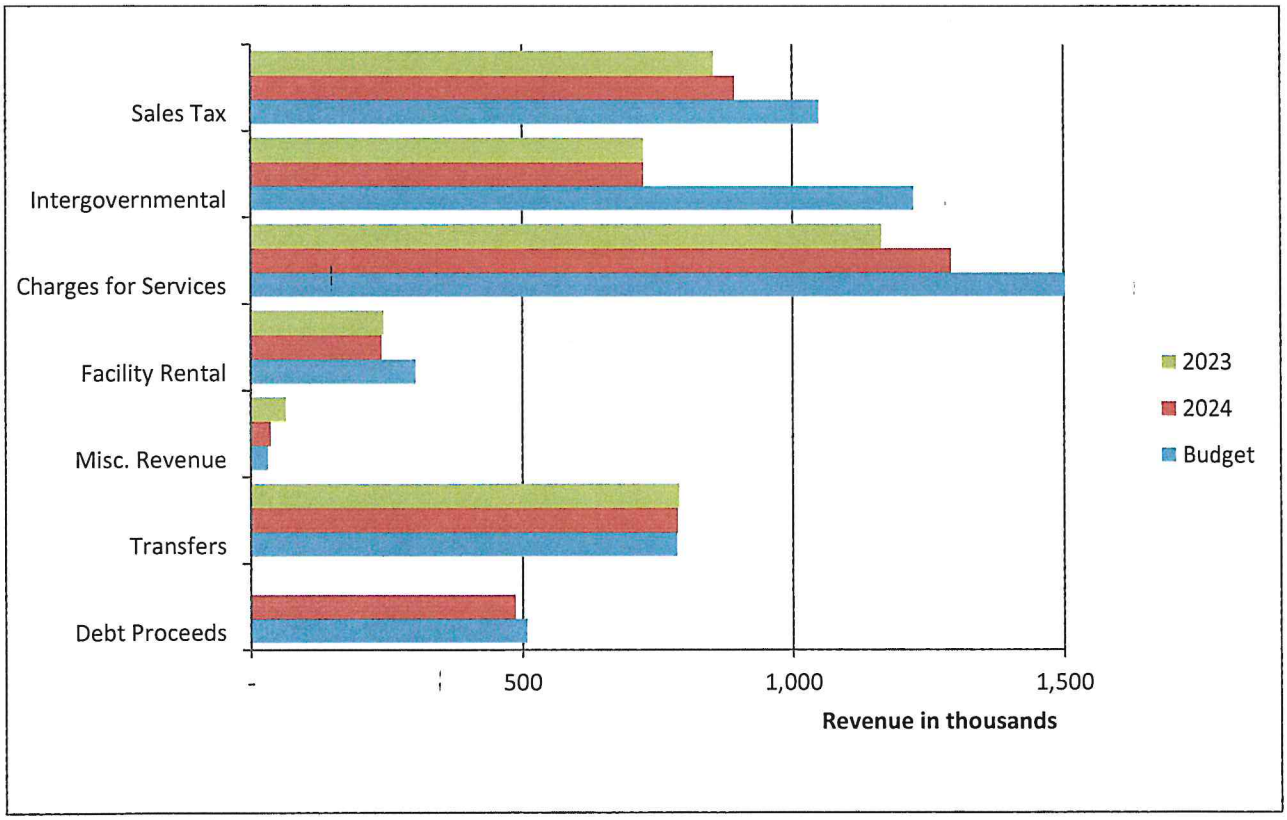


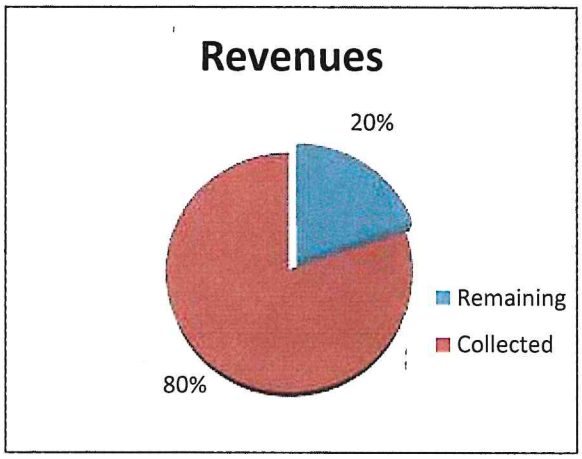


Total budgeted expenditures for the fiscal year are $15,426,435. Total expenditures through 10 months or 83% of this fiscal year amounted to $11,626,486 or 73% of FY24 budgeted expenditures (operating expenditures are $8,877,4851 or 77% of budgeted operating expenditures). Production expenditures are $1,137,598, a decrease of $24,965 from the previous year due to the repair to the secondary basin (FY23). Operations division expenditures are $760,402, an increase of $54,752 due to changes in personnel. Sewer division expenditures have decreased $95,137 to $246,816 due to sewer line maintenance. Non-departmental expenditures are $6,404,406, an increase of $374,479 due to increased sewer charges for sewage treatment. Capital outlay is $2,167,490. Payment for debt is $531,545, a decrease of $439,028 due to debt falling off the debt schedule. Current revenues exceed current expenditures by $14,405,203 (without debt proceeds, expenditures exceed revenue by $602,061).

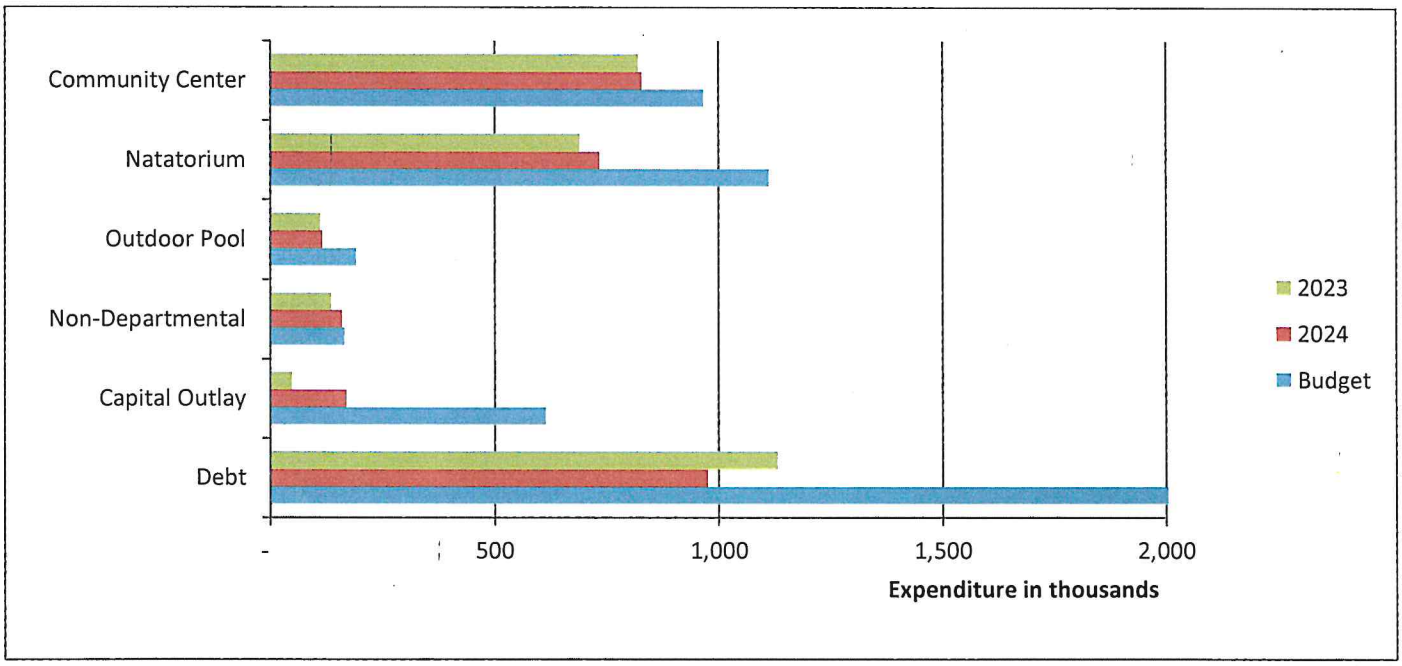


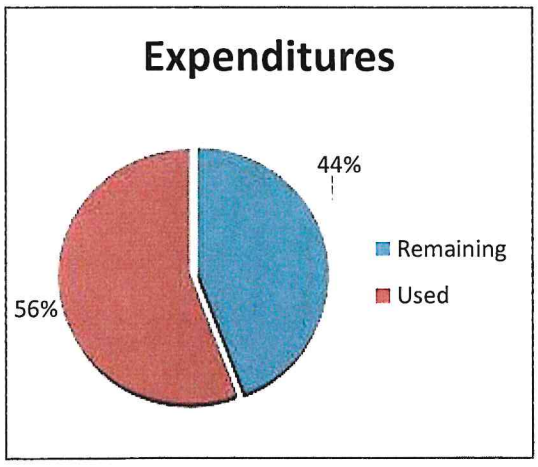
COMMUNITY CENTER AND PARKS TAX FUND





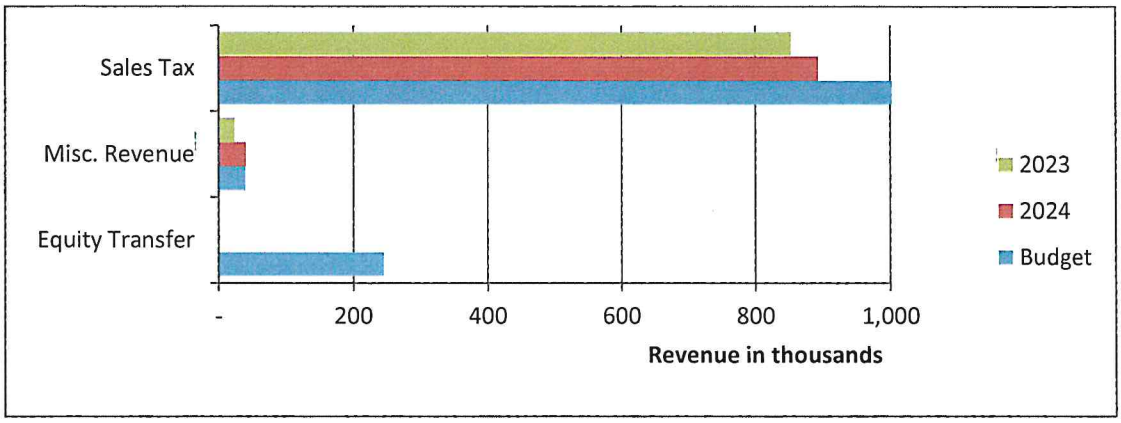
Total budgeted revenues for the fiscal year are $5,567,150. Total revenues through 10 months or 83% of this fiscal year, amounted to $4,464,855 or 80% of FY24 budgeted revenues. Sales tax received is $893,915, an increase of $39,597 (5%) from the previous year. Intergovernmental revenue consists of a charge to the North Kansas City School District for the natatorium of $725,000 and $500,000 in ARPA funding (ARPA funding will be added at yearend). Charges for Services are $1,294,005, an increase of $128,435 (11%). Revenue from facility rental is $242,032, a decrease of 2%. Miscellaneous revenue is $37,400. Transfers to the fund are $786,000 and debt proceeds of $486,503 have been received this fiscal year.



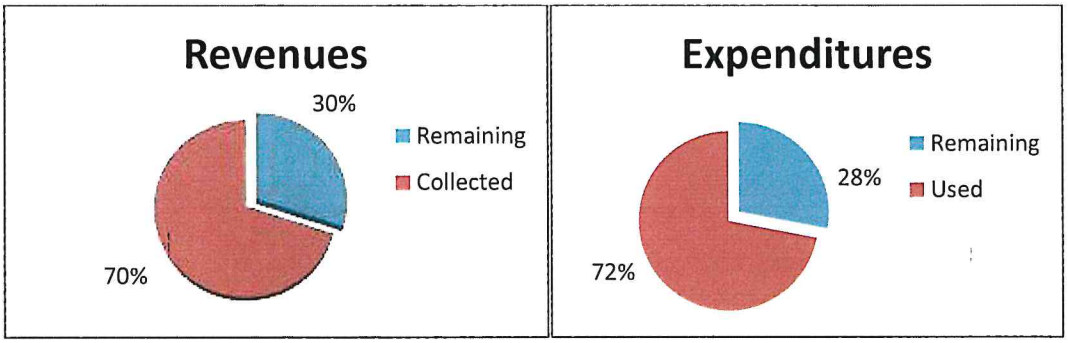


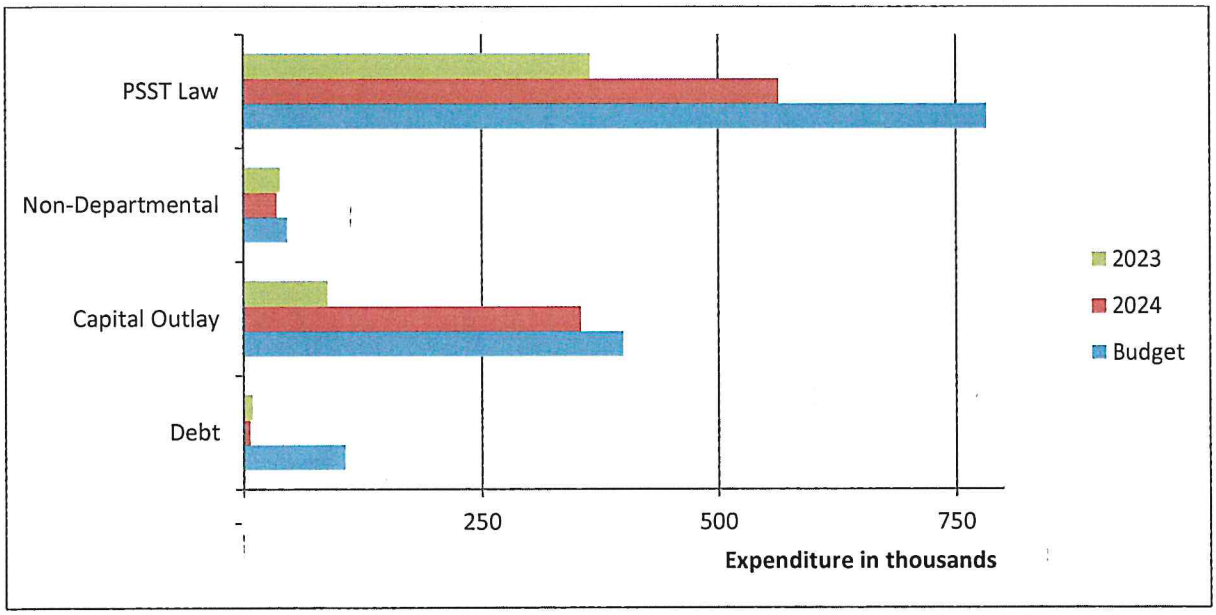
Total budgeted expenditures for the fiscal year are $5,324,897. Total expenditures through 10 months or 83% of this fiscal year amounted to $2,988,762 or 56% of FY24 budgeted expenditures (operating expenditures used as of April 30th are 76% of total operating budget). Community Center expenditures are $829,903 comparable to the previous year. Natatorium expenditures are $734,825, or 6% more than the previous year due to changes in personnel. Outdoor Pool expenditures are $117,288, an increase of 5% from last year. Non-departmental expenditures have increased 18% to $160,874, due to increases in property and liability insurance. Capital outlay is $160,874. Payment for debt is $976,085. Current revenues exceed current expenditures by $1,476,093.

PUBLIC SAFETY SALES TAX FUND



Total budgeted revenues for the fiscal year are $1,336,872. Total revenues through 10 months or 83% of this fiscal year amounted to $935,257 or 70% of FY24 budgeted revenues. Sales tax on a cash basis is $893,899, or an increase of $39,601 (5%). Miscellaneous revenue is $41,358. An equity transfer of $245,872 is budgeted to fund the purchase of new body cameras from a previous lease purchase.





Total budgeted expenditures for the fiscal year are $1,336,872. Total expenditures through 10 months or 83% of this fiscal year are $962,046 or 72% of the FY24 budgeted expenditures. Law division is $564,187, an increase of $198,901 from the same time last year due to filled positions. Non-Departmental is $35,657, compared to $39,250 during the previous year (difference is due to previous year's timing of equipment maintenance expenditures). Capital outlay is $354,764. Payment for debt is $7,438, comparable to the previous year. Current expenditure over current revenue for the fund is $26,789.

Respectfully submitted,

Dominic Accurso
Director of Finance

Request for Council Action

RES ☒ # R-24-28 **BILL ☐ # City Clerk Only** **ORD ☐ # City Clerk Only**

Date: 5/30/2024 Department: Finance

Meeting Date Requested: 6/10/2024

Public Hearing: Yes ☒ Date: 5/13/2024

Subject: 2025 Fiscal Year Budget

Background: Staff has presented the the 2025 Fiscal Year Budget for the General Fund, Community Center and Parks Tax Fund, Public Safety Sales Tax Fund, Capital Improvement Sales Tax Fund, Transportation Sales Tax Fund, Capital Equipment Replacement Fund, Combined Waterworks and Sewerage System Fund, and the Special Parks and Playground Fund during an Open Study Sessions and a Public Hearing. The Budget will serve as the strategic, administrative, and financial plan for the City for the 2025 Fiscal Year.

Budget Discussion: N/A

Public/Board/Staff Input: Staff is recommending that the 2025 budget be passed as presented at the Public Hearing. The budgeted funds and amounts to expended are as follows: General Fund $23,700,945, Community Center/Parks Tax Fund $4,795,890, Public Safety Sales Tax Fund $1,130,000, Capital Improvement Sales Tax Fund $6,369,800, Transportation Sales Tax Fund $3,933,000, Capital Equipment Replacement Fund $464,000, Combined Waterworks Sewerage System Fund $13,214,010, and $0 for the Special Parks & Playground Fund.

Provide Original Contracts, Leases, Agreements, etc. to: City Clerk and Vendor.

Dominic Accurso	JM	BB
Department Director/Administrator	City Attorney	City Manager

RESOLUTION NO. R-24-28

A RESOLUTION ADOPTING THE 2025 ANNUAL OPERATING BUDGET FOR THE CITY OF GLADSTONE, MISSOURI, AND AUTHORIZING THE EXPENDITURES OF FUNDS FOR MUNICIPAL SERVICES.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF GLADSTONE, MISSOURI, AS FOLLOWS:

THAT, for the purpose of financing the conduct of affairs of the City of Gladstone, Missouri, during the fiscal year from July 1, 2024, and ending June 30, 2025 inclusive, the budget of the City's revenue and expenses for such period prepared and submitted to the Gladstone City Council by the City Manager is hereby approved and adopted as the Official Budget of the City of Gladstone, Missouri; and

THAT, the amounts set forth in the various funds are hereby appropriated to such uses, and authority is hereby given to the City Manager of the City of Gladstone, to expend the amounts shown for the purposes indicated; and

THAT, Annual Expenditures as shown in the Annual Budget and in each of the listed budgeted funds are:

Fund	Expenditure/Expense
General Fund	$23,700,945
Community Center/Parks Tax Fund	$4,795,890
Public Safety Sales Tax Fund	$1,130,000
Capital Improvement Sales Tax Fund	$6,369,800
Transportation Sales Tax Fund	$3,933,000
Capital Equipment Replacement Fund	$464,000
Combined Waterworks Sewerage System Fund	$13,214,010
Special Parks & Playground Fund	$0

THAT, the amounts for each fund, as shown in the Annual Budget, shall not be increased or decreased except by Council approval, but the various objects of expenses comprising the total appropriation for any fund may be increased or decreased at the discretion of the City Manager, providing the adjustments shall not increase the total amount appropriated for that fund.

INTRODUCED, READ, PASSED, AND ADOPTED BY THE COUNCIL OF THE CITY OF GLADSTONE, MISSOURI, THIS 10TH DAY OF JUNE 2024.

_____
Tina M. Spallo, Mayor

ATTEST:

_____
Kris Keller, City Clerk

Request for Council Action

RES ☒# R-24-29 **BILL ☐# City Clerk Only** **ORD # City Clerk Only**

Date: 5/28/2024 Department: Public Works

Meeting Date Requested: 6/10/2024

Public Hearing: Yes ☐ Date: Click here to enter a date.

Subject: Contract Award, Water Tank Renovations Design, Project WP2492C

Background: Gladstone issued a request for proposals (RFP) for the design of water tank renovations. A total of four (4) firms responded to this request and staff selected Maguire Iron, Incorporated, to begin contract negotiations.

Budget Discussion: Funds are available from the 2024 COP and budgeted in the CWSS Fund.

Public/Board/Staff Input: Staff recommends the City execute an agreement with Maguire Iron, Incorporated, in an amount not to exceed $15,700.00 for the completion of the project. The contract includes a physical inspection of all facilities per Missouri Department of Natural Resources guidelines, the preparation of plans and specifications for bidding purposes, and the development of up to three (3) digital renderings of the exterior of each elevated water tower.

Provide Original Contracts, Leases, Agreements, etc. to: City Clerk and Vendor.

Timothy A. Nebergall Department Director/Administrator	JM City Attorney	BB City Manager

RESOLUTION R-24-29

A RESOLUTION AUTHORIZING THE CITY MANAGER TO EXECUTE AN AGREEMENT WITH MAGUIRE IRON, INCORPORATED, IN THE TOTAL AMOUNT NOT TO EXCEED $15,700.00 FOR THE DESIGN OF WATER TANK RENOVATIONS, PROJECT WP2492C.

WHEREAS, design services are required for water tank renovations; and

WHEREAS, staff issued a Request of Proposals (RFP) seeking assistance with this project; and

WHEREAS, a total of four (4) proposals were received and staff selected Maguire Iron, Incorporated, to begin contract negotiations.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF GLADSTONE, MISSOURI, AS FOLLOWS:

THAT, the City Manager of the City of Gladstone, Missouri, is hereby authorized to enter into an agreement with Maguire Iron, Incorporated, in the total amount not to exceed $15,700.00 to complete the work.

FURTHER, THAT, funds for such purpose are available from the 2024 COP and budgeted in the CWSS Fund.

INTRODUCED, READ, PASSED, AND ADOPTED BY THE CITY COUNCIL OF THE CITY OF GLADSTONE, MISSOURI, THIS 10TH DAY OF JUNE 2024.

_____
Tina M. Spallo, Mayor

ATTEST:

_____
Kris Keller, City Clerk

Request for Council Action

RES ☒ # R-24-30 **BILL ☐ # City Clerk Only** **ORD ☐ # City Clerk Only**

Date: 5/16/2024 Department: Public Works

Meeting Date Requested: 6/10/2024

Public Hearing: Yes ☐ Date: Click here to enter a date.

Subject: Project TO2311, Downtown Gladstone Lighting

Background: Last year, the City placed an advertisement for bids for the Downtown Gladstone Lighting project. No bids were received and as a result, the City has entered into negotiations with Yates Electric Co., Inc. to perform this work.

Budget Discussion: Funds are budgeted in the amount of $ 378,124.00 from the CIST Fund. Ongoing costs are estimated to be $0 annually. Previous years' funding was N/A.

Public/Board/Staff Input: Yates Electric has completed various projects for the City in the past, and staff has been pleased with their performance. Regarding this project, Yates Electric has offered a proposal to provide the materials and labor to install the festoon lighting, fixtures with catenary cables, and above ground and below ground electrical for a lump sum of $378,124.00, including the concrete and landscape adders.

The 2020 Certificate of Participation (COP) lease purchase included the Fire Station #2, Outdoor Pool, and Downtown Parking projects. Festoon lighting was included in the Downtown Parking design; however, staff waited to ensure funding was adequate to complete the Fire Station and Outdoor Pool projects prior to completing the lighting portion of the Downtown Parking project. Now that the other projects have been completed, funding is adequate to complete the original design with the installation of festoon lighting. COP funds can only be used on projects outlined in the terms of the COP.

Provide Original Contracts, Leases, Agreements, etc. to: City Clerk and Vendor.

Timothy A. Nebergall Department Director/Administrator	JM City Attorney	BB City Manager

RESOLUTION NO. R-24-30

A RESOLUTION AUTHORIZING THE CITY MANAGER TO EXECUTE A CONTRACT WITH YATES ELECTRIC COMPANY, INCORPORATED, IN THE TOTAL AMOUNT NOT TO EXCEED $378,124.00 FOR DOWNTOWN GLADSTONE LIGHTING, PROJECT TO2311.

WHEREAS, Yates Electric Company, Incorporated, has completed numerous projects for the City in the past; and

WHEREAS, previous efforts to obtain bids were unsuccessful, and the Downtown Gladstone Lighting costs have been negotiated in accordance with the Purchasing Policy.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF GLADSTONE, MISSOURI, AS FOLLOWS:

THAT, the City Manager of the City of Gladstone, Missouri, is hereby authorized to execute a contract with Yates Electric Company, Incorporated, for work as outlined in the attached proposal document for a total amount not to exceed $378,124.00.

FURTHER, THAT, funds for such purpose are authorized from the 2020 COP and budgeted in the Capital Improvement Sales Tax Fund.

INTRODUCED, READ, PASSED, AND ADOPTED BY THE COUNCIL OF THE CITY OF GLADSTONE, MISSOURI, THIS 10TH DAY OF JUNE 2024.

_____

Tina M. Spallo, Mayor

ATTEST:

_____

Kris Keller, City Clerk

Request for Council Action

RES ☒# R-24-31 **BILL ☐# City Clerk Only** **ORD # City Clerk Only**

Date: 5/28/2024 Department: Public Works

Meeting Date Requested: 6/10/2024

Public Hearing: Yes ☐ Date: Click here to enter a date.

Subject: Contract Award, Design of Water Treatment Plant Improvements, Project WP2492B

Background: Gladstone issued a request for proposals (RFP) for the design of water treatment plant improvements. A total of three (3) firms responded to this request. Formal interviews were conducted on April 17, 2024 and it was the recommendation of the selection committee to begin contract negotiations with Lamp Rynearson, Incorporated.

Budget Discussion: Funds are available from the 2024 COP and budgeted in the CWSS Fund.

Public/Board/Staff Input: Staff recommends the City execute a professional engineering services agreement with Lamp Rynearson, Incorporated, in an amount not to exceed $784,167.39 for the completion of the project. Services will be billed on a time and material basis to the following limits:

Project Design		$485,677.52
Construction Administration		$213,799.47
Construction Observation		$ 84,690.40
	Total	$784,167.39

Provide Original Contracts, Leases, Agreements, etc. to: City Clerk and Vendor.

Timothy A. Nebergall	JM	BB
Department Director/Administrator	City Attorney	City Manager

RESOLUTION R-24-31

A RESOLUTION AUTHORIZING THE CITY MANAGER TO EXECUTE A PROFESSIONAL ENGINEERING SERVICES AGREEMENT WITH LAMP RYNEARSON, INCORPORATED IN THE TOTAL AMOUNT NOT TO EXCEED $784,167.39 FOR THE COMPLETION OF DESIGN OF WATER TREATMENT PLANT IMPROVEMENTS, PROJECT WP2492B.

WHEREAS, design services are required for the Water Treatment Plant Improvements; and

WHEREAS, staff issued a Request of Proposals (RFP) seeking assistance with this project; and

WHEREAS, a total of three (3) proposals were received and staff selected Lamp Rynearson, Incorporated, to begin contract negotiations.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF GLADSTONE, MISSOURI, AS FOLLOWS:

THAT, the City Manager of the City of Gladstone, Missouri, is hereby authorized to enter into a professional engineering services agreement with Lamp Rynearson, Incorporated, in the total amount not to exceed $784,167.39 to complete the work.

FURTHER, THAT, funds for such purpose are available from the 2024 COP and budgeted in the CWSS Fund.

INTRODUCED, READ, PASSED, AND ADOPTED BY THE COUNCIL OF THE CITY OF GLADSTONE, MISSOURI, THIS 10TH DAY OF JUNE 2024.

_____
Tina M. Spallo, Mayor

ATTEST:

_____
Kris Keller, City Clerk

Request for Council Action

RES ☐# City Clerk Only **BILL ☒# 24-18** **ORD ☒ # 4.673**

Date: 5/30/2024 Department: General Administration

Meeting Date Requested: 6/10/2024

Public Hearing: Yes ☐ Date: Click here to enter a date.

Subject: An Ordinance directing the City Manager to execute a cooperative Agreement with the North Kansas City School District for providing a School Resource Officer (SRO) at Antioch Middle School.

Background: The North Kansas City School District and the City of Gladstone currently have an agreement in place that provides for a uniformed school resource officer at Antioch Middle School during the school year. The proposed Ordinance simply updates and renews the agreement terms and accounts for the expected wage and benefit increases for FY 25.

Budget Discussion: Funds are budgeted in the amount of $58, 586.20 from the General Fund. Ongoing costs are estimated to be $ 58,568.20 annually. Previous years' funding was $57, 439.00.

Public/Board/Staff Input: Staff recommends approval of the Ordinance that amends the agreement.

Provide Original Contracts, Leases, Agreements, etc. to: City Clerk and Vendor.

Fred Farris Chief of Police	JM City Attorney	BB City Manager

BILL NO. 24-18 **ORDINANCE NO. 4.673**

AN ORDINANCE DIRECTING THE CITY MANAGER TO EXECUTE A COOPERATIVE AGREEMENT WITH THE NORTH KANSAS CITY SCHOOL DISTRICT FOR PROVIDING A SCHOOL RESOURCE OFFICER AT ANTIOCH MIDDLE SCHOOL.

WHEREAS, the City of Gladstone and the North Kansas City School District seek to continue full-time School Resource Officer (SRO) program at Antioch Middle School; and

WHEREAS, The SRO program serves to reduce incidents of delinquency in school by combining law enforcement with educational professionals to address drug and alcohol abuse, youth violence, truancy and other youth issues in an educational environment; and

WHEREAS, The SRO fulfills three valuable roles as Educator, Counselor or Problem Solver, and Law Enforcement Officer; and

WHEREAS, The Cooperative Agreement is in the best interests of the residents of the City of Gladstone;

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF GLADSTONE, MISSOURI, AS FOLLOWS:

THAT, the City Manager of the City of Gladstone, Missouri, is hereby authorized to enter into the proposed Memorandum of Understanding, in substantially the form attached hereto and incorporated herein, with the North Kansas City School District to provide a School Resource Officer at Antioch Middle School.

INTRODUCED, READ, PASSED, AND ADOPTED BY THE COUNCIL OF THE CITY OF GLADSTONE, MISSOURI, THIS 10TH DAY OF JUNE 2024.

_____
Tina M. Spallo, Mayor

ATTEST:

_____
Kris Keller, City Clerk

First Reading: June 10, 2024 Second Reading: June 10, 2024

SCHOOL RESOURCE OFFICER PROGRAM
MEMORANDUM OF UNDERSTANDING

CITY OF GLADSTONE, MISSOURI
Gladstone, Missouri

NORTH KANSAS CITY SCHOOLS
District #74

This Memorandum of Understanding is entered into, this _____ day of _____ 2024, by and between the City of Gladstone, Missouri (hereinafter referred to as the "City" or "Police Department") and the North Kansas City School District #74, a state accredited, school district located within Clay County, Missouri (hereinafter referred to as the "District")

WITNESSETH:

A. The City, by and through its Police Department, agrees to provide the School District one or more Gladstone Police Department officers to serve in the School Resources Officer Program in one or more of the District's schools as a School Resource Officer ("SRO"); and

B. The District and the City desire for this Agreement to guide and direct the School Resource Officer Program.

NOW, THEREFORE, in consideration of the agreements and undertakings hereinafter set forth, and for other good and valuable consideration, the receipt and adequacy therefor being hereby acknowledged, the District and the City agree as follows

II. MISSION AND GOALS:

A. The mission of the School Resource Officer Program is to reduce incidents of delinquency in or around school by combining law enforcement with educational professionals to address drug and alcohol abuse, youth violence, truancy and other youth issues in an educational environment.

B. The following goals are shared between the District and the City with regard to the School Resource Officer Program:

1. Provide a safe and respectful school;

2. Enhance the relationship between law enforcement officers and students in middle school; and

3. Foster educational programs, which will address tobacco, alcohol, and other drug issues, violence diffusion and prevention, and other safety issues as needed.

4. Assist Clay County School Resource Deputies in providing the Choices program curriculum to fifth graders in the District at four elementary schools located in Gladstone, Missouri: Meadowbrook Elementary School, Chapel Hill Elementary School,

Oakwood Manor Elementary School, Linden West Elementary School, and the Northland Innovations Center.

III. EMPLOYMENT AND ASSIGNMENT OF THE SCHOOL RESOURCE OFFICER:

A. Collaboration of the selection of an SRO shall be achieved through the School District's Safety & Security Director, in conjunction with the City. Upon agreeance of such selection, the City shall provide one (1) SRO to Antioch Middle School, 2100 NE 65th Street Gladstone, Missouri.

B. Regular Duty Hours of the School Resource Officer

1. The SRO shall be assigned to the school on a full-time basis during those days and hours the school is in regular session. The SRO shall be on campus from one-half hour prior to the start of classes until one-half hour after the end of the regularly scheduled school day.

2. On early release or late start days, the SRO may be required to attend District meetings or training during the remainder of the day.

3. During the SRO's daily tour of duty, the SRO may be *off* campus performing such tasks that may be required by their assignments.

4. The SRO may be temporarily reassigned by the City during school holidays and vacations, and/or during the periods of police emergency.

5. If staffing allows, the City may fill the role of the SRO when the regular SRO is on sick days, vacation days or in training. The City will, at a minimum, provide an officer for traffic control at arrival and dismissal when the SRO is absent and will increase extra patrol.

6. The SRO shall ensure that the respective principal and the School District Safety & Security Director are notified when an SRO is sick or injured. If an SRO calls in sick, the SRO shall, if possible, use reasonable efforts to notify the principal and the School District Safety & Security Director prior to the start of the school day.

7. Regular working hours may be adjusted on situational basis with the consent of the SRO's supervisor. These adjustments should be approved prior to their being required and should be utilized to cover scheduled school related activity requiring the presence of a law enforcement officer.

C. EXTRA DUTY HOURS OF THE SCHOOL RESOURCE OFFICER

1. The District may request the City to provide a School Resource Officer for summer programs, not to exceed thirty (30) days beyond the normal academic calendar.

2. The District may request the City to provide a School Resource Officer for Before- and After- School Programs, not to exceed three

(3) hours per day. The District shall reimburse the SRO for the Extra Duty Hours at the District standard off-duty rate unless the SRO is performing duties related to an investigation or Police Department function, in which the SRO will be compensated at his/her *overtime* rate.

3. The SRO will participate in training related to their SRO duties on one professional development day in the first semester and one professional development day in the second semester. The SRO will work with the District Safety & Security Director to establish and set up the training.

D. The Role of the School Resource Officer

The role of the School Resource Officer is based on a "triad" approach adopted from training developed and presented by the National Association of School Resource Officers (NASRO) and/or the Missouri School Resource Officers Association (MSROA). The triad philosophy defines a School Resource Officer as fulfilling three main roles: Educator, Counselor or Problem Solver, and Law Enforcement Officer.

1. Educator - The School Resource Officer shall provide educational information in the form of classroom presentations, parent or public presentations, or in-service school staff presentations. Formal presentations shall be made available to these groups on any topic concerning public safety, law related issues, crime prevention, drug abuse prevention, gang prevention, or other topics as appropriate. The School Resource Officer will act as an instructor or arrange for another SRO or certified public safety instructor, for these respective presentations when invited to do so by the principal or member of the faculty. These presentations shall be conducted in a professional manner and shall be pre-approved by the District's Director of Safety & Security with input from the respective school administrator.

2. Counselor/Problem Solver - The School Resource Officer is not a substitute for school counselors. The SRO may give advice or guidance to students and the education staff within the context of the officer's knowledge, training and experience. The SRO counsels students on a variety of issues, which may range from dealing with anger, personal conflicts, drug and alcohol issues, abuse and neglect, and other issues related to public safety or the law.

   The School Resource Officer shall work closely with the District Director of Safety & Security, school administrators and counselors, social workers, juvenile officers, and other organizations, which service youth in order to provide support to students in need.

3. Law Enforcement Officer - The School Resource Officer shall conduct criminal investigations and make arrests utilizing the same criteria as any other certified law enforcement officer of the City. However, the effective SRO will often work with the District Director of Safety & Security, school administrators, parents, social service agencies, and perhaps the Clay County Juvenile Office to explore effective ways to hold juvenile offenders accountable for their actions.

   The School Resource Officer shall also gather intelligence information regarding criminal activities involving school aged or juvenile offenders. This information is then shared with the appropriate resources.

E. Additional Duties of the School Resource Officer

1. The SRO shall coordinate all of his/her activities with the City, the District Director of Safety & Security, the principal and staff members concerned, and will seek permission, advice, and guidance prior to enacting any programs within the school.
2. The SRO shall develop expertise in presenting various subjects to the students. Such subjects shall include a basic understanding of the laws, the role of the police, and the police mission.
3. The SRO shall encourage individual and small group discussions with students based on material presented in class to further establish rapport with the students.
4. When requested by the District Director of Safety & Security or by the respective principal, the SRO shall attend parent/faculty meetings to solicit support and understanding of the SRO program. Each year, the SRO will provide faculty members, especially new members, an overview of the SRO program.
5. The SRO shall make himself/herself available for conferences with students, parents, and faculty member to assist them with problems of law enforcement, crime prevention, or violence prevention topics. Confidential information shall not be disclosed except as provided by law or court order.
6. The SRO shall become familiar with all community agencies that offer assistance to youth and their families such as mental health clinics, drug treatment centers, etc. The SRO shall make referrals to such agencies and liaise when necessary, thereby acting as a resource person to the students, faculty and staff of the school.
7. The SRO shall assist the District Director of Safety & Security and principal(s) in developing plans and strategies to prevent and/or minimize dangerous situations that may occur on campus or during school sponsored events.

8. The SRO shall adhere to School Board policy, City policy and legal requirements should it become necessary to conduct formal police activities with the students.

9. If the SRO becomes aware of any criminal investigation at the SRO's respective school(s), the SRO should help coordinate that investigation, even though the SRO may not be the lead investigator. For example, when the SRO becomes aware of a child abuse case, they may not be the lead investigator; however, the SRO will make the necessary contacts with the appropriate investigating agency to facilitate the investigation.

10. The SRO shall take law enforcement action as required. As soon as practical, the SRO shall make the District Director of Safety & Security, along with the respective principal, aware of such action. At the request of District Director of Safety & Security or the respective school principal, the SRO shall take appropriate law enforcement action for violations of the law on school property or at related school functions as allowed by Missouri Statues.

11. The SRO shall give assistance to other law enforcement officers and/or other local law enforcement departments in matters regarding his/her school assignment, whenever necessary.

12. The SRO shall, whenever possible, and in accordance with established overtime procedures, participate in and/or attend school functions.

13. The SRO may be assigned non-campus investigations relating to runaways or truant students that attend the school to which the SRO is assigned.

14. The SRO shall maintain detailed and accurate records of the operation of the School Resource Officer Program, and shall make them available to the City, the District Director of Safety & Security, principal, or superintendent as required by law.

15. The SRO shall not act as a school disciplinarian or conduct searches or frisks on behalf of an administrator for issues only related to school discipline. However, if there is a safety risk; or the District Director of Safety & Security or the principal believes a violation of law has occurred, and the school district intends to pursue the matter criminally; then the SRO shall be contacted. The SRO shall determine whether law enforcement action is appropriate. If the District Director of Safety & Security disagrees, then the SRO's supervisor at the City shall be consulted.

16. The SRO is not to be used for regularly assigned lunchroom duties, hall monitor, bus monitor, in school suspension monitor, or any other

regularly assigned duties that are filled by a School or District employee. If there is a problem in one of these areas, the SRO should be actively involved and help the school solve the problem. These solutions will vary but may include the presence of the SRO in these areas. Even though the SRO is not to be assigned regular duties of another School or District member in these high traffic areas, the SRO should make a consistent and regular practice to be visible in these areas. The SRO's presence will provide great opportunities to make positive contacts with students and to help deter negative issues from occurring.

17. The SRO or City should ensure the respective principal and the District Director of Safety & Security are notified when the SRO is sick or injured prior to the start of the school day.

F. Access to Education Records

1. School officials shall allow the SRO to inspect any public records maintained by the School District to the extent allowed by state and federal law. However, law enforcement officials may not inspect and/or copy confidential student education records except in accordance with Board of Education Policy and Regulations.

2. If some information in a student's cumulative record is needed in an emergency to protect the health or safety of the student or other individuals, school officials may disclose to the SRO that information which is needed to respond to the emergency based on the seriousness of the threat to someone's health or safety.

3. A full explanation as to the need of the information to handle the emergency and the extent to which time is of the essence shall be articulated in the SRO's official policy report.

4. If confidential student record information is needed, but no emergency exists, the information may be released only upon the issuance of a search warrant or subpoena to produce the records, or with consent of the student's parent or guardian as required by Board Policy or as otherwise allowed by state and federal law.

5. The City, the Police Department and the SRO will comply with the Family Educational Rights and Privacy Act, 20 U.S.C.A. § 12329, and will indemnify the District, to the extent permitted by law, for any damages suffered by it by reason of its failure to do so.

IV. RIGHTS, DUTIES AND RESPONSIBILITIES OF THE DISTRICT

A. District Administration shall provide to all the full-time SRO's the following materials and facilities, which are deemed necessary to the performance of the SRO duties:

1. Access to an air-conditioned and properly lighted private office, which shall contain a telephone to be used for general business purposes. This office may be shared by another SRO but shall be for SRO use only.

2. A location for files and records, which can be properly locked and secured.

3. A desk with drawers, a desk chair, additional guest chair(s), filing cabinet office supplies.

4. Access to a computer and/ or secretarial assistance.

V. FINANCING OF THE SCHOOL RESOURCE OFFICER PROGRAM

A. The District agrees to pay $58,568.20 to the City of Gladstone, Missouri as its' share of the Officer's salary in the School Resource Officer Program for the term of the agreement, as described herein.

VI. TERM OF THE SCHOOL RESOURCE OFFICER PROGRAM

This program is effective for the twelve-month period beginning on July 1st, 2024, for the academic school year, and shall remain in effect until either June 30, 2025, or until a party provides written notice to the other party indicating a request for either amendment or termination as indicated in section IX, entitled TERMINATION OF AGREEMENT.

VII. EMPLOYMENT STATUS OF THE SCHOOL RESOURCE OFFICER

A. The School Resource Officer shall remain an employee of the City of Gladstone, Missouri, and shall not be an employee of the District.

B. The District and the City acknowledge that the School Resource Officer shall remain responsible to the chain of command of the Department. However, the School Resource Officer shall coordinate efforts and activities with the District Director of Safety & Security and respective school principal.

VIII. DISMISSAL OF SCHOOL RESOURCE OFFICER; REPLACEMENT

A. In the event the principal of the school to which the SRO is assigned feels that the SRO is not effectively performing his or her duties and responsibilities, the principal shall discuss the matter with School District Director of Safety & Security. The School District Director of Safety & Security will try and resolve any issues, however, if the principal and the School District Director of Safety & Security agree that the respective SRO should be removed from the program then the School District Director of Safety & Security shall then give this written recommendation to the Executive Director for Support Services and Student Activity.

B. The Executive Director for Support Services and Student Activity will exhaust all avenues to attempt to resolve the situation. If resolution cannot be gained, the recommendation to remove the SRO from the program will be forwarded to the Superintendent of the District. Within a reasonable time after receiving the recommendation to remove the SRO from the program, the Superintendent or his/her designee shall advise the City of the request.

C. If the City so desires, the Superintendent and the City Manager or his/her designees, shall meet with the SRO to mediate or resolve any problems, which may exist. At such a meeting, specific members of the respective school, along with the School District Director of Safety & Security and Executive Director for Student Activities and Support Services may be required to be present. If, within a reasonable amount of time after commencement of such mediation, the problem cannot be resolved or mediated, or in the event the City does not seek mediation, then the SRO shall be removed from the program and the school. The City shall then provide a replacement SRO.

D. The City may dismiss or reassign an SRO based upon City Rules, Regulations and/or General Orders and when it is in the best interest of the people of the City of Gladstone, Missouri, and the District.

E. In the event of the resignation, dismissal, reassignment or long-term absence of an SRO, the City shall provide a temporary replacement for the SRO within thirty (30) calendar days of receiving notice of such resignation, dismissal, re-assignment or long-term absence.

IX. TERMINATION OF AGREEMENT

A. This agreement may be terminated by either party upon ninety (90) days written notice that any other party has failed to substantially perform in accordance with the terms and conditions of this Agreement.

B. Either party upon one hundred eighty (180) days written notice may terminate this Agreement without cause.

C. Termination of this Agreement may only be accomplished as provided herein.

D. In the event this Agreement is terminated, compensation will be made to the Department for all services performed to the date of the termination and the School District shall be entitled to a pro-rated refund for that period of time when SRO services are not provided because of the termination of the Agreement.

X. EVALUATION OF PROGRAM

A. It is mutually agreed that the City and the District shall annually evaluate the School Resource Officer Program and implement recommendations and changes as needed and agreed upon.

XI. NOTICES

Any and all notices or any other communication herein required or permitted shall be deemed to have been given when deposited in the United States postal service as regular mail, postage prepaid and addressed as follows:

Dr. Rochel Daniels,
Superintendent

North Kansas City School District
2000 NE 46th Street, Kansas City MO 64116

Bob Baer
City Manager
7010 North Holmes
Gladstone, Missouri 64118

XII. GOOD FAITH

A. The District, the City, their agents and employees agree to cooperate in good faith in fulfilling the terms of this Agreement.

B. Unforeseen difficulties or questions will be resolved by negotiation between the District Superintendent and the City Manager, or their designees.

XIII. MODIFICATION

This document constitutes the full understanding of the parties and no terms, conditions, understandings or agreement purporting to modify or vary the terms of this document shall be binding unless hereafter made in writing and signed by the party to be charged.

XIV. NON-ASSIGNMENT

This Agreement, and each and every covenant herein, shall not be capable of assignment, unless the express written consent of the District and the City is obtained.

XV. MERGER

This agreement constitutes a final written expression of all the terms of this Agreement and is a complete and exclusive statement of those terms.

XVI. INSURANCE

It is understood that both the City and the School District are governmental bodies and maintain appropriate insurance coverage.

XVII. LEGAL CONTINGENCIES

It is understood and agreed that this agreement is entered into solely for the benefit of the parties hereto and gives no right to any other party. Without waiving any governmental immunity, sovereign immunity, or official immunity, each party agrees to be responsible and assumes liability for its own actions and omissions and those of its Officers, teachers, staff or any other agent for any incident arising out of or in connection with this agreement, to the fullest extent required by the law and agrees to save, indemnify, defend and hold the other party harmless from such liability for its own actions.

XVIII. NO WAIVER OF IMMUNITY

Nothing in this Agreement waives any governmental immunity including sovereign immunity or official immunity available to the parties or their agents. The parties hereby expressly reserve all immunities available under Missouri law.

IN WITNESS WHEREOF, the parties have caused this Agreement to be signed by their duty-authorized officers.

NORTH KANSAS CITY SCHOOL DISTRICT #74

_____ _____

Janet Kauk, President
Board of Education

Date

_____ _____

Board Secretary

Date

CITY OF GLADSTONE, MISSOURI

_____ _____

City Manager

Date

Request for Council Action

RES ☐ # City Clerk Only **BILL ☒ # 24-19** **ORD ☒ # 4.674**

Date: 6/4/2024 Department: Community Development

Meeting Date Requested: 6/10/2024

Public Hearing: Yes ☒ Date: 6/10/2024

Subject: 7200 N. Broadway – Gas Station & Convenience Store – Site Plan Revision

Background:

Update: City Staff has requested the following from the applicant after the Planning Commission meeting on Monday, May 20th:

- To have the traffic engineers present at the City Council meeting to answer any traffic related questions in more detail.
- Provide renderings of the west side of the store that will give a better visual of the drive thru and backside of the store.
- To be prepared to discuss and show the potential left turn lane installation and the right-in/right-out traffic mitigation options in some detail.

Narrative: The applicant is requesting site plan approval for the purpose of constructing a new 5,000 sq. ft. gas station and convenience store located at 7200 N. Broadway. This property is currently vacant and zoned CP-2 which is an appropriate zoning for the proposed use.

This project was proposed in 2023 and denied by the Gladstone City Council. The property owner has made adjustments to the site plan and those adjustments include the following:

- The access point on NW 72nd Street has been shifted west to lineup with the Post Office access point.
- The water quality pond has been moved from the northern side of the property to the western side of the property away from the residential homes located to the north. This basin will be located on the KCMO parcel.
- The wooded area on the northern side of the property will primarily remain untouched.

This project will also incorporate a drive thru lane and window as well as two (2) electric vehicle (EV) charging stations and a commercial bike rack. There will be ten (10) fuel pumps covered by a canopy to serve customers.

The primary exterior building materials used will be brick and stucco.

The landscaping plans show new landscape throughout the property using various trees and shrubs. All disturbed areas will be sodded and irrigated.

A traffic study was conducted by Priority Engineers, Inc. and they provided a summary of their findings.

- "Analysis of unsignalized intersections indicate that they operate with acceptable levels of service both before and after the construction of the proposed development. The signalized intersection at NW 72nd Street and N Broadway Street has an overall level of service that is acceptable both before and after construction of the proposed development. The proposed entrance locations have sufficient sight distance. A left turn lane is warranted for the entrance on N Broadway Street in the PM Peak Hour. Due to geometric constraints of this location, the left turn lane will need to be designed so that it does not interfere with the southbound left turn lane at the signalized intersection with NW 72nd Street. No other improvements are required as a result of this development."
- Given the conclusions and recommendations made by the traffic engineers, City Staff will be requiring the installation and construction of a left turn lane or right-in/right-out for the entrance on N. Broadway at the property owner's expense.

