HUBER HEIGHTS
Come Grow With Us!

AGENDA
CITY PLANNING COMMISSION

City Hall - Council Chambers
6131 Taylorsville Road
November 9, 2021
6:00 P.M.

1. Call Meeting To Order

2. Roll Call

3. Opening Remarks By The Chair and Commissioners

4. Citizens Comments

5. Swearing of Witnesses

6. Pending Business

   A. BASIC DEVELOPMENT PLAN - The applicant, DARIN SCHMIDT, is requesting approval of a Basic Development Plan for 19.1 acres for an Airsoft and Paintball facility for property located at 7860 Bellefontaine Road (ZC 21-36).

7. New Business

   A. REZONING - The applicant, Parveen Wadhwa, is requesting approval of a Rezoning to Planned Commercial and a Basic Development Plan for property located at 6025 Taylorsville Road (ZC 21-42).

   B. MINOR CHANGE - The applicant, MS Consultants, Inc., is requesting approval of a Minor Change for addition of new coolers, freezer, and dry storage room at property located at 5611 Merily Way (ZC 21-44).

   C. MAJOR CHANGE - The applicant, Larkspur, is requesting approval of a Major Change to the Basic and Detailed Development Plan in a Planned Commercial District for 7.234 acres for property located at 7650 Waynetowne Boulevard (ZC 21-43).

8. Additional Business

A. Pre Application Conference – Residential Development - 22 acre Storck Property, Bellefontaine Road

9. Approval of Minutes

A. Planning Commission October 26, 2021

10. Reports and Calendar Review

A. Major Change - 5840 Old Troy Pike

11. Upcoming Meetings

A. December 14, 2021

12. Adjournment

AI-7939 **6. A.**

Planning Commission

Meeting Date: 11/09/2021

BASIC DEVELOPMENT PLAN

Information

Agenda Title

BASIC DEVELOPMENT PLAN - The applicant, DARIN SCHMIDT, is requesting approval of a Basic Development Plan for 19.1 acres for an Airsoft and Paintball facility for property located at 7860 Bellefontaine Road (ZC 21-36).

Purpose and Background

Attachments

Staff Report
Decision Record
Map
Drawings
Fire Assessment
Resident letters

Memorandum

Staff Report for Meeting of November 09, 2021

To: Huber Heights City Planning Commission

From: Scott P. Falkowski, Assistant City Manager

Date:

Subject: ZC 21-36 Basic Development Plan G2 Tactical 7860 Bellefontaine Road

Application dated September 24, 2021

Department of Planning and Development City of Huber Heights

APPLICANT/OWNER: Darin Schmidt – Applicant/Owner

DEVELOPMENT NAME: G2 Tactical

ADDRESS/LOCATION: 7860 Bellefontaine Road

ZONING/ACREAGE: Ag / 19.1

EXISTING LAND USE: Vacant

ZONING ADJACENT LAND: A

REQUEST: The applicant requests approval for a Basic Development Plan for 19.1 acres for G2 Tactical.

ORIGINAL APPROVAL:

APPLICABLE HHCC:

CORRESPONDENCE: In Favor – None Received
In Opposition – One Received

ATTACHMENTS:

OVERVIEW:

The applicant requests approval of a Basic Development Plan for 19.1 acres at 7860 Bellefontaine Road for a paintball and airsoft facility.

STAFF ANALYSIS AND RECOMMENDATION:

The applicant requests approval of a Basic Development Plan for 19.1 acres at 7860 Bellefontaine Road for a paintball and airsoft facility.

The City's Comprehensive Plan calls for this area to be Agricultural/Low Density Residential.

There are no public sanitary and water connections available at the site. Drainage calculations shall be submitted by a licensed professional engineer and follow the standards for water quality and quantity. The proposal calls for areas to be set up for paint ball and airsoft facilities. Staff's recommendation is that any building follow the standard Commercial Design as per City Code. Also, the entrance shall be upgraded to the City Standard of a concrete drive apron for commercial standards. Parking and loading shall follow the City Standards as well, including materials, number of spaces and dimensions. The minimum standard for a landscaped buffer in 15 feet along the southern and eastern property lines. The parking and loading facilities shall be a distance of at least 25 feet from the established right-of-way line, and the building(s) or the structure(s) at least 75 feet from the established right-of-way line per the Official Thoroughfare Plan or the recorded plat. The nearest residential structure to this property is approximately 780 feet away.

The Zoning Code for the proposal is as follows:

CHAPTER 1176 (PC) PLANNED COMMERCIAL DISTRICT[1]

1176.01 Principal permitted uses.

The following principal uses are permitted provided that they are approved as provided for in this chapter:

(a) Retail, office and commercial establishments;

(b) Personal service commercial establishments;

(c) Motels and hotels;

(d) Filling stations;

[1]Cross reference(s)—General provisions—See Ch. 1171.

(e) Service stations; and

(f) Public garages.

(g) Sweepstakes cafe.

(Ord. 2012-O-1948, Passed 3-12-12)

1176.02 Accessory uses.

Only the following accessory uses shall be permitted in this District:

(a) Uses customarily incident to all principal permitted uses; and

(b) Temporary buildings and uses for construction purposes, not to exceed 12 months.

(Ord. 89-O-339, Passed 2-6-89)

1176.03 Development standards.

Except when specifically modified herein, the provisions of Chapter 1181, "General Provisions" shall govern. In addition, the following development standards shall apply:

(a) Minimum Land Area Requirement.

(1) No minimum land area shall be required.

(b) Site Planning.

(1) All yards within the development plan except those abutting a Business or Industrial District shall be maintained in landscaping and not used for parking, to the extent of a minimum of 15 feet along property lines.

(2) The parking and loading facilities shall be a distance of at least 25 feet from the established right-of-way line, and the building(s) or the structure(s) at least 75 feet from the established right-of-way line per the Official Thoroughfare Plan or the recorded plat.

(Ord. 2006-O-1656, Passed 10-5-05)

1176.04 Parking and loading.

The provisions of Chapter 1185, "Parking and Loading" shall apply, except that off-street loading space shall be provided with area, location and design appropriate to the needs of the development and specific uses within it, and the space designated for off-street loading shall not be used for off-street parking.

(Ord. 89-O-339, Passed 2-6-89)

1176.05 Special uses.

The following shall be permitted as a special use:

(a) Reserved.

(b) Fraternal organizations, service clubs and other nonprofit organizations in accordance with the provisions of Chapter 1135. In addition to the criteria set forth in Chapter 1135, the parking requirements have to be reviewed yearly.

(c) Places of worship.

(Ord. 2000-O-1159, Passed 1-10-00; Ord. 2002-O-1354, Passed 6-24-02)

1171.05 - Contents of basic development plan.

(a) The basic development plan shall consist of at least the following information together with such other data and materials as may be required by the City:

(1) Site plan showing the actual shape and dimensions of the lot to be built upon or to be changed in its use together with the location of the existing and proposed structures with approximate square footages, number of stories including heights of structures;

(2) Typical elevation views of the front and side of each type of building;

(3) Planning location and dimensions of all proposed drives, service access road, sidewalks, and curb openings;

(4) Parking lot areas (show dimensions of a typical parking space), unloading areas, fire lanes and handicapped parking;

(5) Landscaping plan, walls and fences;

(6) Storm water detention and surface drainage;

(7) Exterior lighting plan;

(8) Vehicular circulation pattern;

(9) Location and square footage of signs;

(10) Topographic survey; and

(11) Listing of proposed uses taken from the list of permitted and special uses of the PUD zoning district to which rezoning is being sought.

(b) The Planning Commission shall schedule both the proposed rezoning and the issue of approval of the basic development plan for a combined public hearing, following which it shall make its recommendation indicating approval, approval with modification or disapproval.

(Ord. 2006-O-1655, Passed 9-25-05)

1171.06 - General standards for approval.

The Planning Commission shall review the application, prepared development plan and the facts presented at the hearing. The applicant shall have the burden of proof. No approval shall be given unless the Commission shall find by a preponderance of the evidence that such PUD on the proposed locations:

(a) Is consistent with official thoroughfare plan, comprehensive development plan and other applicable plans and policies;

(b) Could be substantially completed within the period of time specified in the schedule of development submitted by the developer;

(c) Is accessible from public roads that are adequate to carry the traffic that shall be imposed upon them by the proposed development. Further, the streets and driveways on the site of the proposed development shall be adequate to serve the residents or occupants of the proposed development;

(d) Shall not impose an undue burden on public services such as utilities, fire and police protection, and schools;

(e) Contains such proposed covenants, easements and other provisions relating to the proposed development standards as may reasonably be required for the public health, safety and welfare;

(f) Shall be landscaped or otherwise improved and the location and arrangement of structures, parking areas, walks, lighting and appurtenant facilities shall be compatible with the existing intended uses, and any part of a PUD not used for structures, parking and loading areas, or accessways;

(g) Shall preserve natural features such as water courses, trees, and rock outcrops, to the degree possible, so that they can enhance the overall design of the PUD;

(h) Is designed to take advantage of the existing land contours in order to provide satisfactory road gradients and suitable building lots and to facilitate the provision of proposed services;

(i) Shall place underground all electric and telephone facilities, street light wiring and other wiring conduits and similar facilities in any development which is primarily designed for or occupied by dwellings, unless waived by the Commission because of technical reasons;

(j) Shall not create excessive additional requirements at public cost of public facilities and services and shall not be detrimental to the economic welfare of the community;

(k) Shall not involve uses, activities, processes, materials, equipment, and conditions of operation that shall be detrimental to any persons, property or the

general welfare by reason of excessive production of traffic, noise, smoke, fumes, glare or odors; and

(l) Rezoning of the land to the PUD District and approval of the development plan shall not adversely affect the public peace, health, morals, safety or welfare.

(Ord. 93-O-602, Passed 3-22-93)

1171.07 - Review and recommendations by planning commission.

The Planning Commission shall review the proposed PUD as presented in the application and basic development plan in terms of the standards in Section 1171.06 and the specific requirements as outlined in all Planned Unit Developments. The Commission shall hold a public hearing on the proposed PUD. At least ten days in advance of such hearing, notice of time and place of such hearing shall be published in a newspaper of general circulation in the City. Written notice of such hearing shall be mailed at least ten days before the public hearing to the owners of property located within 200 feet of the property proposed for the PUD. The Planning Commission shall make its recommendation, indicating approval, approval with modifications, or disapproval. If the Commission recommends approving rezoning of land to a PUD District and also approves a basic development plan for the area to be rezoned, it may impose upon that plan any additional requirements or conditions deemed appropriate by the Commission to ensure that the development shall meet the standards described in Section 1171.06 and shall comply with the intention and objectives of this Zoning Ordinance.

If the owner chooses to submit a combined development plan, the Planning Commission shall review the aspects of it constituting the basic development plan pursuant to the standards set out in Section 1171.06. The detailed development plan aspects shall be reviewed in the same manner as provided herein for review of detailed development plans.

(Ord. 93-O-602, Passed 3-22-93)

1171.08 - Action by council.

Council shall hold a public hearing for application for rezoning and approval of the basic development plan (or combined development plan) after receiving the proposal from the Planning Commission. At least 15 days' notice of the time and place of such public hearing shall be placed in a newspaper of general circulation in the City. Written notice of such hearing shall be mailed at least ten days before the public hearing to the owners of property located within 200 feet of the property proposed for the PUD. Council shall approve, reject or approve with modifications the rezoning and basic development plan in the same manner as other rezoning requests. If the applicant has

chosen to submit a combined development plan, Council shall review the aspects of it constituting the basic development plan pursuant to the standards set out in Section 1171.06. If Council approves the basic development plan aspects of a combined development plan, the detailed development plan shall be deemed to be approved and no further action shall be required for the area covered by the combined development plan. If the basic development plan aspects of a combined development plan are modified, the combined development plan shall be changed in all aspects to meet that modification. The City staff in charge of plan review shall determine when the basic development plan or combined plan meets the modification required by Council.

(Ord. 93-O-602, Passed 3-22-93)

1171.11 - Changes in the basic and detailed development plans.

A PUD shall be developed only according to the approved and recorded detailed development plan and supporting data together with all recorded amendments and shall be binding on the applicants, their successors, grantees and assigns and shall limit and control the use of premises (including the internal use of buildings and structures) and location of structures in the PUD as set forth therein.

(a) Major Changes. Changes which alter the concept, uses or intent of the PUD including increases in the number of units per acre, change in location or amount of nonresidential land uses, more than 15 percent modification in proportion of housing types, significant redesign of roadways, utilities or drainage, may be approved only by submission of a new basic plan and supporting data in accordance with Sections 1171.03, 1171.04 and 1171.05.

(b) Minor Changes. The Zoning Officer recommends to the Planning Commission approval or disapproval of the minor changes in the PUD. Minor changes are defined as any change not defined as a major change.

(Ord. 89-O-339, Passed 2-6-89)

Planning Commission Decision Record

WHEREAS, on September 24, 2021, the applicant, Darin Schmidt, requested approval of a rezoning from A (Agriculture) to PC (Planned Commercial) and a Basic Development Plan for property located at 7860 Bellefontaine Road, Parcel Number P70-03905-0060 of the Montgomery County, Ohio Records (ZC 21-36); and

WHEREAS, on November 9, 2021, the Planning Commission did meet and fully discuss the details of the request.

NOW, THEREFORE, BE IT RESOLVED that the Planning Commission hereby recommended approval of the request.

moved to recommend approval of the request by the applicant, Darin Schmidt for a rezoning from A (Agriculture) to PC (Planned Commercial) and a Basic Development Plan for property located at 7860 Bellefontaine Road, Parcel Number P70-03905-0060 of the Montgomery County, Ohio Records (ZC 21-36) in accordance with the recommendation of Staff's Memorandum dated October 15, 2021 with the following conditions:

1. The Basic Development Plan shall be the plans stamped received by the City of Huber Heights Planning Department on September 24, 2021.

2. Prior to the issuance of a zoning permit, the applicant shall submit and receive approval of a Detailed Development Plan through the Planning Commission.

3. The drive approach shall be a City standard concrete commercial drive entrance.

4. Parking and Loading shall meet the requirements of Chapter 1185 of the City Code.

5. A drainage report shall be submitted following the Montgomery County Standards for water quality and quantity.

6. Buildings shall meet the City's commercial design standards.

7. Applicant shall meet all Fire Code requirements.

8. A 15' preservation zone shall be placed along the Southern and Eastern boundary lines.

Seconded by _____. Roll call showed: YEAS: ____. NAYS: ____. Motion to recommend approval carried ____.

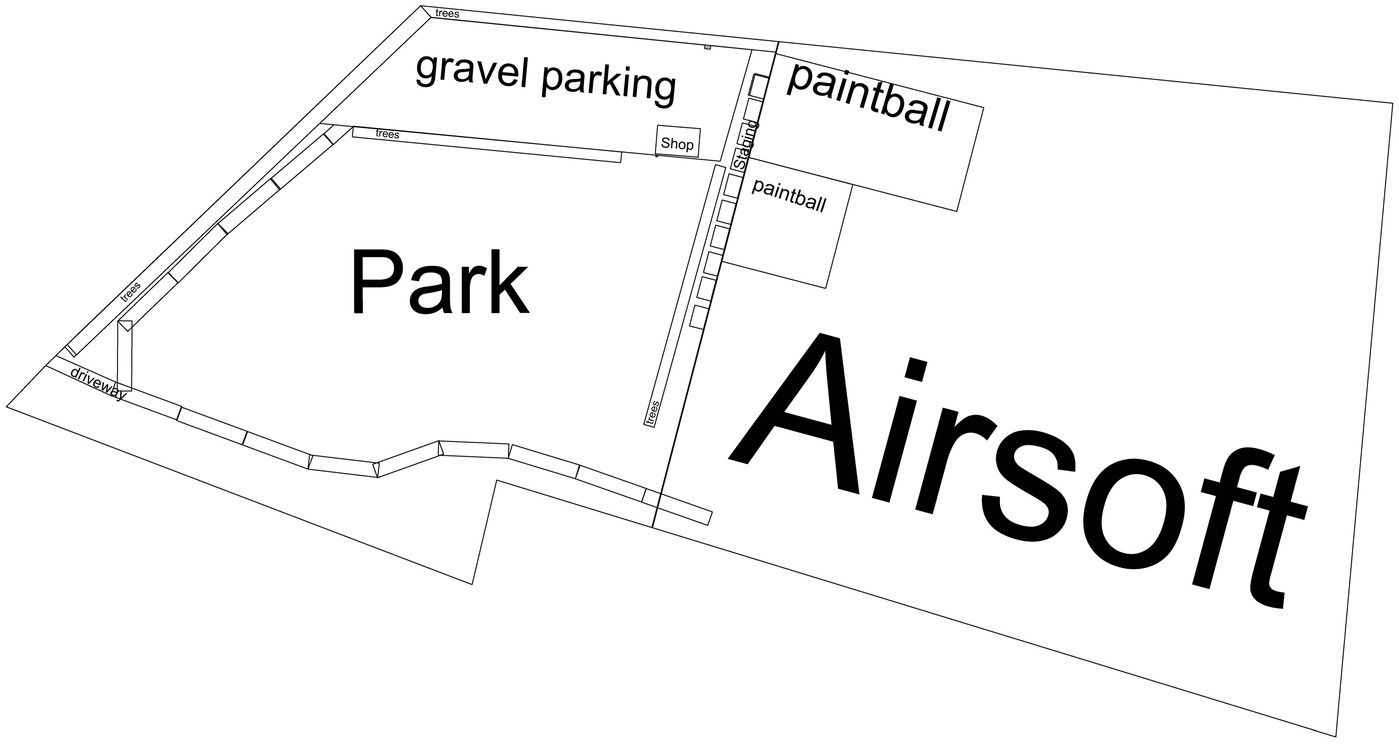
_____ _____
Terry Walton, Chair Date
Planning Commission

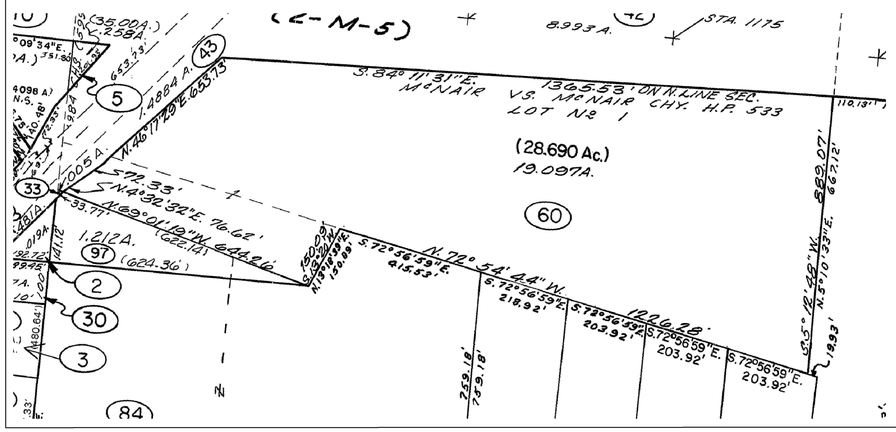
City of Huber Heights

1 in = 376 ft

Date : 10/26/2021

N




(2-M-5)
8.993 A.
STA. 1175
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McNAIR
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V.S. McNAIR CHY. H.P. 533
LOT N8 1
(28.690 Ac.)
19.097A.
60
43
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97
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84
N. 46° 17' 20" E. 685.75'
S. 72° 56' 59" E. 415.53'
N. 72° 54' 44" W.
1226.28'
S. 72° 56' 59" E. 203.92'
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259.18'
259.18'
S. 5° 10' 33" E. 889.07'
S. 5° 12' 12" W. 1893'
S. 72° 33' 34" E. 150.09'
S. 72° 33' 34" E. 150.09'
S. 72° 33' 34" E. 150.09

Huber Heights Fire Division

Inspections require two business days advance notice! (OAC)1301:7-7-09(A)(5)

Occupancy Name:	G2 Tactical
Occupancy Address:	7860 Bellefontaine Road

Type of Permit:	HHP&D Site Plan
Additional Permits:	Choose an item.
Additional Permits:	Choose an item.

MCBR BLD:	Not Yet Assigned	HH P&D:	
MCBR MEC:		HHFD Plan:	21-220
MCBR ELE:		HHFD Box:	
REVIEWER:	Susong	DATE:	10/25/2021

Fire Department Comments:

The Huber Heights City Code Part 15 Refers to Fire Code Requirements and has adopted by reference OFC and IFC Appendices

THIS DRAWING HAS NOT BEEN APPROVED AT THIS TIME DUE TO THE FOLLOWING:

Site Plan :

- **Fire Department access roads shall be 20 feet in width and a vertical clearance of 13 feet 6 inches. Ohio Fire Code 503.2.1. Access needs to be shown on drawing.**
- **Access roads shall be capable of handling the imposed load of fire apparatus and have an all-weather driving surface. Ohio Fire Code 503.2.4.**
- **Fire hydrants shall be provided where any portion of the building is greater than 400 feet from existing hydrants. Ohio Fire Code 507.5.1 and HHCO 1521.06(c).**
- **Please clarify parking and staging areas**
- **All new places of assembly, educational, health care, detention and correctional occupancies, and business, industrial, storage or unusual structures, which are located more than 150 feet from a public street, or which require quantities of water beyond the capabilities of the public water distribution system shall be provided with properly placed fire hydrants. HHCO 1521.01(a).**

Building:

- **Clarify proposed occupancy of building.**

Please reference contact information below for questions or concerns with this document.

Plans reviewed by the Huber Heights Fire Division are reviewed with the intent they comply in **ALL** respects to this code, as prescribed in **SECTION (D) 104.1 of the 2017 Ohio Fire Code**. Any omissions or errors on the plans or in this review do not relieve the applicant of complying with **ALL** applicable requirements of this code. These plans have been reviewed for compliance with the Ohio Fire Code adopted by this jurisdiction. There may be other regulations applicable under local, state, or federal statues and codes, which this department has no authority to enforce and therefore have not been evaluated as part of this plan review.

Administrative Office: 7008 Brandt Pike Huber Heights, Ohio 45424
Telephone: (937) 233 - 1564 Fax Number: (937) 233 - 4520

CAUTION EXTERNAL EMAIL: This message originated from a non Huber Heights email server. DO NOT CLICK ANY LINKS or OPEN ANY ATTACHMENTS unless you have contacted the sender to verify its legitimacy or confirmed you were expecting it. Contact the IT Department if you need assistance.

Dear Ed:

We have exchanged emails in the past for other issues. I am not going to be able to attend the Planning Commission Meeting tomorrow night due to a prior commitment. I was not able to make the meeting on 10/26 since I was still recovering from hip surgery.

I am not sure if you will be at that meeting. If not, I would appreciate that you forwarding this to the members of that board.

*****

I have several concerns that MUST be addressed before I would even think about supporting this.

1. We had an extremely dry year this year. It is not the first time that
2. this has occurred. There is NO city water in this area. Those of us
3. that live here know not to do anything that might ignite a fire is
4. such arid conditions. What measures are going to be in place and
5. enforced to ensure that this potential issue is addressed? Setting off
6. any type of incendiary device or not properly attended camp fires
7. in these conditions are a recipe for disaster.
8. What will the noise ordinance be and will the city ensure that it is
9. followed? If not, what enforcement actions will be taken. I tried to
10. read the City Code of Huber Heights to learn more, but it was not
11. found. The only one liner I was able to view was the Eichelberger
12. Packet. Hour of operation were set to 10a to 9p. Will any of the
13. incendiary devices used exceed that noise limit? I for one, do not
14. what to be hearing constant bangs throughout the day. It is bad
15. enough that after the city let Walmart relocate to their current
16. location that we have to deal with the constant road noise. The
17. removal of all the trees allowed the road noise that funnels out
18. at the walls that end at 201 to affect a larger area. The only time
19. the noise is deadened is when it is raining or there is a "very
20. strong" wind blowing out of the south. Is there some way that
21. they can neutralize the noise? White noise generators?
22. Will there be any new safety concerns for the traffic on Bellefontaine?
23. I already have concerns with potential issues once the barn open
24. for business. We have had 3 occurrences with drunk drives over the
25. years at our property alone. 2 of which the police did not get here in
26. a timely response to catch the drivers. They simply walked away.
27. The last one was the worst. Found out that the city was not responsible
28. to report / follow up that he did not have insurance. When I ask the

29. officer who reports it to the BMV, he said that was the courts job. Also,
30. of course, none of the 3 drivers were insured. Thus, we had to pay for
31. all the repairs. Thank God, none of our kids or grand kids were hurt.

*****

That's my input for now based on what I have been informed about this item to date.

Feel free to contact me if you have any questions.

Sincerely,
Kurt Simala
7656 Bellefontaine Road

4.
5.

Hoskins, Geralyn

From: Falkowski, Scott
Sent: Monday, November 8, 2021 6:11 PM
To: Hoskins, Geralyn
Subject: FW: Rezoning of Bellefontaine property for paintball/airsoft

Scott P. Falkowski, P.E.
Interim City Manager
City of Huber Heights
6131 Taylorsville Road
Huber Heights, OH 45424
Office: 937.233.1423
Fax: 937.237.5800
Email: sfalkowski@hhoh.org
If you have received this email in error please notify the sender or call 937.233.1423. Please note that any views or opinions presented in this email do not necessarily represent those of the City of Huber Heights. Ohio has a very broad public records law. As a result, most written communication created or received by City of Huber Heights employees, elected officials, agents and volunteers are subject to disclosure to the public and news media upon request, unless otherwise exempt. Under Ohio law, email addresses are public records. If you do not want your email address released in response to a public records request, do not send email to this office or request that email be sent to you at a private email address. Instead, contact our office by phone at 937.233.1423.

-----Original Message-----
From: Lori Strong <lstrong001@woh.rr.com>
Sent: Monday, November 8, 2021 6:04 PM
To: Falkowski, Scott <SFalkowski@hhoh.org>
Cc: Otto, Glenn <GOtto@hhoh.org>
Subject: Rezoning of Bellefontaine property for paintball/airsoft

CAUTION EXTERNAL EMAIL: This message originated from a non Huber Heights email server. DO NOT CLICK ANY LINKS or OPEN ANY ATTACHMENTS unless you have contacted the sender to verify its legitimacy or confirmed you were expecting it. Contact the IT Department if you need assistance.

Good evening. Ahead of the zoning meeting scheduled for tomorrow, 11/9/2021, I wanted to express my opposition to rezoning property on the south side of I-70 for commercial use.

The properties that will be impacted carry some of the highest property values in Huber Heights. These property values could be dramatically decreased by rezoning for a paintball/airsoft facility. Many of the affected properties are owned by families that have lived in them for decades. These are not part of the transient population of our community, but long term residents with roots in our community.

Inherent with a business like this will come increased traffic, unsupervised juveniles in our backyards, litter, trespassing, noise and vandalism. Airsoft and paintball pose a significant environmental and wildlife impact, particularly with the creek that runs along the property. With even "biodegradable" ammunition taking potentially a year or more to degrade, this is not healthy for the ecosystem in our area. We already decimated our ecosystem when the wetlands

were destroyed building Walmart and we have seen flooding that no one could have even imagined downstream of this in the ensuing years. We don't need to compound these problems with additional zoning blunders.

Even if you feel an airsoft/paintball facility is fairly benign, once the property is rezoned, there is no going back. Rezoning could become a slippery slope when this business closes and a new, more objectionable business purchases the property.

We have ample areas of Huber Heights that have appropriate zoning for a business like this to operate. There is no reason to rezone this property adjacent to beautiful homes and properties that families have invested decades in maintaining and improving.

Sincerely,
Lori Strong

Hoskins, Geralyn

From: Falkowski, Scott
Sent: Monday, November 8, 2021 12:59 PM
To: Hoskins, Geralyn
Subject: FW: Bellefontaine Road property for rezone

FYI

Scott P. Falkowski, P.E.
Interim City Manager
City of Huber Heights
6131 Taylorsville Road
Huber Heights, OH 45424
Office: 937.233.1423
Fax: 937.237.5800
Email: sfalkowski@hhoh.org

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From: sue adams <ksueadams@hotmail.com>
Sent: Friday, November 5, 2021 1:11 PM
To: Falkowski, Scott <SFalkowski@hhoh.org>
Subject: Bellefontaine Road property for rezone

CAUTION EXTERNAL EMAIL: This message originated from a non Huber Heights email server. DO NOT CLICK ANY LINKS or OPEN ANY ATTACHMENTS unless you have contacted the sender to verify its legitimacy or confirmed you were expecting it. Contact the IT Department if you need assistance.

Hi,
I am emailing this with my concerns for rezoning the property on Bellefontaine Road to Commercial for the use of a Paintball facility. It was clear to most of us at the initial meeting that these gentlemen were not completely honest with everything that will be going on at this facility. To each their own, but this is a residential area and we have numerous regulations that we have to follow and we all feel it will be taking from a lot of Huber Heights families to give this establishment some entertainment. In addition to the noise, volume of traffic, litter etc, there will be a continuous smell from the paintballs when they are open (they all wear gas mask). There are numerous reasons to not allow this facility to open in this residential location along with the weekly fireworks which are illegal in city limits. There have been two properties on this end of Bellefontaine go up for sale in the last couple weeks because of the possibility of this establishment opening. Please do what's right for all of the Huber Heights residents and not for the convenience of some out of town individuals looking for therapy. Stay safe and see you Tuesday!

Case No. 21-36
7860 Bellefontaine Road

Words vs Actions

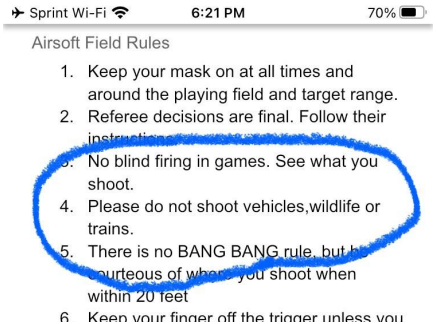
Rich Moore
8787 Taylorsville Road

Words: “We want to make it into a park-like setting”

Actions (images from G2 Tactical Facebook site):

Words: “We will be good neighbors”

Actions (images from G2 Tactical Facebook site):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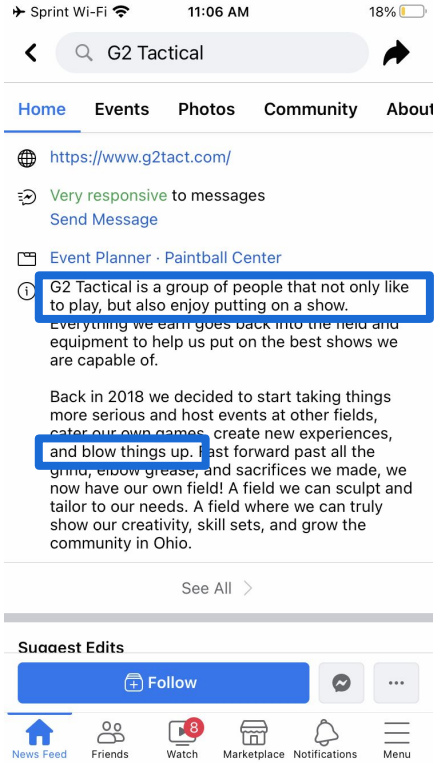
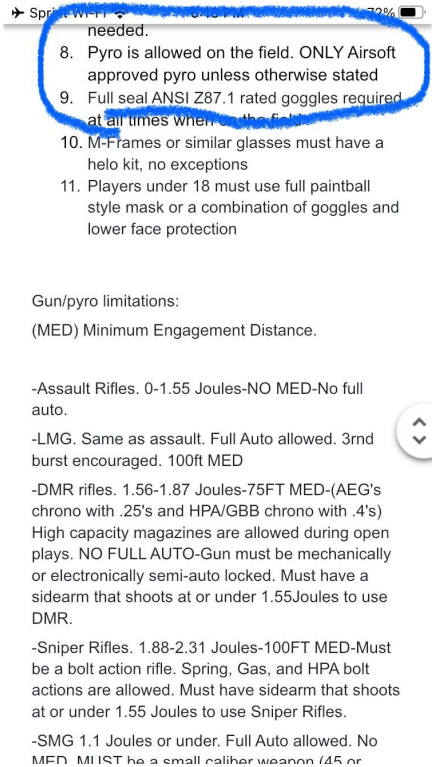
Airsoft Field Rules

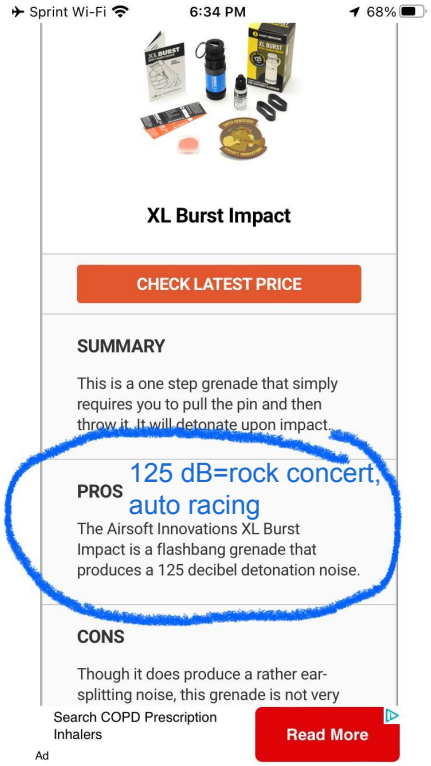
1. Keep your mask on at all times and around the playing field and target range.
2. Referee decisions are final. Follow their instructions
3. No blind firing in games. See what you shoot.
4. Please do not shoot vehicles,wildlife or trains.
5. There is no BANG BANG rule, but be courteous of where you shoot when within 20 feet
6. Keep your finger off the trigger unless you

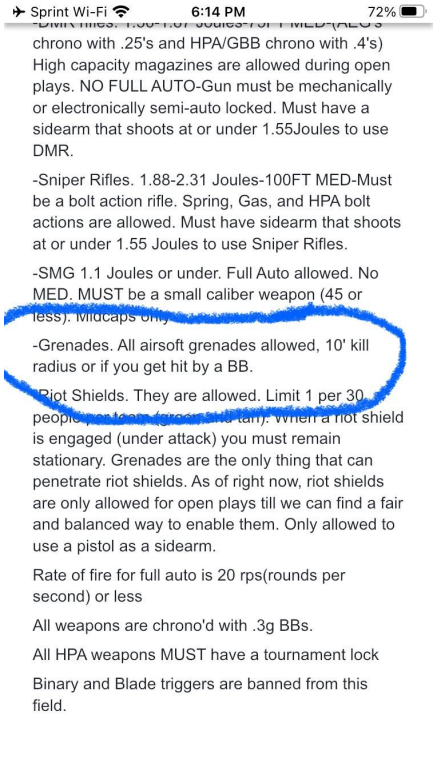
Words: Nothing said about pyrotechnics, grenades

Actions (from G2 Tactical Facebook site):



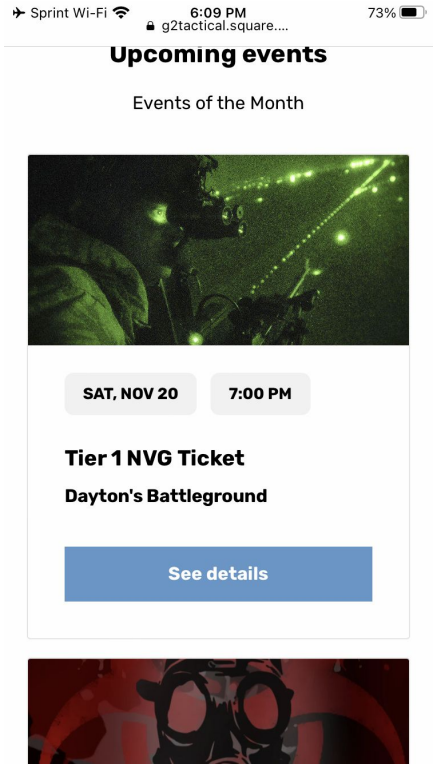


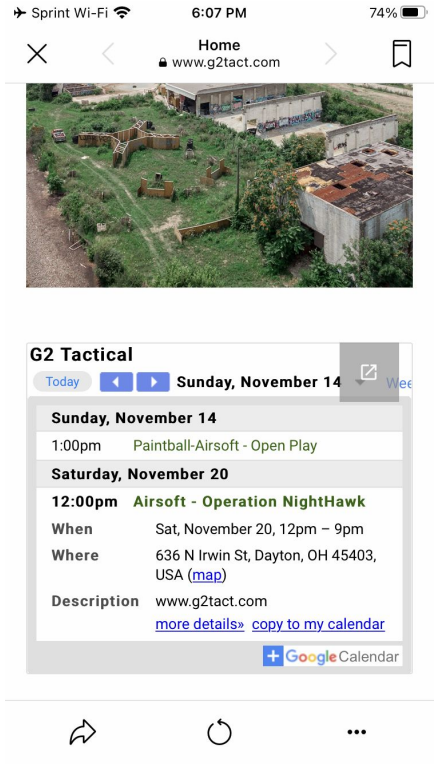


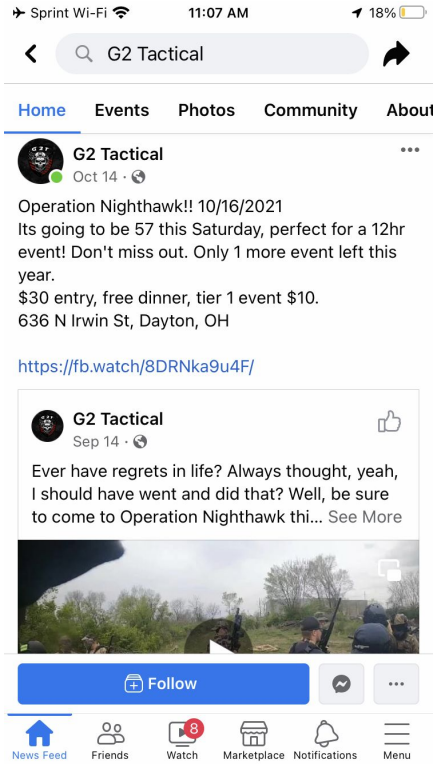


Words: “We close before dark and during winter”

Actions (from G2 Tactical Facebook site):

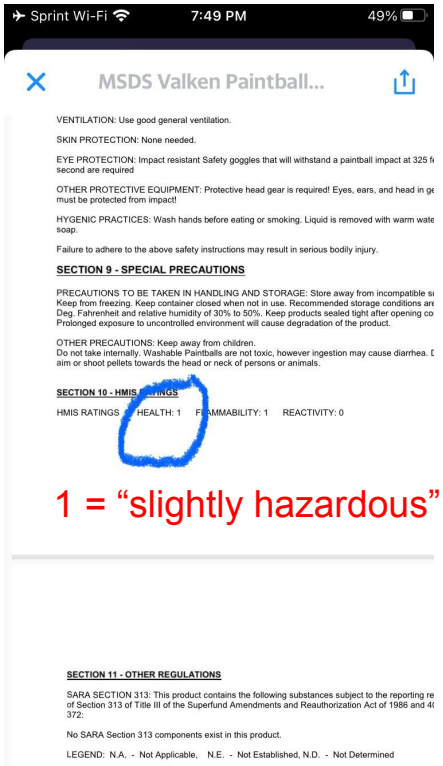






Words: “The Paintballs are Not Bad for the Environment”

Actions (from Valken Paint Ball Material Safety Data Sheet):



Words: “We *highly encourage* biodegradable BB’s”

Actions:

- https://pubmed.ncbi.nlm.nih.gov/31526095/): **“A cautionary note: Toxicity of polyethylene glycol 200 injected intraperitoneally into mice”**
  - **“mice injected intraperitoneally (i.p.) with PEG 200 at a dose of 8 mL/kg (i.e. 9 g/kg) did not tolerate PEG 200 well, and half of the animals had to be euthanized**
  - Biodegradable BB’s are made with polyethylene glycol
- **https://bachbio.com/airsoft-bbs-and-environment/: “Are Airsoft BBs Bad For The Environment?”**
  - **“Imagine a scenario where 50 airsoft players are shooting 1,000 0.20g sized BBs every week at a field and it equates to around 550lbs of waste in that period.”**
  - **“Biodegradable BBs are … more expensive to purchase, which is why some people still prefer to use a standard plastic BB” … “will be fully decomposed within a year” … “they’re not entirely environmentally friendly”**
- **https://csef.usc.edu/History/2014/Projects/J1319.pdf: “Airsoft and the Environment: What Happens to All the BBs?”**
  - **BB’s still at 17% of original size after 1.5 years**

Words: “We will install netting”

Actions:

- https://westcoastnetting.com/sports/paintball-netting/
  - Paintball: “The shell will be reduced to parts no larger than 3x5 mm.” (i.e., big hazardous waste pieces converted to many small hazardous waste pieces)
  - BBs: “There is not an American Society for Testing and Materials standard for airsoft netting. West Coast Netting suggests a 35’ buffer on both sides of the net and shooting less than 300 FPS (Feet per Second). Because airsoft projectiles are so small, this net will not stop a point blank shot or shots closer than 35’.”

Leonids Ziverts
8480 Taylorsville Rd
Dayton, OH 45424-6332

Leonids Ziverts

Say "NO" to Airsoft and Paintball Range in Your Backyard!

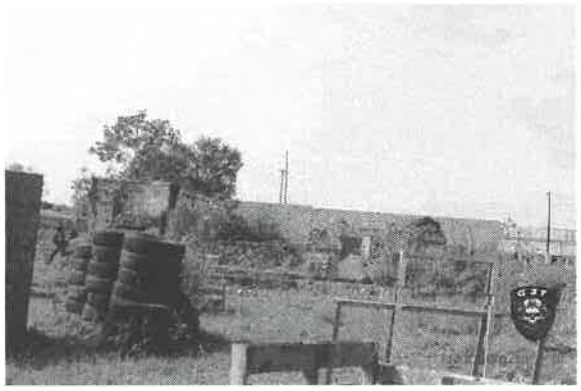
Proposed Airsoft and Paintball Range

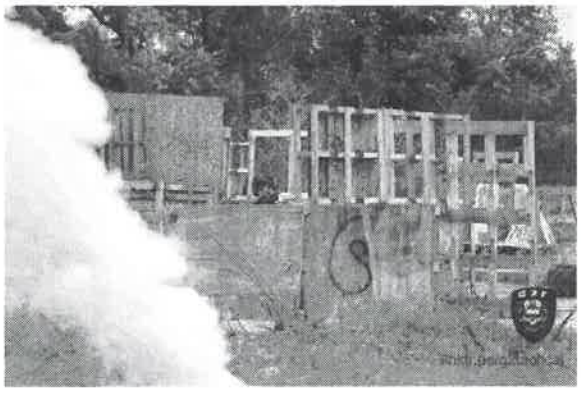
Oct 26 H.H. Planning Commission Meeting Results:

- About 15-20 of our neighbors attended!!
- Learned fireworks and 130 decibel grenades will be detonated & overnight camping will occur on site
- **Your voice was heard!** Planning Commission seemed sympathetic to residents, but voted to table the issue to request further info from applicant

NEXT MEETING: November 9 at 6:00 at City Hall
WE NEED TO FILL THE ROOM AND SAY "NO!"
(If you can't attend, please send a letter to city)

This is what our backyards could become (current range used by G2 Tactical - from Facebook):





Please contact Rich Moore if you have questions about how you can help (8787 Taylorsville Road, 937-993-6104, ohmoore@yahoo.com)

AI-7940 **7. A.**

Planning Commission

Meeting Date: 11/09/2021

REZONING

Information

Agenda Title

REZONING - The applicant, Parveen Wadhwa, is requesting approval of a Rezoning to Planned Commercial and a Basic Development Plan for property located at 6025 Taylorsville Road (ZC 21-42).

Purpose and Background

Attachments

Staff Report
Decision Record
Drawings
Elevations
Fire Assessment
Traffic Study Information

Memorandum

Staff Report for Meeting of November 09, 2021

To: Huber Heights City Planning Commission

From: Scott Falkowski, Assistant City Manager

Date: November 4, 2021

Subject: ZC 21-42 (Rezoning of a total of 1.46 acres to PC-Planned Commercial and approval of a Basic Development Plan)

Application dated October 14, 2021

Department of Planning and Zoning City of Huber Heights

APPLICANT/OWNER: Parveen Wadhwa – Applicant
Carolyn Farmer - Owner

DEVELOPMENT NAME:

ADDRESS/LOCATION: 6025 Taylorsville Road

ZONING/ACREAGE: R-4 / 1.46 acres

EXISTING LAND USE: Residential

ZONING ADJACENT LAND:

REQUEST: The applicant requests approval of a Rezoning and Basic Development Plan for 1.46 acres at 6025 Taylorsville Road

PREVIOUS APPROVAL:

APPLICABLE HHCC:

CORRESPONDENCE: In Favor – None Received
In Opposition – None Received

STATEMENT OF FACT:

The applicant requests approval of a Rezoning and Basic Development Plan for the property at 6025 Taylorsville Road to Planned Commercial for a convenience store and laundromat.

STAFF ANALYSIS AND RECOMMENDATION:

Overview

The above-described properties have two current uses. The northern parcel is currently vacant and is zoned B-3 Commercial District. The southern parcel is currently zoned R-6 Residence District.

The City's 2011 Comprehensive Plan Update shows this area as Mixed Density Residential, which allows for higher density residential development and features a mix of detached and attached housing types. The district recommends a density of 6-8+ units per acre and allows flexibility in housing development. This land use category is appropriate for residential redevelopment and new mixed housing type areas. This use would be a complement to mixed density residential as a neighborhood commercial space.

Site

The site currently has one residential building. The proposal is to raze the building and build a new 7200 s.f. building.

Parking will be provided following Chapter 1185 of the City's Zoning Code and is called out to be 10 foot by 18-foot spaces.

Storm water will be handled through storm sewers flowing into a proposed underground storm water management unit. This will follow all City drainage regulations.

Water and Sanitary will connect to existing public systems.

A traffic analysis was completed by the applicant and no major roadway improvements are recommended.

Buildings

The City Code for buildings are as follows:

1181.24 COMMERCIAL BUILDING DESIGN STANDARDS.

(a) Applicability: The Commercial Building Design Standards shall apply to all newly constructed or reconstructed/remodeled non-residential structures located in the O-1, B-1, B-2, and B-3 zoning districts.

(1) Exceptions: The requirements of this section shall not apply to:

A. Existing structures as of the adoption of this Section shall be exempt from these commercial building design standards unless an exempted structure is expanded by 10% or more of its original size.

B. Deviation from the design standards contained in this Section may only be approved through the Planned Unit Development Approval Process.

(b) Design Standards.

(1) Building materials.

A. All exterior walls, including parking structures, garages, and accessory structures shall be 100% masonry materials.

B. Masonry coverage calculation does not include doors, windows, chimneys, dormers, window box-outs, bay windows that do not extend to the foundation, or any exterior wall that does not bear on the foundation.

C. Masonry Materials shall be defined as:

1. Hard fired brick: Shall be kiln fired clay or slate material and can include concrete brick if it is to the same American Society for Testing and Materials (ASTM) standard for construction as typical hard fired clay brick. Unfired or under-fired clay, sand or shale brick shall be prohibited.

2. Stone: Includes naturally occurring granite, marble, limestone, slate, river rock, and other similar hard and durable all-weather stone that is customarily used in exterior construction material. Cast or manufactured stone product may be approved, provided that such product yields a highly textured, stone-like appearance.

3. Decorative concrete block: Shall be highly textured finish such as split-faced, indented, hammered, fluted, ribbed, or similar architectural finish. Coloration shall be integral to the masonry material and shall not be painted on.

4. Concrete pre-cast or tilt wall panel: Shall be of an architectural finish that is equal to or exceeds the appearance and texture of face brick or stone. Coloration shall be integral to the masonry material and shall not be painted on.

5. Stucco: An exterior plaster made from a mixture of cement, sand, lime, and water spread over metal screening or chicken wire or lath.

6. Exterior Insulated Finish System (EIFS): A synthetic stucco cladding system that typically consists of these main components:

a. Panels of expanded polystyrene foam insulation installed with adhesive or mechanically fastened to the substrate, usually plywood or oriented strand board;

b. A base coat over the foam insulation panels,

c. A glass fiber reinforcing mesh laid over the polystyrene insulation panels and fully imbedded in the base coat; and

d. A finishing coat over the base coat and the reinforcing mesh.

7. Other: The Director of the Planning and Development Department, or his/her designee, may approve the use of other materials not specifically mentioned herein if it is determined that said materials exhibit comparable characteristics as those materials already approved herein.

(2) Roofing design and materials.

A. Asphalt shingles, industry approved synthetic shingles, standing seam metal or tile roofs are allowed.

B. Gable roofs, if provided, shall have a minimum pitch of 6/12.

C. Pitch roofs, if provided, shall have a minimum pitch of 9/12.

D. Architectural elements that add visual interest to the roof, such as dormers and masonry chimneys, are encouraged.

E. Flat roofs shall require parapet screening in accordance with Section 1181.18.

F. Parapet shall require cornice detailing or similar design.

(3) Prohibited Materials. The following materials shall be prohibited as primary cladding or roofing materials:

A. Aluminum or vinyl siding or cladding.

B. Galvanized steel or other metal.

C. Wood or plastic siding.

D. Cementitious fiberboard.

E. Unfinished concrete block.

F. Exposed aggregate.

G. Wood roof shingles.

H. Reflective glass.

(4) Architectural design features.

A. All non-residential buildings shall be architecturally finished on all sides with the same materials and detailing (e.g. tiles, moldings, cornices, wainscoting, etc.)