Budget Discussion: N/A

Public/Board/Staff Input:
Public: There were approximately 5-10 people in the audience who attended the Planning Commission hearing that are in opposition to the proposed project. These individuals live in the neighborhood of NW 72nd Terrace, which is north of the proposed project.
Board: The Planning Commission approved the project. (7 Yes – 1 No)

Provide Original Contracts, Leases, Agreements, etc. to: City Clerk and Vendor.

Austin Greer	JM	BB
Department Director/Administrator	City Attorney	City Manager

BILL NO. 24-19 **ORDINANCE NO. 4.674**

AN ORDINANCE APPROVING A SITE PLAN REVISION FOR PROPERTY AT 7200 N. BROADWAY.

WHEREAS, pursuant to Section 32-37 of Ordinance No. 2.292 being the Gladstone Zoning Ordinance, public notice was made of a request for site plan approval at 7200 N. Broadway; and

WHEREAS, public hearings have been held after the publishing of the required notices; and

WHEREAS, the City Council finds that the planned development does not materially injure the property and the uses of the properties immediately adjacent to the proposed development; and

WHEREAS, the City Council finds that the site plan presents a unified and organized arrangement of buildings and facilities which have a functional relationship to the property comprising the development; and

WHEREAS, the City Council finds it is in the best interest of the citizens of the City of Gladstone that the site plan submitted by the applicant be approved subject to the terms and conditions set forth herein;

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF GLADSTONE, MISSOURI, AS FOLLOWS:

SECTION 1. SITE PLAN APPROVAL.

The Site Plan for 7200 N. Broadway is hereby approved subject to the terms and conditions set forth herein;

1. Any and all disturbed areas shall be sodded.
2. All manicured grass and landscaped areas shall be irrigated and maintained in perpetuity.
3. Install a minimum of 20 new shrub plantings adjacent to N. Broadway.
4. Install a minimum of 10 new shrub plantings adjacent to NE 72nd Street.
5. All mechanical equipment on the roof shall be screened from public view by a parapet or approved screening similar in design to the rest of the structure. This must be a minimum of twelve (12) inches above the tallest piece of mechanical equipment.
6. A compliant monument sign shall be used to serve the development. The monument sign will need a minimum of 240 sq. ft. of area landscaping around the sign.
7. All exterior lighting on the site shall be LED and designed to reduce adverse impact on adjoining properties.
8. The dumpster shall be enclosed with materials consistent with the primary building. Specific colors and materials shall be submitted and approved as part of the building permit.
9. Trash service, store deliveries, and gasoline refilling (underground commercial gasoline tanks) shall occur between the hours of 7:00 a.m. to 10:00 p.m.
10. Tractor trailers, storage containers, and other commercial vehicles (including delivery trucks) shall not be parked or stored overnight on the premises.
11. No more than 50% of each glazed window area of the building shall have signage.

12. Hours of operation permitted are 24 hours seven days per week.
13. Install a commercial grade bike rack on-site.
14. Install new curb, gutter, and sidewalk along the property line adjacent to N. Broadway.
15. Preserve the northern wooded tree line as a buffer to the residential neighborhood located to the north along NW 72nd Terrace.
16. Complete a Post-Construction Maintenance Agreement for storm water facilities.
17. Install a fire hydrant within four-hundred (400) feet of any portion of the building.
18. Extend and loop the 8-inch water main along N. Broadway.
19. Given the project location and that the development extends to property located in Kansas City, Missouri, this development is subject to Kansas City, Missouri approving the improvements on their parcel.
20. The installation and construction of a left turn lane or right-in/right-out for the entrance on N. Broadway at the property owner's expense.

SECTION 2. SEVERABILITY CLAUSE. The provisions of this ordinance are severable and if any provision hereof is declared invalid, unconstitutional or unenforceable, such determination shall not affect the validity of the remainder of this ordinance.

INTRODUCED, READ, PASSED, AND ADOPTED BY THE COUNCIL OF THE CITY OF GLADSTONE, MISSOURI, THIS 10TH DAY OF JUNE 2024.

_____
Tina M. Spallo, Mayor

ATTEST:

_____
Kris Keller, City Clerk

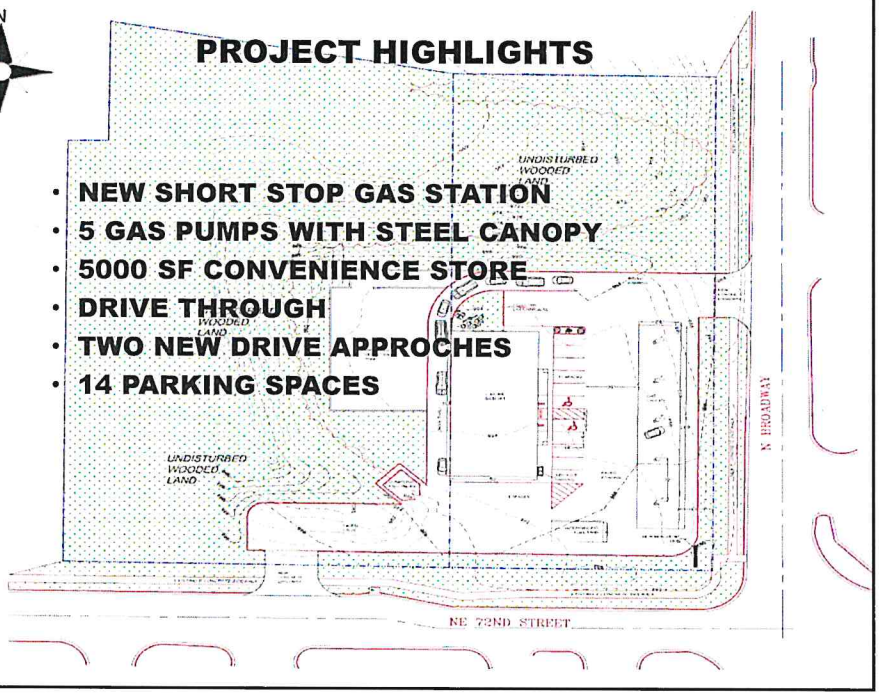
First Reading: June 10, 2024

Second Reading: June 10, 2024

File # 24-00002

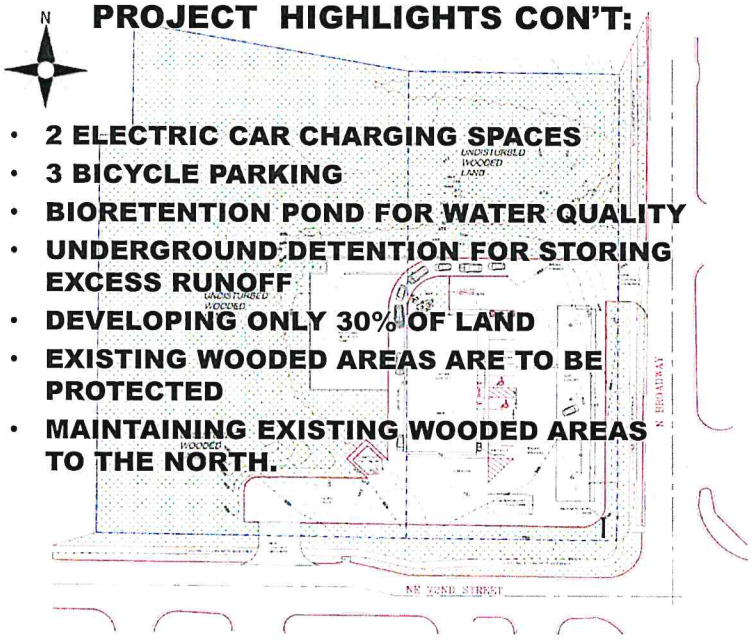
PROJECT HIGHLIGHTS

- NEW SHORT STOP GAS STATION
- 5 GAS PUMPS WITH STEEL CANOPY
- 5000 SF CONVENIENCE STORE
- DRIVE THROUGH
- TWO NEW DRIVE APPROCHES
- 14 PARKING SPACES

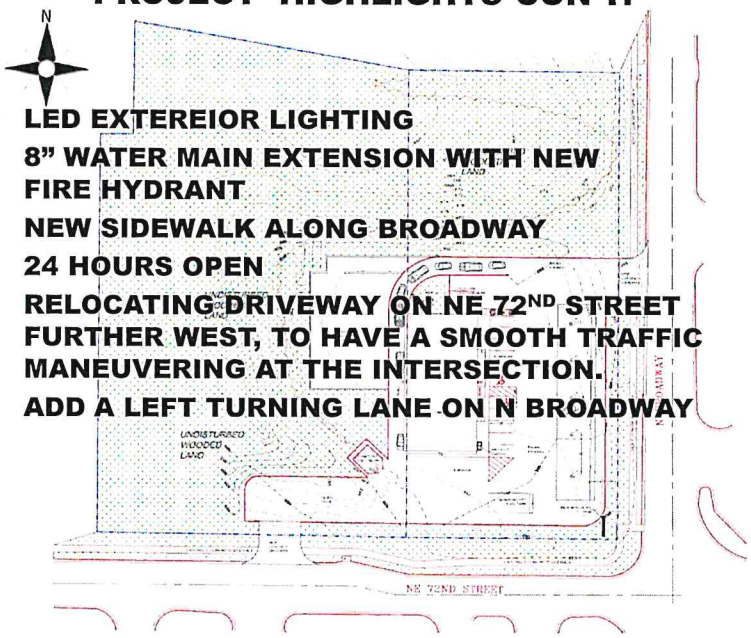


PROJECT HIGHLIGHTS CON'T:

- 2 ELECTRIC CAR CHARGING SPACES
- 3 BICYCLE PARKING
- BIORETENTION POND FOR WATER QUALITY
- UNDERGROUND DETENTION FOR STORING EXCESS RUNOFF
- DEVELOPING ONLY 30% OF LAND
- EXISTING WOODED AREAS ARE TO BE PROTECTED
- MAINTAINING EXISTING WOODED AREAS TO THE NORTH.

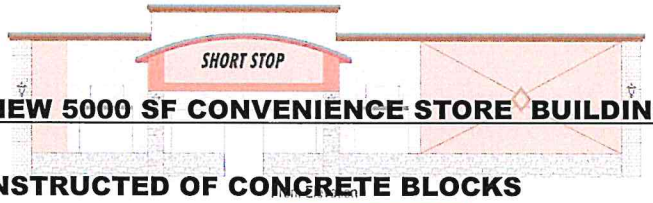


PROJECT HIGHLIGHTS CON'T:



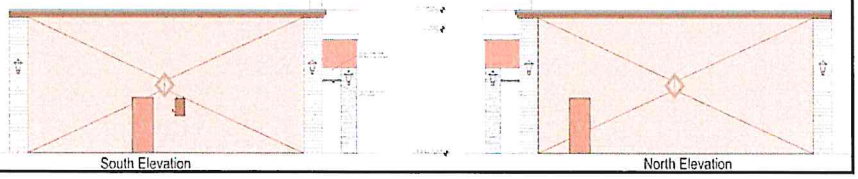
- LED EXTEREIOR LIGHTING
- 8" WATER MAIN EXTENSION WITH NEW FIRE HYDRANT
- NEW SIDEWALK ALONG BROADWAY
- 24 HOURS OPEN
- RELOCATING DRIVEWAY ON NE 72ND STREET FURTHER WEST, TO HAVE A SMOOTH TRAFFIC MANEUVERING AT THE INTERSECTION.
- ADD A LEFT TURNING LANE ON N BROADWAY

C-STORE BUILDING ELEVATIONS



NEW 5000 SF CONVENIENCE STORE BUILDING

- CONSTRUCTED OF CONCRETE BLOCKS
- METAL BAR JOIST ROOF SYSTEM
- BRICK AND STONE EXTERIOR
- CONCRETE STUCCO ON SIDE AND REAR
- HIGH PARAPET TO SCREEN MECHANICAL UNITS
- LESS THAN 50% GLAZING TO HAVE SIGNAGE
- MATCHING ENCLOSED TRASH DUMPSTER



SITE PLAN RENDERING

BUILDING & CANOPY RENDERING

BUILDING & CANOPY RENDERING

LANDSCAPING HIGHLIGHTS:

- ONLY 30% AREA DEVELOPED
- 70% AREA MOSTLY HAVING MATURE TREES TO REMAIN
- MAINTAINING EXISTING WOODED AREAS. NOT DISTURBING ANYTHING TO THE NORTH.

LANDSCAPING HIGHLIGHTS CON'T:

- BUILT IN IRRIGATION SYSTEM
- PLANTING TREES AND SHRUBS ALONG BROADWAY AND 72ND STREET
- ALL DISTURBED AREAS SODDED
- PLANTING NEW VEGETATION TO THE WEST

PLANNING COMMISSION
GLADSTONE, MISSOURI
Gladstone Community Center
Monday, May 20th, 2024
7:00 pm

Item 1 on the Agenda: Roll Call.

Present: Kate Middleton
Bill Turnage
Jennifer McGee
Joseph Brancato
Cameron Nave Secretary
Robert Wilson
Steve Beamer Chair
Mike Ebenroth

Absent: Chase Cookson
Brenda Lowe, V-Chair
Kim Murch

Council & Staff Present:
Austin Greer, Assistant City Manager | Community Development Director
Alan Napoli, Community Development Administrator/Building Official
Angie Daugherty, Admin. Assistant
Jean B. Moore, Councilmember
Tina Spallo, Mayor

Item 2 on the Agenda: Pledge of Allegiance.

Chair Beamer led the group in reciting the Pledge of Allegiance to the United States of America.

Item 3 on the Agenda: Approval of the April 1st, 2024 Minutes. Chair Beamer asked if there was a motion to approve the minutes from the April 1st meeting.

Mr. Turnage moved to approve the minutes; Ms. McGee seconded. The minutes were approved, 8-0.

Item 4 on the Agenda: Consideration: On a Site Plan Revision on property located at 7200 N. Broadway.

Applicant: Gerald W. Menefee P.E.
Owner: Mohammad Hafiz
City Council consideration for this project is scheduled for Monday, June 10, 2024.

Mr. Greer read from the staff report:

The applicant is requesting site plan approval for the purpose of constructing a new 5,000 sq. ft. gas station and convenience store located at 7200 N. Broadway. This property is currently vacant and zoned CP-2 which is an appropriate zoning for the proposed use.

This project was proposed in 2023 and denied by the Gladstone City Council. The property owner has made adjustments to the site plan and those adjustments include the following:

- The access point on NW 72nd Street has been shifted west to lineup with the Post Office access point.
- The water quality pond has been moved from the northern side of the property to the western side of the property away from the residential homes located to the north. This basin will be located on the KCMO parcel.
- The wooded area on the northern side of the property will primarily remain untouched.

This project will also incorporate a drive thru lane and window as well as two (2) electric vehicle (EV) charging stations and a commercial bike rack. There will be ten (10) fuel pumps covered by a canopy to serve customers.

The primary exterior building materials used will be brick and stucco.

The landscaping plans show new landscape throughout the property using various trees and shrubs. All disturbed areas will be sodded and irrigated.

A traffic study was conducted by Priority Engineers, Inc. and they provided a summary of their findings.

- "Analysis of unsignalized intersections indicate that they operate with acceptable levels of service both before and after the construction of the proposed development. The signalized intersection at NW 72nd Street and N Broadway Street has an overall level of service that is acceptable both before and after construction of the proposed development. The proposed entrance locations have sufficient sight distance. A left turn lane is warranted for the entrance on N Broadway Street in the PM Peak Hour. Due to geometric constraints of this location, the left turn lane will need to be designed so that it does not interfere with the southbound left turn lane at the signalized intersection with NW 72nd Street. No other improvements are required as a result of this development."
- Given the conclusions and recommendations made by the traffic engineers, City Staff will be requiring the installation and construction of a left turn lane or right-in/right-out for the entrance on N. Broadway at the property owner's expense.
-

City Staff recommends that the following conditions be considered if the Planning Commission and City Council choose to approve this project request:

1. Any and all disturbed areas shall be sodded.
2. All manicured grass and landscaped areas shall be irrigated and maintained in perpetuity.
3. Install a minimum of 20 new shrub plantings adjacent to N. Broadway.
4. Install a minimum of 10 new shrub plantings adjacent to NE 72nd Street.
5. All mechanical equipment on the roof shall be screened from public view by a parapet or approved screening similar in design to the rest of the structure. This must be a minimum of twelve (12) inches above the tallest piece of mechanical equipment.

6. A compliant monument sign shall be used to serve the development. The monument sign will need a minimum of 240 sq. ft. of area landscaping around the sign.
7. All exterior lighting on the site shall be LED and designed to reduce adverse impact on adjoining properties.
8. The dumpster shall be enclosed with materials consistent with the primary building. Specific colors and materials shall be submitted and approved as part of the building permit.
9. Trash service, store deliveries, and gasoline refilling (underground commercial gasoline tanks) shall occur between the hours of 7:00 a.m. to 10:00 p.m.
10. Tractor trailers, storage containers, and other commercial vehicles (including delivery trucks) shall not be parked or stored overnight on the premises.
11. No more than 50% of each glazed window area of the building shall have signage.
12. Hours of operation permitted are 24 hours seven days per week.
13. Install a commercial grade bike rack on-site.
14. Install new curb, gutter, and sidewalk along the property line adjacent to N. Broadway.
15. Preserve the northern wooded tree line as a buffer to the residential neighborhood located to the north along NW 72nd Terrace.
16. Complete a Post-Construction Maintenance Agreement for stormwater facilities.
17. Install a fire hydrant within four-hundred (400) feet of any portion of the building.
18. Extend and loop the 8-inch water main along N. Broadway.
19. Given the project location and that the development extends to property located in Kansas City, Missouri, this development is subject to Kansas City, Missouri approving the improvements on their parcel.
20. The installation and construction of a left turn lane or right-in/right-out for the entrance on N. Broadway at the property owner's expense.

City Staff recommends that the request be **APPROVED** contingent upon the conditions listed above.

Mr. Menefee who is the applicant on the project presented a PowerPoint.

Mr. Menefee stated that this will be a convenience store with five gas pumps, a drive thru, 14 parking spaces, EV charging stations, exterior lighting along the north side, the water main extension and sidewalk, and open 24 hours. They will also add an access drive off of Broadway and NE 72nd St. Only 30% of the area will be developed and the other 70% has mature trees. They will have storage pipes on the northern edge of the site and those will be connected to the water retention pond on the west side of the structure. Thank you.

Ms. Middleton asked what part of this property is in Kansas City.

Mr. Menefee stated the western parcel that has the basin and west side of the driveway.

Mr. Turnage asked who will be in charge of redesigning the drive from Broadway.

Mr. Greer stated that private sector engineers hired by the property owner will likely design the project and submit the designs to city staff for review.

Ms. McGee asked where the retaining wall was going and how tall will it be.

Mr. Menefee stated the wall will be along the tree line and around 10 to 12 feet tall at the tallest point.

Mr. Wilson asked if he could explain the difference between the basin and a sand and oil separator pit.

Mr. Menefee stated it is based on the volume of the water that comes off the site. It is a large area and with a lot of rain fall this goes into the retention pond and the sand filtration is basically the same thing. The filter is made up of primarily tree bark and peat moss.

Mr. Brancato asked how the public is supposed to gain access to the drive thru and whether or not they will have to drive around the back of the building and face N. Broadway or NW 72nd Street. Also, will the drive thru be open for 24 hours as well?

Mr. Menefee stated he isn't sure about the hours that the drive thru will be open but assumes it will be dependent on customer demand. The drive thru comes in at the north side and goes south along the building facing NW 72nd St.

Mr. Beamer asked about approval from Kansas City. Do you all have a status on this?

Mr. Menefee stated they have not brought this project to Kansas City yet as we would like to get permission from the City of Gladstone first.

Mr. Beamer asked if this property has historically been vacant or have there been other approved plans on this site.

Mr. Greer stated yes, a Casey's gas station and a dentistry has been approved on this site historically but neither pursued the actual construction of the projects.

Mr. Beamer welcomed the audience to speak in favor or against the proposed project.

Mr. and Ms. Weatherford who reside at 403 NW 72nd Terrace stated that since there is a Casey's at one end of Broadway and a QuikTrip on the other so why do we need another gas station in the middle of residential? That area is full of residential homes. Will the sales from the Short Stop be mostly gas or alcohol? This is a very dangerous intersection and we are very concerned about traffic and wrecks. Are there plans to look at this intersection?

Ms. Josie Nabavian who resides at 400 NW 72nd Terrace asked what has changed from the last meeting? What is going to be the traffic pattern? There is a lot of traffic in that area. With the exit off of Broadway into the gas station, will this make a traffic delay?

Mr. Greer stated that a traffic study has been completed and the study indicates a left turn lane is warranted traveling northbound. Staff is requiring that the property owner add a left turn lane or a right-in/right-out to help mitigate traffic.

Mr. Tyson who resides at 308 NW 76th St. asked when you mention right-in and right-out will this be right lane going into the gas station parking lot and right turn only coming out of the parking lot on N. Broadway?

Mr. Greer stated yes sir.

Mr. Tyson stated that the city cannot control the traffic off of 76th St. or 72nd St.

Mr. Greer stated that the design of the right-in and right-out will be built high enough that most people will try not to drive over it.

Mr. Tyson brought up traffic control and that he doesn't think the police department does enough to stop people from speeding on Broadway. This property has been vacant for so long and I don't understand why they want to put a gas station there.

Ms. Vicki Marshall resides at 401 NW 72nd Terrace and her concern is that she feels like this project will be in her backyard. What if they have a gas leak from the tanks? When they first moved here they were told that it was zoned for an office building and that was in 1992.

Mr. Menefee stated that it is a requirement that they have a containment system that has a double wall tank that is surrounded by a plastic liner.

Ms. Taylor Sherrill who resides at 6305 N. Bales Avenue stated that this project from an environmental perspective does not seem to be compatible with the recent comprehensive plan and that this project does not fit the location.

MOTION: By Ms. Middleton, second by Mr. Ebenroth to consider a Site Plan Revision located at 7200 N Broadway.

Vote:	**Mr. Wilson**	**Yes**
	Mr. Brancato	**Yes**
	Mr. Turnage	**Yes**
	Ms. Middleton	**No**
	Chair Beamer	**Yes**
	Ms. McGee	**Yes**
	Mr. Nave	**Yes**
	Mr. Ebenroth	**Yes**

The motion carried. (7-1)

Item 5 on the Agenda: Communications from the City Council

Councilmember Jean Moore wanted to welcome everyone to the new space and Mr. Bob Wilson to the Planning Commission. She also thanked the residents for their participation tonight.

Item 6 on the Agenda: Communications from the City Staff

Mr. Greer welcomed Mr. Wilson to the Commission as well. With the storms that happened last night the city will be offering free brush disposable at Public Works today through Friday. City Hall will be closed next Monday for Memorial Day and Food, Art, and Drink will be at Linden Square on June 1st. Also, there will be no Planning Commission meeting on Monday, June 3rd.

Item 7 on the Agenda: Communications from the Planning Commission Members

Mr. Beamer welcomed Mr. Wilson to the Planning Commission and asked Mr. Wilson to tell them a little about himself.

Mr. Wilson stated that he is an architect by trade and is leading an architectural firm here in Kansas City. I was also on the Capital Improvements Committee and am very excited to join the Planning Commission and help the community.

Mr. Turnage wanted to thank the Public Works Department for sponsoring the beautification event.

Item 8 on the Agenda: Adjournment

Chair Beamer adjourned the meeting at 7:39 pm.

Respectfully submitted:

_____ Approved as submitted _____
Steve Beamer, Chair

_____ Approved as corrected _____
Angie Daugherty, Recording Secretary

DEVELOPMENT APPLICATION

CITY OF GLADSTONE
7010 N HOLMES STREET
GLADSTONE, MISSOURI 64118
PHONE: 436-4110 FAX: 436-2228

File #: _____
Application Date: **04/01/2024**
PC Date: _____
CC Date: _____

Application Type:

- ☐ (PH) Special Use Permit ($500)
- ☐ (PH) Zoning Change ($500)
- ☐ (PH) Site Plan Revision ($500)
- ☐ (PH) Right-of-Way Vacation ($200)
- ☐ (PH) Variance – BZA ($200)
- ☐ Final Plat/Replat ($75)

Address of Action: **400 NE 72ND STREET**

Legal Description: *Attach under separate cover if needed.* BEG SW COR LT 12 WILLOW CREEK E146, S340, SW21.21, W138, N TO POB

Proposed Change: CONSTRUCTION OF NEW GAS STATION WITH 5000 SF CONVENIENCE STORE AND 5 GAS DISPENSERS AND DRIVE THRU

Applicant/Property Owner Information:

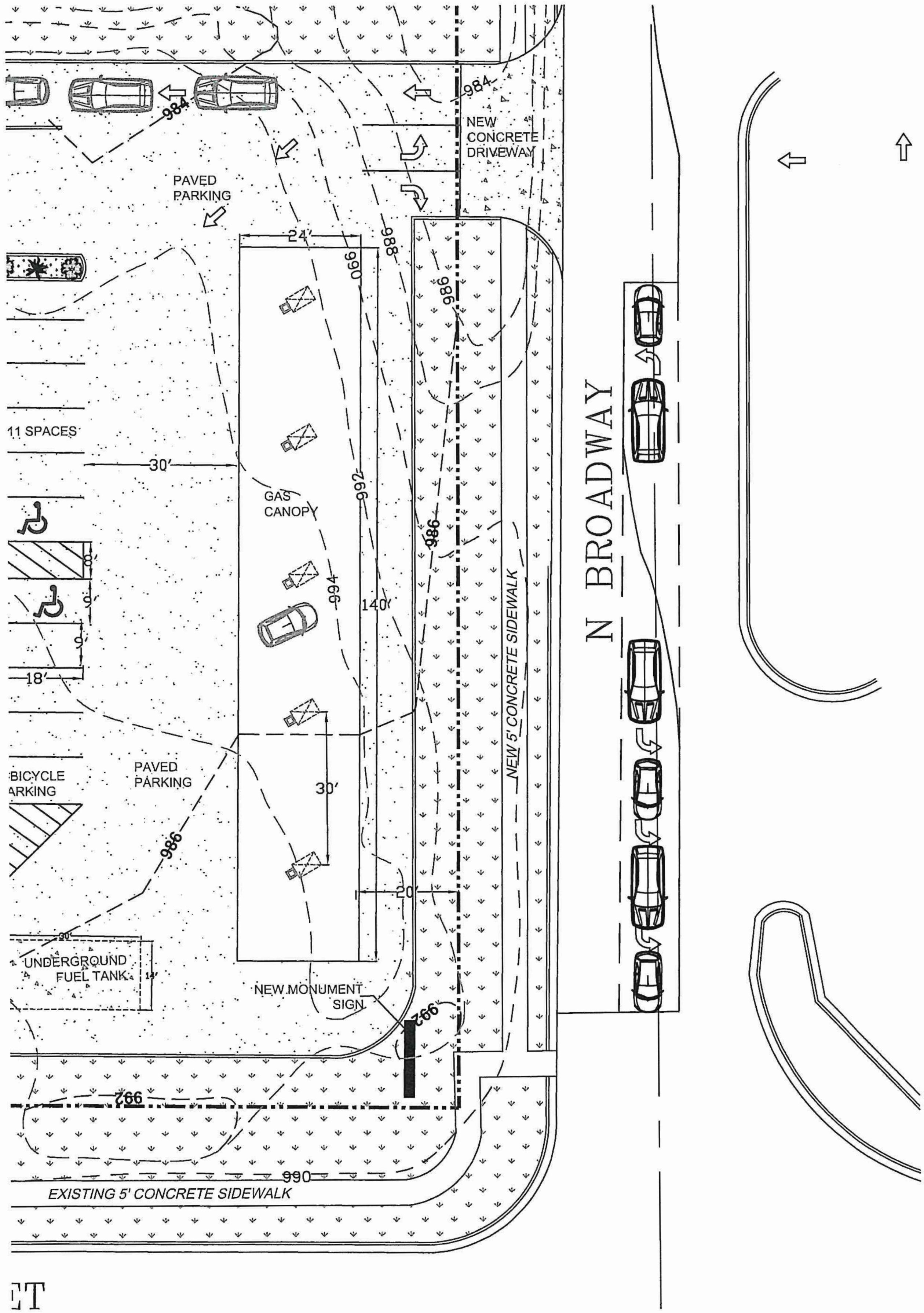
☐ Applicant/Engineer GERALDW MENEFEE, P.E.
Company KAM DESIGN GROUP LLC
Address 9000 E BANNISTER ROAD, KANSAS CITY MO 64134
Phone 8167972065 Fax: _____ E-Mail: kamdesign@aol.com

☐ Property Owner (if different than applicant) MOHAMMAD HAFIZ
Company _____
Address 1121 SW BLAZINGSTAR CT., LEE'S SUMMIT MO 64081
Phone 816 7861622 Fax: _____ E-Mail: mhafiz103@yahoo.com

☐ Architect DARRYL W HAWKINS AIA
Company INNOVATIVE DESIGN & RENOVATION
Address 8011 PASEO SUITE 201, KANSAS CITY, MO 64131
Phone 8164052159 Fax: _____ E-Mail: arkitec35@aol.com

Please indicate in one box above which person is to be the contact.

Applicant's Signature Darryl W Hawkins Date 4/1/24


984
NEW CONCRETE DRIVEWAY
PAVED PARKING
24'
990
986
11 SPACES
30'
GAS CANOPY
992
994
140'
18'
BICYCLE
PAVED PARKING
30'
20'
UNDERGROUND FUEL TANK
NEW MONUMENT SIGN
NEW 5' CONCRETE SIDEWALK
N BROADWAY
992
990
EXISTING 5' CONCRETE SIDEWALK

Recorded in Clay County, Missouri
Date and Time: 08/12/2010 at 08:09:37 AM
Instrument Number: 2010027038
Book: H Page: 12
Instrument Type SURV
Page Count 1
Recording Fee 369.00 $
Grantor 72ND & BROADWAY
Grantee 72ND & BROADWAY
Robert T Sevier, Recorder

BOUNDARY / TOPOGRAPHIC SURVEY

72ND AND BROADWAY

SEC. 15 - TWN. 51N - RNG. 33W
KANSAS CITY, CLAY COUNTY, MISSOURI

SCALE
0' 30' 60'
1"=30' HORIZ.

PLAN LEGEND

SURVEY MARKERS
- FOUND SECTION CORNER (MONUMENTATION AS NOTED)
- FOUND PROPERTY CORNER (MONUMENTATION AS NOTED)
- SET 1/2" IRON BAR WITH PLASTIC CAP
- BENCHMARK

GAS
- GK GAS LINE MARKER

SANITARY
- SMH SANITARY MANHOLE

UTILITY LINES
- EOH ELECTRIC, OVERHEAD

CONTOURS
- 100 INDEX CONTOURS
- 100 INTERMEDIATE CONTOURS

ELECTRIC
- GUY GUY ANCHOR
- LP LIGHT POLE
- PP POWER POLE

STORM
- CI CURB INLET
- STMH STORM MANHOLE

WATER
- WV WATER VALVE

TRAFFIC
- TSP TRAFFIC SIGNAL POLE
- TSC TRAFFIC SIGNAL CONTROLS
- TSV TRAFFIC SIGNAL VAULT

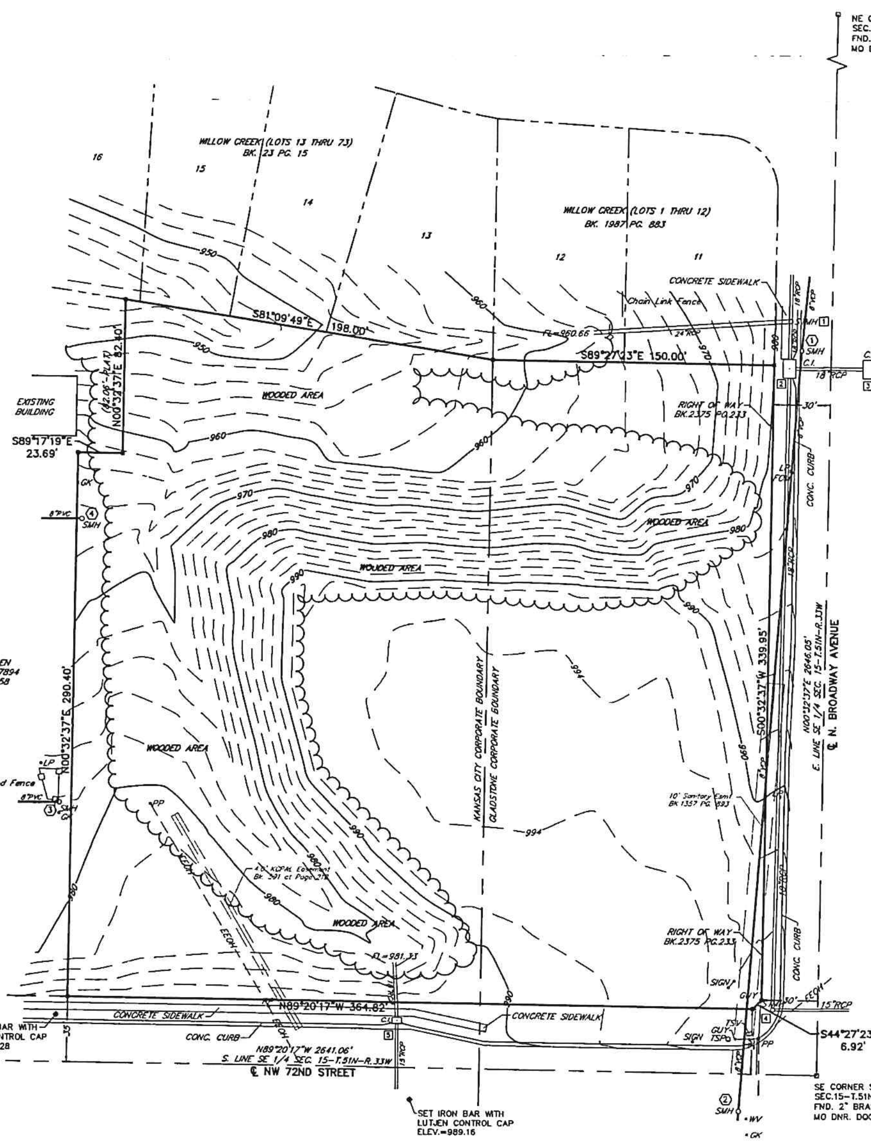
TELEPHONE
- FOM FIBER OPTIC MARKER

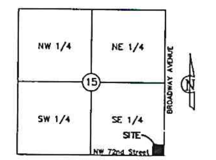
STORM INVERTS

1. TOP MH-980.66, FL IN S-973.16, FL IN N-970.06, FL OUT W-961.96
2. TOP CI-980.65, FL IN S-973.80, FL IN E-976.65, FL OUT N-973.45
3. TOP CI-980.65, FL OUT W-973.96
4. TOP MH-996.00, FL IN E-985.60, FL OUT N-982.70
5. TOP CI-988.79, FL IN S-983.69, FL OUT N-982.70

SANITARY INVERTS

1. TOP SMH-980.17, FL IN S-975.17, FL OUT N-974.97
2. TOP SMH-996.38, FL IN S-985.38, FL OUT N-984.58
3. TOP SMH-978.32, FL OUT W-966.92
4. TOP SMH-965.74, FL OUT W-955.24





LOCATION MAP
Sec. 15, Twp. 51 N., Rge. 33 W.
(N.T.S.)

Property Description:

A tract of land in the Southeast Quarter of Section 15, Township 51 North, Range 33 West of the 5th Principal Meridian in Kansas City and Gladstone, Clay County, Missouri being bounded and described as follows: Beginning at the Southeast corner of Lot 11, WILLOW CREEK (LOTS 1 THRU 12), a subdivision of land in said Clay County; thence South 00°32'37" West, along the West right-of-way line of N. Broadway Avenue, as now established, 339.95 feet; thence South 44°27'23" West, continuing along said West right-of-way line, 6.92 feet to a point on the North right-of-way line of NW 72nd Street, as now established; thence North 89°20'17" West, along said North right-of-way line, 364.82 feet to the Southeast corner of WILLOW GLEN, a subdivision of land in said Clay County, Missouri; thence North 00°32'37" East, along the East line of said WILLOW GLEN, 290.40 feet; thence South 89°17'19" East, continuing along said East line, 23.69 feet; thence North 00°32'37" East, continuing along said East line 82.40 feet (82.06' Plat) to a point on the South line of WILLOW CREEK (LOTS 13 THRU 73), a subdivision of land in said Clay County; thence South 81°09'49" East, along the South line of said WILLOW CREEK (LOTS 13 THRU 73), 198.00 feet to the Southwest corner of Lot 12, said WILLOW CREEK (LOTS 1 THRU 12) ; thence South 89°27'23" East, along the South line of said WILLOW CREEK (LOTS 1 THRU 12), 150.00 feet to the Point of Beginning. Containing 126,866 square feet or 2.96 acres, more or less.

SURVEYORS NOTES:

1. Property information referencing this survey was taken from the Commitment for Title Insurance Report, issued by Integrity Land Title Company, Inc., Firm File No. KC-IT-7089-10, with an effective of May 14, 2010 at 8:00 a.m.

2. Bearings used hereon are based on the Missouri State Plane Coordinate System, NAD 1983, West Zone. Vertical Datum is based on the North American Vertical Datum of 1988 (NAVD 88).

3. The underground utilities shown hereon have been located from field survey information, existing drawings and marking provided by Missouri One Call System, Inc. The surveyor makes no guarantee that underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not certify that they are located as accurately as possible from information available at the time of survey. The surveyor has not physically located the underground facilities.

4. Field work was completed in May 2010.

CERTIFICATION:

I hereby certify that this survey was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Land Surveyor under the laws of the State of Missouri and that this survey was performed in accordance with the requirements of the current Missouri Minimum Standards for Property Boundary Surveys.

STATE OF MISSOURI · JASON S. ROUDEBUSH · NUMBER PLS 2002014092 · PROFESSIONAL LAND SURVEYOR

JASON S. ROUDEBUSH PLS 2002014092
DATE: 6-2-10

Date of Survey: 06-02-10

Location: S:\Projects\MISSOURI\15-51-33\10081-01-(72nd and Broadway)\Plans\Boundary\10081-72nd and Broadway Bnd - 6-2-10.dwg

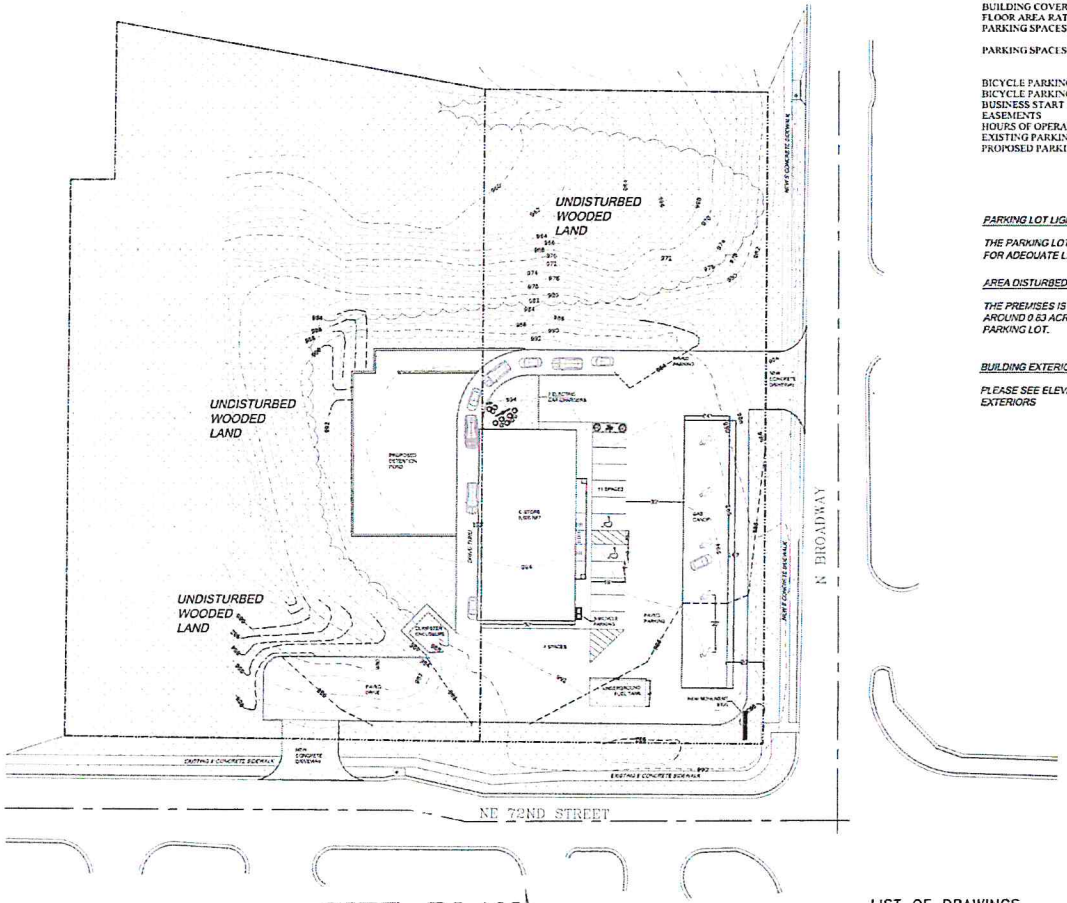
Surveyed By:	ZB / KB
Reviewed By:	BAL
Drafted By:	JR
Lutjen Project No.:	10081

LUTJEN
1301 Burlington, #100
North Kansas City, MO 64116
816.587.4320
816.587.1393 fax
www.lutjen.com
surveying
planning
engineering
landscape architecture

Sheet No.: 1 of 1

SHORT STOP GAS STATION
DEVELOPMENT APPLICATION
400 NE 72ND STREET, GLADSTONE, MISSOURI

LOCATION PLAN



SITE PLAN

30 15 0 30 60

LEGEND

- EXISTING/PROPOSED CONCRETE SURFACE
- GRASS COVER
- BUILDING OUTLINE
- PROPERTY LINE
- FIRE HYDRANT
- STREET CENTER LINE

APPLICATION INFORMATION

EXISTING ZONING	CP1 (GLADSTONE)
PROPOSED ZONING	CP1
TOTAL LAND	1.19 ACRES
LAND AREA FOR EXISTING & PROPOSED STREET RIGHT-OF-WAY	NONE
NET LAND AREA OR ACRES	1.19 ACRES
PROPOSED USE	M - GAS STATION WITH 5,000 SFT CONVENIENCE STORE
BUILDING HEIGHT	SINGLE STORY BUILDING 17 FEET C-STORE A
GROSS FLOOR AREA	5,000 SFT
BUILDING COVERAGE/ FLOOR AREA RATIO	0.10 %
PARKING SPACES REQUIRED	2.5 SPACES PER 1000 SFT OF RETAIL SPACE (13 SPACES)
PARKING SPACES PROVIDED	14 SPACES PLUS TWO ELECTRIC CAR CHARGERS INCLUDING 1 ACCESSIBLE SPACE
BICYCLE PARKING REQUIRED	2 SPACES
BICYCLE PARKING PROVIDED	3 SPACES WITH 2 LONG TERM SPACE
BUSINESS START DATE	SPRING 2024
EASEMENTS	NONE
HOURS OF OPERATION	24 HOURS
EXISTING PARKING LOT	CONCRETE/ASPHALT COVERED
PROPOSED PARKING LOT	CONCRETE PAVEMENT

PARKING LOT LIGHTING:

THE PARKING LOT SHALL HAVE 6 PARKING LIGHT POLES INSTALLED FOR ADEQUATE LIGHTING.

AREA DISTURBED:

THE PREMISES IS CURRENTLY GREEN SPACE AND WE WILL DISTURB AROUND 0.83 ACRES TO PUT THE NEW BUILDING,CANOPY AND PARKING LOT.

BUILDING EXTERIOR:

PLEASE SEE ELEVATION PLANS THAT SHOW THE BUILDING EXTERIORS

LEGAL DESCRIPTION

BEG SW COR LT 12 WILLOW CREEK E146, S340, SW21.21, W135, N TO POB

BEG SE COR LT 13 WILLOW CRK, S TO NL NW 72ND ST, W210, N290.4, E23.69, N82.06, SELY TO POB

OWNERS:

MUHAMMAD ARIF HAFIZ
1121 SW BLAZINGSTAR COURT
LEES SUMMIT, MO 64081
(816) 786-1622

DESIGNED BY:

GERALD W MENEFEE, P.E.
KAM DESIGN GROUP LLC
9000 E BANNISTER ROAD, SUITE 100
KANSAS CITY, MO-64134
(816) 797-2065
kamdesign@aol.com

DEVELOPER
MPS CONTRACTING LLC
14926 BENSON STREET
OVERLAND PARK, KS 66221

LIST OF DRAWINGS

No.	Description	Date
	SUBMITTED FOR CWPB APPROVAL	03/30/2024

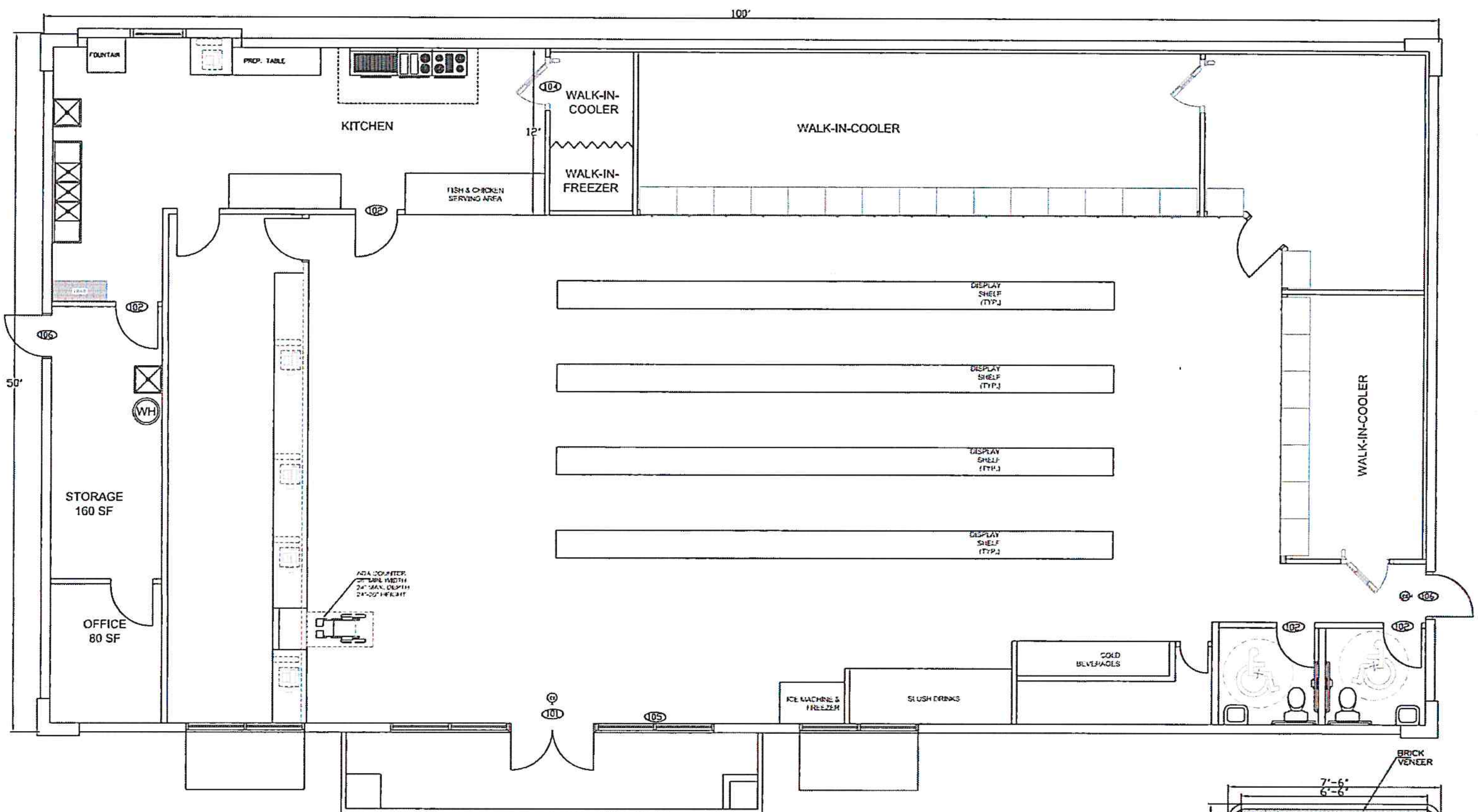
KAM Design Group LLC
9000 E Bannister Road
Suite 100
Kansas City, Missouri 64134
(816) 797-2065

SHORT STOP GAS STATION
PROJECT
400 NE 72ND STREET
GLADSTONE, MISSOURI

SITE PLAN

Project number	2023-109
Drawn by	KRB
Checked by	GWM

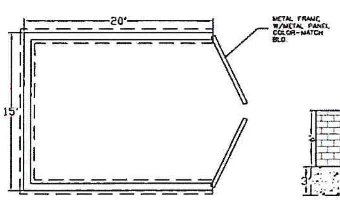
SHEET 1



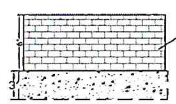
Scale 1/4"= 1'

Floor Plan

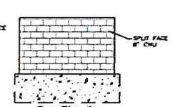
Scale 1/4"= 1'



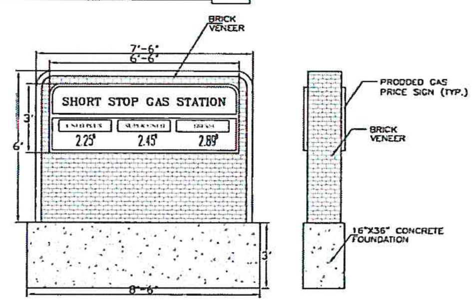
Trash Enclosure Plan



Side Elevation



Rear Elevation



NEW MONUMENT SIGN

FLOOR PLAN & DETAILS

Project number	2023-109
Drawn by	KRB
Checked by	DWH

SHEET 2

SHORT STOP GAS STATION PROJECT

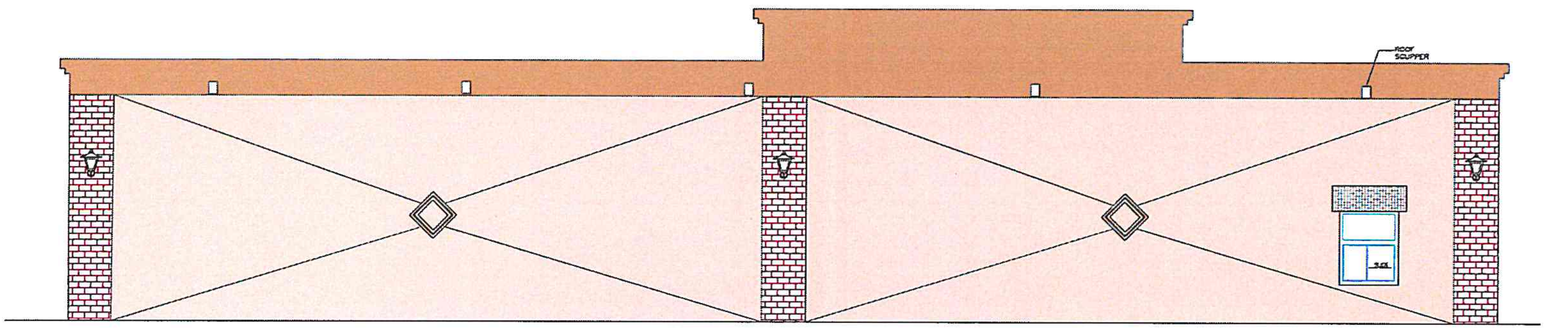
400 NE 72ND STREET,
GLADSTONE, MISSOURI

05/20/2023

INNOVATIVE DESIGN & RENOVATION
8011 PASEO BLVD. UNIT #201
KANSAS CITY, MISSOURI 64131
(816) 797-2065
(816) 531-2221

No.	Description	Date
	SUBMITTED FOR CITY APPROVAL	05/17/2023

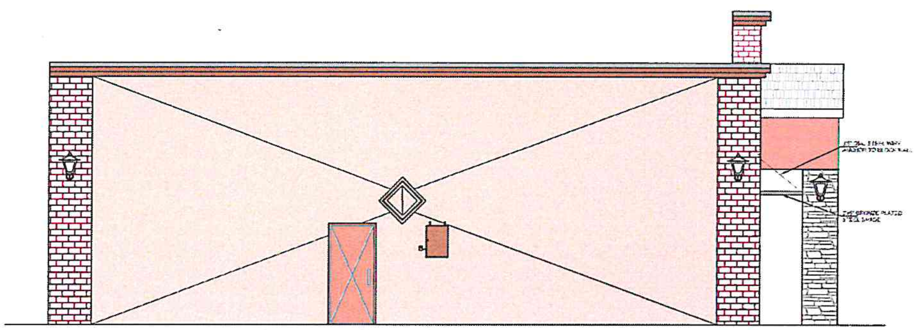
Front Elevation



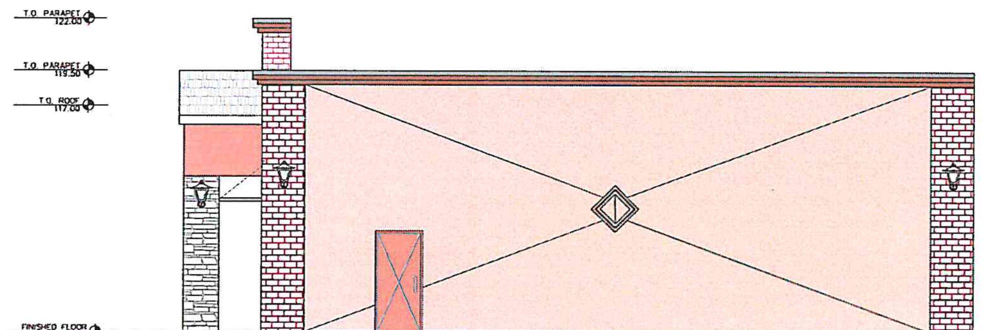
West Elevation

EXTERIOR MATERIAL LEGEND:

- CONCRETE STUCCO
  COLOR - MATCH BRICK
- BURNT CLAY BRICK VENEER
  COLOR - ANTIQUE RED
- BURNT CLAY KING BRICK VENEER
  COLOR - ANTIQUE BLOOD RED
- CONCRETE STUCCO
  COLOR - GREY
- ALUMINUM STOREFRONT SYSTEM
  MANUFACTURER - KAWNEER OR APPROVED
  EQUAL FINISH - ANODIZED ALUMINUM,
  OR FLUPROPOLOMER FINISH
- CEMENT STUCCO
  COLOR - HATTERAS (63149)
- WALL MOUNTED LIGHT
  MANUFACTURER - LUMINIS NAUTILUX NT 870
  FIXTURE WITH 90 DEGREE CUT-OFF



South Elevation



North Elevation

ELEVATIONS SHEET

Project number	2023-109
Drawn by	KRB
Checked by	DWH

SHEET 3

SHORT STOP GAS STATION PROJECT

400 NE 72ND STREET,
GLADSTONE, MISSOURI

STATE OF MISSOURI ARCHITECT
05/20/2023

INNOVATIVE DESIGN & RENOVATION
8011 PASEO BLVD. UNIT #201
KANSAS CITY, MISSOURI 64131
(816) 797-2065
(816) 531-2221

No.	Description	Date
	SUBMITTED FOR CITY APPROVAL	05/17/2023

BUILDING RENDERING

BUILDING RENDERING

Project number	2023-109
Drawn by	KRB
Checked by	DWH

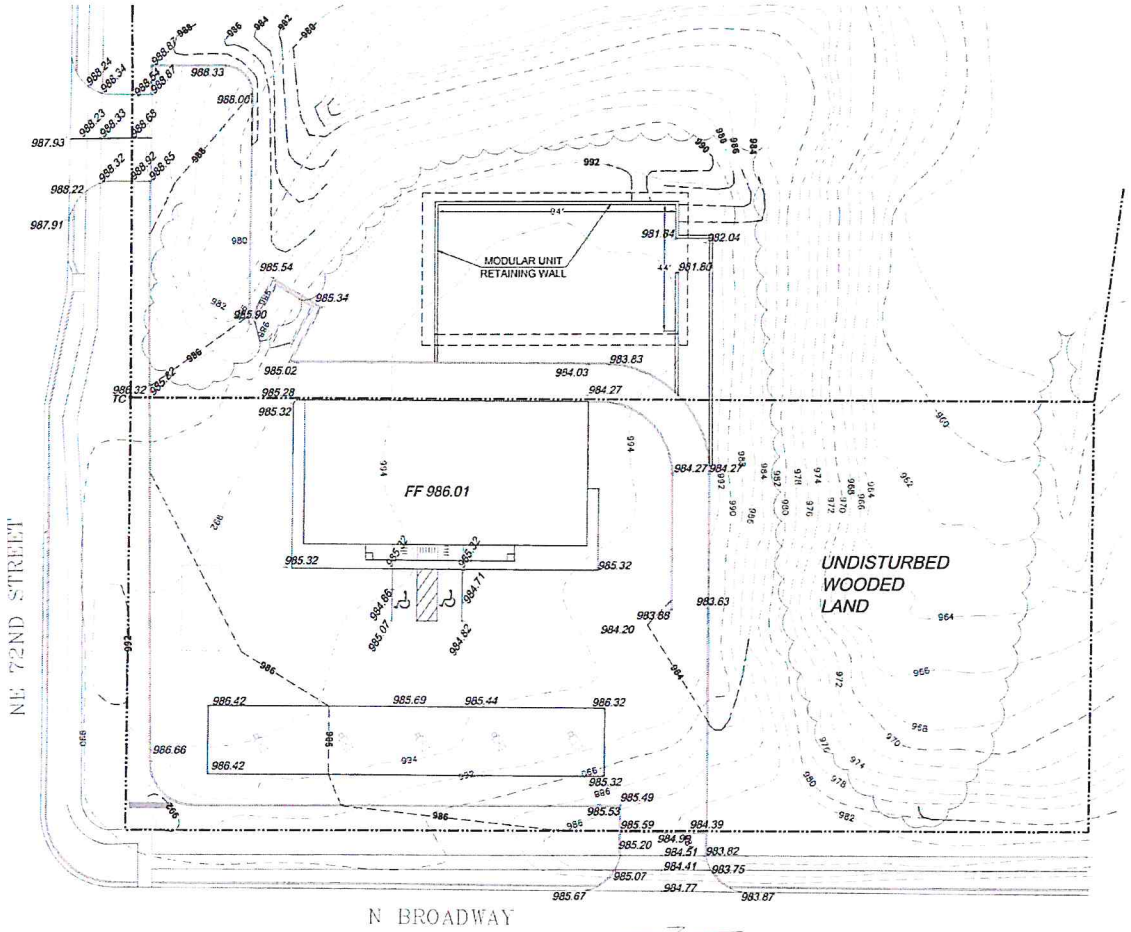
SHEET 4

SHORT STOP GAS STATION
PROJECT

400 NE 72ND STREET,
GLADSTONE, MISSOURI

INNOVATIVE
DESIGN &
RENOVATION
8011 PASEO BLVD. UNIT #201
KANSAS CITY, MISSOURI 64131
(816) 797-2065
(816) 531-2221

No.	Description	Date
	SUBMITTED FOR CITY APPROVAL	05/10/2023



GRADING PLAN

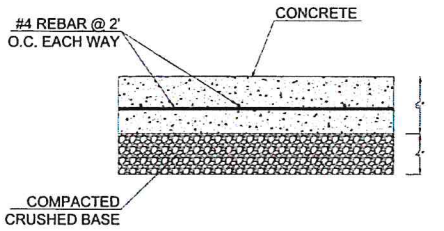
20 10 0 20 40

LEGEND

- BUILDING OUTLINE
- PROPERTY LINE
- 809.92 SPOT ELEVATIONS
- 809.92 TOP OF CURB ELEVATION
- 809.42 TOP OF PAVEMENT ELEVATION
- EXISTING CONTOUR
- PROPOSED CONTOUR

GENERAL NOTES:

1. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY OBSERVED DISCREPANCIES IN DIMENSIONS, DETAILING, OR OTHER ITEMS AS SHOWN ON THE PLANS OR SPECIFIED PRIOR TO PROCEEDING WITH WORK RELATED TO SAID DISCREPANCIES.
2. ALL WORK SHALL BE DONE IN ACCORDANCE WITH LOCAL CODES
3. CONTRACTOR SHALL INCLUDE ALL LABOR, MATERIAL, AND EQUIPMENT TO PROVIDE COMPLETE AND FUNCTIONING INSTALLATIONS. AND ALL MATERIAL AND EQUIPMENT SHALL BE NEW UNLESS OTHERWISE SPECIFIED.
4. ACCEPTANCE OF WORK SHALL BE SUBJECT TO OWNER'S REPRESENTATIVE APPROVAL OF WORK IN PLACE AS WELL AS SHOP DRAWINGS AND SAMPLE OF MATERIALS AND EQUIPMENT WHICH SHALL BE CHECKED BY CONTRACTOR BEFORE SUBMITTAL.
5. PROTECT ALL EXISTING UTILITIES ALONG THE SOUTH FOR FUTURE USE OF THE NEW BUILDING.
6. REMOVE ALL EXISTING PAVEMENT AND RESURFACE THE PARKING AREA WITH 6" CONCRETE PAVEMENT PLEASE FOLLOW THE DETAIL SHOWN ON THIS SHEET. THE TANK AREA SHALL BE PAVED WITH 8" CONCRETE PAVED WITH REINFORCEMENT.
7. INSTALL NEW DRIVEWAY ALONG THE WEST ACCESS ROAD. NEW DRIVE APPROACHES SHALL BE CONSTRUCTED PER KCMO STANDARD COMMERCIAL DRIVEWAY DRAWING. CONSTRUCT ADA COMPLIANCE ACCESSIBLE RAMPS ON EACH SIDE OF NEW DRIVEWAY.



CONCRETE PAVEMENT SECTION

NTS

No.	Description	Date
	SUBMITTED FOR OWNER APPROVAL	03/30/2024

Design Group LLC.
9000 E Bannister Road
Suite 100
Kansas City, Missouri 64134
(816) 797-2265

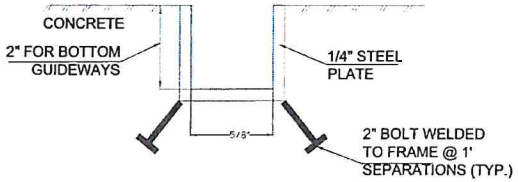
SHORT STOP GAS STATION
PROJECT

400 NE 72ND STREET
GLADSTONE, MISSOURI

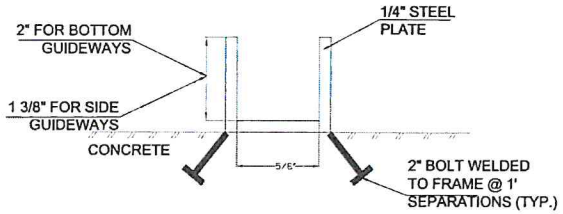
GRADING PLAN

Project number	2023-109
Drawn by	KRB
Checked by	GWM

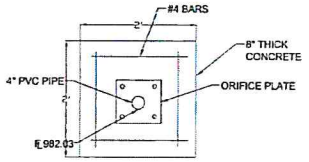
SHEET 5



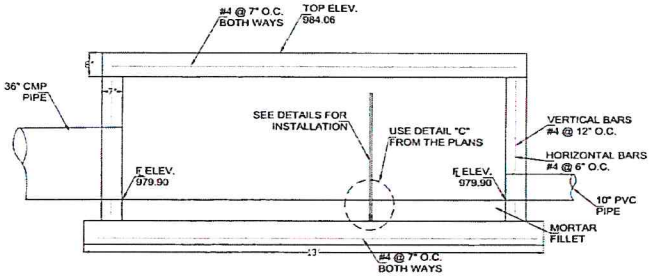
BOTTOM FRAME RESTRAINER FOR ORIFICE PLATE
NTS
DETAIL "C"



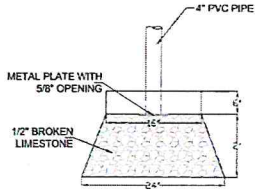
SIDE FRAME RESTRAINER FOR ORIFICE PLATE
NTS
DETAIL "D"



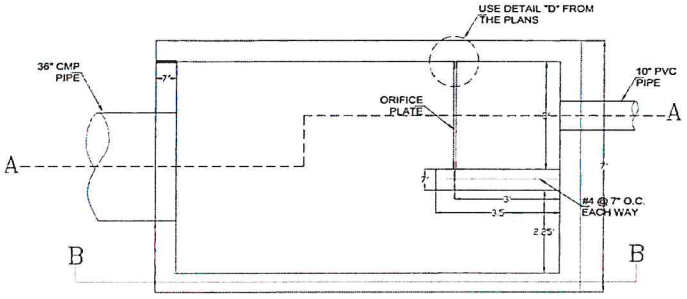
WATER QUALITY
PLATE DETAIL
NTS



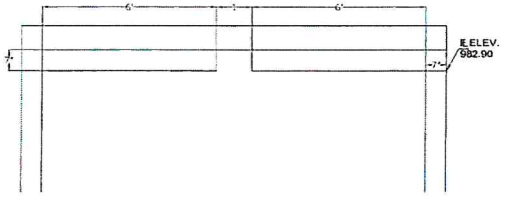
SECTION A–A



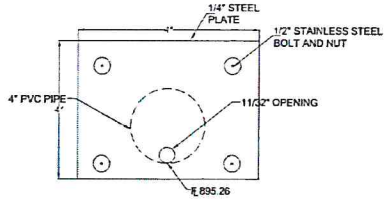
OUTFALL FOR WATER
QUALITY BASIN
NTS



STRUCTURE PLAN VIEW



SECTION B–B



WATER QUALITY DRAIN OUTLET DETAIL
NTS

No.	Description	Date
	SUBMITTED FOR CONSTRUCTION APPROVAL	07/10/2023

KAM Design Group, LLC.
9000 E Bannister Road
Suite 100
Kansas City, Missouri 64134
(816) 797-2065

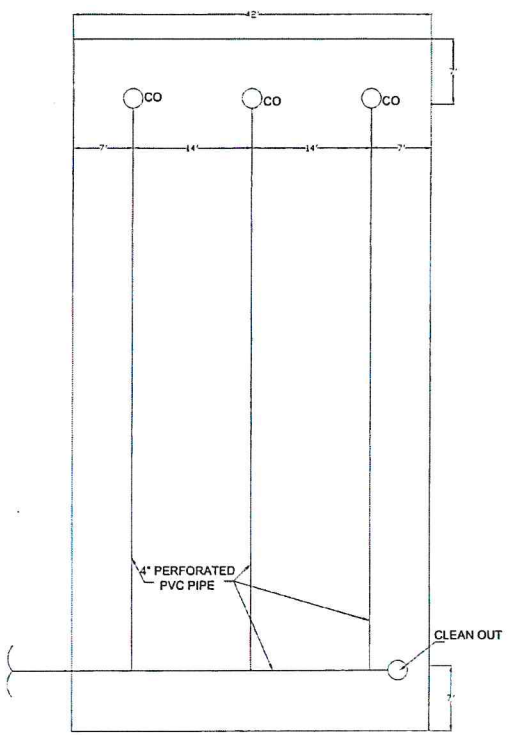
SHORT STOP GAS STATION
PROJECT

400 NE 72ND STREET
GLADSTONE, MISSOURI

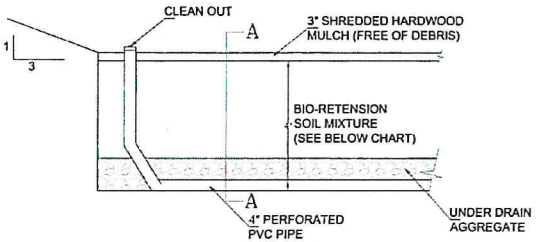
DETAILS SHEET

Project number	2023-109
Drawn by	KRB
Checked by	GWM

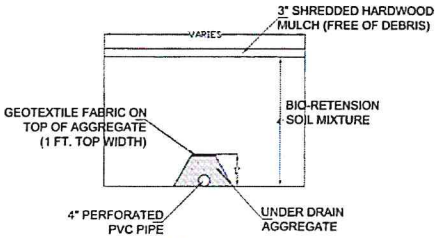
SHEET 6



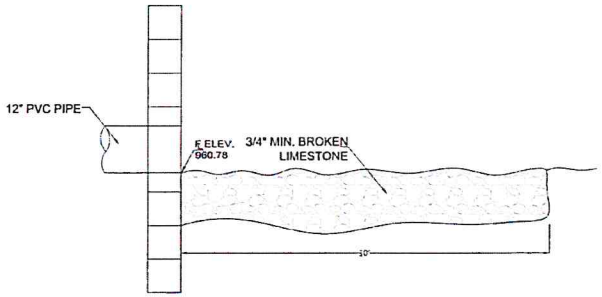
4" PVC PIPE PLAN FOR BIORETENSION BED
NTS



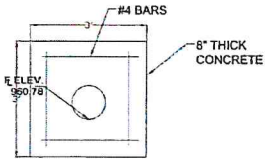
BIO-RETENSIOM BASIN TYPICAL X-SECTION
NTS



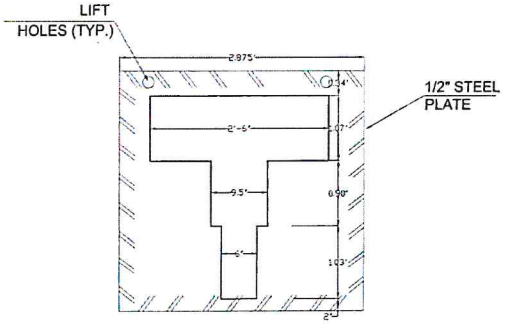
SECTION A-A



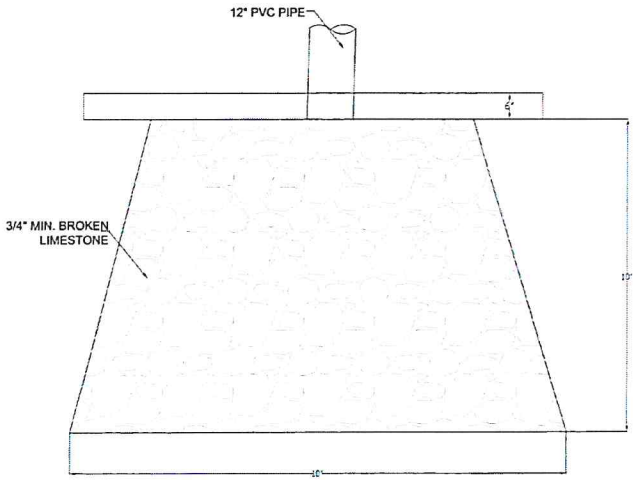
SECTION VIEW
NTS



DETENTION DISCHARGE PLATE DETAIL
NTS



ORIFICE PLATE FOR DETENTION OUTFLOW
NTS



OUTFALL FOR WATER QUALITY BASIN
NTS

BIO-RETENSION SOIL MIXTURE

COMPONENTS	RATIO BY VOLUME
FILTER SAND	70% (+/- 3%)
COCONUT COIR FIBER	20% (+/- 2%)
HIGH CARBON WOOD ASH	10% (+/- 1%)

No.	Description	Date
	SUBMITTED FOR OWNER APPROVAL	07/10/2023

Design Group LLC.
9200 E Bannister Road
Suite 100
Kansas City, Missouri 64134
(816) 797-2065

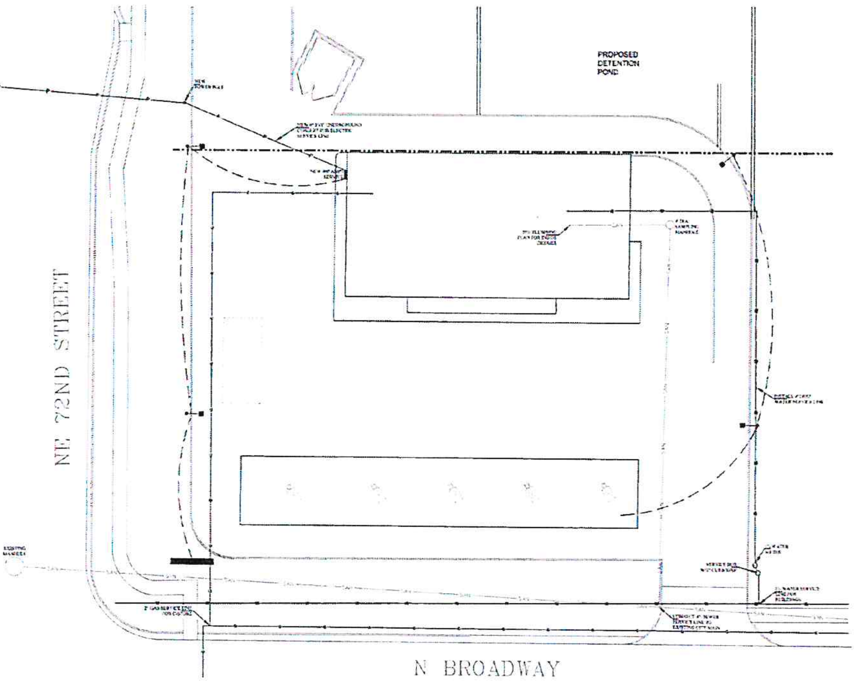
SHORT STOP GAS STATION
PROJECT

400 NE 72ND STREET
GLADSTONE, MISSOURI

DETAILS SHEET II

Project number	2023-109
Drawn by	KRB
Checked by	GWM

SHEET 7

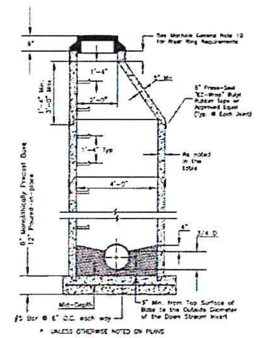


LEGEND

- BUILDING OUTLINE
- PROPERTY LINE
- WATER SERVICE LINE
- GAS SERVICE LINE
- SANITARY SERVICE LINE
- ELECTRICAL SERVICE LINE
- UNDERGROUND CONDUIT FOR LP'S

UTILITY PLAN

20 10 0 20 40



MANHOLE GENERAL NOTES:

1. All manhole rings shall be set in a mortar of two (2) rows of 3/4 to 1 inch pre-formed butyl joint sealer.
2. All manhole rings to be placed in pavement or in areas to be subsequently paved shall have "Machined Horizontal Bearing Surfaces" and shall comply with Class #25 as established in ASTM A-48.
3. The inside diameter of the manhole shall be 4'-0" for pipe diameters from 8" thru 24" and shall be 5'-0" for pipe diameters from 27" thru 36". In addition, the inside diameter (ID) of manholes up to 20 feet deep shall be 4'-0". ID shall be 5'-0" for depths up to 25 feet and ID shall be 6'-0" for depths exceeding 25 feet unless otherwise noted on the plans.
4. All manhole bases (pre-cast or poured-in-place) shall have No. 5 reinforcing bars placed on 6" centers both ways.
5. All standard manhole rings and covers to be Deeter 1315-Jcs, Neenah NF-15360009/3 (frame) and NF-15360010/3 (cover), or approved equal. All manhole rings and covers shown in plans to be "bolt-down" to be Clay & Bailey Manufacturing Co. No. 2344, Neenah R-1915-F2 or approved equal. An extra payment for furnishing "bolt-down" ring and cover as shown in plans will not be made, but shall be considered as subsidiary to the item, "Standard Manhole".
6. Standard manhole steps to be steel core, plastic coated steps (M.A. Ind., Inc. No. PS1-PF, PS2-PF, or approved equal).
7. Maximum grade adjustment allowable is 8". Minimum allowable thickness for precast concrete grade adjustment ring is 4".
8. Reinforcement in all precast sections shall equal or exceed ASTM C-478 specifications.
9. Butyl material to be used at all precast sections joints. O-Rings may be used for joints below the cone section, but the cone section itself shall not have O-ring joints.
10. Riser Rings:

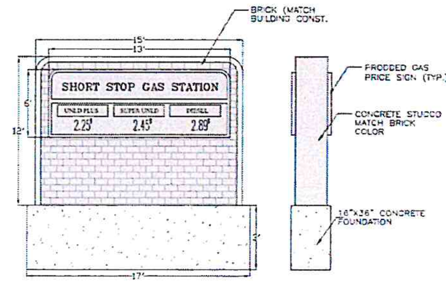
    A. Manholes in Pavement: The thickness of the recycled rubber riser rings shall not be less than one (1) inch nor greater than four (4) inches. If the required thickness of riser rings exceeds 4 inches, a 4-inch or 6-inch precast concrete riser ring maybe installed between the rubber riser ring and the cone. Riser rings may be used up to a maximum of 12 inches. The minimum number of riser rings required to achieve the necessary adjustment shall be used. The rubber riser rings shall be tapered to match the slope of the existing or proposed pavement at the manhole. The joints between the cone, rubber riser rings, and casting shall be sealed with the manufacturer-supplied sealant.

    B. Manholes Not in Pavement: All manholes shall be provided with riser ring(s) underneath the casting as shown on Drawings. A minimum of one (1) 4-inch riser ring shall be installed on top of the cone section. If a greater depth of adjustment rings is necessary, a combination of 4-inch and 6-inch riser rings may be used up to a maximum of 12 inches of riser rings. The minimum number of riser rings required to achieve the necessary adjustment shall be used. If precast concrete riser rings are used, the joints between the cone, riser rings, and casting shall be sealed with a double bead of preformed butyl rubber sealant. If recycled rubber riser rings are used, the joints between the cone, rubber riser rings, and casting shall be sealed with the manufacturer-supplied sealant.

    C. Brick and mortar adjustments will not be allowed.

4' DIA. STANDARD PRECAST MANHOLE (ECCENTRIC CONE)

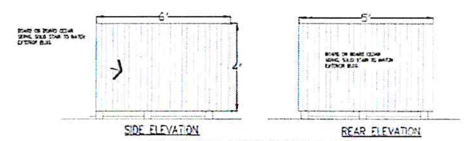
N.T.S.



NEW MONUMENT SIGN

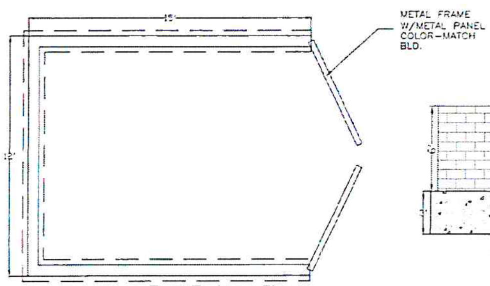
SIGN NOTE:

THE CONTRACTOR SHALL APPLY SEPARATELY TO THE PERMIT DIVISION FOR SIGN PERMIT.

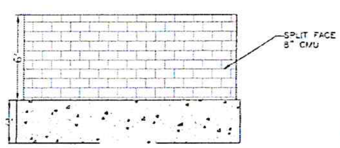


HVAC UNIT SCREENING DETAILS

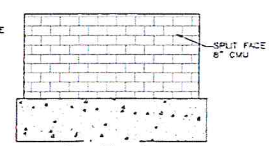
NOTE:
THE HEIGHT OF THE SCREENING APPARATUS SHALL BE AT LEAST 12" HIGHER THAN ANY EQUIPMENT ON THE ROOF.



Trash Enclosure Plan



Side Elevation



Rear Elevation

No.	Description	Date
	SUBMITTED FOR OWNER APPROVAL	07/30/2024

KAM Design Group LLC
6000 E Bannister Road
Suite 100
Kansas City, Missouri 64134
(816) 797-2065

SHORT STOP GAS STATION PROJECT

400 NE 72ND STREET
GLADSTONE, MISSOURI

UTILITY PLAN

Project number	2020-109
Drawn by	KRB
Checked by	GWM

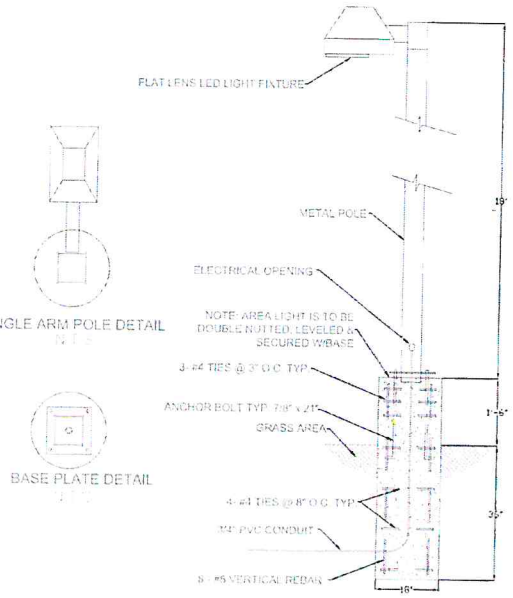
SHEET 8

PLAN NOTES:

1. ROUTE 120V HOME RUN BELOW GRADE TO QUAZITE BOX SHOWN ON PLANS. ASSUMED VOLTAGE USED TO DETERMINE VOLTAGE DROP AND WIRE SIZES IS 120V, 1-PHASE.
2. PARKING LOT LIGHT WITH STEEL POLE LIGHT AND CONCRETE FOUNDATION. REFERENCE LIGHT FIXTURE SPECIFICATION THIS SHEET.
3. ASSUMED LOCATIONS OF CONDUIT ENTRY INTO BUILDING FOR SITE LIGHTING. REFER TO BUILDING ELECTRICAL ENGINEERING PLANS AND BUILDING ELECTRICAL ENGINEER FOR UPDATED LOCATIONS OF CONDUIT ROUTING INTO THE BUILDING.
4. LIGHTING CONTROLS AND CONNECTIONS, PROVISIONS FOR ELECTRICAL POWER, AND CONDUIT ROUTING INTO BUILDING ARE NOT INCLUDED WITHIN THE SCOPE OF THIS WORK. REFER TO BUILDING ELECTRICAL ENGINEER FOR MORE INFORMATION. NOTIFY ENGINEER IF ACTUAL LOCATION OF ELECTRICAL CONNECTION/CONTROL IS IN A SIGNIFICANTLY DIFFERENT AREA OF BUILDING.
5. PROVIDE QUAZITE BOX IN APPROXIMATE LOCATION FOR PULL POINT TO CONNECT WITH HOME RUNS FROM SITE LIGHTING.

LIGHT FIXTURE SPECIFICATIONS:

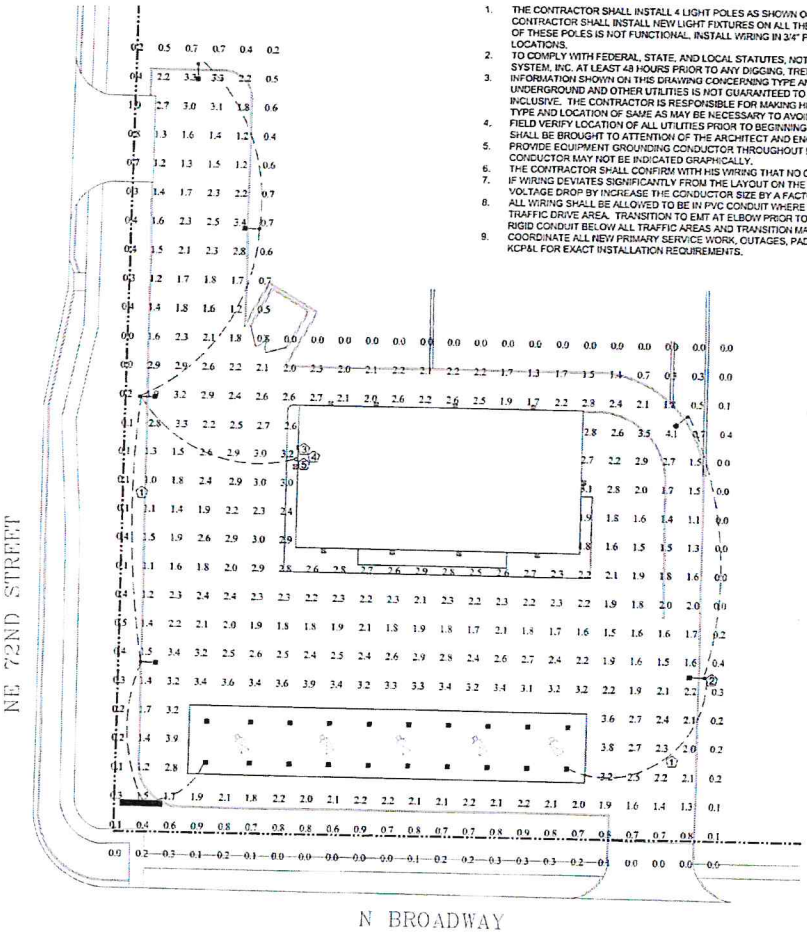
MANUFACTURER	INNOVATIVE LIGHTING
LIGHT TYPE	LED LIGHT ENGINE
POWER	48 WATTS
TYPE	II
MODEL	EF2-U--28-3-N
INSTALLATION	POLE MOUNTED



LIGHT POLE SECTION / ELEVATION DETAIL
N.T.S.

GENERAL NOTES:

1. THE CONTRACTOR SHALL INSTALL 4 LIGHT POLES AS SHOWN ON THIS SHEET. THE CONTRACTOR SHALL INSTALL NEW LIGHT FIXTURES ON ALL THESE POLES. IF WIRING TO ANY OF THESE POLES IS NOT FUNCTIONAL, INSTALL WIRING IN 3/4" PVC CONDUIT FOR POLE LOCATIONS.
2. TO COMPLY WITH FEDERAL, STATE, AND LOCAL STATUTES, NOTIFY MISSOURI ONE-CALL SYSTEM, INC. AT LEAST 48 HOURS PRIOR TO ANY DIGGING, TRENCHING, EXCAVATION, ETC.
3. INFORMATION SHOWN ON THIS DRAWING CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF SAME AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.
4. FIELD VERIFY LOCATION OF ALL UTILITIES PRIOR TO BEGINNING WORK. ANY INTERFERENCE SHALL BE BROUGHT TO ATTENTION OF THE ARCHITECT AND ENGINEER FOR DIRECTION.
5. PROVIDE EQUIPMENT GROUNDING CONDUCTOR THROUGHOUT EACH BRANCH CIRCUIT. CONDUCTOR MAY NOT BE INDICATED GRAPHICALLY.
6. THE CONTRACTOR SHALL CONFIRM WITH HIS WIRING THAT NO CIRCUIT EXCEEDS 3328 VA.
7. IF WIRING DEVIATES SIGNIFICANTLY FROM THE LAYOUT ON THE PLANS, ACCOUNT FOR MORE VOLTAGE DROP BY INCREASE THE CONDUCTOR SIZE BY A FACTOR OF ONE SIZE.
8. ALL WIRING SHALL BE ALLOWED TO BE IN PVC CONDUIT WHERE NOT LOCATED BELOW A TRAFFIC DRIVE AREA. TRANSITION TO EMT AT ELBOW PRIOR TO GOING ABOVE GRADE. USE RIGID CONDUIT BELOW ALL TRAFFIC AREAS AND TRANSITION MATERIALS ACCORDINGLY.
9. COORDINATE ALL NEW PRIMARY SERVICE WORK, OUTAGES, PAD REQUIREMENTS, ETC. WITH KCP&L FOR EXACT INSTALLATION REQUIREMENTS.



LEGEND

- NEW LIGHT POLE
- CANOPY LIGHT
- WALL MOUNTED LIGHT
- UNDERGROUND ELECTRIC

SITE LIGHTING PHOTOMETRIC PLAN

20 10 0 20 40

No.	Description	Date
	SUBMITTED FOR OWNER'S APPROVAL	05/07/2024

KM Design Group LLC.
9000 E Bannister Road
Suite 100
Kansas City, Missouri 64134
(816) 797-2065

SHORT STOP GAS STATION PROJECT

400 NE 72ND STREET
GLADSTONE, MISSOURI

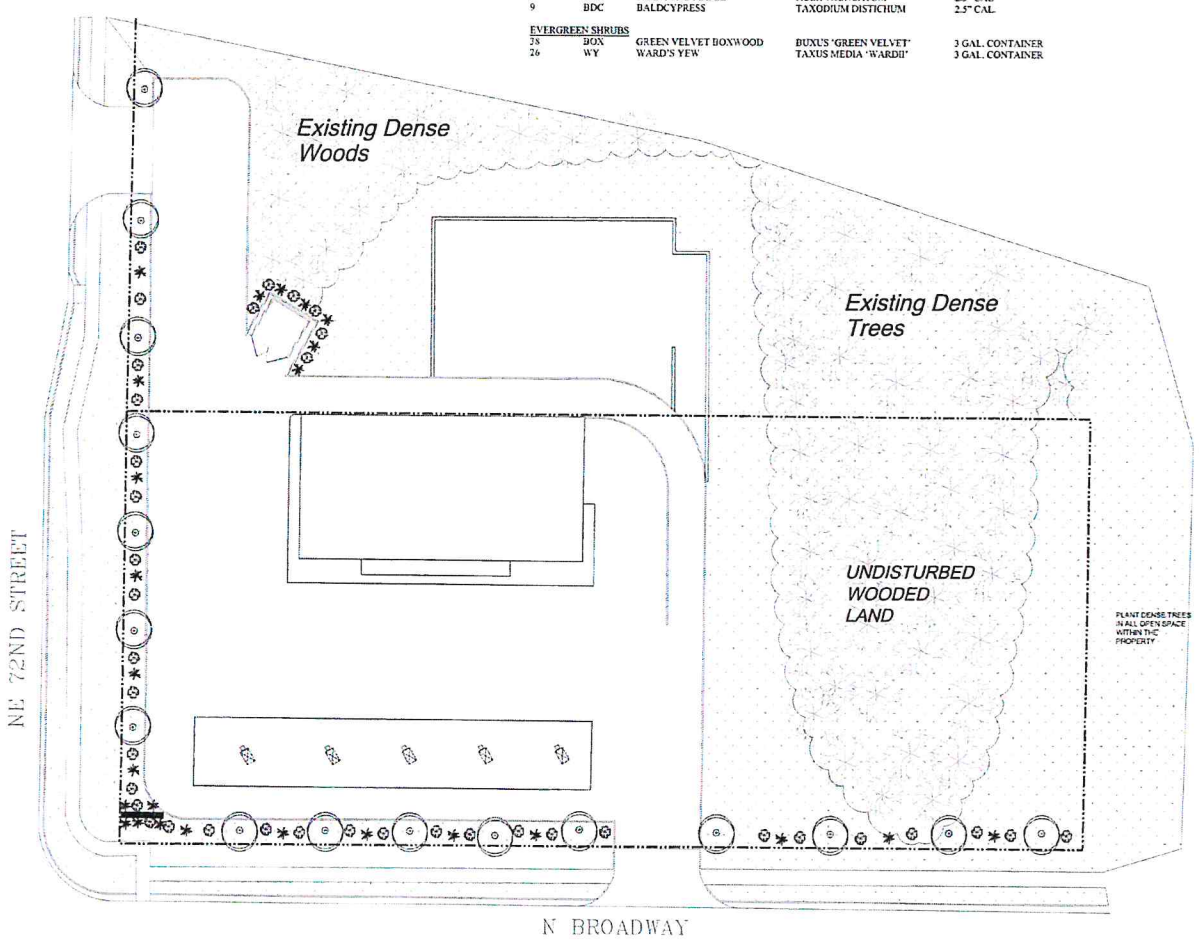
PARKING LOT PHOTOMETRIC PLAN

Project number	2023-109
Drawn by	KRB
Checked by	GWM

SHEET 9

PLANT LIST

NO.	SYMBOL	COMMON NAME	BOTANICAL NAME	SIZE
SHADE TREES				
8	SHM	SHANTUNG MAPLE	ACER TRUNCATUM	2.5" CAL
9	BDC	BALDCYPRESS	TAXODIUM DISTICHUM	2.5" CAL
EVERGREEN SHRUBS				
28	BOX	GREEN VELVET BOXWOOD	BUXUS 'GREEN VELVET'	3 GAL. CONTAINER
26	WY	WARD'S YEW	TAXUS MEDIA 'WARDII'	3 GAL. CONTAINER



LANDSCAPING NOTES:

1. ALL PLANT MATERIAL SHALL BE FIRST CLASS REPRESENTATIVES OF SPECIFIED SPECIES, VARIETY OR CULTIVAR, IN HEALTHY CONDITION WITH NORMAL WELL DEVELOPED BRANCHES AND ROOT PATTERNS. PLANT MATERIAL MUST BE FREE OF OBJECTIONABLE FEATURES. PLANTS SHALL COMPLY IN ALL APPLICABLE RESPECTS WITH PROPER MOST RECENT STANDARDS AS SET FORTH IN THE AMERICAN ASSOCIATION OF NURSERYMEN'S "AMERICAN STANDARD OF NURSERY STOCK", ANSI Z60.1. AND THE GLADSTONE NURSERY AND LANDSCAPE ASSOCIATION.
2. ORNAMENTALS AND SHRUBS SHALL BE CONTAINER GROWN AND WILL BE FREE OF DISEASE AND PESTS. ABSOLUTELY NO BARE ROOT MATERIALS. FERTILIZER OF 10-20-10: ONE PELLET OR 1-2 OZ. SHALL BE ADDED TO SOIL AT TIME OF PLANTING.
ALL SHRUB AND PLANT BEDS TO BE MULCHED WITH 3" DEPTH DARK HARDWOOD MULCH. AS AN ALTERNATE IN SHRUB BEDS, 2" DEEP SMOOTH RIVER ROCK OVER PERMEABLE WEED BARRIER FABRIC USED FOR WEED PREVENTION MAY BE INSTALLED INSTEAD OF HARDWOOD MULCH. HARDWOOD MULCH TO BE INSTALLED IN ALL ORNAMENTAL GRASS BEDS.
PLANTING BEDS ARE TO BE FREE OF WEEDS AND GRASS. TREAT BEDS WITH A PRE-EMERGENT HERBICIDE PRIOR TO PLANTING AND MULCH PLACEMENT. APPLY IN ACCORDANCE WITH STANDARD TRADE PRACTICE.
3. ALL TREES SHALL BE FERTILIZED WITH FERTILOME BRAND LIQUID ROOT STIMULATOR, 1.5 TABLESPOONS PER GAL. OF WATER, AS A SUBSTITUTE, 19-8-10 GRANULAR FERTILIZER, .75 LB. FOR 2" CAL. & 1.5 LBS. FOR 3" CAL., SHALL BE ADDED. INCORPORATE FERTILIZER INTO THE AMENDED PLANTING SOIL BEFORE PLANTING TREE. HOLE AREA FOR TREE TO BE TWICE (2x) THE DIAMETER OF THE ROOT BALL AND ROOT BALL SHALL BE MOUNDED. ALL TREES TO BE STAKED AND GUYED WITH A MINIMUM OF 3 POSTS AND PROTECTED W/ COVERING AT TREE W/ GUY WIRE.
4. ALL PLANT MATERIALS SHALL BE PROTECTED FROM THE DRYING ACTION OF THE SUN AND WIND AFTER BEING DUG, WHILE BEING TRANSPORTED, AND WHILE AWAITING PLANTING. BALLS OF PLANTS WHICH CANNOT BE PLANTED IMMEDIATELY SHALL BE PROTECTED FROM DRYING ACTION BY COVERING THEM WITH MOIST MULCH. PERIODICALLY, APPLY WATER TO MULCH-COVERED BALLS TO KEEP MOIST. IF PLANTING SHOULD OCCUR DURING GROWING SEASON, APPLY ANTI-DESICCANT TO LEAVES BEFORE TRANSPORT TO REDUCE THE LIKELIHOOD OF WINDBURN. REAPPLY ANTI- DESICCANT AFTER PLANTING TO REDUCE TRANSPIRATION.
5. AFTER PLANTING IS COMPLETED, REPAIR INJURIES TO ALL PLANTS AS REQUIRED. LIMIT AMOUNT OF PRUNING TO A MINIMUM TO REMOVE DEAD OR INJURED TWIGS AND BRANCHES. PRUNE IN SUCH A MANNER AS NOT TO CHANGE THE NATURAL HABIT OR SHAPE OF THE PLANT. MAKE CUTS FLUSH, LEAVING NO STUBS. CUTS OF ONE INCH OR MORE TO BE PAINTED WITH TREE PAINT. CENTRAL LEADERS SHALL NOT BE REMOVED.
6. THE INSTALLATION OF ALL PLANT MATERIAL SHALL BE IN COMPLIANCE WITH THE REQUIREMENTS OF THE CITY OF GLADSTONE, MO.
7. ALL LANDSCAPE AREAS TO BE FREE OF ALL BUILDING DEBRIS AND TRASH, BACK FILLED WITH CLEAN FILL SOIL AND TOP DRESSED WITH 6" OF TOPSOIL. TOPSOIL SHALL HAVE A pH RANGE OF 5.5 TO 7 AND A 4% ORGANIC MATERIAL MINIMUM, ASTM D5268.
8. ALL PLANT BED AREAS TO RECEIVE DAIRY COW MANURE SOIL CONDITIONER AT A RATE OF 4.5 CU. YDS. PER 1000 SF. AND ORGANIC COMPOST AT A RATE OF 4.5 CU. YDS. PER 1000 SF. TO DETERMINE THE AMOUNT OF PHOSPHOROUS AND POTASSIUM THE CONTRACTOR SHALL PERFORM A SOIL TEST AND ADD THOSE FERTILIZERS ACCORDING TO THE TEST RESULTS. AFTER APPLYING SOIL CONDITIONER AND FERTILIZER, THOROUGHLY TILL AREA TO A DEPTH OF 12". CONTRACTOR TO INSTALL A PERMEABLE LANDSCAPE WEED CONTROL FABRIC, 3 OZ. PER SQ. YD. MIN. IN ALL PLANT BEDS EXCEPT IN AREAS OF GROUND COVER, PERENNIAL OR ANNUAL PLANTINGS. PLANT BEDS TO BE "MOUNDED". ALL PLANT MATERIAL, PLANT BEDS, MULCH AND EDGING TO BE INSTALLED PER LANDSCAPE PLANS AND DETAILS. MYKE PRO MYCCHORIZAE GRANULES TO BE ADDED TO ALL PLANTINGS PER MANUFACTURERS RECOMMENDATIONS.
9. REESTABLISH FINISH GRADES TO WITHIN ALLOWABLE TOLERANCES ALLOWING 1-1/2" FOR SOD AND 3" FOR MULCH IN PLANT BEDS. HAND RAKE ALL AREAS TO SMOOTH EVEN SURFACES FREE OF DEBRIS, CLODS, ROCKS, AND VEGETATIVE MATTER GREATER THAN 1".
10. THE EXACT LOCATION OF ALL UTILITIES, STRUCTURES, AND UNDERGROUND UTILITIES SHALL BE DETERMINED AND VERIFIED ON SITE BY THE LANDSCAPE CONTRACTOR PRIOR TO INSTALLATION OF THE MATERIALS. DAMAGE TO EXISTING UTILITIES AND OR STRUCTURES SHALL BE REPLACED TO THEIR ORIGINAL CONDITION BY THE LANDSCAPE CONTRACTOR AT NO COST TO THE OWNER.
11. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS AND REQ'D INSPECTIONS BY LEGAL AUTHORITIES. THE LANDSCAPE CONTRACTOR SHALL UNCONDITIONALLY GUARANTEE ALL PLANT MATERIAL FOR ONE CALENDAR YEAR.
12. ANY SUBSTITUTIONS OF DEVIATIONS SHALL BE REQUESTED IN WRITING BY THE CONTRACTOR FOR APPROVAL BY THE OWNER OR LANDSCAPE ARCHITECT.
13. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, OBTAINING AND INSTALLATION OF ALL IRRIGATION COMPONENTS, SLEEVING, PIPE, METERS, PERMITS, CONNECTION AND CONTROL SYSTEMS. DESIGN DRAWINGS OF THE PROPOSED IRRIGATION SYSTEM SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
14. EROSION CONTROL MAT TO BE NORTH AMERICAN SC 150-BN BIODEGRADABLE MAT OR EQUIVALENT.
15. ALL LAWN AREAS TO BE SODDED OR SEEDED WITH TURF TYPE TALL FESCUE BLEND IN LOCATIONS INDICATED ON PLANS. SEEDED LAWN TO BE HYDRO-SEEDED OR DRILLED. SOD AND SEED SHALL COMPLY WITH THE U.S. DEPT. OF AGRICULTURE RULES AND REGULATIONS UNDER THE FEDERAL SEED ACT AND EQUAL IN QUALITY TO STANDARDS FOR CERTIFIED SEED. LAWN SHALL BE TURF TYPE TALL FESCUE 3 WAY BLEND:

LAWN SEED MIX

TRI-STAR" QUICK TURF MIXTURE OR SIMILAR BLEND:

SEEDING RATE: 8 -10 LBS PER 1,000 SF

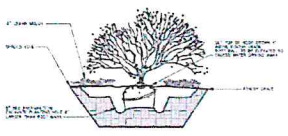
25% TITAN LTD FESCUE "TRI-STAR SEED COMPANY
25% FALCON IV TALL FESCUE SPRING HILL, KS 66083
25% 2ND MILLENNIUM TALL FESCUE 800-874-3368
25 % TURF PERENNIAL RYEGRASS

GENERAL NOTES:

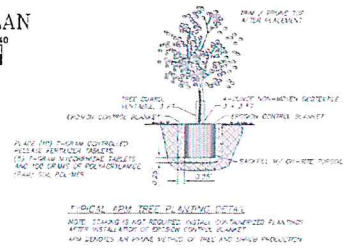
1. THE LANDSCAPING AREA SHALL BE INSTALLED WITH BUILT IN IRRIGATION SYSTEM.
2. ANY DAMAGES TO CURB AND SIDEWALK IN PUBLIC RIGHT OF WAY SHALL BE REPAIRED PER CITY STANDARD DETAIL AND SPECIFICATIONS.
3. THE TRASH ENCLOSURE STRUCTURE SHALL BE CONSTRUCTED OF THE SAME MATERIAL AS FOR THE MAIN BUILDING.
4. THE GAS METER AREA SHALL BE SCREENED WITH SHRUBS. THE ELECTRICAL METER AND SWITCHGEAR SHALL BE SCREENED WITH ENCLOSURE MATCHING THE BUILDING EXTERIOR.
5. 12 TREES SHALL BE PLANTED ALONG THE PUBLIC RIGHT OF WAY.