B. Structures 20,000 square feet or less shall require a minimum of two distinct building materials from the approved masonry list be utilized on all facades to provide architectural detail and interest.

C. Structures over 20,000 square feet shall require a minimum of three distinct building materials from the approved masonry list be utilized on all facades to provide architectural detail and interest.

D. Secondary materials must cover a minimum of ten percent (10%) of the building façade on all sides.

E. No blank walls shall front along any public right-of-way.

F. All non-residential buildings shall be designed to include no less than four of the architectural design features listed as follows. Buildings over 20,000 square feet must include a minimum of six of the architectural design features listed as follows.

1. Canopies, awnings, arcades, covered walkways, or porticos.

2. Recesses, projections, columns, pilasters projecting from the planes, offsets, reveals or projecting ribs used to express architectural or structural bays.

3. Varies roof heights for pitched, peaked, sloped or flat roof styles.

4. Articulated cornice line.

5. Arches.

6. Display windows, faux windows, or decorative windows.

7. Architectural details (such as tile work and molding) or accent materials integrated into the building façade.

8. Integrated planted or wing walls that incorporate landscaping and sitting areas or outdoor patios.

9. Integrated water features.

10. Other architectural features approved by the Planning and development Director or his/her designee.

The Proposed Architectural Styling is as follows:

Commercial Buildings:

- The proposal calls for an all masonry building with a sloped roof.

Landscaping

The applicant proposes a landscape buffer on all sides of the project.

Lighting

Proposed lighting shall follow Section 1181.21 of the City Zoning Code:

Signage

Signage will follow Section 1189 of the City's Zoning Code.

Planning Commission Decision Record

WHEREAS, on October 14, 2021, the applicant, Parveen Wadhwa, requested approval of a Rezoning from R-4 Residence to Planned Commercial and a Basic Development Plan for property located at 6025 Taylorsville Road, further identified as Parcel Number P70 04005 0006 of the Montgomery County, Ohio Recorder's Office (Zoning Case 21-42), and;

WHEREAS, on November 09, 2021 the Planning Commission did meet and fully discuss the details of the request.

NOW, THEREFORE, BE IT RESOLVED that the Planning Commission hereby recommended approval of the request.

_____ to recommend approval of the application by Parveen Wadhwa, requested approval of a Rezoning from R-4 Residence to Planned Commercial and a Basic Development Plan for property located at 6025 Taylorsville Road, further identified as Parcel Number P70 04005 0006 of the Montgomery County, Ohio Recorder's Office (Zoning Case 21-42), in accordance with the recommendation of Staff's Memorandum dated November 4, 2021 with the following conditions:

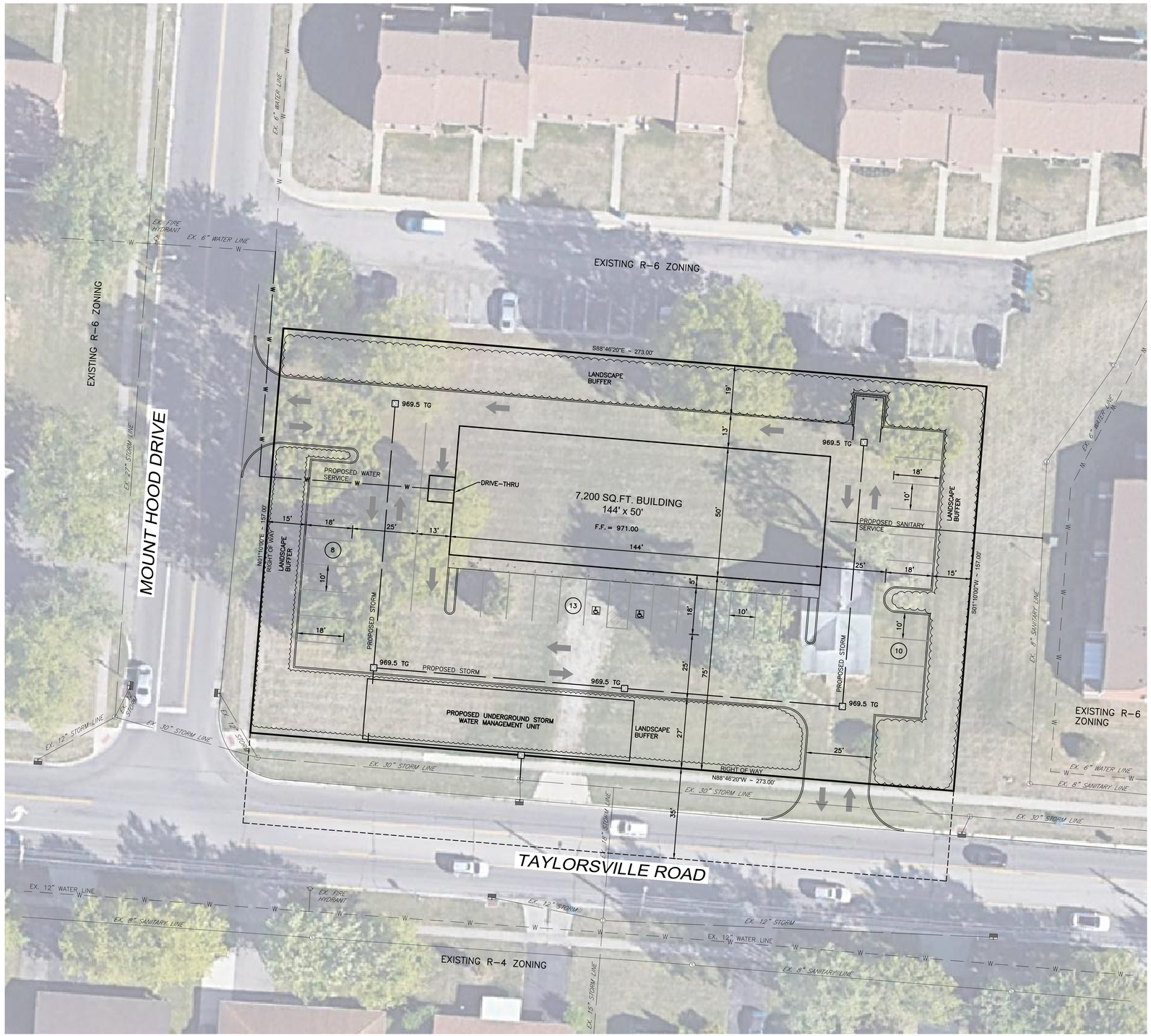
1. The Basic Development Plan shall be the plans stamped received by the City of Huber Heights Planning Department on October 14, 2021 unless specifically modified below.

2. Only the requested uses of a convenience store and laundry are permitted within the PC – Planned Commercial District as described in Chapter 1179 of the City's Zoning Code.

3. Prior to the issuance of a zoning permit, the applicant shall submit and receive approval of a Detailed Development Plan through the Planning Commission.

Seconded by _____. Roll call showed: YEAS: NAYS: Motion to recommend approval _____.

_____ _____
Terry Walton, Chair Date
Planning Commission



EXISTING ZONING: R-4 RESIDENTIAL
PROPOSED ZONING: PLANNED COMMERCIAL PUD
PROPOSED USE: CONVENIENCE STORE AND LAUNDRY MAT

PROPOSED ZONING REQUIREMENTS

Setbacks:
- Front: 75' building and 25' parking setback when across the street from an 'R' district.
- Side: 50' building setback when adjoining an 'R' district. 15' landscape buffer
- Rear: 32' building with 19' landscaped buffer

Parking:
- 1 space per 200 sq. ft. for first 2,000 sq. ft. then 1 space for every 250 sq. ft
- Required: 31 spaces / 2 handicap spaces
- Provided: 31 spaces / 2 handicap spaces

Screening:
- 6' tall screening required along side and rear yards abutting a residential district

GRAPHIC SCALE
20 0 10 20
1 inch = 20 ft.

N

Know what's below. Call before you dig.

- PRELIMINARY PLANS - NOT FOR CONSTRUCTION

Item	Description	Date

BASIC DEVELOPMENT PLAN FOR TAYLORSVILLE ROAD COMMERCIAL SITE

6025 TAYLORSVILLE ROAD
CITY OF HUBER HEIGHTS, MONTGOMERY COUNTY, OHIO

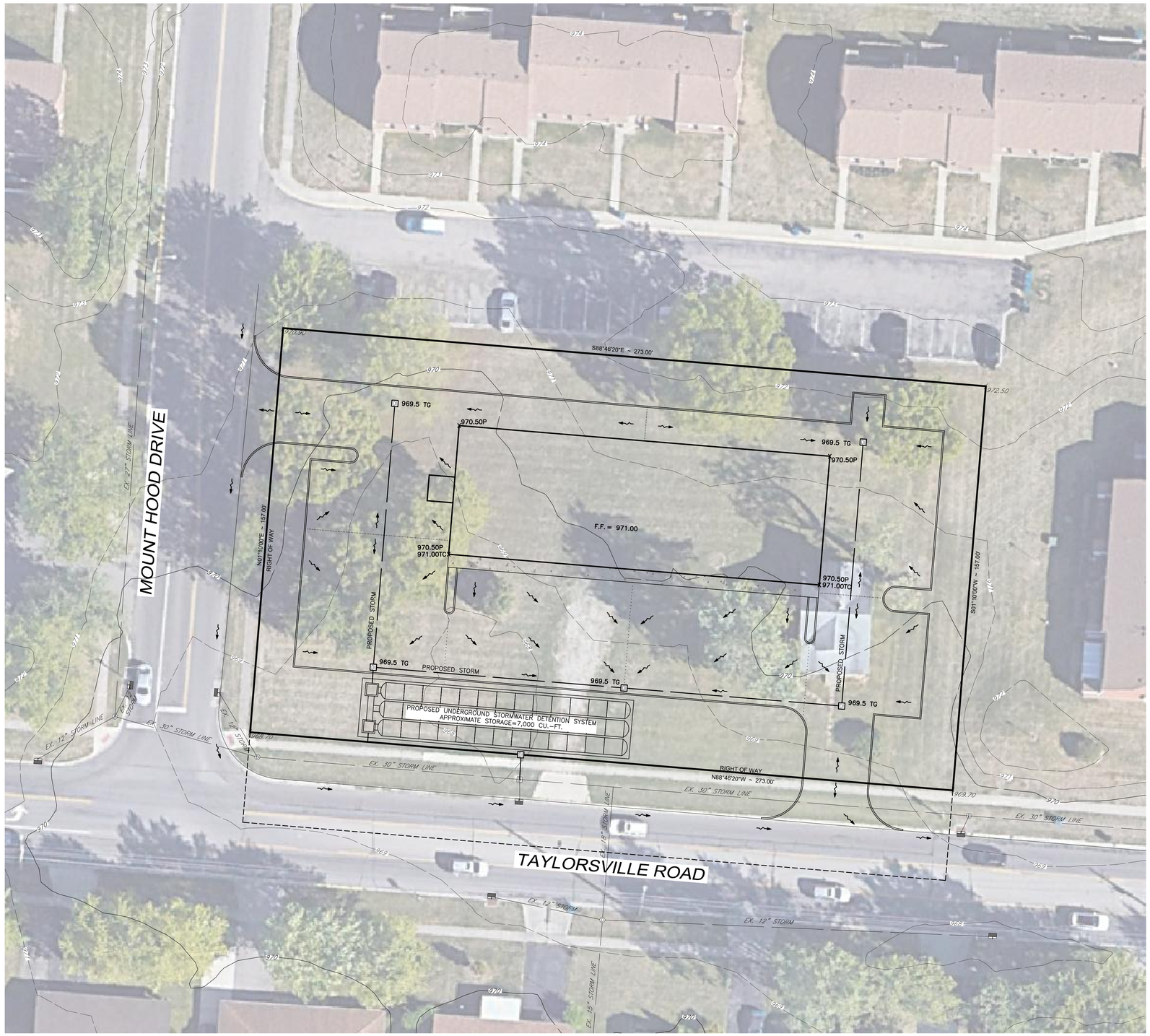
BURKHARDT
ENGINEERS ▸ SURVEYORS
28 North Cherry Street | Germantown, Ohio 45327 | Phone: 937-386-8999 | BURKHARDTINC.COM
CIVIL ENGINEERING | LAND SURVEYING | NATIONAL RETAIL SITE DEVELOPMENT

Design: HB	Proj: 21-285
Draw: HB	Dwg: 21.285.dwg
Check: KZ	Tab: C2.0-SP
Scale: 1" = 20'	

Date: 10.14.2021

Sheet: BASIC DEVELOPMENT PLAN

Sheet No.: C-2.0



EXISTING CONDITIONS

The existing site is partially developed with a house at the southeast corner of the lot and a gravel drive near the center of the lot. There are no existing detention areas on the site. The site drains overland from northwest to southeast toward Taylorsville Road and into inlets that discharge into the City of Huber Heights storm sewer system at the south edge of the site.

PROPOSED CONDITIONS

The proposed improvements will include removing the existing house and constructing a new 7,200 square foot building with a drive through and associated parking lot in the center of the site. An underground detention basin will be constructed on the south side of the new parking lot. Runoff from the new parking lot will be collected by inlets within the parking lot that lead to the underground detention basin. The underground detention basin will connect to City of Huber Heights storm sewer system on the south side of the site.

On-Site Soils:
-MsA - Milton Silt Loam, 0 to 2 % slopes, Hydrologic Soil Group C (52% of site)
-MsB - Milton Silt Loam, 2 to 6 % slopes, Hydrologic Soil Group C (48% of site)

24-hour Storm Event
Huber Heights, Ohio Rainfall Depths:
1 year - 2.26"
2 year - 2.71"
5 year - 3.32"
10 year - 3.79"
25 year - 4.44"
50 year - 4.95"
100 year - 5.47"

STORMWATER MANAGEMENT

Reference Materials and Methodology for Calculations:
USDA - Urban Hydrology for Small Watersheds - Technical Release 55
USDA - Web Soil Survey
City of Huber Heights Stormwater Regulations
Ohio EPA Permit No 0OHC000005
ODNR Rainwater and Land Development Manual
NOAA Altas 14, Volume 2, Version 3

Runoff Control Requirements:
Provide detention as necessary to reduce post-construction runoff rates to pre-development rates in accordance with the Critical Storm Method.

Critical Storm Method Calculations
Pre-Development Conditions
Area = 1.19 acres
Composite CN = 76
1.01 acres of Open Space in Good Condition (CN=74)
0.15 acres of Open Space in Poor Condition (CN=86)
0.03 acres of Pavement/Building (CN=98)
Tc = 3.5 minutes
Post-Development Conditions
Area = 1.19 acres
Composite CN = 84
0.67 acres of Pavement/Building (CN=98)
0.52 acres of Open Space in Good Condition (CN=74)
Tc = 2.4 minutes
Pre-developed 1 year storm runoff volume = 2,393 cu-ft
Post-developed 1 year storm runoff volume = 3,779 cu-ft
58% increase in runoff volume
Critical Storm = 10 year

GRADING LEGEND

P	PAVEMENT
HP	HIGH POINT
TC	TOP–OF–CURB
TG	TOP–OF–GRATE
~~	FLOW DIRECTION
+000.00	PROP. SPOT ELEVATION
+000.00	EXIST. SPOT ELEVATION

GRAPHIC SCALE
20 0 10 20
1 inch = 20 ft.

N

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

- PRELIMINARY PLANS - NOT FOR CONSTRUCTION

Item	Description	Date

BASIC DEVELOPMENT PLAN FOR TAYLORSVILLE ROAD COMMERCIAL SITE

6025 TAYLORSVILLE ROAD
CITY OF HUBER HEIGHTS, MONTGOMERY COUNTY, OHIO

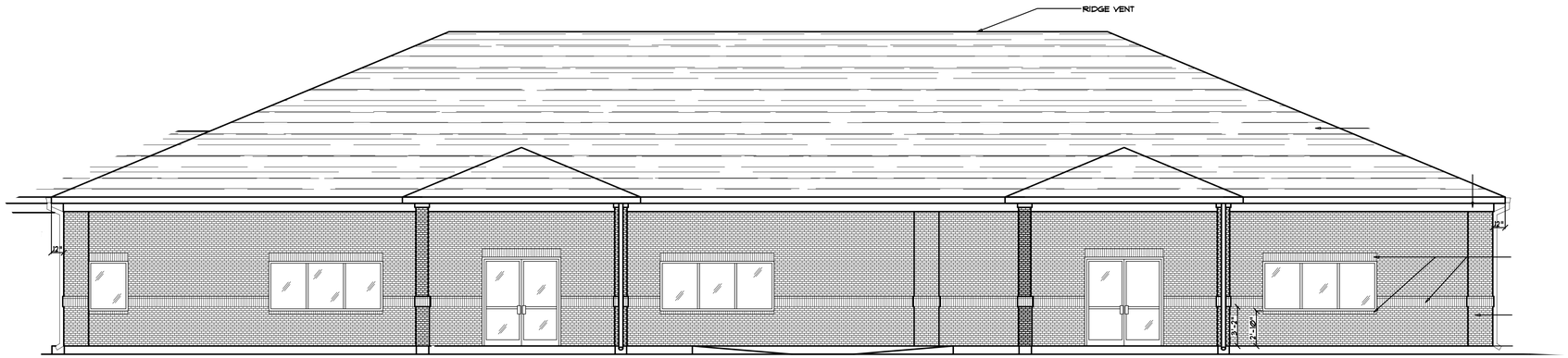
BURKHARDT ENGINEERS • SURVEYORS
28 North Cherry Street | Germantown, Ohio 45327 | Phone: 937-388-8888 | BURKHARDTINC.COM
CIVIL ENGINEERING | LAND SURVEYING | NATIONAL RETAIL SITE DEVELOPMENT

Design: HB	Proj: 21-285
Draw: HB	Dwg: 21.285.dwg
Check: KZ	Tab: C3.0-STM/GP
Scale: 1" = 20'	

Date: 10.14.2021

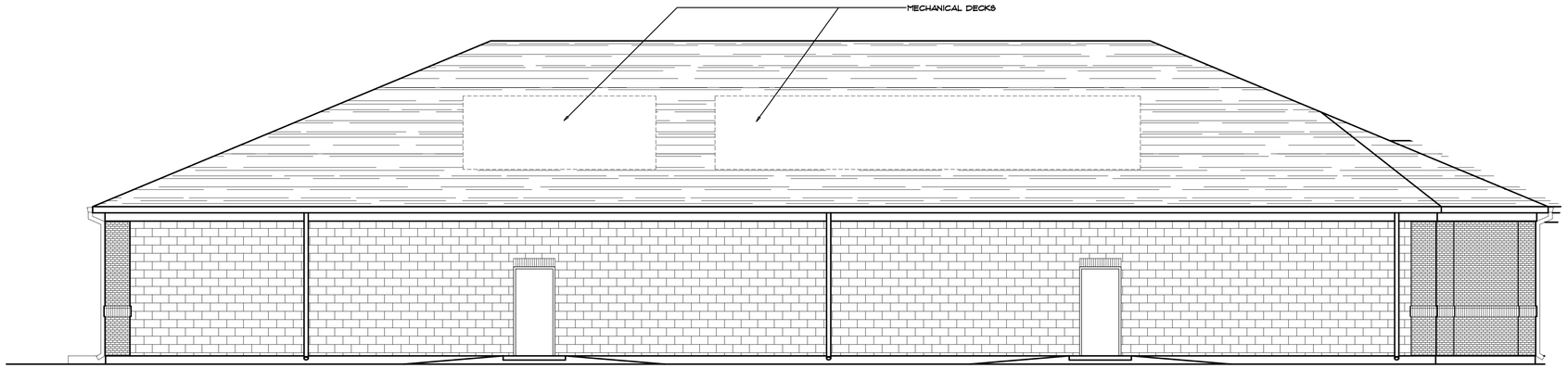
Sheet: PRELIMINARY STORM WATER MANAGMENT AND GRADING PLAN

Sheet No.: C-3.0



FRONT ELEVATION

SCALE: 3/16" = 1'-0" (FRONT) 1 / A3



REAR ELEVATION

SCALE: 3/16" = 1'-0" (REAR) 3 / A3

D.A.E. Designs

DATE: 4/9/2021
SCALE: SHOWN
DRAWN BY: KFD
CHECKED BY: DAE

EXTERIOR ELEVATIONS

REVISIONS:

STATE OF OHIO DAVID A EATON 6824 REGISTERED ARCHITECT
DAVID A. EATON
ARCHITECT
EXP. DATE: 12/31/2021

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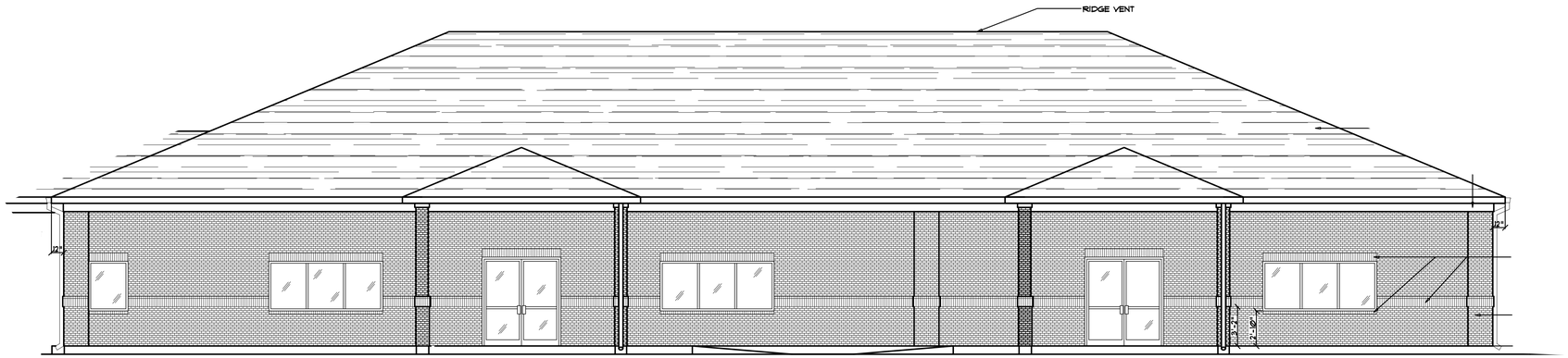
D.A.E. Designs
LIBERTY TOWER
120 W. SECOND STREET, SUITE #401
DAYTON, OH 45402
PHONE (937) 299-3213

A-3



FRONT ELEVATION

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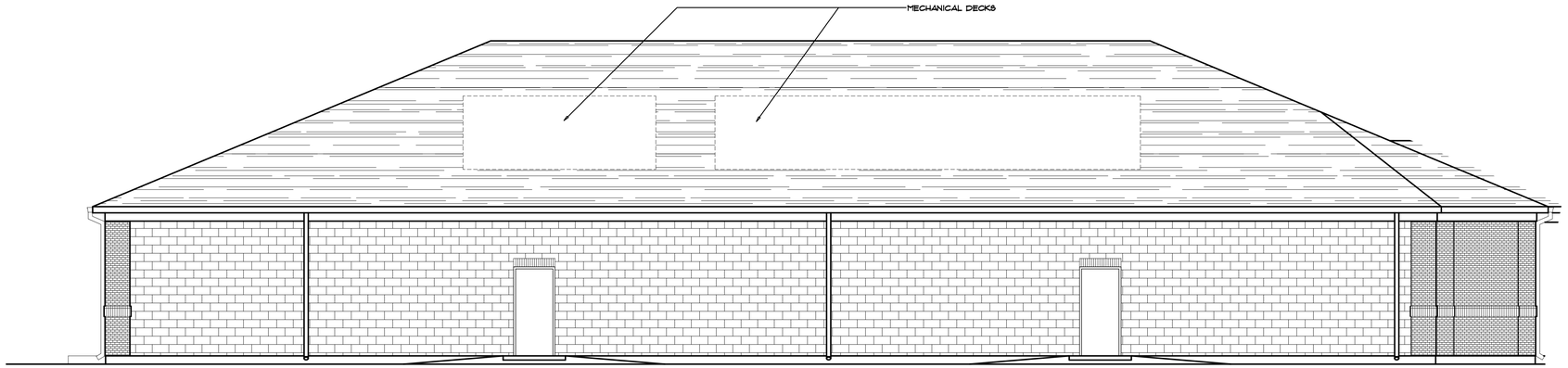

REAR ELEVATION

SCALE: 3/16" = 1'-0" (REAR) 3 / A3

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DATE: 4/9/2021
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DAYTON, OH 45402
PHONE (937) 299-3213

A-3

Huber Heights Fire Division

Inspections require two business days advance notice! (OAC)1301:7-7-09(A)(5)

Occupancy Name:	Laundry/Mini Mart
Occupancy Address:	6025 Taylorsville Road

Type of Permit:	HHP&D Site Plan
Additional Permits:	Choose an item.
Additional Permits:	Choose an item.

MCBR BLD:	Not Yet Assigned	HH P&D:	
MCBR MEC:		HHFD Plan:	21-221
MCBR ELE:		HHFD Box:	
REVIEWER:	Susong	DATE:	11/4/2021

Fire Department Comments:

The Huber Heights City Code Part 15 Refers to Fire Code Requirements and has adopted by reference OFC and IFC Appendices

These comments are based only on the proposed site work, fire department access and basic fire protection concept at this time. A full plan review of the building systems, fire protection, egress and life safety will need to be conducted once the architectural plans have been submitted. The proposed development will need to meet the requirements of the Ohio Fire Code 2017, Ohio Building Code 2017 and the Huber Heights Codified Ordinance. Based on the drawings provided the following requirements need to be met.

Requirements: (Site Plan)

- **Proposed driveways are acceptable and appear to meet Ohio Fire Code requirements for turn radius.**
- **If building will be equipped with a fire sprinkler system at least one fire hydrant will be required within 75 feet of the Fire Department Connection for the sprinkler system. (Huber Heights Codified Ordinance 1521.01)**
- **A permit shall be obtained for construction from Montgomery County Building Regulations.**

Please reference contact information below for questions or concerns with this document.

Plans reviewed by the Huber Heights Fire Division are reviewed with the intent they comply in **ALL** respects to this code, as prescribed in **SECTION (D) 104.1 of the 2017 Ohio Fire Code**. Any omissions or errors on the plans or in this review do not relieve the applicant of complying with **ALL** applicable requirements of this code. These plans have been reviewed for compliance with the Ohio Fire Code adopted by this jurisdiction. There may be other regulations applicable under local, state, or federal statues and codes, which this department has no authority to enforce and therefore have not been evaluated as part of this plan review.

October 14, 2021

City of Huber Heights
Planning and Zoning Department
6131 Taylorsville Road
Huber Heights, Ohio 45424

RE: Rezoning and Development Application Traffic Study
6025 Taylorsville Road, Huber Heights, OH 45424, Parcel ID#P700 4005 0006

Dear Planning Commission:
Attached please find contract for the required traffic study.

Due to Covid restrictions many providers were 60-90 days out to start the survey. Choice One Engineering will be able to provide and complete the survey by the end of October, 2021 prior to the November 9th, 2021 meeting date.

As soon as provided to us, we will submit to the City of Huber Heights.

Respectfully,

Parveen Wadhwa
Developer
2946 Idaho Falls Drive
Beavercreek, OH 45431

ChoiceOne Engineering

Date
October 12, 2021

Attention
Parveen Wadhwa

Address
2946 Idaho Falls Drive
Beavercreek, Ohio 45431

Subject
Agreement for Professional Services
Taylorsville Road Commercial Development TIS
MOT-HHE-2111

Dear Mr. Wadhwa:

Choice One Engineering Corporation appreciates the opportunity to provide services for the Taylorsville Road Commercial Development TIS.

This Agreement is by and between HRI Commercial, hereinafter referred to as Client, and Choice One Engineering Corporation, hereinafter referred to as Choice One. If everything is acceptable, please execute two originals, keeping one for your files and returning one to Choice One. Choice One will not start work on this Project until the Agreement is signed and received in our office.

This Agreement is subject to the provisions of the following which are attached to and made a part of this Agreement: Scope of Services, Compensation, and Schedule, consisting of three pages and Choice One Engineering Corporation Standard Terms & Conditions consisting of three pages.

Authorization by the Client to proceed, whether oral or written, constitutes acceptance of the terms and conditions of this Agreement, without modification, addition, or deletion. Client and Choice One each bind itself and its partners, successors, executors, administrators of this executed Agreement.

Parveen Wadhwa

Authorized Signature

10/12/2021
Date

Choice One Engineering Corporation

Michael K. Goettemoeller, Project Manager

10/11/2021
Date

W. Central Ohio/E. Indiana
440 E. Hoewisher Rd.
Sidney, OH 45365
937.497.0200 Phone

S. Ohio/N. Kentucky
8[illegible] Glendale Milford Rd. Suite 1
Loveland, OH 45140
[illegible] Phone

www.CHOICEONEENGINEERING.com

Scope of Services

Project Snapshot

Choice One intends to prepare a traffic impact study for the proposed commercial development and submit it to the City of Huber Heights.

Project Services

1. **Traffic Impact Study**
    a. This study will be in accordance with ODOT's State Highway Access Management Manual (SHAMM).
    b. The purpose of the study is to determine the necessary roadway improvements to the surrounding roadway network.
    c. Perform turning movement traffic counts at the following intersections from 6:00– 7:00 PM to determine the existing traffic volumes.
        i. Taylorsville Road & Mount Hood
    d. The traffic counts will be conducted on a Tuesday, Wednesday, or Thursday.
    e. The study will evaluate the proposed access points for the site.
    f. The traffic scenario years that will be analyzed are:
        i. Opening Year No-Build Traffic Scenario (2022)
        ii. Opening Year Build Traffic Scenario (2022)
        iii. 10-year Design Year No-Build Traffic Scenario (2032)
        iv. 10-year Design Year Build Traffic Scenario (2032)
    g. A growth rate will be obtained from the Miami Valley Regional Planning Commission's (MVRPC) regional travel demand model.
        i. The growth rate will be applied at a simple linear rate with respect to count.
    h. Prepare Trip Generation, Distribution & Assignment
        i. Prepare trip generation for the proposed development using the Institute of Transportation Engineers Trip Generation Manual, 10th edition.
        ii. Peak hour directional distributions to/from the site shall be based upon the existing counts at the adjacent intersection. The assignment of traffic to the proposed access roadways shall consider the planned footprint of the development. Based on the directional distribution, the generated traffic volumes shall be assigned to the adjacent street network.
    i. Prepare capacity analyses of the intersections based on study years.
        i. Intersection capacity analysis will be performed using Synchro 10.
    j. Provide turn lane warrant analyses for the studied intersections for the study years.
        i. Turn lane analysis will be performed using the procedures set forth in the Ohio Department of Transportation Location and Design Manual: Volume 1 Roadway Design, Figure 401-9E.
    k. Prepare Signal Warrant Analysis
    l. Provide recommendations for roadway improvements.
    m. The final engineering design of any recommended improvements are not included in this agreement and will be under a separate scope and fee.
    n. Submit the Traffic Impact Study to Huber Heights for review and approval.
    o. One (1) meeting is included in this scope and fee. Additional meetings will be charged on an hourly basis according to our current Standard Hourly Rate Schedule.
    p. This agreement is based upon the concept attached. If there are changes to the concept which impact the analysis, will be at an additional fee.

Additional Services

We have the skill, experience, and knowledge to provide additional services as listed below. Additional services will be approved by the Client prior to commencement and will be performed on an hourly basis according to our current Standard Hourly Rate Schedule or a mutually negotiated lump sum fee.

1. Construction Plans
2. Storm Sewer Design
3. Sanitary Sewer Design
4. Waterline Design
5. Traffic Signal Design
6. Traffic Impact Studies
7. Traffic Data Collection
8. Detailed Maintenance of Traffic Plans
9. Topographic Survey
10. Boundary Survey
11. Off-Site Utility Extension
12. Construction Layout Staking
13. Easement and Right-of-Way Plats or Descriptions
14. Construction Bidding Procedures
15. Record Drawings
16. Construction Observation
17. Certification of Grading Plan
18. Construction Administration
19. Individual Lot Layout, Drainage, and Design
20. Ohio Environmental Protection Agency (OEPA) Permits and Submittals
21. Ohio Department of Transportation (ODOT) Permits and Submittals
22. Wetland Evaluation and Determination
23. Geotechnical Services

Client Responsibilities

- Provide timely decisions to keep design work on schedule.

Compensation & Schedule

Compensation

Lump Sum Fee Schedule	
Traffic Impact Study	$6,200.00
Total	**$6,200.00**

Schedule

Choice One will work with the client to determine the project schedule after receipt of an executed agreement.

AI-7941 **7. B.**

Planning Commission

Meeting Date: 11/09/2021

MINOR CHANGE

Information

Agenda Title

MINOR CHANGE - The applicant, MS Consultants, Inc., is requesting approval of a Minor Change for addition of new coolers, freezer, and dry storage room at property located at 5611 Merily Way (ZC 21-44).

Purpose and Background

Attachments

Staff Report

Decision Record

Drawings

Memorandum

Staff Report for Meeting of November 09, 2021

To: Huber Heights City Planning Commission

From: Scott Falkowski, Interim City Manager

Date: November 4, 2021

Subject: ZC 21-44 (Minor Change Texas Roadhouse)

Application dated October 18, 2021

Department of Planning and Zoning City of Huber Heights

APPLICANT/OWNER: MS Consultants, Inc, – Applicant
Texas Roadhouse of Huber Heights, LLC - Owner

DEVELOPMENT NAME: Texas Roadhouse

ADDRESS/LOCATION: 5611 Merily Way

ZONING/ACREAGE: PC/ 6.5 Acres

EXISTING LAND USE: Restaurant Use

ZONING ADJACENT LAND: R-6, B-3

REQUEST: The applicant requests approval of a Minor Change for Addition of New coolers, Freezer, and Dry Storage at Rear of Building.

ORIGINAL APPROVAL:

APPLICABLE HHCC:

CORRESPONDENCE: In Favor – None Received
In Opposition – None Received

STATEMENT OF FACT:

The applicant requests approval of a Minor Change for Addition of New coolers, freezer, and dry storage at rear of building.

STAFF ANALYSIS:

Overview

The applicant wishes to place an addition to the rear of the building for coolers, freezers and storage. There is no plan to expand any of the dining areas, so there are no increased parking requirements, but their plan is to remove eight spaces where the expansion is located. The restaurant expanded the parking lot above the required amount several years ago, so the decrease does not go below that standard code. The plan for the exterior of the building is to match the materials and colors of the existing stone, brick, and roofing.

Planning Commission Decision Record

WHEREAS, on October 18, 2021, the applicant, MS Consultants, Inc., requested approval of a Minor Change for 5611 Merily Way (Zoning Case 21-44), and;

WHEREAS, on November 9, 2021 the Planning Commission did meet and fully discuss the details of the request.

NOW, THEREFORE, BE IT RESOLVED that the Planning Commission hereby approved the request.

_____ moved to approve the application by the applicant, MS Consultants, Inc., for approval of a Minor Change (Zoning Case 21-44) in accordance with the recommendation of Staff's Memorandum dated November 4, 2021 with the following conditions:

1. All previous PUD regulations shall remain in full force and effect unless specifically modified herein.

2. The approved plan shall be that stamped as received by the Planning Department on September 5, 2021, except as modified herein.

Seconded by _____. Roll call showed: YEAS: ____. NAYS: ____. Motion to approve carried ____.

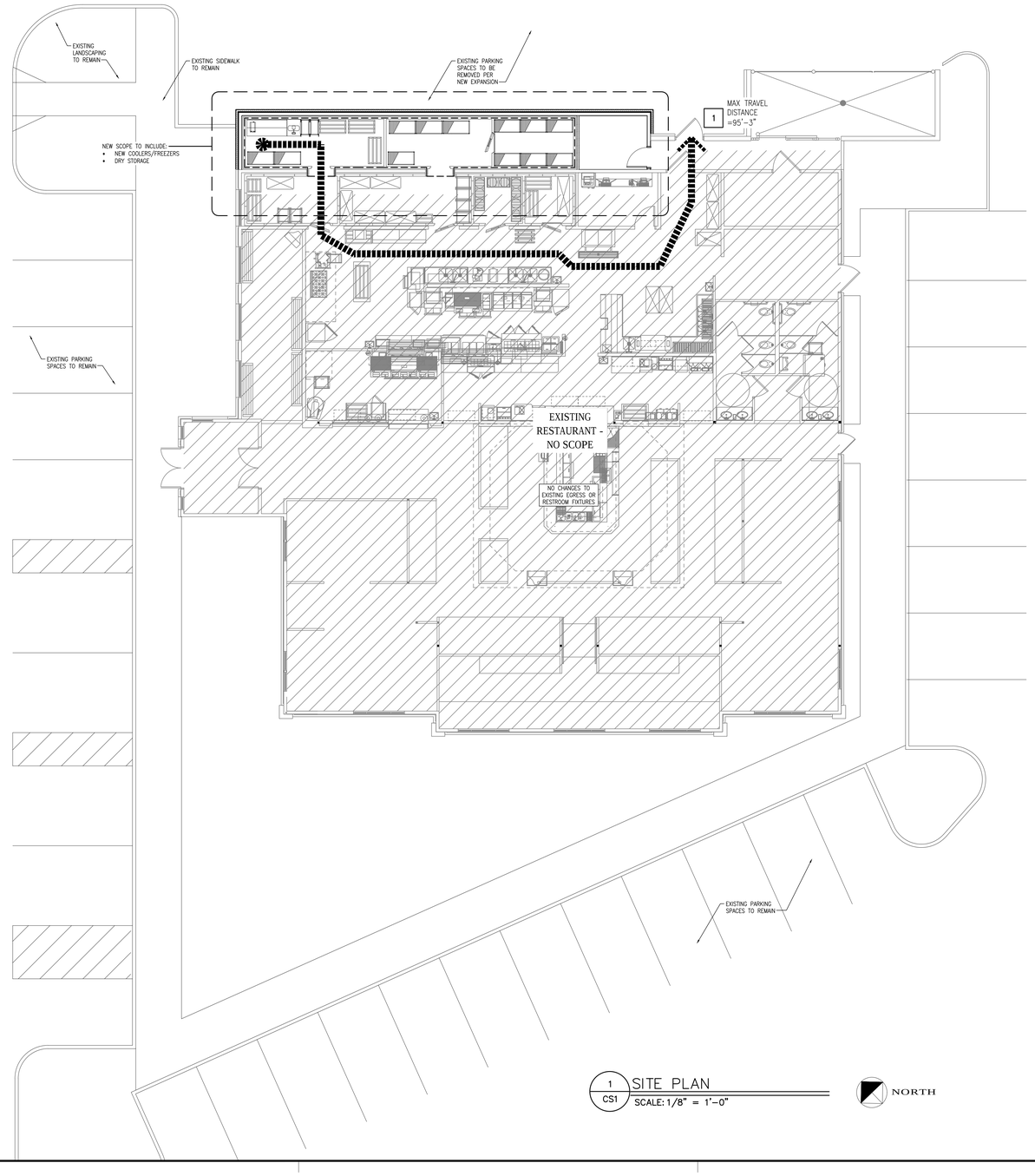
_____ _____

Terry Walton, Chair Date
Planning Commission

TEXAS ROADHOUSE

5611 MERILY WAY

HUBER HEIGHTS, OH 45424



1 CS1 SITE PLAN
SCALE: 1/8" = 1'-0"

NORTH

CODE ANALYSIS

BUILDING CODE INFORMATION

1. SUBMITTOR:	MS CONSULTANTS, INC.
2. SUBMITTOR ADDRESS:	2221 SCHROCK ROAD COLUMBUS, OH 43229 T: 614.898.7100 F: 614.898.7570
3. PROJECT NAME:	TEXAS ROADHOUSE
4. PROJECT ADDRESS:	5611 MERILY WAY HUBER HEIGHTS, OH 45424
5. BUILDING CODES:	2017 OHIO BUILDING CODE 2017 OHIO FIRE CODE 2017 OHIO MECHANICAL CODE 2017 OHIO PLUMBING CODE 2012 ICCC OR 2010 ASHRAE 2015 INTERNATIONAL FUEL GAS CODE 2017 NATIONAL ELECTRIC CODE 2009 ACCESSABILITY ICC A1171 & 2017 OHIO BUILDING CODE, CH11
6. CONSTRUCTION TYPE:	VB
7. USER GROUP:	A2
8. NUMBER OF STORIES:	ONE (1)
9. HEIGHT OF ADDITION:	15'-0" HIGH [APPROX. HEIGHT OF (E) BUILDING: 27'-6"]
10. GROSS AREA OF RENOVATION/ADDITION:	612 S.F.
11. FULLY SPRINKLED:	EXISTING SPRINKLER CONTRACTOR TO SUBMIT DRAWINGS TO BUILDING DEPARTMENT FOR REVIEW (FOR NEW SPRINKLERS)
12. SCOPE OF WORK:	COOLER AND DRY STORAGE EXPANSION AT EXISTING BUILDING FOR RESTAURANT. ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL.
13. EGRESS	EGRESS TO REMAIN EXISTING AS IS UNLESS NOTED OTHERWISE. NEW TRAVEL DISTANCES TO EXISTING EXITS ARE NOTED ON SITE PLAN.

OCCUPANCY LOAD
(PER 2017 OHIO BUILDING CODE)

	EXISTING AREA TO REMAIN	EXISTING OCCUPANTS	NEW AREA	TOTAL OCCUPANTS
EXISTING DINING AREA (FIXED SEATS)	4,851 S.F.	283 SEATS	--	283 SEATS
WAITING (1:7)	251 S.F.	36 PERSONS	--	36 PERSONS
KITCHEN (1:200)	2,498 S.F.	13 PERSONS	+534 S.F. (+3 PERSONS)	16 PERSONS
TOTAL INTERIOR	**7,600 S.F.**	**332 PERSONS**	**534 S.F.**	**335 PERSONS**

PLUMBING FIXTURE COUNT
(PER 2017 OHIO PLUMBING CODE)

OCCUPANCY	**EXISTING TOTAL**	**NEW TOTAL**	
	332 PERSONS	335 PERSONS	
CODE (WC)	**EXISTING**	**REQUIRED**	**CHANGE REQUIRED**
MALE (1 PER 75 OR 67% URINAL)	(2) WC (1) URINAL	(2) WC (1) URINAL	NO CHANGE
FEMALE (1 PER 75)	(3) WC	(3) WC	NO CHANGE
CODE (LAV)			
MALE (1 PER 200)	(2) LAV	(1) LAV	NO CHANGE
FEMALE (1 PER 200)	(2) LAV	(1) LAV	NO CHANGE

INDEX OF DRAWINGS

GENERAL

SHEET #	SHEET TITLE
CS1	COVER SHEET

STRUCTURAL

SHEET #	SHEET TITLE
S1	GENERAL NOTES
S2	PARTIAL FOUNDATION PLAN & DETAILS
S3	PARTIAL ROOF FRAMING PLAN & DETAILS

ARCHITECTURAL

SHEET #	SHEET TITLE
D1	DEMO FLOOR PLANS
A1	FLOOR PLANS
A2	EXTERIOR ELEVATIONS
A3	WALL SECTIONS & DETAILS
A4	RCP & FINISH FLOOR PLAN

MECHANICAL

SHEET #	SHEET TITLE
M1	MECHANICAL PLANS AND DETAILS

ELECTRICAL

SHEET #	SHEET TITLE
E1	POWER & LIGHTING PLAN AND DETAILS

SPECIFICATION SHEETS

SHEET #	SHEET TITLE
SPC1	SPECIFICATIONS
SPC2	SPECIFICATIONS
SPC3	SPECIFICATIONS

GENERAL NOTES

SPECIAL CONDITIONS

THE CONTRACTOR SHALL CAREFULLY EXAMINE THE CONSTRUCTION DOCUMENTS AND SECURE FROM THE ARCHITECT ADDITIONAL INFORMATION, IF NECESSARY, THAT MAY BE REQUISITE TO A CLEAR AND FULL UNDERSTANDING OF THE WORK.

ANY WORK OR MATERIAL WHICH IS NOT DIRECTLY NOTED IN THE SPECIFICATIONS AND DRAWINGS, BUT IS NECESSARY FOR THE PROPER CARRYING OUT OF THE OBVIOUS INTENTION, IS TO BE UNDERSTOOD AS "IMPLIED" AND IS TO BE PROVIDED BY THE CONTRACTOR IN HIS PROPOSAL AS FULLY AS IF SPECIFICALLY DESCRIBED OR DELINEATED. ANY DISCREPANCIES BETWEEN DRAWINGS AND SPECIFICATIONS MUST BE REPORTED TO THE ARCHITECT FOR CORRECTION AND INTERPRETATION BEFORE THE WORK IS EXECUTED.

DURING THE BIDDING PERIOD, ANY DISCREPANCIES, CONFLICTS, AND/OR INTERPRETATION IN THE DOCUMENTS SHALL BE SUBMITTED TO THE ARCHITECT PROMPTLY FOR CLARIFICATION. THE ARCHITECT SHALL ISSUE WRITTEN ADDENDA TO BIDDERS CLARIFYING SUCH MATTERS. THE ARCHITECT WILL NOT BE RESPONSIBLE FOR ORAL INSTRUCTIONS. IT SHALL BE HELD THAT ALL BIDDERS HAVE EXAMINED ALL DOCUMENTS FOR PROPER COMPREHENSION IN THE DIVISION OF THE WORK, AND THEIR RELATIONSHIP TO THE OTHER CONTRACTORS OR SECTIONS OF THE WORK. NO ALLOWANCE SHALL BE MADE, AFTER THE BID OPENING, FOR MISUNDERSTANDING ON THE PART OF THE CONTRACTOR.

BEFORE ORDERING ANY MATERIAL OR DOING ANY WORK, EACH CONTRACTOR SHALL VERIFY ALL DIMENSIONS AT THE BUILDING AND SHALL BE RESPONSIBLE FOR THE CORRECTION OF THE SAME. NO EXTRA CHARGE OR COMPENSATION WILL BE ALLOWED ON ACCOUNT OF DIFFERENCE BETWEEN ACTUAL DIMENSIONS AND THE MEASUREMENTS INDICATED ON THE DRAWINGS. ANY DIFFERENCE WHICH MAY BE FOUND SHALL BE SUBMITTED TO THE ARCHITECT FOR CONSIDERATION BEFORE PROCEEDING WITH THE WORK.

PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL MAKE CERTAIN THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.

INDEX OF REVISIONS

REVISION #	DATE	REVISED SHEET NUMBERS	DESCRIPTION

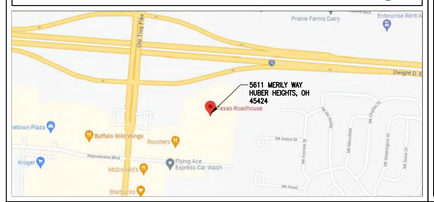
DEFERRED SUBMITTALS

FIRE SPRINKLERS

FIRE ALARM SYSTEMS

VICINITY MAP

HUBER HEIGHTS, OH
(NO SCALE)



ABBREVIATIONS

A.C.T.	ACOUSTICAL CEILING TILE	E.W.	EACH WAY	MTD.	MOUNTED
A.B.	ANCHOR BOLT	E.W.C.	ELECTRICAL WATER COOLER	MTL.	METAL
A.F.F	ABOVE FINISH FLOOR	F.B.O.	FURNISHED BY OTHERS	N.I.C	NOT IN CONTRACT
ALT.	ALTERNATE	FD.	FLOOR DRAIN	NO.	NUMBER
ALU.	ALUMINUM	FDN.	FOUNDATION	N.T.S.	NOT TO SCALE
ASPH.	ASPHALT	FLR.	FLOOR	O.C.	ON CENTER
BD.	BOARD	FIN.	FINISH(ED)	O.D.	OUTSIDE DIAMETER
BLDG.	BUILDING	FTG.	FOOTING	O.H.	OVERHEAD
BLKG.	BLOCKING	F.P.	FIREPROOF	OPNG.	OPENING
BM.	BEAM	FURR.	FURRING	OPP.	OPPOSITE
BOT.	BOTTOM	GA.	GAUGE	P.P.C.	PLUMBING CONTRACTOR
B.S.	BOTH SIDES	GALV.	GALVANIZED	PL.	PLATE
CLG.	CEILING	G.C.	GENERAL CONTRACTOR	PLAS. LAM.	PLASTIC LAMINATE
CLR.	CLEAR	GL.	GLASS	PLYWD.	PLYWOOD
C.M.U	CONCRETE MASONRY UNIT	GRD.	GRADE	PR.	PAIR
COL.	COLUMN	GYP.	GYPSUM	PT.	PAINT
CONC.	CONCRETE	HAC.	HEATING & A/C CONTRACTOR	RAD.	RADIUS
CONTR.	CONTRACTOR	HC.	HOLLOW CORE	REINF.	REINFORCED
C.J.	CONTROL JOINT	HDWD.	HARD WOOD	REQ'D	REQUIRED
C.T.	CERAMIC TILE	H.M.	HOLLOW METAL	RESIL.	RESILIENT
CTR.	CENTER	HORIZ.	HORIZONTAL	RM.	ROOM
DBL.	DOUBLE	HORIZ.P.	HIGH POINT	R.O.	ROUGH OPENING
DIA.	DIAMETER	HT.	HEIGHT	SIM.	SIMILAR
DN.	DOWN	I.D.T.	INSIDE DIMENSION CLEAR	SHTG.	SHEATHING
DR.	DOOR	I.D.	INSIDE DIAMETER	SPEC'S.	SPECIFICATIONS
DS.	DOWNSPOUT	INSUL.	INSULATION	SQ.	SQUARE
DTL./DET.	DETAIL	INT.	INTERIOR	STD.	STANDARD
DWG.	DRAWING	JAN.	JANITOR	STL.	STEEL
EA.	EACH	JT.	JOINT	STRUCT.	STRUCTURAL
E.C.	ELECTRICAL CONTRACTOR	LAM.	LAMINATE	SUSP. CLG.	SUSPENDED CEILING
ELEC.	ELECTRICAL	LAV.	LAVATORY	T.M.	TOP OF MASONRY
ELEV.	ELEVATION	L.P.	LOW POINT	T.S.	TOP OF STEEL
E.F.	EACH FACE	MAX.	MAXIMUM	TYP.	TYPICAL
EQ.	EQUAL	MECH.	MECHANICAL	U.N.O.	UNLESS NOTED OTHERWISE
EQUIP.	EQUIPMENT	MIN.	MINIMUM	V.C.T.	VINYL COMPOSITION TILE
EXIST.	EXISTING	MISC.	MISCELLANEOUS	W/	WITH
EXP.	EXPANSION	M.O.	MASONRY OPENING	WD.	WOOD

SYMBOL LEGEND

ROOM NAME & NUMBER IDENTIFICATION — XXX / XXX

DOOR NUMBER IDENTIFICATION — 14

DETAIL MARK — X / XX

KEYED NOTE — XX

WINDOW TYPE — X

REVISION MARK WITH DELTA — 1

WALL SECTION — X / XX

INTERIOR ELEVATION MARK — X / XX

BUILDING ELEVATION — X / XX

TYPICAL DETAIL DESIGNATION — X / XX — DETAIL NUMBER; SHEET WHERE DETAIL IS SHOWN

CONSULTANTS

MECHANICAL & PLUMBING	MS CONSULTANTS, INC. MICHAEL MORELLI CONTACT: JOHN HAMILTON (614) 898-7100 jhamilton@msconsultants.com	STRUCTURAL	MS CONSULTANTS, INC. CRAIG METZGER CONTACT: JOHN HAMILTON (614) 898-7100 jhamilton@msconsultants.com
ELECTRICAL	MS CONSULTANTS, INC. MICHAEL MORELLI CONTACT: JOHN HAMILTON (614) 898-7100 jhamilton@msconsultants.com	KITCHEN EQUIPMENT	TEXAS ROADHOUSE CONTACT: GREG MICHALSKI (419)508-8959 Gregory.Michalski@TexasRoadhouse.com
ARCHITECTURAL	MS CONSULTANTS, INC. CHARLES BUSCH CONTACT: JOHN HAMILTON (614) 898-7100 jhamilton@msconsultants.com		

ISSUED:	DATE:
COORDINATION SET	09/10/2021
PERMIT SET	09/24/2021

NOTICE

THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH THE ARCHITECT. UNAUTHORIZED REPRODUCTION, OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF THE ARCHITECT. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED.