LANDSCAPING PLAN

20 10 0 20 40



TYPICAL SHRUB PLANTING



TYPICAL DECIDUOUS TREE PLANTING DETAIL

LEGEND

- NEW TREE
- NEW SHRUB PLANTINGS (LOW TREES)
- BUILDING OUTLINE
- PROPERTY LINE
- DENSE TREE LINE

No.	Description	Date
	SUBMITTED FOR OWNER APPROVAL	07/30/2024

KAW Design Group LLC.
9200 E. Bannister Road
Suite 100
Kansas City, Missouri 64134
(816) 737-2265

SHORT STOP GAS STATION PROJECT

400 NE 72ND STREET
GLADSTONE, MISSOURI

LANDSCAPING PLAN

Project number	2023-109
Drawn by	KRB
Checked by	GWM

SHEET 10

Property Owners Within 185' & Other Interested Parties

FROM: Community Development Department

DATE: May 2nd, 2024

SUBJECT: Gas Station & Convenience Store – Site Plan Revision

PUBLIC HEARING

All persons are hereby notified that the Gladstone Planning Commission will conduct a public hearing on Monday, May 20, 2024 at 7:00 PM in the Council Chamber of Gladstone City Hall on a request for a Site Plan Revision at 7200 N Broadway Ave. Legally described as 000000 NW 72ND ST BEG SW COR LT 12 WILLOW CREEK E146, S340, SW21.21, W138, N T O POB.

Applicant: Gerald W. Menefee P.E.

Owner: Mohammad Hafiz

Subsequently, at its regular meeting of June 10th, 2024, at 7:30 PM, the City Council will conduct a public hearing on the same request.

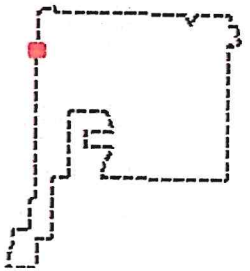
Project Summary: This project was proposed in 2023 and denied by the Gladstone City Council. The property owner has made adjustments to the site plan and is proposing to build a new gas station and convenience store on the vacant land located at 7200 N Broadway Avenue. The primary exterior building materials being used are brick and stucco. There will be two access points; one point on N Broadway Avenue and one point on NW 72nd Street. This property is zoned CP-2, Planned District, General Business and a gas station and convenience store is currently a permitted use for this commercial zoning.

Primary Adjustments to the Site Plan:

- The access point on NW 72nd Street has been shifted west to lineup with the Post Office access point.
- The water detention basin has been moved from the northern side of the property to the western side of the property away from the residential homes located to the north. This basin will be located on the KCMO parcel.
- The wooded area on the northern side of the property will primarily remain untouched.

If you have any questions or concerns, please contact Austin Greer, Community Development Director & Assistant City Manager at austing@gladstone.mo.us and/or 816-423-4102.

Gladstone, MO



Legend

- Stop Sign
- KCPL Lights
- Gladstone Lights
- School Point
- Bike Parking
- Bus Stop
- Point of Interest
- Church
- Apartment Point
- Street Centerline
- Edge Of Pavement
- Driveway
- City Limits
- Parcel
- House Number
- Building Footprint
- School Polygon
- City Park
- Villages
- Apartment Polygon

Notes

232.0 0 115.99 232.0 Feet

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

(minus street right-of-ways), the final City Council action has to have a minimum of four (4) positive votes for the request to be approved. The application cannot be approved if three (3) vote "yes" and two (2) "no". For further information regarding this handout, please call or come by the Community Development Department at 7010 N. Holmes, 423-4110.

☐City Code Variance Request: Board of Zoning Adjustment

REQUIREMENTS

Completed application
Owner's authorization signed (if applicable)
Legal description- County records
Information on the proposed change including pictures of the property, property surveys, written comments from impacted neighbors, etc.

DEPOSIT FEE

The $200 fee listed on the form and paid at the time of application is a deposit toward the costs the City of Gladstone incurs during the processing of your application. This fee goes toward the following costs:

Office fee $75.00
Certified mail notices to surrounding property owners within 185'- amount varies.*
Planning Commission Legal Notice- amount varies*

** Indicates fees for items required by State Law. The fee amount for certified mail will vary depending upon the number of property owners within 185 feet of your property. The Legal Notice fee will also vary generally depending upon the length of the legal description of your property.*

After the total costs are compiled for your application, you will be billed for any costs remaining over the initial $200 application deposit fee. If the costs accrued are under $200, you will be reimbursed for the difference.
As the money deposited for your application goes toward real costs paid by the City, there is no refund if your application is denied by the Board of Zoning Adjustment. If you withdraw your application before some of the costs are accrued by the City, you may be entitled to a refund.

Preliminary & Final Plat/Replat Submittals

REQUIREMENTS

Completed application
Owner's authorization signed (if applicable)
Legal description- County records
Digital copy of plans
(1) 11x17 paper copy
(3) 24x36 paper copies folded
(1) 24x36 Mylar Copy – Completion of the Plat

FEE

The $75 fee listed on the form and paid at the time of application goes toward the costs the City of Gladstone incurs during the processing of your application. As the fee for your application goes toward real costs paid by the City, there is no refund.
**At completion of the plat, please submit to Community Development (1) 24x36 Mylar copy.

OWNER'S AUTHORIZATION

I, Mohammad Hadiz, do hereby authorize _____
(Owner's name) (Applicant's name)
to apply for the following action on my property at _____
_____.

a. Rezone from ___ to ___

b. Site Plan Revision ___

c. Special Use Permit ___

d. Variance ___

e. Plat/Replat ___

Date: 5/20/24 Owner's Signature: [signature]

NOTARIZATION

State of Kansas

County of Wyandotte

Subscribed and sworn before me this 20th day of May, 2024.

Notary's Signature:

[signature]

My Commission expires: 12-8-2027

KASANDRA WRIGHT
Notary Public, State of Kansas
My Appointment Expires
12-8-2027

Additional Required Documents

(check if needed)	Comments
Site Plan ___	
Traffic Study ___	
Landscaping Plans ___	
Stormwater (Pre – Post – BMP) ___	
Photometric Study ___	
Master Sign Plan ___	
Colored Elevation / Rendering ___	
Materials Board ___	

Gladstone Convenience Store

TRAFFIC IMPACT STUDY

May 20, 2024

Prepared For:
Mr. Muhammed Hafiz

Prepared By:
Priority Engineers, Inc.
PO Box 563
Garden City, MO 64747

May 20, 2024

Mr. Muhammed Hafiz

RE: Gladstone Convenience Store Traffic Impact Study – Gladstone, MO

Dear Mr. Hafiz:

In response to your request, Priority Engineers, Inc. has completed a traffic impact analysis for the above referenced project. The purpose of the analysis is to determine the potential traffic impacts associated with this development on the intersections and streets surrounding this site, primarily during the AM and PM peak hours. The following report documents our analysis and recommendations.

We appreciate the opportunity to work with you on this project. Please contact us with any questions or if you require additional information.

Sincerely,

PRIORITY ENGINEERS, INC.

Kristin L. Skinner, P.E., PTOE
President

Priority Engineers, Inc.
PO Box 563
Garden City, MO 64747
816.738.4400

Table of Contents

1) INTRODUCTION

The purpose of this study is to examine the potential traffic impacts associated with a proposed Gladstone Convenience Store development located within the municipal limits of Gladstone, in Clay County, Missouri. This proposed development will construct a convenience store located to the north and the west of the intersection of NW 72nd Street and N Broadway Street.

The study area is shown in Figure 1. The site layout is shown in Figure 2.

2) EXISTING CONDITIONS

The proposed Gladstone Convenience Store development is located on a parcel of undeveloped land located northwest of the intersection of N Broadway Street and NW 72nd Street. To the north and west of the proposed development there are existing residential developments. To the south of the proposed development is a USPS facility and to the east of the proposed development is the Gladstone Bowl bowling alley.

N Broadway Street, south of the intersection with NW 72nd Street has a cross-section of two lanes in each direction without separation and it has curb and gutter and an enclosed drainage system. This segment N Broadway Street has a posted speed limit of 35 MPH. North of the intersection with NW 72nd Street has a cross section that consists of one lane in each direction, and curb and gutter with an enclosed drainage system. The posted speed limit on this segment of N Broadway Street is 30 MPH. The Mid America Regional Council (MARC) has given N Broadway Street Street a functional classification of Minor Arterial south of NW 72nd Street and a functional classification of Minor Collector north of NW 72nd Street. The Gladstone Comprehensive Plan identifies N Broadway Street as an Arterial south of NW 72nd Street and as a Primary Collector to the north of NW 72nd Street.

NW 72nd Street, to the east, has a cross section with two through lanes in each direction. NW 72nd Street has curb and gutter and an enclosed drainage system. MARC has given NW 72nd Street a functional classification of Minor Arterial to the west. The Gladstone Comprehensive Plan identifies NW 72nd Street as an Arterial. NW 72nd Street has a posted speed limit of 35 MPH.

Peak Hour turning movement counts were collected for the following intersections:

- NE 72nd Street N Broadway Street
- NE 72nd Street and West Drive of the USPS facility
- N Broadway Street and Gladstone Bowl entrance

These counts were performed on January 17th of this year. The Peak Hour turning movement counts were performed from 7:00 to 9:00 AM and from 4:00 to 6:00 PM. The AM Peak Hour was found to be from 8:00 to 9:00 and the PM Peak Hour was found to be from 4:30 to 5:30 for the overall roadway network. The complete traffic counts are shown in Appendix II. The peak hour traffic volumes and existing lane configurations are shown in Figures 3-6.

3) PROPOSED DEVELOPMENT

The proposed development will build an approximately 5,000 SF convenience store with 10 vehicle fueling positions (VFP). The provided site plan shows a drive through window on the west side of convenience store. There will be two full access entrances into the development. The first proposed entrance is a full access entrance onto NE 72nd Street located opposite of the

west entrance into the USPS facility. Street. The second full access entrance will provide access onto N Broadway Street. This access will be located to the north of the existing Gladstone Bowl drive.

4) TRIP GENERATION

The vehicle trips generated by the proposed development were estimated using the Institute of Transportation Engineers' (ITE) Trip Generation, 11th Edition. Land Use 945, Convenience Store / Gas Station. Since this location has a drive-through window, both Land Use 935 (fast food restaurant with drive-through window and no indoor seating) and Land Use 934 (fast food restaurant with drive through window) were considered for a portion of the 5,000 SF store. It was determined that the trips generated by Land Use 945 is higher than Land Use 935 and it is slightly higher than Land Use 934, so the complete footprint of the store was considered using Land Use 945 for a more conservative trip generation estimate.

Land Use 945 has two subcategories in the ITE data set, and GFA of the Store (with independent variable of VFP and VFP (with independent variable of GFA). Selecting data from the VFP subcategory resulted in a more conservative trip generation and was selected for this study.

The estimated AM and PM peak hour traffic volumes associated with the full buildout of this development are shown in Table 1.

Table 1: ITE Trip Generation

Land Use	*Intensity*	*Daily*	*AM Peak Hour*			*PM Peak Hour*		
			Total	*In*	*Out*	*Total*	*In*	*Out*
Convenience Store/Gas Station (VFP 9-15)	5,000 SF	3353	283	141	142	273	136	137

Pass-by trips are made as intermediate stops on the way from an origin to a primary trip destination without a route diversion. For this site, pass-by trips will be those vehicles already traveling through the intersection of NW 72nd Street and N Broadway Street. Chapter 10 and Appendix E of the ITE *Trip Generation Handbook, 3rd Edition* were consulted in estimating these trips. Research indicates that on average 76 percent of AM Peak Period Hour and 75 percent of PM Peak Hour for land use 945 are pass-by in nature. The Trip Generation volumes anticipated by the development are shown in Table 2 below.

Table 2: ITE Trip Generation								
		ITE	AM Peak Hour			PM Peak Hour		
Land Use	***Intensity***	***Code***	***Total***	***In***	***Out***	***Total***	***In***	***Out***
Convenience Store/Gas Station (VFP 9-15)	5,000 SF	945	283	141	142	273	136	137
			-215	*-107*	*-108*	*-205*	*-102*	*-103*
Subtotal			283	141	142	273	136	137
Pass-By Trips			*-215*	*-107*	*-108*	*-205*	*-102*	*-103*
Total New Trips			**68**	**34**	**34**	**68**	**34**	**34**

5) TRIP DISTRIBUTION AND ASSIGNMENT

Trips generated by the Gladstone Convenience Store development were distributed based on existing traffic flows and a general analysis of the surrounding area. The trips were distributed onto the existing street system approximately as follows:

- 15 percent to and from the north via N Broadway Street
- 40 percent to and from the south via N Broadway Street
- 40 percent to and from the east via NW 72nd Street
- 5 percent to and from the west via NW 72nd Street

Pass-by trips were distributed based upon the existing traffic patterns near the study intersection of NW 72nd Street and N Broadway Street.

6) LEVEL OF SERVICE AND VOLUME/CAPACITY ANALYSES

Capacity analysis was used to quantify the impacts of the increased traffic on the intersections studied. The methodology outlined in the Highway Capacity Manual, 7th Edition was used as a basis to perform the analysis for this study. Capacity analysis defines the quality of traffic operation for an intersection using a grading system called Level of Service (LOS). The LOS is defined in terms of average vehicle delay. Levels of service A through F have been established with A representing the best and F the worst.

Table 3: Level of Service Definitions		
Level of Service	***Unsignalized Intersection***	***Signalized Intersection***
A	< 10 Seconds	< 10 Seconds
B	< 15 Seconds	< 20 Seconds
C	< 25 Seconds	< 35 Seconds
D	< 35 Seconds	< 55 Seconds
E	< 50 Seconds	< 80 Seconds
F	≥ 50 Seconds	≥ 80 Seconds

The study intersections were evaluated using Synchro based on part on Highway Capacity Manual methods. The analysis reports are included in Appendix II. Signal Timing Inputs were based upon data provided by City Staff.

Existing Conditions

The levels of service, lane configuration, and queue lengths for existing conditions are shown in Figures 5 and 6 in Appendix I.

During the AM and PM Peak Hours, the overall level of service for the signalized intersection at NW 72nd Street and North Broadway Street is a C in both the AM and PM Peak Hour.

At all STOP-controlled intersections within the study area, the minor movements operate with a level of service B or better during both AM and PM Peak Hours.

Existing + Proposed Development Conditions

The levels of service, lane configuration, and queue lengths for existing conditions are shown in Figures 9 and 10 in Appendix I.

The overall level of service remains a C in both Peak Hours for the signalized intersection with the addition of the traffic generated by the proposed development.

All STOP controlled intersections within the study area operate with a level of service C or better during both Peak Hours.

7) SIGHT DISTANCE

Intersection sight distance and stopping sight distance was measured at the proposed entrances into the development. Intersection sight distance represents the distance and time required for the driver to make the decision to turn and to complete the turn without slowing oncoming traffic. Stopping sight distance represents the amount of distance required for a driver to make an unexpected stopping maneuver based upon observing a 2' tall object in the roadway. At both locations, the AASHTO minimum sight distance for a 35 MPH design speed.

8) ACCESS MANAGEMENT

The proposed drive onto N Broadway Street is located between two existing intersections located on the east side of the street. The drive into Gladstone Bowl is approximately 110' from the intersection of NW 72nd Street and N Broadway Street. Typically, it would be recommended that proposed drive be aligned with an existing drive to minimize turning conflicts. It is not recommended that the drive be located at the Gladstone Bowl drive dure to the proximity of this drive to the signalized intersection. The proposed drive however is located approximately as far north as possible and has an approximate offset of 35' from the entrance further to the north. The next entrance to the north has a spacing of approximately 160' to the north from the Gladstone Bowl Entrance.

APWA section 5200 spacing requirements can not be met due to the close proximity of the existing entrances on the east side of N Broadway Street. The proposed drive, however, is located as far north as possible to minimize the impact of the entrance on the function of the intersection.

The entrances at both NW 72nd Street and N Broadway Street were evaluated for right and left turn lanes in accordance with the methodology associated with NCHRP Report 457 using the turn lane guidelines found in MoDOT EPG section 940.9.

At the entrance on NW 72nd Street, neither a left turn lane (EPG Section 940.9.1 left turn guidelines for roads less than or equal to 40 MPH) nor a right turn lane guideline (EPG 940.9.8 right turn lane guidance for two lane roads) is met.

At the entrance onto N Broadway Street a right turn lane is not recommended (EPG 940.9.8 right turn lane guidance for two lane roads), but a left turn lane is recommended when the 40% left turn trend line is selected as per EPG guidance. This is documented in Figure 11 of Appendix I.

9) RECOMMENDATIONS & CONCLUSIONS

This study documents the impact of the proposed Gladstone Convenience Store development on the adjacent roadway network during the AM and PM Peak Hour. Analysis of unsignalized intersections indicate that they operate with acceptable levels of service both before and after the construction of the proposed development. The signalized intersection at NW 72nd Street and N Broadway Street has and overall level of service that is acceptable both before and after construction of the proposed development.

The proposed entrance locations have sufficient sight distance.

A left turn lane is recommended according to MoDOT guidelines for the entrance on N Broadway Street in the PM Peak Hour. Due to the geometric constraints of this location, if such a turn lane were constructed, it would need to be designed so that it does not interfere with the southbound left turn lane at the signalized intersection with NW 72nd Street. The levels of service at this entrance without the left turn lane are a B or better with a design queue of less than one vehicle.

No other improvements are required as a result of this development.

APPENDIX I

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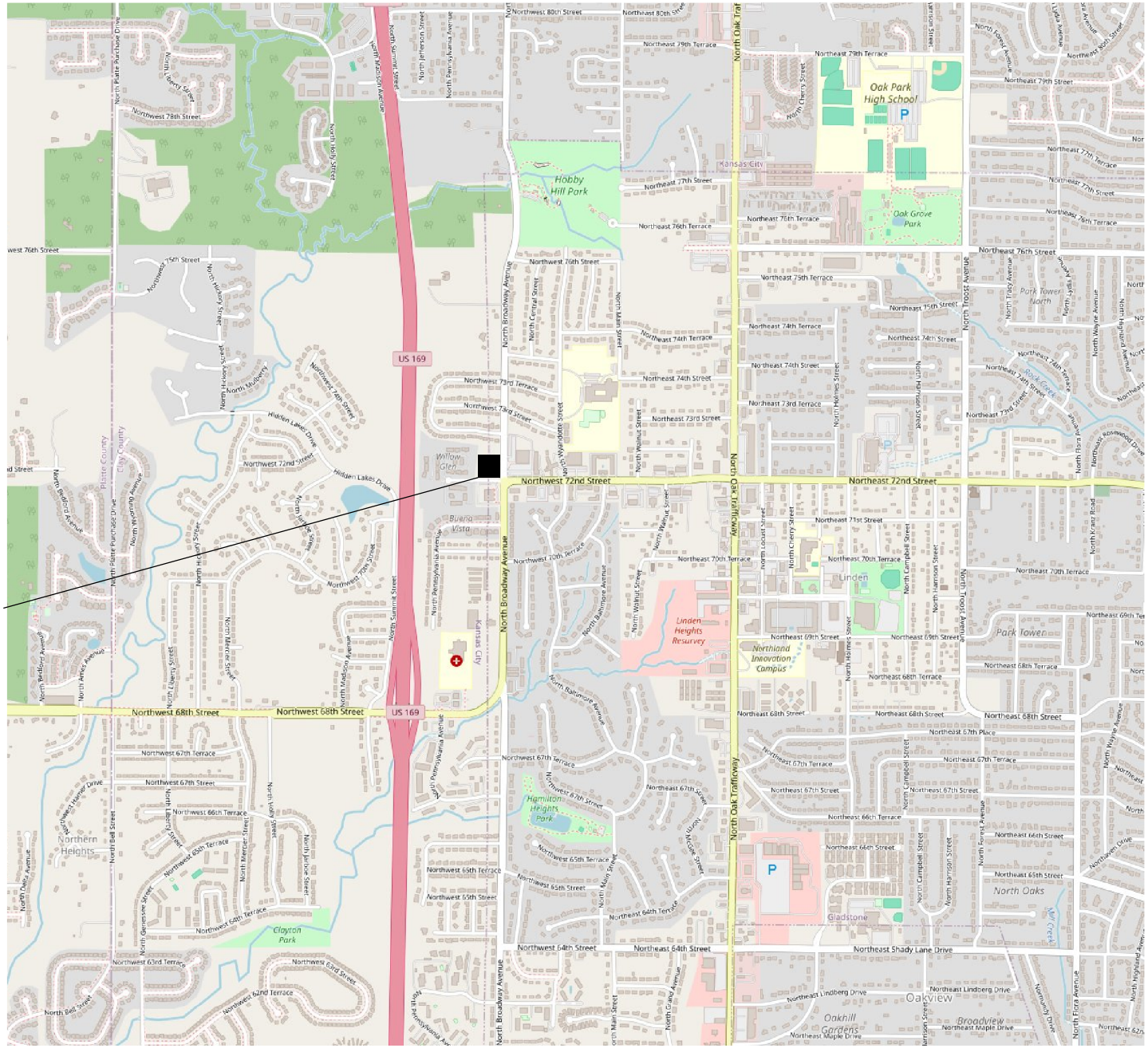
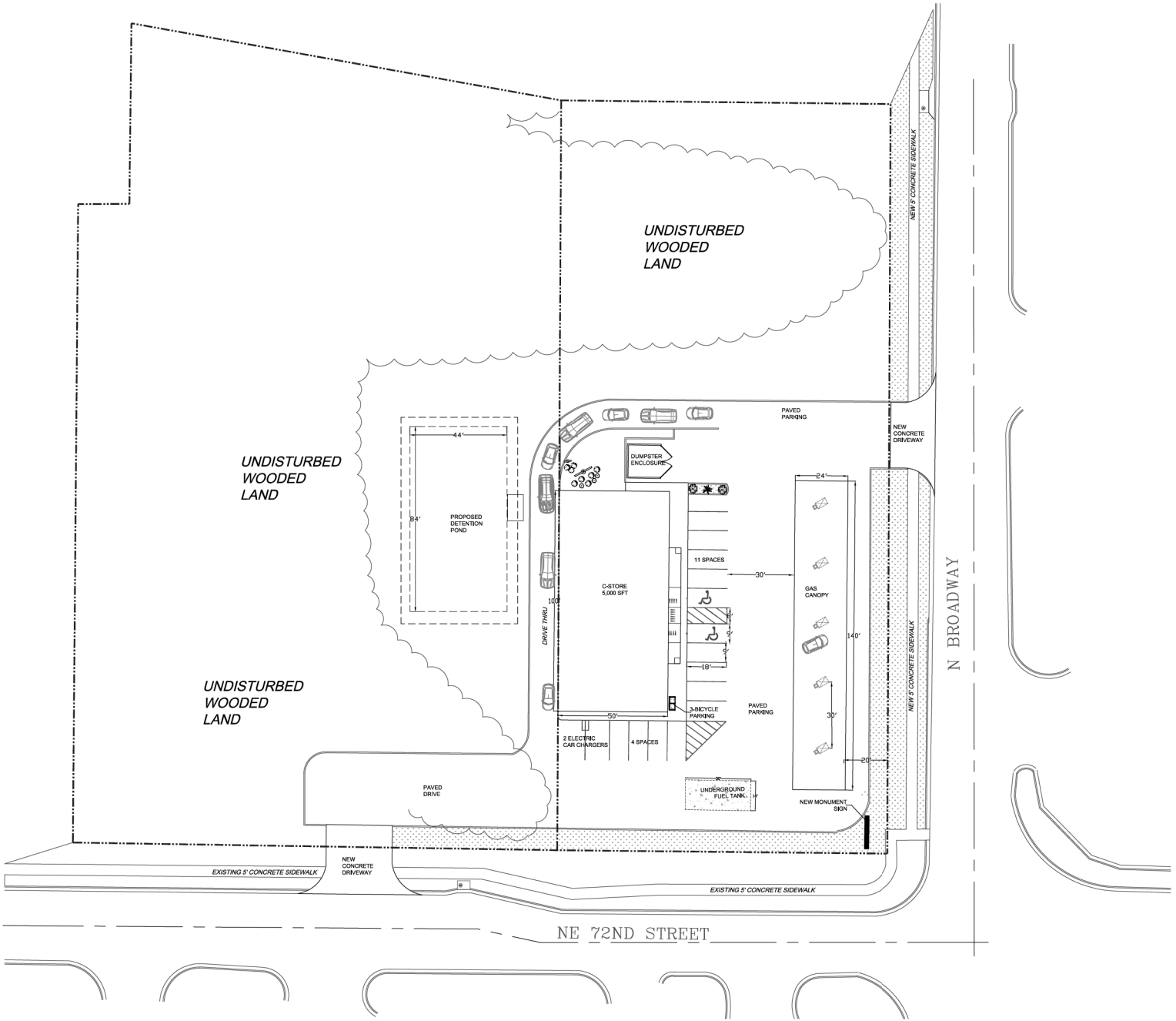
Project Location



Project Location	Gladstone Convenience Store Gladstone, MO	No Scale Figure 1

priority ENGINEERS
PO Box 563
Garden City, MO 64747
816.738.4400



Design Group LLC.
9000 E Bannister Road
Suite 100
Kansas City, Missouri 64134
(816) 797-2065

Site Plan

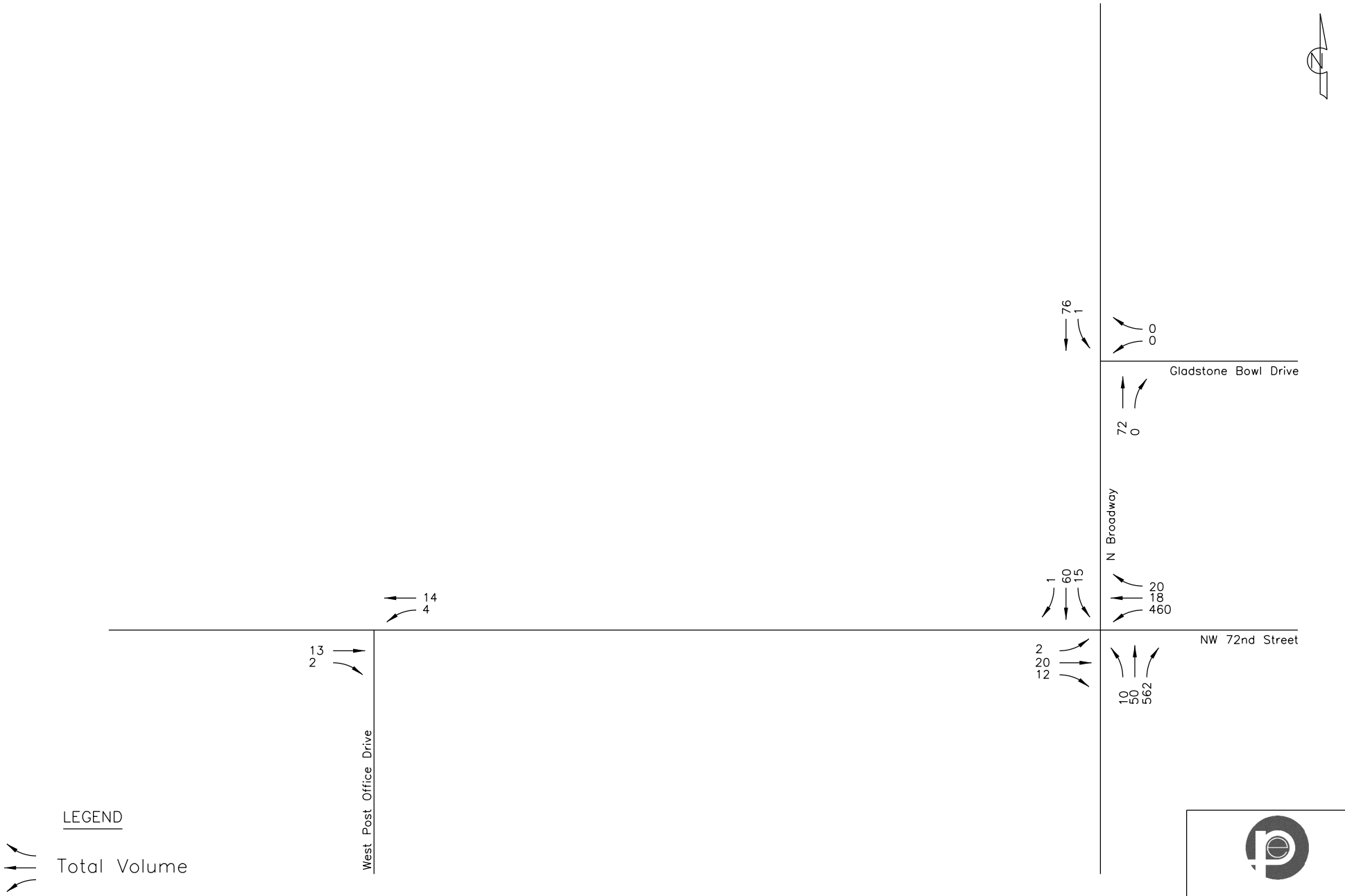
Gladstone Convenience Store

Gladstone, MO

No Scale

Figure 2

priority
ENGINEERS
PO Box 563
Garden City, MO 64747
816.738.4400



Existing AM Peak Hour Traffic Volumes	Gladstone Convenience Store Gladstone, MO	No Scale Figure 3

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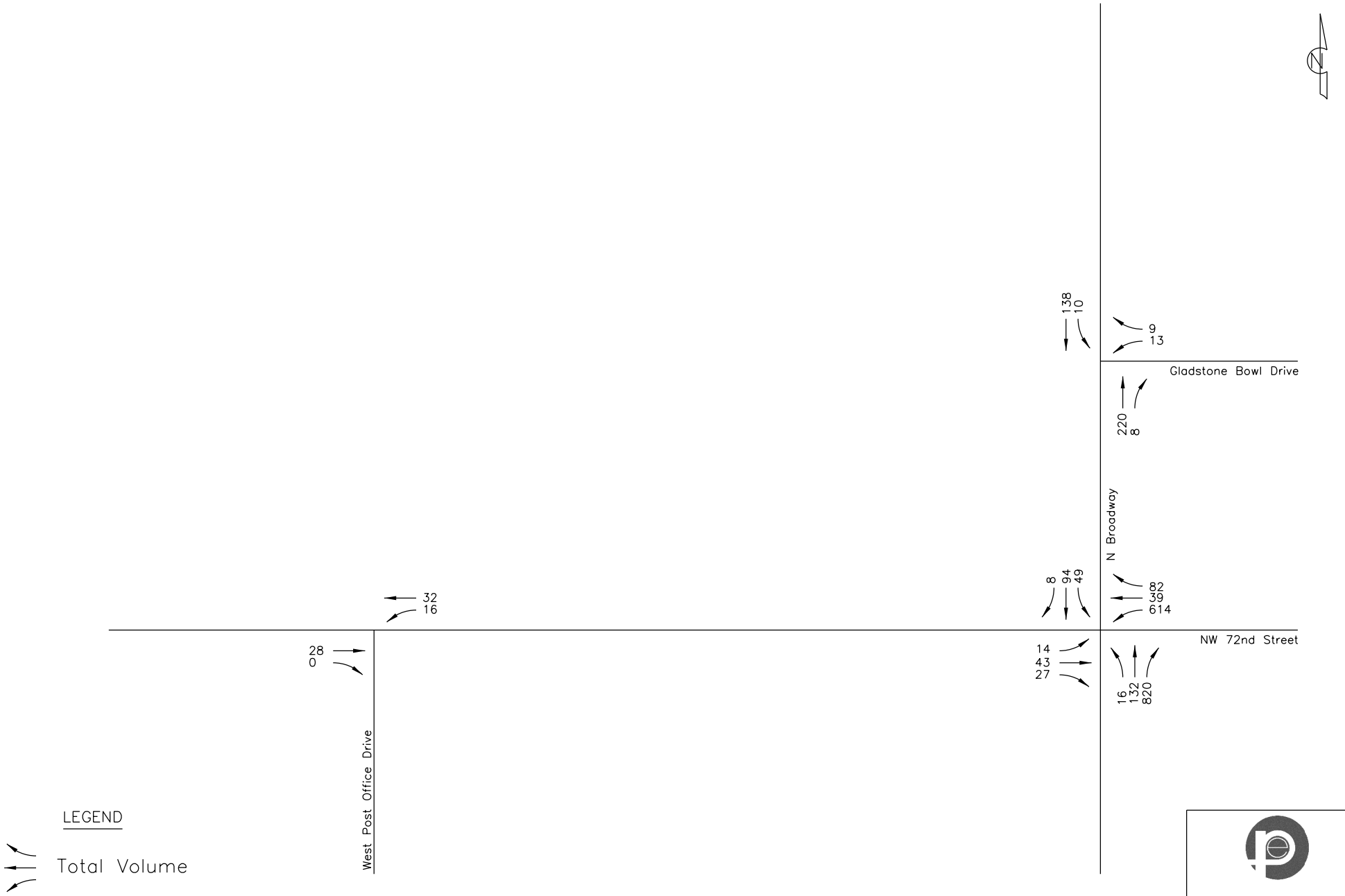
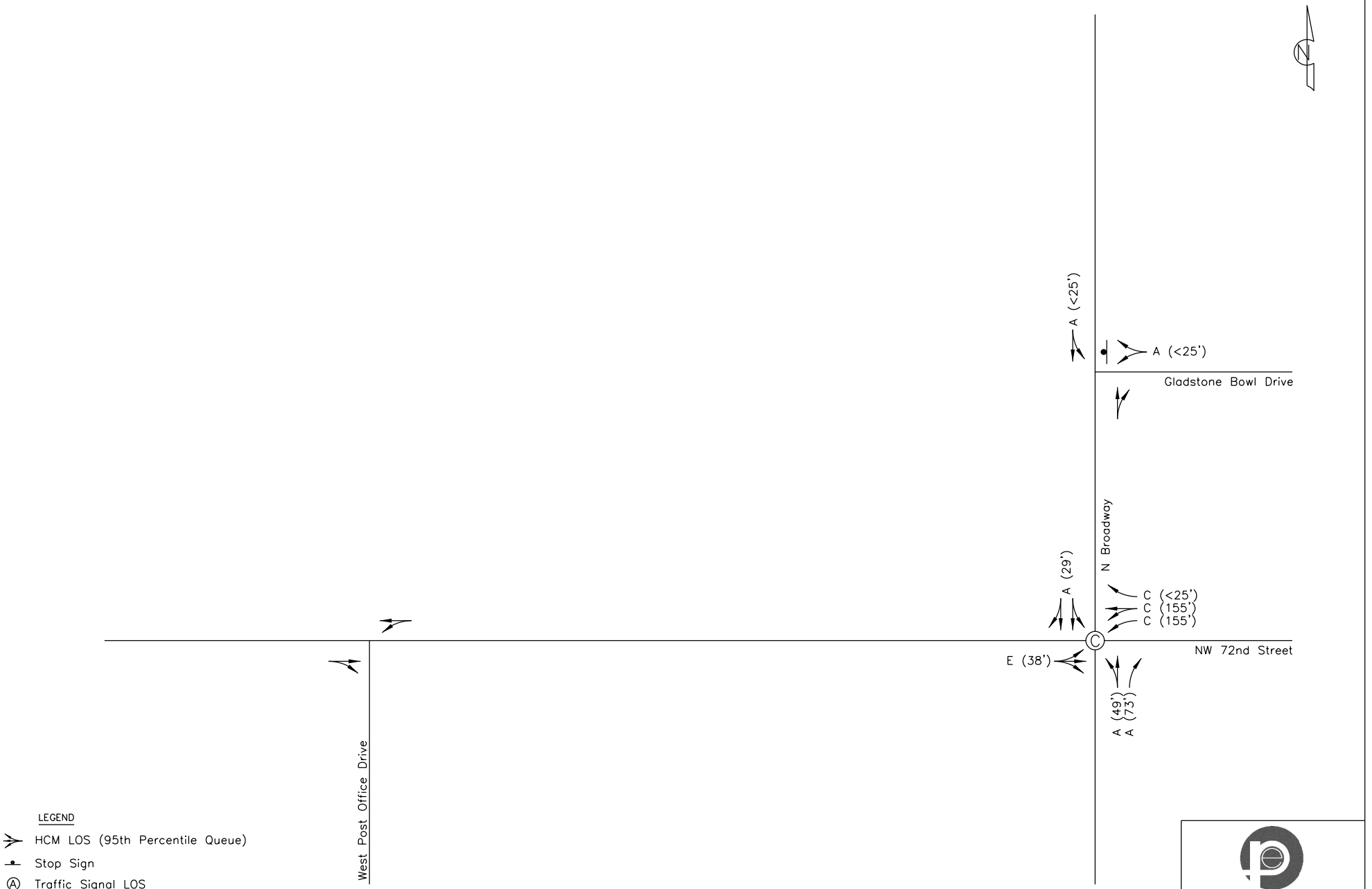
Garden City, MO 64747
816.738.4400



Existing PM Peak Hour Traffic Volumes	Gladstone Convenience Store Gladstone, MO	No Scale Figure 4	priority ENGINEERS PO Box 563 Garden City, MO 64747 816.738.4400



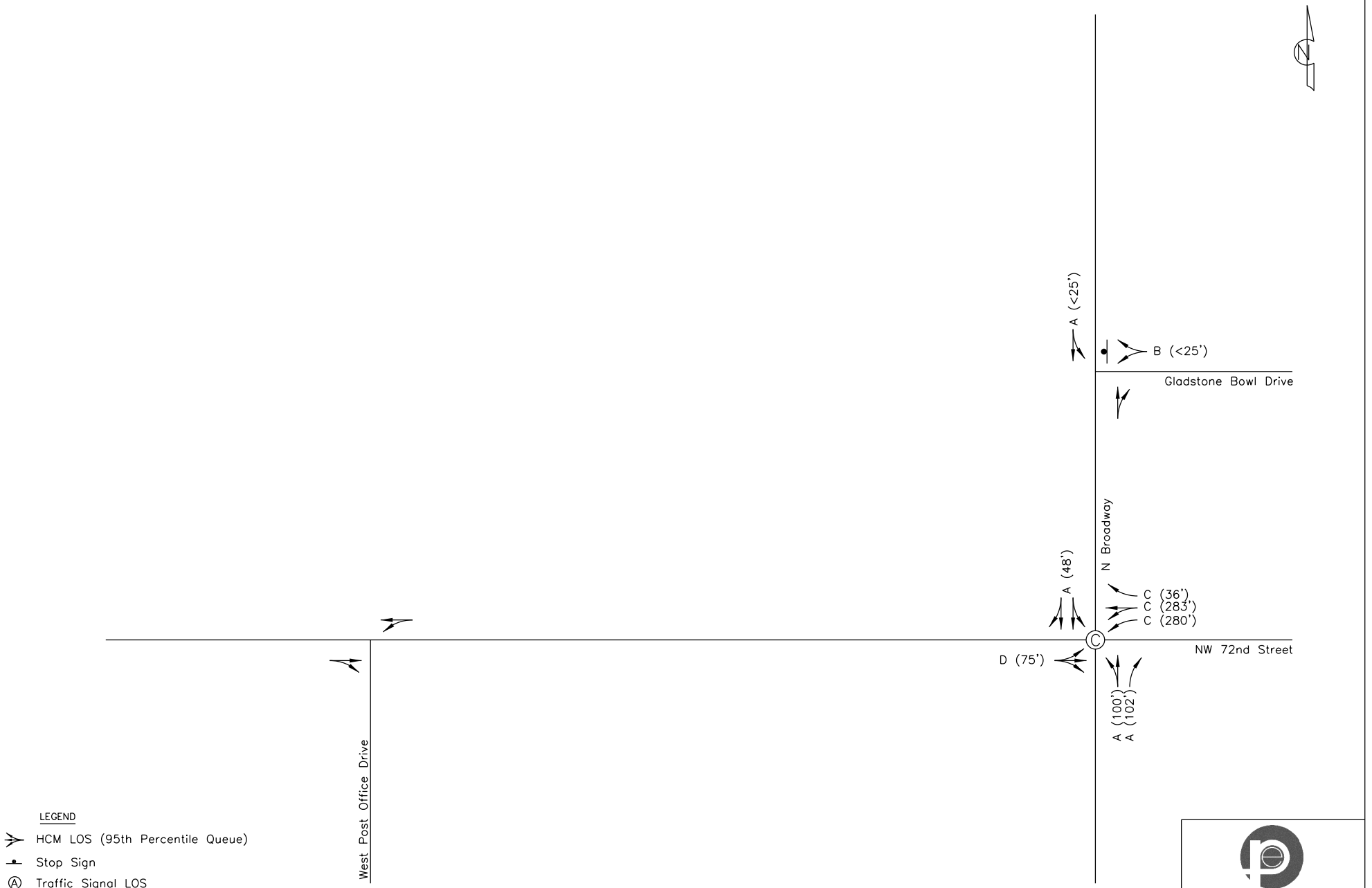
Existing AM Peak Hour
Lane Configuration &
Levels of Service

Gladstone Convenience Store
Gladstone, MO

No Scale

Figure 5

priority ENGINEERS
PO Box 563
Garden City, MO 64747
816.738.4400



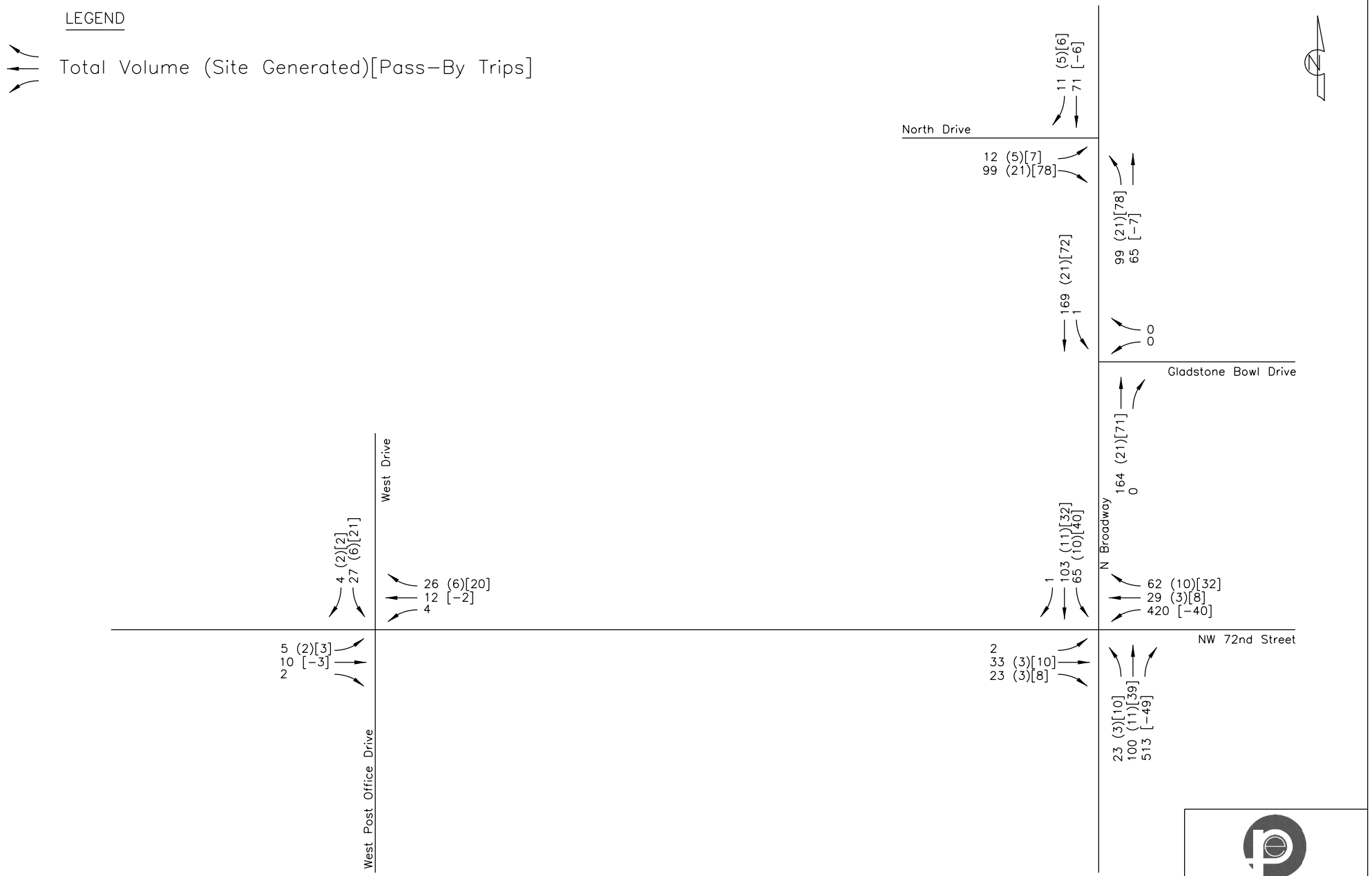
Existing PM Peak Hour
Lane Configuration &
Levels of Service

Gladstone Convenience Store
Gladstone, MO

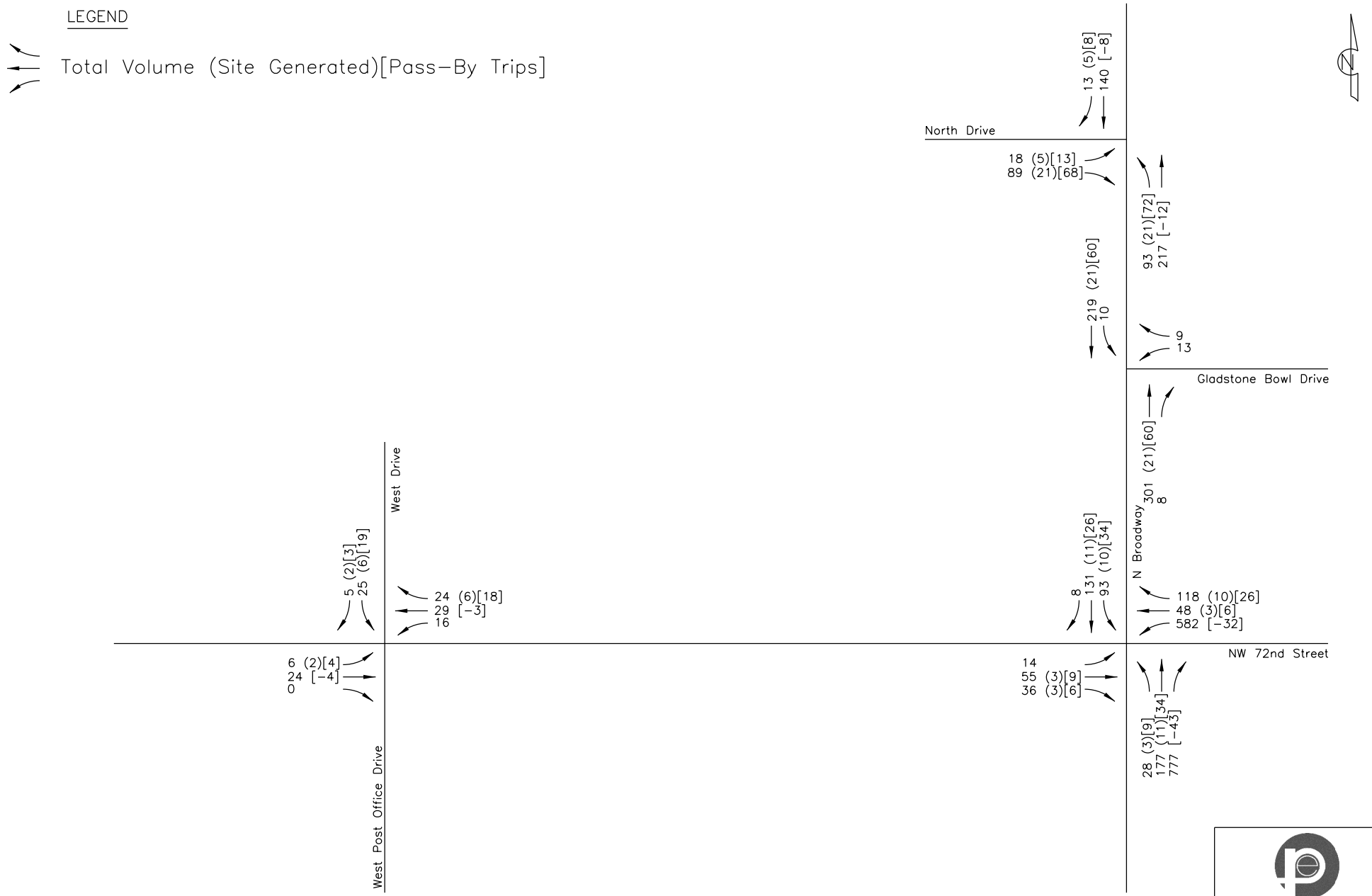
No Scale

Figure 6

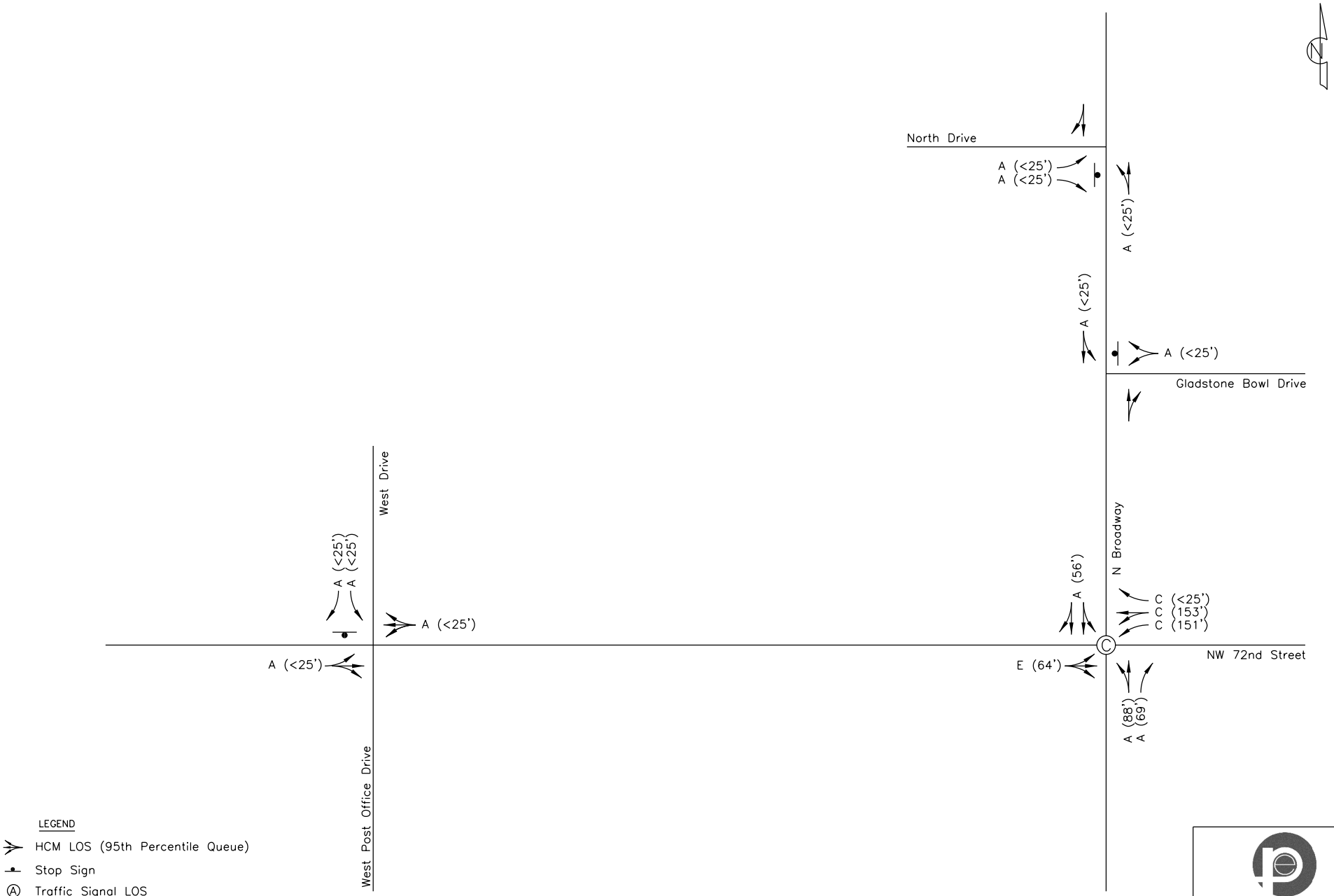
priority ENGINEERS
PO Box 563
Garden City, MO 64747
816.738.4400



Existing + Proposed Development AM Peak Hour Traffic Volumes	Gladstone Convenience Store Gladstone, MO	No Scale Figure 7	priority ENGINEERS PO Box 563 Garden City, MO 64747 816.738.4400



Existing + Proposed Development PM Peak Hour Traffic Volumes	Gladstone Convenience Store Gladstone, MO	No Scale Figure 8	priority ENGINEERS PO Box 563 Garden City, MO 64747 816.738.4400



Existing + Proposed Development
AM Peak Hour
Lane Configuration &
Levels of Service

Gladstone Convenience Store
Gladstone, MO

No Scale

Figure 9

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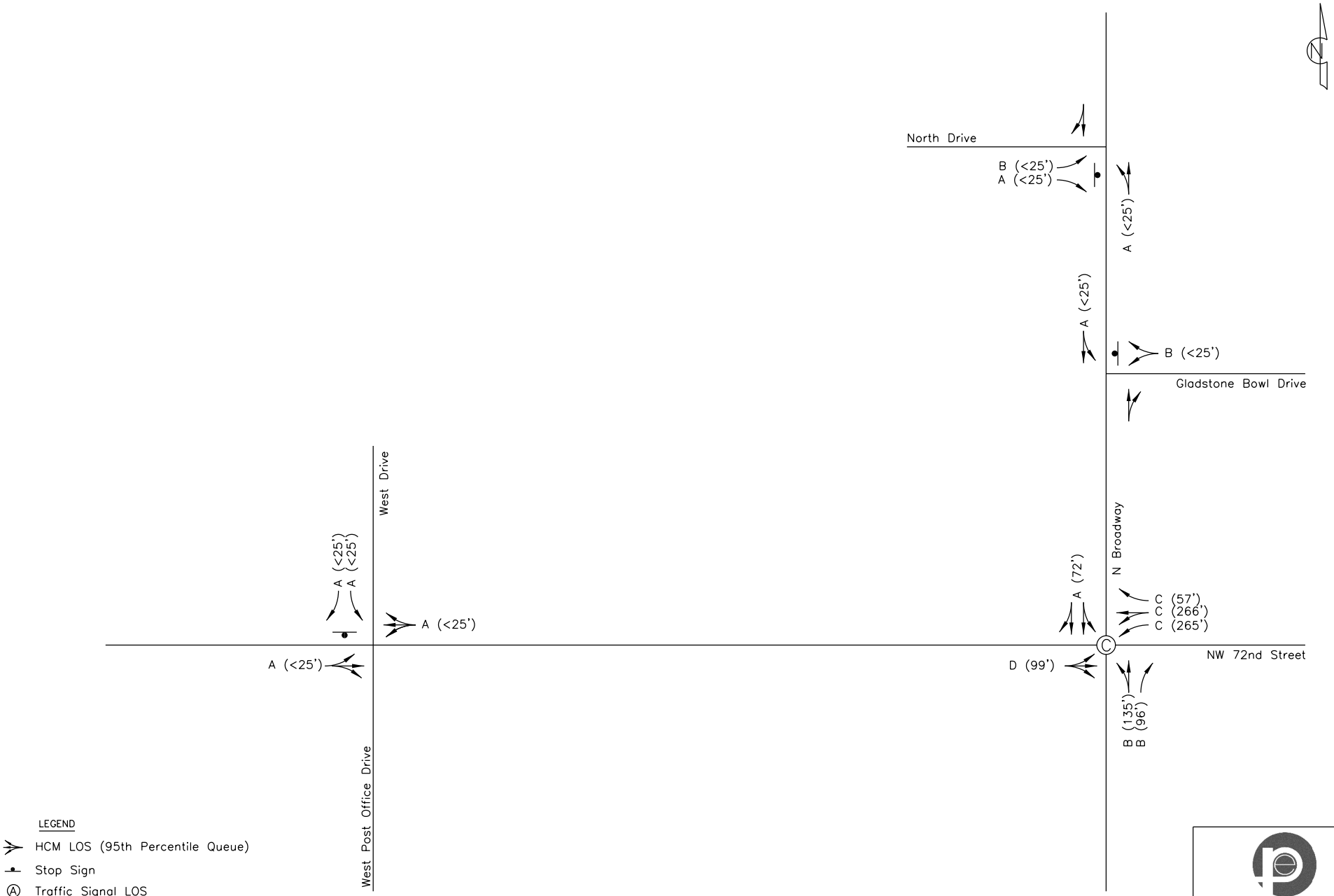
Garden City, MO 64747
816.738.4400



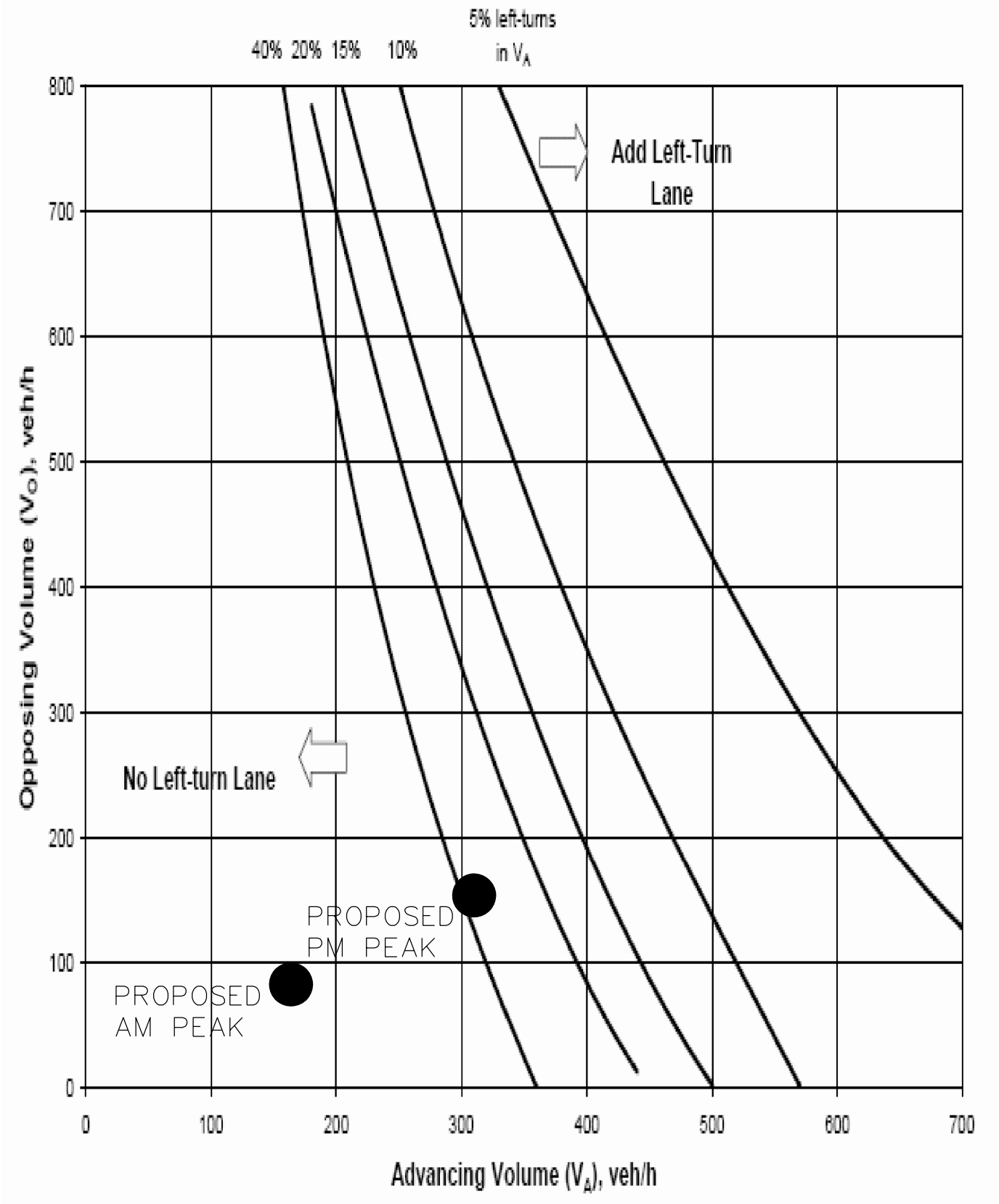
Existing + Proposed Development
PM Peak Hour
Lane Configuration &
Levels of Service

Gladstone Convenience Store
Gladstone, MO

No Scale

Figure 10

priority ENGINEERS
PO Box 563
Garden City, MO 64747
816.738.4400



Left Turn Lane Guidelines for Two–Lane Roads less than or equal to 40 mph (MoDOT EPG Figure 940.9.1)	Gladstone Convenience Store Gladstone, MO	No Scale Figure 11	priority ENGINEERS

APPENDIX II

Broadway & 72nd Street

	Southbound					Westbound					Northbound					Eastbound						
Start Time	Left	Through	Right	Ped	Bike	Left	Through	Right	Ped	Bike	Left	Through	Right	Ped	Bike	Left	Through	Right	Ped	Bike	Totals	
7:00	6	22	0			69	4	7			1	7	62			1	4	4	0		187	
7:15	3	22	0			99	2	4			0	5	79			2	1	0	1		218	
7:30	4	19	0			127	0	3			0	11	125			0	3	2	0		294	
7:45	6	22	1			100	5	11			0	13	136			0	4	1	0		299	998 1187
8:00	7	23	0			110	2	4			3	11	109			1	3	2	0		275	1086 1275
8:15	3	17	0			127	4	3			0	7	167			0	3	1	0		332	1200 1381
8:30	3	14	0			128	5	6			3	16	115			0	3	5	1		299	1205 1393
8:45	2	6	1			95	7	7			4	16	171			1	11	4	0		325	1231 1408
Totals	15	60	1	0	0	460	18	20	0	0	10	50	562	0	0	2	20	12	1	0	1231	
Trucks		1				6					1		5				2			PHF=	0.93	
%		2%				1%					10%		1%				10%					

72nd Street & West Post Office Drive

	Southbound					Westbound					Northbound					Eastbound						
Start Time	Left	Through	Right	Ped	Bike	Left	Through	Right	Ped	Bike	Left	Through	Right	Ped	Bike	Left	Through	Right	Ped	Bike	Totals	
7:00						2	2	0	0								5	0	2		11	
7:15						0	1	0	0								1	0	7		9	
7:30						0	0	0	1								4	0	1		6	
7:45						2	2	0	0								1	0	0		5	31
8:00						2	2	0	0								2	0	0		6	26
8:15						0	3	0	0								2	0	0		5	22
8:30						2	3	0	0								3	0	1		9	25
8:45						0	6	0	0								6	2	0		14	34
Totals	0	0	0	0	0	4	14	0	0	0	0	0	0	0	0	0	13	2	1	0	34	
Trucks							2										2			PHF=	0.61	
%							14%										15%					

Broadway & Gladstone Bowl Drive

	Southbound					Westbound					Northbound					Eastbound						
Start Time	Left	Through	Right	Ped	Bike	Left	Through	Right	Ped	Bike	Left	Through	Right	Ped	Bike	Left	Through	Right	Ped	Bike	Totals	
7:00	0	25				0		0				15									40	
7:15	0	22				0		0				11									33	
7:30	0	20				0		0				14									34	
7:45	1	27				1		1				21									51	158
8:00	0	29				0		0				16									45	163
8:15	0	19				0		0				10									29	159
8:30	0	17				0		0				21									38	163
8:45	1	8				0		0				22									31	143
Totals	1	73	0	0	0	0	0	0	0	0	0	69	0	0	0	0	0	0	0	0	143	
Trucks												1								PHF=	0.79	
%												1%										

Broadway & 72nd Street

	Southbound					Westbound					Northbound					Eastbound						
Start Time	**Left**	**Through**	**Right**	**Ped**	**Bike**	**Left**	**Through**	**Right**	**Ped**	**Bike**	**Left**	**Through**	**Right**	**Ped**	**Bike**	**Left**	**Through**	**Right**	**Ped**	**Bike**	**Totals**	
16:00	18	18	3			127	12	15	0		4	28	166			2	10	4	0		**407**	
16:15	16	44	4			126	12	10	0		3	29	203			3	14	5	0		**469**	
16:30	7	32	2			123	14	13	1		5	28	212			4	11	9	0		**461**	
16:45	12	20	2			150	10	17	0		3	29	209			5	14	9	0		**480**	1817
17:00	13	25	1			187	7	22	0		3	31	191			3	9	4	0		**496**	1906
17:15	17	17	3			154	8	30	1		5	44	208			2	9	5	1		**504**	1941
17:30	12	13	0			142	1	15	0		7	29	166			0	3	4	1		**393**	1873
17:45	20	24	1			130	5	15	0		5	27	167			1	5	1	0		**401**	1794
																						2234
Totals	**49**	**94**	**8**	**0**	**0**	**614**	**39**	**82**	**2**	**0**	**16**	**132**	**820**	**0**	**0**	**14**	**43**	**27**	**1**	**0**	**1941**	
Trucks		3					4	1						7				1		**PHF=**	**0.96**	
Truck %		3%				1%	3%						1%					4%				

72nd Street & West Post Office Drive

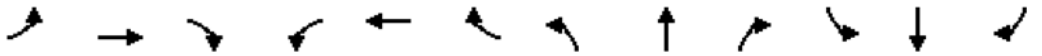
	Southbound					Westbound					Northbound					Eastbound						
Start Time	**Left**	**Through**	**Right**	**Ped**	**Bike**	**Left**	**Through**	**Right**	**Ped**	**Bike**	**Left**	**Through**	**Right**	**Ped**	**Bike**	**Left**	**Through**	**Right**	**Ped**	**Bike**	**Totals**	
16:00						8	3		0								2		0		**13**	
16:15						4	7		0								5		0		**16**	
16:30						6	5		1								3		0		**15**	
16:45						4	9		0								8		0		**21**	65
17:00						3	7		0								8		0		**18**	70
17:15						3	11		1								9		0		**24**	78
17:30						1	7		0								6		1		**15**	78
17:45						0	7		0								3		0		**10**	67
Totals	**0**	**0**	**0**	**0**	**0**	**16**	**32**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**28**	**0**	**0**	**0**	**78**	
Trucks							1										1			**PHF=**	**0.81**	
Truck %							3%										4%					

Broadway & Gladstone Bowl Drive

	Southbound					Westbound					Northbound					Eastbound						
Start Time	**Left**	**Through**	**Right**	**Ped**	**Bike**	**Left**	**Through**	**Right**	**Ped**	**Bike**	**Left**	**Through**	**Right**	**Ped**	**Bike**	**Left**	**Through**	**Right**	**Ped**	**Bike**	**Totals**	
16:00	0	34				2		4				42	1								**83**	
16:15	2	56				0		2				35	2								**97**	
16:30	2	36				2		2				44	0								**86**	
16:45	2	30				3		2				46	3								**86**	352
17:00	3	34				4		0				52	2								**95**	364
17:15	3	33				4		5				70	3								**118**	385
17:30	6	26				0		0				40	2								**74**	373
17:45	4	31				0		0				41	4								**80**	367
Totals	**10**	**133**	**0**	**0**	**0**	**13**	**0**	**9**	**0**	**0**	**0**	**212**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**385**	
Trucks		2																		**PHF=**	**0.82**	
Truck %		2%																				

Lane Group	EBT	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	37	257	257	22	65	604	82
v/c Ratio	0.45	0.57	0.57	0.04	0.07	0.54	0.04
Control Delay (s/veh)	39.8	28.0	27.9	0.2	14.9	4.0	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	39.8	28.0	27.9	0.2	14.9	4.0	14.1
Queue Length 50th (ft)	11	108	108	0	16	0	10
Queue Length 95th (ft)	38	155	155	0	49	73	29
Internal Link Dist (ft)	204		604		384		28
Turn Bay Length (ft)				25			
Base Capacity (vph)	161	496	499	518	911	1105	1664
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.52	0.52	0.04	0.07	0.55	0.05

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	20	12	460	18	20	10	50	562	15	60	1
Future Volume (veh/h)	2	20	12	460	18	20	10	50	562	15	60	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1752	1870	1870	1870	1870	1752	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	22	13	509	0	22	11	54	0	16	65	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	10	2	2	2	2	10	2	2	2	2	2
Cap, veh/h	3	35	21	691	0	307	199	942		410	1672	26
Arrive On Green	0.04	0.04	0.04	0.19	0.00	0.19	0.61	0.61	0.00	0.61	0.61	0.61
Sat Flow, veh/h	89	977	577	3563	0	1585	234	1543	1585	564	2739	43
Grp Volume(v), veh/h	37	0	0	509	0	22	65	0	0	43	0	39
Grp Sat Flow(s),veh/h/ln	1643	0	0	1781	0	1585	1777	0	1585	1653	0	1694
Q Serve(g_s), s	1.7	0.0	0.0	10.1	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.7
Cycle Q Clear(g_c), s	1.7	0.0	0.0	10.1	0.0	0.9	1.1	0.0	0.0	0.7	0.0	0.7
Prop In Lane	0.05		0.35	1.00		1.00	0.17		1.00	0.37		0.03
Lane Grp Cap(c), veh/h	59	0	0	691	0	307	1141	0		1075	0	1034
V/C Ratio(X)	0.63	0.00	0.00	0.74	0.00	0.07	0.06	0.00		0.04	0.00	0.04
Avail Cap(c_a), veh/h	438	0	0	950	0	423	1141	0		1075	0	1034
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.7	0.0	0.0	28.4	0.0	24.7	5.9	0.0	0.0	5.8	0.0	5.8
Incr Delay (d2), s/veh	21.2	0.0	0.0	3.6	0.0	0.2	0.1	0.0	0.0	0.1	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.0	4.4	0.0	0.3	0.4	0.0	0.0	0.3	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	56.9	0.0	0.0	32.0	0.0	24.9	6.0	0.0	0.0	5.9	0.0	5.9
LnGrp LOS	E			C		C	A			A		A
Approach Vol, veh/h		37			531			65			82	
Approach Delay, s/veh		56.9			31.7			6.0			5.9	
Approach LOS		E			C			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	49.8	6.7	49.8	18.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	23.0	20.0	23.0	20.0
Max Q Clear Time (g_c+I1), s	3.1	3.7	2.7	12.1
Green Ext Time (p_c), s	0.4	0.2	0.6	2.5

Intersection Summary	
HCM 7th Control Delay, s/veh	27.7
HCM 7th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	72	0	1	76
Future Vol, veh/h	0	0	72	0	1	76
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	91	0	1	96

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	142	91	0	0	91	0
Stage 1	91	-	-	-	-	-
Stage 2	51	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	844	966	-	-	1503	-
Stage 1	932	-	-	-	-	-
Stage 2	966	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	843	966	-	-	1503	-
Mov Cap-2 Maneuver	843	-	-	-	-	-
Stage 1	932	-	-	-	-	-
Stage 2	965	-	-	-	-	-

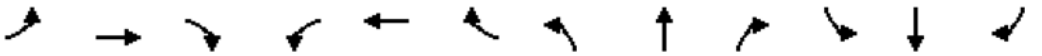
Approach	WB	NB	SB
HCM Control Delay, s/v	0	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	47	-
HCM Lane V/C Ratio	-	-	-	0.001	-
HCM Control Delay (s/veh)	-	-	0	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBT	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	88	339	342	85	155	854	157
v/c Ratio	0.72	0.70	0.70	0.16	0.21	0.74	0.13
Control Delay (s/veh)	51.3	33.4	33.4	7.8	18.9	6.7	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	51.3	33.4	33.4	7.8	18.9	6.7	16.9
Queue Length 50th (ft)	26	134	135	4	53	0	25
Queue Length 95th (ft)	#75	#280	#283	36	100	102	48
Internal Link Dist (ft)	204		604		384		28
Turn Bay Length (ft)				25			
Base Capacity (vph)	171	501	504	523	736	1151	1206
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.68	0.68	0.16	0.21	0.74	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	43	27	614	39	82	16	132	820	49	94	8
Future Volume (veh/h)	14	43	27	614	39	82	16	132	820	49	94	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1841	1870	1856	1870	1870	1870	1870	1870	1856	1870
Adj Flow Rate, veh/h	15	45	28	669	0	85	17	138	0	51	98	8
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	4	2	3	2	2	2	2	2	3	2
Cap, veh/h	21	63	39	836	0	372	120	905		546	1101	94
Arrive On Green	0.07	0.07	0.07	0.23	0.00	0.23	0.54	0.54	0.00	0.54	0.54	0.54
Sat Flow, veh/h	299	897	558	3563	0	1585	124	1690	1585	874	2055	175
Grp Volume(v), veh/h	88	0	0	669	0	85	155	0	0	81	0	76
Grp Sat Flow(s),veh/h/ln	1755	0	0	1781	0	1585	1814	0	1585	1447	0	1657
Q Serve(g_s), s	3.7	0.0	0.0	13.3	0.0	3.3	0.0	0.0	0.0	0.0	0.0	1.7
Cycle Q Clear(g_c), s	3.7	0.0	0.0	13.3	0.0	3.3	3.1	0.0	0.0	1.6	0.0	1.7
Prop In Lane	0.17		0.32	1.00		1.00	0.11		1.00	0.63		0.11
Lane Grp Cap(c), veh/h	122	0	0	836	0	372	1025	0		854	0	888
V/C Ratio(X)	0.72	0.00	0.00	0.80	0.00	0.23	0.15	0.00		0.10	0.00	0.09
Avail Cap(c_a), veh/h	468	0	0	950	0	423	1025	0		854	0	888
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.2	0.0	0.0	27.0	0.0	23.2	8.8	0.0	0.0	8.5	0.0	8.5
Incr Delay (d2), s/veh	15.6	0.0	0.0	5.5	0.0	0.7	0.3	0.0	0.0	0.2	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	5.9	0.0	1.2	1.2	0.0	0.0	0.6	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.7	0.0	0.0	32.6	0.0	23.9	9.1	0.0	0.0	8.7	0.0	8.7
LnGrp LOS	D			C		C	A			A		A
Approach Vol, veh/h		88			754			155			157	
Approach Delay, s/veh		49.7			31.6			9.1			8.7	
Approach LOS		D			C			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	44.2	9.2	44.2	21.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	23.0	20.0	23.0	20.0
Max Q Clear Time (g_c+I1), s	5.1	5.7	3.7	15.3
Green Ext Time (p_c), s	1.3	0.5	1.4	2.3

Intersection Summary	
HCM 7th Control Delay, s/veh	26.9
HCM 7th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	9	220	8	10	138
Future Vol, veh/h	13	9	220	8	10	138
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	11	268	10	12	168

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	382	273	0	0	278	0
Stage 1	273	-	-	-	-	-
Stage 2	109	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	607	765	-	-	1283	-
Stage 1	772	-	-	-	-	-
Stage 2	904	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	601	765	-	-	1283	-
Mov Cap-2 Maneuver	601	-	-	-	-	-
Stage 1	772	-	-	-	-	-
Stage 2	896	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	10.7	0	0.59
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	659	243	-
HCM Lane V/C Ratio	-	-	0.041	0.01	-
HCM Control Delay (s/veh)	-	-	10.7	7.8	0.1
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	EBT	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	62	240	243	67	133	552	182
v/c Ratio	0.64	0.55	0.56	0.14	0.15	0.51	0.12
Control Delay (s/veh)	50.7	28.3	28.3	5.2	15.0	3.9	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	50.7	28.3	28.3	5.2	15.0	3.9	13.8
Queue Length 50th (ft)	16	102	103	0	35	0	24
Queue Length 95th (ft)	#64	151	153	22	88	69	56
Internal Link Dist (ft)	204		604		384		28
Turn Bay Length (ft)				25			
Base Capacity (vph)	165	488	492	511	880	1078	1488
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.49	0.49	0.13	0.15	0.51	0.12

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	33	23	420	29	62	23	100	513	65	103	1
Future Volume (veh/h)	2	33	23	420	29	62	23	100	513	65	103	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1752	1870	1870	1870	1870	1752	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	35	25	474	0	67	25	108	0	70	111	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	10	2	2	2	2	10	2	2	2	2	2
Cap, veh/h	3	46	33	665	0	296	215	897		712	1239	12
Arrive On Green	0.05	0.05	0.05	0.19	0.00	0.19	0.60	0.60	0.00	0.60	0.60	0.60
Sat Flow, veh/h	53	921	658	3563	0	1585	262	1487	1585	1042	2054	19
Grp Volume(v), veh/h	62	0	0	474	0	67	133	0	0	93	0	89
Grp Sat Flow(s),veh/h/ln	1631	0	0	1781	0	1585	1750	0	1585	1416	0	1699
Q Serve(g_s), s	2.8	0.0	0.0	9.4	0.0	2.7	0.0	0.0	0.0	0.0	0.0	1.6
Cycle Q Clear(g_c), s	2.8	0.0	0.0	9.4	0.0	2.7	2.3	0.0	0.0	1.6	0.0	1.6
Prop In Lane	0.03		0.40	1.00		1.00	0.19		1.00	0.75		0.01
Lane Grp Cap(c), veh/h	81	0	0	665	0	296	1113	0		938	0	1025
V/C Ratio(X)	0.76	0.00	0.00	0.71	0.00	0.23	0.12	0.00		0.10	0.00	0.09
Avail Cap(c_a), veh/h	435	0	0	950	0	423	1113	0		938	0	1025
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.2	0.0	0.0	28.6	0.0	25.9	6.4	0.0	0.0	6.2	0.0	6.2
Incr Delay (d2), s/veh	26.3	0.0	0.0	3.0	0.0	0.8	0.2	0.0	0.0	0.2	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.0	4.1	0.0	1.0	0.8	0.0	0.0	0.6	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.5	0.0	0.0	31.6	0.0	26.7	6.6	0.0	0.0	6.4	0.0	6.4
LnGrp LOS	E			C		C	A			A		A
Approach Vol, veh/h		62			541			133			182	
Approach Delay, s/veh		61.5			31.0			6.6			6.4	
Approach LOS		E			C			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	49.3	7.7	49.3	18.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	23.0	20.0	23.0	20.0
Max Q Clear Time (g_c+I1), s	4.3	4.8	3.6	11.4
Green Ext Time (p_c), s	1.1	0.3	1.7	2.6

Intersection Summary	
HCM 7th Control Delay, s/veh	24.7
HCM 7th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	164	0	1	169
Future Vol, veh/h	0	0	164	0	1	169
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	208	0	1	214

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	317	208	0	0	208	0
Stage 1	208	-	-	-	-	-
Stage 2	109	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	663	832	-	-	1362	-
Stage 1	826	-	-	-	-	-
Stage 2	903	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	663	832	-	-	1362	-
Mov Cap-2 Maneuver	663	-	-	-	-	-
Stage 1	826	-	-	-	-	-
Stage 2	903	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	0	0	0.05
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	21	-
HCM Lane V/C Ratio	-	-	-	0.001	-
HCM Control Delay (s/veh)	-	-	0	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	10	2	4	12	26	0	0	0	27	0	4
Future Vol, veh/h	5	10	2	4	12	26	0	0	0	27	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	61	61	61	61	92	61	92	61	92	92	92
Heavy Vehicles, %	2	15	2	2	14	2	2	2	2	2	2	2
Mvmt Flow	5	16	3	7	20	28	0	0	0	29	0	4

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	48	0	0	20	0	0			74	77	34
Stage 1	-	-	-	-	-	-			47	47	-
Stage 2	-	-	-	-	-	-			27	31	-
Critical Hdwy	4.12	-	-	4.12	-	-			6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-			5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-			3.518	4.018	3.318
Pot Cap-1 Maneuver	1559	-	-	1597	-	-			929	813	1039
Stage 1	-	-	-	-	-	-			976	856	-
Stage 2	-	-	-	-	-	-			995	870	-
Platoon blocked, %		-	-		-	-					
Mov Cap-1 Maneuver	1559	-	-	1597	-	-			922	0	1039
Mov Cap-2 Maneuver	-	-	-	-	-	-			922	0	-
Stage 1	-	-	-	-	-	-			972	0	-
Stage 2	-	-	-	-	-	-			991	0	-

Approach	EB	WB	SB
HCM Control Delay, s/v	1.58	0.87	8.96
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	377	-	-	194	-	-	922	1039
HCM Lane V/C Ratio	0.003	-	-	0.004	-	-	0.032	0.004
HCM Control Delay (s/veh)	7.3	0	-	7.3	0	-	9	8.5
HCM Lane LOS	A	A	-	A	A	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-	-	0.1	0

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	99	99	65	71	11
Future Vol, veh/h	12	99	99	65	71	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	108	108	71	77	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	369	83	89	0	-	0
Stage 1	83	-	-	-	-	-
Stage 2	286	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	631	976	1506	-	-	-
Stage 1	940	-	-	-	-	-
Stage 2	763	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	584	976	1506	-	-	-
Mov Cap-2 Maneuver	584	-	-	-	-	-
Stage 1	870	-	-	-	-	-
Stage 2	763	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	9.38	4.57	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1087	-	584	976	-	-
HCM Lane V/C Ratio	0.071	-	0.022	0.11	-	-
HCM Control Delay (s/veh)	7.6	0	11.3	9.1	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.1	0.4	-	-

Lane Group	EBT	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	110	327	329	123	213	809	241
v/c Ratio	0.77	0.70	0.70	0.25	0.29	0.72	0.21
Control Delay (s/veh)	53.8	33.8	33.6	11.2	20.0	6.2	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	53.8	33.8	33.6	11.2	20.0	6.2	18.0
Queue Length 50th (ft)	33	129	130	16	77	0	43
Queue Length 95th (ft)	#99	#265	#266	57	135	96	72
Internal Link Dist (ft)	204		604		384		28
Turn Bay Length (ft)				25			
Base Capacity (vph)	187	488	492	511	712	1123	1104
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.67	0.67	0.24	0.30	0.72	0.22

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	55	36	582	48	118	28	177	777	93	131	8
Future Volume (veh/h)	14	55	36	582	48	118	28	177	777	93	131	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1841	1870	1856	1870	1870	1870	1870	1870	1856	1870
Adj Flow Rate, veh/h	15	57	38	642	0	123	29	184	0	97	136	8
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	4	2	3	2	2	2	2	2	3	2
Cap, veh/h	21	79	53	820	0	365	141	847		631	964	58
Arrive On Green	0.09	0.09	0.09	0.23	0.00	0.23	0.52	0.52	0.00	0.52	0.52	0.52
Sat Flow, veh/h	239	907	604	3563	0	1585	166	1622	1585	1043	1846	112
Grp Volume(v), veh/h	110	0	0	642	0	123	213	0	0	122	0	119
Grp Sat Flow(s),veh/h/ln	1750	0	0	1781	0	1585	1787	0	1585	1333	0	1668
Q Serve(g_s), s	4.6	0.0	0.0	12.7	0.0	4.9	0.0	0.0	0.0	0.0	0.0	2.8
Cycle Q Clear(g_c), s	4.6	0.0	0.0	12.7	0.0	4.9	4.6	0.0	0.0	2.7	0.0	2.8
Prop In Lane	0.14		0.35	1.00		1.00	0.14		1.00	0.80		0.07
Lane Grp Cap(c), veh/h	153	0	0	820	0	365	988	0		783	0	872
V/C Ratio(X)	0.72	0.00	0.00	0.78	0.00	0.34	0.22	0.00		0.16	0.00	0.14
Avail Cap(c_a), veh/h	467	0	0	950	0	423	988	0		783	0	872
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.3	0.0	0.0	27.1	0.0	24.1	9.7	0.0	0.0	9.2	0.0	9.2
Incr Delay (d2), s/veh	12.7	0.0	0.0	4.9	0.0	1.2	0.5	0.0	0.0	0.4	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	0.0	5.6	0.0	1.8	1.8	0.0	0.0	1.0	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	46.0	0.0	0.0	32.0	0.0	25.2	10.2	0.0	0.0	9.6	0.0	9.5
LnGrp LOS	D			C		C	B			A		A
Approach Vol, veh/h		110			765			213			241	
Approach Delay, s/veh		46.0			30.9			10.2			9.6	
Approach LOS		D			C			B			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		43.2		10.6		43.2		21.3				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		23.0		20.0		23.0		20.0				
Max Q Clear Time (g_c+I1), s		6.6		6.6		4.8		14.7				
Green Ext Time (p_c), s		1.8		0.7		2.3		2.6				

Intersection Summary												
HCM 7th Control Delay, s/veh			25.0									
HCM 7th LOS			C									

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	9	301	8	10	219
Future Vol, veh/h	13	9	301	8	10	219
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	11	367	10	12	267

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	530	372	0	0	377	0
Stage 1	372	-	-	-	-	-
Stage 2	158	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	494	673	-	-	1180	-
Stage 1	696	-	-	-	-	-
Stage 2	855	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	489	673	-	-	1180	-
Mov Cap-2 Maneuver	489	-	-	-	-	-
Stage 1	696	-	-	-	-	-
Stage 2	846	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	11.87	0	0.43
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	551	157	-
HCM Lane V/C Ratio	-	-	0.049	0.01	-
HCM Control Delay (s/veh)	-	-	11.9	8.1	0.1
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	24	0	16	29	24	0	0	0	25	0	5
Future Vol, veh/h	6	24	0	16	29	24	0	0	0	25	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	81	81	81	81	92	81	92	81	92	92	92
Heavy Vehicles, %	2	4	2	2	3	2	2	2	2	2	2	2
Mvmt Flow	7	30	0	20	36	26	0	0	0	27	0	5

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	62	0	0	30	0	0			131	131	49
Stage 1	-	-	-	-	-	-			88	88	-
Stage 2	-	-	-	-	-	-			43	43	-
Critical Hdwy	4.12	-	-	4.12	-	-			6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-			5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-			3.518	4.018	3.318
Pot Cap-1 Maneuver	1541	-	-	1583	-	-			863	760	1020
Stage 1	-	-	-	-	-	-			935	822	-
Stage 2	-	-	-	-	-	-			980	859	-
Platoon blocked, %		-	-		-	-					
Mov Cap-1 Maneuver	1541	-	-	1583	-	-			848	0	1020
Mov Cap-2 Maneuver	-	-	-	-	-	-			848	0	-
Stage 1	-	-	-	-	-	-			931	0	-
Stage 2	-	-	-	-	-	-			967	0	-

Approach	EB	WB	SB
HCM Control Delay, s/v	1.33	1.77	9.25
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	325	-	-	402	-	-	848	1020
HCM Lane V/C Ratio	0.004	-	-	0.012	-	-	0.032	0.005
HCM Control Delay (s/veh)	7.3	0	-	7.3	0	-	9.4	8.5
HCM Lane LOS	A	A	-	A	A	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-	-	0.1	0

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	89	93	217	140	13
Future Vol, veh/h	18	89	93	217	140	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	97	101	236	152	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	597	159	166	0	-	0
Stage 1	159	-	-	-	-	-
Stage 2	438	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	466	886	1412	-	-	-
Stage 1	869	-	-	-	-	-
Stage 2	650	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	427	886	1412	-	-	-
Mov Cap-2 Maneuver	427	-	-	-	-	-
Stage 1	798	-	-	-	-	-
Stage 2	650	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	10.28	2.32	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	540	-	427	886	-	-
HCM Lane V/C Ratio	0.072	-	0.046	0.109	-	-
HCM Control Delay (s/veh)	7.7	0	13.8	9.6	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.1	0.4	-	-

Drainage Report
For
400 NW 72nd Street
Gladstone, Missouri

April 01, 2024

By:
Gerald W. Menefee, PE
KAM Design LLC
9000 Bannister Road
Kansas City, Missouri 64134

menefeegerald@gmail.com

Table of Contents

Section 1
General

The proposed site for a new convenience store with gasoline pumps is just northwest corner of the intersection of N Broadway and NW 72nd Street in Gladstone, Missouri. The tract of land is currently covered by grassland. The developed portion of the site is expected to cover approximately the south two thirds of the site.

Section 2
Methodology

HydroCAD 10.00 was utilized for the drainage calculations developed for this project. The Water Quality solution was developed utilizing Manual of Best Management Practices for Stormwater Quality, October 2012 edition.

Section 3
Existing Drainage Patterns

From the peak elevation of the site located near the southeast corner of the site, there are three basins radiating out from it. Reference Maps Section. Basins E1 generally exhibits flow toward the west side of the property; Basin E2 drains to the east part of the property; while Basin E3 drains toward the west side of the site. Table 1 shows the amounts of existing runoff from each of the basins for the 1-year, 10-year and 100-year storms are as follows:

Table 1
Existing Site Runoff

Storm Year	Basin E1 (cfs)	Basin E2 (cfs)	Basin E3 (cfs)	Total Site (cfs)
1	0.66	0.03	1.53	2.22
10	2.04	0.08	4.62	6.74
100	3.65	0.15	8.24	12.04

Proposed Drainage Patterns Section 4

The proposed drainage patterns are consolidated into six basins. Reference the Maps Section. The north or 1P Basin allows for runoff to flow toward the north edge of the property and thence to the Bioretention Bed located to its immediate north. Basins 2P and 3P are much smaller basins

draining to the west. The Basin 4P Generally drains that portion of the east property. The P5 Basin is the water quality Bioretention Area and land immediately around. It drains excess runoff to the sites underground detention system. The area surrounding P5 is comprised of P6 land which is uncontrolled drainage to the west side of the property. A summary of the proposed runoff expected from the site for the 1-year, 10-year and 100-year storms are noted in Table 2. The calculated detention depth and storage are noted in Table 3 as follows:

Table 2
Proposed Site Runoff

Storm Year	Basin 1P (cfs)	Basin 1P And 5P w/ Detention (cfs)	Basin 2P (cfs)	Basin 3P (cfs)	Basin 4P (cfs)	Basin 5P (cfs)	Basin 6P (cfs)	Total Site w/ Detention (cfs)
1	4.33	1.70	0.01	0.01	0.27	0.23	0.23	2.06
10	8.53	5.20	0.03	0.03	0.82	0.70	0.61	5.38
100	12.83	8,78	0.06	0.06	1.45	1.23	1.23	10.81

Table 3
Detention Depth and Storage

Storm Year	Detained Depth (ft)	Detained Volume (ac-ft)
1	1.02	0.064
10	1.71	0.126
100	5.98	0.177

Table 4
Final Detention Volume Minus the WQv Volume

	Calculated Detention Volume	WQv Volume Stored	Final Detention Volume
Acre-Feet Volumes	0.211 ac-ft	0.081 ac-ft	0.13 ac- ft
Linear Feet of Pipe	1300.00 Lf	499.00 Lf	801.00 Lf

As a part of this analysis, it was assumed that the outflow pipe of the detention basin would consist of a 12-inch diameter PVC pipe. As can be seen in the Tables 1 that at all storm levels

the 12-inch PVC pipe provides an adequate release of water so that the discharge in the post developed situation results in the sites runoff being less than the existing runoff.

As for an emergency spillover, it shall be incorporated as a part of the discharge of the 12-inch PVC pipe. The pipe can handle the excess flow by allowing the water in the inlet structure to exceed the height of the orifice plate and travel down through the 12-inch discharge pipe.

The total detention utilized for the site incorporates a reduction in volume. See Table 4. This reduction is predicated on the assumption that the runoff stored in the Bioretention area is effectively detained water and therefore extra volume was left in the detention system pipes.

Section 5
Water Quality

Water quality goals for the site will be achieved through the use Bioretention Area. The area is located to immediate north of drainage basin P1. Runoff water will fill the Area with runoff to a depth of 1 foot. Once this volume is achieved, excess water over the maximum depth of the subsurface storage area flows in an into an inlet structure located at the southwest portion of the Area corner of the property and then into the detention piping.

Water in the Bioretention Area is to drain down the through a 3- inch cover of hardwood wood chips and thence through a 4-foot-thick layer of porous soil. Runoff will be removed from the Area utilizing a system of perforated 4-inch PVC pipes to allow water to leave and travel to a point of daylight. The Area is constructed to allow for the minimum drawdown of one foot per day.

Section 6
Summary

The proposed new improvements on will increase impervious cover necessitating the need for a detention facility to control the additional runoff generated. Since there is insufficient area to construct a detention pond on the surface, it was determined that a subsurface pipe system should be constructed on the north side of the developed portion of the site. A bio retention pond is too be constructed just before the runoff is directed to the detention system in order to allow for the treatment of the first flush of rain water.

Section 7
Conclusions and Recommendations

Based upon review of the site involving existing and proposed conditions, conclusions and recommendations are provided as follows:

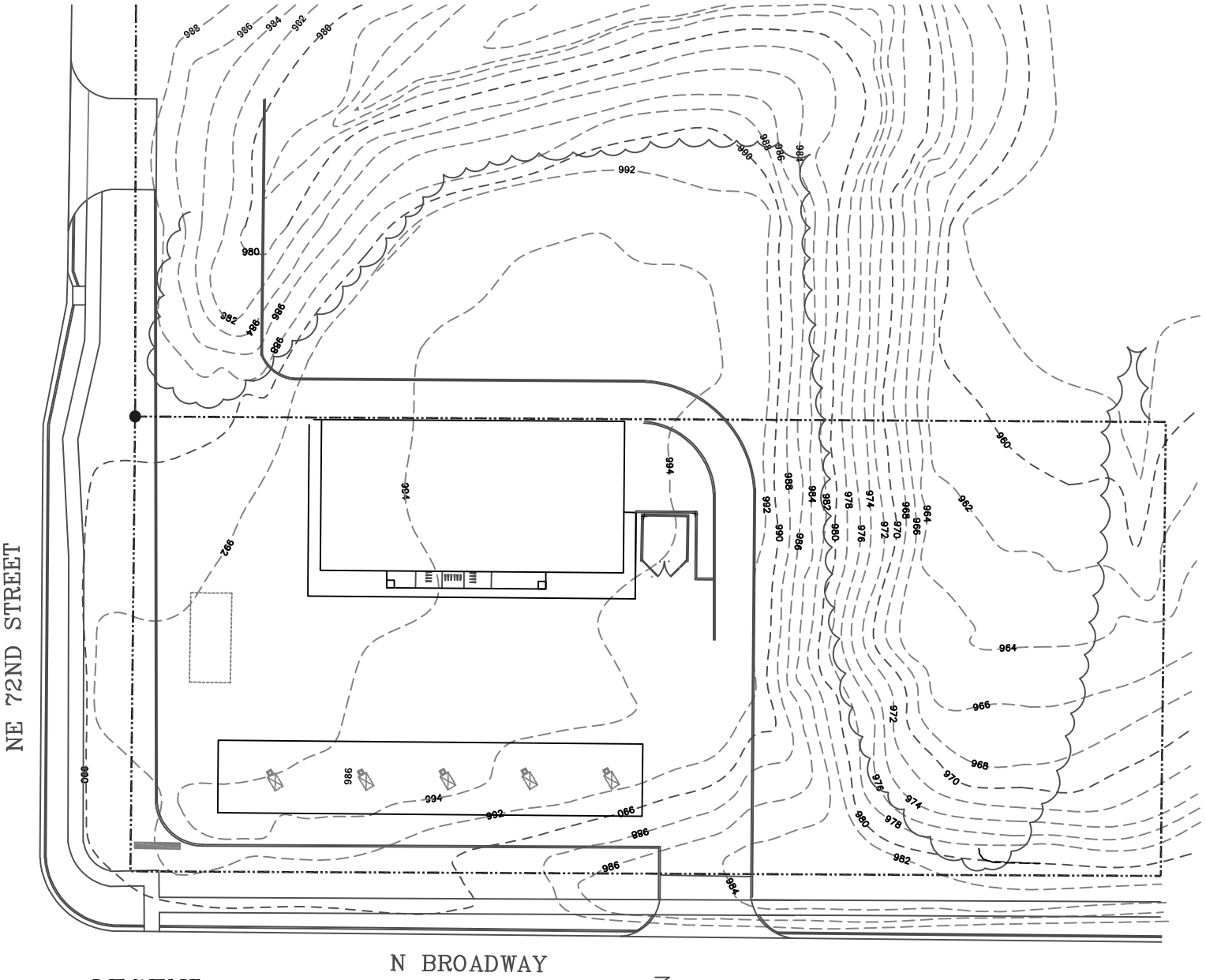
1. Installation of the Bioretention Area will increase the quality of water exiting the site by filtering water leaving the proposed parking areas.
2. Detention will be provided to mitigate the increasing runoff due to the additional impervious cover added to the site.
3. The detention volume was reduced by the storage volume of the water quality storage. Since not doing this would result in the site being penalized by the extra water stored in the water quality structure.
4. Over flow runoff will be incorporated within the discharge piping of the detention control structure.