CLIENT

ms consultants, inc.
engineers, architects, planners
2221 Schrock Road
Columbus, Ohio 43229-1547
phone 614.898.7100
fax 614.898.7570

PROJECT

TEXAS ROADHOUSE

5611 MERILY WAY
HUBER HEIGHTS, OH 45424
MONTGOMERY COUNTY

SEAL

STATE OF OHIO
CHARLES M. BUSCH
1817348
REGISTERED ARCHITECT

PROFESSIONAL OF RECORD
CHARLES M. BUSCH, AIA, NCARB
LICENSED ARCHITECT NO. 1817348
EXP DATE: 12/31/2021

SHEET TITLE

COVER SHEET

DRAWN BY: HW/DH

CHECKED BY: CB

PROJECT NO: 40493-07

SCALE: AS NOTED

DRAWING

CS1

Drawing Name: N:\2021\21040493.07 - Huber Heights, OH\Docs\CAD\TXRH Huber Heights,OH_CS1_Cover Sheet.dwg Last Modified: Sep 27, 2021 - 12:07pm by jhillenbrand
N:\2021\21040493.07 - Huber Heights, OH\Docs\CAD\TXRH Huber Heights,OH_CS1_Cover Sheet.dwg, 9/27/2021 12:07 PM, hillenbrand, danielle

STRUCTURAL NOTES:

A. CONTRACTORS NOTES:

1. THE CONTRACT DOCUMENTS REPRESENT THE INTENT OF THE CONSTRUCTION. THE PROCEDURES AND RISKS ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE STRUCTURAL INTEGRITY OF THE BUILDING SHALL BE MAINTAINED AT ALL TIMES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATIONS OF ALL DIMENSIONS AND ELEVATIONS. ANY DISPARITY SHALL BE REPORTED TO THE ARCHITECT/ENGINEER PRIOR TO THE BEGINNING OF WORK.
3. ANY CHANGES MADE BY THE CONTRACTOR SHALL BE APPROVED BY THE ARCHITECT/ENGINEER PRIOR TO THE BEGINNING OF WORK.

B. DESIGN CRITERIA

APPLICABLE CODE: 2017 OHIO BUILDING CODE
THIS STRUCTURE HAS BEEN DESIGNED ACCORDING TO THE FOLLOWING:
BUILDING RISK CATEGORY: III

ROOF LOADS:

1. TOP CHORD TRUSS DEAD LOAD:	16 P.S.F.	5. GROUND SNOW LOAD:	20 P.S.F.
2. BOTTOM CHORD COLLATERAL LOAD:	5 P.S.F.	6. ROOF SNOW LOAD:	15.4 P.S.F.
3. TOP CHORD TRUSS LIVE LOAD:	20 P.S.F.	7. SNOW IMPORTANCE FACTOR:	I_S =1.10
4. NET WIND UPLIFT:	10 P.S.F.		

8. MECHANICAL EQUIPMENT LOADS AND LOCATIONS USED FOR DESIGN ARE AS INDICATED ON THE STRUCTURAL DRAWINGS. ACTUAL LOADS INDICATED ON THE SHOP DRAWINGS.

LATERAL LOADS:

1. WIND:

ULTIMATE WIND SPEED:	120 M.P.H.	WIND IMPORTANCE FACTOR:	I_W=1.00
NOMINAL WIND SPEED:	93 M.P.H.	INTERNAL PRESSURE COEFFICIENT:	± 0.18
WIND EXPOSURE:	'C'		

2. SEISMIC:

SEISMIC IMPORTANCE FACTOR:	I_E =1.25	BASIC SEISMIC-FORCE RESISTING SYSTEM:	
SEISMIC USE GROUP:	I	BEARING WALL (LIGHT FRAME	
SEISMIC SITE CLASSIFICATION:	C	WALLS W/ WOOD SHEAR PANELS)	
SEISMIC CATEGORY:	B	DESIGN BASE SHEAR:	0.032W
S_S = 0.156**g** S_1 = 0.070**g**		SEISMIC RESPONSE COEFFICIENT:	0.032
S_{DS} = 0.166**g** S_{D1} = 0.112**g**		RESPONSE MODIFICATION FACTOR:	6.5
		ANALYSIS PROCEDURE USED:	EQUIVALENT LATERAL FORCE PROCEDURE

C. FOUNDATION AND BACKFILLING

1. SPREAD FOOTING DESIGN IS BASED ON AN ASSUMED 2000P.S.F. BEARING PRESSURE PER SOILS REPORT PREPARED BY GILES ENGINEERING ASSOCIATES, INC (DATED DECEMBER 13, 2006), AND EXISTING STRUCTURAL DRAWINGS BY ONM&J, PROJECT NUMBER 2006.0592 (TO BE VERIFIED BY A QUALIFIED GEOTECHNICAL ENGINEER).
2. THE BOTTOM OF EXTERIOR FOOTINGS IN UNHEATED AREAS SHALL BEAR A MINIMUM OF 32" BELOW FINAL EXTERIOR GRADE FOR FROST PROTECTION.
3. SELECT FILL MATERIALS SHALL BE PLACED IN 8-INCH LAYERS (USING PLATE COMPACTORS) OR 12-INCH LAYERS (USING VIBRATORY ROLLERS) AND BE COMPACTED TO AT LEAST 95 PERCENT MODIFIED PROCTOR METHOD.
4. FOOTINGS MAY BE POURED INTO AN EARTH-FORMED TRENCH IF SOIL CONDITIONS PERMIT.

D. CAST IN PLACE CONCRETE

1. CONCRETE FOR FOOTINGS SHALL BE 3000 P.S.I. COMPRESSIVE STRENGTH IN 28 DAYS. ALL OTHER CONCRETE SHALL BE 4000 P.S.I. STRENGTH
2. PROVIDE TEST MATERIAL FOR CONCRETE MATERIAL AND MIX DESIGN TEST.
3. REINFORCEMENT SHALL BE DEFORMED STEEL AND CONFORM TO ASTM A615 FY=60 K.S.I. WELDED WIRE FABRIC SHALL BE ASTM A185
4. CONTINUOUS SPLICES, VERTICAL OR HORIZONTAL, SHALL BE 40 BAR DIAMETER. SPLICES SHALL BE CONTINUOUS OR SPLICED WITH DOWELS.
5. BAR CLEARANCES SHALL BE: MIN. COVER
   - A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH
     - #6-#18 BAR: 2"
     - #5 OR SMALLER: 1½"
   - B. CONCRETE EXPOSED TO EARTH OR ELEMENTS
     - #6-#18 BAR: 2"
     - #5 OR SMALLER: 1½"
   - C. CONCRETE NOT EXPOSED TO ELEMENTS OR EARTH SLABS/WALLS
     - #11 OR SMALLER: 1½"
   - D. BEAMS, COLUMNS, PRIMARY REINFORCEMENT TIES AND STIRRUPS: 2"
   - E. SLAB-ON-GRADE REINFORCEMENT (FROM TOP OF SLAB)
6. PRIOR TO FABRICATION, SUBMIT SHOP FABRICATION DRAWINGS FOR BENDING AND PLACEMENT OF CONCRETE REINFORCEMENT. COMPLY WITH ACI 315 "MANUAL OF STANDARD PRACTICE FOR STANDARD DETAILING REINFORCED CONCRETE STRUCTURES" SHOWING BAR SCHEDULES, STIRRUP SPACING, DIAGRAMS OF BENT BARS, ARRANGEMENT OF CONCRETE REINFORCEMENT. INCLUDE SPECIAL REINFORCEMENT REQUIRED AND OPENINGS THROUGH CONCRETE.

F. MASONRY

1. REINFORCED MASONRY SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH, F'M, OF 1500 PSI. MASONRY UNITS SHALL BE NORMAL WEIGHT BLOCK CONFORMING TO ASTM C90, GRADE N, AND SHALL HAVE A MINIMUM NET AREA COMPRESSIVE STRENGTH OF 1900 PSI. MORTAR SHALL CONFORM TO ASTM C270, TYPE S, U.N.O. GROUT SHALL CONFORM TO ASTM C476. GROUT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2000 PSI AND MAXIMUM DENSITY OF 115 PCF. SLUMP AT POINT OF PLACEMENT SHALL BE 9" ± 1".
2. REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60, UNLESS NOTED OTHERWISE.
3. CONTINUOUS WIRE REINFORCING (JOINT REINFORCING) SHALL BE GALVANIZED TRUSS OR LADDER TYPE FORMED FROM 9 GAUGE COLD - DRAWN STEEL WIRE COMPLYING WITH ASTM A82. JOINT REINFORCING SHALL BE SPACED AT 16" O.C. VERTICALLY IN ALL MASONRY WALLS.
4. SEE DRAWINGS FOR LOCATIONS OF VERTICAL CONTROL JOINTS. HORIZONTAL BOND BEAM AND LINTEL REINFORCING SHALL BE CONTINUOUS ACROSS VERTICAL CONTROL JOINTS. JOINT REINFORCING SHALL BE STOPPED EITHER SIDE OF VERTICAL CONTROL JOINTS.
5. ALL REINFORCED CELLS, ALL CELLS BELOW GRADE AND ALL CELLS BELOW FINISH FLOOR SHALL BE GROUTED SOLID.
6. WHEN A FOUNDATION DOWEL DOES NOT LINE UP WITH A VERTICAL BLOCK CORE, IT SHALL NOT BE SLOPED MORE THAN ONE HORIZONTAL IN 6 VERTICAL. DOWELS MAY BE GROUTED INTO A CELL IN VERTICAL ALIGNMENT, EVEN THOUGH IT IS IN AN ADJACENT CELL TO THE VERTICAL WALL REINFORCING.
7. REINFORCING STEEL SHALL BE SECURED IN PLACE BEFORE GROUTING STARTS.
8. SPLICED REINFORCING SHALL BE LAPPED 48 BAR DIAMETERS OR 24 INCHES, WHICHEVER IS GREATER. SPLICED BARS SHALL BE WIRED TOGETHER.
9. VERTICAL BARS SHALL BE HELD IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 200 DIAMETERS OF THE REINFORCING, NOR 10 FEET. BARS SHALL BE IN PLACE PRIOR TO GROUTING.
10. VERTICAL REINFORCING BARS SHALL HAVE A MINIMUM CLEARANCE OF 1/4 OF AN INCH FROM THE MASONRY FOR FINE GROUT AND 1/2 INCH FOR COARSE GROUT.
11. VERTICAL CELLS THAT WILL BE GROUTED SHALL HAVE A VERTICAL ALIGNMENT TO MAINTAIN A CONTINUOUS UNOBSTRUCTED CELL AREA NOT LESS THAN 3"X4".
12. GROUTING SHALL BE STOPPED 1-1/2" BELOW THE TOP OF A COURSE SO AS TO FORM A KEY AT THE POUR JOINT.
13. ALL BOLTS, ANCHORS, ETC., INSERTED IN THE WALLS, SHALL BE GROUTED SOLID INTO POSITION.

G. SHEATHING

1. STRUCTURAL PANEL ON WALL SHALL BE 1/2" APA RATED WOOD STRUCTURAL PANEL (PLYWOOD/OSB BOARD) EXPOSURE 1. EXTERIOR GRADE APA RATED WITH THICKNESS SHOWN ON PLANS. PANEL SHALL BE NAILED WITH 8D COMMON NAILS @ 6" O.C. AT EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS UNLESS NOTED. SEE SHEAR WALL SCHEDULE ON SHEET S6
2. STRUCTURAL PANEL ON ROOF SHALL BE $\frac{7}{16}$" T&G APA RATED WOOD STRUCTURAL PANEL (PLYWOOD/OSB BOARD) EXPOSURE 1. PANEL SHALL BE NAILED WITH 8D COMMON NAILS AT 6" O.C. AT EDGES, AT 12" O.C. AT INTERMEDIATE SUPPORTS, AND AT 6" O.C. AT DIAPHRAGM BOUNDARY UNLESS NOTED OTHERWISE. SEE ROOF SHEATHING SPACING DIAGRAM ON SHEET S5.
3. ROOF PANEL SHALL BE PLACED WITH FACE GRAIN ACROSS TRUSSES AND STAGGERED SO CONTINUOUS PANEL JOINTS OCCUR ONLY IN ONE DIRECTION, PERPENDICULAR TO THE SPAN OF THE TRUSS. PROVIDE TONGUE AND GROOVE SHEATHING OR BLOCKING.

H. FRAMING LUMBER

1. ALL LUMBER SHALL BE GRADED IN ACCORDANCE WITH AF&PA STANDARDS & NDS 2012.
2. STUDS SHALL BE SOUTHERN YELLOW PINE OR DOUGLAS FIR OR APPROVED EQUAL STUD GRADE (AS NOTED ON PLANS) AT 19% MAX. MOISTURE CONTENT.

S.Y.P #2	Fb = 925 P.S.I.	E = 1,400,000 P.S.I.
S.Y.P. #3	Fb = 575 P.S.I.	E = 1,200,000 P.S.I.
DOUGLAS FIR #2	Fb = 900 P.S.I.	E = 1,600,000 P.S.I.
DOUGLAS FIR (STUD)	Fb = 700 P.S.I.	E = 1,400,000 P.S.I.

3. ROOF RAFTERS, COLUMNS, AND JOISTS SHALL BE DENSE SOUTHERN YELLOW PINE OR DOUGLAS FIR OR APPROVED EQUAL JOIST/RAFTER GRADE (AS NOTED ON PLANS) AT 19% MAX. MOISTURE CONTENT.

S.Y.P #2	Fb = 925 P.S.I.	E = 1,400,000 P.S.I.
DOUGLAS FIR #2	Fb = 900 P.S.I.	E = 1,600,000 P.S.I.
MICROLAM LVL (1.9E)	Fb = 2600 P.S.I.	E = 1,900,000 P.S.I.

4. WOOD CONNECTORS SHOWN ON THE DRAWINGS SHALL BE SIMPSON STRONG-TIE CONNECTORS AS MANUFACTURED BY THE SIMPSON CO., OR APPROVED EQUAL. ALL CONNECTORS EXPOSED TO THE WEATHER SHALL BE GALVANIZED.
5. ALL SHEATHING AND DRYWALL PANEL EDGES SHALL BE SUPPORTED WITH MIN. 2x6 BLOCKING TYP.
6. ALL FRAMING LUMBER EXPOSED TO WEATHER SHALL BE PRESSURE TREATED.

J. COLD FORMED METAL FRAMING (METAL STUDS)

1. METAL STUDS SHOWN ON THE DRAWINGS HAVE BEEN SPECIFIED USING AMERICAN IRON & STEEL INSTITUTE (AISI) STANDARD DESIGNATIONS.
2. DESIGN, FABRICATIONS AND ERECTION SHALL CONFORM TO AISI "SPECIFICATIONS FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS", LATEST EDITION. THE CONTRACTOR SHALL SUBMIT FABRICATION DRAWINGS FOR REVIEW SIGNED AND SEALED BY A PROFESSIONAL STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED.
3. GALVANIZED MATERIAL:
   - A. ALL GALVANIZED STUDS AND ACCESSORIES 12, 14 AND 16 GAUGE, SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE MINIMUM REQUIREMENTS OF A.S.T.M. A653, GRADE D WITH A MINIMUM YIELD OF 50,000 PSI.
   - B. ALL GALVANIZED 18 AND 20 GAUGE STUDS, TRACK, BRIDGING, END CLOSURES AND ACCESSORIES SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE REQUIREMENTS OF A.S.T.M. A653, GRADE A WITH A MINIMUM YIELD OF 33,000 PSI.
   - C. ALL GALVANIZED STUDS, TRACK, BRIDGING AND ACCESSORIES SHALL BE FORMED FROM STEEL HAVING A G-60 GALVANIZED COATING MEETING THE REQUIREMENTS OF A.S.T.M. A653.
4. UNLESS NOTED, ALL SCREWS OR PINS SHALL BE NON-CORROSIVE NO. 8-18 (D=.125") OR LARGER. (DO NOT USE STAINLESS STEEL OR COPPER COATED FASTENERS). UNLESS NOTED, ALL PINS FOR STUDS (14 GAUGE TO 22 GAUGE) ATTACHMENT TO SHEATHING SHALL BE 0.1 INCH DIAMETER STEEL BY ERICO TOOL & FASTENERS, INC.
5. UNLESS NOTED, TRACKS SHALL BE SAME DEPTH AS JOISTS AND EQUAL OR THICKER GAUGE THAN JOISTS. TRACKS SHALL BE CONNECTED TO SUPPORTS AT 16" O.C. MAXIMUM. STUDS SHALL BE CONNECTED TO TRACKS AT EACH SIDE.
6. THE QUANTITY OF STUDS DISPLACED OR CUT FOR OPENING SHALL BE PLACED HALF ON EACH SIDE OF OPENING.
7. BRIDGING FOR WALL STUDS SHALL BE PER MANUFACTURER RECOMMENDATIONS.
8. SHEAR WALL FRAMING SHALL BE OF ASTM A1003 GRADE 50 TYPE H.

K. SPECIAL INSPECTIONS: - UNLESS NOTE REQUIRED AS WARRANTED BY CONDITIONS IN THE JURISDICTION AS APPROVED BY THE BUILDING OFFICIAL:

1. A. SPECIAL INSPECTOR (SI) SHALL BE RETAINED AND PAID BY THE OWNER.
   B. SPECIAL INSPECTOR SHALL BE FULLY QUALIFIED, APPROVED BY THE BUILDING OFFICIAL, REGISTERED BY APPLICABLE REGISTRATION BOARD IF REQUIRED AND ACCEPTABLE TO THE ARCHITECT.
   C. THE DUTIES OF THE SPECIAL INSPECTOR SHALL INCLUDE, BUT ARE NOT LIMITED TO, VERIFICATION OF CONSTRUCTION QUALITY CONTROL, TESTING, COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS, BUILDING CODE REQUIREMENTS, AND LOCAL BUILDING DEPARTMENT REQUIREMENTS.
   D. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE PROPER NOTIFICATION TO THE SPECIAL INSPECTOR AND PROCEED WITH THE CONSTRUCTION ONLY AFTER THE SPECIAL INSPECTOR'S APPROVAL.
2. SPECIAL INSPECTORS SHALL KEEP RECORDS OF ALL INSPECTIONS AND TESTING. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE CODE OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL OF RECORD. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CODE OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL OF RECORD. A FINAL REPORT OF INSPECTIONS DOCUMENTING COMPLETION AND COMPLIANCE OF ALL REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY. INTERIM REPORTS SHALL BE SUBMITTED PERIODICALLY WITH MINIMUM FREQUENCY OF TWO WEEKS.
3. SPECIAL INSPECTIONS ARE REQUIRED FOR, BUT NOT LIMITED TO, THE FOLLOWING ACTIVITIES:
   - A. SLAB ON GRADE CONCRETE AND REINFORCING. VERIFICATION IS REQUIRED FOR PROPER LOCATION OF SLAB-ON-GRADE REINFORCING AND USAGE OF PROPER REINFORCING SUPPORTS.
   - B. FOOTING EXCAVATION AND FILL (GEOTECHNICAL ENGINEER CERTIFICATIONS IS REQUIRED PRIOR TO POURING CONCRETE).
   - C. ALL FIELD WELDING.
   - D. ALL HIGH STRENGTH BOLTING, ANCHORING SYSTEMS & POST-INSTALLED CONCRETE ANCHORS.
   - E. WOOD ROOF DECK & WALL PANEL FASTENING.
   - F. STRUCTURAL STEEL CONNECTIONS AND INSTALLATION.
4. FAILURE TO NOTIFY THE SPECIAL INSPECTOR MAY RESULT IN CONTRACTOR HAVING TO REMOVE WORK FOR THE PURPOSE OF INSPECTION AT CONTRACTOR'S EXPENSE.
5. PREMATURE NOTIFICATION FOR INSPECTIONS WILL RESULT IN AN ADDITIONAL INSPECTION WITH ALL EXPENSES AND FEES PAID BY THE CONTRACTOR.

ABBREVIATIONS

AB	ANCHOR BOLT	E.J.	EXPANSION JOINT	P.S.F.	POUNDS PER SQUARE FOOT
ANCH.	ANCHOR	ELEV.	ELEVATION	P.S.I.	POUNDS PER SQUARE INCH
ARCH.	ARCHITECT/ARCHITECTURAL	E.W.	EACH WAY	REINF.	REINFORCED
BLDG.	BUILDING	EXIST.	EXISTING	REQ'D.	REQUIRED
BLKG.	BLOCKING	EXP.	EXPANSION	SECT.	SECTION
BM	BEAM	EXT.	EXTERIOR	SIM.	SIMILAR
BOT.	BOTTOM	FDN.	FOUNDATION	STL.	STEEL
BRG.	BEARING	F.F.E	FINISHED FLOOR ELEVATION	STRUCT.	STRUCTURAL
CJ	CONTROL JOINT/ CONSTRUCTION JOINT	FRMG.	FRAMING	T.B.E.	TRUSS BEARING ELEVATION
		FV.	FIELD VERIFY	T.F.E.	TOP OF FOOTING ELEVATION
℄	CENTER LINE	FTG.	FOOTING	T.S.E.	TOP OF STEEL ELEVATION
C.M.U.	CONCRETE MASONRY UNIT	HORIZ.	HORIZONTAL	TYP.	TYPICAL
COL.	COLUMN	J.B.E.	JOIST BEARING ELEVATION	VERT.	VERTICAL
CONC.	CONCRETE	JT.	JOINT	W/	WITH
CONT.	CONTINUOUS	L.L.	LIVE LOAD	WWF	WELDED WIRE FABRIC
DIA.	DIAMETER	L.L.H.	LONG LEG HORIZONTAL		
D.L.	DEAD LOAD	L.L.V.	LONG LEG VERTICAL		
DWG.	DRAWING(S)	MAX	MAXIMUM		
EA.	EACH	MFCR.	MANUFACTURER		
E.F.	EACH FACE	MIN.	MINIMUM		
E.J.	EXPANSION JOINT	M.O.	MASONRY OPENINGS		
		O.C.	ON CENTER		
		P	PLATE		

ISSUED:	DATE:
COORDINATION SET	09/10/2021
PERMIT SET	09/24/2021

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CRAIG E. METZGER
51417
REGISTERED PROFESSIONAL ENGINEER

PROFESSIONAL OF RECORD
CRAIG E. METZGER 51417
EXP DATE: 12/31/2021

SHEET TITLE
GENERAL NOTES

DRAWN BY: CLS
CHECKED BY: DMS
PROJECT NO: 40493-07
SCALE: AS NOTED

DRAWING
S1

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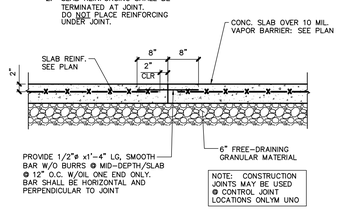
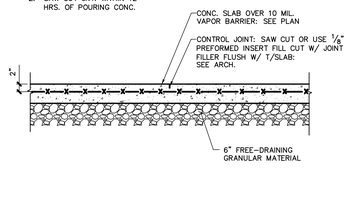
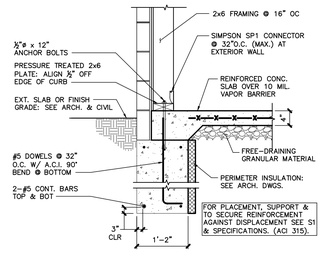


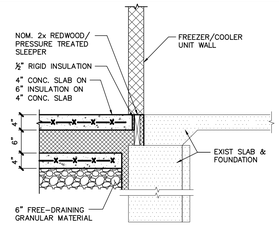
CONSTRUCTION JOINT DETAIL | SCALE 3/4"=1'-0" | 2



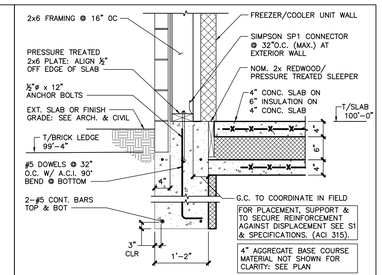
CONTROL JOINT DETAIL | SCALE 3/4"=1'-0" | 3



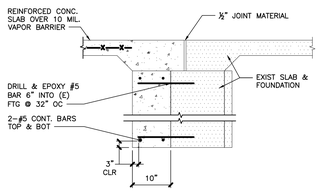
TYP WALL FOUNDATION | SCALE 3/4"=1'-0" | 4



TYP WALL FOUNDATION | SCALE 3/4"=1'-0" | 5



FND @ FRZR/ COOLER | SCALE 3/4"=1'-0" | 6



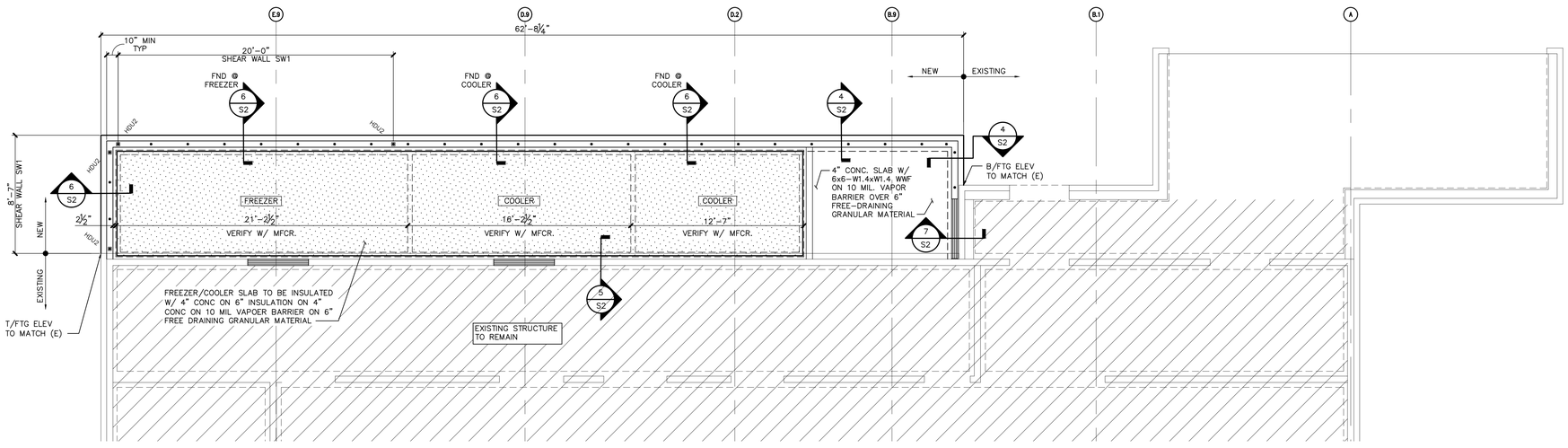
WALL FOUNDATION | SCALE 3/4"=1'-0" | 7

HOLDOWN SCHEDULE								
SHEAR WALL	SHEAR WALL HOLDOWN	HOLDOWN POST/STUDS		STUD/POST FASTENERS	CAST-IN-PLACE ANCHOR BOLT	EMBED IN FTG	POST-INSTALLED ANCHOR BOLT	EMBED IN FTG
SW1	SIMPSON HDU2-SDS2.5	(2)2x6	4x6	(6) SDS¼x2½	5/8"ø x20" HEAVY HEX BOLT W/NUT @ BOTTOM	8"	5/8"ø x 22" LG. THREADED ROD SIMPSON SET-XP	9"
							ALTERNATE	

NOTES:
1. USE HOLDOWNS AND ANCHORS BY SIMPSON STRONG-TIE.
2. INSTALLATION OF CAST-IN-PLACE AND POST-INSTALLED ANCHORS SHALL BE PER MANUFACTURER'S INSTRUCTIONS.
3. FOR ADHESIVE ANCHOR SYSTEMS, HOLES SHALL BE CLEANED AND PREPARED PER MANUFACTURER'S INSTRUCTIONS.
4. HOLDOWN ANCHOR EMBEDMENT LENGTH INTO FOUNDATION, NOT INTO CURB.
5. HOLDOWN SHALL BE CONNECTED TO STUD/POST WITH FASTENERS PER MANUFACTURER'S INSTRUCTIONS.
6. REFER TO BUILT-UP COLUMN SCHEDULE FOR STUD/POST NAILING PATTERN.

WOOD FRAMED SHEAR WALL SCHEDULE						
WALL MARK	PLYWOOD/OSB SHEATHING (1 SIDE U.N.O.)	BLKG. REQ'D	FASTENER SIZE	FASTENER SPACING		PLATE ATTACHMENT TO CONCRETE
				PANEL EDGE	INTERMEDIATE SUPPORTS	
SW1	½" SHEATHING	YES	8d NAILS	NAILS @ 6"	NAILS @ 12"	5/8"ø ANCHOR BOLTS @ 32" O.C.

1. 1/2" APA RATED SHEATHING SHALL BE EXPOSURE 1, SPAN RATING 32/16.
2. BLOCKING IS REQUIRED AT EDGES OF SHEATHING AND IT SHALL BE AT LEAST AS WIDE AS THE STUDS AND INSTALLED AT ALL PANEL EDGES.
3. 8d NAILS SHALL BE A MINIMUM OF 2½" LONG AND PENETRATE A MINIMUM OF 2" INTO FRAMING.
4. RESILIENT CHANNELS (R/C) SHALL NOT BE USED BETWEEN SPECIFIED SHEATHING AND STUDS AT SHEAR WALLS.
5. PLATE NAILING APPLIES AT TOP PLATES. TOE NAILING MAY BE USED AT BOTTOM PLATES.
6. ANCHOR BOLTS SHALL HAVE A MINIMUM OF 7" EMBEDMENT LENGTH INTO CONCRETE.



NOTE:
ALL EXPOSED CONC. AT ELEVATION 100'-0" TO BE INTEGRAL COLOR-BLACK. U.N.O.

DAVIS COLOR 8084 GRAPHITE. 150# PER 10 YARDS.

DAVIS COLORS
3700 EAST OLYMPIC BLVD.
LOS ANGELES, CA 90023
800-356-4848

FOUNDATION PLAN NOTES:
1. SEE SHEET S1 FOR GENERAL NOTES & ADDITIONAL INFO
2. TOP OF INTERIOR FOOTING ELEVATION SEE PLAN.
3. SLAB JOINTS SHALL BE SPACED AT A MAXIMUM OF 12'-0" ON CENTER IN EACH DIRECTION.
4. FOR STRUCTURAL FILL: BACKFILL; BASE & SUBBASE SUPPORT; REFER TO SHEET S1.
5. FOR PLACEMENT, SUPPORT AND TO SECURE REINFORCEMENT AGAINST DISPLACEMENT SEE S1 & SPECIFICATIONS. (ACI 315).

1/S2 PARTIAL FNDN. PLAN
SCALE: 1/4"=1'-0"

NORTH

ISSUED:	DATE:
COORDINATION SET	09/10/2021
PERMIT SET	09/24/2021

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SEAL

PROFESSIONAL OF RECORD
CRAIG E. METZGER S1417
EXP DATE: 12/31/2021

SHEET TITLE
PARTIAL FOUNDATION PLAN & DETAILS

DRAWN BY: CLS
CHECKED BY: DMS
PROJECT NO: 40493-07
SCALE: AS NOTED

DRAWING
S2

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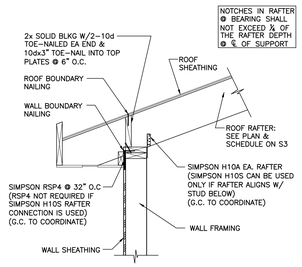
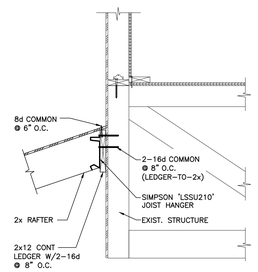


FRAMING SECTION | SCALE 3/4"=1'-0" | 2



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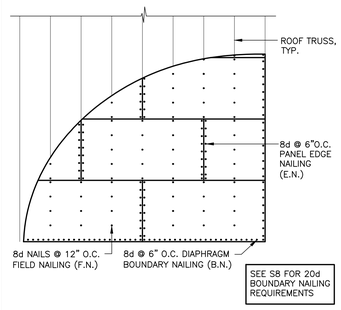
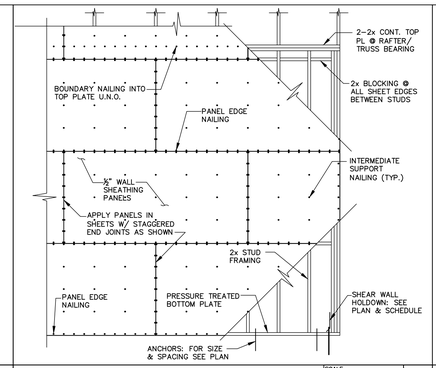
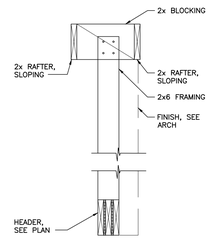


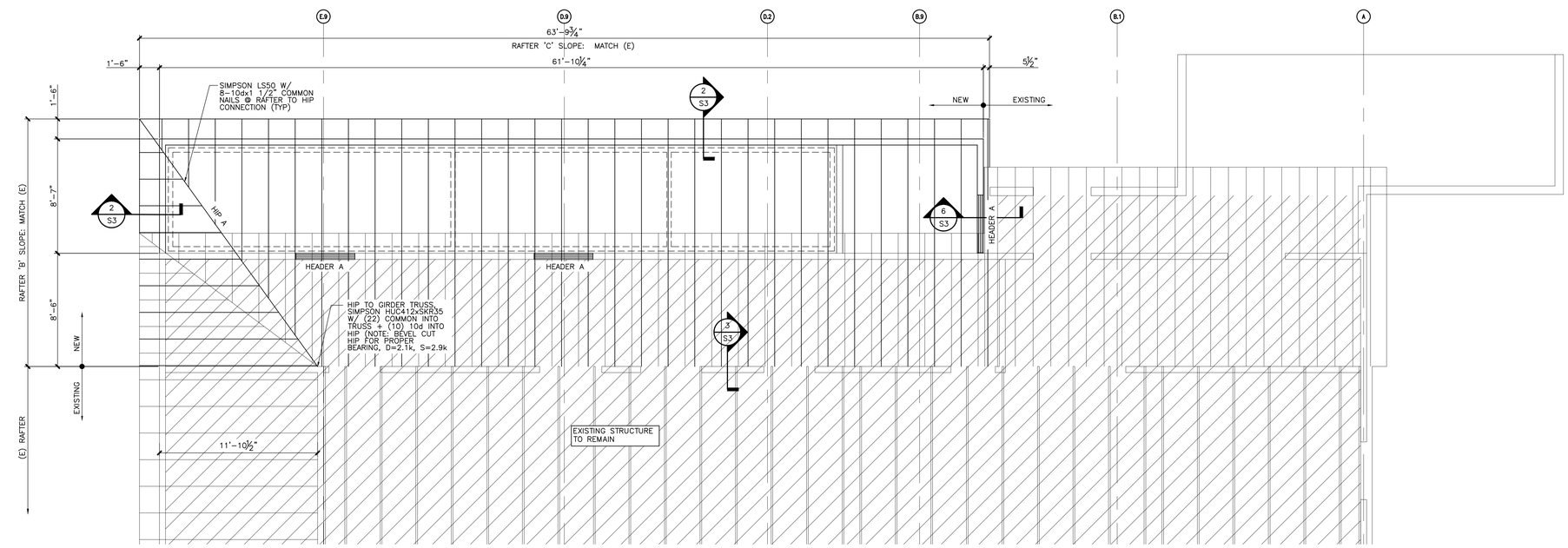
NAILING DIAGRAM @ ROOF | SCALE 3/4"=1'-0" | 4



NAILING DIAGRAM @ WALL | SCALE 3/8"=1'-0" | 5



FRAMING SECTION | SCALE 3/4"=1'-0" | 6



1 / S3 PARTIAL FRAMING PLAN
SCALE: 1/4"=1'-0"

NORTH

TIMBER FRAMING SCHEDULE		
MEMBER	SYP #2 (UNO)	DF #2 (UNO)
RAFTER 'B'	2x10 @ 24" OC	2x10 @ 24" OC
RAFTER 'C'	2x10 @ 12" OC	2x10 @ 12" OC
HEADER 'A'	3-2x10	3-2x10
HIP 'A'	3-1.75x16 LVL (2.0E)	

NOTE: SHEET S3 CORRESPONDS TO SYP. CONTRACTOR TO COORDINATE AS REQUIRED FOR DF.

ROOF FRAMING PLAN NOTES:
1. SEE SHEET S1 FOR GENERAL NOTES & ADDITIONAL INFO.
2. FOR RAFTER, RIDGE, HIP, HEADER, & WOOD BEAM INFO: SEE TIMBER FRAMING SCHEDULE ON SHEET S3.

NOTE: STRUCTURAL STEEL AND TRUSSES ARE OWNER SUPPLIED.

ISSUED:	DATE:
COORDINATION SET	09/10/2021
PERMIT SET	09/24/2021

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PROJECT
TEXAS ROADHOUSE

5611 MERILY WAY
HUBER HEIGHTS, OH 45424
MONTGOMERY COUNTY

SEAL

STATE OF OHIO · CRAIG E. METZGER · 51417 · REGISTERED PROFESSIONAL ENGINEER · SIGNATURE

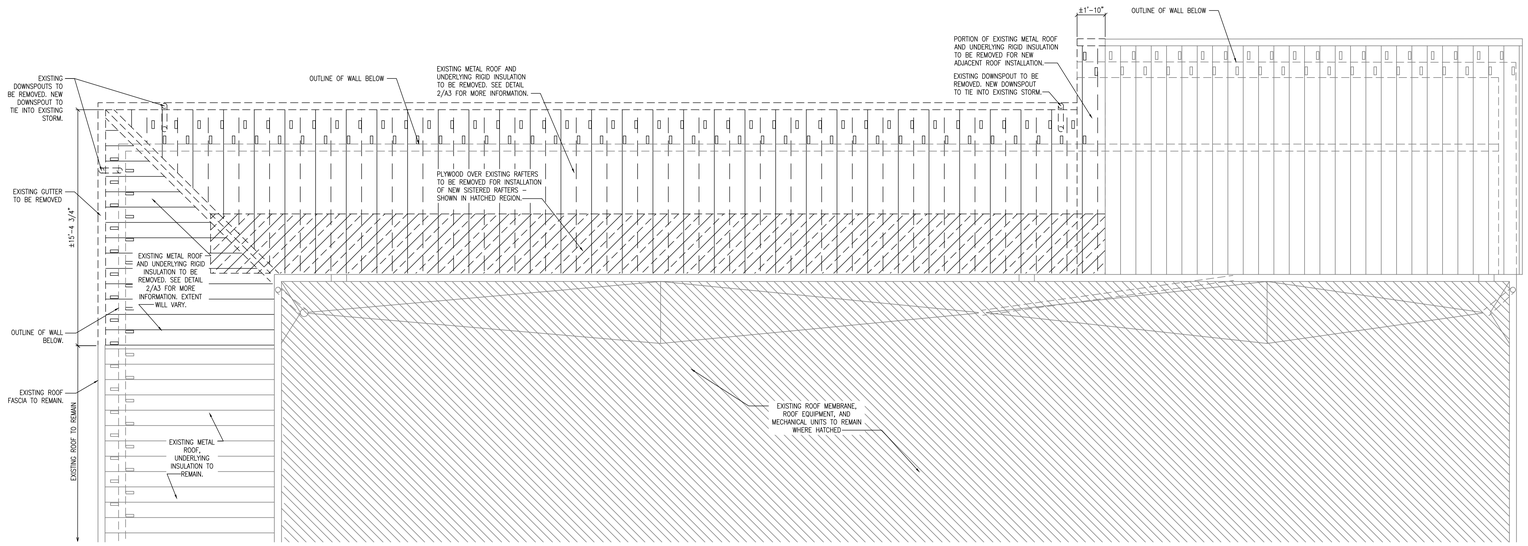
PROFESSIONAL OF RECORD
CRAIG E. METZGER 51417
EXP DATE: 12/31/2021

SHEET TITLE
PARTIAL ROOF FRAMING PLAN & DETAILS

DRAWN BY: CLS
CHECKED BY: DMS
PROJECT NO: 40493-07
SCALE: AS NOTED

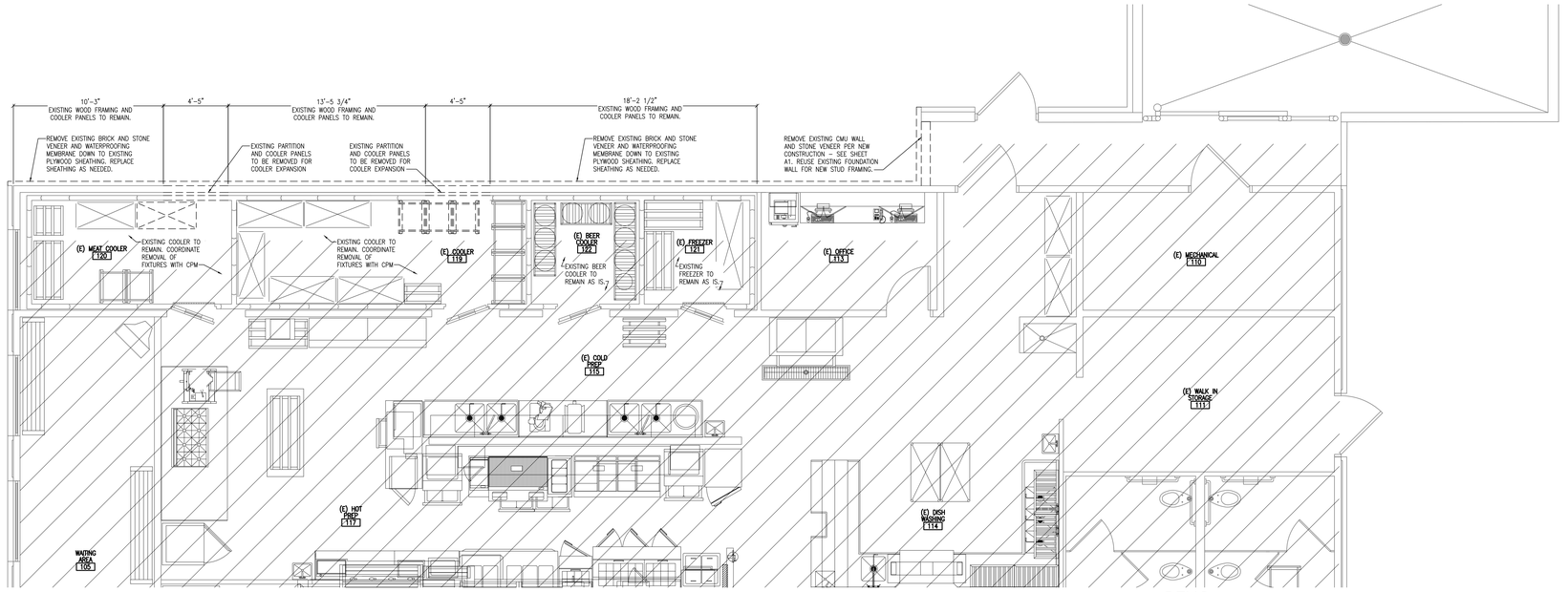
DRAWING
S3

Drawing Name: N:\0362\40493\07 - Huber Heights, OH\Docs\CAD\TX\RH Huber Heights\OH_S3_Roof Framing Plan.dwg, Layout: Framing Plan, Last Modified: Sep 24, 2021 - 2:43pm, Plotted on: Sep 24, 2021 - 11:01am by: sabatucci
N:\0362\40493\07 - Huber Heights, OH\Docs\CAD\TX\RH Huber Heights\OH_S3_Roof Framing Plan.dwg, 9/24/2021 11:01 AM, sabatucci, crisfie



2 / D1 DEMO ROOF PLAN
SCALE: 1/4" = 1'-0"

NORTH



1 / D1 DEMO FLOOR PLAN
SCALE: 1/4" = 1'-0"

NORTH

ISSUED:	DATE:
COORDINATION SET	09/10/2021
PERMIT SET	09/24/2021

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MONTGOMERY COUNTY

SEAL

STATE OF OHIO
CHARLES M. BUSCH
1817348
REGISTERED ARCHITECT

PROFESSIONAL OF RECORD
CHARLES M. BUSCH, AIA, NCARB
LICENSED ARCHITECT NO. 1817348
EXP DATE: 12/31/2021

SHEET TITLE
DEMO FLOOR PLANS

DRAWN BY: HW/DH

CHECKED BY: CB

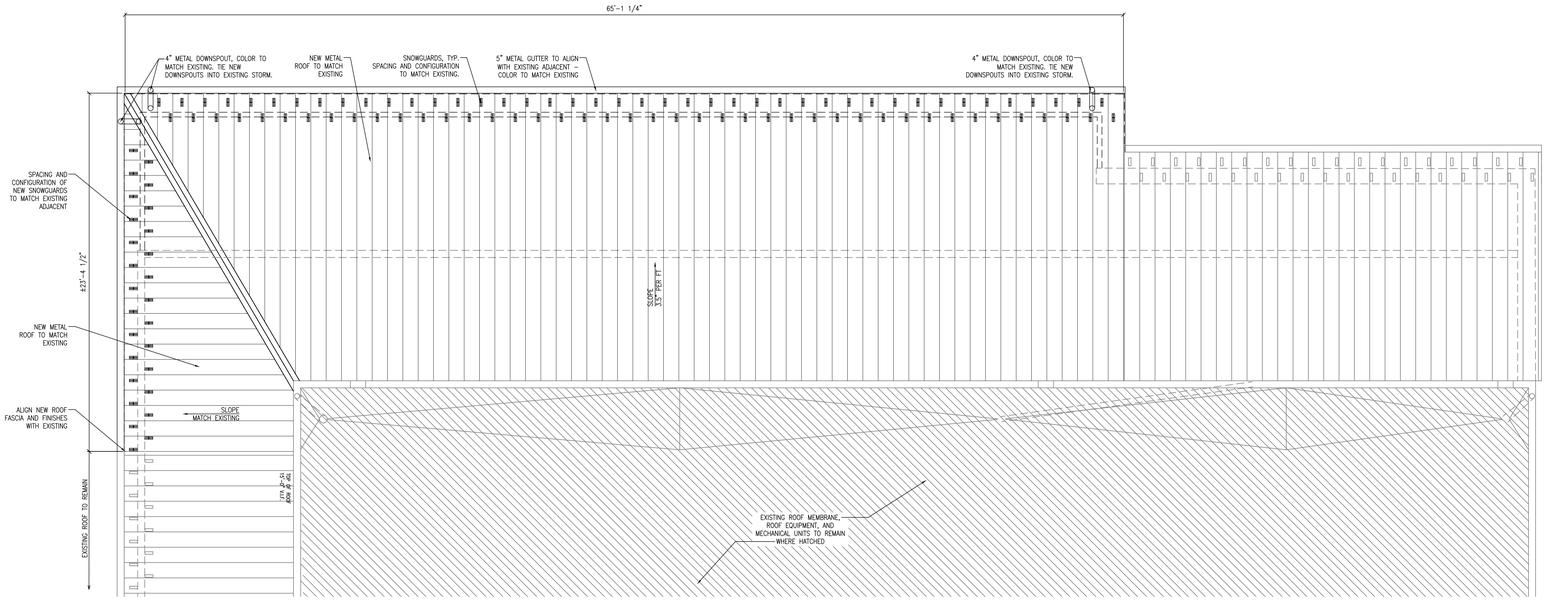
PROJECT NO: 40493-07

SCALE: AS NOTED

DRAWING
D1

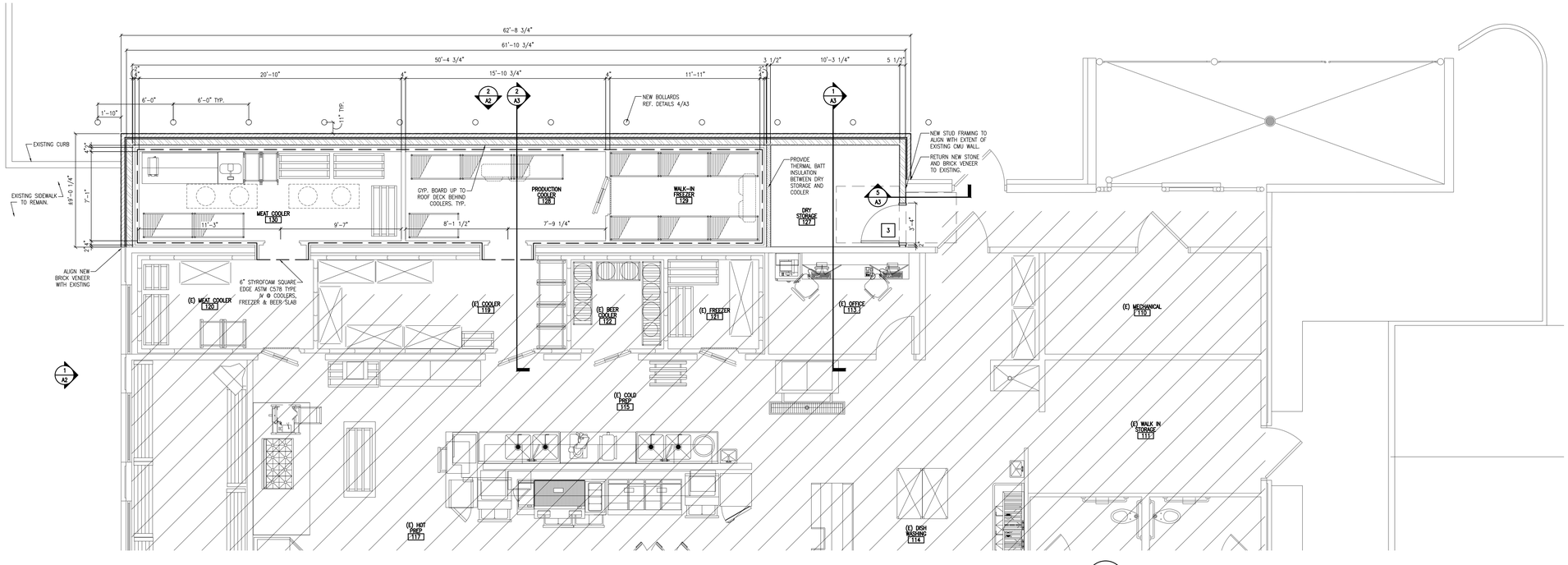
Drawing Name: N:\0362\40493\07 - Huber Heights, OH\Docs\CAD\TXRH Huber Heights,OH_D1_DEMO Floor Plans.dwg, Last Modified: Sep 27, 2021 - 12:07pm Printed on: Sep 27, 2021 - 12:07pm by jhillenbrand

N:\0362\40493\07 - Huber Heights, OH\Docs\CAD\TXRH Huber Heights,OH_D1_DEMO Floor Plans.dwg, 9/27/2021 12:07 PM, hillenbrand, danielle



2 A1 ROOF PLAN
SCALE: 1/4" = 1'-0"

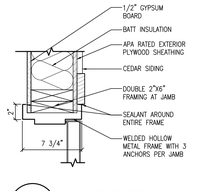
NORTH



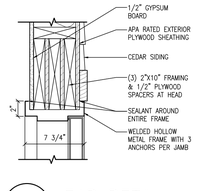
1 A1 FLOOR PLAN
SCALE: 1/4" = 1'-0"

NORTH

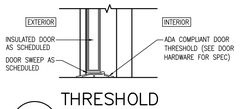
DOOR & JAMB DETAILS



A A1 JAMB DETAIL
SCALE: 1 1/2"=1'-0"



B A1 HEAD DETAIL
SCALE: 1 1/2"=1'-0"



C A1 THRESHOLD DETAIL
SCALE: 1 1/2"=1'-0"

DOOR SCHEDULE

DOOR NUMBER	DOOR SIZE	DOOR TYPE	FRAME TYPE	DETAILS JAMB	DETAILS HEAD	DETAILS GLAZ	HDWR. SET	
3	3'-0" X 7'-0"	B	2	A/A1	B/A1		2	SEE NOTES #1 & #3

NOTES:
1. PAINT INTERIOR FACES BLACK.
2. INSTALL GALVANIZED CHAINLINK FENCE TO UNDERSIDE OF ROOF OVERHANG, ±8'-10" V.I.F.
3. SEE C/A1 FOR THRESHOLD DETAIL.

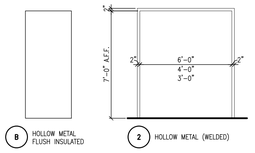
HARDWARE SET #2 (EXTERIOR SINGLE DOOR) - DRY STORAGE

OPENING DESCRIPTION: 3'-0" X 7'-0" X 1-3/4" X HMD TYPE B HMF TYPE 2

1 SINGLE DOOR #3 EXTERIOR FROM DRY STORAGE 127

QUANTITY	ITEM	MANUFACTURER	MODEL
3	HINGES	HAGER	BB1191 4.5x4.5-NRP x US10B
1	LATCH GUARD	HAGER	341D x 630
1	LOCKSET	SCHLAGE	ND80TD x RHO X US26D
1	INTERCHANGABLE CORES	SCHLAGE	23-030 C-KEYWAY x 606
1	CLOSER	LCN	4040XP RW/PA TBWMS x 695
1	WEATHER STRIPPING	HAGER	891S V x .36"x84" x DBA
1	SWEEPS	HAGER	750S N x .36" x DBA
1	THRESHOLD	HAGER	413S x .36" x DBA

DOOR/FRAME TYPES



B HOLLOW METAL FLUSH INSULATED

2 HOLLOW METAL (WELDED)

LEGEND

WALL TYPE	DESCRIPTION
	BRICK/STONE VENEER WITH ROWLOCK ABOVE OVER APA RATED SHEATHING OVER 2"X6" WOOD STUDS WITH R-21 BATT INSULATION OVER GYPSUM BOARD
	WOOD STUD PARTITION TO UNDERSIDE OF DECK - STUDS AT 16" O.C.

NOTE: ALL KITCHEN WALLS TO RECEIVE 1/2" CEMENT BOARD 18" UP WALL. DUROCK OR EQUAL.

SEE A4 FINISH SCHEDULE FOR ADDL. NOTES

FLOOR PLAN GENERAL NOTES

1. ALL INTERIOR & EXTERIOR DIMENSIONS ARE FROM FACE OF STUD TO FACE OF STUD UNLESS OTHERWISE NOTED.
2. ALL INTERIOR FINISHES TO HAVE CLASS B FLAME SPREAD OR BETTER.
3. SEE ROOM FINISH SCHEDULE FOR WALLS TO RECEIVE MOISTURE RESISTANT GYPSUM BOARD & SPECIFIC FINISH DESIGNATIONS.
4. ALL JOINTS, GAPS, & SPACES LEADING TO HOLLOW OR INACCESSIBLE SPACES ARE TO BE SEALED WITH NSF APPROVED SEALANTS.
5. G.C. TO INSTALL WOOD BLOCKING IN WALL FOR THE HANGING OF WALL SHELVING. REFER TO FIXTURE SHEETS & EQUIPMENT SHEETS FOR LOCATION OF WALL SHELVES.
6. ALL JOINTS, GAPS AND SPACES TO BE SEALED.
7. ALL WOOD IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED, TYP.

ISSUED:	DATE:
COORDINATION SET	09/10/2021
PERMIT SET	09/24/2021

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SEAL

STATE OF OHIO
CHARLES M. BUSCH
1817348
REGISTERED ARCHITECT

PROFESSIONAL OF RECORD
CHARLES M. BUSCH, AIA, NCARB
LICENSED ARCHITECT NO. 1817348
EXP DATE: 12/31/2021

SHEET TITLE
FLOOR PLANS

DRAWN BY: HW/DH

CHECKED BY: CB

PROJECT NO: 40493-07

SCALE: AS NOTED

DRAWING
A1

Drawing Name: N:\037\07\40493\07 - Huber Heights, OH\Docs\CAD\TXRH Huber Heights\OH_A1_Floor Plans.dwg Last Modified: Sep 27, 2021 - 12:07pm Plotted on: Sep 27, 2021 - 12:07pm by jhillenbrand
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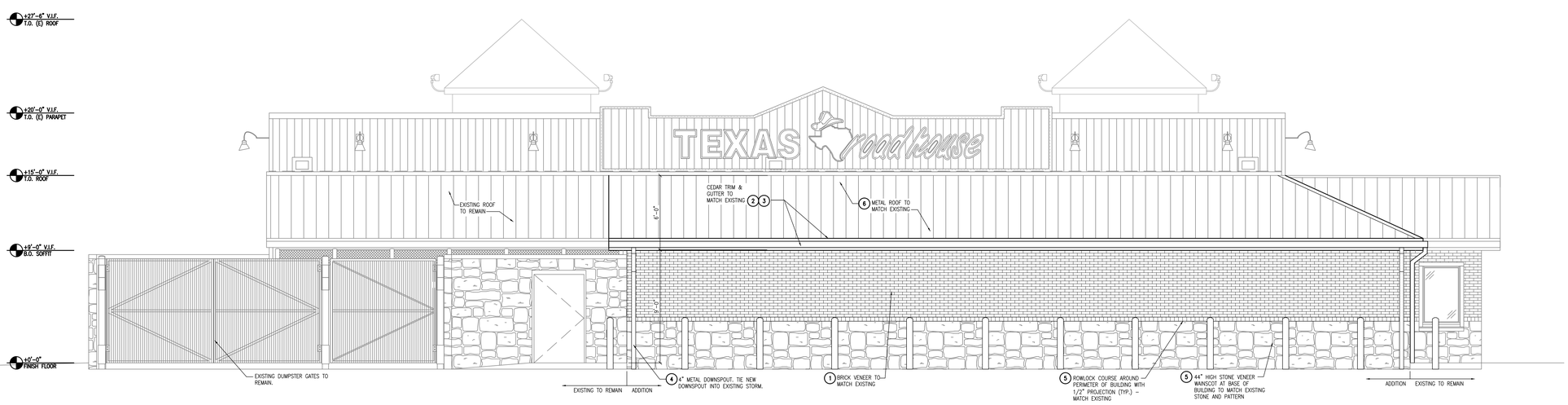
EXTERIOR FINISH SCHEDULE

1	WOOD SIDING & TRIM	PRE-STAINED CEDAR HENRY POOR LUMBER 3200 REAGAN DRIVE LAFAYETTE, IN 47906 CONTACT: DOUG MILLER PHONE: 800-255-7913 AMTECO #501 STAIN FORMULA
2	TRIM	PORTER PAINTS #617 "EXTERIOR GLOSS" FINISH COLOR – DARK GREEN FORMULA: 2Y16E/2Y13L/8Y10P/1Y24C/2YY NOTE: TWO COATS–BRUSH APPLIED (DO NOT SPRAY) (TO MATCH EXISTING V.I.F.)
3	METAL FLASHING & GUTTERS	PORTER PAINTS #617 "EXTERIOR GLOSS" FINISH COLOR – DARK GREEN FORMULA: 2Y16E/2Y13L/8Y10P/1Y24C/2YY (TO MATCH EXISTING V.I.F.)
4	DOWNSPOUTS	PORTER PAINTS #610 "EXTERIOR GLOSS" FINISH COLOR TO MATCH PRE-STAINED CEDAR – PRIMER/TWO FINISH COATS PORTER 614 BASE– 14Y1U/2Y8M/1Y24K/4P/24–V
4b	METAL DOORS & FRAMES	PORTER PAINTS "EXTERIOR GLOSS" BLACK – PRIMER/TWO FINISH COATS
5	BRICK	GENERAL SHALE BRICK COMPANY "PHOENIX" #143 OVERSIZE SANFORD, NORTH CAROLINA 800-277-2700
6	METAL ROOF	GALVANIZED 5 RIBBED V GROOVED COLOR: GREEN
7	STONE	ALAMO STONE MOUNTAIN BLEND ASHLAR

NOTE:
1. FOR ALL LIGHTING INCLUDING WHITE LED, REFER TO ELECTRICAL.



2 A2 RIGHT SIDE ELEVATION (NORTHEAST)
SCALE: 1/4" = 1'-0"

1 A2 FRONT ELEVATION (SOUTHEAST)
SCALE: 1/4" = 1'-0"

ISSUED:	DATE:
COORDINATION SET	09/10/2021
PERMIT SET	09/24/2021

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REGISTERED ARCHITECT

PROFESSIONAL OF RECORD
CHARLES M. BUSCH, AIA, NCARB
LICENSED ARCHITECT NO. 1817348
EXP DATE: 12/31/2021

SHEET TITLE
EXTERIOR ELEVATIONS

DRAWN BY: HW/DH
CHECKED BY: CB
PROJECT NO: 40493-07
SCALE: AS NOTED

DRAWING
A2

N:\03\62\40493\07 - Huber Heights, OH\Docs\CAD\TXRH Huber Heights,OH_A2_Exterior Elevations.dwg, 9/27/2021 12:07 PM, hillenbrand, danielle
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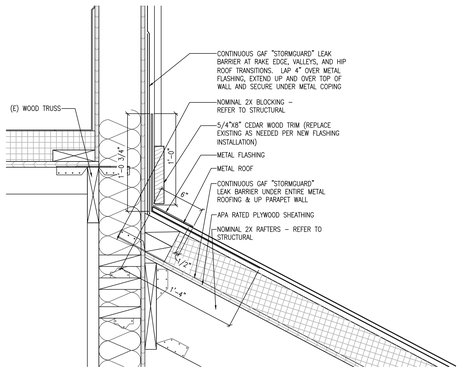
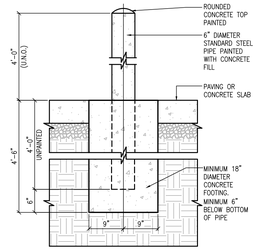


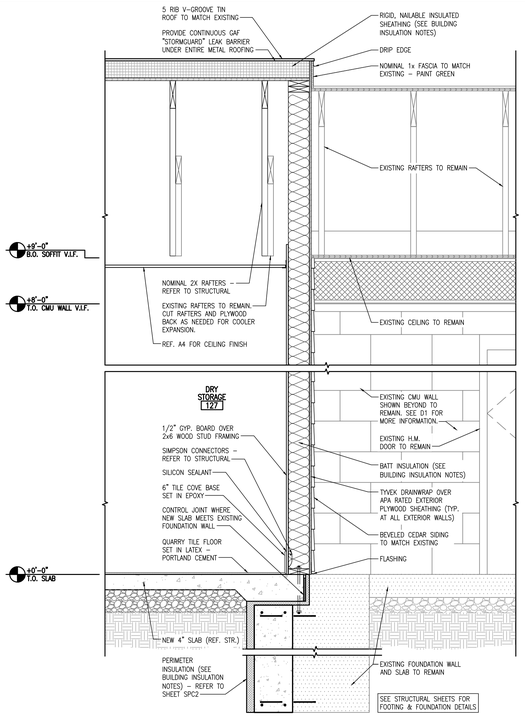
3 A3 TYPICAL ROOF TO WALL FLASHING DETAIL

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



4 A3 DETAIL AT PIPE BOLLARD

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



5 A3 WALL SECTION @ NEW DRY STORAGE

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

BUILDING SHEATHING NOTES

1. WALL SHEATHING: 1/2" APA RATED PLYWOOD OR ORIENTED STRAND BOARD (OSB) EXCEPT WHERE OTHERWISE NOTED.
2. ROOF SHEATHING AT FLAT ROOF: 3/4" T&G APA RATED PLYWOOD OR ORIENTED STRAND BOARD (OSB) EXCEPT WHERE OTHERWISE NOTED.
3. ROOF SHEATHING AT SLOPED ROOF: 3/4" T&G APA RATED PLYWOOD OR ORIENTED STRAND BOARD (OSB) EXCEPT WHERE OTHERWISE NOTED.

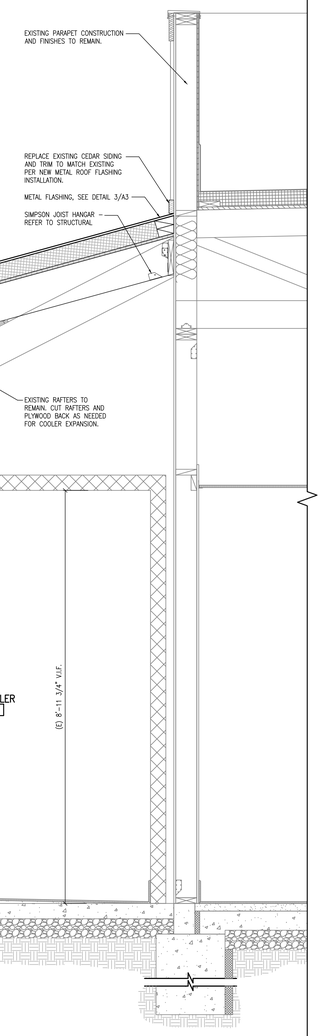
VERIFY THICKNESSES WITH SECTION G ON SHEET S1. SHOULD DISCREPANCIES OCCUR BETWEEN THESE SECTIONS & THE STRUCTURAL PLANS, THE STRUCTURAL PLANS SHALL TAKE PRECEDENCE.

BUILDING INSULATION NOTES

1. ALL ROOF AREAS WITH CONDITIONED SPACE BELOW TO HAVE MIN. OF R23.6 RIGID INSULATION (THICKNESS = 4")
2. ALL WOOD WALLS TO HAVE MIN. OF R21 BATT INSULATION (THICKNESS = 5 1/2")
3. VERTICAL FOUNDATION WALL TO HAVE MIN. OF R10 RIGID INSULATION (THICKNESS = 2")

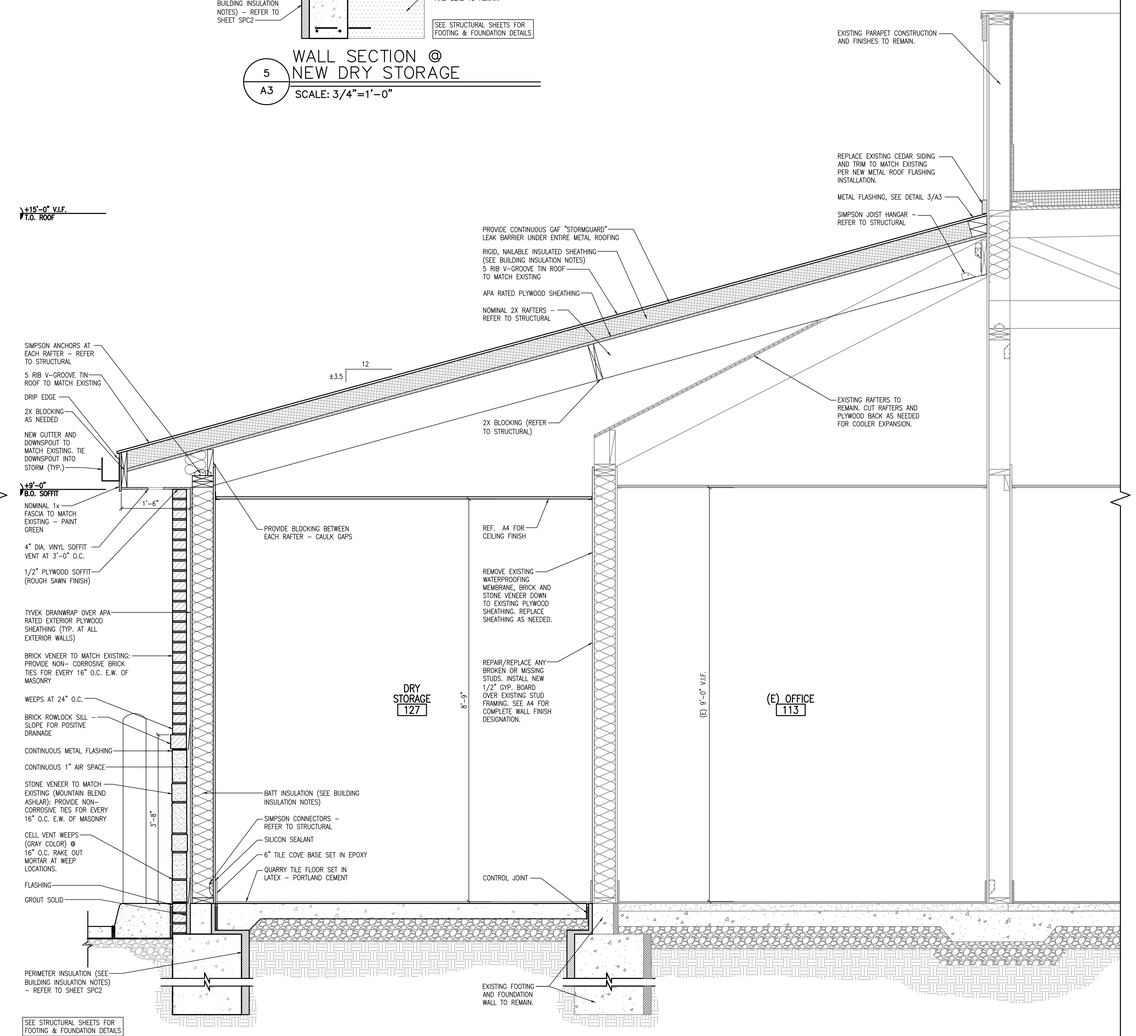
SEE SHEET SPC2, DIVISION 7, SECTION 07210 "BUILDING INSULATION" FOR MORE INFORMATION

INSULATION REQUIREMENTS MEET COMchecks AND CODE REQUIREMENTS. ALETERNATE R-VALUES SHALL BE COORDINATED WITH ARCHITECT.



2 A3 BUILDING SECTION

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



1 A3 BUILDING SECTION

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

ISSUED:	DATE:
COORDINATION SET	07/23/2021
PERMIT SET	08/06/2021
BID SET	08/18/2021

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ERIE COUNTY

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PROFESSIONAL OF RECORD
CHARLES M. BUSCH, AIA, NCARB
LICENSED ARCHITECT NO. 1817348
EXP DATE: 12/31/2021

SHEET TITLE

WALL SECTIONS & DETAILS

DRAWN BY: HW/DH

CHECKED BY: CB

PROJECT NO: 40493-04

SCALE: AS NOTED

DRAWING

A3

Drawing Name: N:\03\62\40493\07 - Huber Heights, OH\Docs\CAD\TXRH Huber Heights,OH_A3_Wall Sections & Details.dwg, Last Modified: Sep 27, 2021 - 12:08pm, Plotted on: Sep 27, 2021 - 4:23pm, Plotted by: jbrittenford

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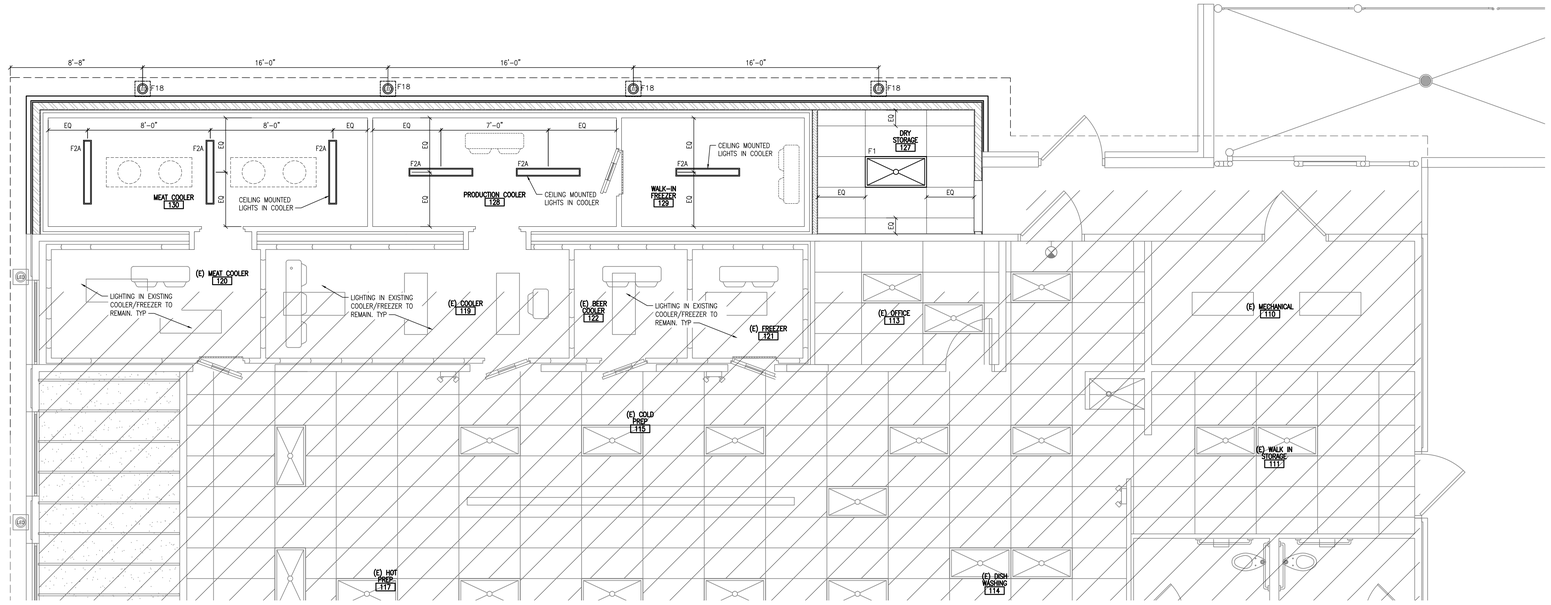
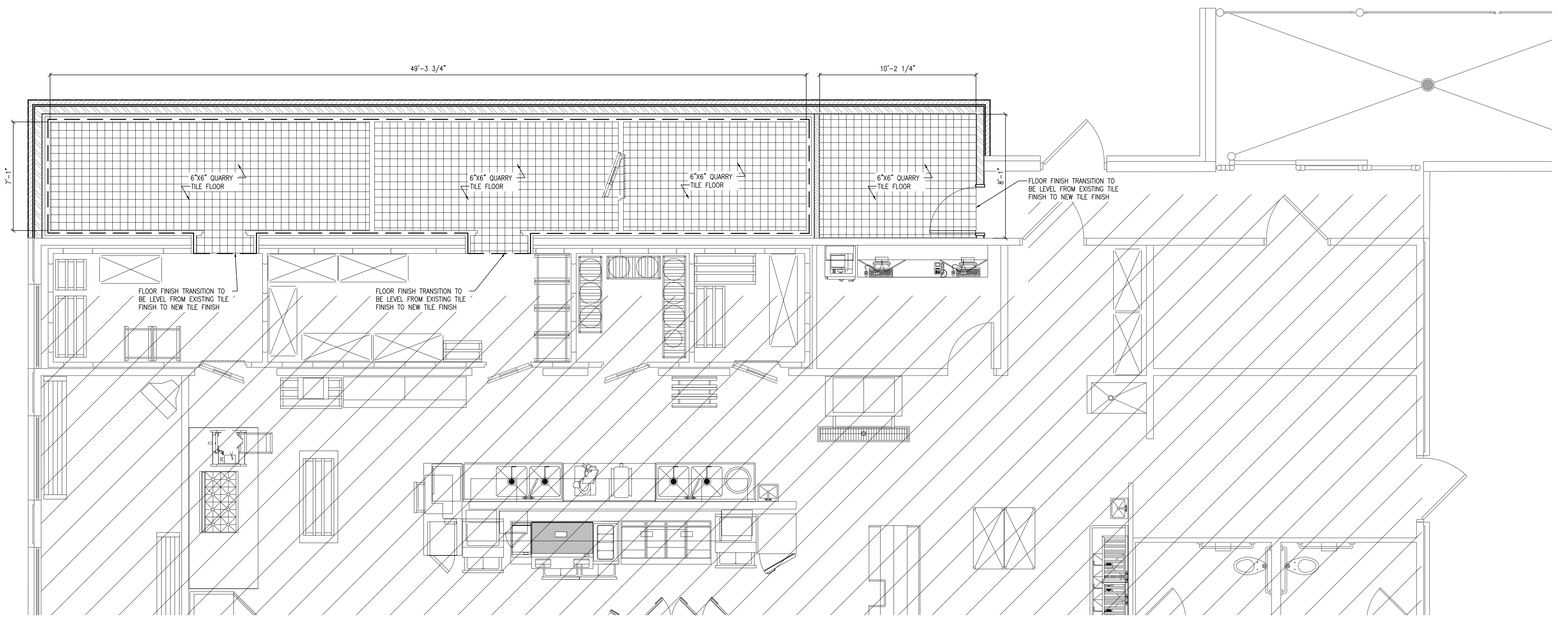


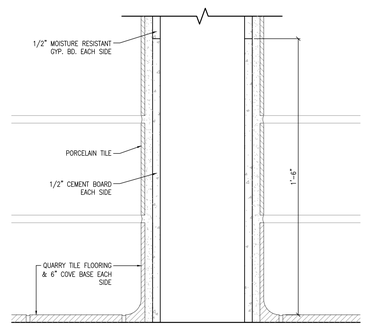
2 / A4 REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"

NORTH



1 / A4 FINISH FLOOR PLAN
SCALE: 1/4" = 1'-0"

NORTH



3 / A4 QUARRY TILE FLOORING DETAIL
SCALE: 3" = 1'-0"

BUILDING SHEATHING NOTES

1. WALL SHEATHING: 1/2" APA RATED PLYWOOD OR ORIENTED STRAND BOARD (OSB) EXCEPT WHERE OTHERWISE NOTED.

VERIFY THICKNESSES WITH SECTION G ON SHEET S1. SHOULD DISCREPANCIES OCCUR BETWEEN THESE SECTIONS & THE STRUCTURAL PLANS, THE STRUCTURAL PLANS SHALL TAKE PRECEDENCE.

ROOM FINISH SCHED.

		FLOORS						BASES				WALLS							CEILINGS									
		WOOD	NOT USED	CONCRETE (BLACK)	QUARRY TILE	CONCRETE	QUARTZ FLOOR	RUBBER BASE	QUARTZ BASE	WOOD (2" X 6")	QUARRY TILE	S.S. PANELS	FRP	CEDAR	GYPSUM BOARD	PORCELAIN TILE	BRICK	STUCCO	EXPOSED	WASHABLE ACT.	NON-WASHABLE A.C.T.	RAFTERS/JOISTS	CORRUGATED GALV.	GALV. 5 RIBBED V	GYPSUM BOARD	HEIGHT	
ROOM NUMBER	ROOM NAME	F1	F2	F3	F4	F5	F6	B1	B2	B3	B4	W1	W2	W3	W4	W5	W6	W7	C1	C2	C3	C4	C5	C6	C7		NOTES
127	DRY STORAGE				F4						B4		W2a		W4					C2a						8'-9"	
128	PROD. COOLER				F4						B4															MANUF.	1
129	WALK-IN FREEZER				F4						B4															MANUF.	1
130	MEAT COOLER				F4						B4															MANUF.	1

NOTES:
1. MANUFACTURED WALK-IN COOLER

LIGHT FIXTURE TRIM, GRIDS AND A.C. GRILLS TO BE FIELD PAINTED TO MATCH CEILING SYSTEM

LEGEND - ROOM FINISH SCHEDULE

FLOORING
F4: QUARRY TILE IN 1" MUDSET, SLOPE TOWARDS DRAIN- 6"X6" AMERICAN OLEAN- FAWN GRAY, ABRASIVE QUARRY TILE FLOOR COLOR; "ABRASIVE GRAIN 006" WITH TEC #925 SABLE GROUT (PROVIDE CONTROL JOINTS IN FLOOR AT ALL FLOOR SLAB JOINTS)

BASE NOTE: SEE WALL DETAILS
B4: 6" QUARRY TILE COVE BASE TO MATCH F4 FLOORING. COVE TO FLOOR AND TO WALL. INSTALL BASE OVER WATER RESISTANT GYPSUM BOARD. SEE DETAIL 3/A14.

WALL COVERING
W2a: FRP – WHITE – (PLYWOOD BACKING BEHIND ALL FRP) INSTALL CEMENT BOARD 18" UP FROM FLOOR, THEN PLYWOOD UP TO 9'-6".

W4: GYPSUM BOARD – PAINTED

CEILING
C2a: 2'X4' SUSPENDED VINYL COATED GYPSUM BOARD WITH ALUMINUM CLAD GRID

PAINT, STAIN
SEE SPECIFICATIONS

CEILING LEGEND

SYMBOL	DESCRIPTION
	SINGLE FLOURESCENT LIGHTING FIXTURE APPROXIMATELY TO SCALE. UPPER CASE LETTER REFERS TO FIXTURE TYPE IN FIXTURE SCHEDULE.
D	LED DOWN LIGHT
	DOWN LIGHT
	REMOTE EMERGENCY LIGHT FIXTURE
	EMERGENCY LIGHTING UNIT
	DIRECTIONAL EXIT LIGHT
	DIFFUSERS – SEE REFLECTED CEILING PLAN NOTE #5 PAINT BLACK IN: DINING (200), BAR (106), LOUNGE (400), WAITING AREA 105) PAINT TO MATCH CEILING IN: KITCHEN AREAS, OFFICE & RESTROOMS
	FLOURESCENT LIGHTING FIXTURE APPROXIMATELY TO SCALE. UPPER CASE LETTER REFERS TO FIXTURE TYPE IN FIXTURE SCHEDULE.

REFLECTED CEILING PLAN NOTES

1. SHOULD DISCREPANCIES OCCUR BETWEEN THIS PLAN & THE ELECTRICAL LIGHTING PLAN, THE ELECTRICAL PLAN SHALL TAKE PRECEDENCE.
2. REFER TO SHEET E1 FOR WIRING OF ALL LIGHT FIXTURES.
3. WALK-IN BOX LIGHTS SUPPLIED BY EQUIPMENT SUPPLIER – MOUNTED & INSTALLED BY ELECTRICAL CONTRACTOR
5. MECHANICAL LAYOUT SHOWN FOR COORDINATION ONLY. SEE M1 FOR MECHANICAL LAYOUT. SHOULD DISCREPANCIES OCCUR BETWEEN THIS PLAN AND THE MECHANICAL FLOOR PLAN, THE MECHANICAL PLAN SHALL TAKE PRECEDENCE.

ISSUED:	DATE:
COORDINATION SET	09/10/2021
PERMIT SET	09/24/2021

NOTICE
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SEAL

STATE OF OHIO
CHARLES M. BUSCH
1817348
REGISTERED ARCHITECT

PROFESSIONAL OF RECORD
CHARLES M. BUSCH, AIA, NCARB
LICENSED ARCHITECT NO. 1817348
EXP DATE: 12/31/2021

SHEET TITLE
RCP &
FINISH FLOOR PLAN

DRAWN BY: HW/DH
CHECKED BY: CB
PROJECT NO: 40493-07
SCALE: AS NOTED

DRAWING
A4

Drawing Name: N:\0362\40493\07 - Huber Heights, OH\Docs\CAD\TXRH Huber Heights,OH_A4_RCP & FINISH FLOOR PLAN.dwg, Last Modified: Sat, 25, 2021 - 12:08pm by DHolland

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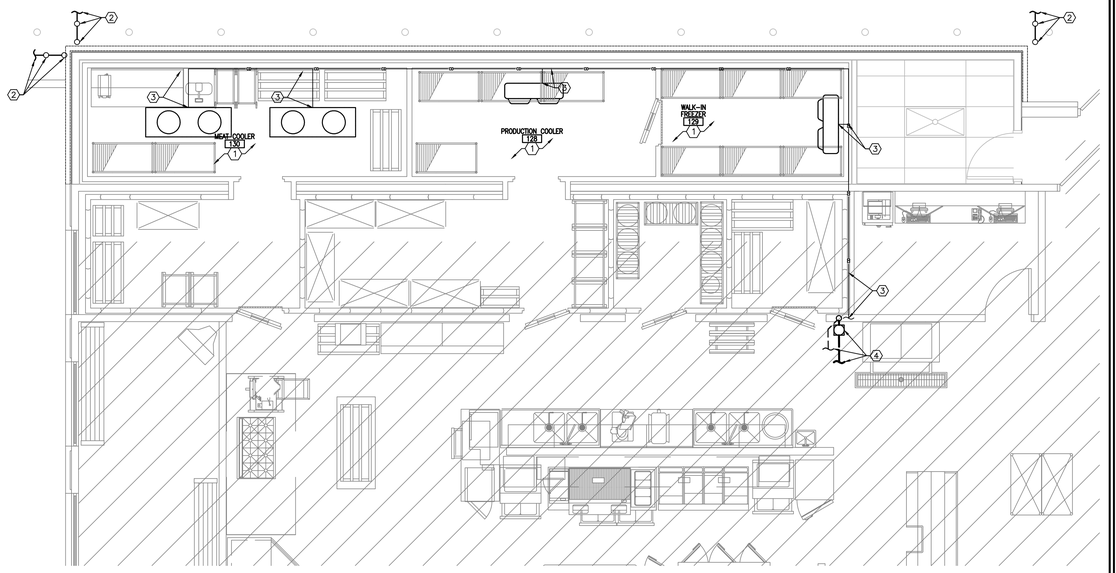

1 M1.0 PLUMBING PLAN
SCALE: 1/4" = 1'-0"

SEE COVER SHEET FOR OVERALL BUILDING WITH AREA OF WORK INDICATED.

NORTH

NOTE:
CONTRACTOR WILL NOT CAUSE INTERRUPTION OF RESTAURANT OPERATIONS AND MUST COORDINATE WORK IN EXISTING AREAS AT LEAST TWO DAYS PRIOR TO COMMENCING SUCH WORK. FULLY COORDINATE REQUIRED ACCESS WITH OWNER REPRESENTATIVE AND GENERAL MANAGER.

ALL WORK SHALL BE PERFORMED BY MECHANICAL CONTRACTOR UNLESS STATED OTHERWISE.

ALL MECHANICAL WORK SHALL COMPLY WITH OHIO BUILDING CODE.

THE MECHANICAL CONTRACTOR SHALL FIELD VERIFY AND COORDINATE ALL TIE-IN WORK. THE MECHANICAL CONTRACTOR SHALL PERFORM A PRE-CONSTRUCTION AIR BALANCE EVALUATION OF EXISTING SYSTEMS. IF EXISTING SYSTEMS WILL NOT SUPPORT THE MODIFICATIONS INDICATED AS PART OF THIS REMODEL, OR IF ANY MAINTENANCE OR SYSTEM DEFICIENCIES EXIST, CONTRACTOR MUST COORDINATE SOLUTION WITH GENERAL CONTRACTOR, OWNER REPRESENTATIVE, AND ENGINEER PRIOR TO PERFORMING WORK. AT COMPLETION OF WORK, REPLACE ALL FILTERS AND RE-BALANCE ALL SYSTEMS. PROVIDE OWNER REPRESENTATIVE WITH AS-BUILT DRAWINGS (RECORD SET FROM SITE WITH ANY MODIFICATIONS TO SCOPE CLEARLY MARKED IN RED INK).

THE MECHANICAL CONTRACTOR SHALL COORDINATE DEMOLITION WORK REQUIRED WITH GENERAL CONTRACTOR. DO NOT ABANDON ANY EQUIPMENT, CONTROLS, DEVICES, DUCTWORK, APPURTENANCES, ETC., REMOVE BACK TO SOURCE, OR LAST ACTIVE COMPONENT. FOR DEVICES/EQUIPMENT BEING REPLACED, PROTECT EXISTING CONNECTIONS AND COMPONENTS TO THE EXTENT POSSIBLE, AND REUSE/EXTEND, OR PROVIDE NEW AS REQUIRED. MECHANICAL CONTRACTOR SHALL COORDINATE ALL MECHANICAL REQUIREMENTS FOR WORK INDICATED AS PART OF THIS REMODEL. EXISTING INFORMATION WAS TAKEN FROM PREVIOUS DESIGN DRAWINGS AND MUST BE FIELD VERIFIED. INFORMATION FOR NEW KITCHEN EQUIPMENT WAS ASSUMED FROM PROTOTYPICAL DESIGN STANDARDS AND IS SUBJECT TO CHANGE.

NUMBER IN CIRCLE INDICATES ASSUMED EQUIPMENT NUMBER BASED ON PROTOTYPICAL EQUIPMENT. NO FFE PACKAGE DEVELOPED FOR THIS REMODEL WORK. FIELD VERIFY ALL EQUIPMENT REQUIREMENTS WITH VENDORS AND OWNER PRIOR TO ROUGH-IN.

(#)

ABBREVIATIONS:

AFF	ABOVE FINISHED FLOOR
CFM	CUBIC FEET PER MINUTE
CO	CLEANOUT
NIC	NOT IN CONTRACT
UNO	UNLESS NOTED OTHERWISE
EC	ELECTRICAL CONTRACTOR
GC	GENERAL CONTRACTOR
MC	MECHANICAL CONTRACTOR
OA	OUTSIDE AIR
SA	SUPPLY AIR
TYP	TYPICAL
WP	WEATHERPROOF

MECHANICAL GENERAL NOTES

1. THE EQUIPMENT ROUGH-INS AS SHOWN ARE ACCURATE TO THE BEST OF OUR KNOWLEDGE. HOWEVER, IN SOME INSTANCES, THE OWNER OR SUPPLIER MAY SUBSTITUTE OR THE EQUIPMENT MAY VARY FROM WHAT IS SHOWN. THEREFORE, THE CONTRACTOR SHALL VERIFY ALL CRITICAL DIMENSIONS WITH THE OWNER PRIOR TO CONSTRUCTION. FAILURE OF THE CONTRACTOR TO VERIFY THESE DIMENSIONS SHALL PLACE THE RESPONSIBILITY FOR ANY SUBSEQUENT RELOCATION DIRECTLY UPON THE CONTRACTOR.
2. ANY FEES ASSOCIATED WITH CONSTRUCTION AND INSPECTION SHALL BE BORNE BY THE CONTRACTOR IN ORDER TO DELIVER TO THE OWNER A FINISHED BUILDING, READY FOR OCCUPANCY AND 100% OPERATION.
3. TWO COPIES OF OPERATION AND MAINTENANCE MANUALS FOR THE EQUIPMENT HEREIN INSTALLED SHALL BE GIVEN TO THE OWNER PRIOR TO ACCEPTANCE OF THE BUILDING FOR OCCUPANCY.
4. CONTRACTOR SHALL SUBMIT 6 COPIES OF SHOP DRAWINGS TO THE ARCHITECT/ENGINEER FOR APPROVAL FOR ALL EQUIPMENT AND DEVICES INSTALLED, EXCLUDING EQUIPMENT/DEVICES SUPPLIED BY OWNER. THERE WILL BE NO SHOP DRAWINGS UNTIL DRAWINGS HAVE BEEN SUBMITTED & REVIEWED BY ARCHITECT/ENGINEER.
5. ANY DEVIATION FROM PLANS WITHOUT PRIOR APPROVAL OF THE ARCHITECT SHALL BE CAUSE FOR THE REJECTION OF MATERIALS AND/OR METHODS, AND ANY COST INCURRED TO CORRECT SUCH DEVIATION TO THE SATISFACTION OF THE ARCHITECT SHALL BE BORNE BY THE CONTRACTOR.
6. THIS CONTRACTOR SHALL COOPERATE FULLY BETWEEN ALL OTHER TRADES. ANY COSTS INCURRED DUE TO LACK OF COOPERATION AMONG THE TRADES SHALL BE BORNE BY THE CONTRACTOR.
7. THE SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT THE CONTRACTOR HAS FAMILIARIZED HIMSELF WITH THE PLANS AND BUILDING SITE. CLAIMS MADE SUBSEQUENT TO THE PROPOSAL FOR MATERIALS AND LABOR, BECAUSE OF DIFFICULTIES ENCOUNTERED, WILL NOT BE RECOGNIZED IF THEY COULD HAVE BEEN FORESEEN HAD PROPER EXAMINATION BEEN MADE.
8. TRADE NAMES ARE GIVEN TO CLARIFY TYPE OF PRODUCT AND QUALITY DESIRED.
9. ALL EQUIPMENT TO BE PROPERLY SECURED TO PREVENT MOVING ONCE IN PLACE.
10. ALL ROOF WORK TO BE PERFORMED BY THE ORIGINAL ROOFING CONTRACTOR, OR A ROOFING CONTRACTOR WHO WILL HONOR THE ORIGINAL WARRANTY, SUCH THAT THE EXISTING WARRANTY SHALL FULLY APPLY AFTER REMODEL. MECHANICAL CONTRACTOR SHALL COORDINATE ALL ROOF PENETRATIONS, AND PROVIDE CURBS, FLASHING, COUNTER-FLASHING, GOOSENECKS, BOOTS, OR OTHER WEATHERPROOFING AS REQUIRED BY ROOFING CONTRACTOR TO PROTECT AND EXTEND EXISTING ROOF WARRANTY, AND TO PREVENT LEAKS.
11. MANUFACTURERS MINIMUM CLEARANCE RECOMMENDATIONS SHALL BE MAINTAINED ON ALL EQUIPMENT.
12. CONTRACTOR SHALL CAREFULLY COORDINATE THE LOCATION OF ALL EQUIPMENT AND COMPONENTS WITH THE GENERAL CONTRACTOR FOR FRAMING AN FINISHES.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF CONDENSATE DRAINS. CONDENSATE LINES SHALL BE PVC OR ABS PAINTED TO MATCH EXTERIOR WALL. ALL CONDENSATE DRAIN LINES SHALL BE SLOPED MINIMUM 1/8" PER LINEAR FOOT OF RUN AND SHALL INCLUDE A TRAP AND CLEAN-OUT PLUG AT THE UNIT CONNECTION.
14. AIR CONDITIONING UNIT SHALL BE INSTALLED ON RAILS/CURB ON ROOF AS REQUIRED BY ROOFING CONTRACTOR.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR START UP AND PROPER OPERATION OF ALL OWNER FURNISHED EQUIPMENT PRIOR TO REPORT BY BALANCE CONTRACTOR.
16. CONTRACTOR SHALL CAREFULLY COORDINATE ALL THERMOSTAT LOCATIONS WITH INTERIOR FINISHES. VERIFY LOCATIONS WITH INTERIOR ELEVATIONS.
17. OUTSIDE AIR INTAKE SHALL BE FURNISHED WITH INSECT SCREEN, BIRD SCREEN, AND BACKDRAFT DAMPER WHERE APPLICABLE AND ACCORDING TO THE SCHEDULE.
18. ALL CONTROL WIRING SHALL BE BY THE MECHANICAL CONTRACTOR.
19. ALL POWER WIRING SHALL BE BY THE ELECTRICAL CONTRACTOR.

MECHANICAL CODED NOTES

1. CONTRACTOR SHALL VERIFY REQUIREMENTS FOR NEW KITCHEN EQUIPMENT WITH OWNER REPRESENTATIVE AND VENDOR PRIOR TO ROUGH-IN. INFORMATION INDICATED (WATER, WASTE, VENT, MOUNTING, REFRIGERANT CONNECTIONS, SYSTEM INFORMATION, ETC.) IS BASED ON PROTOTYPICAL EQUIPMENT ONLY AND MAY NOT DIRECTLY MATCH NEW EQUIPMENT OR EXISTING EQUIPMENT BEING REUSED. PROVIDE ALL PIPING, SUPPORT, CONNECTIONS, SYSTEM COMPONENTS, APPURTENANCES, ETC. AS REQUIRED AND MAKE FINAL CONNECTIONS.
2. PROVIDE 4" STORM DRAIN FROM ROOF. PROVIDE CLEANOUT IN STORM DRAIN RISER AS REQUIRED BY CODE. CONNECT STORM DRAIN RISER TO EXISTING STORM SEWER LINE UNDERGROUND. EXTERIOR PIPING SHALL BE PAINTED TO MATCH EXTERIOR WALL. FIELD VERIFY AND COORDINATE ALL REQUIREMENTS AND LOCATIONS WITH OWNER REPRESENTATIVE AND EXISTING CONDITIONS.
3. PROVIDE 1" COPPER TRAPPED CONDENSATE PIPING FROM EVAPORATIVE COILS IN COOLER/FREEZER (TYPICAL). WRAP WITH SELF LIMITING HEAT TRACE TAPE (10 WATTS PER LINEAL FOOT), THEN INSULATION (MINIMUM 1" THICK ARMAFLEX OR EQUAL INSULATION WITH ALL-SERVICE JACKET) IN MEAT COOLER AND FREEZER. POWER BY ELECTRICAL CONTRACTOR. SLEEVE AND SEAL PENETRATION THROUGH COOLER/FREEZER WALL. ROUTE CONDENSATE TO FLOOR DRAIN AS INDICATED AND PROVIDE CODE COMPLIANT AIR GAP AT DISCHARGE. FIELD VERIFY AND COORDINATE ALL REQUIREMENTS AND LOCATIONS WITH OWNER REPRESENTATIVE, GENERAL CONTRACTOR, AND EXISTING CONDITIONS.
4. PROVIDE FUNNEL FLOOR DRAIN ZURN #ZLC FD-2280-PB-R6-P, PVC BODY, ROUND TOP, 6" POLISHED BRASS STRAINER, ZB-328-4 ROUND POLISHED BRASS FUNNEL ATTACHMENT WITH TRAP PRIMER CONNECTION AS REQUIRED. TRENCH FLOOR AND EXTEND 4" UNDERSLAB SANITARY PIPING TO NEAREST EXISTING 4" SANITARY SEWER CONNECTION POINT. AFTER INSPECTION, BACKFILL AND COORDINATE SLAB PATCH WITH GENERAL CONTRACTOR. PROVIDE WALL CLEANOUT WHERE ACCESSIBLE AS REQUIRED BY CODE. EXTEND 2" VENT AS HIGH AS POSSIBLE TO EXISTING 2" VENT AND CONNECT. FIELD VERIFY AND COORDINATE ALL REQUIREMENTS AND LOCATIONS WITH OWNER REPRESENTATIVE AND EXISTING CONDITIONS.