Section 8

Drainage Area Maps

SHORT STOP GAS STATION

400 N 72ND STREET, GLADSTONE, MISSOURI



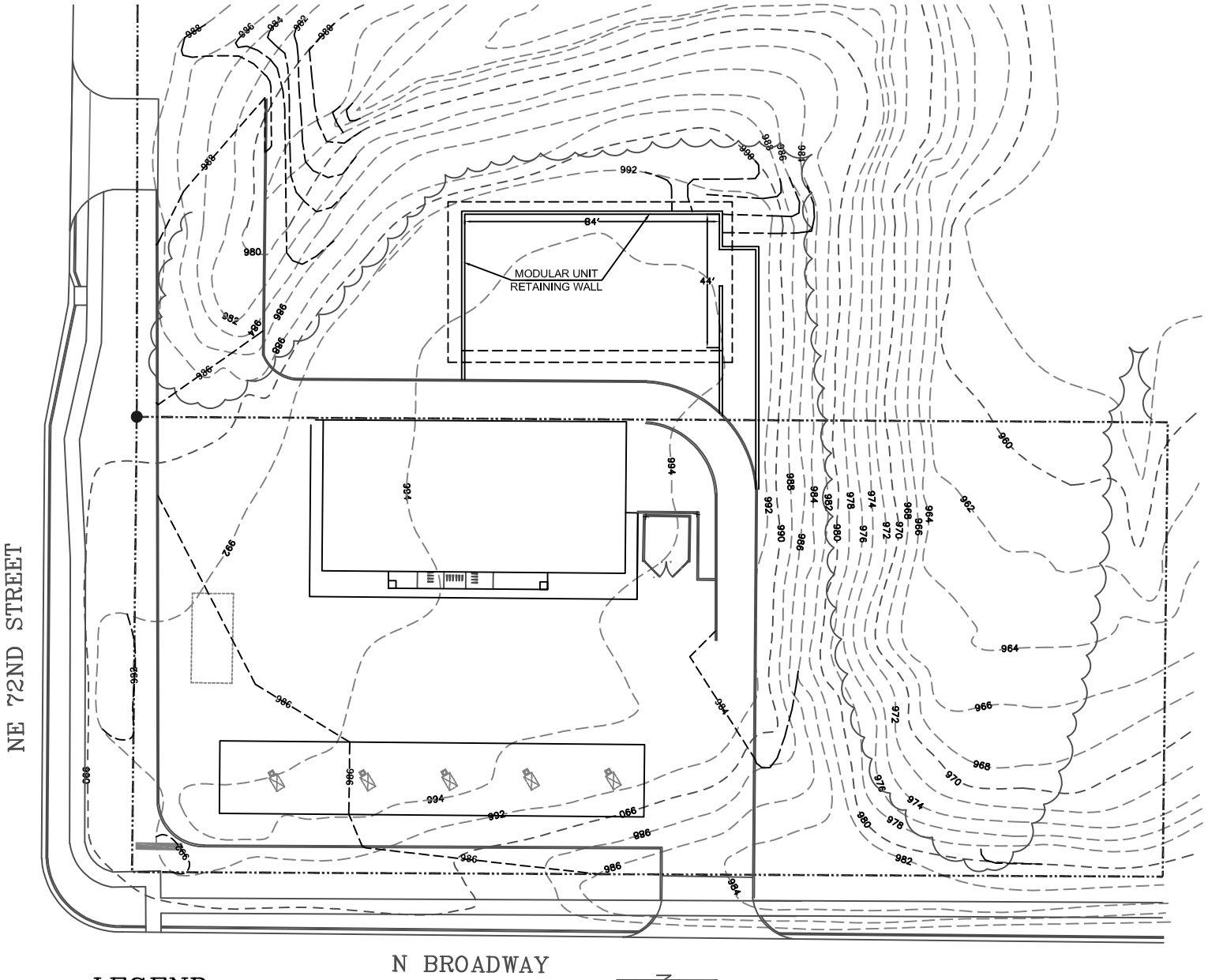
EXISTING DRAINAGE AREA MAP

SCALE 1' = 50'

Design Group LLC.
9264 Blue Ridge Blvd.
Suite A
Kansas City, Missouri 64138
(816) 797–2065

SHORT STOP GAS STATION

400 N 72ND STREET, GLADSTONE, MISSOURI



LEGEND

EXISTING CONTOURS

PROPOSED CONTOURS

PROPOSED DRAINAGE AREA MAP

SCALE 1' = 50'

Design Group LLC.

9264 Blue Ridge Blvd.
Suite A
Kansas City, Missouri 64138
(816) 797–2065

Section 9

Supporting Calculations

Exhibit 1
Water Quality Equations

WQv = P*Rv*A/12

P = 1.37
I = 68 %
Rv = 0.05+0.009*I = 0.05+0.009*68 =
A = 0.87

= 1.37*0.62*0.87/12 = 0.062 a-ft = 2665.87 cf

Refer to Bioretention Worksheet that follows:

Design Procedure Form: Bioretention
Main Worksheet

Designer: GERALD MENEFEE
Checked By: GERALD MENEFEE
Company: KAM DESIGN LLC
Date: 2/21/23
Project: SHORT STOP - 495 STATION
Location: 400 NW 72ND STREET

I. Water Quality Volume		
Step 1) Tributary area to bioretention area, A_T (ac)	A_T (ac) =	1.207
Step 2) Calculate WQv using methodology in Section 6	WQv (cu-ft) =	0.91
IIa. Pretreatment		
Step 1) Specify type of inflow to Bioretention facility: Type 1 = sheet flow Type 2 = concentrated or channelized	Inflow type =	TYPE 2
Step 2) Pretreatment		
Step 3) Proceed to Part IIb, IIc, or IId for design guidance on different pretreatment options		
IIb. Vegetated Pretreatment Strip		
Step 1) Type of land cover of contributing area: Type 1 = Impervious (i.e., parking lot) Type 2 = Pervious (i.e., residential lawn)	Land cover type =	TYPE 1
Step 2) Maximum inflow approach length, $L_{approach}$ (ft)	$L_{approach}$ (ft) =	30
Step 3) Average slope of pretreatment strip, S_{fs} (%) (Maximum slope of 6%)	S_{fs} (%) =	2%
Step 4) Vegetated pretreatment strip minimum length, L_{fs} (ft), from Table 8.2	L_{fs} (ft) =	30
IIc. Vegetated Pretreatment Channel		
Step 1) Percent imperviousness of contributing area, % imp	% imp =	68
Step 2) Average slope of vegetated channel, S_{vc} (%) (Maximum slope of 6%)	S_{vc} (%) =	2%
Step 3) Vegetated pretreatment channel minimum length, L_{vc} (ft), from Table 8.3	L_{vc} (ft) =	30
IId. Other Pretreatment Devices		
Other methods of pretreatment may be utilized upstream of a bioretention facility to settle out suspended solids and reduce runoff velocity. Several proprietary devices are available that will achieve these results. Most such devices install below ground and accept inflow from a piped stormwater management system or from surface sheet flow via drop inlets. These devices should be selected and sized based on site-specific conditions for each project.		

Design Procedure Form: Bioretention
Main Worksheet

Designer: GERALD MENEFEE
Checked By: GERALD MENEFEE
Company: KAM DESIGN LLC
Date: 7/21/23
Project: SHORT STOP GAS STATION
Location: 400 NW 72ND STREET

III. Planting Soil Bed and Ponding Area

Step 1) Planting bed soil depth, d_f (ft) (d_f should be between 2.5 feet and 4 feet).	d_f (ft) = 4
Step 2) Coefficient of permeability for planting soil bed, k (ft/day) (k should be at least 1 ft/ day)	k (ft/ day) = 1
Step 3) Maximum ponding depth, h_{max} (ft) (h_{max} should be between 0.25 ft and 1.0 ft).	h_{max} (ft) = 1
Step 4) Average height of water above bioretention bed, havg (ft) $h_{avg} = h_{max}/2$	h_{avg} (ft) = 0.5
Step 5) Time required for WQv to filter through the planting soil bed, t_f (days) (t_f of 1 to 3 days is recommended)	t_f (days) = 1
Step 6) Required filter bed surface area, A_f (ft^2) $A_f = (WQv*d_f)/[k*t_f*(h_{avg}+df)]$	A_f (ft^2) = 2370
Step 7) Approximate filter bed length, L_f (ft), assuming a length to width ratio of 2:1 (L_f should be at least 40 ft)	L_f (ft) = 84
Step 8) Approximate filter bed width, W_f (ft), assuming a length to width ratio of 2:1 (W_f should be at least 15 feet, and optimally half of L_f)	W_f (ft) = 42
Step 9) Required Ponding Area, A_p (sf) $Ap = WQv/h_{max}$	Ap (ft^2) = 2666.00

Design Procedure Form: Bioretention
Main Worksheet

Designer: GERALD MENEFEE
Checked By: GERALD MENEFEE
Company: KAW DESIGN LLC
Date: 7/21/23
Project: SHORT STOP GAS STATION
Location: 400 NW 72ND STREET

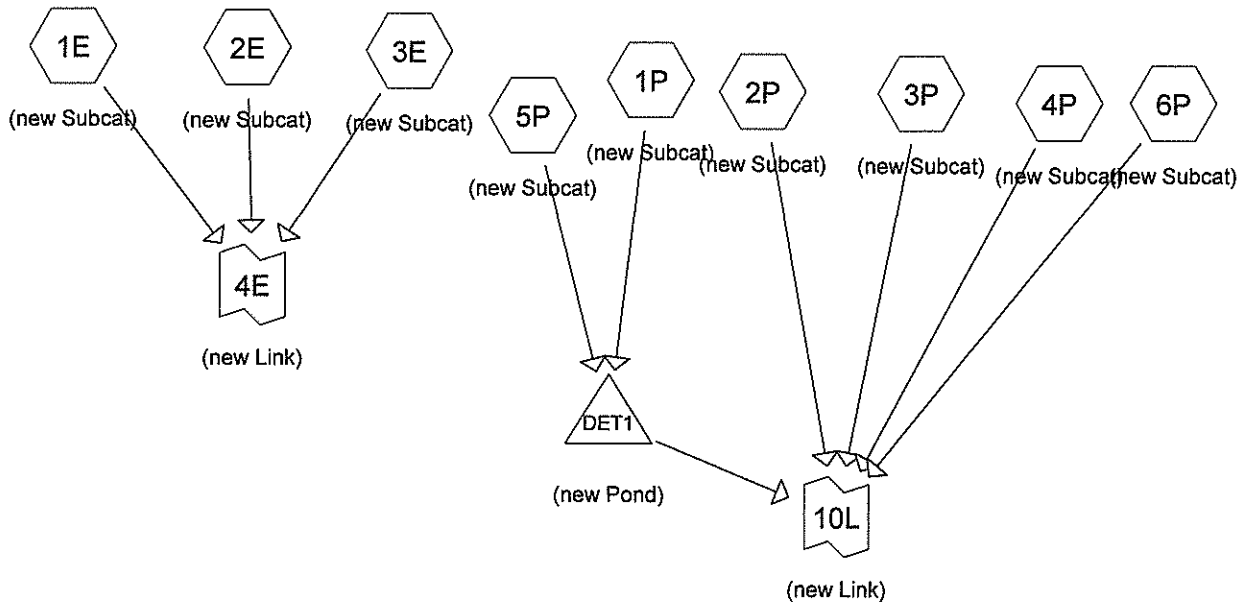
IV. Underdrain

Step 1) Underdrain pipe diameter, D_U (in) (D_U should be at least 4 inches)	D_U (in) =	4
Step 2) Depth of gravel blanket, Z_{gravel} (in.) (Z_{gravel} should be at least 8 inches, and at least 2 inches greater than D_U)	Z_{gravel} (in) =	12"
Step 3) Set underdrain perforation diameters to 0.375 inches.	D_{perf} (in) =	0.375
Step 4) Longitudinal center-to-center underdrain perforation spacing, S_{perf} (in)	S_{perf} (in) =	14
Step 5) Number of perforations per row (around circumference of underdrain), n_{perf} (n_{perf} should be at least 4)	n_{perf} =	4
Step 6) Underdrain collector spacing (approximately 20') SU (ft)	S_U (ft) =	14
Step 7) Pipe grade, Gpipe (%), for main pipe and transverse collector pipes (G_{pipe} should be at least 0.5%)	G_{pipe} (%) =	0
Step 8) Providing at least one cleanout per pipe run? (Yes or No)		YES
Step 9) Determine design head (ho) on orifice, ho = (df + hmax)/2	ho (ft) =	2.5
Step 10) Determine Average flow rate, Qavg = WQv/144,000	Qavg (cfs) =	0.019
Step 11) Determine orifice area Ao = Qavg/(0.6*(2*g*ho)^0.5)	Ao (ft^2) =	0.0025
	Ao (in^2) =	0.36

V. Overflow

The bioretention overflow shall be designed to safely pass runoff flows from events up to and including the 1 percent event unless the facility is designed with a bypass around the facility for larger storm events. If the 1-percent event is to pass through the facility, the maximum velocity shall be kept below 3 feet per second to avoid erosion of the soil matrix. If facilities are designed with a bypass, it shall be designed to safely pass runoff flows from events up to and including the 1 percent event. The overflow shall be designed as a vegetated or stabilized channel of a yard inlet catch basin. Vegetated or stabilized channels shall be designed using one of the methods presented in APWA Section 5603 and shall conform to the design criteria presented in APWA Section 5607. Methods presented in APWA Section 5604 shall be used for inlet design.

Exhibit 2
1-Year Storm Calculations



Subcat Reach Pond Link

Routing Diagram for 400 NW 72 Street
Prepared by HP, Printed 7/21/2023

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.354	74	>75% Grass cover, Good, HSG C (1E, 1P, 2E, 2P, 3E, 3P, 4P, 5P, 6P)
0.874	98	Paved parking, HSG C (1P)
3.228	**80**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
3.228	HSG C	1E, 1P, 2E, 2P, 3E, 3P, 4P, 5P, 6P
0.000	HSG D	
0.000	Other	
3.228		**TOTAL AREA**

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	2.354	0.000	0.000	2.354	>75% Grass cover, Good	1E, 1P, 2E, 2P, 3E, 3P, 4P, 5P, 6P
0.000	0.000	0.874	0.000	0.000	0.874	Paved parking	1P
0.000	**0.000**	**3.228**	**0.000**	**0.000**	**3.228**	**TOTAL AREA**	

Time span=2.00-30.00 hrs, dt=0.05 hrs, 561 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1E: (new Subcat) Runoff Area=0.544 ac 0.00% Impervious Runoff Depth=0.85"
Flow Length=81' Slope=0.0247 '/' Tc=10.6 min CN=74 Runoff=0.66 cfs 0.038 af

Subcatchment 1P: (new Subcat) Runoff Area=1.145 ac 76.33% Impervious Runoff Depth=2.07"
Flow Length=249' Tc=2.8 min CN=92 Runoff=4.33 cfs 0.197 af

Subcatchment 2E: (new Subcat) Runoff Area=0.017 ac 0.00% Impervious Runoff Depth=0.85"
Flow Length=30' Slope=0.0732 '/' Tc=3.1 min CN=74 Runoff=0.03 cfs 0.001 af

Subcatchment 2P: (new Subcat) Runoff Area=0.007 ac 0.00% Impervious Runoff Depth=0.85"
Flow Length=33' Slope=0.0758 '/' Tc=3.3 min CN=74 Runoff=0.01 cfs 0.000 af

Subcatchment 3E: (new Subcat) Runoff Area=1.053 ac 0.00% Impervious Runoff Depth=0.85"
Flow Length=237' Tc=5.8 min CN=74 Runoff=1.53 cfs 0.074 af

Subcatchment 3P: (new Subcat) Runoff Area=0.007 ac 0.00% Impervious Runoff Depth=0.85"
Flow Length=43' Slope=0.5116 '/' Tc=1.9 min CN=74 Runoff=0.01 cfs 0.000 af

Subcatchment 4P: (new Subcat) Runoff Area=0.167 ac 0.00% Impervious Runoff Depth=0.85"
Flow Length=83' Tc=2.6 min CN=74 Runoff=0.27 cfs 0.012 af

Subcatchment 5P: (new Subcat) Runoff Area=0.142 ac 0.00% Impervious Runoff Depth=0.85"
Flow Length=13' Slope=0.0176 '/' Tc=2.8 min CN=74 Runoff=0.23 cfs 0.010 af

Subcatchment 6P: (new Subcat) Runoff Area=0.146 ac 0.00% Impervious Runoff Depth=0.85"
Flow Length=222' Tc=7.5 min CN=74 Runoff=0.20 cfs 0.010 af

Pond DET1: (new Pond) Peak Elev=983.05' Storage=0.064 af Inflow=4.56 cfs 0.207 af
Outflow=1.70 cfs 0.207 af

Link 4E: (new Link) Inflow=2.13 cfs 0.114 af
Primary=2.13 cfs 0.114 af

Link 10L: (new Link) Inflow=2.06 cfs 0.230 af
Primary=2.06 cfs 0.230 af

Total Runoff Area = 3.228 ac Runoff Volume = 0.344 af Average Runoff Depth = 1.28"
72.92% Pervious = 2.354 ac 27.08% Impervious = 0.874 ac

Summary for Subcatchment 1E: (new Subcat)

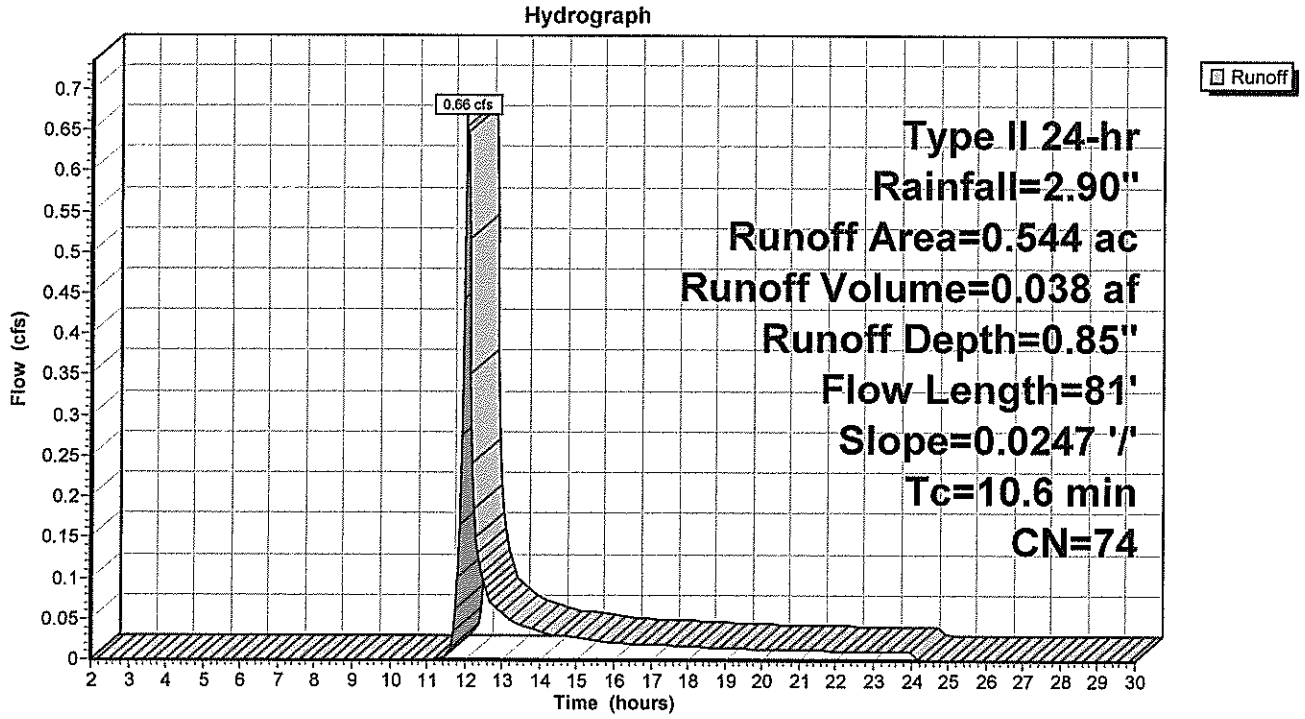
Runoff = 0.66 cfs @ 12.04 hrs, Volume= 0.038 af, Depth= 0.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.90"

Area (ac)	CN	Description
0.544	74	>75% Grass cover, Good, HSG C
0.544		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	81	0.0247	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.50"

Subcatchment 1E: (new Subcat)



Summary for Subcatchment 1P: (new Subcat)

[49] Hint: Tc<2dt may require smaller dt

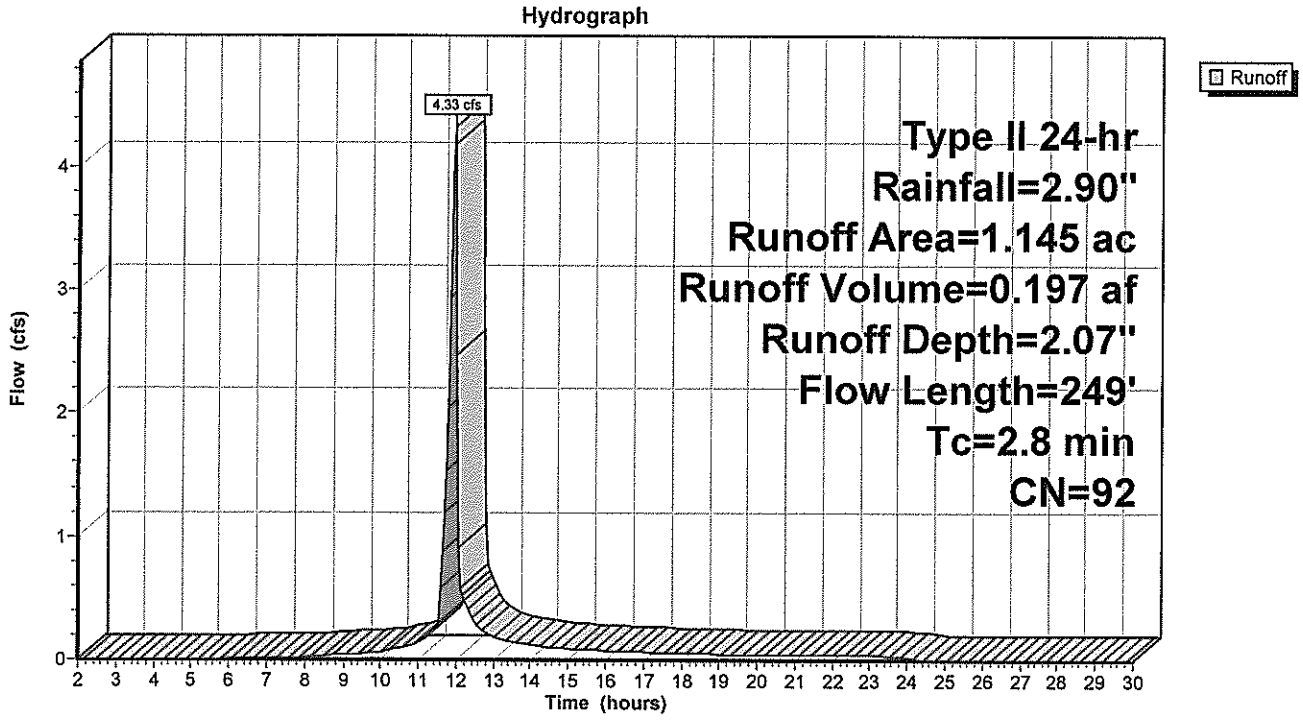
Runoff = 4.33 cfs @ 11.93 hrs, Volume= 0.197 af, Depth= 2.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.90"

Area (ac)	CN	Description
0.271	74	>75% Grass cover, Good, HSG C
0.874	98	Paved parking, HSG C
1.145	92	Weighted Average
0.271		23.67% Pervious Area
0.874		76.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0065	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"
1.0	149	0.0151	2.49		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.8	249	Total			

Subcatchment 1P: (new Subcat)



Summary for Subcatchment 2E: (new Subcat)

[49] Hint: Tc<2dt may require smaller dt

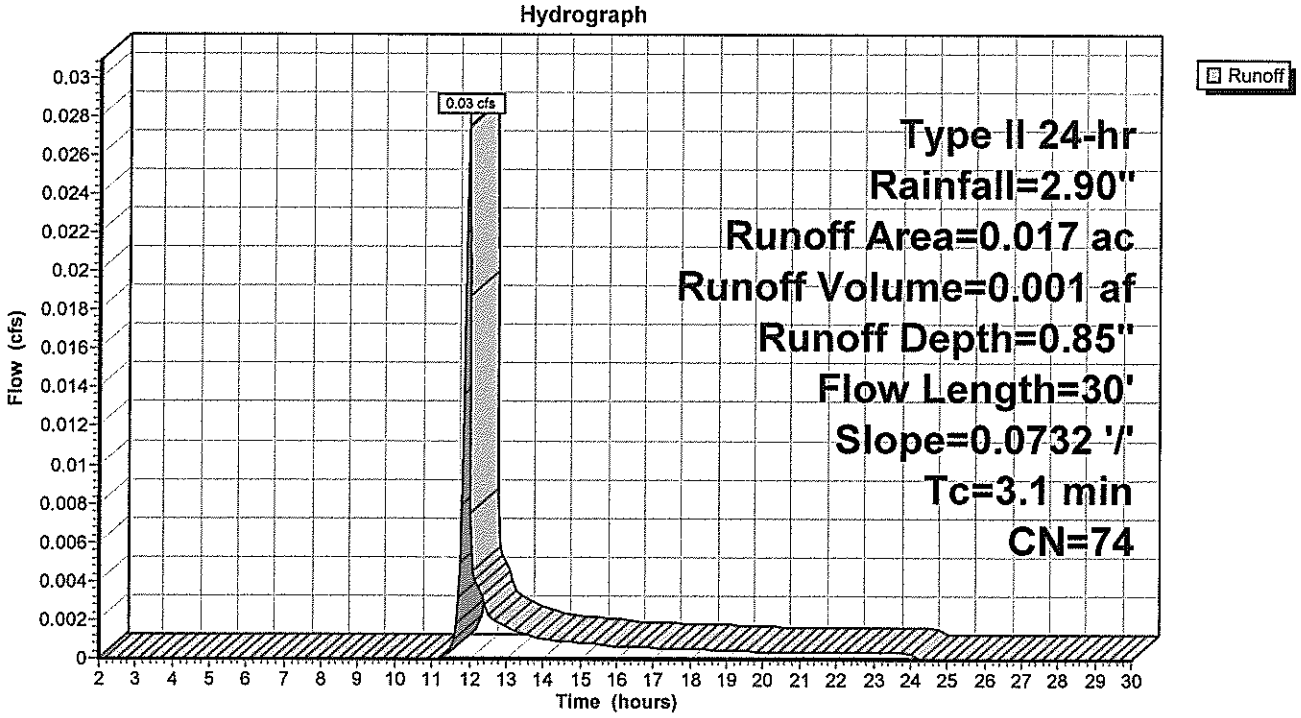
Runoff = 0.03 cfs @ 11.94 hrs, Volume= 0.001 af, Depth= 0.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.90"

Area (ac)	CN	Description
0.017	74	>75% Grass cover, Good, HSG C
0.017		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.1	30	0.0732	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.50"

Subcatchment 2E: (new Subcat)



Summary for Subcatchment 2P: (new Subcat)

[49] Hint: Tc<2dt may require smaller dt

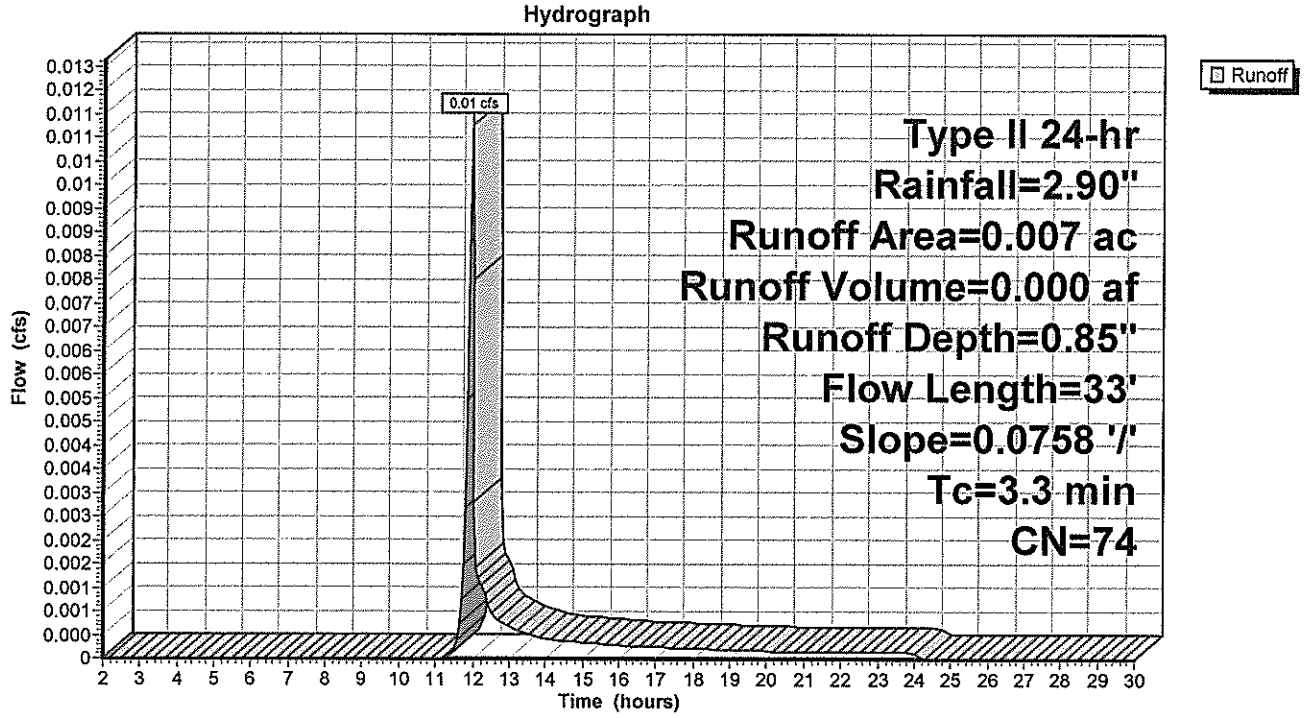
Runoff = 0.01 cfs @ 11.95 hrs, Volume= 0.000 af, Depth= 0.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.90"

Area (ac)	CN	Description
0.007	74	>75% Grass cover, Good, HSG C
0.007		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	33	0.0758	0.17		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.50"

Subcatchment 2P: (new Subcat)



Summary for Subcatchment 3E: (new Subcat)

[49] Hint: Tc<2dt may require smaller dt

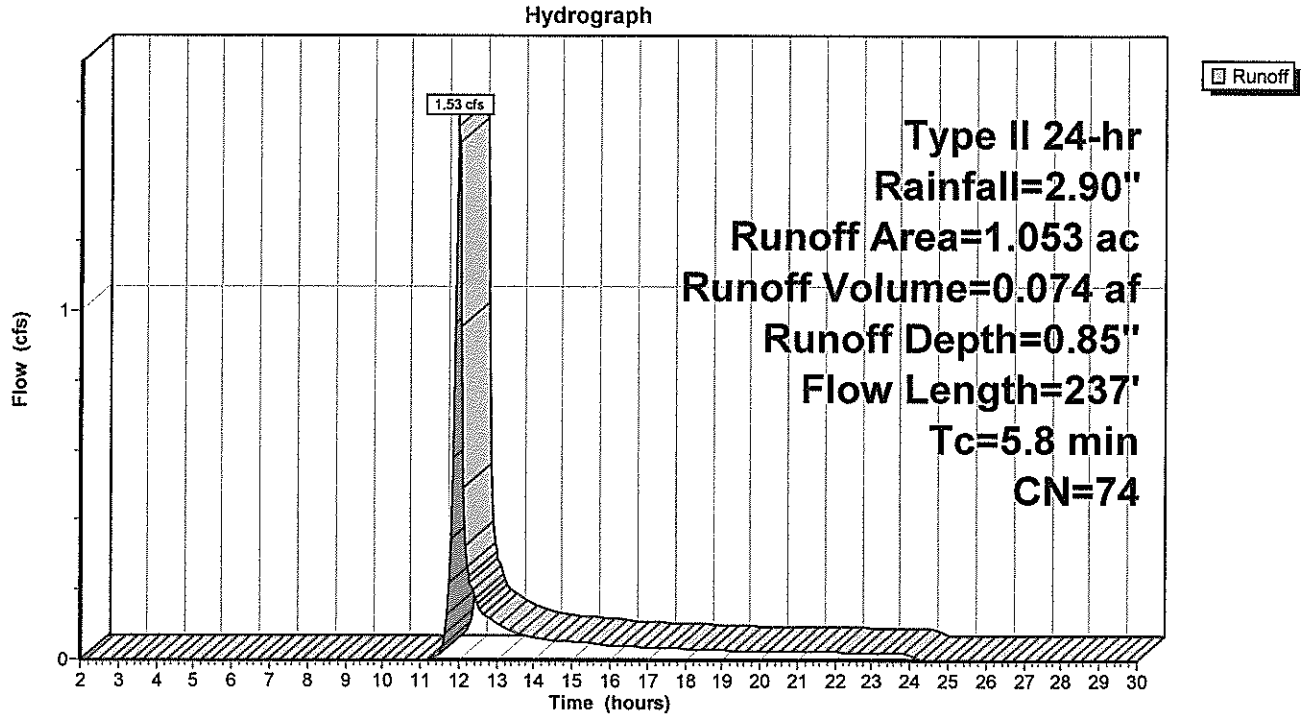
Runoff = 1.53 cfs @ 11.98 hrs, Volume= 0.074 af, Depth= 0.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.90"

Area (ac)	CN	Description
1.053	74	>75% Grass cover, Good, HSG C
1.053		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.4	100	0.2000	0.31		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.50"
0.4	137	0.1339	5.49		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
5.8	237	Total			

Subcatchment 3E: (new Subcat)



Summary for Subcatchment 3P: (new Subcat)

[49] Hint: Tc<2dt may require smaller dt

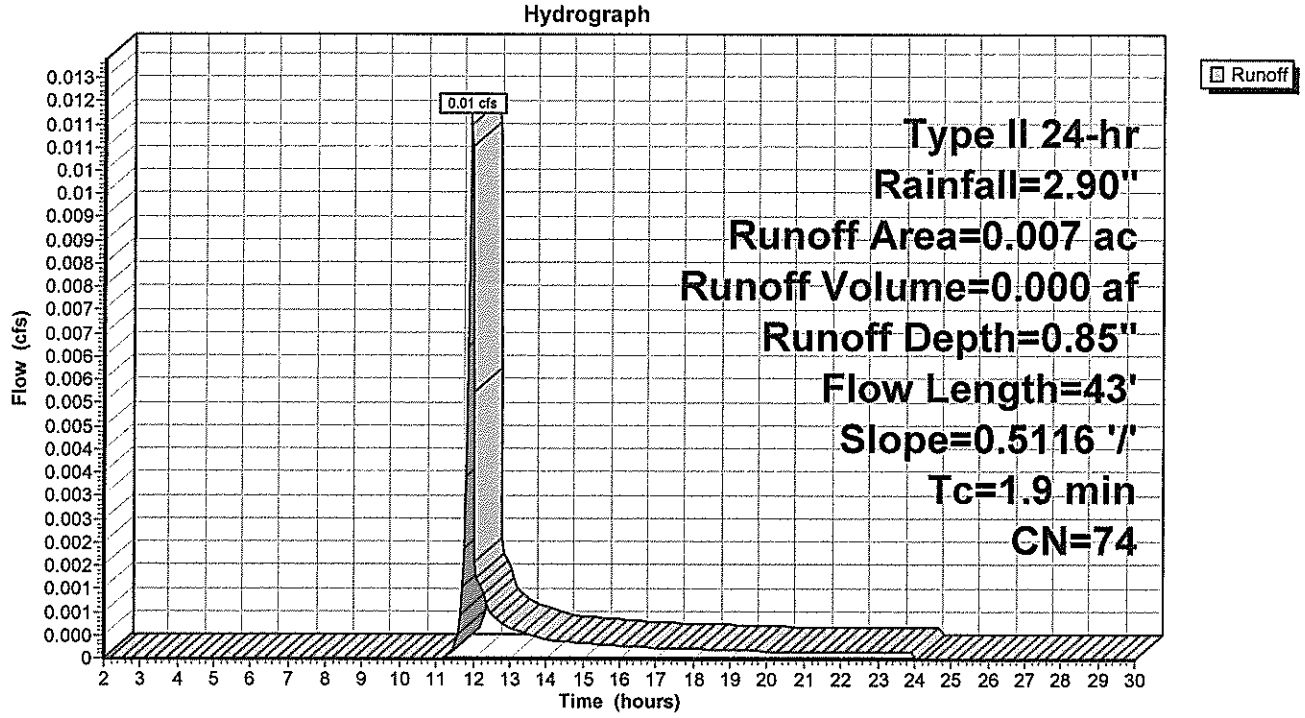
Runoff = 0.01 cfs @ 11.93 hrs, Volume= 0.000 af, Depth= 0.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.90"

Area (ac)	CN	Description
0.007	74	>75% Grass cover, Good, HSG C
0.007		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	43	0.5116	0.38		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.50"

Subcatchment 3P: (new Subcat)



Summary for Subcatchment 4P: (new Subcat)

[49] Hint: Tc<2dt may require smaller dt

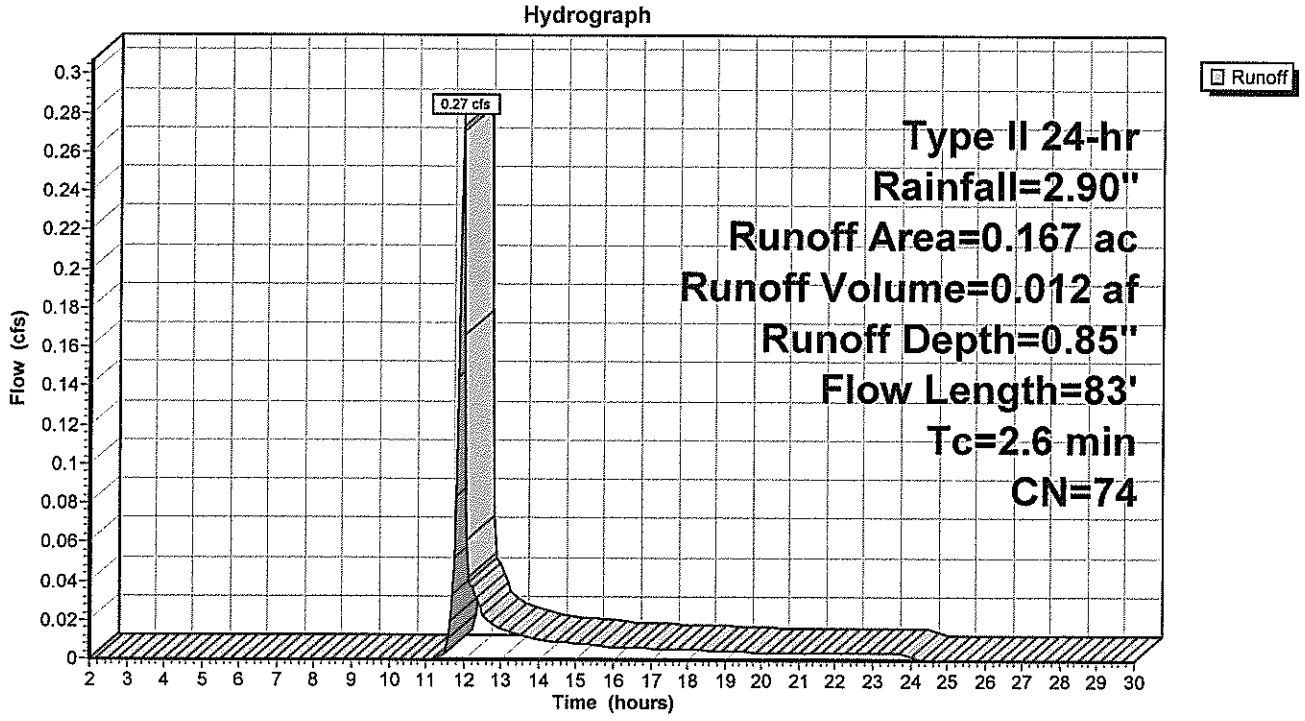
Runoff = 0.27 cfs @ 11.94 hrs, Volume= 0.012 af, Depth= 0.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.90"

Area (ac)	CN	Description
0.167	74	>75% Grass cover, Good, HSG C
0.167		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.4	30	0.1453	0.21		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.50"
0.2	53	0.0967	5.01		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
2.6	83	Total			

Subcatchment 4P: (new Subcat)



Summary for Subcatchment 5P: (new Subcat)

[49] Hint: Tc<2dt may require smaller dt

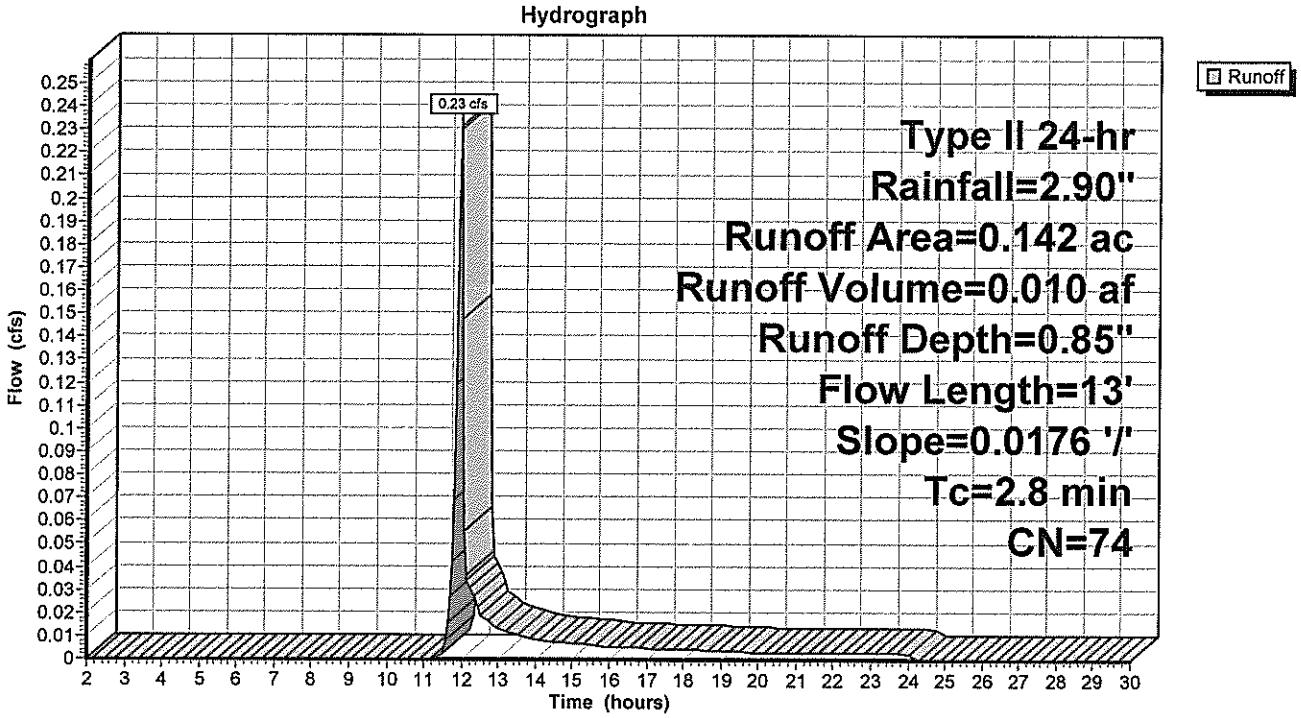
Runoff = 0.23 cfs @ 11.94 hrs, Volume= 0.010 af, Depth= 0.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.90"

Area (ac)	CN	Description
0.142	74	>75% Grass cover, Good, HSG C
0.142		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.8	13	0.0176	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.50"

Subcatchment 5P: (new Subcat)



Summary for Subcatchment 6P: (new Subcat)

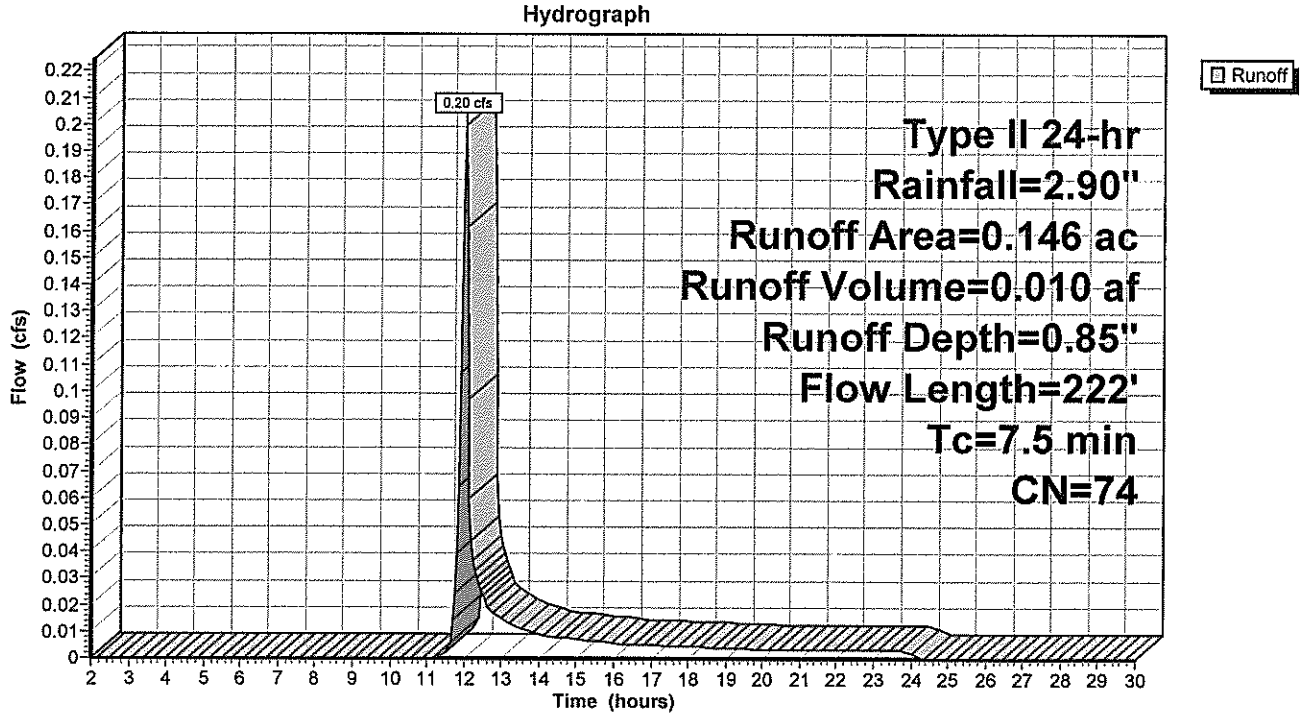
Runoff = 0.20 cfs @ 12.00 hrs, Volume= 0.010 af, Depth= 0.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.90"

Area (ac)	CN	Description
0.146	74	>75% Grass cover, Good, HSG C
0.146		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	60	0.0400	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.50"
0.6	162	0.0775	4.18		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
7.5	222	Total			

Subcatchment 6P: (new Subcat)



Summary for Pond DET1: (new Pond)

Inflow Area = 1.287 ac, 67.91% Impervious, Inflow Depth = 1.93"
Inflow = 4.56 cfs @ 11.93 hrs, Volume= 0.207 af
Outflow = 1.70 cfs @ 12.03 hrs, Volume= 0.207 af, Atten= 63%, Lag= 6.0 min
Primary = 1.70 cfs @ 12.03 hrs, Volume= 0.207 af

Routing by Stor-Ind method, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 983.05' @ 12.03 hrs Surf.Area= 0.085 ac Storage= 0.064 af

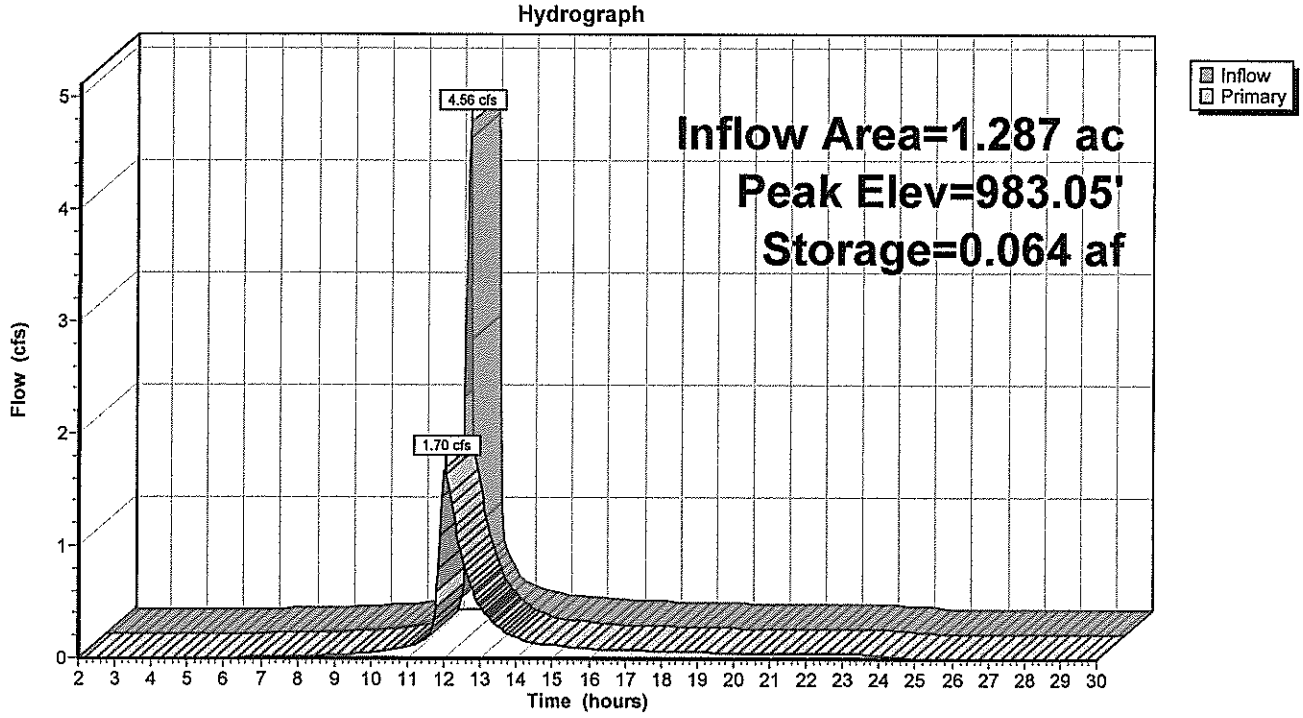
Plug-Flow detention time= 29.3 min calculated for 0.207 af (100% of inflow)
Center-of-Mass det. time= 29.1 min (827.6 - 798.5)