COOLER/FREEZER COORDINATION

FIELD VERIFY AND COORDINATE REUSE/REPLACEMENT/DEMO/NEW FOR ALL WALK-IN BOX EQUIPMENT WITH EXISTING CONDITIONS, OWNER REPRESENTATIVE, AND GENERAL CONTRACTOR PRIOR TO ROUGH-IN. WHEN POSSIBLE, REUSE EXISTING ROOF PENETRATIONS, IF NEW ARE REQUIRED, COORDINATE WITH ROOFING CONTRACTOR. ROUTING OF EXISTING POWER, REFRIGERANT LINES, CONDENSATE LINES, ETC., AND ALL REQUIREMENTS TO BE COORDINATED IN FIELD BY AND BETWEEN ALL TRADE, EXISTING CONDITIONS, AND OWNER REPRESENTATIVE.

ISSUED:	DATE:
COORDINATION SET	09/10/2021
PERMIT SET	09/24/2021

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STATE OF OHIO
MICHAEL R. MORELLI
E-77471
REGISTERED
PROFESSIONAL ENGINEER

ENGINEER OF RECORD:
MICHAEL R. MORELLI NO. E-77471
EXP DATE: 12/31/2021

SHEET TITLE
MECHANICAL PLAN AND DETAILS

DRAWN BY: WRG

CHECKED BY: KFF

PROJECT NO: 40493-07

SCALE: AS NOTED

DRAWING
M1

Drawing Name: N:\03\62\40493\07 - Huber Heights, OH\Docs\CAD\TYXRH Huber Heights_M1_Mechanical Plan & Details.dwg, Layout: M1.0, User: wmiller, Sep 23, 2021 - 4:42pm Plotted on: Sep 27, 2021 - 1:07pm by wmiller
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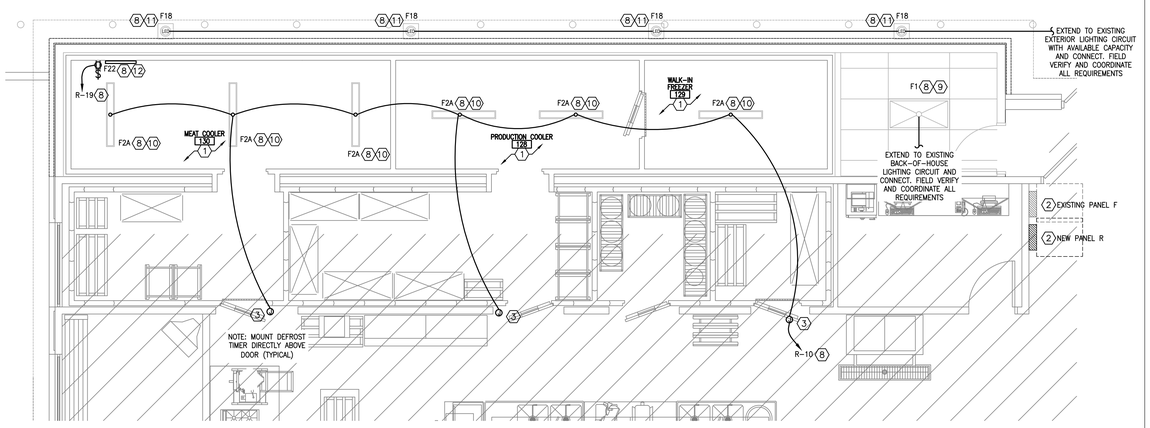
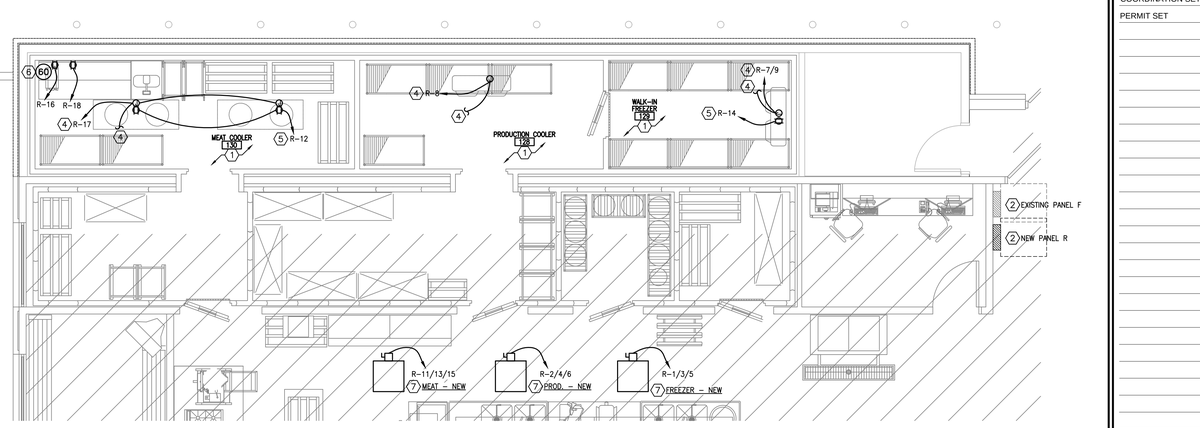


2 LIGHTING PLAN
E1.0 SCALE: 1/4" = 1'-0"

SEE COVER SHEET FOR OVERALL BUILDING WITH AREA OF WORK INDICATED.

NORTH



1 POWER PLAN
E1.0 SCALE: 1/4" = 1'-0"

SEE COVER SHEET FOR OVERALL BUILDING WITH AREA OF WORK INDICATED.

NORTH

PANEL B

LOCATION: IFS
MOUNTING: INTEGRATED
FRAME SIZE: 225
MAIN SIZE: 225 AMP MLO
FED FROM: MDP
DISTRIBUTION: 208Y/120V
PHASE: 3
WIRE: 4
FAULT CURRENT RATING (KAIC): 65000

BRANCH CIRCUIT DESCRIPTION	KVA	WIRE SIZE	GND SIZE	CB	P	NOTE	CIRCUIT NO. A	B	C	CB	P	NOTE	WIRE SIZE	GND SIZE	KVA	BRANCH CIRCUIT DESCRIPTION
COFFEE MAKER #93	1.800	ETR	ETR	20	1	2	1	●		2	20	1	2	ETR	ETR	1.800	*FROZEN MARG MACH #M*
OUTLET @24" DRN BRD #D	1.800	ETR	ETR	20	1	2	3		●	4	20	1	2	ETR	ETR	0.750	*SECURITY SYSTEM*
SODA DISPENSER #91	0.500	ETR	ETR	20	1	2	5		●	6	20	1	2	ETR	ETR	0.750	*SECURITY SYSTEM*
ICE TEA BREWER #92	1.805	ETR	ETR	20	1	2	7	●		8	20	1	2	ETR	ETR	1.000	*BLAST CHILLER COIL #1*
TELEPHONE BACKBOARD	0.200	ETR	ETR	20	1	2	9		●	10	20	1	2	ETR	ETR	1.000	*OFFICE OUTLETS*
MUSIC SYSTEM	1.000	ETR	ETR	20	1	2	11		●	12	20	1	2	ETR	ETR	0.864	*CARBONATOR #104*
GLASS WASHER #G	1.800	ETR	ETR	20	1	2	13	●		14	20	1	2	ETR	ETR	1.140	*BOTTLE COOLER #E*
FROZEN COCKTAIL MACH. COMP. (ON ROOF)	1.664	ETR	ETR	30	2	2	15		●	16	20	1	2	ETR	ETR	0.900	*MUG FROSTER #F*
	1.664	ETR	ETR		-		17		●	18	20	1	2	ETR	ETR	0.756	*WALK-IN COOLER COIL #1*
LIT LIQUOR/BEER DISP. #R	1.380	ETR	ETR	20	1	2	19	●		20	20	2	2	ETR	ETR	1.800	*CHEESE MELTER #15*
HANGING HEAT LAMPS #57	0.750	ETR	ETR	20	1	2	21		●	22		-		ETR	-	1.800	
EXTERIOR OUTLETS	1.000	ETR	ETR	20	1	2	23		●	24	20	1	2	ETR	ETR	1.000	*OFFICE OUTLETS*
HOOD FIRE SUPPRESSION	1.800	ETR	ETR	20	1	1,2	25	●		26	20	1	2	ETR	ETR	0.800	*GP OUTLETS @DISH MACH.*
MUG FROSTER #F1	1.680	ETR	ETR	20	1	2	27		●	28	20	1	2	ETR	ETR	1.800	*COFFEE MAKER #93*
GP OUTLETS/JUKE BOX	1.800	ETR	ETR	20	1	2	29		●	30	20	1	2	ETR	ETR	0.720	*TV OUTLETS*
RECIRCULATING PUMPS	1.600	ETR	ETR	20	1	2	31	●		32	30	2	2	ETR	ETR	2.400	*HEAT LAMPS*
CARBONATOR #104	0.864	ETR	ETR	20	1	2	33		●	34		-		ETR	-	2.400	
FRZR/CLR COMBO #37	1.332	ETR	ETR	20	1	2	35		●	36	100	3		1	6	8.771	
SODA DISPENSER #91	0.500	ETR	ETR	20	1	2	37	●		38		-	3	1	-	8.982	PANEL R
TRACK LIGHTS AT BAR	0.600	ETR	ETR	20	1	2	39		●	40		-		1	-	9.007	
FLOOD LIGHT	1.000	ETR	ETR	20	1	1,2	41		●	42	20	1	2	ETR	ETR	0.100	*MECH. RM. OUTLETS/IRR.*

TOTAL CONN. LOAD: 75.079 KVA
CONNECTED AMPS: 208.40 AMPS
DEMAND AMPS: 162.56 AMPS

PHASE A: 28.61 KVA
PHASE B: 25.22 KVA
PHASE C: 21.26 KVA

NOTES:
1) HANDLE PADLOCK ATTACHMENT
2) BREAKER AND LOAD IS EXISTING TO REMAIN
3) RELOCATE EXISTING EQUIPMENT TO NEW PANEL R AND PROVIDE NEW 100A/3P BREAKER TO FEED NEW PANEL R

PANEL R

LOCATION: SEE PLANS
MOUNTING: SURFACE
FRAME SIZE: 100
MAIN SIZE: 100 AMP MLO
FED FROM: PANEL B
DISTRIBUTION: 208Y/120V
PHASE: 3
WIRE: 4
FAULT CURRENT RATING (KAIC): 10,000

BRANCH CIRCUIT DESCRIPTION	KVA	WIRE SIZE	GND SIZE	CB	P	NOTE	CIRCUIT NO. A	B	C	CB	P	NOTE	WIRE SIZE	GND SIZE	KVA	BRANCH CIRCUIT DESCRIPTION
SPARE				20	1		1	●		2	20	3	10	10	1.300	
SPARE				20	1		3		●	4		-	10	-	1.300	WALK-IN MEAT COOLER COMP.
MEAT GRINDER #60	1.500	12	12	20	1		5		●	6		-	10	-	1.300	
SPARE				20	1		7	●		8	20	1	10	10	0.756	WALK-IN MEAT EVAP.
SPARE				20	1		9		●	10	20	1	12	12	1.236	WALK-IN LTS/DOOR HTR.
SPARE				20	1		11		●	12	20	1	12	12	1.500	MEAT WIB HEAT TRACE TAPE
GP RECEPTACLES	0.900	12	12	20	1		13	●		14	20	1	12	12	1.500	FREEZER HEAT TRACE TAPE
TELEVISIONS	1.000	12	12	20	1	3	15		●	16	20	3	10	10	1.126	
SPEAKERS	0.500	12	12	20	1	3	17		●	18		-	1	10	-	1.126	WALK-IN FREEZER COMP.
LOW-VOLTAGE DEVICES	1.000	12	12	20	1	3	19	●		20		-		10	-	1.126	
SPARE				20	1		21		●	22	20	2	1	10	10	0.905	WALK-IN FREEZER EVAP.
SPARE				20	1		23	●		24		-		10	-	0.905	
SPARE				20	1		25	●		26	20	2	1	10	10	1.500	VESTIBULE HEATER (TO GO)
SPARE				20	1		27		●	28		-		10	-	1.500	
SPARE				20	1		29		●	30		1					SPACE
SPARE				20	1		31	●		32	20	3				0.900	
SPACE					1		33		●	34		-	3			0.900	MIXER #11
SPACE					1		35		●	36		-				0.900	
SPACE					1		37	●		38		1					SPACE
SPACE					1		39		●	40	20	2	1	10	10	1.040	SS-2
SPACE					1		41		●	42		-		10	-	1.040	

TOTAL CONN. LOAD: 26.760 KVA
CONNECTED AMPS: 74.28 AMPS
DEMAND AMPS: 60.88 AMPS

PHASE A: 8.98 KVA
PHASE B: 9.01 KVA
PHASE C: 8.77 KVA

NOTES:
1) PROVIDE HACR TYPE BREAKER
2) BREAKER PROVIDED FOR OWNER SYSTEMS REQUIRING POWER, REFER TO CODED NOTE 16 ON SHEET E1
3) BACKFEED EXISTING EQUIPMENT FROM NEW BREAKER RELOCATED FROM PANEL B.

COOLER/FREEZER COORDINATION

FIELD VERIFY AND COORDINATE REUSE/REPLACEMENT/DEMO/NEW FOR ALL WALK-IN BOX EQUIPMENT WITH EXISTING CONDITIONS, OWNER REPRESENTAIVE, AND GENERAL CONTRACTOR PRIOR TO ROUGH-IN. WHEN POSSIBLE, REUSE EXISTING ROOF PENETRATIONS, IF NEW ARE REQUIRED, COORDINATE WITH ROOFING CONTRACTOR. ROUTING OF EXISTING POWER, REFRIGERANT LINES, CONDENSATE LINES, ETC., AND ALL REQUIREMENTS TO BE COORDINATED IN FIELD BY AND BETWEEN ALL TRADES, EXISTING CONDITIONS, AND OWNER REPRESENTATIVE.

THE ELECTRICAL CONTRACTOR SHALL FIELD VERIFY AND COORDINATE ALL TIE-IN WORK FOR CAPACITY. DO NOT OVERLOAD ANY BRANCH CIRCUIT, BREAKER, PANEL, CONTROLLER, CONTACTOR, SWITCH, OR OTHER ELECTRICAL COMPONENTS. IF EXISTING SYSTEMS WILL NOT SUPPORT THE NEW DEVICES, COMPONENTS, EQUIPMENT, AND LIGHTING INDICATED AS PART OF THIS SCOPE, CONTRACTOR MUST COORDINATE SOLUTION WITH GENERAL CONTRACTOR, OWNER REPRESENTATIVE, AND ENGINEER PRIOR TO PERFORMING WORK. AT COMPLETION OF WORK, RE-BALANCE PHASES FOR ALL EXISTING PANELS, PROVIDE NEW TYPE-WRITTEN PANELBOARD DIRECTORY FOR ALL EXISTING PANELS, AND PROVIDE OWNER REPRESENTATIVE WITH AS-BUILT DRAWINGS (RECORD SET FROM SITE WITH ANY MODIFICATIONS TO SCOPE CLEARLY MARKED IN RED INK).

THE ELECTRICAL CONTRACTOR SHALL COORDINATE DEMOLITION WORK REQUIRED WITH GENERAL CONTRACTOR. DO NOT ABANDON ANY WIRING, CONDUIT, DEVICES, EQUIPMENT, APPURTENANCES, ETC., REMOVE BACK TO SOURCE, OR LAST ACTIVE COMPONENT. FOR DEVICES/EQUIPMENT BEING REPLACED, PROTECT EXISTING ELECTRICAL CONNECTIONS AND COMPONENTS TO THE EXTENT POSSIBLE, AND REUSE/EXTEND, OR PROVIDE NEW AS REQUIRED. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL ELECTRICAL REQUIREMENTS FOR WORK INDICATED AS PART OF THIS REMODEL. EXISTING INFORMATION WAS TAKEN FROM PREVIOUS DESIGN DRAWINGS AND MUST BE FIELD VERIFIED. INFORMATION FOR NEW KITCHEN EQUIPMENT WAS ASSUMED FROM PROTOTYPICAL DESIGN STANDARDS AND IS SUBJECT TO CHANGE.

ABBREVIATIONS:

G	GROUND
NEC	NATIONAL ELECTRICAL CODE
AFF	ABOVE FINISHED FLOOR
C	CONDUIT
NIC	NOT IN CONTRACT
UNO	UNLESS NOTED OTHERWISE
EC	ELECTRICAL CONTRACTOR
GC	GENERAL CONTRACTOR
MC	MECHANICAL CONTRACTOR
GFI	GROUND FAULT INTERRUPTER
WP	WEATHERPROOF

NUMBER IN CIRCLE INDICATES ASSUMED EQUIPMENT NUMBER BASED ON PROTOTYPICAL EQUIPMENT. NO FFE PACKAGE DEVELOPED FOR THIS REMODEL WORK. FIELD VERIFY ALL EQUIPMENT REQUIREMENTS WITH VENDORS AND OWNER PRIOR TO ROUGH-IN.

(#)

GENERAL NOTES:
1. PRIOR TO ROUGH-IN OF ANY DEVICE SHOWN ON THIS DRAWING, REFER TO THE FOLLOWING:
   A. E2 FOR PANEL SCHEDULES.
   B. OWNER DIRECTION FOR EXACT LOCATION AND MOUNTING HEIGHTS.
   C. P.O.S. VENDOR FOR P.O.S SYSTEM CONDUIT REQUIREMENTS AND FOR P.O.S SYSTEM WIRING DIAGRAM.
   D. OWNER REPRESENTATIVE, OR OWNER VENDORS FOR SYSTEM REQUIREMENTS RELATED TO: TELEPHONE, FIRE ALARM, SECURITY, SOUND, SIGNS, LIGHTING, KITCHEN EQUIPMENT, MECHANICAL EQUIPMENT, PLUMBING EQUIPMENT, ETC.
2. REFER TO PANEL SCHEDULES ON E2 FOR CONDUCTOR SIZES.
3. ALL KITCHEN, BAR, MECHANICAL/ELECTRICAL ROOMS, RESTROOM, AND ROOF TOP RECEPTACLES SHALL BE GFI.
4. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND REQUIREMENTS OF ALL MECHANICAL EQUIPMENT SHOWN ON THIS DRAWING.
5. REFER TO PLUMBING DRAWINGS FOR EXACT LOCATION AND REQUIREMENTS OF ALL PLUMBING EQUIPMENT SHOWN ON THIS DRAWING.

NOTE:
ALL CONDUIT TO BE RUN OUTSIDE OF WALK-IN AND PENETRATIONS TO BE THOROUGHLY CAULKED WITH FOOD GRADE SILICONE SEALER. RACEWAYS THAT PENETRATE COOLERS THAT ARE KNOWN TO BE SUBJECT TO DIFFERENT TEMPERATURES AND CONDENSATION SHALL BE FILLED INSIDE THE RACEWAY WHERE IT ENTERS THE COOLERS WITH AN APPROVED MATERIAL TO PREVENT TO CIRCULATION OF WARM AIR TO THE COOLER SECTION. (SEE 300.7 OF NFPA 70).

NOTE:
CONTRACTOR WILL NOT CAUSE INTERRUPTION OF POWER FOR RESTAURANT OPERATIONS AND MUST COORDINATE WORK IN EXISTING AREAS AT LEAST TWO DAYS PRIOR TO COMMENCING SUCH WORK. FULLY COORDINATE REQUIRED ACCESS WITH OWNER REPRESENTATIVE AND GENERAL MANAGER.

NOTE:
ALL CONDUIT TO BE RUN IN AREAS WHERE THE LEAST AMOUNT OF WORK IS REQUIRED TO COORDINATE WITH EXISTING CONDITIONS. CONDUIT SHALL NOT BE ALLOWED TO RUN INSIDE OF ANY COOLERS/FREEZERS, UNDER SLAB, WALK-IN, OR ANY SPACE WHERE EXISTING FINISHED CONSTRUCTION MUST BE REMOVED UNLESS FIRST COORDINATED WITH OWNER REPRESENTATIVE AND GENERAL MANAGER.

ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL CONDUIT(S) AND J-BOX(ES) FOR HVAC CONTROLS AS REQUIRED. FIELD VERIFY AND COORDINATE REQUIREMENTS WITH HVAC CONTRACTOR AND HVAC PLAN.

ALL WORK SHALL BE PERFORMED BY ELECTRICAL CONTRACTOR UNLESS STATED OTHERWISE.

ALL ELECTRICAL WORK SHALL COMPLY WITH OHIO BUILDING CODE & NFPA 70. ELECTRICAL WORK SHALL COMPLY WITH ARTICLE 250 OF THE NEC.

ELECTRICAL GENERAL NOTES

1. THE EQUIPMENT ROUGH-INS AS SHOWN ARE ACCURATE TO THE BEST OF OUR KNOWLEDGE. HOWEVER, IN SOME INSTANCES, THE OWNER OR SUPPLIER MAY SUBSTITUTE OR THE EQUIPMENT MAY VARY FROM WHAT IS SHOWN. THEREFORE, THE CONTRACTOR SHALL VERIFY ALL CRITICAL DIMENSIONS WITH THE OWNER PRIOR TO CONSTRUCTION. FAILURE OF THE CONTRACTOR TO VERIFY THESE DIMENSIONS SHALL PLACE THE RESPONSIBILITY FOR ANY SUBSEQUENT RELOCATION DIRECTLY UPON THE CONTRACTOR.
2. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE N.E.C. AND STATE AND LOCAL CODES AS THEY APPLY.
3. ALL DISCONNECT SWITCHES SHALL BE RATED FOR HEAVY DUTY U.O.N.
4. STARTERS AND RELATED WIRING SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR. OVERLOAD UNITS SHALL BE INSTALLED AS PER NAME PLATE DATA ON EQUIPMENT. EXCEPT FOR SUCH ITEMS AS ARE NORMALLY SUPPLIED WITH STARTERS INSTALLED (HVAC UNITS, DISH-WASHERS ETC.) AT THEIR POINT OF MANUFACTURE, ALL STARTERS SHALL BE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR WILL MOUNT ALL SUCH STARTERS, AS DIRECTED, FURNISHING SUPPORTING STRUCTURES WHERE NECESSARY.
5. ANY FEES ASSOCIATED WITH CONSTRUCTION AND INSPECTION SHALL BE BORNE BY THE CONTRACTOR IN ORDER TO DELIVER TO THE OWNER A FINISHED BUILDING, READY FOR OCCUPANCY AND 100% OPERATION.
6. TWO COPIES OF OPERATION AND MAINTENANCE MANUALS FOR THE EQUIPMENT HEREIN INSTALLED SHALL BE GIVEN TO THE OWNER PRIOR TO ACCEPTANCE OF THE BUILDING FOR OCCUPANCY.
7. ALL PANELBOARDS AND EMERGENCY LIGHTING DISCONNECT SWITCHES SHALL BE LABELED WITH RESPECT TO THEIR TITLE, VOLTAGE AND PHASE; I.E. PANEL "A" 120/208/3ø. LABEL SHALL BE PHENOLIC PLASTIC WITH WHITE LETTERS AND BLACK BACKGROUND. LABELS SHALL BE PERMANENTLY FIXED TO THE EQUIPMENT. MODIFY/REPLACE ANY EXISTING LABELS AS REQUIRED.
8. PANELBOARDS SHALL CONTAIN A TYPEWRITTEN DIRECTORY WITH A PLASTIC COVER AFFIXED TO THE INSIDE DOOR. MODIFY EXISTING/PROVIDE NEW PANELBOARD DIRECTORIES FOR WORK INDICATED ON THESE PLANS.
9. CONTRACTOR SHALL SUBMIT 6 COPIES OF SHOP DRAWINGS TO THE ARCHITECT/ENGINEER FOR APPROVAL FOR ALL EQUIPMENT AND DEVICES INSTALLED, EXCLUDING EQUIPMENT/DEVICES SUPPLIED BY OWNER. CONTRACTOR MUST NOT START WORK NOR PURCHASE MATERIALS UNTIL SHOP DRAWINGS HAVE BEEN SUBMITTED AND REVIEWED BY ARCHITECT/ENGINEER. CONTRACTOR SHALL PROVIDE A MINIMUM OF FIVE BUSINESS DAYS FOR REVIEW BY ARCHITECT/ENGINEER WITHOUT IMPACT TO THE CONSTRUCTION SCHEDULE.
10. ANY DEVIATION FROM PLANS WITHOUT PRIOR APPROVAL OF THE ARCHITECT SHALL BE CAUSE FOR THE REJECTION OF MATERIALS AND/OR METHODS, AND ANY COST INCURRED TO CORRECT SUCH DEVIATION TO THE SATISFACTION OF THE ARCHITECT SHALL BE BORNE BY THE CONTRACTOR.
11. ANY COSTS INCURRED DUE TO LACK OF COOPERATION AMONG THE TRADES SHALL BE BORNE BY THE CONTRACTOR.
12. IT SHALL BE THIS CONTRACTOR'S RESPONSIBILITY, PRIOR TO ANY INDIVIDUAL CIRCUIT'S INSTALLATION, TO VERIFY WITH ALL OTHER TRADES CONCERNED THAT THE CIRCUIT WITH DEVICES AS DRAWN IS ADEQUATE IN SIZE AND WAKE-UP FOR THE MECHANICAL AND/OR KITCHEN EQUIPMENT TO BE INSTALLED. IF ANY CONFLICT IN VOLTAGE, PHASE OR LOAD IS ENCOUNTERED WHICH WOULD ALTER THE CIRCUIT CONFIGURATION, THIS CONTRACTOR SHALL NOTIFY THE ENGINEER OR OWNER IMMEDIATELY. FAILURE TO DO SO SHALL PLACE THE RESPONSIBILITY FOR ANY SUBSEQUENT CIRCUIT CHANGE DIRECTLY UPON THE CONTRACTOR.
13. FOR POWER CIRCUITS MINIMUM WIRE SIZE SHALL BE #12 AWG AND MINIMUM CONDUIT SIZE SHALL BE 3/4"C. ALL WIRING SHALL BE RUN IN CONDUIT. WIRING INDICATED IS THE MINIMUM REQUIRED. RUNS IN EXCESS OF 90'-0" (ONE WAY) SHALL BE SIZED PER THE NEC FOR MAXIMUM 3% VOLTAGE DROP.
14. COORDINATE WITH LOCAL UTILITIES FOR THEIR REQUIREMENTS.
15. PROVIDE GFI RECEPTACLE, OR GFI CIRCUIT BREAKERS IN PANELBOARD WHERE RECEPTACLE TEST/RESET BUTTONS ARE NOT LOCATED IN A READILY ACCESSIBLE LOCATION.
16. ALL ELECTRICAL OUTLETS SHALL COMPLY WITH NEC 210.8(B) WHICH WILL REQUIRE RECEPTACLES TO BE GFCI PROTECTED. PROVIDE EITHER INDIVIDUAL GFI DEVICES OR GFI CIRCUIT BREAKERS, UNLESS SPECIFICALLY NOTED ON THE DRAWINGS OR SCHEDULES. ALSO SEE NEC 647.6(B). REFERENCING ISOLATED GROUND RECEPTACLES. (VERIFY WITH LOCAL AUTHORITY HAVING JURISDICTION ON NEC ADDITION ENFORCED.)
17. IG-GFI RECEPTACLES SHALL BE LEGRAND #1595-IGTRO OR APPROVED EQUAL. PROVIDE ISOLATED GROUND RECEPTACLES PER NEC 647.6(B) FOR TERMINATION OF BRANCH CIRCUIT EQUIPMENT GROUNDING CONDUCTORS. (VERIFY WITH LOCAL AUTHORITY HAVING JURISDICTION ON NEC ADDITION ENFORCED.)
18. THE SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT THE CONTRACTORS HAVE FAMILIARIZED THEMSELVES WITH THE PLANS AND BUILDING SITE. CLAIMS MADE SUBSEQUENT TO THE PROPOSAL FOR MATERIALS AND LABOR, BECAUSE OF DIFFICULTIES ENCOUNTERED, WILL NOT BE RECOGNIZED IF THEY COULD HAVE BEEN FORESEEN HAD PROPER EXAMINATION BEEN MADE.
19. TRADE NAMES ARE GIVEN TO CLARIFY TYPE OF PRODUCT AND QUALITY DESIRED.
20. CONTRACTORS SHALL VERIFY SERVICE VOLTAGE WITH UTILITY COMPANY, AND REVISE AND BALANCE PANEL AS REQUIRED.
21. ALL EXTERIOR RECEPTACLES, JUNCTION BOXES AND EQUIPMENT SHALL BE WEATHERPROOF. ALL EXTERIOR CONDUIT FOR WIRING SHOULD BE MINIMIZED TO EXPOSURE BY ROUTING IN CEILING SPACES/OVERHANGS.
22. THE POS COMMUNICATION CABLE IS FURNISHED AND INSTALLED BY THE OWNER.
23. ALL FIXTURES TO BE PROPERLY SECURED TO PREVENT MOVING ONCE IN PLACE.
24. ALL CONDUIT (RIGID AND FLEXIBLE) SHALL BE PROPERLY SECURED AND NOT ALLOWED TO LAY ON FLOOR, ETC.
25. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND REQUIREMENTS OF ALL MECHANICAL EQUIPMENT SHOWN ON THIS DRAWING.
26. REFER TO PLUMBING DRAWINGS FOR EXACT LOCATION AND REQUIREMENTS OF ALL PLUMBING EQUIPMENT SHOWN ON THIS DRAWING.

ELECTRICAL CODED NOTES

1. FIELD VERIFY AND COORDINATE ALL SYSTEMS, EQUIPMENT, DEVICES, LIGHTING FIXTURES, CONTROLS, COMPONENTS, ETC. REQUIRING POWER WITH OWNER REPRESENTATIVE. COORDINATION SHALL INCLUDE QUANTITIES, LOCATIONS, MOUNTING, AND ALL REQUIREMENTS WITH OWNER REPRESENTATIVE. REFER TO ARCHITECTURAL DRAWINGS, VENDOR INFORMATION, MANUFACTURER'S INSTRUCTIONS, OR OWNER DIRECTION. ALL LIGHTING FIXTURES SHALL BE SUPPLIED BY OWNER. ALL LAMPS SHALL BE MANUFACTURED BY PHILLIPS LIGHTING WITHOUT EXCEPTION. ONLY LAMP WATTAGE LISTED MAY BE USED. ALL LIGHTING FIXTURES AVAILABLE THROUGH ACCUSERV: DANA BRUCE OR SANDY HINES AT 877-707-7378.
2. PROVIDE CLEARANCES FOR ELECTRICAL PANEL PER N.E.C. 110.26. PANEL CIRCUIT BREAKER SHALL BE AN ACCESSIBLE HEIGHT OF 6'-7"AFF PER NEC 404.8. PROVIDE NEW 100A-3P BREAKER IN EXISTING PANEL WITH SPACE AND CAPACITY TO FEED NEW PANEL R. FIELD VERIFY AND COORDINATE ALL REQUIREMENTS.
3. 120V/1ø CONNECTIONS FOR LIGHTS, DOOR HEATERS AND DEFROST TIMERS. ALL WALK-IN LIGHTS AND DOOR HEATER CONNECTIONS AND INSTALLATIONS ARE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. LIGHTING CONDUIT SHALL BE RUN ABOVE WALK-IN BOX AND ALL PENETRATIONS THOROUGHLY SEALED. LIGHT FIXTURES FURNISHED UNINSTALLED BY THE WALK-IN SUPPLIER, INSTALLATION AND WIRING BY THE ELECTRICAL CONTRACTOR. FIELD VERIFY AND COORDINATE ALL REQUIREMENTS WITH EXISTING CONDITIONS, OWNER REPRESENTATIVE, AND GENERAL CONTRACTOR.
4. CONNECTION FOR EVAPORATOR COIL INSIDE WALK-IN. EXTEND INTER-WIRING TO ROOF COMPRESSOR PER MANUFACTURER'S DRAWINGS.
5. POWER FOR HEAT TRACE TAPE FOR CONDENSATE DRAIN LINE FOR FREEZER, AND MEAT COOLER AS REQUIRED. COORDINATE WITH MECHANICAL AND GENERAL CONTRACTORS.
6. CONTRACTOR SHALL VERIFY REQUIREMENTS FOR NEW KITCHEN EQUIPMENT WITH OWNER REPRESENTATIVE AND VENDOR PRIOR TO ROUGH-IN. INFORMATION INDICATED (CONNECTION TYPE, VOLTS/AMPS/WATTS, ETC.) IS BASED ON PROTOTYPICAL EQUIPMENT ONLY AND MAY NOT DIRECTLY MATCH NEW EQUIPMENT OR EXISTING EQUIPMENT BEING REUSED. PROVIDE FLEXIBLE CONNECTOR, CORD/WHIP, RECEPTACLE, ETC. AS REQUIRED AND MAKE FINAL CONNECTION.
7. FIELD VERIFY AND COORDINATE INSTALLATION OF NEW CONDENSER ON ROOF FOR NEW PRODUCTION COOLER, MEAT COOLER, AND FREEZER. PROVIDE NON-FUSED WEATHERPROOF DISCONNECT SWITCH WITH PHEONLIC LABEL MOUNTED AT EACH CONDENSING UNIT ON ROOF AND EXTEND CONDUIT AND FEEDERS FOR POWER TO EACH CONDENSER AND BETWEEN EACH CONDENSER AND PAIRED EVAPORATOR(S). PROVIDE ANY REQUIRED CONTROLS WIRING. REFER TO KITCHEN EQUIPMENT VENDOR INFORMATION/INSTALLATION INSTRUCTIONS. COORDINATE WITH EXISTING CONDITIONS, OWNER REPRESENTATIVE, VENDOR, MECHANICAL, ROOFING, AND GENERAL CONTRACTORS.
8. CONTRACTOR SHALL FIELD VERIFY AND COORDINATE MODIFICATIONS TO EXISTING AUTOMATIC LIGHTING CONTROL/DIMMING PANEL AND SHALL PROVIDE ALL MATERIALS AND LABOR REQUIRED TO CONNECT NEW FIXTURES TO EXISTING CONTROL PANEL. WORK SHALL BE COORDINATED WITH OWNER, LIGHTING CONTROL PANEL MANUFACTURER, AND ACCUSERV (SEE CODED NOTE #1).
9. OWNER FURNISHED, CONTRACTOR INSTALLED "F1" LED PANEL LAY-IN TROFFER (DIFFUSING LENS, ELECTRONIC BALLAST, INTEGRAL 50W LED, 5000LM, 4000K LED, CREE LIGHTING CR24-50L-40K-S). CIRCUIT RUN AS INDICATED. VERIFY MOUNTING LOCATION AND ALL REQUIREMENTS WITH OWNER. SEE CODED NOTE #11 ABOUT CONTROLS.
10. OWNER FURNISHED, CONTRACTOR INSTALLED "F2A" FREEZER/COOLER LIGHT (FULLY ENCLOSED AND GASKETED, INDUSTRIAL FIXTURE, 73W LED LAMP, 5000K, IMPACT RESISTANT ACRYLIC SHIELD, NON-DIMMING DRIVER, 6200 LM, H.E.WILLIAMS 96-4-L62/850-HAFR-DRV-UNV). CIRCUIT RUN AS INDICATED. VERIFY MOUNTING LOCATION AND ALL REQUIREMENTS WITH OWNER. SEE CODED NOTE #8 ABOUT CONTROLS.
11. OWNER FURNISHED, CONTRACTOR INSTALLED "F1B" (6" LED RECESSED CEILING CAN LIGHT, BLACK TRIM, 650 LUMENS, 12W LED LAMP, JUNO LIGHTING IC926LEDG4-35K-U-614B-BL). CONNECT TO EXISTING EXTERIOR LIGHTING CIRCUIT FOR POWER AND CONTROLS. VERIFY MOUNTING LOCATION AND ALL REQUIREMENTS WITH OWNER. SEE CODED NOTE #8 ABOUT CONTROLS.
12. OWNER FURNISHED, CONTRACTOR INSTALLED "F22" UNDERCOUNTER MEAT COOLER LIGHT (SLIMLINE SURFACE MOUNTED LED, 2 FOOT, 26W LED LAMP, 5000K, 2000 LM, H.E.WILLIAMS LLMS-2-L20/850-S-RD-WRS/120-DRV-120). PROVIDE RECEPTACLE AND SWITCH AS INDICATED, CIRCUIT RUN AS INDICATED. VERIFY MOUNTING LOCATION AND ALL REQUIREMENTS WITH OWNER. SEE CODED NOTE #8 ABOUT CONTROLS.

ISSUED:	DATE:
COORDINATION SET	09/10/2021
PERMIT SET	09/24/2021

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EXP DATE: 12/31/2021

SHEET TITLE
POWER & LIGHTING PLANS AND DETAILS

DRAWN BY: WRG
CHECKED BY: KFF
PROJECT NO: 40493-07
SCALE: AS NOTED

DRAWING
E1

Drawing Name: N:\0362\40493\07 - Huber Heights, OH\Docs\CAD\TXRH Huber Heights_E1_Power and Lighting Plans & Details.dwg, last modified: Sep 23, 2021 - 1:01pm, Plotted on: Sep 27, 2021 - 1:06pm by: curtiss

SECTION 00100 – INSTRUCTIONS TO BIDDERS

1. AIA DOCUMENT A701, 1987 EDITION "INSTRUCTIONS OF BIDDERS" ARE INCLUDED AS PART OF THESE SPECIFICATIONS SAME AS IF HEREIN REPRINTED IN FULL.

   A) A COPY OF AIA A701, 1987 MAY BE OBTAINED FROM OWNER, ARCHITECT, OR DIRECTLY FROM THE AMERICAN INSTITUTE OF ARCHITECTS, 1735 NEW YORK AVENUE, N.W. WASHINGTON, D.C. 20006.

SECTION 00120 – SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

THE FOLLOWING SUPPLEMENTS MODIFY, CHANGE, DELETE FROM, OR ADD TO THE INSTRUCTIONS TO BIDDERS (AIA A701, 1987 EDITION). WHERE ANY ARTICLE OF THE INSTRUCTION TO BIDDERS IS MODIFIED OR ANY PARAGRAPH, SUB-PARAGRAPH, OR CLAUSE THEREOF IS MODIFIED OR DELETED BY THESE SUPPLEMENTAL INSTRUCTIONS, THE UNALTERED PROVISIONS OF THE ARTICLE, PARAGRAPH, SUB-PARAGRAPH, OR CLAUSE SHALL REMAIN IN EFFECT.

1. ARTICLE 1, PARAGRAPH 1.8, ADD:

   BIDDING IS BY INVITATION, FROM THE OWNER, ONLY.

2. ARTICLE 1, ADD PARAGRAPH 1.10:

   1.10 THE TERM "ARCHITECT" AS USED HEREIN, SHALL BE CONSTRUED TO MEAN THE "OWNER", AS THE OWNER WILL ADMINISTER THE BIDDING PROCEDURE.

3. ARTICLE 3, PARAGRAPH 3.1.1:

   OWNER WILL PROVIDE EACH INVITED BIDDER ONE (1) SET OF SEPIAS OF THE BIDDING DOCUMENTS. EXTRA SETS MAY BE REQUESTED FROM THE OWNER OF A NON-REFUNDABLE COST. DEPOSIT IS OF OWNER'S DISCRETION.

4. ARTICLE 4, PARAGRAPH 4.1.1 DELETE AND INSERT THE FOLLOWING:

   4.1.1 BIDS SHALL BE SUBMITTED ON FORMS IDENTICAL TO THE BID FORM PROVIDED BY THE OWNER; ONE (1) ORIGINAL WITH ORIGINAL SIGNATURE(S). BIDS TRANSMITTED VIA FACSIMILE, PROVIDED THEY ARE RECEIVED BY THE PRESCRIBED DEADLINE, ARE ACCEPTABLE. ORIGINALS SHALL BE SENT BY OVERNIGHT SERVICE FOR NEXT DAY DELIVERY.

5. ARTICLE 4, PARAGRAPH 4.2:

   DELETE THIS PARAGRAPH IN ITS ENTIRETY, AS NO BID SECURITY WILL BE REQUIRED.

6. ARTICLE 4, PARAGRAPH 4.4.1:

   THE "STIPULATED TIME PERIOD" SHALL BE CONSTRUED AS 45 CALENDAR DAYS.

7. ARTICLE 5, PARAGRAPH 5.3.3:

   5.3.3 VOLUNTARY ALTERNATES, IF OFFERED BY THE BIDDER, WILL NOT BE CONSIDERED IN DETERMINING THE LOWEST RESPONSIBLE BID. HOWEVER, THE OWNER RESERVES THE RIGHT TO ACCEPT OR REJECT,, ANY OR ALL VOLUNTARY ALTERNATES, PRIOR TO AWARD OF CONTRACT.

8. ARTICLE 6, PARAGRAPH 6.2:

   DELETE THIS PARAGRAPH IN IT'S ENTIRETY.

9. ARTICLE 7, PARAGRAPH 7.1.1:

   BOND REQUIREMENT WILL BE AN OPTION RESERVED BY THE OWNER.

10. ARTICLE 7, PARAGRAPH 7.2.2:

    DELETE "UNLESS OTHERWISE PROVIDED, " AND SUBSTITUTE: "UNLESS OTHERWISE ACCEPTABLE TO THE OWNER."

SECTION 00220 – GEOTECHNICAL DATA

1. SUBSURFACE REPORT

   A) THE OWNER HAS HAD A SUBSURFACE INVESTIGATION PERFORMED BY A GEOTECHNICAL CONSULTANT, THE RESULTS OF WHICH ARE CONTAINED ON THE DRAWINGS. THE CONSULTANT'S REPORT PRESENTS HIS CONCLUSIONS ON SUBSURFACE CONDITIONS, BASED ON HIS INTERPRETATIONS OF THE DATA OBTAINED IN THE INVESTIGATION. THE CONTRACTOR ACKNOWLEDGES THAT HE HAS REVIEWED THE CONSULTANT'S REPORT AND ANY ADDENDA THERETO, AND THAT HIS BID FOR EXCAVATION OPERATIONS, INCLUDING ALL NECESSARY ROCK REMOVAL, IS BASED ON THE SUBSURFACE CONDITIONS AS DESCRIBED IN THAT REPORT. IT IS RECOGNIZED THAT A SUBSURFACE INVESTIGATION MAY NOT DISCLOSE ALL CONDITIONS AS THEY ACTUALLY EXIST BETWEEN THE TIME OF A SUBSURFACE INVESTIGATION AND THE TIME EXCAVATION OPERATIONS. IN RECOGNITION OF EQUITABLE ADDITIONAL COMPENSATION FOR THE CONTRACTOR IF ADVERSE UNANTICIPATED CONDITIONS ARE ENCOUNTERED, AND TO PROVE A MEANS OF REBATE TO THE OWNER IF THE CONDITIONS ARE MORE FAVORABLE THAN ANTICIPATED.

   B) AT ANY POINT IN TIME DURING EXCAVATION OPERATIONS THAT THE CONTRACTOR ENCOUNTERS CONDITIONS THAT ARE DIFFERENT THAN THOSE ANTICIPATED BY THE FOUNDATION CONSULTANT'S REPORT, HE SHALL IMMEDIATELY (WITHIN 24 HOURS) BRING THIS FACT TO THE OWNER'S ATTENTION. ONCE A FACT OF UNANTICIPATED CONDITIONS HAS BEEN BROUGHT TO THE ATTENTION OF THE OWNER, AND THE CONSULTANT HAS CONCURRED, IMMEDIATE NEGOTIATIONS WILL BE UNDERTAKEN BETWEEN THE OWNER, AND THE CONTRACTOR TO ARRIVE AT A CHANGE IN CONTRACT PRICE FOR ADDITIONAL WORK OR REDUCTION IN WORK BECAUSE OF THE UNANTICIPATED CONDITIONS. THE CONTRACTOR AGREES THAT HIS STATED UNIT PRICE WOULD APPLY FOR ADDITIONAL OR REDUCED WORK UNDER THE CONTRACT.

   C) THE SOIL INVESTIGATION REPORT IS NOT INTENDED AS REPRESENTATIONS OR WARRANTIES OF ACCURACY OF CONTINUITY BETWEEN SOIL BORINGS, AND IS FURNISHED ONLY AS A MATTER OF CONVENIENCE TO THE BIDDER.

SECTION 00300 – BID FORM

1. THE FORM OF PROPOSAL WILL BE FURNISHED SEPARATELY BY THE OWNER.

SECTION 00700 – GENERAL CONDITIONS

1. AIA DOCUMENT A201, 1987 EDITION, "GENERAL CONDITIONS OF THE CONTACT FOR CONSTRUCTION" ARE INCLUDED AS PART OF THESE SPECIFICATIONS SAME AS IF HEREIN REPRINTED IN FULL.

   A) A COPY OF AIA A701, 1987 MAY BE OBTAINED FROM OWNER, ARCHITECT, OR DIRECTLY FROM THE AMERICAN INSTITUTE OF ARCHITECTS, 1735 NEW YORK AVENUE, N.W. WASHINGTON, D.C. 20006.

SECTION 00800 – SUPPLEMENTARY CONDITIONS

THE FOLLOWING SUPPLEMENTS MODIFY, CHANGE, DELETE FROM, OR ADD TO THE INSTRUCTIONS TO BIDDERS (AIA A701, 1987 EDITION). WHERE ANY ARTICLE OF THE INSTRUCTION TO BIDDERS IS MODIFIED OR ANY PARAGRAPH, SUB-PARAGRAPH, OR CLAUSE THEREOF IS MODIFIED OR DELETED BY THE SUPPLEMENTAL INSTRUCTIONS, THE UNALTERED PROVISIONS OF THE ARTICLE, PARAGRAPH, SUB-PARAGRAPH, OR CLAUSE SHALL REMAIN IN EFFECT.

1. ARTICLE 1, PARAGRAPH 4.2.1; DELETE AND SUBSTITUTE:
   4.2.1 ALL REFERENCES USED THROUGHOUT THESE DOCUMENTS REQUIRING THE ARCHITECT TO ACT, APPROVE, OBSERVE OR OTHERWISE USE HIS PROFESSIONAL JUDGMENT REGARDING THIS PROJECT, WILL BECOME THE SOLE RESPONSIBILITY OF THE OWNER, WHO MAY CONSULT WITH THE ARCHITECT ON PERIODIC BASIS AS THE OWNER DEEMS NECESSARY TO ASSURE COMPLIANCE WITH THE CONTRACT DOCUMENTS.

2. ARTICLE 7, PARAGRAPH 7.3.6 IS FURTHER CLARIFIED AS FOLLOWS:

   WHEN THE OWNER AUTHORIZES THE CONTRACTOR TO PERFORM CHANGES OR ADDITIONS INVOLVING EXTRA LABOR AND MATERIAL, AND IF THE CONTRACTOR IS DIRECTED TO PROCEED ON THE BASIS OF THE ACTUAL COST OF LABOR AND MATERIAL BY CHANGE ORDER, THE FOLLOWING ALLOWANCES WILL BE ALLOWED FOR OVERHEAD (INCLUDING BOND AND INSURANCES/ & PROFIT:

   1) FOR THE CONTRACTOR: NET 10%
   2) EXTRA WORK COVERED BY UNIT PRICES AS REQUESTED IN THE BID FORM, INCLUDE CONTRACTOR'S OVERHEAD AND PROFIT.
   3) SUPERINTENDENT'S TIME SHALL NOT BE INCLUDED IN T & M EXTRA WORK

3. ARTICLE 8, ADD PARAGRAPH 8.3.4:

   8.3.4 THE CONTRACTOR SHALL HAVE NO CLAIM FOR AN EXTENSION OF TIME UNLESS SUCH TIME IS STATED ON THE FACE OF A WRITTEN CHANGE ORDER AND APPROVED AND ACCEPTED IN WRITING BY THE OWNER IN SUCH CHANGE ORDER. ANY ATTEMPTED RESERVATION BY THE CONTRACTOR OF THE RIGHT TO SUBSEQUENTLY CLAIM ANY EXTENSION OF TIME NOT STATED ON THE FACE OF A WRITTEN CHANGE ORDER APPROVED AND ACCEPTED BY THE OWNER SHALL BE NULL AND VOID.

4. ARTICLE 9, PARAGRAPH 9.3.1; ADD THE FOLLOWING:

   PAYMENT REQUESTS MUST BE RECEIVED BY THE OWNER NO LATER THAN THE 28TH DAY OF EACH MONTH, AND MUST BE ACCOMPANIED BY A LIEN WAIVER IN FULL FOR EACH PARTICIPATING CONTRACTOR, SUBCONTRACTOR, AND SUPPLIER SEEKING PAYMENT. OWNER WILL NOT BE REQUIRED TO MAKE ANY PAYMENT WITHOUT THE REQUIRED LIEN WAIVERS.

5. ARTICLE 9, PARAGRAPH 9.4: DELETE IN ITS ENTIRETY.

6. ARTICLE 9, PARAGRAPH 9.6.1; DELETE AND SUBSTITUTE:

   9.6.1 UPON RECEIPT OF CONTRACTOR'S APPLICATION FOR PAYMENT, OWNER WILL MAKE SUCH PAYMENT TO THE CONTRACTOR WITHIN 15 DAYS OR AS SOON AS PRACTICAL THEREAFTER.

7. ARTICLE 9, ADD PARAGRAPHS 9.10.5 AND 9.10.6:

   9.10.5 BEFORE OWNER ISSUES FINAL PAYMENT HEREUNDER, THE CONTRACTOR SHALL SUBMIT TO THE OWNER; (A) AN AFFIDAVIT THAT ALL PAYROLLS AND BILLS FOR MATERIAL AND EQUIPMENT, AND OTHER INDEBTEDNESS CONNECTED WITH WORK FOR WHICH THE OWNER OF IT'S PROPERTY MIGHT IN ANY WAY BE RESPONSIBLE, HAVE BEEN PAID OR OTHERWISE SATISFIED, (B) THE CONSENT OF SURETY TO FINAL PAYMENT- AND (C) IF REQUIRED BY THE OWNER, OTHER DATA ESTABLISHING PAYMENT OR SATISFACTION OF ALL SUCH OBLIGATIONS, SUCH AS RECEIPTS, RELEASES AND WAIVERS OF LIENS ARISING OUT OF THE CONTRACT DOCUMENTS, TO BE THE EXTENT AND IN SUCH FORM AS MAY BE DESIGNATED BY THE OWNER. IF ANY SUBCONTRACTOR AND/OR MATERIALMAN REFUSES TO FURNISH A BOND, AT IT'S EXPENSE, SATISFACTORY TO THE OWNER TO INDEMNIFY THE OWNER AGAINST SUCH LIEN. IF ANY SUCH LIEN REMAINS UNSATISFIED AFTER ALL PAYMENTS ARE MADE, THE CONTRACTOR SHALL REFUND TO THE OWNER ALL MONIES THAT THE OWNER MAY BE COMPELLED TO PAY IN DISCHARGING SUCH LIEN, INCLUDING, WITHOUT LIMITATION, ALL COSTS AND REASONABLE ATTORNEYS FEES.

   9.10.6 ALL WAIVERS AND SUBORDINATION AGREEMENTS REQUIRED HEREUNDER IN THE FORM ACCEPTABLE TO THE OWNER.

8. ARTICLE 11; DELETE FIRST PARAGRAPH 11.1.1 BEGINNING WITH "THE CONTRACTOR" AND ENDING WITH BE LIABLE.' AND SUBSTITUTE TO THE FOLLOWING:

   11.1.1 PRIOR TO THE COMMENCEMENT OF THE WORK, CONTRACTOR SHALL PROCURE, AND CONTRACTOR SHALL MAINTAIN, ALL INSURANCE REQUIRED UNDER THE PARAGRAPH 11.1. CONTRACTOR SHALL REQUIRE EACH SUBCONTRACTOR TO PROVIDE COVERAGE ADEQUATE TO PROTECT SUBCONTRACTOR AND IT'S EMPLOYEES. IF THE TERMS OF COVERAGE OF SUCH POLICIES ARE UNACCEPTABLE TO OWNER, CONTRACTOR AND/OR SUBCONTRACTOR SHALL REVISE THE COVERAGE OR OBTAIN ADDITIONAL COVERAGE AS REASONABLE REQUESTED BY OWNER. OWNER'S APPROVAL OF CONTRACTOR'S AND ANY SUBCONTRACTOR'S INSURANCE SHALL NOT RELIEVE OR LIMIT THEIR LIABILITY UNDER THE CONTRACT DOCUMENTS. IN THE EVENT OF THE FAILURE OF CONTRACTOR TO FURNISH AND MAINTAIN SUCH INSURANCE THEN THE OWNER SHALL HAVE THE RIGHT, BUT NOT THE OBLIGATION, TO TAKE OUT AND MAINTAIN SUCH INSURANCE FOR AND IN THE NAME OF CONTRACTOR AND CONTRACTOR SHALL PAY THE COST THEREOF AND FURNISH ALL NECESSARY INFORMATION TO PERMIT THE OWNER TO TAKE OUT AND MAINTAIN SUCH INSURANCE FOR THE ACCOUNT OF CONTRACTOR. CONTRACTOR SHALL NOT ALLOW ANY SUBCONTRACTOR TO COMMENCE WORK ON IT'S SUBCONTRACT UNTIL ALL INSURANCES REQUIRED OF SUBCONTRACTOR HAVE BEEN OBTAINED. CONTRACTOR SHALL PURCHASE AND MAINTAIN SUCH INSURANCE AS WILL PROTECT FROM CLAIMS SET FORTH BELOW WHICH MAY ARISE OUT OF OR RESULT FROM CONTRACTOR'S OPERATIONS UNDER THE CONTRACT DOCUMENTS, WHETHER SUCH OPERATIONS BE BY CONTRACTOR OR BY SUBCONTRACTOR OR BY ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM, OR BY ANYONE FOR WHOSE ACTS ON ANY OF THEM MAY BE LIABLE:

9. ARTICLE 11; DELETE PARAGRAPH 11.1.2 AND SUBSTITUTE THE FOLLOWING:

   11.1.2 THE LIABILITY INSURANCE PURCHASED AND MAINTAINED BY CONTRACTOR PURSUANT TO THIS PARAGRAPH 11.1 SHALL INCLUDE THE TYPES AND BE IN THE MINIMUM AMOUNTS AS FOLLOWS:

   A) WORKMAN'S COMPENSATION

   I) WORKERS' OR WORKMENS' COMPENSATION – MAXIMUM PERMITTED BY STATUE, UNLIMITED IF PERMITTED;

   II) EMPLOYER'S LIABILITY – $1 MILLION.

   B) COMPREHENSIVE GENERAL LIABILITYBODILY INJURY AND PROPERTY DAMAGE HAVING A COMBINED SINGLE LIMIT OF $1 MILLION AND INCLUDING THE FOLLOWING COVERAGES:

   I) COMPREHENSIVE FORM:

   II) PREMISES – OPERATIONS;

   III) EXPLOSION AND COLLAPSE HAZARD;

   IV) UNDERGROUND HAZARD;

   V) PRODUCTS – COMPLETED OPERATIONS HAZARD (WHICH MUST BE MAINTAINED FOR 2 YEARS COMMENCING WITH ISSUANCES OF THE FINAL CERTIFICATE OF PAYMENT);

   VI) CONTRACTUAL INSURANCE;

   VII) BROAD FORM PROPERTY DAMAGE (EXTENDED TO APPLY TO COMPLETED OPERATIONS);

   VIII)INDEPENDENT CONTRACTORS;

   IX) PERSONAL INJURY (WITH EMPLOYEES AND CONTRACTUAL EXCLUSIONS DELETED);

   C) AUTOMOBILE LIABILITY (COMPREHENSIVE FORM, INSURING CONTRACTOR FOR OPERATIONS OF ALL OWNED, HIRED, AND NON-OWNED VEHICLES) LIMIT OF $1 MILLION.

   D) UMBRELLA EXCESS LIABILITY

10. ARTICLE 11; PARAGRAPH 11.3:

    DELETE ALL REFERENCES TO OWNER FURNISHED PROPERTY INSURANCE.

    THE OWNER SHALL FURNISH BUILDER'S RISK INSURANCE, INCLUDING THE PERILS OF FIRE, EXTENDED COVERAGE, VANDALISM, AND MALICIOUS MISCHIEF IN AN AMOUNT OF NOT LESS THAN 100% OF THE INSURABLE VALUE OF ALL THE WORK, AND THE COVERAGE WRITTEN ON BUILDER'S RISK COVERAGE FORM CP0020, INCLUDING CAUSES OF LOSS BASIC FORM CP 1010 OR CAUSES OF LOSS – BROAD FORM CP1020 OR CAUSES OF LOSS – SPECIAL FORM CP1030, OR AN ACCEPTABLE INLAND MARINE "ALL RISK" INSTALLATION FLOATER FORM, WITH A COMPANY AUTHORIZED TO DO BUSINESS IN THE STATE IN WHICH THE PROJECT IS LOCATED.

11. ARTICLE 12; ADD PARAGRAPH 12.2.2.1:

    12.2.2.1 IF DURING THE CONTRACTOR'S ONE (1) YEAR WARRANTY AFTER COMPLETION THE OWNER REQUESTS THAT TESTS BE PERFORMED TO DETERMINE IF CORRECTIONS IN THE WORK NEED TO BE MADE, THE EXPENSE OF SUCH TESTS SHALL BE BORNE BY (A) THE OWNER, IF THE RESULTS OF THE TESTS INDICATE THAT CORRECTIONS ARE NECESSARY, OR (B) THE CONTRACTOR, IF THE RESULTS OF THE TEST INDICATE THAT CORRECTIONS ARE NECESSARY.

12. ARTICLE 13; PARAGRAPH 13.6.1:

    13.6.1 INTEREST NOTE SHALL BE TEN PERCENT (10%)

SECTION 01015 – OWNER FURNISHED ITEMS AND EQUIPMENT

1. ITEMS SHOWN OR NOTED "BY OUTS" OR "BY OTHERS" ON THE DRAWINGS AND/OR IN THE SPECIFICATIONS SHALL BE FURNISHED AND INSTALLED BY OWNER UNDER SEPARATE CONTRACT, EXCEPT AS DESCRIBED HEREINAFTER. THE CONTRACTOR SHALL RECEIVE, UNLOAD AS REQUIRED, STORE, AND BE RESPONSIBLE TO THE EXTENT OF CARRYING NECESSARY INSURANCE TO COVER ITEMS IN CASE OF THEFT, FIRE, LOSS, MALICIOUS DAMAGE, INCLUDED IN THIS CATEGORY ARE:

   A) KITCHEN AND BAR EQUIPMENT, INCLUDING WALK-IN COOLER/FREEZER WITH ATTENDANT REFRIGERATION EQUIPMENT. THIS EQUIPMENT SHALL BE FURNISHED, UNLOADED, ASSEMBLED AND SET IN PLACE UNDER SEPARATE CONTRACT WITH ROUGH-INS AND FINAL CONNECTIONS BY CONTRACTOR.

   B) STAINLESS STEEL FABRICATION INCLUDING COUNTERS AND CORNER GUARDS, FURNISHED AND INSTALLED BY OWNER'S FOOD SERVICE CONTRACTOR WITH FINAL CONNECTIONS BY CONTRACTOR.

   C) ALL LOOSE FURNISHING SUCH AS BOOTHS, TABLES, WAITRESS STATIONS, HOSTESS STAND, CHAIRS, AND WAITING BENCHES.

   D) BAR TOP.

   E) KITCHEN EXHAUST HOODS, FANS AND FAN CURBS FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR.

   F) SECURITY SYSTEM.

   G) SOUND SYSTEM.

   H) INTERIOR SIGNAGE.

   I) SAFE.

   J) EXTERIOR SIGNAGE AND NEON (OWNER INSTALLED WIRED BY CONTRACTOR).

   K) HOOD FIRE SUPPRESSION SYSTEM.

   L) OWNER–FURNISHED,CONTRACTOR–INSTALLED EQUIPMENT.

2. CONTRACTOR SHALL PROVIDE ALL ROUGH–IN SERVICES AND MAKE ALL FINAL CONNECTIONS. CONTRACTOR SHALL BE REQUIRED TO REQUEST SHOP DRAWINGS, CATALOG CUTS, SCHEDULES, ETC., FROM THE OWNER, AS NECESSARY TO PROPERLY COORDINATE UTILITY CONNECTIONS, PREPARATIONS, ROOF OPENINGS, AND EQUIPMENT SUPPORT TO ACCOMMODATE ACTUAL FURNISHED ITEMS AND EQUIPMENT.

   CONTRACTOR SHALL DESIGNATE A COMPETENT INDIVIDUAL ON THE JOB SITE STAFF AS HIS "AUTHORIZED REPRESENTATIVE" FOR OWNER–FURNISHED EQUIPMENT. THIS INDIVIDUAL WILL BE RESPONSIBLE FOR FURNISHING INFORMATION ON DESIRED DELIVERY SCHEDULES, PROPER RECEIPT AND REPORTING OF ALL SHIPMENTS RECEIVED AS DESCRIBED HEREINAFTER; AND SHALL BE RESPONSIBLE FOR PROPER STORAGE AND HANDLING OF THE EQUIPMENT AT ALL TIMES

SECTION 01070 – CUTTING AND PATCHING

1. EXECUTING, CUTTING (INCLUDING EXCAVATING), FITTING OR PATCHING OF WORK, REQUIRED TO:

   A) MAKE SEVERAL PARTS FIT PROPERLY.
   B) UNCOVER WORK TO PROVIDE FOR INSTALLATION OF ILL–TIMED WORK.
   C) REMOVE AND REPLACE DEFECTIVE WORK.
   D) REMOVE AND REPLACE WORK NOT CONFORMING TO REQUIREMENTS OF CONTRACT DOCUMENTS.
   E) REMOVE SAMPLES OF INSTALLED WORK AS SPECIFIED FOR TESTING.

2. EXECUTE CUTTING A PATCHING BY METHODS WHICH WILL PREVENT DAMAGE TO OTHER WORK AND WILL PROVIDE PROPER SURFACES TO RECEIVE INSTALLATION OF REPAIRS AND NEW WORK.

3. EMPLOY ORIGINAL INSTALLER TO PERFORM CUTTING AND PATCHING FOR EXPOSED FINISHED SURFACES.

4. REFINISH ENTIRE SURFACE AS NECESSARY TO PROVIDE AN EVEN FINISH.

   A) CONTINUOUS SURFACES: TO NEAREST INTERSECTION.
   B) ASSEMBLY: ENTIRE REFINISHING.

SECTION 01200 – PRECONSTRUCTION MEETING DATE

1. OWNER WILL ADMINISTER PRE–CONSTRUCTION CONFERENCE FOR EXECUTION OF OWNER–CONTRACTOR AGREEMENT AND EXCHANGE OF PRELIMINARY SUBMITTALS.

2. OWNER WILL ADMINISTER MOBILIZATION AT PROJECT SITE FOR CLARIFICATION OF CONTRACTOR RESPONSIBILITIES IN USE OF SITE AND FOR REVIEW OF ADMINISTRATIVE PROCEDURES.

3. ATTENDANCE, JOB SUPERINTENDENT, REPRESENTATIVE OF THE CONTRACTOR'S HOME, OFFICE, MAJOR SUBCONTRACTORS AND SUPPLIERS, AND OWNER REPRESENTATIVE. OTHERS AS APPROPRIATE TO AGENDA TOPICS.

4. SUGGESTED AGENDA: REVIEW PROGRESS SCHEDULE AND ADJUSTMENT THERETO, DELIVERY SCHEDULES, SUBMITTAL, MAINTENANCE OF QUALITY STANDARDS, PENDING CHANGES AND SUBSTITUTION AND OTHER ITEMS AFFECTING PROGRESS WORK.

5. CONTRACTOR SHALL SCHEDULE, ORGANIZE AND CHAIR ANY SUBSEQUENT PROJECT MEETING DURING NORMAL WORKING HOURS.

SECTIONS 01300 – SUBMITTALS

1. DELIVER SUBMITTALS TO OWNER'S PROJECT MANAGER, UNLESS OTHERWISE DIRECTED.

2. IDENTIFY SUBMITTALS WITH CONTRACTOR'S NAME, PROJECT NAME/LOCATION AND DATE OF SUBMITTAL.

3. MAKE ANY CORRECTIONS TO THE SUBMITTALS REQUIRED BY OWNER AND RESUBMIT UNTIL APPROVED. DIRECT SPECIFIC ATTENTION IN WRITING OR REVISIONS ON RESUBMITTALS OTHER THAN THE CORRECTIONS REQUESTED BY OWNER ON PREVIOUS SUBMITTALS.

4. CONSTRUCTION SCHEDULE

   A) WITHIN TEN (10) DAYS AFTER EXECUTION OF THE CONTRACT OR THE DATE OF WRITTEN NOTICE TO COMMENCE THE WORK, WHICH EVER IS EARLIER, SUBMIT THREE (3) COPIES OF A DETAILED CONSTRUCTION SCHEDULE FOR APPROVAL.

   B) SCHEDULE SHALL GRAPHICALLY SHOW THE RELATIONSHIP AND INTERDEPENDENCE OF ALL ACTIVITIES NECESSARY TO FULLY COMPLETE THE WORK AND SHALL SHOW THE SEQUENCE IN WHICH EACH ACTIVITY IS TO BE ACCOMPLISHED. THE DETAIL OF INFORMATION SHALL BE SUCH THAT DURATION TIMES OF ACTIVITIES SHALL NORMALLY RANGE FROM ONE (1) TO FIFTEEN (15).

   C) SCHEDULE SHALL GIVE DESCRIPTION OF EACH ACTIVITY, SHOW ITS DURATION IN CALENDAR DAYS AND REFERENCE ITS START AND FINISH DATES TO CALENDAR DATES.

5. SHOP DRAWINGS AND SAMPLES

   A) SUBMIT ALL DRAWINGS, DIAGRAMS, ILLUSTRATIONS, SCHEDULES, PERFORMANCE CHARTS, INSTRUCTIONS, SPECIFICATIONS AND OTHER PROJECT DATA ILLUSTRATING PARTITIONS OF THE WORK AS REQUIRED BY THE SPECIFICATION SECTIONS. SUCH SUBMITTALS, WHETHER OR NOT REFERRED TO AS SHOP DRAWINGS, SHALL COMPLY WITH THE REQUIREMENTS FOR SHOP DRAWINGS HEREINAFTER PRESCRIBED. UNLESS OTHERWISE NOTED IN THE SPECIFICATIONS SECTIONS, SUBMIT A MINIMUM OF THREE (3) SETS OF SHOP DRAWINGS TO ARCHITECT. TWO (2) SETS WILL BE RETURNED TO CONTRACTOR UNLESS OTHERWISE REQUESTED. NO DRAW WILL BE ACCEPTED UNTIL ALL SHOP DRAWINGS HAVE BEEN SUBMITTED.

   B) UNLESS THE PRECISE COLOR AND PATTERN IS SPECIFICALLY SPECIFIED IN THE SPECIFICATIONS SECTIONS, AND WHENEVER A CHOICE OF COLOR OR PATTERN IS AVAILABLE IN A SPECIFIED PRODUCT, SUBMIT ACCURATE COLOR AND PATTERN CHARTS AND SAMPLES FOR REVIEW AND SELECTIONS.

   C) REVIEW, STAMP WITH CONTRACTOR APPROVAL, SIGNATURE, AND SUBMIT WITHIN THIRTY (30) DAYS AFTER EXECUTION OF THE CONTACT OR THE DATE OF WRITTEN NOTICE TO COMMENCE THE WORK, WHICHEVER IS EARLIER, ALL SHOP DRAWINGS AND SAMPLES. SHOP DRAWINGS OR SAMPLES SUBMITTED WITHOUT CONTRACTOR'S APPROVAL STAMP WILL BE RETURNED WITHOUT REVIEW. SUBMIT SHOP DRAWINGS AND SAMPLES IN AN ORDERLY SEQUENCE SO AS TO CAUSE NO DELAY IN THE WORK OR IN THE WORK OF OTHER CONTRACTORS.

   D) SHOP DRAWINGS AND SAMPLES WILL BE REVIEWED AND APPROVED BY OWNER TO DETERMINE IN GENERAL IF THEY ARE IN COMPLIANCE WITH THE CONTRACT DOCUMENTS. SUCH APPROVAL SHALL NOT RELIEVE CONTRACTOR OF RESPONSIBILITY FOR ANY DEVIATIONS FROM THE REQUIREMENT OF THE CONTRACT DOCUMENTS NOR FROM THE RESPONSIBILITY FOR ERRORS OR OMISSIONS IN THE SHOP DRAWINGS OR SAMPLES.

   E) DO NOT COMMENCE ANY PORTION OF THE WORK UNTIL THE SUBMITTAL HAS BEEN APPROVED AS PRESCRIBED HEREIN. ALL SUCH PORTIONS OF THE WORK SHALL BE IN ACCORDANCE WITH APPROVED SHOP DRAWINGS OR SAMPLES.

6. SCHEDULE OF VALUES

   A) SUBMIT A SCHEDULE OF VALUES FOR VARIOUS PORTIONS OF THE WORK WITHIN TEN (10) DAYS AFTER EXECUTION OF THE CONTRACT OR THE DATE OF WRITTEN NOTICE TO COMMENCE THE WORK, WHICHEVER IS EARLIER. SHOW THE AMOUNTS OF THE CONTRACT SUM ALLOCATED TO EACH PORTION OF WORK, ON AIA G702.

7. CERTIFICATE OF COMPLIANCE

   A) SUBMIT IN DUPLICATE, CERTIFICATES OF COMPLIANCE FOR EACH PRODUCT SPECIFIED, PRIOR TO INSTALLATION OF THE APPLICABLE PRODUCT.

   B) CERTIFICATES OF COMPLIANCE SHALL INCLUDE CERTIFIED LABORATORY TEST REPORTS, MANUFACTURERS CERTIFICATES OR OTHER EVIDENCE SUFFICIENT TO VERIFY COMPLIANCE WITH THE PROJECTS SPECIFIED

SECTION 01400 – QUALITY CONTROL

1. PERFORM WORK IN THE MOST WORKMANLIKE MANNER AND ACCORDING TO BEST STANDARD PRACTICES. ALL WORK SHALL BE FREE FROM FAULTS AND DEFECTS IN WORKMANSHIP.

2. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR QUALITY CONTROL OF THE WORK AND SHALL MAINTAIN QUALITY CONTROL OVER SUPPLIERS, MANUFACTURERS, PRODUCTS, SERVICES, SITE CONDITIONS AND WORKMANSHIP, TO PRODUCE WORK OF SPECIFIED QUALITY.

3. TESTING AND INSPECTION, WHERE REQUIRED BY THE SPECIFICATION SECTIONS, SHALL COMPLY WITH THE SPECIFIC REQUIREMENT OF THE APPLICABLE SPECIFICATION SECTIONS AND THE GENERAL REQUIREMENTS CONTAINED HEREIN.

4. ALL TESTING AND INSPECTION WHETHER REQUIRED BY THE SPECIFICATION SECTION OR BY LAWS, ORDINANCES, RULES, REGULATIONS, CODES OR ORDERS OF ANY PUBLIC AUTHORITY HAVING JURISDICTION OR WHETHER PERFORMED BY CONTRACTOR FOR QUALITY CONTROL SHALL BE AT CONTRACTOR'S EXPENSE UNLESS OTHERWISE INDICATED IN THE CONTRACT DOCUMENTS.

5. WHERE THE SPECIFICATIONS SECTIONS REQUIRE TESTING OR INSPECTIONS BY A TESTING LABORATORY, ENGAGE A REPUTABLE, INDEPENDENT TESTING LABORATORY SPECIALIZING IN THE REQUIRED SERVICES UNLESS THE TESTING OR INSPECTION IS INDICATED AS FURNISHED BY THE OWNER. TESTING LABORATORY SHALL BE APPROVED BY THE OWNER.

6. SECURE REQUIRED CERTIFICATES OF TESTING, INSPECTION OR APPROVAL AND PROMPTLY DELIVER TO OWNER.

7. PROMPTLY REPLACE OR CORRECT ALL WORK FOUND NOT TO BE IN COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND THE REQUIREMENTS OF ANY PUBLIC AUTHORITY HAVING JURISDICTION SO AS NOT TO DELAY THE WORK OF THE OWNER OR OTHER CONTRACTORS REGARDLESS OF HOW SUCH FAILURE TO COMPLY MAY BE REVEALED. REPLACEMENT AND CORRECTION SHALL BE EXPEDITED AS REQUIRED TO MAINTAIN INTERIM CONTRACT COMPLETION DATES AND THE FULL COMPLETION DATE

SECTION 01500 – CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

1. ALL TEMPORARY FACILITIES AND SERVICES SHALL BE FURNISHED IN STRICT ACCORDANCE WITH EXISTING GOVERNING REGULATIONS. INCLUDING ANY PERMITS (I.E. CONST. TRAILER PERMIT)

2. SANITARY FACILITIES: THE CONTRACTOR SHALL BE PROVIDED TEMPORARY SANITARY FACILITIES FOR THE WORKMEN.

3. WATER FACILITIES: THE CONTRACTOR SHALL FURNISH AND PAY FOR TEMPORARY WATER FOR THE PURPOSE OF CONSTRUCTION AS REQUIRED.

4. TEMPORARY HEAT: THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN TEMPORARY HEAT AS WORK REQUIRES. THE TEMPORARY HEAT SHALL PROVIDE A TEMPERATURE DIFFERENTIAL OF APPROXIMATELY 40 DEGREES F USING PORTABLE SPACE HEATERS.

5. POWER AND LIGHT:

   A) THE CONTRACTOR SHALL ARRANGE FOR TEMPORARY POWER FOR TOOLS AND LIGHT AS REQUIRED, TO THE CONSTRUCTION SITE.

   B) COST OF THE ELECTRICAL POWER CONSUMED FOR THE TEMPORARY SERVICE FOR TOOLS AND LIGHTS, SHALL BE BORNE BY THE CONTRACTOR. COST OF DISTURBING POWER TO THE CONSTRUCTION SITE SHALL BE BORNE BY THE CONTRACTOR.

   C) THE CONTRACTOR SHALL REMOVE TEMPORARY POWER ONLY WHEN PERMANENT SERVICE IS ARRANGED AND APPROVED.

6. REMOVE ALL TEMPORARY FACILITIES UPON COMPLETION OF THE WORK OR WHEN NO LONGER REQUIRED.

7. PROVIDE PLUMBING, TEMPORARY DRAINAGE, WATER DIVERSION, WEATHER PROTECTION AND CONTROLS AS REQUIRED TO ENSURE NO DELAY IN THE WORK OR THE WORK OF OTHER CONTRACTORS.

FIELD OFFICE SHALL BE PROVIDED BY CONTRACTOR WITH (2) TELEPHONES, (1) FAX AND (1) PORTABLE, HEATING, AND COOLING. LOCATION SHALL BE AT THE OWNER'S DISCRETION. PERMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

SECTION 01600 – MATERIALS AND EQUIPMENT

1. WH

DIVISION 5 – METALS

SECTION 05120 – STRUCTURAL STEEL

1. CODE AND STANDARDS: AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES"; AISC "SPECIFICATIONS FOR THE DESIGN FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" INCLUDING "COMMENTARY"; AWS "STRUCTURAL WELDING CODE"; COMPLY WITH APPLICABLE PROVISIONS EXCEPT AS OTHERWISE INDICATED.
2. SHOP DRAWINGS: SHOW COMPLETE DETAILS AND SCHEDULES (IF REQUIRED) FOR FABRICATION, ASSEMBLY AND ERECTION. FURNISH ANCHOR BOLTS REQUIRED FOR INSTALLATION IN OTHER WORK; FURNISH TEMPLATES FOR BOLT INSTALLATION.
3. STEEL PLATES, SHAPES, BARS; ASTM A36.
4. COLD-FORMED STEEL TUBING: ASTM A500, GRADE B.
5. STEEL PIPE: ASTM A53, TYPE E OR S, GRADE B, SCHEDULE 40 UNLESS OTHERWISE NOTED.
6. FASTENERS: HIGH-STRENGTH BOLTS AND NUTS, ASTM A325 OR A490; UNFINISHED BOLTS AND NUTS, ASTM A307, GRADE A; RIVETS, ASTM A502, GRADE 1.
7. SHOP PAINT: FS TT-P-86, TYPE II; OR SSPC-PAINT 14.
8. FABRICATION: COMPLY WITH AISC "SPECIFICATIONS" AND FINAL SHOP DRAWINGS. MARK AND MATCH-MARK UNITS FOR FIELD ASSEMBLY.
9. CONNECTIONS: AS SHOWN ON FINAL SHOP DRAWINGS. USE HIGH-STRENGTH BOLTS FOR FIELD CONNECTIONS, EXCEPT AS OTHERWISE INDICATED.

   A) COMPLY WITH ASW CODE FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS.

10. PROVISIONS FOR OTHER WORK: FABRICATE STRUCTURAL STEEL MEMBERS TO PROVIDE HOLES FOR SECURING OTHER WORK AND FOR PASSAGE OF OTHER WORK THROUGH STEEL FRAMING AS INDICATED.
11. SHOP PAINTING: PAINT STRUCTURAL STEEL WORK, EXCEPT MEMBERS OR PARTITIONS OF MEMBERS EMBEDDED IN CONCRETE OR MORTAR, AND CONTACT AREAS TO BE WELDED OR RIVETED. CLEAN STEEL FREE OF LOOSE MILL SCALE, RUST, OIL, AND GREASE. APPLY PRIME PAINT TO PROVIDE A MINIMUM DRY FILM THICKNESS OF 2.0 MILS.
12. ERECTION: COMPLY WITH AISC CODE AND SPECIFICATIONS AND MAINTAIN WORK IN SAFE AND STABLE CONDITION DURING ERECTION. PROVIDE TEMPORARY BRACING AND SHARING AS REQUIRED; REMOVE WHEN FINAL CONNECTIONS PLACED.

SET BASE PLATES ON CLEANED BEARING SURFACES, USING WEDGES OR OTHER ADJUSTMENTS AS REQUIRED. SOLIDLY PACK OPEN SPACES WITH COMMERCIAL NO-SHRINK GROUT.

SECTION 05400 – METAL FRAMING

1. WORK INCLUDES LIGHT GAUGE METAL FRAMING UNITS, OF SIZE AND GAUGE INDICATED, INCLUDING MANUFACTURER'S STANDARD TRACKS, BLOCKING, CLIPS, FASTENERS AND ACCESSORIES.
2. DELIVERY AND STORAGE: PROTECT METAL FRAMING UNITS FROM RUSTING AND DAMAGE. STORE ABOVE GROUND IN DRY, VENTILATED SPACE, OR PROTECT WITH WATERPROOF COVERINGS.
3. EXTERIOR STUDS TO BE GALVANIZED FINISH COMPLYING WITH ASTM A-525 FOR MINIMUM G60 COATING.

SECTION 05500 – METAL FABRICATIONS

1. WORK INCLUDES MISCELLANEOUS SHOP FABRICATED FERROUS METAL ITEMS, INCLUDING BUT NOT LIMITED TO:

   A) LOOSE STEEL LINTELS.

   B) LADDERS.

   C) GRILLES.

   D) MISCELLANEOUS FRAMING, SUPPORTS AND TRIM.

2. MATERIALS:

   A) STEEL SECTIONS ASTM A36.

   B) STEEL TUBING: ASTM A500 OR ASTM A501.

   C) STEEL PIPE: ASTM A53, GRADE B, STANDARD WEIGHT (SCHEDULE 40).

   D) MALLEABLE IRON CASTINGS: ASTM A47.

   E) BOLTS, NUTS, AND WASHERS: ASTM A307.

   F) WELDING MATERIALS: ASW D1.1; TYPE REQUIRED FOR MATERIALS BEING WELDED.

   G) PRIMER: SSPC-PAINT 2, FOR SHOP APPLICATION AND FIELD TOUCHUP.

3. FABRICATION:

   A) VERIFY DIMENSIONS IN FIELD PRIOR TO SHOP FABRICATION.

   B) FABRICATE ITEMS WITH JOINTS TIGHTLY FITTED AND SECURED.

   C) FIT AND SHOP ASSEMBLE IN LARGEST PRACTICAL SECTIONS, FOR DELIVERY TO SITE.

   D) PRIME PAINT ITEMS SCHEDULE TO PROVIDE A UNIFORM DRY FILM THICKNESS OF 2.0 MILS.

   E) LADDERS:

      1) FABRICATE LADDERS FOR THE LOCATIONS SHOWN, WITH DIMENSIONS, SPACING, DETAILS AND ANCHORAGE AS INDICATED. COMPLY WITH THE REQUIREMENTS OF ANSI A 14.3, EXCEPT AS OTHERWISE INDICATED.
         A. UNLESS OTHERWISE SHOWN, PROVIDE ½" X 2½" CONTINUOUS STRUCTURAL STEEL FLAT BAR SIDE RAILS WITH EASED EDGES, SPACED 24" APART.

         B. PROVIDE ¾" DIAMETER SOLID STRUCTURAL STEEL BAR RUNGS, SPACED 12" O.C.

      2) FIT RUGS IN CENTERLINE OF SIDE RAILS, PLUG WELD AND GRIND SMOOTH ON OUTER RAIL FACES.

      3) SUPPORT EACH LADDER AT TOP BOTTOM AND AT INTERMEDIATE POINTS SPACED NOT MORE THAN 5'-0" O.C.. USE WELDED OR BOLTED STEEL BRACKETS, DESIGNED FOR ADEQUATE SUPPORT AND ANCHORAGE, AND TO HOLD LADDER CLEAR OF THE WALL SURFACE WITH A MINIMUM OF 7" CLEARANCE WALL TO CENTERLINE OF RUNGS. RETURN RAILS TO WALL OR STRUCTURE UNLESS OTHER SECURE HANDHOLDS ARE PROVIDED.

      4) PROVIDE NON-SLIP SURFACE ON TOP OF EACH RUNG, EITHER BY COATING THE RUNG WITH ALUMINUM OXIDE GRANULES SET IN EPOXY RESIN ADHESIVE, OR BY USING A TYPE OF MANUFACTURED RUNG WHICH IS FILLED WITH ALUMINUM OXIDE GROUT

DIVISION 6 – WOOD & PLASTICS

SECTION 06100 – CARPENTRY

1. FRAMING LUMBER: AMERICAN SOFTWOOD LUMBER STANDARDS PS20, S4S, 19% MAXIMUM MOISTURE CONTENT, WITH THE FOLLOWING MINIMUM WORKING STRESSES:

   A) MEMBERS IN CONTACT WITH CONCRETE, MASONRY, OR ROOF SHALL BE PRESERVATIVE TREATED, AWPB LP–2.

   B) FIRE RETARDANT TREATED LUMBER: AWPA C20.

2. PLYWOOD: PS1, FACTORY MARKED WITH APPROPRIATE APA TRADEMARK. WAFER OR PARTICLE BOARD IS NOT ACCEPTABLE. PROTECT OIL PLYWOOD FROM MOISTURE BY USE OF ALL REQUIRED WATERPROOF COVERING UNTIL THE PLYWOOD HAS IN TURN BEEN COVERED WITH THE NEXT SUCCEEDING COMPONENT OF FINISH.

   A) ROOF SHEATHING: APA RATED SHEATHING, 40/20, 5/8" AND 3/4" NOMINAL, EXPOSURE 1.

   B) WALL SHEATHING: APA RATED SHEATHING 32/16. 5/8" NOMINAL, EXPOSURE 1.

   C) BUILDING FELT: 15 LB. ASPHALT SATURATED FELT.

3. NAILS, SPIKES, AND STAPLES: GALVANIZED FOR EXTERIOR LOCATIONS AND TREATED WOOD; PLAIN FINISH FOR OTHER INTERIOR LOCATIONS; SIZE AND TYPE TO SUIT APPLICATION.
4. BOLTS, NUTS, WASHER, LAGS, PINS, AND SCREWS: MEDIUM CARBON STEEL; SIZED TO SUIT APPLICATION; GALVANIZED FOR EXTERIOR LOCATIONS AND TREATED WOOD; PLAIN FINISH FOR OTHER INTERIOR LOCATIONS.
5. FASTENERS: TOGGLE BOLT TYPE FOR ANCHORAGE TO HOLLOW MASONRY; EXPANSION SHIELD AND LAG BOLT TYPE FOR ANCHORAGE TO SOLID MASONRY OR CONCRETE. BOLTS OR POWER ACTIVATED TYPE FOR ANCHORAGE TO STEEL.
6. ERECT WOOD FRAMING, FURRING, STRIPPING, PLYWOOD BACKING AND NAILING MEMBERS TRUE TO LINES AND LEVELS. DO NO DEVIATE FROM TRUE ALIGNMENT MORE THAN 1/2 INCH.
7. COMPLY WITH NFPA NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION RECOMMENDATIONS FOR SIZES AND SPACINGS OF MEMBERS, NAILING SCHEDULE, AND FOR FRAMING OPENINGS IF SIZES, SPACES, OR OPENING FRAMING ARE NOT INDICATED.
8. PROVIDE BLOCKING FOR SUPPORT OF WALL MOUNTED TABLES, CABINETWORK, HARDWARE, TOILET PARTIONS, URINAL SCREENS, KITCHEN AND BAR BULKHEAD, MOOSE BULKHEAD, SIGNS, TOILET ACCESSORIES, AND PLUMBING FIXTURES UNLESS OTHER MEANS OF SUPPORT INS INDICATED.
9. DO NOT SPLICE STRUCTURAL MEMBERS BETWEEN SUPPORTS.

SECTION 06150 – PREFABRICATED WOOD TRUSSES

1. SUBMITTALS:

   A) PRODUCT DATA: SUBMIT FABRICATOR'S SPECIFICATIONS AND INSTALLATION INSTRUCTION FOR REQUIRED WORK, COVERING: LUMBER, METAL PLATES, HARDWARE, FABRICATION PROCESS, TREATMENT (IF ANY), HANDLING AND ERECTION.

      1) SUBMIT CERTIFICATION, SIGNED BY AN OFFICER OF FABRICATING FIRM, INDICATING THAT TRUSSES TO BE SUPPLIED FOR PROJECT COMPLY WITH INDICATED REQUIREMENTS.

   B) SHOP DRAWINGS: SUBMIT SHOP DRAWINGS SHOWING SPECIES, SIZES, AND STRESS GRADES OF LUMBER TO BE USED; SPAN, CAMBER CONFIGURATION AND SPACING FOR EACH TYPE OF TRUSS REQUIRED; TYPE, SIZE, MATERIAL, FINISH, DESIGN VALUE AND LOCATION OF METAL CONNECTOR PLATES; AND BEARING AND ANCHORAGE DETAILS.

      1) FABRICATOR SHALL SUBMIT DESIGN ANALYSIS INDICATING SECTION MODULUS, ASSUMED ALLOWABLE STRESS, CALCULATIONS, AND SIMILAR, INFORMATION NEEDED FOR ANALYSIS AND TO ENSURE THAT TRUSSES COMPLY WITH DESIGN REQUIREMENTS.

      2) SHOP DRAWINGS SHALL BE SIGNED AND STAMPED BY A STRUCTURAL ENGINEER LICENSED TO PRACTICE IN THE STATE WHERE TRUSSES ARE TO BE ERECTED.

2. DESIGN REQUIREMENTS:

   A) TRUSS DESIGN STANDARD: DESIGN SPECIFICATION FOR METAL PLATE CONNECTED WOOD TRUSSES PUBLISHED BY TRUSS PLATE INSTITUTE (TPI)

   B) WOOD STRUCTURAL DESIGN STANDARD: NATIONAL DESIGN SPECIFICATION OF WOOD CONSTRUCTION PUBLISHED BY N.F.P.A.

   C) GRADING OF LUMBER: PROVIDE LUMBER GRADED BY A RECOGNIZED AGENCY WITH RULES AND SERVICE COMPLYING WITH REQUIREMENTS OF AMERICAN LUMBER STANDARDS COMMITTEE AND PS20. USE ONLY LUMBER PIECES WHICH BEAR INSPECTION SERVICE'S GRADE MARK, UNLESS OTHERWISE INDICATED (REMOVE MARK DURING FABRICATION IF NECESSARY).

   D) TRUSS FABRICATION STANDARD: QUALITY CONTROL MANUAL PUBLISHED BY TPI.

   E) DESIGN LOADING: TO COMPLY WITH STATE CODE UNLESS OTHERWISE INDICATED, L/240 MAXIMUM DEFLECTION.

3. HANDLE AND STORE TRUSSES WITH CARE, AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND TPI RECOMMENDATIONS TO AVOID DAMAGE FROM BENDING OVERTURNING OR OTHER CAUSE FOR WHICH TRUSS IS NOT DESIGNED TO RESIST OR ENDURE.
4. LUMBER:

   A) NOMINAL SIZES MAY BE NOTED ON SHOP DRAWINGS, EXCEPT DETAILS SHALL USE ACTUAL DIMENSIONS. PROVIDE ACTUAL SIZE AS REQUIRED BY PS20, FOR DRESSED LUMBER.

   B) PROVIDE KILN-DRIED LUMBER WITH 15% MAXIMUM MOISTURE CONTENT AT TIME OF DRESSING.

   C) LUMBER SPECIES: SOUTHERN PINE.

   D) LUMBER GRADE: FOR SPECIES USED, COMPLY WITH FOLLOWING STRESS-RATED GRADE (OR GRADES IF MORE THAN ONE SPECIFIED AT FABRICATOR'S OPTION).

      SPIB GRADE: SELECT STRUCTURAL
      SPIB GRADE: NO. 2

   E) STRESS RATING: PROVIDE LUMBER WHICH HAS BEEN EITHER GRADED OR TESTED AND CERTIFIED, AT INDICATED MOISTURE CONTENT, TO HAVE THE FOLLOWING MINIMUM VALUE:

      FB = 1400 PSI
      FT = 825 PSI
      FC = 975 PSI
      E = 1,600,000

5. METAL CONNECTOR PLATES, FASTENERS AND ANCHORAGES:

   A) CONNECTOR PLATE MATERIAL: METAL COMPLYING WITH FOLLOWING REQUIREMENT, UNLESS OTHERWISE INDICATED; NOT LESS THAN 0.036" THICK, COATED THICKNESS (CONTRACTOR'S OPTION IF MORE THAN ONE MATERIAL INDICATED).

      1) GALVANIZED SHEET STEEL: ANSI/ASTM A446, GRADE A, COATING G60.

         ELECTROLYTIC ZINC COATED STEEL SHEET: ANSI/ASTM A591 COATING CLASS C, WITH MINIMUM STRUCTURAL QUALITY EQUIVALENT TO ANSI/ASTM A446, GRADE A.

6. FASTENERS AND ANCHORAGES: PROVIDE SIZE, TYPE, MATERIAL AND FINISH INDICATED COMPLYING APPLICABLE FEDERAL SPECIFICATION FOR NAIL, SCREWS, BOLTS, NUTS AND WASHERS AND ANCHORING DEVICES.
7. ERECT TRUSSES WITH PLANE OF TRUSS WEBS VERTICAL (PLUMB) AND PARALLEL TO EACH OTHER, LOCATED ACCURATELY AT DESIGN SPACINGS INDICATED.
8. PROVIDE TEMPORARY BRACING AS REQUIRED TO MAINTAIN TRUSSES PLUMB, PARALLEL AND IN PROPER LOCATION, UNTIL PERMANENT BRACING IS INSTALLED.
9. ANCHOR TRUSSES SECURELY AT ALL BEARING POINTS.

10.DO NOT CUT OR REMOVE TRUSS MEMBERS.

SECTION 06200 – FINISH CARPENTRY

1. SOFTWOOD LUMBER: GRADED IN ACCORDANCE WITH THE REQUIREMENTS OF AWI QUALITY STANDARDS; MAXIMUM MOISTURE CONTENT OF 6 PERCENT FOR INTERIOR WORK AND 10 PERCENT FOR EXTERIOR WORK.
2. SOFTWOOD PLYWOOD: GRADED IN ACCORDANCE WITH AWI QUALITY STANDARDS; CORE MATERIAL OF VENEER; OF RED OAK VENEER, PAINT GRADE VENEER, OR PLASTIC LAMINATE AS INDICATED.
3. PLASTIC LAMINATE: NEMA LD-3; GP-50 FOR HORIZONTAL AND VERTICAL SURFACES OVER MARINE PLYWOOD CL-20 FOR BACKING AND UNEXPOSED SURFACES.
4. NAILS: SIZE AND TYPE TO SUIT APPLICATION.
5. BOLTS, NUTS, WASHER, LAGS, PINS, AND SCREWS: SIZE AND TYPE TO SUIT APPLICATION.
6. INTERIOR WOOD TRIM:

   A) SOLID WOOD: BEVELED CEDAR SIDING – WESTERN RED CEDAR, 11/16" X 8" KD, DENSITY 12% MC FLAME SPREAD 69 (CLASS 2), CORROSION RESISTANT NAILS.

   B) PANELING: "D" GRADE OR BETTER SOUTHERN YELLOW PINE, 1 X 6 T & G, "V" GROOVE.

   C) PLYWOOD: 3/4" AB GRADE FIR PLYWOOD EXPOSED EDGES BONDED.

7. EXTERIOR WOOD TRIM:

   A) SOLID WOOD: FOR OPAQUE OR SATIN FINISH, "C" SELECT GRADE YELLOW PINE, WHITE PINE, REDWOOD, OR RED CEDAR, LOCATION AS INDICATED ON PLAN.

   B) PANELING: "D" GRADE OR BETTER SOUTHERN YELLOW PINE, 1 X 6 T & G, "V" GROOVE.

   C) PLYWOOD: ROUGH SAWN CEDAR OR DOUGLAS FIR PLYWOOD.

   D) SIDING (INSTALL OVER 1X4 WOOD FURRING ON EXTERIOR MASONRY WALLS) INSTALLATION AND FLASHING PER MANUFACTURERS SPECIFICATIONS:

      – HORIZONTAL 11/16" X 8" BEVELED WESTERN RED CEDAR ROUGH SAWN, SELECT KNOTTY, KILN DRIED, NLGA 204c, WCLIB 111e.
      – VERTICAL: 1" X 8" WESTERN RED CEDAR ROUGH SAWN, SELECT KNOTTY, KILN DRIED, NLGA 204c, WCLIB 111e

   E) TRIM: ROUGH-SAWN RED CEDAR

8. FABRICATE FINISH CARPENTRY AND CABINETWORK ITEMS IN ACCORDANCE WITH AWI QUALITY STANDARDS "CUSTOM GRADE", AND SECTION 400 OF THE AWI GUIDE. SHOP FABRICATE ITEMS WHERE POSSIBLE.
9. APPLY PLASTIC LAMINATE FINISH IN FULL UNINTERRUPTED SHEETS CONSISTENT WITH MANUFACTURED SIZES. CORNERS AND JOINTS TO BE HAIRLINE.

10.CAP EXPOSED PLASTIC LAMINATE EDGES WITH MATERIAL OF SAME FINISH AND PATTERN.

11.USE EXPOSED FASTENING DEVICES OR NAILS ONLY WHEN UNAVOIDABLE.

12.SAND WORK SMOOTH AND SET EXPOSED NAILS AND SCREWS. ELIMINATE HAMMER MARKS AND OTHER DEFECTS. APPLY WOOD FILLER IN EXPOSED NAIL AND SCREW INDENTIONS AND LEAVE READY TO RECEIVE SITE APPLIED FINISHES.

13.SET AND SECURE FINISH CARPENTRY AND CABINETWORK ITEMS IN PLACE, RIGID, PLUMB, AND SQUARE.

14.INSTALL AND ADJUST CABINET HARDWARE TO CORRECT OPERATION.

15.FINISH WOODWORK SHALL BE SET STRAIGHT, PLUMB OR LEVEL, CLOSELY FITTED AND RIGIDLY FASTENED. NAIL HEADS OF EXPOSED WORK SHALL BE SET FOR PUTTY AND OTHER FASTENINGS SHALL BE CONCEALED.

16.JOINTS SHALL BE TIGHT AND FORMED TO CONCEAL SHRINKAGE. ALL TRIM SHALL BE MITERED; NO BUTT JOINTS PERMITTED. INTERIOR CORNERS SHALL BE COPED.

17.INSTALL DOORS PLUMB, TRUE AND FITTED PROPERLY. LEAVE IN PERFECT WORKING ORDER. WARPED DOORS WILL BE REJECTED AND SHALL BE REPLACED. NEATLY MORTISE, DRILL, AND ANCHOR ALL HARDWARE.

18.CONCEAL FASTENERS WHEREVER POSSIBLE. WHERE NOT POSSIBLE, LOCATE THEM IN AN INCONSPICUOUS PLACE. WHERE NAILS OR SCREW ATTACHMENT OCCUR IN WOODWORK FACE, COUNTERSINK, PUTTY AND SAND SMOOTH.

SECTION 06255 – FIBERGLASS REINFORCED PANELS

1. FRP PANELS: 48" WIDE, 3/32" THICKNESS, WHITE UNLESS NOTED OTHERWISE. DURROCK BACKING TO 18" A.F.F.

   A) KEMLITE

   B) MARLITE

2. FRP ACCESSORIES:

   A) ALL MOLDINGS, TRIM, ADHESIVE AND OTHER ACCESSORIES SHALL BE AS MANUFACTURES AND RECOMMENDED BY THE SAME MANUFACTURER AS PANELS.

3. SEALANT:

   A) ONE PART SILICONE RUBBER, ASTM C920 AND FS TT-S-0015434, FDA APPROVED, OR AS RECOMMENDED BY FRP MANUFACTURER.

   B) COLOR: CLEAR TO TRANSLUCENT.

4. INSTALL PANELS OVER PLYWOOD IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, USING NONFLAMMABLE ADHESIVE (100% COVERAGE).