Volume	Invert	Avail.Storage	Storage Description
#1	982.03'	0.211 af	**36.0" Round Pipe Storage** L= 1,300.0'

Device	Routing	Invert	Outlet Devices
#1	Primary	982.03'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.03 1.03 1.93 1.93 3.00 Width (feet) 0.50 0.50 0.79 0.79 2.50 2.50

Primary OutFlow Max=1.68 cfs @ 12.03 hrs HW=983.05' (Free Discharge)
↑**1=Custom Weir/Orifice** (Weir Controls 1.68 cfs @ 3.31 fps)

Pond DET1: (new Pond)

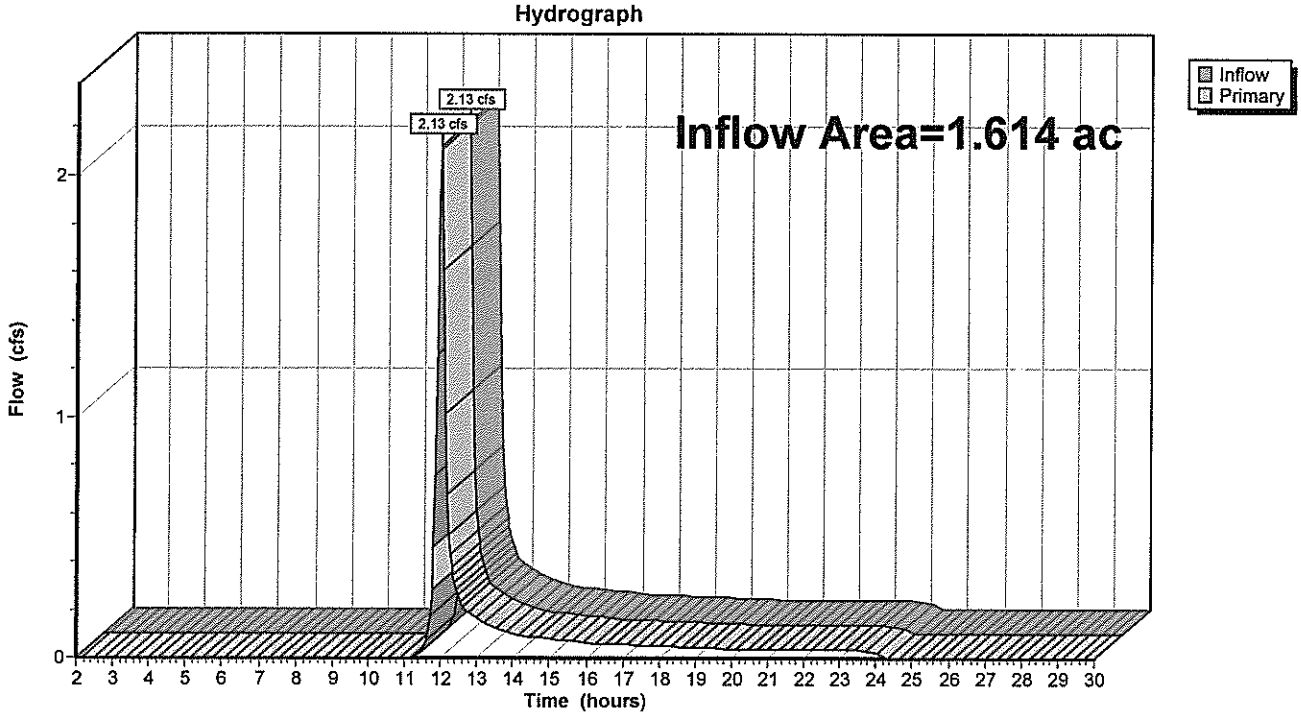


Summary for Link 4E: (new Link)

Inflow Area = 1.614 ac, 0.00% Impervious, Inflow Depth = 0.85"
Inflow = 2.13 cfs @ 11.99 hrs, Volume= 0.114 af
Primary = 2.13 cfs @ 11.99 hrs, Volume= 0.114 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs

Link 4E: (new Link)



Summary for Link 10L: (new Link)

Inflow Area = 1.614 ac, 54.15% Impervious, Inflow Depth = 1.71"
Inflow = 2.06 cfs @ 12.00 hrs, Volume= 0.230 af
Primary = 2.06 cfs @ 12.00 hrs, Volume= 0.230 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs

Link 10L: (new Link)

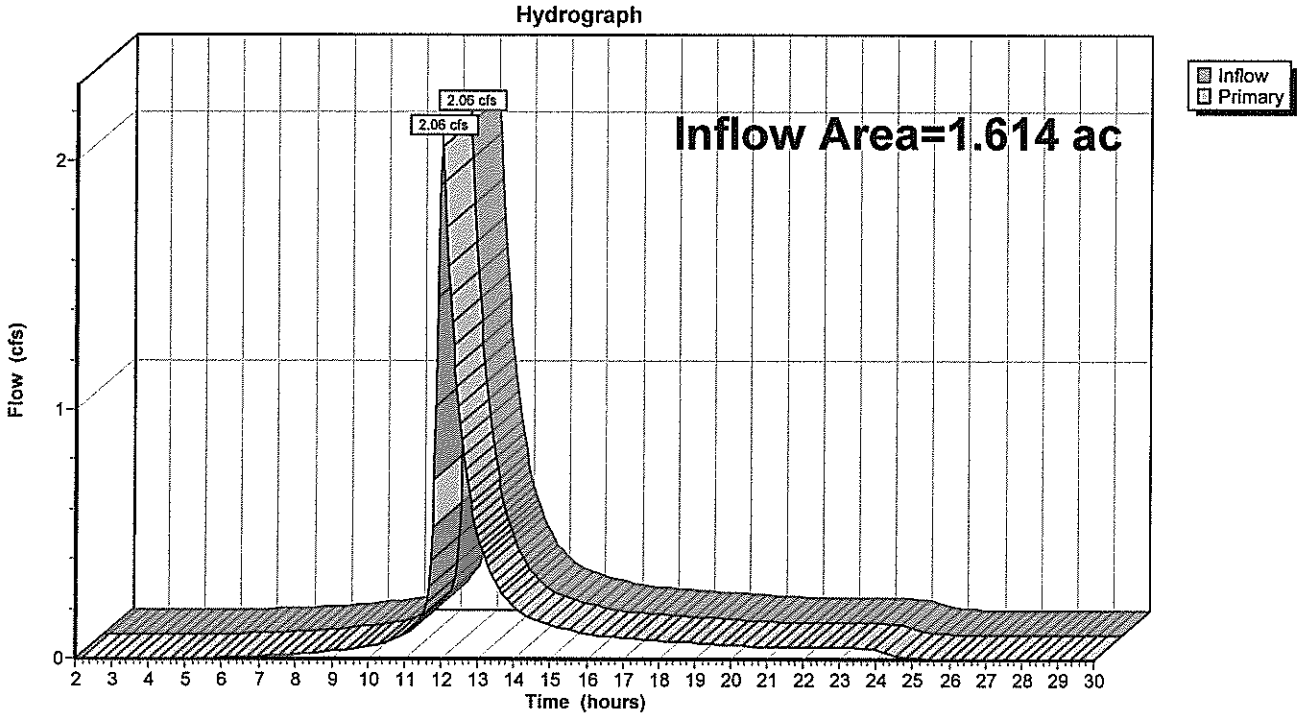
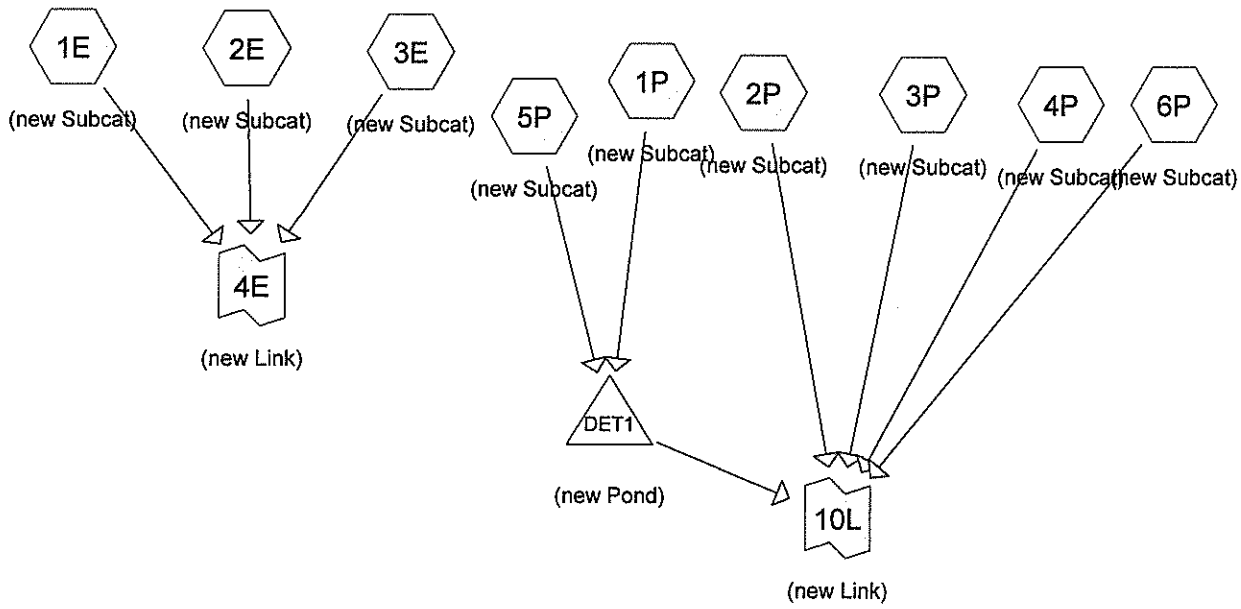


Exhibit 3
10-year Storm Calculations



Subcat Reach Pond Link

Routing Diagram for 400 NW 72 Street
Prepared by HP, Printed 7/20/2023

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.354	74	>75% Grass cover, Good, HSG C (1E, 1P, 2E, 2P, 3E, 3P, 4P, 5P, 6P)
0.874	98	Paved parking, HSG C (1P)
3.228	**80**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
3.228	HSG C	1E, 1P, 2E, 2P, 3E, 3P, 4P, 5P, 6P
0.000	HSG D	
0.000	Other	
3.228		**TOTAL AREA**

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	2.354	0.000	0.000	2.354	>75% Grass cover, Good	1E, 1P, 2E, 2P, 3E, 3P, 4P, 5P, 6P
0.000	0.000	0.874	0.000	0.000	0.874	Paved parking	1P
0.000	**0.000**	**3.228**	**0.000**	**0.000**	**3.228**	**TOTAL AREA**	

Time span=2.00-30.00 hrs, dt=0.05 hrs, 561 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1E: (new Subcat) Runoff Area=0.544 ac 0.00% Impervious Runoff Depth=2.52"
Flow Length=81' Slope=0.0247 '/' Tc=10.6 min CN=74 Runoff=2.04 cfs 0.114 af

Subcatchment 1P: (new Subcat) Runoff Area=1.145 ac 76.33% Impervious Runoff Depth=4.28"
Flow Length=249' Tc=2.8 min CN=92 Runoff=8.53 cfs 0.409 af

Subcatchment 2E: (new Subcat) Runoff Area=0.017 ac 0.00% Impervious Runoff Depth=2.52"
Flow Length=30' Slope=0.0732 '/' Tc=3.1 min CN=74 Runoff=0.08 cfs 0.004 af

Subcatchment 2P: (new Subcat) Runoff Area=0.007 ac 0.00% Impervious Runoff Depth=2.52"
Flow Length=33' Slope=0.0758 '/' Tc=3.3 min CN=74 Runoff=0.03 cfs 0.001 af

Subcatchment 3E: (new Subcat) Runoff Area=1.053 ac 0.00% Impervious Runoff Depth=2.52"
Flow Length=237' Tc=5.8 min CN=74 Runoff=4.62 cfs 0.222 af

Subcatchment 3P: (new Subcat) Runoff Area=0.007 ac 0.00% Impervious Runoff Depth=2.52"
Flow Length=43' Slope=0.5116 '/' Tc=1.9 min CN=74 Runoff=0.03 cfs 0.001 af

Subcatchment 4P: (new Subcat) Runoff Area=0.167 ac 0.00% Impervious Runoff Depth=2.52"
Flow Length=83' Tc=2.6 min CN=74 Runoff=0.82 cfs 0.035 af

Subcatchment 5P: (new Subcat) Runoff Area=0.142 ac 0.00% Impervious Runoff Depth=2.52"
Flow Length=13' Slope=0.0176 '/' Tc=2.8 min CN=74 Runoff=0.70 cfs 0.030 af

Subcatchment 6P: (new Subcat) Runoff Area=0.146 ac 0.00% Impervious Runoff Depth=2.52"
Flow Length=222' Tc=7.5 min CN=74 Runoff=0.61 cfs 0.031 af

Pond DET1: (new Pond) Peak Elev=983.76' Storage=0.126 af Inflow=9.22 cfs 0.439 af
Outflow=4.30 cfs 0.439 af

Link 4E: (new Link) Inflow=6.54 cfs 0.340 af
Primary=6.54 cfs 0.340 af

Link 10L: (new Link) Inflow=5.38 cfs 0.508 af
Primary=5.38 cfs 0.508 af

Total Runoff Area = 3.228 ac Runoff Volume = 0.847 af Average Runoff Depth = 3.15"
72.92% Pervious = 2.354 ac 27.08% Impervious = 0.874 ac

Summary for Subcatchment 1E: (new Subcat)

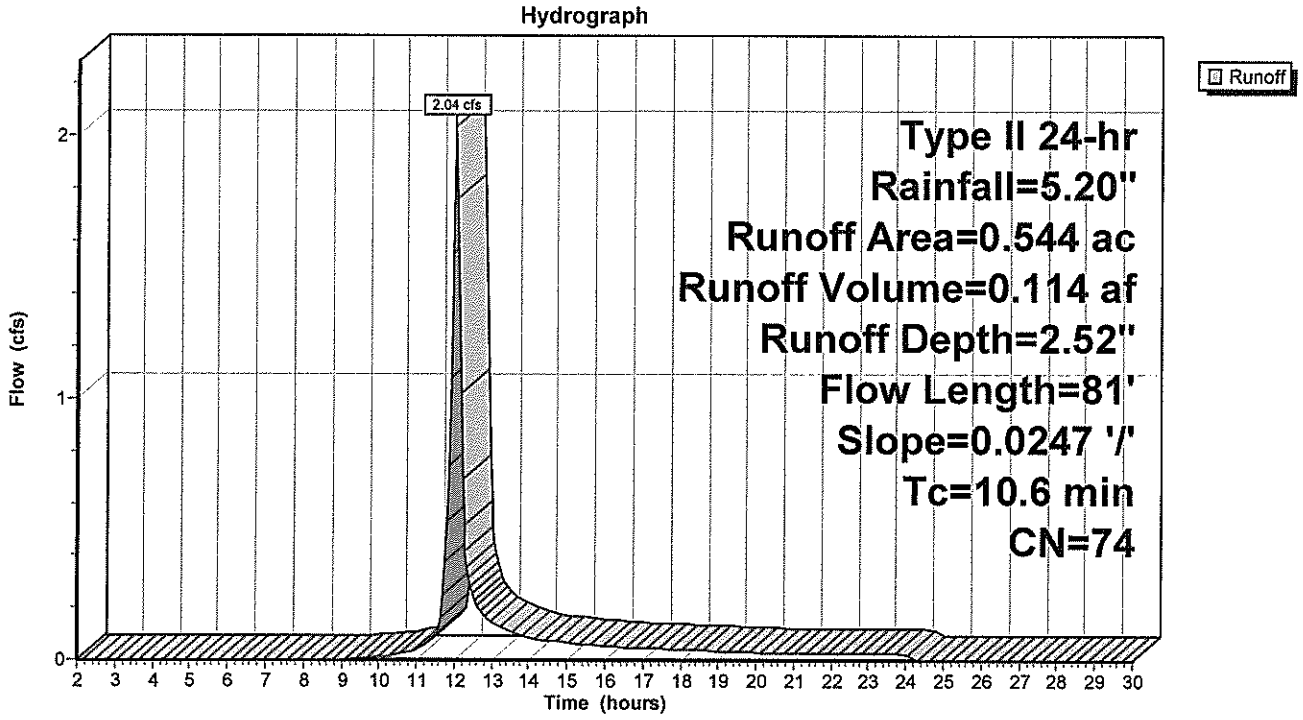
Runoff = 2.04 cfs @ 12.03 hrs, Volume= 0.114 af, Depth= 2.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=5.20"

Area (ac)	CN	Description
0.544	74	>75% Grass cover, Good, HSG C
0.544		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	81	0.0247	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.50"

Subcatchment 1E: (new Subcat)



Summary for Subcatchment 1P: (new Subcat)

[49] Hint: Tc<2dt may require smaller dt

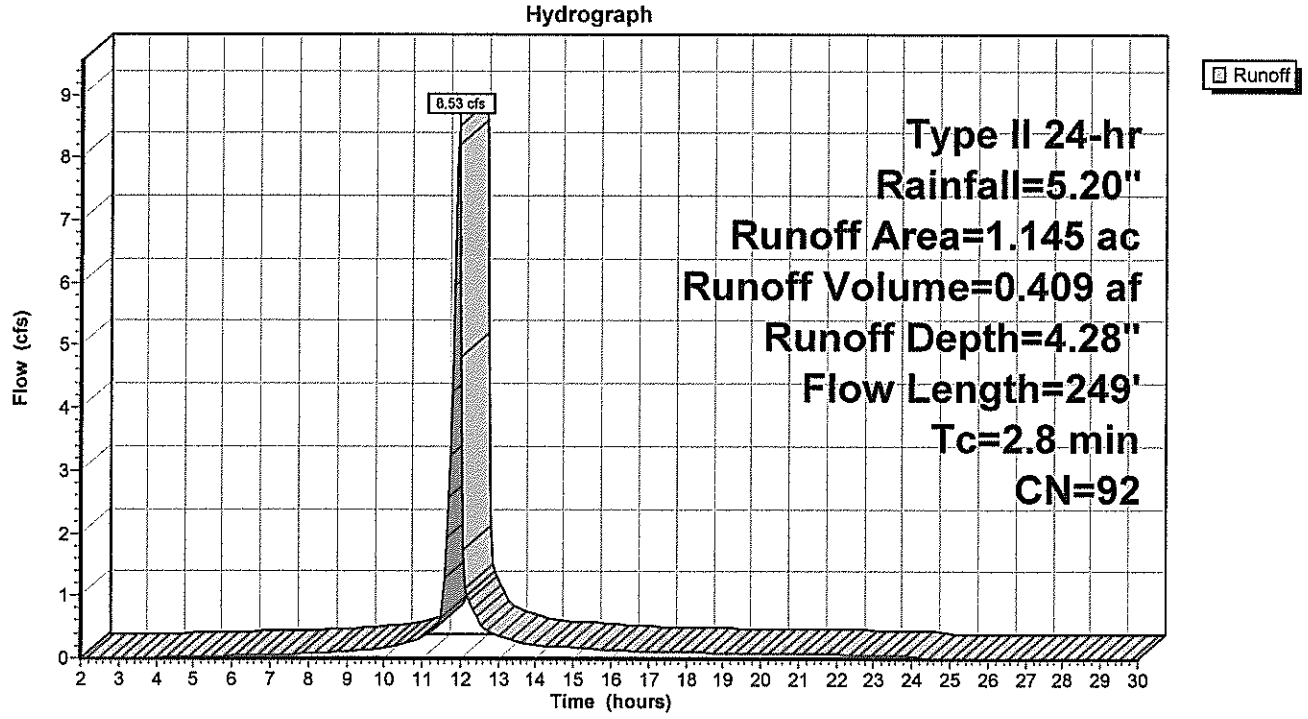
Runoff = 8.53 cfs @ 11.93 hrs, Volume= 0.409 af, Depth= 4.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=5.20"

Area (ac)	CN	Description
0.271	74	>75% Grass cover, Good, HSG C
0.874	98	Paved parking, HSG C
1.145	92	Weighted Average
0.271		23.67% Pervious Area
0.874		76.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0065	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"
1.0	149	0.0151	2.49		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.8	249	Total			

Subcatchment 1P: (new Subcat)



Summary for Subcatchment 2E: (new Subcat)

[49] Hint: Tc<2dt may require smaller dt

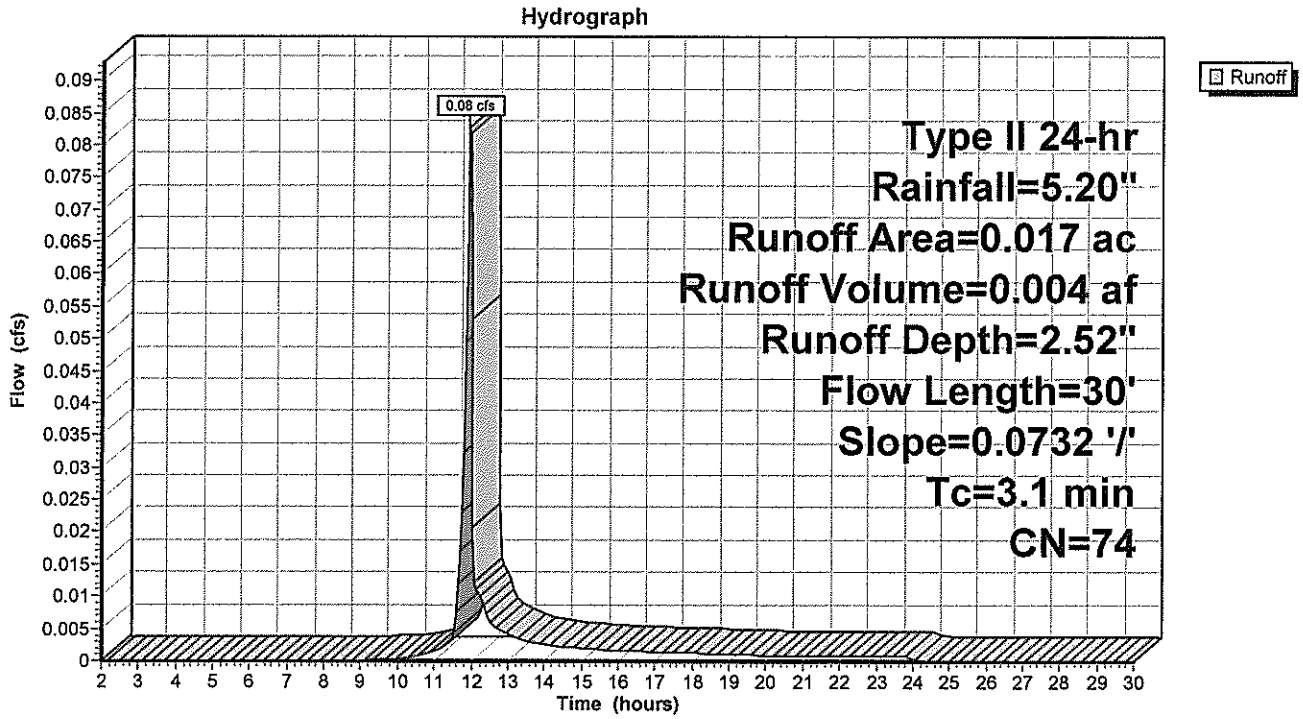
Runoff = 0.08 cfs @ 11.94 hrs, Volume= 0.004 af, Depth= 2.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=5.20"

Area (ac)	CN	Description
0.017	74	>75% Grass cover, Good, HSG C
0.017		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.1	30	0.0732	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.50"

Subcatchment 2E: (new Subcat)



Summary for Subcatchment 2P: (new Subcat)

[49] Hint: Tc<2dt may require smaller dt

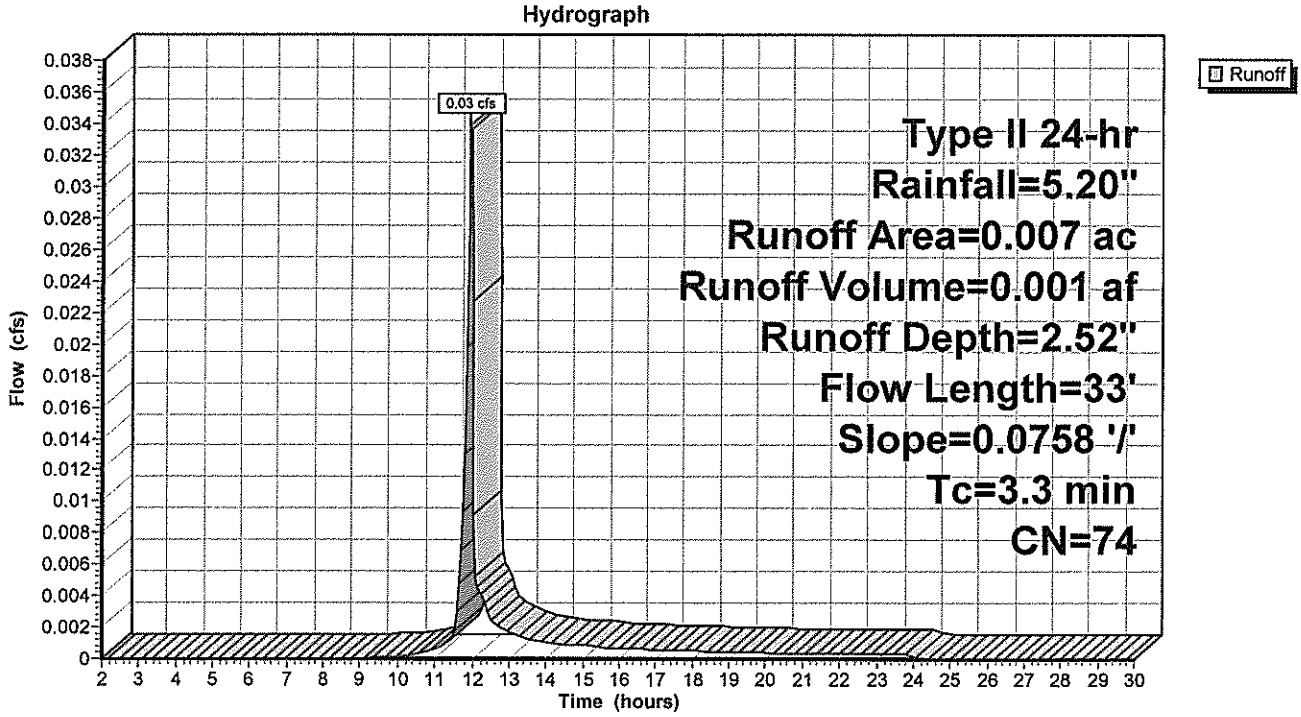
Runoff = 0.03 cfs @ 11.94 hrs, Volume= 0.001 af, Depth= 2.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=5.20"

Area (ac)	CN	Description
0.007	74	>75% Grass cover, Good, HSG C
0.007		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	33	0.0758	0.17		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.50"

Subcatchment 2P: (new Subcat)



Summary for Subcatchment 3E: (new Subcat)

[49] Hint: Tc<2dt may require smaller dt

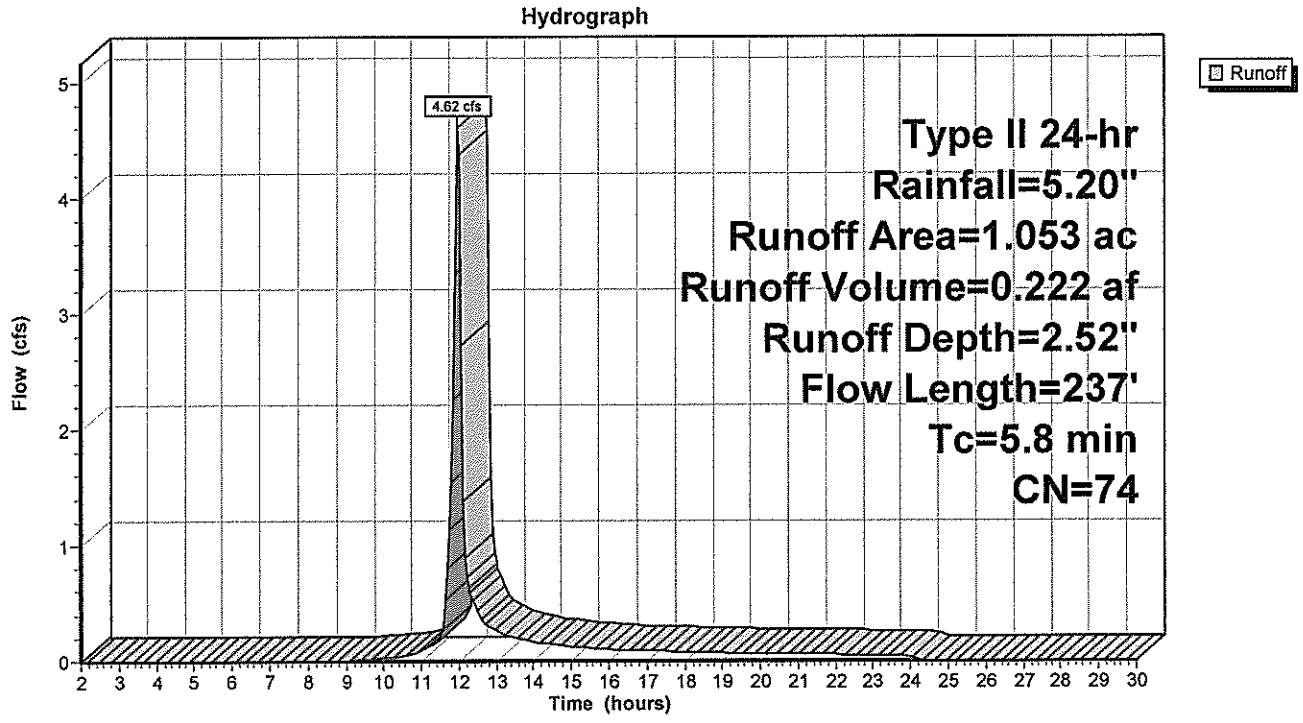
Runoff = 4.62 cfs @ 11.97 hrs, Volume= 0.222 af, Depth= 2.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=5.20"

Area (ac)	CN	Description
1.053	74	>75% Grass cover, Good, HSG C
1.053		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.4	100	0.2000	0.31		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.50"
0.4	137	0.1339	5.49		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
5.8	237	Total			

Subcatchment 3E: (new Subcat)



Summary for Subcatchment 3P: (new Subcat)

[49] Hint: Tc<2dt may require smaller dt

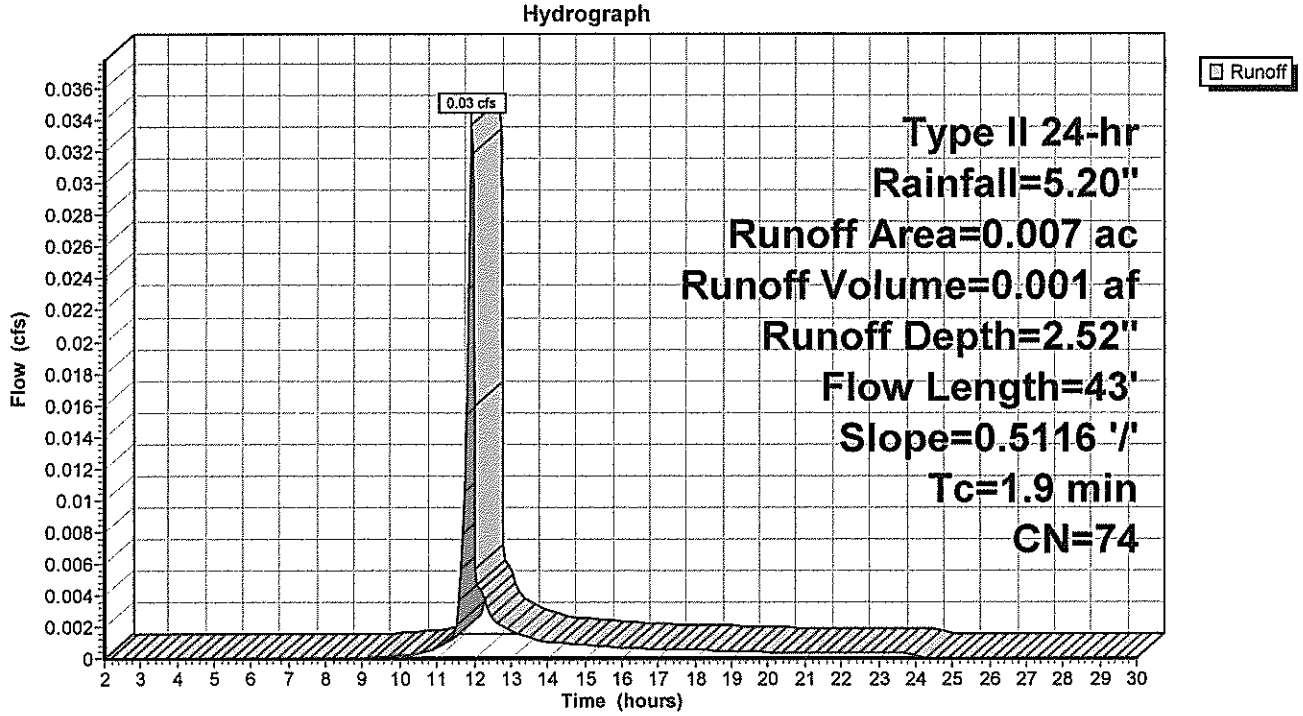
Runoff = 0.03 cfs @ 11.92 hrs, Volume= 0.001 af, Depth= 2.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=5.20"

Area (ac)	CN	Description
0.007	74	>75% Grass cover, Good, HSG C
0.007		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	43	0.5116	0.38		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.50"

Subcatchment 3P: (new Subcat)



Summary for Subcatchment 4P: (new Subcat)

[49] Hint: Tc<2dt may require smaller dt

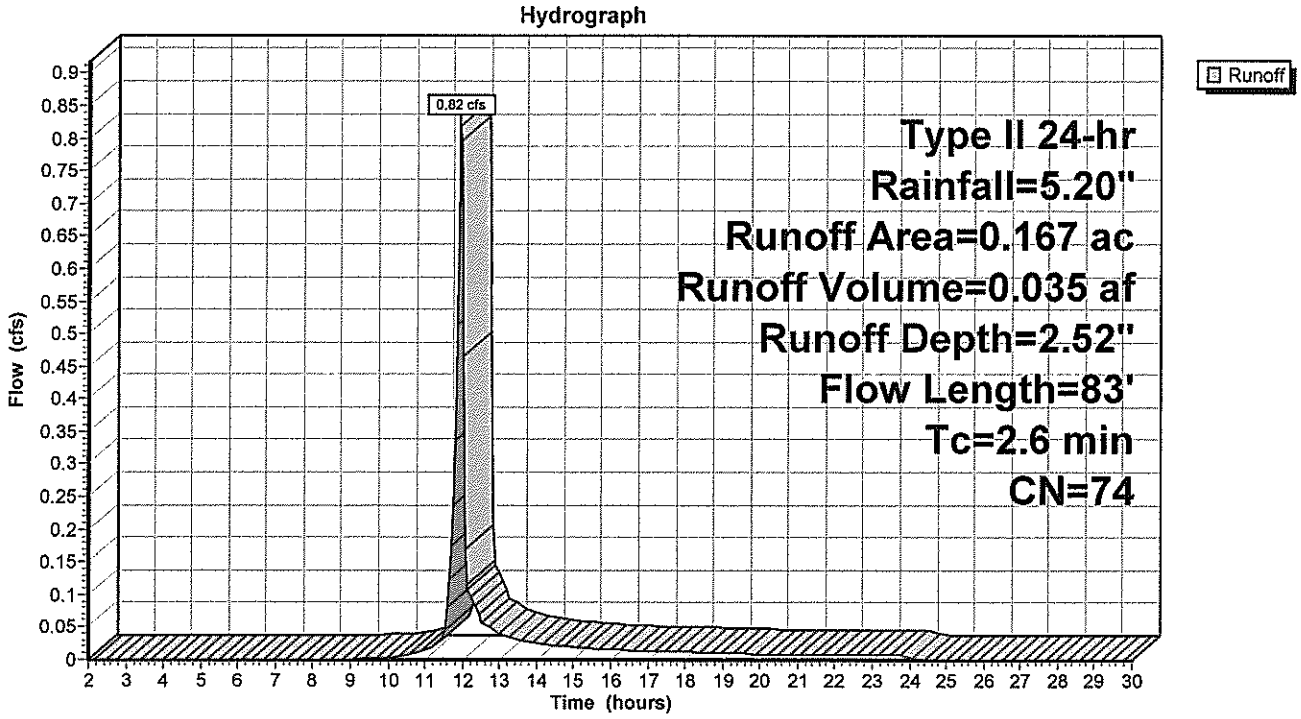
Runoff = 0.82 cfs @ 11.93 hrs, Volume= 0.035 af, Depth= 2.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=5.20"

Area (ac)	CN	Description
0.167	74	>75% Grass cover, Good, HSG C
0.167		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.4	30	0.1453	0.21		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.50"
0.2	53	0.0967	5.01		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
2.6	83	Total			

Subcatchment 4P: (new Subcat)



Summary for Subcatchment 5P: (new Subcat)

[49] Hint: Tc<2dt may require smaller dt

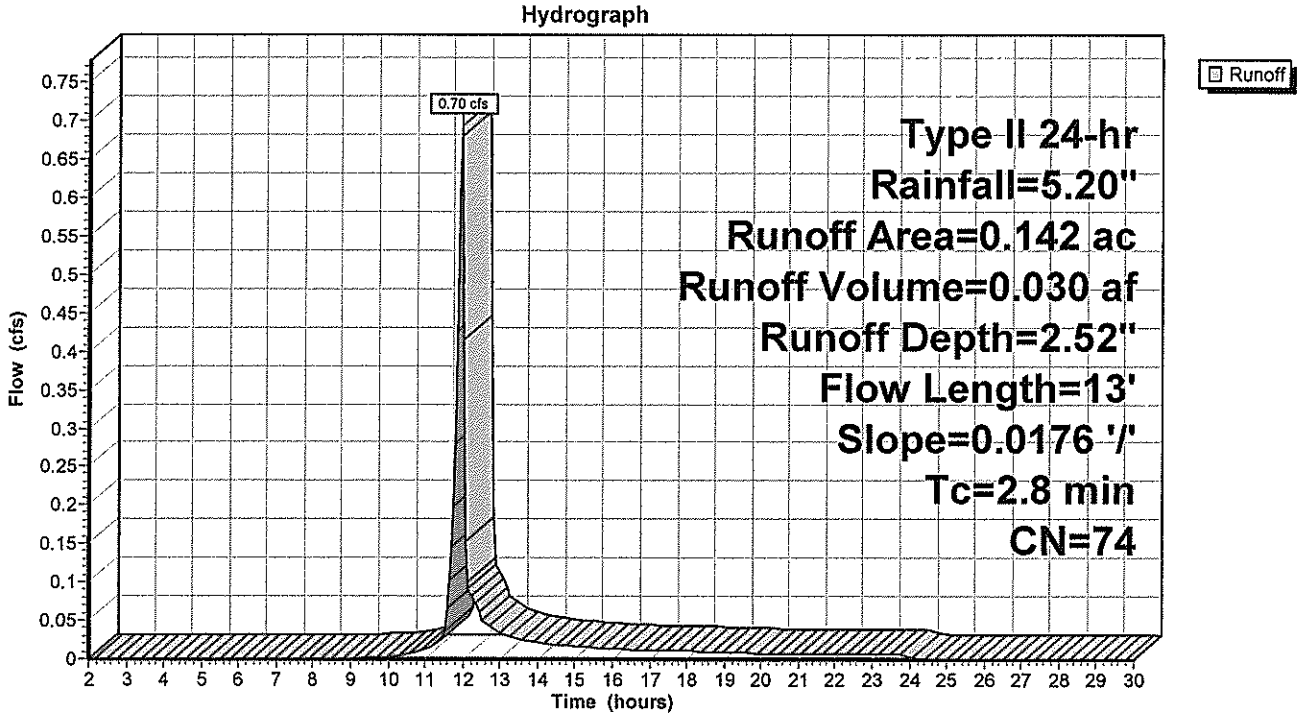
Runoff = 0.70 cfs @ 11.94 hrs, Volume= 0.030 af, Depth= 2.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=5.20"

Area (ac)	CN	Description
0.142	74	>75% Grass cover, Good, HSG C
0.142		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.8	13	0.0176	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.50"

Subcatchment 5P: (new Subcat)



Summary for Subcatchment 6P: (new Subcat)

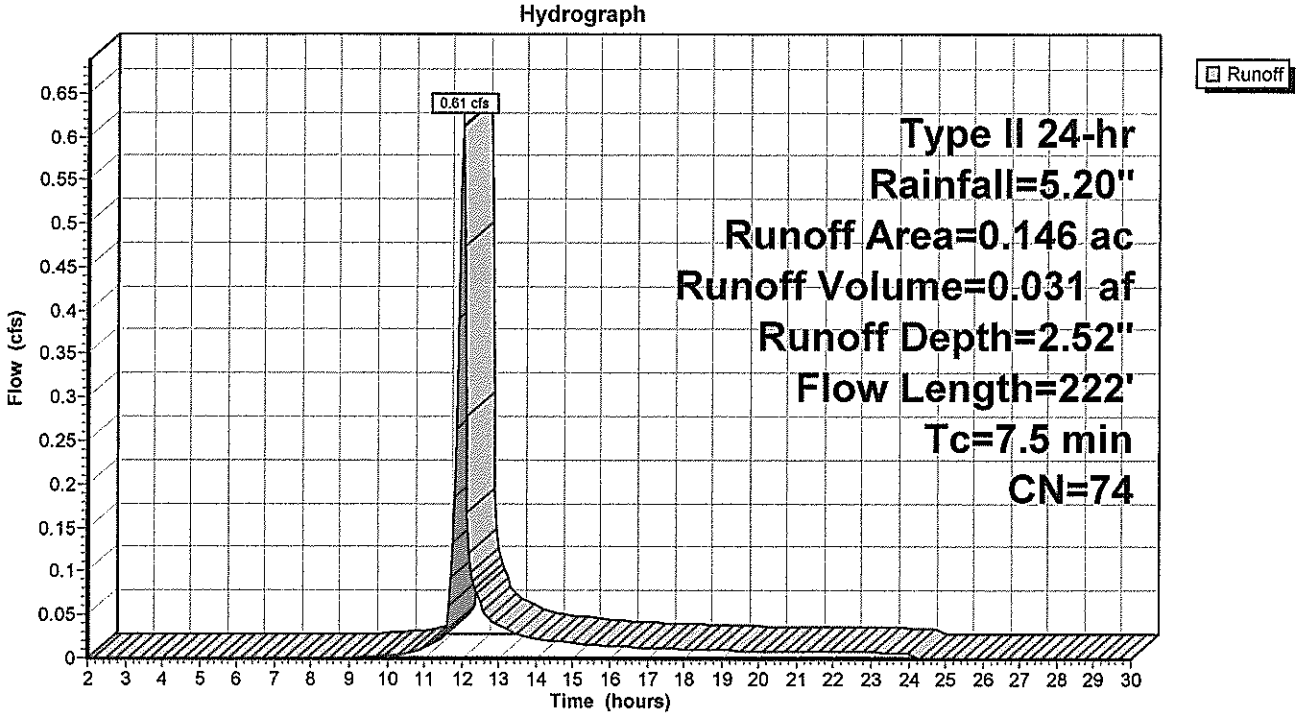
Runoff = 0.61 cfs @ 11.99 hrs, Volume= 0.031 af, Depth= 2.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=5.20"

Area (ac)	CN	Description
0.146	74	>75% Grass cover, Good, HSG C
0.146		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	60	0.0400	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.50"
0.6	162	0.0775	4.18		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
7.5	222	Total			

Subcatchment 6P: (new Subcat)



Summary for Pond DET1: (new Pond)

Inflow Area = 1.287 ac, 67.91% Impervious, Inflow Depth = 4.09"
Inflow = 9.22 cfs @ 11.93 hrs, Volume= 0.439 af
Outflow = 4.30 cfs @ 12.02 hrs, Volume= 0.439 af, Atten= 53%, Lag= 5.2 min
Primary = 4.30 cfs @ 12.02 hrs, Volume= 0.439 af

Routing by Stor-Ind method, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 983.76' @ 12.02 hrs Surf.Area= 0.088 ac Storage= 0.126 af

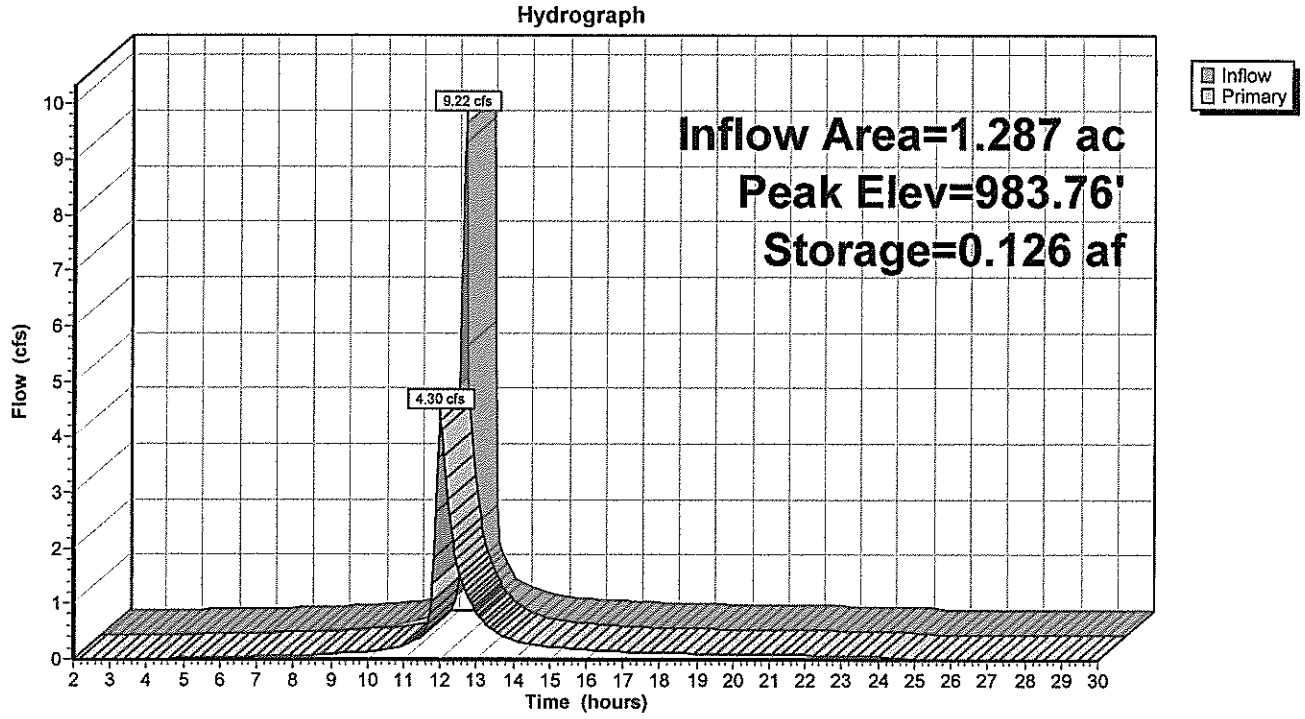
Plug-Flow detention time= 27.3 min calculated for 0.438 af (100% of inflow)
Center-of-Mass det. time= 27.4 min (806.2 - 778.8)

Volume	Invert	Avail.Storage	Storage Description
#1	982.03'	0.211 af	**36.0" Round Pipe Storage** L= 1,300.0'

Device	Routing	Invert	Outlet Devices
#1	Primary	982.03'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.03 1.03 1.93 1.93 3.00 Width (feet) 0.50 0.50 0.79 0.79 2.50 2.50

Primary OutFlow Max=4.21 cfs @ 12.02 hrs HW=983.74' (Free Discharge)
↑—**1=Custom Weir/Orifice** (Weir Controls 4.21 cfs @ 3.99 fps)

Pond DET1: (new Pond)