   A) DRYWALL MUST BE INSTALLED (AND ALL JOINTS TAPED) FLOOR TO CEILING TO PROVIDE A GOOD BONDABLE SURFACE TO ACCEPT INSTALLATION OF FRP PANELS.

5. DISCARD UNITS OF MATERIAL WHICH ARE UNSOUND, WARPED, BOWED, TWISTED, IMPROPERLY TREATED, OR TOO SMALL TO FABRICATE WORK WITH MINIMUM OF JOINTS OR OPTIMUM JOINTING ARRANGEMENTS, OR WHICH ARE OF DEFLECTIVE MANUFACTURE WITH RESPECT TO SURFACES, SIZES, OR PATTERNS.
6. SCRIBE AND CUT WORK TO FIT ADJOINING WORK.

   A) CAULK ALL JOINTS AND ALL MOLDINGS WITH SILICONE SEALANT.

   B) PANELS TO BE APPLIED TO THE WALL WITH THE 48" DIMENSION HORIZONTAL, AND IN LENGTHS TO EXTEND FROM BASE TO CEILING WITH NO INTERMEDIATE HORIZONTAL JOINTS.

   C)INSTALL THE WORK PLUMB, LEVEL, TRUE AND STRAIGHT WITH NO DISTORTIONS. SHIM AS REQUIRED USING CONCEALED SHIMS. INSTALL TO A TOLERANCE OF 1/8" IN 8'–0" FOR PLUMB AND LEVEL, AND WITH 1/16" MAXIMUM OFFSET IN FLUSH ADJOINING SURFACES.

DIVISION 7 – THERMAL AND MOISTURE PROTECTION

SECTION 07210 – BUILDING INSULATION

1. BATT INSULATION: PRE-FORMED GLASS FIBER BATT: BLANKETS WITH FOIL FACE MEMBRANE COVERING; PER

   A) CERTAINTEED CORP.
   B) MANSVILLE BUILDING MATERIALS CORP.
   C) OWENS–CORNING FIBERGLASS CORP.
   D) UNITED STATE GYPSUM CO.
   E) KNAUF FIBERGLASS

2. PERIMETER INSULATION: RIGID, CELLULAR THERMAL INSULATION WITH CLOSED–CELLS AND INTEGRAL HIGH DENSITY SKIN, FORMED BY THE EXPANSION OF POLYSTYRENE BASE RESIN IN AN EXTRUSION PROCESS TO COMPLY WITH ASTM C578 FOR TYPE INDICATED; WITH 5–YEAR AGED R–VALVES OF 5.4 AND 5 AT 40 AND 70 DEG. F. (4.4 AND 23.9 DEG. C.) RESPECTIVELY, 2" THICKNESS UNLESS OTHERWISE NOTED.
3. SOUND ATTENUATION INSULATION: USG "SAFB", 2.5 POUND/CU. FT DENSITY, NO SUBSTITUTION.
4. INSTALLATION ACCESSORIES AND ADHESIVES SHALL BE AS RECOMMENDED BY INSULATION MANUFACTURER FOR TYPE OF APPLICATION AND CONDITION OF SUBSTRATE.
5. INSTALL BATT INSULATION IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

   A) PLACE BATT INSULATION IN PARTITIONS TIGHT WITHIN SPACES AROUND CUT OPENINGS, BEHIND AND AROUND ELECTRICAL AND MECHANICAL ITEMS WITHIN OR BEHIND PARTITIONS AND TIGHT TO ITEMS PASSING THROUGH PARTITIONS.

   B) TRIM INSULATION NEATLY TO FIT SPACES. FILL GAPS OR VOIDS WITH INSULATION.

   C) INSTALL INSULATION WITH FACTORY APPLIED MEMBRANE FACING WARM SIDE OF BUILDING SPACES.

6. SECURE RIGID INSULATION TO SUBSTRATE SURFACES. STAGGER JOINTS 6" WHERE MULTI–LAYERED. CUT AND SHAPE TO SUBSTRATE CONDITIONS.
7. FREEZER SLAB INSULATION: 6" STYROFOAM SQUARE EDGE ASTM C578 TYPE IV

SECTION 07530 – ELASTOMERIC SHEET ROOFING

1. THE ROOFING SYSTEM APPROVED FOR BID ARE AS FOLLOWS: DURO–LAST, WHITE, 50 MIL. THICKNESS
2. ROOF INSULATION SHALL BE JOHNS MANVILLE ENRO'S POLYISOCYANURATE ROOF INSULATION, OR APPROVED EQUAL AND ACCEPTABLE TO ROOF MEMBRANE MANUFACTURER.
3. ALL ROOFING ACCESSORIES, FASTENERS, CAULKING, ROOF WALKWAY PADS, ETC., SHALL BE FURNISHED OR APPROVED BY MANUFACTURER.
4. THE SUCCESSFUL ROOFING CONTRACTOR WILL BE REQUIRED TO SUBMIT TO THE OWNER FOR APPROVAL THE FOLLOWING DRAWINGS AND DOCUMENTS.

   A) ROOF PLAN AT 1" = 20' SHOWING SEAMS, DRAINS AND ALL OTHER ROOF PROTRUSIONS.

   B) DETAILS OF ALL FLASHING AND COPING CONDITIONS AND OTHER INSTALLATION DETAILS.

   C) CAULKING SPECIFICATIONS.

   D) COMPLETE SPECIFICATIONS OF ALL MATERIALS AND THE INSTALLATION OF SAME.

   E) WORK PROGRESS SCHEDULE.

5. THE COMPLETE ROOFING SYSTEM AND INSTALLATION PROCEDURE MUST BE APPROVED BY THE ARCHITECT BEFORE BEGINNING THE WORK.
6. THE APPROVED ROOF SYSTEM SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS BY MFG. AUTHORIZED INSTALLERS. THE INSTALLER MUST BE CERTIFIED AND MUST HAVE AT LEAST 2 YEARS EXPERIENCE IN NEW COMMERCIAL MEMBRANE ROOFING WITH MFG. VERIFICATION OF CREDENTIALS MANDATORY.
7. AT ALL TIMES AND AT THE COMPLETION OF THE WORK, REMOVE ALL UNUSED AND DEBRIS RESULTING FROM THE WORK OF THIS SECTION, FROM THE BUILDING AND SITE. ROOFING AND FLASHING SPECIFIED HEREIN SHALL BE COMPLETE IN EVERY RESPECT, AND SHALL BE WATERTIGHT AND WEATHERTIGHT.
8. THE ROOFING CONTRACTOR SHALL FURNISH TO THE OWNER THE MANUFACTURER'S STANDARD TEN (10) YEAR WARRANTY, PLUS AN ADDITIONAL FIVE (5) YEAR WARRANTY FOR A TOTAL OF FIFTEEN (15) YEAR WARRANTY TO BE FULLY PAID FOR BY THE ROOFING CONTRACTOR.

9.THE GUARANTEE SHALL COVER BOTH LABOR AND MATERIALS NECESSARY TO RESTORE WATERTIGHTNESS.

SECTION 07550 – METAL ROOFING

1. METAL PANELS: METAL SALES FIVE RIB V–GROOVE: GALVALUME (26 GAUGE)
   PHONE: 1502–855–4300

2. COLOR SELECTION: GALVALUME

3. INSTALLATION:

   A) GENERAL: THE MANUFACTURER'S RECOMMENDED METHODS OF INSTALLATION SHALL BE THE BASIS FOR INSPECTION AND ACCEPTING OR REJECTING ACTUAL INSTALLATION PROCEDURES USED ON THE WORK.

   B) ANCHOR ALL PANELS ACCORDING TO MANUFACTURER'S DETAILS. USE FULL LENGTH PANELS WITH NO HORIZONTAL LAP JOINTS. APPLY BUTYL CAULK CLOSURE STRIPS FOR VAPOR SEAL ON TOP AND BOTTOM PANEL SUPPORT.

4. DAMAGE, DENTED OR SCRATCHED PANELS WILL NOT BE ACCEPTED

5. ROOF ACCESSORIES: SNO GEM SNOW GUARD
   888–766–4367
   MODEL: SNO–GEM JR
   INSTALLATION: ACCORDING TO MANUFACTURE INSTRUCTION

   A) APPLY SEALANT BEAD ACROSS BOTTOM OF SNO–GEM SURFACE AND SPREAD SEALANT EVENLY.
   B) PRESS SNOW GEM ON THE ROOF WITH LIGHT EVEN PRESSURE
   C) INSTALL SCREWS WITH NEOPRENE GASKET WASHERS THROUGH PILOT HOLES.
   D) APPLY BEAD OF SEALANT AROUND PERIMETER.

SECTION 07620 – SHEET METAL FLASHING AND TRIM

1. ZINC–COATED STEEL: COMMERCIAL QUALITY WITH 0.20 PERCENT COPPER, ASTM A526, EXCEPT ASTM A527 FOR LOCK–FORMING G90 HOT–DIP GALVANIZED, MIL PHOSPHATIZED FOR PAINTING: 24 GAUGE, EXCEPT AS OTHERWISE INDICATED.
2. SOLDER: FOR USE WITH STEEL, PROVIDE 50–50 TIN/LEAD SOLDER, ASTM B32 WITH ROSIN FLUX.
3. FASTENERS: SAME METAL AS FLASHING/SHEET METAL OR OTHER NON CORROSIVE METAL AS RECOMMENDED BY SHEET MANUFACTURER. MATCH FINISH OF EXPOSED HEADS WITH MATERIAL BEING FASTENED.
4. BITUMINOUS COATING: SSPC–PAINT 12, SOLVENT TYPE BITUMINOUS MASTIC, NOMINALLY FREE OF SULFUR, COMPOUNDED FOR 15–MIL. DRY FILM THICKNESS PER COAT.
5. ROOFING CEMENT: ASTM D2822, ASPHALTIC.
6. GENERAL METAL FABRICATION: SHOP–FABRICATE WORK TO GREATEST EXTENT POSSIBLE. COMPLY WITH DETAILS SHOWN, AND WITH APPLICABLE REQUIREMENTS OF SMACNA "ARCHITECTURAL SHEET METAL MANUAL" AND OTHER RECOGNIZED INDUSTRY PRACTICES. FABRICATE FOR WATERPROOF AND WEATHER RESISTANT PERFORMANCE WITH EXPANSION PROVISIONS FOR RUNNING WORK, ALLOWANCE TO PERMANENTLY PREVENT LEAKAGE, DAMAGE, OR DETERIORATION OF THE WORK. FORM WORK TO FIT SUBSTRATES. COMPLY WITH MATERIAL MANUFACTURER INSTRUCTIONS AND RECOMMENDATIONS FOR FORMING MATERIAL. FORM EXPOSED SHEET METAL WORK WITHOUT EXCESSIVE OIL–CANNING, BUCKLING, AND TOOL MARKS, TRUE TO LINE AND LEVELS INDICATED, WITH EXPOSED EDGES FOLDED BACK TO FORM HEMS.

   A) FABRICATE NON–MOVING SEAMS IN SHEET METAL WITH FLAT–LOCK SEAMS. FOR METAL OTHER THAN ALUMINUM, TIN EDGES TO BE SEAMED FORM SEAMS AND SOLDER. FORM ALUMINUM SEAMS WITH EPOXY SEAM SEALER, RIVET JOINTS FOR ADDITIONAL STRENGTH WHERE REQUIRED.

   B) WHERE LAPPED OR BAYONET–TYPE EXPANSION PROVISIONS IN WORK CANNOT BE USED, OR WOULD NOT BE SUFFICIENTLY WATER–WEATHERPROOF, FORM EXPANSION JOINTS OF INTERMESHING HOOKED FLANGES, NOT LESS THAN 1 INCH DEEP, FILLED WITH MASTIC SEALANT (CONCEALED WITHIN JOINTS).

   C) WHERE MOVABLE, NO–EXPANSION TYPE JOINTS ARE INDICATED OR REQUIRED FOR PROPER PERFORMANCE OF WORK, FORM METAL TO PROVIDE A PROPER INSTALLATION OF ELASTICMERIC SEALANT, IN COMPLIANCE WITH SMACNA STANDARDS.

7. ANCHOR UNITS OF WORK SECURELY IN PLACE, PROVIDING FOR THERMAL EXPANSION OF METAL UNITS; CONCEAL FASTENERS WHERE POSSIBLE, AND SET UNITS TRUE TO LINE AND LEVEL AS INDICATED. INSTALL WORK WITH LAPS, JOINTS, AND SEAMS WHICH WILL BE PERMANENTLY WATERTIGHT AND WEATHERPROOF.

8. CLEAN EXPOSED METAL SURFACE, REMOVING SUBSTANCES WHICH MIGHT CAUSE CORROSION OF METAL OR DETERIORATION OF FINISHES.

SECTION 07920 – SEALANTS AND CAULKING

1. SEALANT TYPE 1: ONE COMPONENT, ACRYLIC LATEX, FOR INTERIOR NON MOVING JOINTS.

   A) SONNEBORN "SONOLAC" OR EQUAL.

2. SEALANT TYPE 2: ONE COMPONENT URETHANE, GUN–GRADE, NON–SAG, FOR INTERIOR AND EXTERIOR CONCEALED MOVING JOINTS, THRESHOLDS AND ARCHITECTURAL SHEET METAL.

   A) SONNEBORN "NP1" OR EQUAL.

3. SEALANT TYPE 3: MULTI–COMPONENT, URETHANE, GUN–GRADE, NON–SAG, FOR INTERIOR AND EXTERIOR EXPOSED MOVING JOINTS (OTHER THAN PAVEMENT), DOOR AND WINDOW FRAMES, AND OTHER WEATHERTIGHT LOCATIONS.

   A) SONNEBORN "NP2" OR EQUAL.

4. SEALANT TYPE 4: ONE–COMPONENT, URETHANE, GUN–GRADES OR POURABLE, SELF–LEVELING FOR INTERIOR OR EXTERIOR HORIZONTAL JOINTS.

   A) SONNEBORN "SONOLASTIC SL" OR EQUAL.

48.SEALANT TYPE 4B: TWO COMPONENT, SELF–LEVELING, POLYURETHANE ELASTOMERIC SEALANT FOR INTERIOR BLACK CONCRETE FLOOR JOINTS.

   A) SIKAFLEX –2c SL BLACK OR SPECIFICALLY APPROVED EQUAL (ALL JOINTS MUST BE CLEANED AND PRIMED)

5. PRIMER: NON–STAINING TYPE, RECOMMENDED BY SEALANT MANUFACTURER TO SUIT APPLICATION. UNPAINTED, POROUS SURFACES SHALL BE PRIMED.
6. JOINT CLEANER: NON–CORROSIVE AND NON–STAINING TYPE, RECOMMENDED BY SEALANT MANUFACTURER; COMPATIBLE WITH JOINT FILLING MATERIALS.
7. JOINT FILLER: ASTM D1056, ROUND, CLOSED CELL POLYETHYLENE FOAM ROD; OVERSIZED 30 TO 50 PERCENT. POLYSTYRENE IS UNACCEPTABLE.
8. BOND BREAKER TAPE: PRESSURE SENSITIVE POLYETHYLENE TAPE RECOMMENDED BY SEALANT MANUFACTURER TO SUIT APPLICATION.
9. CLEAN, PREPARE AND SIZE JOINTS IN

10. VIBRATION AND NOISE

A) EACH OF THE VARIOUS PIECES OF EQUIPMENT SHALL OPERATE WITHOUT OBJECTIONABLE VIBRATION OR NOISE. ALL ROTATING EQUIPMENT SHALL BE IN STATIC AND DYNAMIC BALANCE AND SHALL BE MOUNTED, SUPPORTED AND FASTENED SO THAT NO EQUIPMENT VIBRATION WILL BE TRANSMITTED TO THE BUILDING. THE SPECIFIC SIZE OF VIBRATION ISOLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION AND SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL. IF, IN THE OPINION OF THE ARCHITECT, OBJECTIONABLE VIBRATION OR TRANSMISSION THEREOF TO THE BUILDING OCCURS, THE CONTRACTOR SHALL EXECUTE REMEDIAL MEASURES AS MAY BE NECESSARY TO ELIMINATE SUCH INSATISFACTORY OPERATING CONDITIONS, AT THE CONTRACTOR'S EXPENSE.

11. OPERATING INSTRUCTIONS

A) BROCHURES: WRITTEN INSTRUCTIONS, ASSEMBLED AND BOUND IN BROCHURES, SHALL BE FURNISHED IN TRIPLICATE FOR OPERATING AND MAINTAINING ALL EQUIPMENT FURNISHED UNDER THIS DIVISION OF THE SPECIFICATIONS. INSTRUCTIONS SHALL INCLUDE ALL NORMAL ADJUSTMENTS, A LIST OF LUBRICATING POINTS WITH THE TYPE AND FREQUENCY OF LUBRICATION REQUIRED. PARTS LISTS SHALL BE FURNISHED.

B) DEMONSTRATION: UPON COMPLETION AND ACCEPTANCE OF WORK BY THE OWNER, THE CONTRACTOR SHALL INSTRUCT THE OPERATING PERSONNEL IN THE OPERATION OF THE ENTIRE INSTALLATION. TWO SESSION SHALL BE HELD, ONE FOR SUMMER OPERATION AND ONE FOR WINTER OPERATION, BOTH IN THE RESPECTIVE SEASONS.

C) EQUIPMENT LOCATION AND USE: PROVIDE, IN TRIPLICATE, SUITABLY BOUND OPERATING BOOK CONTAINING ALL EQUIPMENT, ITS LOCATION, USE AND DESCRIPTION AND BUILDING SCHEMATICS. SUBMIT TO ARCHITECT FOR APPROVAL BEFORE PRINTING IN FINAL FORM.

D) CONTRACTOR SHALL INSTRUCT MANAGER ON THE PROGRAMMING OF ALL THERMOSTATS. THIS SHALL BE A HANDS ON EXPLANATION. CONTRACTOR SHALL ALSO PROVIDE MANAGER WITH BOOKLET SHOWING PROGRAMMING INSTRUCTIONS.

12. FINAL INSPECTION

A) SCHEDULE: UPON COMPLETION OF CONTRACT, THERE SHALL BE A FINAL INSPECTION OF THE COMPLETED INSTALLATION. PRIOR TO THIS INSPECTION, ALL WORK UNDER THIS DIVISION SHALL HAVE BEEN COMPLETED, TESTED, BALANCED, AND ADJUSTED AND IN FINAL OPERATING CONDITION.

B) PERSONNEL: A QUALIFIED PERSON REPRESENTING THE CONTRACTOR MUST BE PRESENT AT THIS FINAL INSPECTION TO DEMONSTRATE THE SYSTEM AND APPROVE THE PERFORMANCE OF THE EQUIPMENT.

13. CUTTING AND PATCHING

A) WHERE CUTTING AND PATCHING BECOMES NECESSARY TO PERMIT THE INSTALLATION OF ANY WORK UNDER THE CONTRACT, OR SHOULD IT BECOME NECESSARY TO REPAIR ANY DEFECTS THAT MAY APPEAR IN PATCHING UP TO THE EXPIRATION OF THE GUARANTEE, SUCH CUTTING SHALL BE DONE UNDER THE SUPERVISION OF THE OWNER BY THE TRADE OF SUBCONTRACTOR WHOSE WORK IS TO BE DISTURBED. AFTER THE NECESSARY WORK HAS BEEN COMPLETED, DAMAGE SHALL BE REPAIRED BY THE TRADE OF SUBCONTRACTOR WHOSE WORK HAS BEEN DISTURBED. THE COST OF ALL CUTTING AND PATCHING SHALL BE PAID BY THE TRADE OF SUBCONTRACTOR REQUIRING IT TO BE DONE.

14. EXCAVATING AND BACKFILLING

A) PROVIDE NECESSARY EXCAVATING AND BACKFILLING FOR THE INSTALLATION OF WORK SPECIFIED IN THE DIVISION. TRENCHES FOR UNDERGROUND PIPING AND CONDUITS SHALL BE EXCAVATED TO REQUIRED DEPTHS WITH BELL HOLES PROVIDED AS NECESSARY TO ENSURE UNIFORM BEARING. CARE SHOULD BE TAKEN NOT TO EXCAVATE BELOW DEPTH, AND ANY EXCAVATION BELOW DEPTH SHALL BE REFILLED WITH SAND OR GRAVEL FIRMLY COMPACTED. WHERE ROCK OR HARD OBJECTS ARE ENCOUNTERED, THEY SHALL BE EXCAVATED TO A GRADE SIZE INCHES (6" BELOW AS SPECIFIED. AFTER THE PIPE HAS BEEN INSTALLED, TESTED AND APPROVED, THE TRENCHES SHALL BE BACKFILLED TO GRADE WITH APPROVED MATERIAL, WELL TAMPED OR PUDDLE COMPACTLY IN PLACE. DO NOT PROCEED WITH BACKFILL OPERATIONS UNTIL PIPING HAS BEEN INSPECTED BY THE OWNER OR BY THE LOCAL INSPECTOR OF THE MUNICIPALITY IN WHICH THE WORK IS BEING PERFORMED. DO NOT PERFORM BACKFILLING OPERATIONS EXCEPT IN THE PRESENCE OF THE OWNER OR INSPECTOR. ALL PIPING OUTSIDE THE BUILDING SHALL BE INSTALLED BELOW THE FROST LINE. WHERE STREETS, SIDEWALKS, ETC. ARE DISTURBED, CUT OR DAMAGED BY THIS WORK, THE EXPENSE OF REPAIRING SAME IN A MANNER APPROVED BY THE OWNERS SHALL BE A PART OF THIS CONTRACT.

15. GUARANTEE

A) THE GUARANTEE PROVISION OF THIS SPECIFICATION REQUIRES PROMPT REPLACEMENT OF ALL DEFECTIVE WORKMANSHIP AND MATERIALS OCCURRING WITHIN ONE YEAR OF JOB ACCEPTANCE. THIS INCLUDES ALL WORK REQUIRED TO REMOVE AND REPLACE THE DEFECTIVE ITEM AND TO MAKE ALL NECESSARY ADJUSTMENTS TO RESTORE THE ENTIRE INSTALLATION TO ITS ORIGINAL SPECIFIED OPERATING CONDITION AND FINISH AT THE TIME OF ACCEPTANCE.

SECTION 15400 – PLUMBING

1. SCOPE OF WORK

A) FURNISHING OF ALL LABOR, MATERIALS, TOOLS, TRANSPORTATION SERVICES, ETC. NECESSARY TO COMPLETE THE INSTALLATION OF THE PLUMBING SYSTEM AND AS DESCRIBED IN THESE SPECIFICATIONS, AS ILLUSTRATED ON THE ACCOMPANYING DRAWINGS, OR AS DIRECTED BY THE ARCHITECT.

B) ALL HOT AND COLD WATER SYSTEMS WITH COMPLETE CONNECTIONS FROM THE WATER METER TO ALL PLUMBING FIXTURES AND EQUIPMENT REQUIRING WATER CONNECTIONS. THESE SYSTEMS WILL BE COMPLETE WITH CONTROLS, VALVES, EQUIPMENT, DEVICES AND INSULATION.

C) ALL SOIL, WASTE, AND VENT SYSTEMS OUTSIDE AND INSIDE OF BUILDING AND SEWER CONNECTIONS TO MUNICIPAL SYSTEM AS INDICATED ON DRAWINGS.

D) FURNISH AND SET PLUMBING FIXTURES, INCLUDING ALL THE REQUIRED TRIM AND SUPPORTS.

E) TRENCHING, PIPE BEDDING AND BACKFILLING.

F) ALL ROUGH-IN AND FINAL CONNECTION TO EQUIPMENT IN THE KITCHEN, BAR AND SERVICE AREAS IF INDICATED ON THE DRAWINGS, INCLUDING NECESSARY TRAPS AND MISCELLANEOUS ITEMS AS REQUIRED. COORDINATE W/ OWNER AND K.E.C.

G) FURNISH ALL FINAL PLUMBING CONNECTIONS TO HEATING AND AIR CONDITIONING EQUIPMENT, AND KITCHEN BAR EQUIPMENT INCLUDING CONDENSATE DRAINS, INDIRECT WASTE AND GAS PIPING. SEE "FS" DRAWINGS FOR REQUIREMENTS.

H) METERS AND UTILITY CONDITIONS:

1) WATER: COORDINATE WORK WITH THE LOCAL WATER COMPANY. FURNISH ALL LABOR AND/OR MATERIAL (NOT FURNISHED BY THE WATER COMPANY) WHICH IS REQUIRED TO CONNECT TO EXISTING LINE AND/OR SET METER. INSTALL ALL PERMANENT WATER SUPPLY LINES FROM THE POINT OF CONNECTION AND COMPLETE THE WORK AS SHOWN, ALL IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL WATER COMPANY. TAP FEES SHALL BE PAID BY OWNER, (IF REQUIRED) PLUMBING CONTRACTOR SHALL BAY ALL WORK RELATED INSPECTION FEES BY AUTHORITY HAVING JURISDICTION.

2) SEWER CONNECTIONS: COORDINATE WORK WITH THE LANDLORD AND/OR LOCAL UTILITY COMPANY. ALL WORK AND MATERIALS SHALL BE IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL GOVERNING AUTHORITY. TAP FEES SHALL BE PAID BY OWNER (IF REQUIRED). PLUMBING CONTRACTOR SHALL PAY ALL WORK RELATED INSPECTION FEES BY AUTHORITY HAVING JURISDICTION (IF REQUIRED).

3) GAS: COORDINATE WORK WITH LOCAL UTILITY AND FURNISH ALL LABOR AND/OR MATERIALS (NOT FURNISHED BY UTILITY WHICH IS REQUIRED TO PROVIDE A WORKING UTILITY FOR OWNER, INCLUSIVE OF METER AND/OR REGULATOR. FURNISH SYSTEM FROM TAPPING POINT TO AND IN THE BUILDING AS REQUIRED AND SHOWN ON DRAWINGS. TAP FEES SHALL BE PAID BY OWNER. PLUMBING CONTRACTOR SHALL PAY ALL WORK RELATED INSPECTION FEES.

4) GAS PIPING TO HEATING, VENTILATING AND AIR CONDITIONING EQUIPMENT, AND WATER HEATER.

2. SHOP DRAWINGS

A) WITHIN 15 DAYS AFTER AWARD OF CONTRACT, AND BEFORE ANY PLUMBING MATERIALS ARE DELIVERED TO THE JOB SITE, SUBMIT TO THE OWNER THREE (3) COMPLETE SHOP DRAWINGS IN ACCORDANCE WITH THE PROVISIONS OF SECTION 01300 OF THESE SPECIFICATIONS, INCLUDING ALL PLUMBING FIXTURES, TRIM, DRAINS, CLEANOUTS, PIPING, VALVES, INSULATION, HANGERS, SUPPORTS, EQUIPMENT AND DEVICES PROPOSED TO BE FURNISHED AND INSTALLED. SHOP DRAWINGS SHALL NOT BE REVIEWED UNLESS THEY BEAR THE REVIEW STAMP OF THE GENERAL CONTRACTOR.

3. PRODUCT HANDLING

A) IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO THE APPROVAL OF, AND AT NO ADDITIONAL COST TO THE OWNER.

4. EXAMINATION OF THE SITE

A) ALL CONTRACTORS SUBMITTING PROPOSALS FOR THIS WORK SHALL FIRST EXAMINE THE SITE AND ALL CONDITIONS, INCLUDING LOCAL RULES & REGULATIONS, THEREON AND/OR THEREIN, ALL PROPOSALS SHALL HAVE TAKEN INTO CONSIDERATION ALL CONDITIONS THAT MAY EFFECT THE WORK UNDER THIS CONTRACT. LACK OF THIS INFORMATION WILL NOT BE CONSIDERED AS JUSTIFICATION FOR EXTRA COST OR ALLOWANCES TO THE CONTRACT PRICE.

5. GUARANTEE

A) ALL WORK PERFORMED UNDER THIS SECTION SHALL BE GUARANTEED TO BE FREE OF DEFECTIVE MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE OF THE WORK BY THE OWNER.

B) UPON NOTICE RECEIVED FROM THE OWNER, ARCHITECT OR ENGINEER, OF FAILURE OF ANY PART OF THE GUARANTEED EQUIPMENT DURING THE GUARANTEE PERIODS, THE AFFECTED PART OR PARTS SHALL BE PROMPTLY REPLACED WITH NEW PARTS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. ALL LABOR REQUIRED WITH NEW PARTS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. ALL LABOR REQUIRED TO PERFORM GUARANTEED SHALL BE INCLUDED AS PART OF THE COMPLETE WARRANTY.

6. PRODUCTS

A) DESCRIPTION

1) SOIL, WASTE AND VENT PIPING: BELOW FLOOR TO 5'0" OUTSIDE BUILDING AND YARD PIPING SHALL BE A.B.S. OR P.V.C. SCHEDULE 40 PIPE AND FITTINGS IF APPROVED BY LOCAL AUTHORITY, OR STANDARD WEIGHT COATED CAST IRON SOIL PIPE AND CAST IRON/NEOPRENE GASKET FITTINGS. YARD PIPING WHERE UNDER A SUPERIMPOSED LOAD CONDITION SUCH AS A DRIVEWAY OR PARKING AREA, SHALL BE SERVICE WEIGHT CAST IRON SOIL PIPE AND CAST IRON/NEOPRENE GASKET FITTINGS.

2) ABOVE FLOOR SHALL BE A.B.S. OR P.V.C. SCHEDULE 40 IF APPROVED BY LOCAL AUTHORITY, OR STANDARD WEIGHT COATED CAST IRON PIPE WITH NEOPRENE RUBBER GASKETS, OR HUBLESS CAST IRON PIPE WITH NEOPRENE RUBBER GASKETS AND STAINLESS STEEL CLAMPS (CLAMPS ALL OR EQUAL).

3) HOT AND COLD WATER PIPING:

A) ABOVE THE FLOOR SHALL BE TYPE "L" COPPER WITH 95/5 SWEAT SOLDERED AND WROUGHT COPPER FITTINGS. UNDER BUILDING SLABS SHALL BE TYPE "K" SOFT DRAWN COPPER TUBING WITHOUT JOINTS UNDER FLOOR. LOOP FROM WALL TO WALL.

4) CONDENSATE DRAIN PIPING:

A) CONDENSATE DRAIN PIPING SHALL BE GALVANIZED SCHEDULE 40 OR P.V.C. FROM HVAC OR ROOF AND OTHER EQUIPMENT UNLESS STATED OTHERWISE.

B) CONTRACTOR SHALL FURNISH AND INSTALL 3/4" OR 1" COPPER CONDENSATE DRAINS ON COOLER/FREEZER EVAPORATOR COILS, WITH TRAP ASSEMBLY AND 2" AIR GAP ABOVE DRAIN AS SHOWN ON THE DRAWINGS. FREEZER CONDENSATE PIPING SHALL BE WRAPPED WITH HEAT TAPE WITH A MINIMUM RATING OF 10 WATTS PER LINEAL FOOT FOR ITS ENTIRE LENGTH WITHIN THE FREEZER COMPARTMENT.

5) INDIRECT WASTE PIPING: SHALL BE P.V.C. SCHEDULE 40, EXCEPT AT DISHWASHING MACHINE WHICH SHALL BE TYPE "L" COPPER WITH 95/5 SWEAT SOLDER AND WROUGHT COPPER FITTINGS.

6) GAS PIPING:

A) GAS PIPING INCLUDING TAP AND SERVICE SHALL BE INCLUDED. COORDINATE METER LOCATION WITH LOCAL AUTHORITY.

B) GAS PIPING ABOVE GROUND SHALL BE SCHEDULE 40 BLACK STEEL WITH 125 LB. BLACK MALLEABLE IRON SCREWED FITTINGS AND SUPPORTED AT INTERVALS NOT TO EXCEED 8'-0" AND AT EACH CHANGE IN HORIZONTAL OR VERTICAL DIRECTION. GAS PIPING COMPOUND AT JOINTS SHALL BE IN COMPLIANCE WITH NFPA BULLETIN NO. 54 AND LOCAL APPLICABLE CODES AND SUITABLE FOR NATURAL GAS SERVICE.

C) GAS PIPING SHALL SUPPLY HVAC UNITS, WATER HEATER AND KITCHEN EQUIPMENT IF INDICATED ON DRAWINGS BY THIS CONTRACTOR.

D) MOISTURE TRAPS SHALL BE INSTALLED AT EACH PIPING DROP FOR HVAC UNITS, WATER HEATER AND KITCHEN EQUIPMENT.

7) STORM DRAIN LEADER: SAME AS SOIL, WAST & VENT PIPING.

8) INSULATION

A) ALL WATER PIPES, RAIN LEADERS AND ETC., SHALL BE INSULATED. PIPING SHALL BE INSULATED TO PREVENT EXCESSIVE HEAT LOSS AND TO PREVENT CONDENSATION AND SWEATING. ALL PIPING SHALL BE INSULATED WITH AT LEAST ½" THICK FOAM INSULATION AS MANUFACTURED BY ARMSTRONG ARMAFLEX OR APPROVED EQUAL AS INDICATED ON PLANS AND NOTES. AS MUCH OF THE INSULATION AS POSSIBLE SHALL BE SLIPPED ON TO THE PIPING AS THE PIPING IS BEING CONNECTED IN ORDER TO AVOID CUTTING THE INSULATION. ALL BUTT ENDS AND ANY NECESSARY LONGITUDINAL JOINTS SHALL BE SEALED WITH RUBBER BASED ADHESIVE.

7. FIXTURES

A) SEE DRAWINGS FOR SPECIFICATIONS.

8. FLASHINGS

A) ALL PIPING AND VENTS PASSING THROUGH ROOF SHALL BE FLASHED WATERTIGHT WITH SIX POUND TO THE SQUARE FOOT LEAD USING SLEEVE FLASHING WITH BASE EXTENDING AT LEAST 12 INCHES IN THE DIRECTION BEYOND THE OUTSIDE DIAPHRAGM OF THE PIPE. TURN SLEEVE DOWN A MINIMUM OF 1-1/2" INTO TOP OF VENT PIPE WITH LEAD FITTING SNUGLY INSIDE THE PIPE. WRAP MEMBRANE ROOF UP PIPE AND CLAMP. ALL GAS VENT CAPS SHALL BE FITTED WITH LEAD FITTING SNUGLY INSIDE OF PIPE. ALL VENT CAPS SHALL BE VANDAL PROOF. VERIFY APPROVED FLASHING MATERIAL AND METHODS WITH ROOFING CONTRACTOR TO ENSURE A COMPLETE JOB. SEE DETAILS ON ARCH. SHEETS.

9. CLEANOUTS

A) SEE DRAWINGS FOR SPECIFICATIONS.

10. EQUIPMENT

A) WATER HEATER: FURNISHED BY OWNER, INSTALLED BY PLUMBING CONTRACTOR (THIS NOTE DOES NOT APPLY TO FRANCHISE LOCATIONS – REFERENCES PLUMBING SHEETS AND CONSULT WITH FRANCHISEE (OWNER) TO DETERMINE SCOPE OF WORK).

1) SIZE, CAPACITY, TYPE AND MANUFACTURER AS INDICATED BY DRAWINGS. WATER HEATER SHALL BE GAS.

2) GAS WATER HEATER SHALL BE PROVIDED WITH CLASS "B" UL LABELED FLUE VENT SIMILAR TO METALBESTOS TYPE RV COMPLETE WITH PIPE FITTINGS, CEILING COLLAR, FIRE STOP, ROOF FLASHING, WEATHERTIGHT STORM COLLAR AND VENT CAP, INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

3) THE WATER HEATER, GAS OR ELECTRIC, SHALL BE PROVIDED WITH ALL TEMPERATURE AND SAFETY CONTROLS INCLUDING ASME AND ANSI Z21.22 RATED TEMPERATURE AND PRESSURE RELIEF VALVE, GAS PRESSURE REGULATOR (IF REQUIRED), DRAIN VALVE, EXPANSION TANK, ETC.

4) PLUMBER SHALL MAKE WATER, GAS AND RELIEF LINE CONNECTIONS WITH CUTOFF AND DIELECTRIC UNIONS IN WATER AND GAS LINES.

B) VALVES, COCKS AND FAUCETS

1) UNLESS SPECIFICALLY INDICATED ELSEWHERE, THE VALVES SHALL BE DESIGNED FOR NOT LESS THAN 125 LBS. WORKING PRESSURE. THE VALVES SHALL HAVE SUITABLE VALVE BODY PATTERNS FOR CONNECTION TO THE PIPE FOR WHICH THEY WILL OPERATE. ALL VALVES WITH RISING STEMS SHALL HAVE BACK SEATS FOR PACKING UNDER PRESSURE. APPROVED EQUAL GATE VALVES AND CHECK VALVES AS MANUFACTURED BY STOCKHAM, WALWORTH, LUNKENHEIMER, SCOTT, HAMMOND, CRANE OR WATTS WILL BE ACCEPTABLE.

2) GATE VALVES SHALL BE HAMMOND 1B610 SPLIT WEDGE OR APPROVED EQUAL.

3) CUTOFF VALVES UNDERNEATH LAVATORIES, TANK TYPE WATER CLOSETS, SANITARY SINKS AND WATER COOLERS SHALL BE CHROME PLATED ANGLE STOP VALVES WITH SOFT ANNEALED CHROME PLATED COPPER CONNECTION PIPES AND CHROME PLATED ESCUTCHEON PLATES.

4) GAS COCKS FOR ALL EQUIPMENT: SEE DRAWINGS FOR REQUIREMENTS.

5) WATER CUTOFF VALVE SHALL BE NIBCO OR APPROVED EQUAL BRONZE SOLDER JOINT, 125 LB. WOG WITH RISING STEMS.

6) EXTERIOR HOSE COCKS AND VALVE FIXTURES TO BE NON-FREEZE TYPE, SUPPLY SHUT-OFF VALVES IF INDICATED ON PLANS.

11. EXCEUTION

A) PIPING

1) ALL PIPING SHALL BE RUN CONCEALED EXCEPT WHERE SHOWN OTHERWISE ON DRAWINGS.

2) VALVES, TRAPS, CLEANOUTS AND OTHER APPARATUS SHALL BE INSTALLED IN AN EASILY ACCESSIBLE LOCATION.

3) SOIL, WASTE AND VENT OFFSETS AND HOUSE DRAINS SHALL BE INSTALLED WITH A MINIMUM, UNIFORM GRADE OF 1/8" TO THE FOOT, UNLESS OTHERWISE INDICATED OR REQUIRED BY LOCAL CODES.

4) HOT AND COLD WATER LINES SHALL BE AT LEAST 6" APART WHERE PIPING IS PARALLEL.

5) ALL WATER LINES SHALL RUN OVERHEAD AND DOWN PARTITION WALLS UNLESS NO WALL IS PROVIDED; THEN RUN LINES UNDER SLAB TO POINT OF TERMINATION. ALL LINES SHALL BE CONCEALED UNLESS NOTED OTHERWISE ON PLANS.

B) HANGERS AND SUPORTS

1) COPPER PIPING SHALL BE SUPPORTED AT INTERVALS NOT TO EXCEED 7'-0" AND AT EACH CHANGE IN HORIZONTAL OR VERTICAL DIRECTION. HANGERS SHALL BE FEE & MASON PLASTIC COATED HANGER, FIG. 381 OR APPROVED EQUAL BY GRINNELL. HANGER ATTACHMENT TO STRUCTURE SHALL BE AS REQUIRED.

2) GAS PIPING SHALL BE SUPPORTED AT INTERVALS NOT TO EXCEED 8'-0" AND AT EACH CHANGE IN HORIZONTAL OR VERTICAL DIRECTION. STEEL PIPE HANGERS SHALL BE GRINNELL FIG. 104 OR FEE & MASON FIG. 199. ATTACHMENT TO STRUCTURE TO BE AS REQUIRED.

3) HANGER RODS SHALL BE STANDARD BOLT STEEL WITH MACHINE SCREW THREADS, 3/8" DIAMETER MINIMUM.

4) ALL PIPING UNDERGROUND SHALL BE FIRMLY BEDDED ON THE BODY OF THE PIPE, AND BELL HOLES PROVIDED TO EACH BELL. ALL PIPING SHALL BE INSTALLED IN GRADED TRENCH. EXCAVATE, BACKFILL AND SUPPORT PIPING AS HEREIN BEFORE SPECIFIED.

C) PLUMBING FIXTURES

1) FURNISH AND INSTALL ALL PLUMBING FIXTURES COMPLETE WITH ALL EQUIPMENT FITTINGS, TRIMMINGS AND ACCESSORIES, AS SPECIFIED. OPEN FRONT SEATS WITH NO COVERS AS MANUFACTURED BY CHURCH WILL BE ACCEPTABLE.

2) ALL FIXTURES SHALL BE GRADE A. THE NAME OR TRADE MARK OF THE MANUFACTURER SHALL BE PRINTED OR PRESSED ON ALL CLOSETS AND LAVATORIES, AND A LABEL, WHICH CANNOT BE REMOVED WITHOUT DESTROYING IT, CONTAINING THE MANUFACTURER'S NAME OR TRADEMARK AND THE QUALITY OR CLASS OF THE FIXTURES, SHALL BE AFFIXED TO ALL FIXTURES AND NOT REMOVED UNTIL AFTER THE WORK HAS BEEN ACCEPTED.

3) EXPOSED PIPING TO FIXTURES SHALL BE A PRODUCT OF THE FIXTURE MANUFACTURER OR APPROVED EQUAL AND SHALL BE:

A. WASTE: CHROMIUM PLATED IRON PIPE SIZE RED BRASS.
B. WASTE: CHROMIUM PLATED TUBING, EXCEPT WASTE CONNECTIONS TO KITCHEN OR SCULLERY SINKS.

4) STOPS AS MANUFACTURED BY THE FIXTURE MANUFACTURER, WITH METAL – TO – METAL SEAT, SHALL BE PROVIDED FOR ALL FIXTURES AND EQUIPMENT. REFER TO SCHEDULE ON DRAWINGS FOR MANUFACTURER'S AND MODEL NUMBERS USED AS GUIDE SPECIFICATIONS. NUMBERS AS LISTED REPRESENT THE COMPLETE WORKABLE OUTFITS WITH ALL BRASS TRIM AS NECESSARY.

5) FIXTURES SHALL BE WHITE UNLESS OTHERWISE NOTED.

6) FIXTURES FURNISHED BY THIS CONTRACTOR OR BY THE OWNER SHALL BE FITTED WITH NECESSARY WATER SUPPLIES, STOPS AND TRAPS WITH CLEANOUT PLUGS UNDER SECTION OF THE SPECIFICATIONS.

D) TESTS

1) THE PLUMBING SYSTEM AND ASSOCIATED SYSTEM SHALL BE SUBJECT TO CONSTANT INSPECTION AND FINAL APPROVAL OF THE CODE AUTHORITIES HAVING JURISDICTION. TEST, IN ADDITION TO THESE INCLUDED IN THIS SECTION, REQUIRED TO SHOW CODE COMPLIANCE, SHALL BE PERFORMED AS DIRECTED.

2) THE SOIL, WASTE AND VENT LINES OF THE SANITARY SYSTEMS SHALL BE SUBJECTED TO A WATER PRESSURE TEST OF NOT LESS THAN 10 FEET OF WATER HEAD PRESSURE OR 54 POUNDS OF AIR PRESSURE FOR A DURATION OF NOT LESS THAN 2 HOURS. DURING THE PRESSURE TESTS, EACH JOINT SHALL BE INSPECTED FOR LEAKS. THE LINES SHALL BE TESTED AS AN ENTIRE SYSTEM, BUT ALL THE UNDERGROUND AND CONCEALED LINES SHALL BE GIVEN THE ABOVE TEST AND APPROVED BEFORE THE LINES ARE COVERED.

3) THE DOMESTIC WATER PIPING SYSTEM SHALL BE SUBJECTED TO A WATER PRESSURE TEST OF NOT LESS THAN 150 PSI FOR A DURATION OF NOT LESS THAN 2 HOURS. THE WATER PIPING SHALL BE TESTED AS AN ENTIRE SYSTEM, BUT ALL UNDERGROUND AND CONCEALED LINES SHALL BE GIVEN THE ABOVE TEST AND APPROVED BEFORE THE LINES ARE COVERED.

4) THE GAS SYSTEM, FROM THE METER CONNECTION AND THROUGHOUT THE NEW WORK, SHALL BE SUBJECTED TO AN AIR PRESSURE TEST OF NOT LESS THAN 30 PSI FOR A DURATION OF NOT LESS THAN 4 HOURS AND AT THE SAME TIME EACH JOINT AND CONNECTION SHALL BE TESTED BY APPLYING SOAP SUDS TO EACH POINT. THE GAS PIPING SHALL BE TESTED AS AN ENTIRE SYSTEM, BUT ALL UNDERGROUND AND CONCEALED LINES SHALL BE GIVEN THE ABOVE TEST AND APPROVED BEFORE BEING COVERED. FURTHER, EACH EXPOSED JOINT SHALL BE TESTED WITH SOAP SUDS AFTER THE GAS HAS BEEN ADMITTED INTO THE SYSTEM.

5) SHOULD THE CONTRACTOR REFUSE OR NEGLECT TO MAKE ANY TESTS NECESSARY TO SATISFY THE OWNER, HIS REPRESENTATIVE OR CODING HIS REPRESENTATIVE SHALL BE ORDERED OUT THE TRUE INTENT AND MEANING OF THE SPECIFICATIONS, THE OWNER MAY TAKE SUCH TESTS AND CHARGE THE EXPENSE THEREOF TO THE CONTRACTOR.

E) CLEANING AND PROTECTION

1) THE CONTRACTOR SHALL REMOVE FROM THE JOB SITE ALL DEBRIS AND LEFTOVER MATERIALS FOR WHICH HE IS RESPONSIBLE, CLEAN ALL FIXTURES AND EQUIPMENT AND REPAIR ANY BLEMISHES IN THE FINISH. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR REPLACING FIXTURES WHERE DAMAGE RESULTS FROM FAILURE TO PROVIDE PROTECTION DURING INSTALLATION.

2) FLUSH OUT PIPES: AFTER THE PLUMBING PIPING HAS BEEN INSTALLED, INSPECTED AND APPROVED, THE PIPING SYSTEM SHALL BE FLUSHED TO REMOVE ANY FOREIGN MATTER FROM THE PIPES WITH CHLORINE OR WITH SOLUTION TO SANITIZE THE NEW PIPING OR AS REQUIRED BY THE LOCAL AUTHORITIES.

F) MAINTENANCE

1) ALL PARTS OF THE PLUMBING FIXTURES AND ASSOCIATED EQUIPMENT SHALL BE MANTAINED BY THE CONTRACTOR THROUGHOUT THE GUARANTEE PERIOD. ONE MONTH AFTER FINAL ACCEPTANCE OF THE BUILDING BY THE OWNER, THE CONTRACTOR SHALL GO OVER ALL THE FIXTURES AND TEST ALL WORKING PARTS AND PUT EVERYTHING IN GOOD WORKING ORDER. ALL FIXTURES, INCLUDING TRAPS, SHALL BE THOROUGHLY CLEANED AND ALL PARTS PUT IN GOOD WORKING ORDER.

SECTION 15550 – SPRINKLER SYSTEM

1. SCOPE OF WORK

A) WORK INCLUDED UNDER THIS SECTION CONSISTS OF PROVIDING LABOR, MATERIALS, APPLIANCES, EQUIPMENT, TOOLS, TRANSPORTATION, SUPERINTENDENCE AND SERVICES REQUIRED TO CONSTRUCT AND INSTALL A UNITED AREA SPRINKLER SYSTEM AS SPECIFIED, INDICATED AND ELSEWHERE REQUIRED.

B) THE UNITED SPRINKLER SYSTEM SPECIFIED HEREIN IS REQUIRED TO MEET THE LOCAL BUILDING CODE AND NFPA STANDARDS.

2. PRODUCTS

A) HANGERS, PIPING, VALVES, FIRE DEPARTMENT CONNECTIONS

1) ALL ITEMS MUST MEET NFPA APPROVED TYPE FOR CONSTRUCTION USED.

B) SPRINKLERS

1) SPRINKLERS SHALL BE APPROVED AUTOMATIC SPRAY SPRINKLERS TO COMPLY WITH NFPA 13. SPRINKLERS SHALL BE OF OPERATING TEMPERATURE AS REQUIRED BY NFPA AND THE FIRE MARSHAL'S OFFICE. PROVIDE ANTI-FREEZE LOOPS OR DRY SYSTEM AT TOWERS. PROVIDE ANTI-FREEZE LOOP OR DRY SYSTEM AT ENTRY VESTIBULE IN AREAS NORTH OF MASON DIXON LINE. VERIFY ALL FIRE MARSHALL REGULATIONS. PROVIDE APPROVED METAL CABINET WITH NUMBER OF REPLACEMENT HEADS OF VARIOUS TYPES AND QUANTITIES AS REQUIRED BY INSURING AGENCY.

2) SEMI-RECESSED SPRINKLERS WITH ½" DISCHARGE ORIFICE IN FINISHED AREAS WHERE SPRINKLERS ARE EXPOSED TO THE PUBLIC.

3) STANDARD CHROME PENDANT SPRINKLERS WITH SHORT ESCUTCHEON (1/2") ½" DISCHARGE ORIFICE IN KITCHEN & SERVICE AREAS.

C) WATER FLOW INDICATOR

1) PROVIDE AN ELECTRIC WATER FLOW INDICATOR WHERE INDICATED AND/OR REQUIRED BY THE AUTHORITIES HAVING JURISDICTION. WATER FLOW INDICATOR SHALL BE PROVIDED WITH TIME DELAY MECHANISM WHICH ABSORBS FLUCTUATION CAUSED BY WATER SURGES. SWITCHES SHALL BE WIRED COMPATIBLE WITH SOLENOID VALVE INSTALLED IN DOMESTIC WATER LINE.