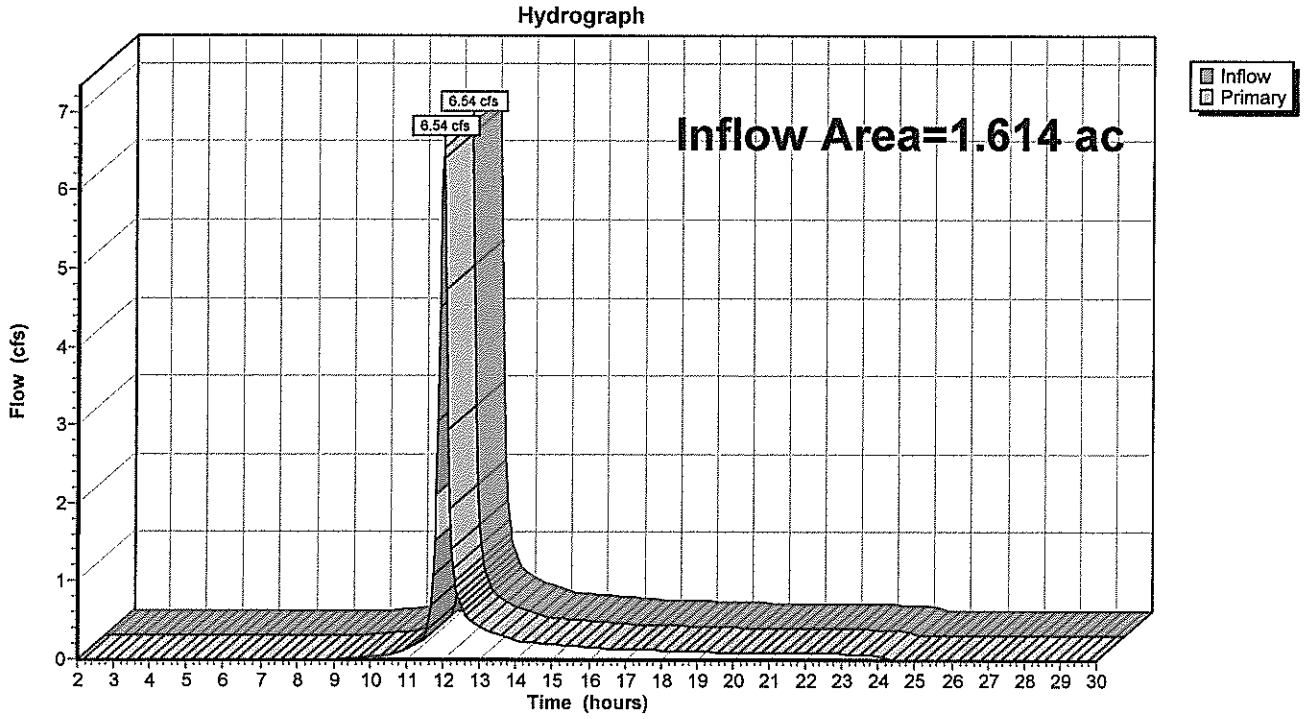


Summary for Link 4E: (new Link)

Inflow Area = 1.614 ac, 0.00% Impervious, Inflow Depth = 2.52"
Inflow = 6.54 cfs @ 11.98 hrs, Volume= 0.340 af
Primary = 6.54 cfs @ 11.98 hrs, Volume= 0.340 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs

Link 4E: (new Link)



Summary for Link 10L: (new Link)

Inflow Area = 1.614 ac, 54.15% Impervious, Inflow Depth = 3.77"
Inflow = 5.38 cfs @ 11.99 hrs, Volume= 0.508 af
Primary = 5.38 cfs @ 11.99 hrs, Volume= 0.508 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs

Link 10L: (new Link)

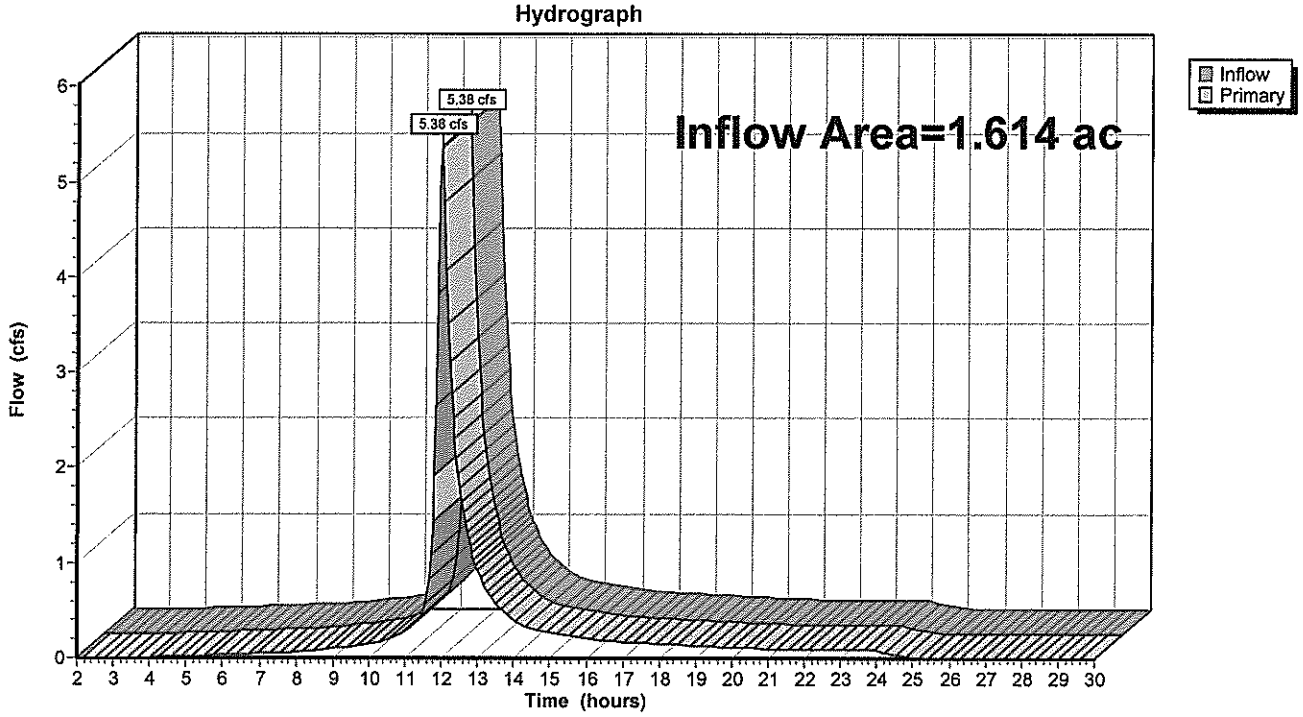
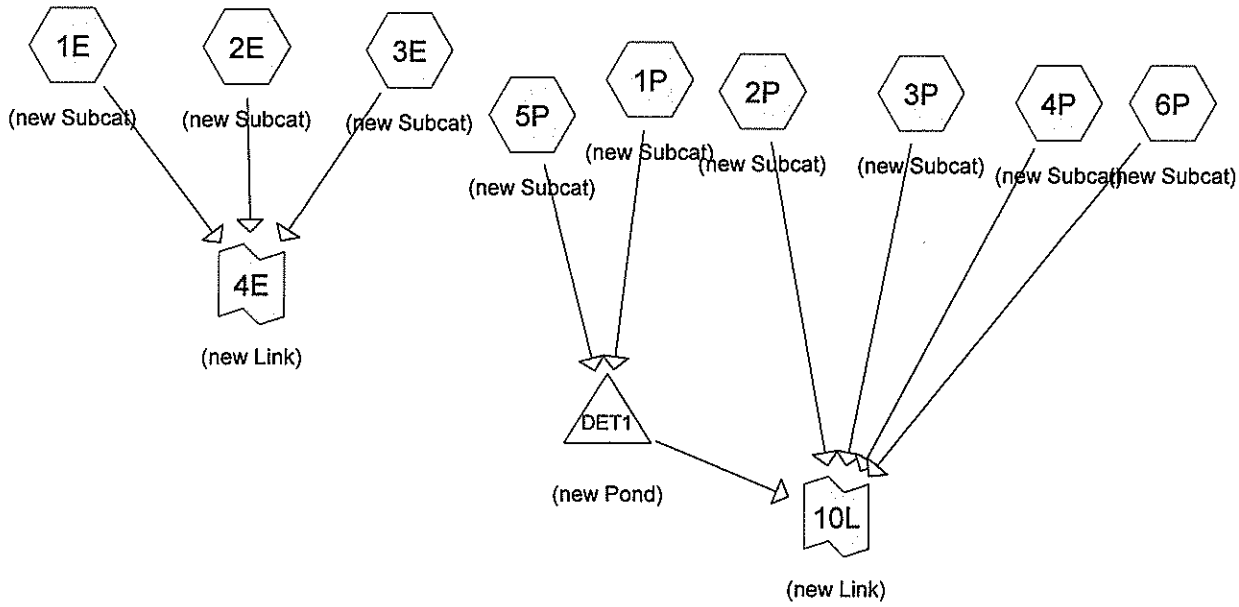
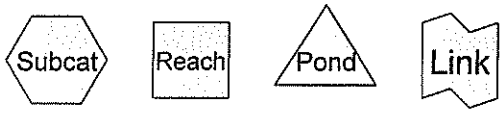


Exhibit 4
100-year Storm Calculations





Routing Diagram for 400 NW 72 Street
Prepared by HP, Printed 7/20/2023

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.354	74	>75% Grass cover, Good, HSG C (1E, 1P, 2E, 2P, 3E, 3P, 4P, 5P, 6P)
0.874	98	Paved parking, HSG C (1P)
3.228	**80**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
3.228	HSG C	1E, 1P, 2E, 2P, 3E, 3P, 4P, 5P, 6P
0.000	HSG D	
0.000	Other	
3.228		**TOTAL AREA**

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	2.354	0.000	0.000	2.354	>75% Grass cover, Good	1E, 1P, 2E, 2P, 3E, 3P, 4P, 5P, 6P
0.000	0.000	0.874	0.000	0.000	0.874	Paved parking	1P
0.000	**0.000**	**3.228**	**0.000**	**0.000**	**3.228**	**TOTAL AREA**	

Time span=2.00-30.00 hrs, dt=0.05 hrs, 561 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1E: (new Subcat) Runoff Area=0.544 ac 0.00% Impervious Runoff Depth=4.57"
Flow Length=81' Slope=0.0247 '/' Tc=10.6 min CN=74 Runoff=3.65 cfs 0.207 af

Subcatchment 1P: (new Subcat) Runoff Area=1.145 ac 76.33% Impervious Runoff Depth=6.65"
Flow Length=249' Tc=2.8 min CN=92 Runoff=12.83 cfs 0.634 af

Subcatchment 2E: (new Subcat) Runoff Area=0.017 ac 0.00% Impervious Runoff Depth=4.57"
Flow Length=30' Slope=0.0732 '/' Tc=3.1 min CN=74 Runoff=0.15 cfs 0.006 af

Subcatchment 2P: (new Subcat) Runoff Area=0.007 ac 0.00% Impervious Runoff Depth=4.57"
Flow Length=33' Slope=0.0758 '/' Tc=3.3 min CN=74 Runoff=0.06 cfs 0.003 af

Subcatchment 3E: (new Subcat) Runoff Area=1.053 ac 0.00% Impervious Runoff Depth=4.57"
Flow Length=237' Tc=5.8 min CN=74 Runoff=8.24 cfs 0.401 af

Subcatchment 3P: (new Subcat) Runoff Area=0.007 ac 0.00% Impervious Runoff Depth=4.57"
Flow Length=43' Slope=0.5116 '/' Tc=1.9 min CN=74 Runoff=0.06 cfs 0.003 af

Subcatchment 4P: (new Subcat) Runoff Area=0.167 ac 0.00% Impervious Runoff Depth=4.57"
Flow Length=83' Tc=2.6 min CN=74 Runoff=1.45 cfs 0.064 af

Subcatchment 5P: (new Subcat) Runoff Area=0.142 ac 0.00% Impervious Runoff Depth=4.57"
Flow Length=13' Slope=0.0176 '/' Tc=2.8 min CN=74 Runoff=1.23 cfs 0.054 af

Subcatchment 6P: (new Subcat) Runoff Area=0.146 ac 0.00% Impervious Runoff Depth=4.57"
Flow Length=222' Tc=7.5 min CN=74 Runoff=1.10 cfs 0.056 af

Pond DET1: (new Pond) Peak Elev=984.37' Storage=0.177 af Inflow=14.06 cfs 0.688 af
Outflow=8.78 cfs 0.688 af

Link 4E: (new Link) Inflow=11.69 cfs 0.615 af
Primary=11.69 cfs 0.615 af

Link 10L: (new Link) Inflow=10.81 cfs 0.813 af
Primary=10.81 cfs 0.813 af

Total Runoff Area = 3.228 ac Runoff Volume = 1.427 af Average Runoff Depth = 5.31"
72.92% Pervious = 2.354 ac 27.08% Impervious = 0.874 ac

Summary for Subcatchment 1E: (new Subcat)

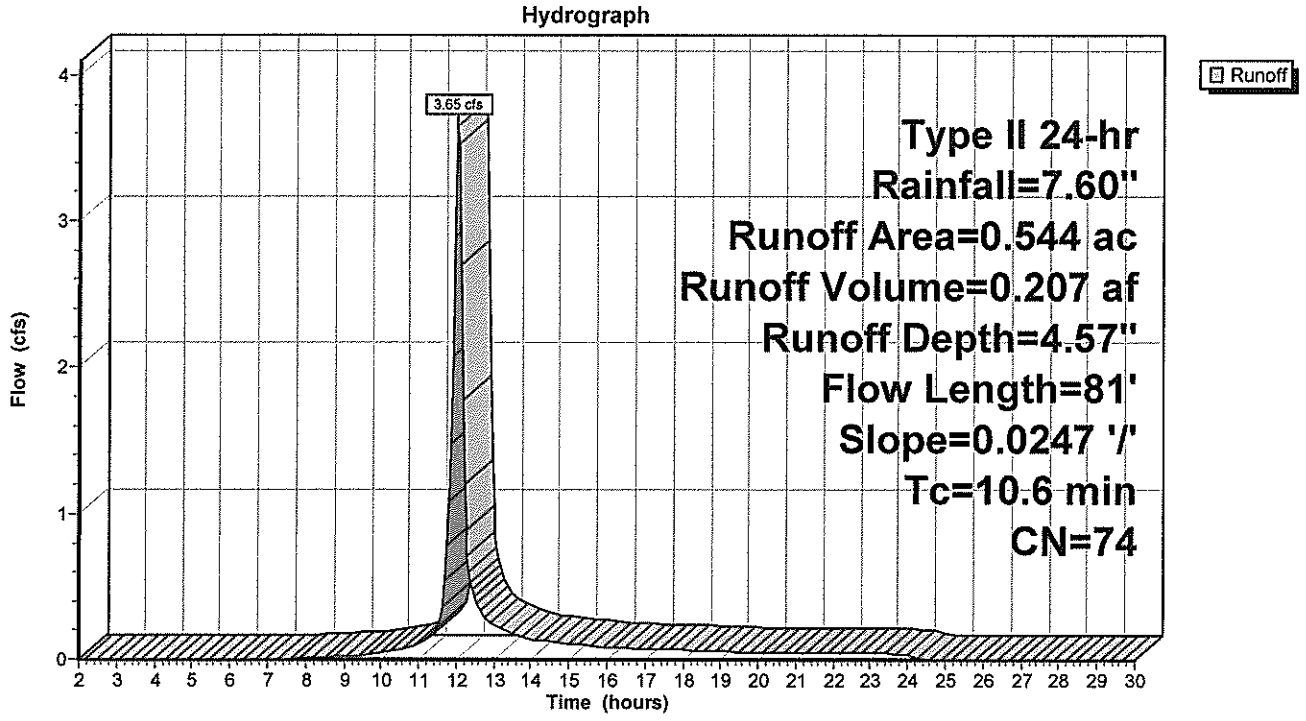
Runoff = 3.65 cfs @ 12.02 hrs, Volume= 0.207 af, Depth= 4.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=7.60"

Area (ac)	CN	Description
0.544	74	>75% Grass cover, Good, HSG C
0.544		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	81	0.0247	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.50"

Subcatchment 1E: (new Subcat)



Summary for Subcatchment 1P: (new Subcat)

[49] Hint: Tc<2dt may require smaller dt

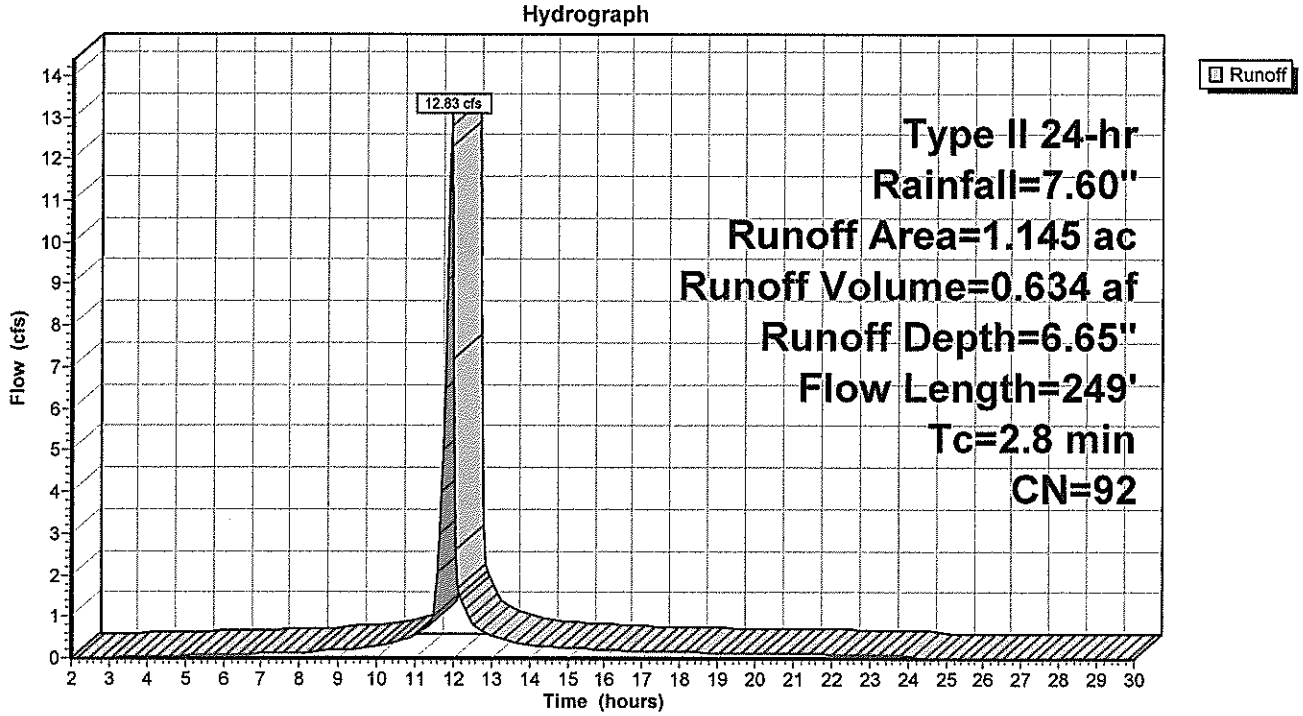
Runoff = 12.83 cfs @ 11.93 hrs, Volume= 0.634 af, Depth= 6.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=7.60"

Area (ac)	CN	Description
0.271	74	>75% Grass cover, Good, HSG C
0.874	98	Paved parking, HSG C
1.145	92	Weighted Average
0.271		23.67% Pervious Area
0.874		76.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0065	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"
1.0	149	0.0151	2.49		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.8	249	Total			

Subcatchment 1P: (new Subcat)



Summary for Subcatchment 2E: (new Subcat)

[49] Hint: Tc<2dt may require smaller dt

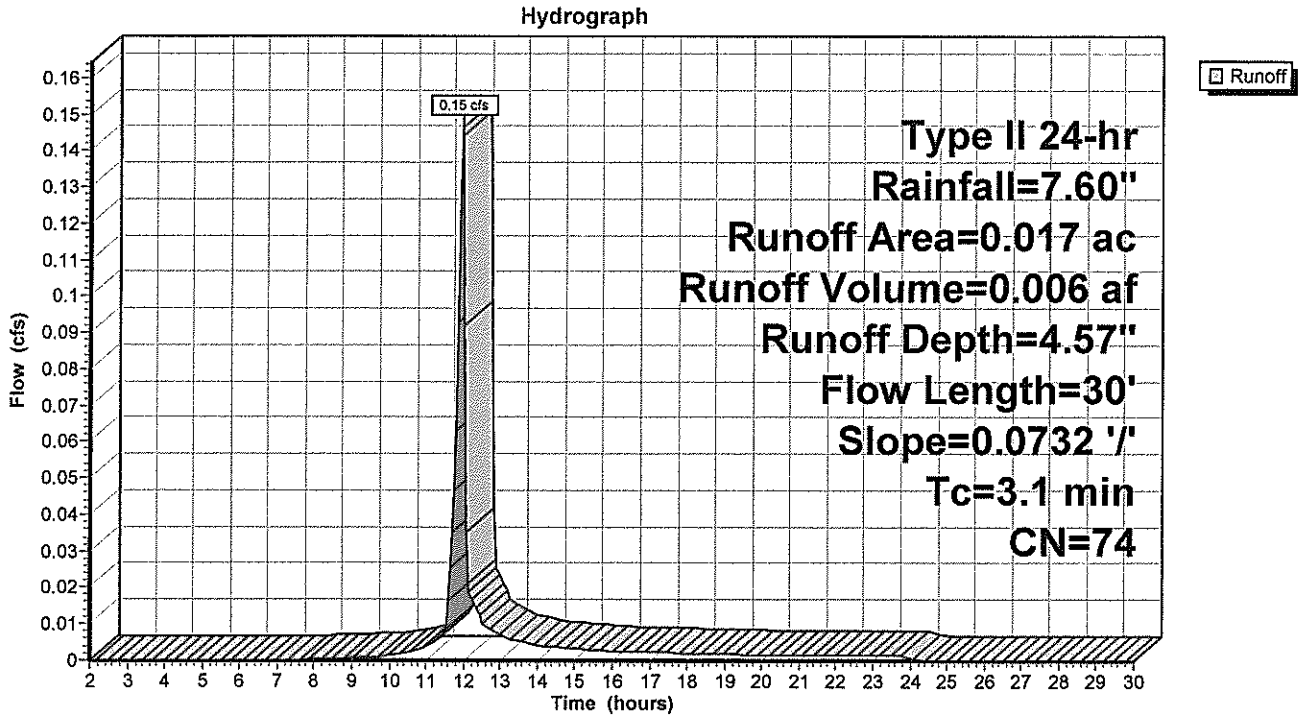
Runoff = 0.15 cfs @ 11.94 hrs, Volume= 0.006 af, Depth= 4.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=7.60"

Area (ac)	CN	Description
0.017	74	>75% Grass cover, Good, HSG C
0.017		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.1	30	0.0732	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.50"

Subcatchment 2E: (new Subcat)



Summary for Subcatchment 2P: (new Subcat)

[49] Hint: Tc<2dt may require smaller dt

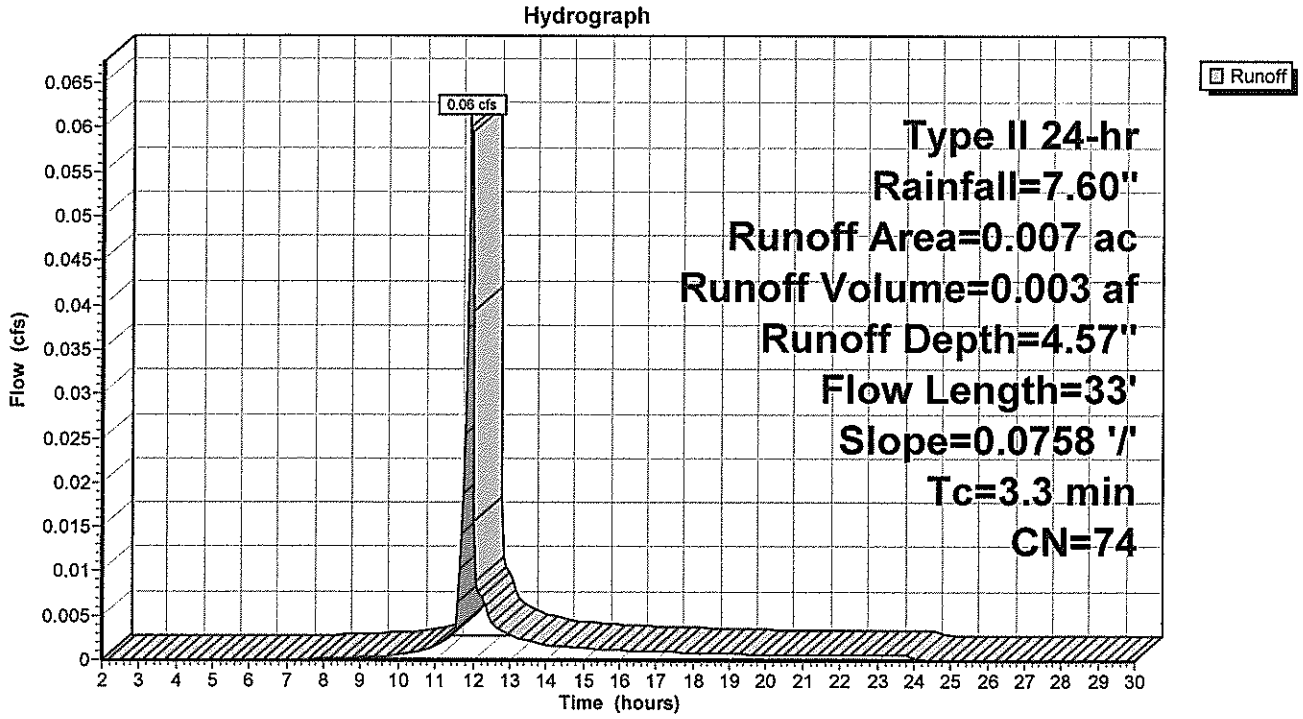
Runoff = 0.06 cfs @ 11.94 hrs, Volume= 0.003 af, Depth= 4.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=7.60"

Area (ac)	CN	Description
0.007	74	>75% Grass cover, Good, HSG C
0.007		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	33	0.0758	0.17		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.50"

Subcatchment 2P: (new Subcat)



Summary for Subcatchment 3E: (new Subcat)

[49] Hint: Tc<2dt may require smaller dt

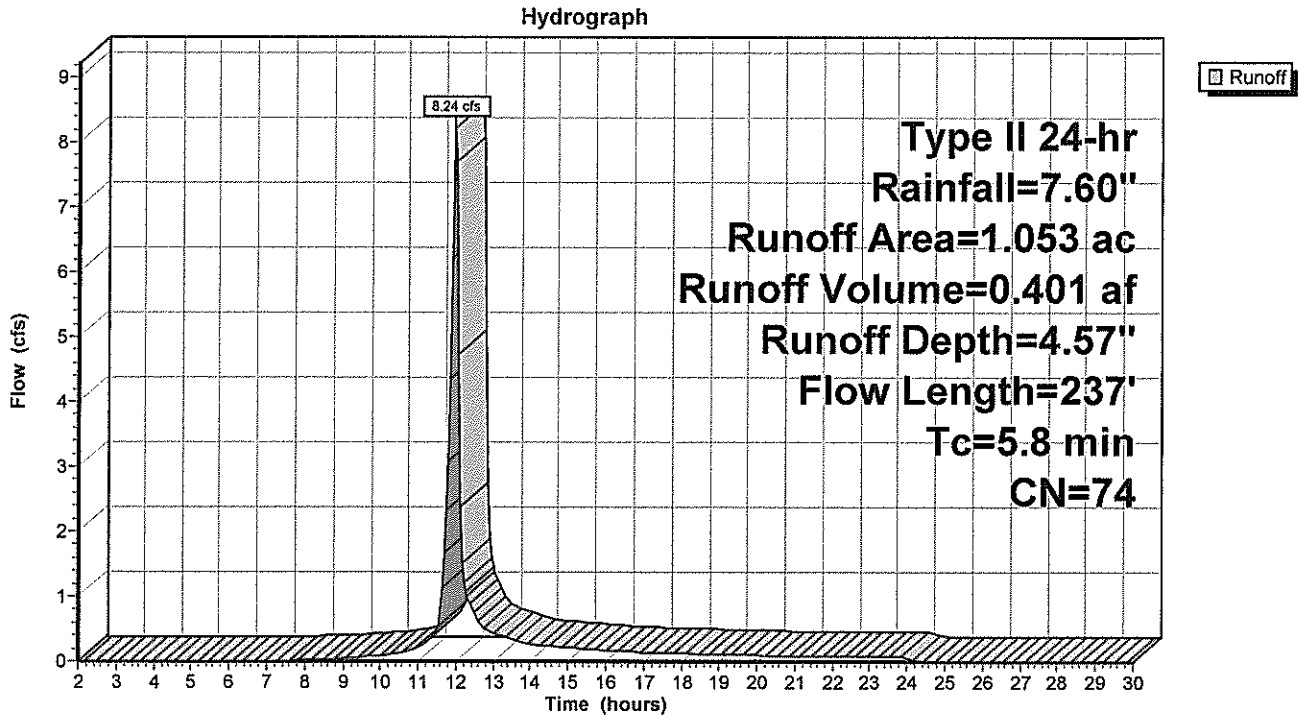
Runoff = 8.24 cfs @ 11.97 hrs, Volume= 0.401 af, Depth= 4.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=7.60"

Area (ac)	CN	Description
1.053	74	>75% Grass cover, Good, HSG C
1.053		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.4	100	0.2000	0.31		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.50"
0.4	137	0.1339	5.49		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
5.8	237	Total			

Subcatchment 3E: (new Subcat)



Summary for Subcatchment 3P: (new Subcat)

[49] Hint: Tc<2dt may require smaller dt

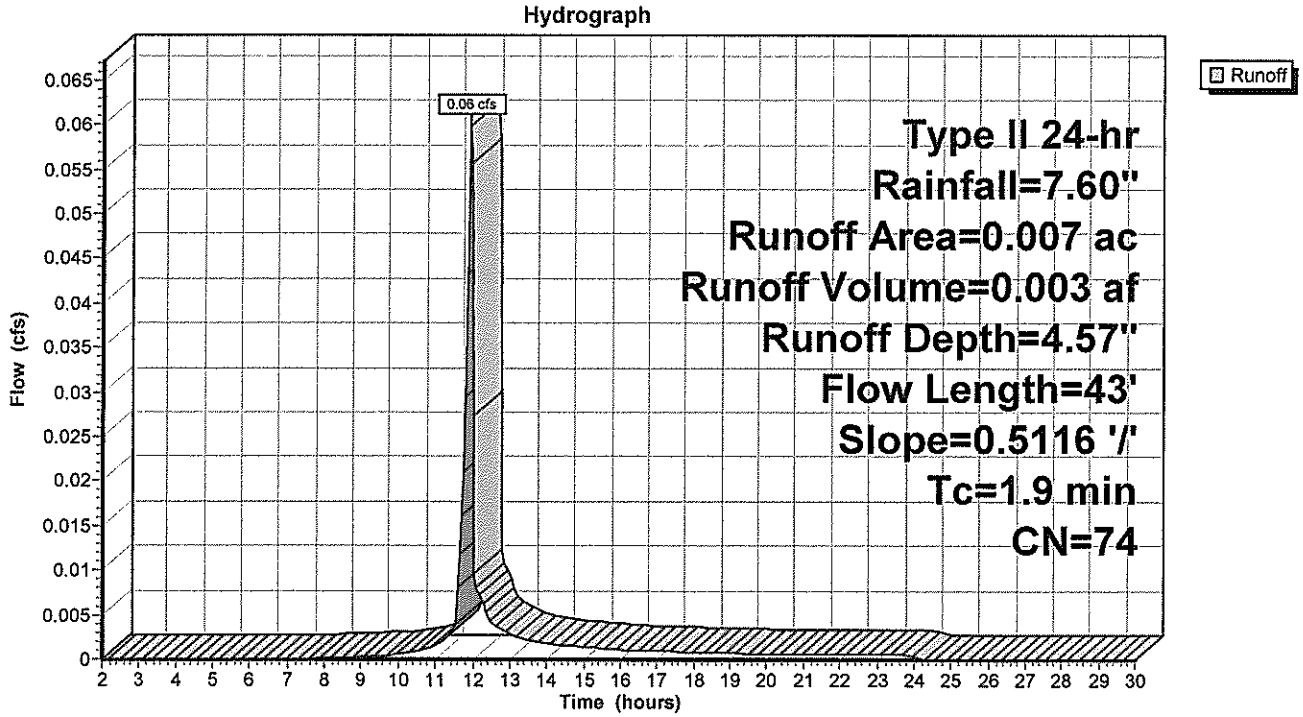
Runoff = 0.06 cfs @ 11.92 hrs, Volume= 0.003 af, Depth= 4.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=7.60"

Area (ac)	CN	Description
0.007	74	>75% Grass cover, Good, HSG C
0.007		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	43	0.5116	0.38		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.50"

Subcatchment 3P: (new Subcat)



Summary for Subcatchment 4P: (new Subcat)

[49] Hint: Tc<2dt may require smaller dt

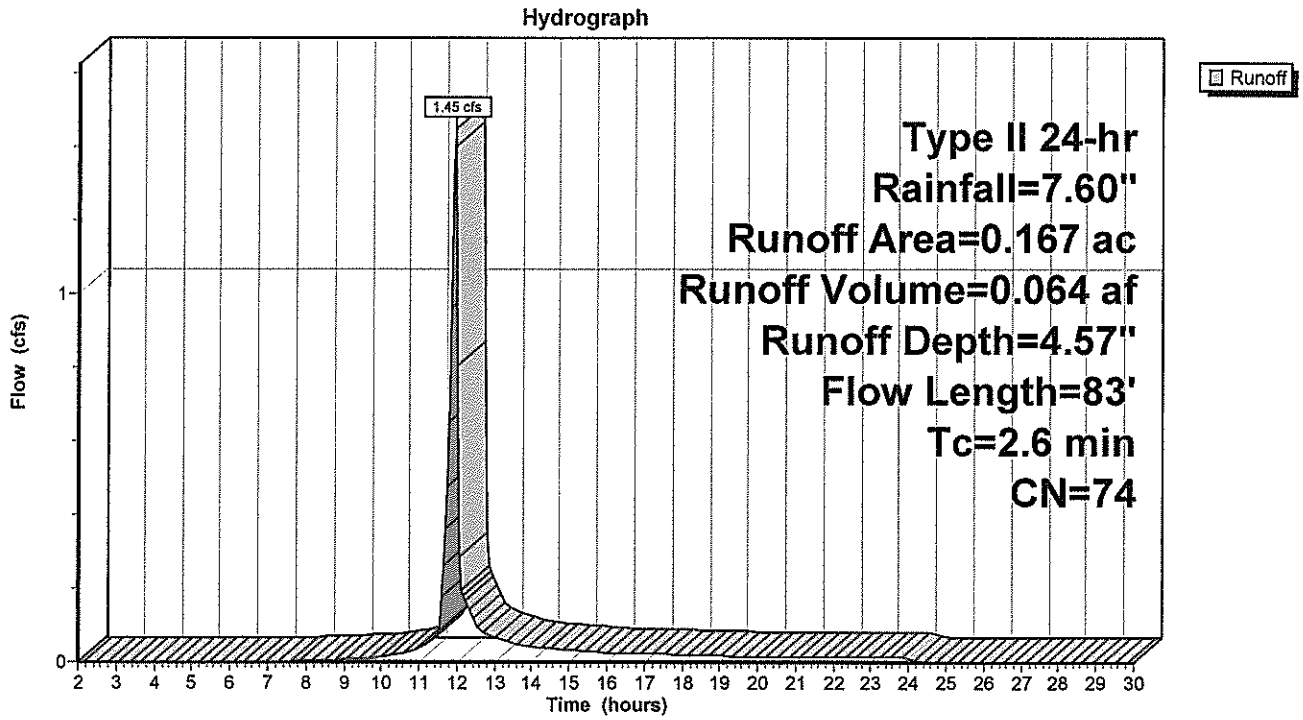
Runoff = 1.45 cfs @ 11.93 hrs, Volume= 0.064 af, Depth= 4.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=7.60"

Area (ac)	CN	Description
0.167	74	>75% Grass cover, Good, HSG C
0.167		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.4	30	0.1453	0.21		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.50"
0.2	53	0.0967	5.01		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
2.6	83	Total			

Subcatchment 4P: (new Subcat)



Summary for Subcatchment 5P: (new Subcat)

[49] Hint: Tc<2dt may require smaller dt

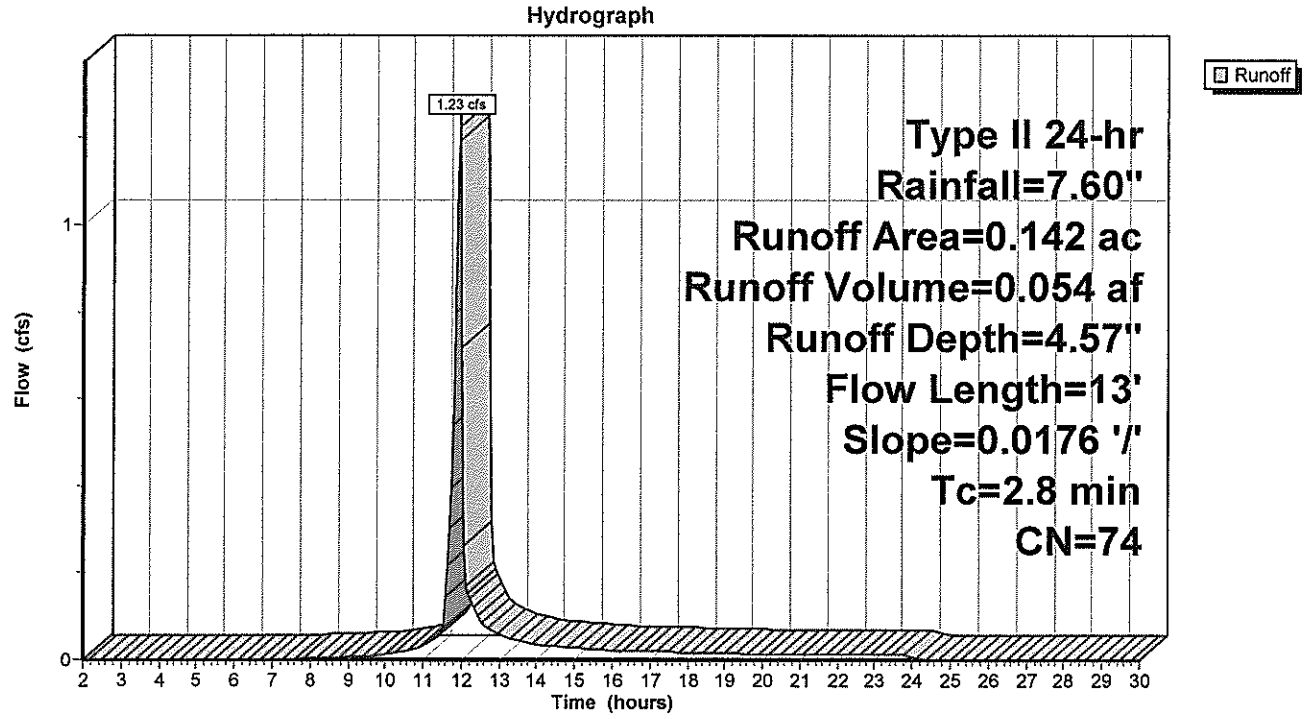
Runoff = 1.23 cfs @ 11.93 hrs, Volume= 0.054 af, Depth= 4.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=7.60"

Area (ac)	CN	Description
0.142	74	>75% Grass cover, Good, HSG C
0.142		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.8	13	0.0176	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.50"

Subcatchment 5P: (new Subcat)



Summary for Subcatchment 6P: (new Subcat)

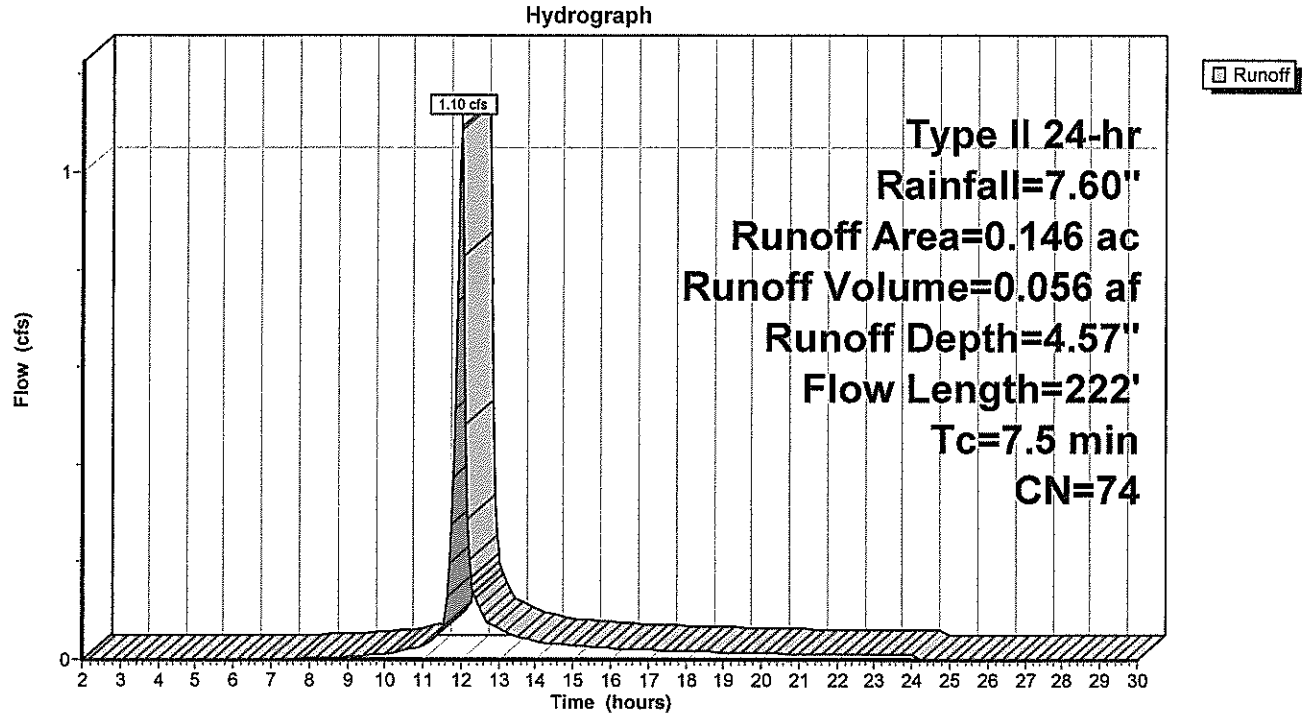
Runoff = 1.10 cfs @ 11.99 hrs, Volume= 0.056 af, Depth= 4.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=7.60"

Area (ac)	CN	Description
0.146	74	>75% Grass cover, Good, HSG C
0.146		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	60	0.0400	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.50"
0.6	162	0.0775	4.18		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
7.5	222	Total			

Subcatchment 6P: (new Subcat)



Summary for Pond DET1: (new Pond)

Inflow Area = 1.287 ac, 67.91% Impervious, Inflow Depth = 6.42"
Inflow = 14.06 cfs @ 11.93 hrs, Volume= 0.688 af
Outflow = 8.78 cfs @ 12.00 hrs, Volume= 0.688 af, Atten= 38%, Lag= 4.3 min
Primary = 8.78 cfs @ 12.00 hrs, Volume= 0.688 af

Routing by Stor-Ind method, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 984.37' @ 12.00 hrs Surf.Area= 0.074 ac Storage= 0.177 af

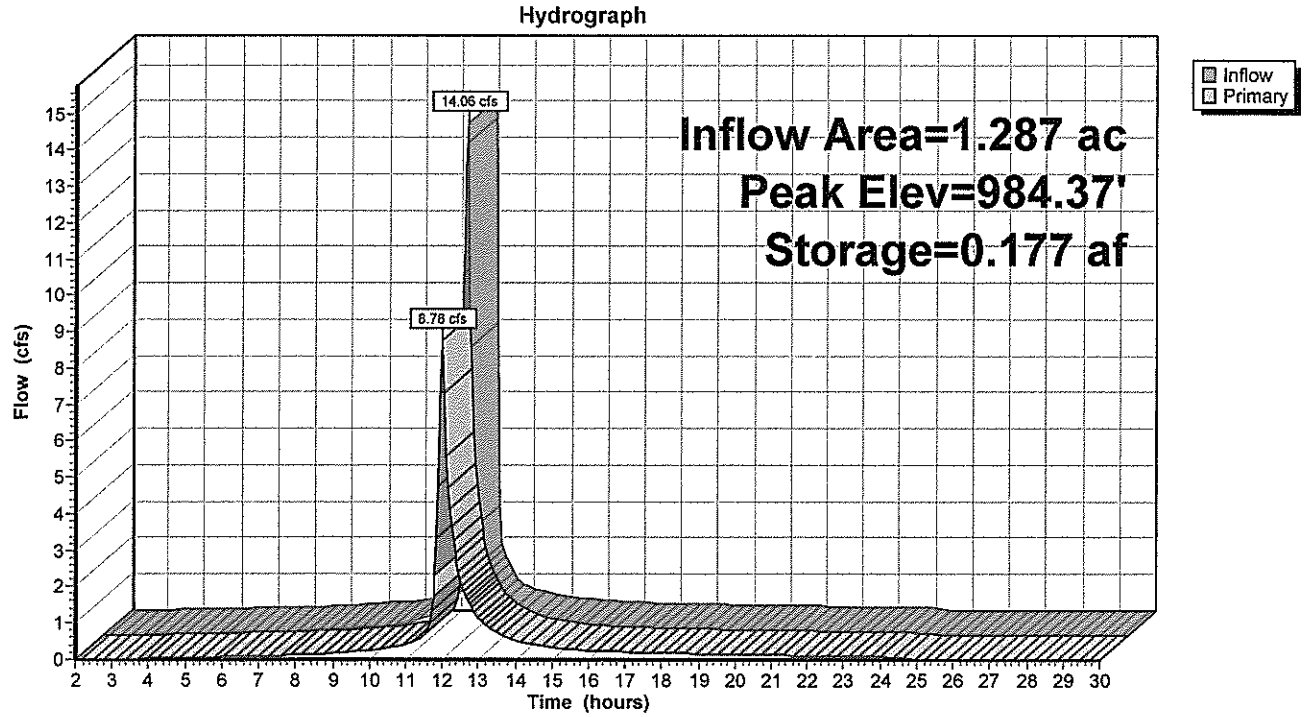
Plug-Flow detention time= 25.7 min calculated for 0.688 af (100% of inflow)
Center-of-Mass det. time= 25.5 min (793.2 - 767.7)

Volume	Invert	Avail.Storage	Storage Description
#1	982.03'	0.211 af	**36.0" Round Pipe Storage** L= 1,300.0'

Device	Routing	Invert	Outlet Devices
#1	Primary	982.03'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.03 1.03 1.93 1.93 3.00 Width (feet) 0.50 0.50 0.79 0.79 2.50 2.50

Primary OutFlow Max=8.78 cfs @ 12.00 hrs HW=984.37' (Free Discharge)
↑—**1=Custom Weir/Orifice** (Weir Controls 8.78 cfs @ 3.89 fps)

Pond DET1: (new Pond)

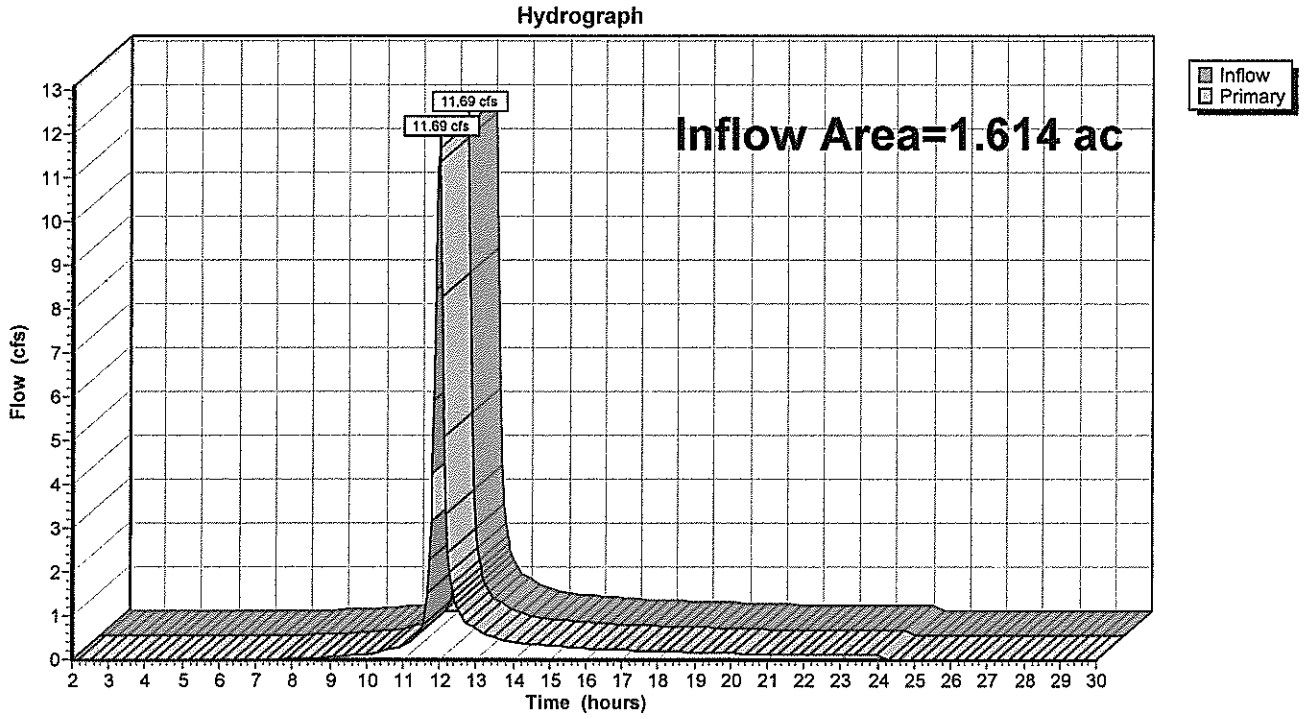


Summary for Link 4E: (new Link)

Inflow Area = 1.614 ac, 0.00% Impervious, Inflow Depth = 4.57"
Inflow = 11.69 cfs @ 11.98 hrs, Volume= 0.615 af
Primary = 11.69 cfs @ 11.98 hrs, Volume= 0.615 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs

Link 4E: (new Link)



Summary for Link 10L: (new Link)

Inflow Area = 1.614 ac, 54.15% Impervious, Inflow Depth = 6.04"
Inflow = 10.81 cfs @ 11.99 hrs, Volume= 0.813 af
Primary = 10.81 cfs @ 11.99 hrs, Volume= 0.813 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs

Link 10L: (new Link)