3. EXECUTION

A) INSTALLATION

1) DRAWINGS WERE PREPARED WITH INTENT THAT ALL LINES CLEAR OBSTRUCTIONS AS PIPES, BEAMS, LIGHTS, HANGERS AND SIMILAR ITEMS. EXAMINE BUILDING AND PLANS CONFIRMING DIMENSIONS BEFORE PIPE IS CUT, FABRICATED AND/OR INSTALLED, TO DETERMINE IF OFFSETS ARE NECESSARY. WHERE REQUIRED, OFFSETS SHALL BE MADE WITHOUT ADDITIONAL COST TO OWNER.

2) FOLLOWING GENERAL SCHEME SHALL BE EMPLOYED WHEN LOCATING SPRINKLER HEADS UNLESS RESTRICTED BY NFPA STANDARDS AND RULES AND REGULATING BODIES.

3) UNLESS OTHERWISE INDICATED, CONCEAL PIPING IN FINISHED PORTIONS OF BUILDING AND EXPOSE ELSEWHERE. LOCATE CONCEALED PIPING IN FURNISHINGS, PIPE SPACES, CHASES AND ABOVE SUSPENDED CEILINGS. INSTALL EXPOSED PIPING PARALLEL OR PERPENDICULAR TO WALLS.

4) LINES AT OR ABOVE CEILINGS SHALL BE HELD AS HIGH AS POSSIBLE AND BE RUN TO AVOID CONFLICTS. INCLUDE TO MATCH FIRMLY CONSTRUCTED AND MATERIAL REQUIRED TO ACCOMPLISH THIS RESULT.

5) PROVIDE SLEEVES FOR PIPING PASSING THROUGH FLOORS, CEILINGS AND MASONRY OF CONCRETE WALLS. LOCATE, SET AND ANCHOR SLEEVES.

6) PROVIDE LINTELS REQUIRED TO PROPERLY COMPLETE SPRINKLER INSTALLATION.

7) PROVIDE PLATES ON LINES PASSING THROUGH FLOORS, CEILING OR WALLS.

8) HANGERS MUST BE PROPERLY SPACED AND SECURED TO BUILDING STRUCTURE TO ADEQUATELY SUPPORT LINES. SUPPORT FROM SUSPENDED CEILINGS AND/OR SIMILAR CONSTRUCTION WILL NOT BE ACCEPTED.

9) DEVICES SHALL BE IN ACCORDANCE WITH NFPA STANDARDS AND RULES AND REGULATIONS OF INSURING AGENCY AND SHALL BEAR THEIR LABEL OF APPROVAL.

10) REDUCING BUSHINGS ARE NOT PERMITTED IN MORE THAN ONE OUTLET OF ANY TEE OR ANY TWO OUTLETS OF ANY ELBOW. BUSHINGS ARE NOT PERMITTED IN ANY ELBOWS OR WHEN THE REDUCTION IN SIZE OF THE OUTLET IS NOT LESS THAN ½".

11) INSTALL VALVES WHERE INDICATED ON PLANS.

B) TESTING

1) TEST SYSTEMS IN ACCORDANCE WITH NFPA STANDARDS UNDER NORMAL OPERATING CONDITIONS

AI-7943 **7. C.**

Planning Commission

Meeting Date: 11/09/2021

MAJOR CHANGE

Information

Agenda Title

MAJOR CHANGE - The applicant, Larkspur, is requesting approval of a Major Change to the Basic and Detailed Development Plan in a Planned Commercial District for 7.234 acres for property located at 7650 Waynetowne Boulevard (ZC 21-43).

Purpose and Background

Attachments

Staff Report

Decision Record

Maps

Drawings

Drainage Report

Memorandum

Staff Report for Meeting of November 09, 2021

To: Huber Heights City Planning Commission

From: Scott Falkowski, Assistant City Manager

Date: November 4, 2021

Subject: ZC 21-43 (Major Change in the PC District and Basic and Detailed Development Plan – Larkspur)

Application dated October 15, 2021.

Department of Planning and Development City of Huber Heights

APPLICANT/OWNER: David Bernstein, Larkspur – Applicant
Larkspur Huber Heights, LLC - Owner

DEVELOPMENT NAME: Larkspur

ADDRESS/LOCATION: 7650 Waynetowne Boulevard

ZONING/ACREAGE: PC (Planned Commercial) / 7.234 acres

EXISTING LAND USE:

ZONING ADJACENT LAND:

REQUEST: The applicant requests approval of a Major Change to the Basic and Detailed Development Plan for a new Storage Facility.

ORIGINAL APPROVAL:

APPLICABLE HHCC:

CORRESPONDENCE: In Favor – None Received
In Opposition – None Received

STATEMENT OF FACT:

The applicant requests approval of a Major Change to the Basic and Detailed Development Plan in a PC (Planned Commercial) District for a Storage Facility.

STAFF ANALYSIS AND RECOMMENDATION:

Overview:

The proposal before Planning Commission calls for redevelopment of the property at 7650 Waynetowne Boulevard, currently occupied by Danbarry Cinema, to Larkspur for an Indoor Storage Facility.

STAFF ANALYSIS:

1171.09 - Detailed development plan.

The detailed development plan shall conform substantially to the basic development plan. If desired by the developer, it may be submitted in stages with each stage reflecting a portion of the approved basic plan which is proposed to be recorded and developed; provided however, that such portion conforms to all requirements of this chapter and other applicable ordinances. The requirement procedure for approval of a detailed development plan shall be:

(a) The detailed plan and supporting data shall be filed with the City. The Planning Commission shall determine that such plan is in conformity with these regulations and in agreement with the approved basic plan.

(b) After review of the detailed plan and supporting data, the Commission shall approve or disapprove the plan submitted by the developer. Disapproval of the detailed plan shall be based on its failure to comply with the basic development plan and current applicable codes, standards, and regulations.

(Ord. 89-O-339, Passed 2-6-89)

1171.091 - Planning commission/council review.

It is the purpose of the Planning Development regulations to encourage property owners to develop their land in efficient and effective ways. It is the intent of these regulations to encourage land uses which may not always meet traditional zoning rules. Inherent in these Planned Development regulations is an opportunity for property owners to develop their sites without requiring strict compliance with all zoning regulations where the overall plan is deemed to be in the best interest of the City. During review of a Basic or Detailed Development Plan by the Planning Commission or City Council, all requirements within Part 11, Title 7 of the Code are to be used as

guidelines and may be varied as part of the Basic or Detailed Development Plan if it is determined that such deviation will not materially adversely affect neighboring properties or the community as a whole, any such variation of these requirements does not change the overall plan and character of the proposed development, and the variance does not have the effect of nullifying the intent and purpose of these regulations or the Zoning Ordinance. In granting variances or modifications, the Commission or Council may require such conditions as shall, in its judgement, secure substantially the objective of the standards or requirements so varied or modified.

(Case 427; Ord. 2002-O-1367, Passed 9-9-02)

The site in question is the one that currently is occupied by a commercial structure. The applicant received approval of a Detailed Development Plan that would allow for the razing of the existing building and placing five new storage buildings with leasable space in Phase I. The current request is to build one large building in place of the previously approved five individual buildings.

Building Elevations:

The buildings are made up of pre-engineered metal, EIFS and brick. The building face that fronts along Waynetowne Boulevard are requested to be pre-engineering metal with brick at the water table. The previous approved buildings had all masonry materials along the face that fronts along Waynetowne Boulevard. Each unit will have roll up doors. The main office will have a glass storefront. The dumpster enclosure will be masonry with gates at the front.

Site Design and Engineering:

1176.03 - Development standards.

Except when specifically modified herein, the provisions of Chapter 1181, "General Provisions" shall govern. In addition, the following development standards shall apply:

(a) *Minimum Land Area Requirement.*

(1) No minimum land area shall be required.

(b) *Site Planning.*

(1) All yards within the development plan except those abutting a Business or Industrial District shall be maintained in landscaping and not used for parking, to the extent of a minimum of 15 feet along property lines.

(2) The parking and loading facilities shall be a distance of at least 25 feet from the established right-of-way line, and the building(s) or the structure(s) at least 75 feet from the established right-of-way line per the Official Thoroughfare Plan or the recorded plat.

(Ord. 2006-O-1656, Passed 10-5-05)

The proposal calls for one curb cut to access the facility off of Waynetowne Boulevard. The current two curb cuts will be removed, and a new curb cut installed. The parking requirement for the office is one space for every 300 square feet of gross floor area, which calculates to 4 parking spaces, with 1 of those being designated accessible spaces. Paved drive aisles access each building with no dead-end drives. Fencing is proposed at the perimeter of the site with fencing abutting public right of way being a decorative metal fencing and coated chain ling for the remainder of the fencing which meets the approved PUD conditions. The exterior aisles are 30 feet and 25 feet to allow for emergency vehicle turning movements.

Utilities:

The buildings are to be serviced by connections to public water and the office will connect to the public sanitary sewer. Gas, telephone, and electric are also currently available at the site. Drainage is being collected through catch basins and storm sewer routing the flow through the existing detention basin onsite. The existing detention basin is being upgraded to meet current water quality and quantity detention requirements. Lighting is shown on the submitted drawings and complies with City Code 1181.21.

Signage:

The ground sign shall have a maximum height of six feet from ground level, a maximum area of seventy-five square feet and base materials shall match the fronts of the buildings.

Landscaping:

Landscaping is being proposed to include street trees and buffering around the perimeter of the site. This landscaping includes a combination of deciduous trees, evergreen trees, shrubs, and grasses. The Landscaping Plan complies with the City Standards.

Planning Commission Decision Record

WHEREAS, on October 15, 2021, the applicant, Larkspur, requested approval of a Major Change to the Basic and Detailed Development Plan in a Planned Commercial District for the property located at 7650 Waynetowne Boulevard, further identified as Parcel Number P70-04005-0100 on the Montgomery County Auditor's Tax Map (Zoning Case 21-43); and

WHEREAS, on November 09, 2021, the Planning Commission did meet and fully discuss the details of the request.

NOW, THEREFORE, BE IT RESOLVED that the Planning Commission hereby recommends approval of the request.

_____moved to recommend approval of the application submitted by the applicant, Larkspur, requesting approval of a Major Change to the Basic and Detailed Development Plan in a Planned Commercial District for the property located at 7650 Waynetowne Boulevard, further identified as Parcel Number P70-04005-0100 on the Montgomery County Auditor's Tax Map (Zoning Case 21-43), with the following conditions:

1. The approved Basic and Detailed Development Plan site plans shall be the plans stamped received by the City of Huber Heights Planning Department on October 15, 2021, except as modified herein.

2. The applicant shall receive final Engineering approval prior to a Zoning Certificate being issued.

3. The applicant shall address all Fire Division comments prior to a Zoning Certificate being issued.

4. The front building face along Waynetowne Boulevard shall be constructed of all masonry materials, except for the window walls along the office.

5. The ground sign shall have a maximum height of six feet from ground level and base materials shall match the fronts of the buildings.

6. Prior to the issuance of a zoning permit, the applicant shall enter into a PUD Agreement with the City for the purpose, but not the sole purpose, of establishing the development obligations of the applicant and requiring the submittal of a performance bond, cash bond, or letter of credit to insure the installation of landscaping as approved. The bond or letter of credit shall be in an amount equal to the applicant's estimate of the cost of installation as approved by the Planning Department and shall remain in effect until such time as the landscaping has been completed as determined by the Planning Department. Upon completion of the installation of landscaping as required by the approved landscape plan, the applicant may request release of the performance bond or letter of credit. Following an inspection by the Planning Department and upon determination by the department that the landscaping has been completed in accordance with the approved landscaping plan, 80% of the performance bond or letter of credit may be released. However, the performance bond or letter of credit will not be released until a maintenance bond lasting three growing seasons, or letter of credit equal to 20% of the initial performance bond or letter of credit to ensure maintenance of the landscaping, is submitted to and accepted by the Planning Department. The term of the maintenance bond shall be three growing seasons.

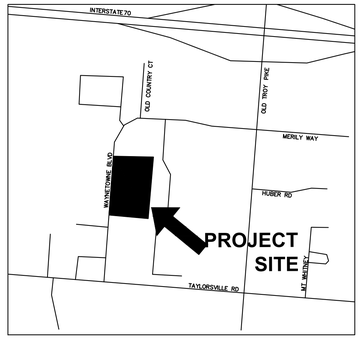
Seconded by _____. Roll call showed: YEAS: NAYS: Motion to recommend approval _____.

_____ _____
Terry Walton, Chair Date
Planning Commission

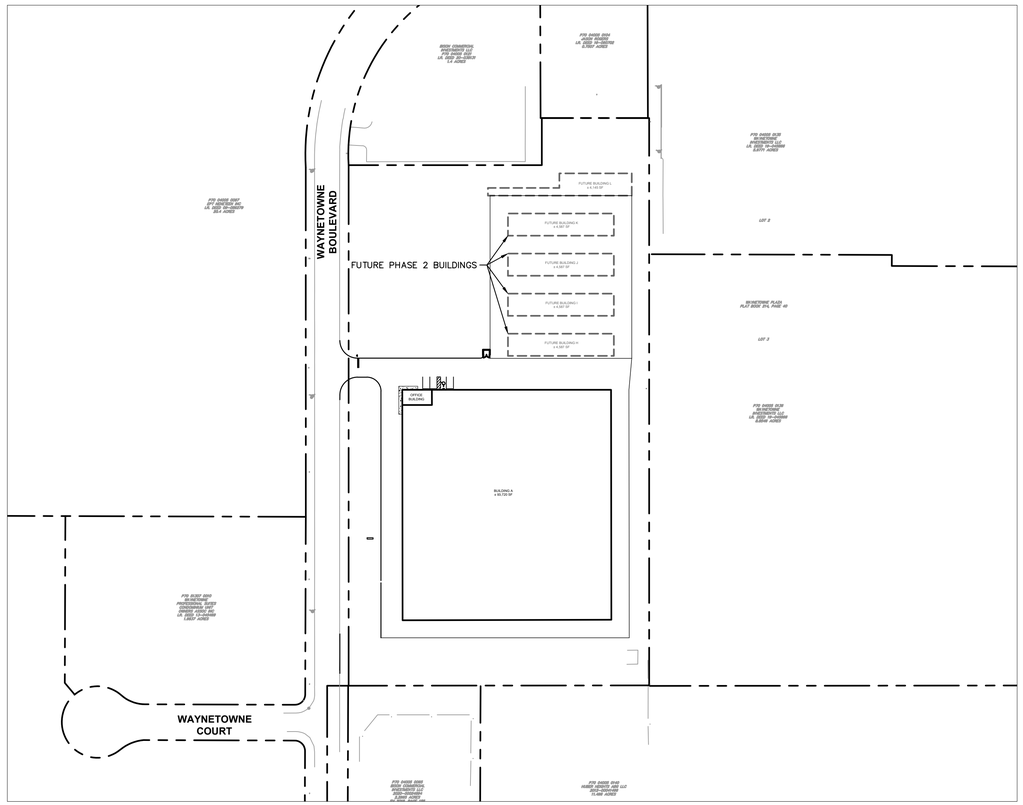
DETAILED DEVELOPMENT PLANS

LARKSPUR HUBER HEIGHTS

7650 WAYNETOWNE BOULEVARD
HUBER HEIGHTS, OH 45424



VICINITY MAP
N.T.S.



INDEX MAP
SCALE: 1"=100'

Sheet List Table	
Sheet Number	Sheet Title
C0.0	TITLE SHEET
V0.0	ALTA SURVEY
C1.0	GENERAL NOTES
C2.0	DEMOLITION PLAN
C3.0	SITE PLAN
C3.1	FIRE TRUCK ROUTE PLAN
C4.0	EROSION CONTROL PLAN
C4.1	EROSION CONTROL DETAILS
C5.0	GRADING PLAN
C5.1	GRADING PLAN
C5.2	BASIN DETAIL SHEET
C6.0	UTILITY PLAN
C7.0	CONSTRUCTION DETAILS
C7.1	CONSTRUCTION DETAILS
C7.2	CONSTRUCTION DETAILS
L1.0	LANDSCAPE PLAN
L2.0	LANDSCAPE NOTES AND DETAILS
PH1.0	PHOTOMETRIC PLAN

PROJECT TEAM

DEVELOPER
LARKSPUR ACQUISITIONS, LLC
10800 BISCAYNE BLVD
MIAMI, FL 33161
(786) 540-4130
EMAIL: DAVID.BERNSTEIN@LARKSPURPROP.COM
CONTACT: DAVID BERNSTEIN

ARCHITECT
MCMILLAN PAZDAN SMITH ARCHITECTURE
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SPARTANBURG, SC 29304
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EMAIL: AFLYNN@MCMILLANPAZDANSMITH.COM
CONTACT: ADAM FLYNN

SURVEYOR
CESO, INC.
3601 RIGBY ROAD, SUITE 300
MIAMISBURG, OHIO 45342
TEL: (937) 829-1655
EMAIL: SCHOONOVER@CESOINC.COM
CONTACT: DAVID SCHOONOVER

CIVIL ENGINEER
KIMLEY-HORN AND ASSOCIATES, INC.
2400 CORPORATE EXCHANGE DR, SUITE 120
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CONTACT: DERIK LEARY

LANDSCAPE ARCHITECT
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2400 CORPORATE EXCHANGE DR, SUITE 120
COLUMBUS, OH 43231
TEL: (630) 487-3450
EMAIL: AMANDA.FOLTA@KIMLEY-HORN.COM
CONTACT: AMANDA FOLTA

BENCHMARKS

SITE BENCHMARKS:
(LOCATIONS SHOWN ON SURVEY, NAVD88)

SBM A: CHISELED SQUARE ON LIGHT POLE
ELEVATION = 922.83

PROFESSIONAL ENGINEER'S CERTIFICATION

I, DERIK LEARY, A LICENSED PROFESSIONAL ENGINEER OF OHIO HEREBY CERTIFY THAT THIS SUBMISSION, PERTAINING ONLY TO THE CIVIL SHEETS LISTED ABOVE, WAS PREPARED ON BEHALF OF LARKSPUR BY KIMLEY-HORN AND ASSOCIATES, INC. UNDER MY PERSONAL DIRECTION. THIS TECHNICAL SUBMISSION IS INTENDED TO BE USED AS AN INTEGRAL PART OF AND IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND CONTRACT DOCUMENTS.

DATED THIS 12TH DAY OF OCTOBER, A.D., 2021.

STATE OF OHIO
DERIK D. LEARY
E-84090
REGISTERED PROFESSIONAL ENGINEER

OHIO LICENSED PROFESSIONAL ENGINEER E-84090
MY LICENSE EXPIRES ON DECEMBER 31, 2021

No.	REVISIONS	DATE	BY

Kimley»Horn

© 2021 KIMLEY-HORN AND ASSOCIATES, INC.

7965 N. HIGH ST., SUITE 200,
COLUMBUS, OH 43235
PHONE: 614-454-6939
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: IC
DRAWN BY: NAB
CHECKED BY: DDL

Larkspur Properties
REAL ESTATE PARTNERSHIP

TITLE SHEET

DETAILED DEVELOPMENT PLANS
7650 WAYNETOWNE BLVD
HUBER HEIGHTS, OH 45424

ORIGINAL ISSUE: 10/12/2021
KHA PROJECT NO. 190081001
SHEET NUMBER
C0.0

Drawing name: K:\CIB_LIEV\190081001_Larkspur_HuberHeights_OH\2 Design\CAD\PlanSheets\Final Plans\TITLE SHEET.dwg Layout1 Oct 14, 2021 8:05am by: MattShiflett
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

ALTA/NSPS LAND TITLE SURVEY

7650 WAYNETOWNE BOULEVARD
SECTION 29, TOWN 2, RANGE 8
CITY OF HUBER HEIGHTS, MONTGOMERY COUNTY OHIO

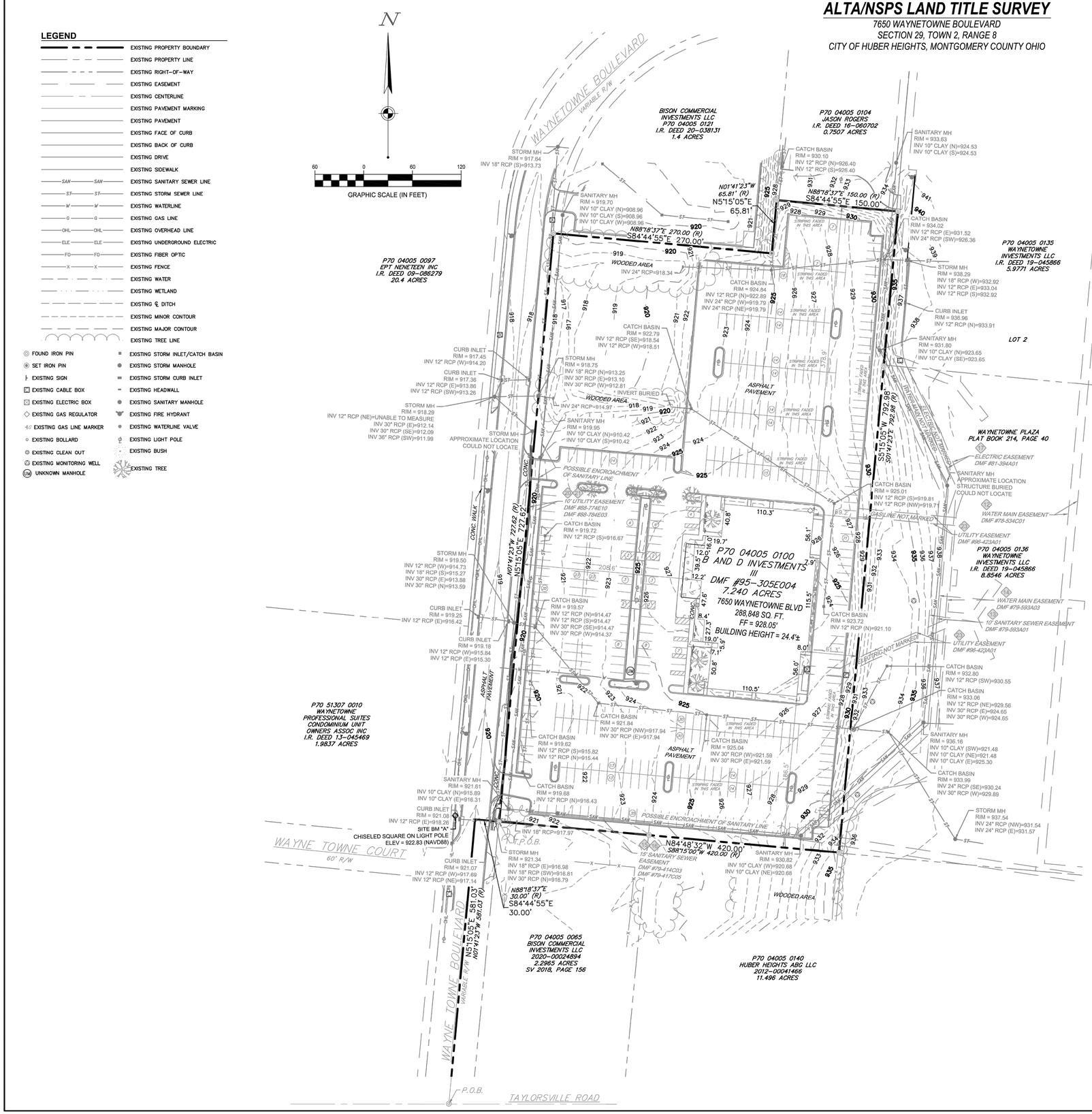


EXHIBIT "A" LEGAL DESCRIPTION

FROM TITLE COMMITMENT PROVIDED BY FIDELITY NATIONAL TITLE INSURANCE COMPANY

SITUATED IN SECTION 29, TOWN 2, RANGE 8, CITY OF HUBER HEIGHTS, MONTGOMERY COUNTY, OHIO AND BEING PART OF THE LAND CONVEYED TO WAYNETOWNE ASSOCIATES IN DEED MICROFICHE NUMBER 88-0744E04 OF THE DEED RECORDS OF MONTGOMERY COUNTY, OHIO AND BEING A TRACT OF LAND MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT BEING THE CENTERLINE INTERSECTION OF WAYNETOWNE BOULEVARD AND TAYLORSVILLE ROAD;
THENCE WITH THE CENTERLINE OF SAID WAYNETOWNE BOULEVARD NORTH 01 DEG. 41' 23" WEST FOR A DISTANCE OF 581.03 FEET TO A POINT;
THENCE NORTH 88° 18' 37" EAST FOR A DISTANCE OF 30.00 FEET TO A POINT ON THE RIGHT-OF-WAY LINE OF SAID WAYNETOWNE BOULEVARD, SAID POINT ALSO BEING THE NORTHWEST CORNER OF A TRACT OF LAND CONVEYED TO THE HUBER HEIGHTS CIRCUIT COURTS INC. IN DEED MICROFICHE NUMBER 79-522 D04 OF SAID MONTGOMERY COUNTY DEED RECORDS, AND ALSO BEING THE TRUE POINT OF BEGINNING OF THIS DESCRIPTION;
THENCE WITH THE RIGHT-OF-WAY LINE OF SAID WAYNETOWNE BOULEVARD NORTH 01° 41' 23" WEST FOR A DISTANCE OF 727.62 FEET TO A POINT BEING THE SOUTHWEST CORNER OF A TRACT OF LAND CONVEYED TO EARL SIMONE IN DEED MICROFICHE NUMBER 95-56E09 OF SAID MONTGOMERY COUNTY DEED RECORDS;
THENCE WITH THE SOUTH LINE OF SAID SIMONE TRACT, NORTH 88° 18' 37" EAST OR A DISTANCE OF 270.00 FEET TO A POINT BEING THE SOUTHEAST CORNER OF SAID SIMONE TRACT;
THENCE WITH THE EAST LINE OF SAID SIMONE TRACT NORTH 01° DEG. 41' 23" WEST FOR A DISTANCE OF 65.81 FEET TO A POINT BEING THE SOUTHWEST CORNER OF A TRACT OF LAND CONVEYED TO WAYNETOWNE CAR WASH IN DEED MICROFICHE NUMBER 93-0723B03 OF SAID MONTGOMERY COUNTY RECORDS;
THENCE WITH THE SOUTH LINE OF SAID WAYNETOWNE CAR WASH TRACT, NORTH 88° 18' 37" EAST FOR A DISTANCE OF 150.00 FEET TO A POINT ON THE EAST LINE OF SAID WAYNETOWNE ASSOCIATES TRACT;
THENCE WITH THE EAST LINE OF SAID WAYNETOWNE ASSOCIATES TRACT, SOUTH 01° 41' 23" EAST FOR A DISTANCE OF 792.98 FEET TO A POINT ON THE NORTH LINE OF A TRACT OF LAND CONVEYED TO S.S. LITT IN DEED MICROFICHE NUMBER 76-644 D09 OF SAID MONTGOMERY COUNTY DEED RECORDS;
THENCE WITH THE NORTH LINE OF SAID LITT TRACT, SOUTH 88° 15' 00" WEST FOR A DISTANCE OF 420.00 FEET TO THE TRUE POINT OF BEGINNING OF THE DESCRIPTION.

CONTAINING 7.2400 ACRES, BE IT THE SAME, MORE OR LESS, SUBJECT TO ALL LEGAL CONDITIONS, EASEMENTS AND RESTRICTIONS OF RECORD.

PARCEL NO. P70-04005-0100

SCHEDULE BII ITEMS:

ITEMS 1-11 AND 24 ARE NOT SURVEY RELATED.

SCHEDULE BII ITEMS:

12. *EASEMENT DEED FOR WATER MAIN TO OHIO SUBURBAN WATER CO., FILED FOR RECORD SEPTEMBER 25, 1978, IN DMF 78-534C01, OF THE MONTGOMERY COUNTY RECORDS.*
EASEMENTS ARE NOT ON SUBJECT PARCEL BUT ARE SHOWN HEREON
13. *EASEMENT DEED FOR SANITARY SEWER TO OHIO SUBURBAN WATER CO., FILED FOR RECORD SEPTEMBER 25, 1978, IN DMF 78-534 C04, OF THE MONTGOMERY COUNTY RECORDS. CORRECTIVE EASEMENT DEED FILED FOR RECORD NOVEMBER 5, 1979, IN DMF 79-593 A01 OF THE MONTGOMERY COUNTY,OHIO RECORDS. RELEASE OF EASEMENTS FILED FOR RECORD DECEMBER 10, 1979, IN DMF 79-754 E12, OF THE MONTGOMERY COUNTYRECORDS.*
EASEMENTS ARE ON SUBJECT PARCEL AND SHOWN HEREON
14. *EASEMENT DEED FOR WATER MAIN TO OHIO SUBURBAN WATER CO., FILED FOR RECORD SEPTEMBER 25, 1978, IN DMF 78-534C06 OF THE MONTGOMERY COUNTY, OHIO RECORDS. CORRECTIVE EASEMENT DEED FILED FOR RECORD NOVEMBER 5, 1979, IN DMF 79-593 A03 OF THE MONTGOMERY COUNTY, OHIO RECORDS. RELEASE OF EASEMENTS FILED FOR RECORD DECEMBER 10, 1979, IN DMF 79-754 E12, OF THE MONTGOMERY COUNTY RECORDS.*
EASEMENTS ARE ON SUBJECT PARCEL AND SHOWN HEREON
15. *SANITARY SEWER EASEMENT GRANTED TO THOMAS W. KENDALL, TRUSTEE, FILED FOR RECORD AUGUST 7, 1979, IN DMF 79-414C03 OF THE MONTGOMERY COUNTY, OHIO RECORDS.*
EASEMENTS ARE ON SUBJECT PARCEL AND SHOWN HEREON
16. *EASEMENT AGREEMENT BY AND BETWEEN WAYNETOWNE ASSOCIATES AND THOMAS W. KENDELL, TRUSTEE, FILED FOR RECORDAUGUST 8, 1979, IN DMF 79-417 C05, OF THE MONTGOMERY COUNTY RECORDS.*
EASEMENTS ARE ON SUBJECT PARCEL AND SHOWN HEREON
17. *RIGHT OF WAY AND EASEMENT FOR THE TRANSMISSION OF ELECTRIC ENERGY TO THE DAYTON POWER AND LIGHT COMPANY, FILED FOR RECORD SEPTEMBER 8, 1981, IN DMF 81-394 A01 OF THE MONTGOMERY COUNTY, OHIO RECORDS.*
EASEMENTS ARE ON SUBJECT PARCEL AND SHOWN HEREON
18. *EASEMENT DEED FOR A WATER MAIN GRANTED TO THE OHIO SUBURBAN WATER CO., FILED FOR RECORD JANUARY 28, 1983, IN DMF 83-040 D02 OF THE MONTGOMERY COUNTY, OHIO RECORDS.*
EASEMENTS ARE NOT ON SUBJECT PARCEL AND NOT SHOWN HEREON
19. *EASEMENT DEED FOR A SANITARY SEWER GRANTED TO THE OHIO SUBURBAN WATER CO., FILED FOR RECORD JANUARY 28, 1983, IN DMF 83-040 D03 OF THE MONTGOMERY COUNTY, OHIO RECORDS.*
EASEMENTS ARE NOT ON SUBJECT PARCEL AND NOT SHOWN HEREON
20. *RIGHT OF WAY AND EASEMENT FOR GAS, ELECTRIC AND UTILITY LINES FOR FACILITIES GRANTED TO THE DAYTON POWER AND LIGHT COMPANY, FILED FOR RECORD DECEMBER 22, 1988, IN DMF 88-774 E10 OF THE MONTGOMERY COUNTY, OHIO RECORDS.*
EASEMENTS ARE ON SUBJECT PARCEL AND SHOWN HEREON
21. *EASEMENT FOR UNDERGROUND COMMUNICATION SYSTEMS GRANTED TO THE OHIO BELL TELEPHONE COMPANY, FILED FOR RECORD DECEMBER 27, 1988, IN DMF 88-784 E03 OF THE MONTGOMERY COUNTY, OHIO RECORDS.*
EASEMENTS ARE ON SUBJECT PARCEL AND SHOWN HEREON
22. *AGREEMENT CONCERNING DETENTION BY AND BETWEEN NATIONAL AMUSEMENTS, INC. AND WAYNETOWNE ASSOCIATES, FILEDFOR RECORD MARCH 17, 1989, IN DMF 89-140 D12 OF THE MONTGOMERY COUNTY, OHIO RECORDS.*
EASEMENTS ARE NOT ON SUBJECT PARCEL AND NOT SHOWN HEREON
23. *RIGHT OF WAY AND EASEMENT FOR UTILITY LINES OR FACILITIES GRANTED TO THE DAYTON POWER AND LIGHT COMPANY, FILED FOR RECORD JUNE 25, 1996, IN DEED MICROFICHE 96-423 A01 OF THE MONTGOMERY COUNTY, OHIO DEED RECORDS.*
EASEMENTS ARE ON SUBJECT PARCEL AND SHOWN HEREON

SURVEYORS NOTES:

THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY THE SURVEYOR. ALL INFORMATION REGARDING RECORD EASEMENTS AND OTHER DOCUMENTS THAT MIGHT AFFECT THE QUALITY OF TITLE TO THE PARCEL SHOWN HEREON WERE OBTAINED THROUGH A CERTIFIED TITLE COMMITMENT CONDUCTED BY FIDELITY NATIONAL TITLE INSURANCE COMPANY, COMMITMENT NUMBER GLW2000957 WITH AN EFFECTIVE DATE OF AUGUST 13, 2020 AT 8:59 AM.

ALL DATA SOURCES, DOCUMENTS AND RECORDS SHOWN HEREON ARE ON FILE IN THE MONTGOMERY COUNTY RECORDERS OFFICE LOCATED IN DAYTON, OHIO.

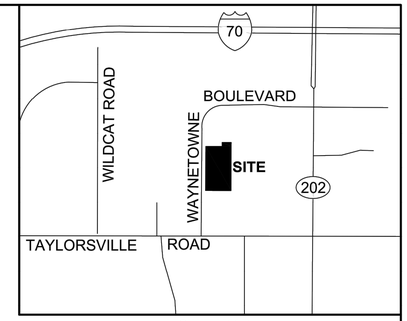
OCCUPATION IN GENERAL MATCHED THE SURVEY

MONUMENTS FOUND ARE IN GOOD CONDITION UNLESS NOTED OTHERWISE

THIS IS NOT A RECORDABLE DOCUMENT FOR TRANSFER OF TITLE

THIS SURVEY MEETS ALL OF THE ACCURACY REQUIREMENTS FOR BOUNDARY SURVEYS AS SET FORTH BY O.A.C. 4733-37.

HORIZONTAL DATUM - U.S. STATE PLANE, NAD83 OHIO SOUTH (3402) ESTABLISHED FROM UTILIZING THE O.D.O.T. V.R.S. NETWORK. COORDINATES TAKEN TO GROUND AT LATITUDE N39°51'59.08948", LONGITUDE W84°08'31.89705", PROJECT HEIGHT 812.013' GROUND SCALE FACTOR 1.00006758962137.



VICINITY MAP:

NOT TO SCALE

TABLE A ITEMS

1. MONUMENTS FOUND OR SET AS SHOWN.

2. ADDRESSES ARE AS SHOWN HEREON.

3. BY INFORMATION PROVIDED BY FEMA FLOOD MAP SERVICE CENTER, THIS PROPERTY WAS FOUND TO BE LOCATED WITHIN FLOOD ZONE X, AN AREA OF MINIMAL FLOOD HAZARD, BY THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 39113C0157E, WHICH BEARS AN EFFECTIVE DATE OF JANUARY 6, 2005.

4. GROSS LAND AREA AS SHOWN.

5. VERTICAL DATUM - U.S. STATE PLANE, NAD83 OHIO SOUTH (3402) ESTABLISHED FROM UTILIZING THE O.D.O.T. V.R.S. NETWORK.

6(b). A ZONING REPORT NOT PROVIDED BY THE INSURER

7(a). EXTERIOR DIMENSIONS OF ALL BUILDINGS AT GROUND LEVEL AS SHOWN.

7(b)(1). SQUARE FOOTAGE OF EXTERIOR FOOTPRINT OF BUILDINGS AT GROUND LEVEL AS SHOWN.

7(c). MEASURED HEIGHT OF BUILDINGS AS SHOWN.

8. SUBSTANTIAL FEATURES OBSERVED IN THE PROCESS OF CONDUCTING THE SURVEY ARE AS SHOWN.

9. STRIPING OF PARKING SPACES AS SHOWN. 499 REGULAR; 11 ADA.

10(a). NO DIVISIONS OR PARTY DESIGNATED BY THE CLIENT WITH RESPECT TO ADJOINING PROPERTIES.

11. THE UTILITIES SHOWN HEREON HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES LOCATED HEREON COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES LOCATED ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE.

OUPS UTILITY LOCATE ORDER A021603359-00A & B021601925-00B

13. NAMES OF ADJOINERS AS SHOWN.

14. THE CLOSEST INTERSECTION IS APPROXIMATELY 600 FEET SOUTH TO TAYLORSVILLE ROAD.

16. NO OBSERVED EVIDENCE OF CURRENT EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS AT THE TIME OF THIS SURVEY.

17. NO PROPOSED CHANGES IN STREET RIGHT OF WAY LINES WERE PROVIDED TO THE SURVEYOR. NO EVIDENCE OF STREET OR SIDEWALK CONSTRUCTION OR REPAIRS OBSERVED AT TIME OF SURVEY.

18. A FIELD DELINEATION OF WETLANDS SURVEY WAS NOT CONDUCTED AT THE TIME OF SURVEY.

19. PLOTTABLE OFFSITE EASEMENTS PROVIDED AS SHOWN.

20. PROFESSIONAL LIABILITY INSURANCE AVAILABLE ON REQUEST.

SURVEYORS CERTIFICATION

TO: LARKSPUR ACQUISITIONS, LLC, B&D INVESTMENTS, III, LTD, AN OHIO LIMITED LIABILITY COMPANY, FIDELITY NATIONAL TITLE INSURANCE COMPANY:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 5, 6(B), 7(A), 7(B)(1), 7(C), 8, 9, 10(A), 11, 13, 14, 16, 17, 18, 19, 20, AND 21 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED IN AUGUST, 2020.

MICHAEL J WILSON, P.S. *DATE*
STATE PROFESSIONAL SURVEYOR #8281

REVISIONS		
NO.	DATE	DESCRIPTION

ALTA/NSPS LAND TITLE SURVEY

B & D INVESTMENTS, III, LTD.

7650 WAYNETOWNE BLVD.
HUBER HEIGHTS

SECTION 29, TOWN 2, RANGE 8
MONTGOMERY COUNTY, OHIO

SCALE: 1" = 60'
DATE: 8/25/2020

DESIGN: N/A
DRAWN: DAS
CHECKED: JKH

CESO
WWW.CESOINC.COM

JOB NO.: 758210
SHEET NO.: 1 OF 1

W:\PROJECTS\KIMLEY HORN\758210-01-HUBER HEIGHTS ALTA\04-SURVEY\DWG\758210 ALTA.DWG - 8/25/2020 4:23 PM

Drawing name: K:\CLB_JDEV\190081001_Larkspur_HuberHeights_OH\2_Design\CAD\PlanSheets\Final Plans\GENERAL NOTES.dwg Layout1 Oct 14, 2021 8:09am by MattSchlett
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GENERAL NOTES

1. EXISTING SITE TOPOGRAPHY, UTILITIES, RIGHT-OF-WAY AND HORIZONTAL CONTROL SHOWN ON THE DRAWINGS WERE OBTAINED FROM A SURVEY PREPARED BY:

   CESO, INC.
   3601 RIGBY ROAD, SUITE 300
   MIAMISBURG, OHIO 45342
   TEL: (937) 829-1655
   EMAIL: SCHOONOVER@CESOINC.COM
   CONTACT: DAVID SCHOONOVER

   COPIES OF THE SURVEY ARE AVAILABLE FROM THE ENGINEER. SITE CONDITIONS MAY HAVE CHANGED SINCE THE SURVEY WAS PREPARED. CONTRACTORS TO VISIT SITE TO FAMILIARIZE THEMSELVES WITH THE CURRENT CONDITIONS.

1. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF HUBER HEIGHTS SPECIFICATIONS AND STANDARD DRAWINGS. IF NO CITY STANDARD IS AVAILABLE, THEN STANDARD DRAWINGS AND SPECIFICATIONS FROM THE MONTGOMERY COUNTY, OHIO ENGINEERING DEPARTMENT OR THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION "CONSTRUCTION & MATERIALS SPECIFICATIONS" (LATEST EDITION) SHALL BE FOLLOWED.
2. ALL UTILITY TRENCH EXCAVATION WITHIN THE EXISTING AND PROPOSED RIGHT-OF-WAY AND EASEMENTS SHALL BE BACKFILLED WITH GRANULAR FILL MATERIAL IN ACCORDANCE WITH CITY SPECIFICATIONS AND COMPACTED BEFORE SUB-GRADE APPROVAL.
3. ALL UNDERGROUND UTILITY SERVICE LATERALS ARE TO BE INSTALLED FROM MAIN TO RIGHT-OF-WAY LINE BEFORE STREETS ARE SURFACED.
4. ALL CATCH BASINS (CURB AND GUTTER INLET) ODOT TYPE 3A UNLESS OTHERWISE SPECIFIED. THE CASTING HOOD SHALL HAVE "DUMP NO WASTE" LETTERING AND FISH IMAGE.
5. ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE ASTM C-76, CLASS IV, UNLESS OTHERWISE NOTED.
6. ALL MANHOLES TO BE TYPE "A", UNLESS OTHERWISE NOTED.
7. CHANNEL BOTTOMS OF ALL MANHOLES.
8. CURB RAMPS TO BE LOCATED AS INDICATED ON PLANS AND CONSTRUCTED IN ACCORDANCE WITH CITY SPECIFICATIONS.
9. CONCRETE CURBING TO BE A TYPE SPECIFIED IN THE CITY OF HUBER HEIGHTS STANDARD DRAWINGS. EXTRUDED OR PRECAST CURB IS NOT PERMITTED.
10. ALL FIELD TILE ENCOUNTERED SHALL BE REPLACED OR CONNECTED TO THE STORM SEWER SYSTEM.
11. SITE GRADING WITHIN SUBDIVISIONS SHALL BE SUCH THAT ALL LOTS WILL READILY DRAIN. LOTS SHALL HAVE A 1.5% MINIMUM SLOPE IN GRASS AREAS. OVERLAND FLOW ON LOTS SHALL BE LIMITED TO A MAXIMUM DISTANCE OF THREE HUNDRED (300) FEET UNLESS APPROVED BY THE CITY ENGINEER.
12. ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATION ACCORDING TO THE BEST AVAILABLE INFORMATION. FORTY-EIGHT (48) HOURS BEFORE DIGGING IS TO COMMENCE, THE CONTRACTORS SHALL NOTIFY THE FOLLOWING AGENCIES: THE OHIO UTILITIES PROTECTION SERVICE (OUPS) AT 1-800-362-2764; THE DAYTON POWER & LIGHT CO. AT 937-866-3303, AND ALL OTHER AGENCIES WHICH MIGHT HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NON-MEMBERS OF OUPS.
13. THE CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO CONTROL SOIL EROSION AND SEDIMENTATION THROUGH THE LIFE OF THE CONTRACT. THESE MAY INVOLVE THE USE OF HAY AND STRAW BALES, DIKES, SEDIMENT PITS, MULCHES, FILTER FABRICS AND OTHER DEVICES AND METHODS. PARTICULAR CARE SHALL BE TAKEN TO AVOID EROSION AND SEDIMENTATION ON EXISTING PAVED AND GRAVELED AREAS. FOR RESIDENTIAL AND SMALL CONSTRUCTION SITES – PRIOR TO ANY SITE DISTURBANCE, THE CONTRACTOR SHALL HAVE IN PLACE EROSION CONTROL MEASURES PER EPA 830-F-15-001 GUIDELINES FOR STORMWATER PREVENTION.
14. ROOF AREA DRAIN LINES SHALL NOT BE EXTENDED THROUGH CURBS BUT SHALL BE DIRECTLY CONNECTED TO THE STORM SEWER SYSTEM.
15. ALL METAL CASTINGS SHALL BE PAINTED WITH TWO COATS OF BLACK ASPHALTUM PAINT.
16. ALL EXISTING MONUMENTS SHALL BE PROTECTED AND OR REFERENCED BY THE CONTRACTOR. MONUMENTS SHOWN ON THE PLANS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS SHOWN ON MONTGOMERY COUNTY STANDARD CONSTRUCTION DRAWING MC-1. MONUMENT BOXES SHALL BE LOCATED AT ROADWAY PI, PC, PT POINTS AS WELL AS CROSS STREETS CENTERLINE.
17. CONSTRUCTION STAKING MUST BE FURNISHED FOR THE CITY INSPECTOR TO VERIFY CONFORMANCE TO THE DESIGN PLAN. CONSTRUCTION STAKING IS REQUIRED AT SUFFICIENT DENSITY TO ENSURE THE CITY INSPECTOR CAN VERIFY THE WORK PERFORMED BY THE CONTRACTOR. CONTACT THE CITY INSPECTOR TO ENSURE ADEQUATE CONSTRUCTION STAKING IS FURNISHED.
18. ALL SURVEY MUST BE PERFORMED BY THE STATE OF OHIO LICENSED SURVEYOR.

SANITARY NOTES

1. THE CONTRACTOR SHALL BE QUALIFIED TO CONSTRUCT SANITARY SEWERS. ALL SUCH WORK SHALL BE CONSTRUCTED ACCORDING TO CITY OF HUBER HEIGHTS SPECIFICATIONS.
2. SANITARY SEWER PIPE AND FITTINGS SHALL BE PVC S3034 SDR 26.
3. SANITARY SEWER PIPE JOINTS SHALL CONFORM TO ASTM D 3212 FOR PVC.
4. ROOF DRAINS, FOUNDATION DRAINS AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.
5. NO CONSTRUCTION SHALL COMMENCE UNTIL ALL PERMITS HAVE BEEN ISSUED.
6. ALL UTILITY TRENCHES WITHIN THE EXISTING OR PROPOSED STREET RIGHT-OF-WAYSHALL BE BACKFILLED WITH COMPACTED GRANULAR MATERIAL CONFORMING TO ODOT 310 IN ACCORDANCE WITH THE CITY SPECIFICATIONS.
7. NO ADDITIONS, DELETIONS OR REVISIONS TO THE SANITARY SEWER ARE TO BE MADE WITHOUT PRIOR WRITTEN APPROVAL BY THE CITY OF HUBER HEIGHTS.
8. WATER LINES CROSSING ANY AND ALL SEWERS SHALL HAVE A MINIMUM VERTICAL SEPARATION OF 18" BETWEEN THE OUTSIDES OF THE WATER MAIN PIPE AND THE SEWER PIPE. ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING SUCH THAT BOTH JOINTS WILL BE EQUIDISTANT AND AS FAR FROM THE SEWER AS POSSIBLE. IF WATER CROSSES BELOW SANITARY SEWERS, THE SEWER MUST BE WATER MAIN MATERIAL FOR THAT SPAN.
9. ALL SERVICE LATERALS SHALL BE PVC SCHEDULE 40 AND ARE TO BE INSTALLED FROM MAIN TO RIGHT OF WAY OR EASEMENT BEFORE STREETS ARE SURFACED.
10. ALL MANHOLES SHALL BE PRECAST IN ACCORDANCE WITH CITY STANDARDS. MANHOLE STEPS SHALL BE PLASTIC. ALL MANHOLE FRAMES AND LIDS SHALL BE DUCTILE IRON TRAFFIC BEARING WITH VENTHOLES TO BE AT THE OPTION OF THE CITY ENGINEER.

WATER NOTES

1. THE CONTRACTOR SHALL BE QUALIFIED TO CONSTRUCT WATER MAINS. ALL WATER LINES AND APPURTENANCES SHALL BE CONSTRUCTED ACCORDING TO CITY OF HUBER HEIGHTS SPECIFICATIONS.
2. WATER MAINS, BENDS AND FITTINGS SHALL BE DUCTILE CAST IRON PIPE AND CONFORM TO ANSI A-21.51 (AWWA C- 151), CLASS 53. BENDS AND TEES SHALL BE RESTRAINED USING MECHANICAL JOINT RESTRAINTS SUCH AS MEGALUG OR APPROVED EQUAL.
3. ALL WATER MAINS SHALL HAVE 4' -6" MINIMUM COVER.
4. NO SERVICE CONNECTIONS SHALL BE MADE TO THE WATER MAIN UNTIL THE MAIN LINE HAS BEEN INSPECTED, TESTED, AND FLUSHED FOR 12 HOURS MINIMUM. NO TAPPING WILL BE PERMITTED IN INCLEMENT WEATHER.
5. NO CONSTRUCTION SHALL COMMENCE UNTIL ALL PERMITS HAVE BEEN ISSUED.
6. ALL UTILITY TRENCHES WITHIN THE EXISTING OR PROPOSED PAVEMENT OR EASEMENTS SHALL BE BACKFILLED WITH COMPACTED GRANULAR MATERIAL CONFORMING TO ODOT 310 IN ACCORDANCE WITH THE CITY SPECIFICATIONS.
7. NO ADDITIONS, DELETIONS, OR REVISIONS TO THE WATER FACILITIES ARE TO BE MADE WITHOUT PRIOR WRITTEN APPROVAL BY THE CITY OF HUBER HEIGHTS.
8. ONLY CITY OF HUBER HEIGHTS OR UNITED WATER PERSONNEL SHALL OPERATE MAIN LINE WATER VALVES.
9. ALL FIRE HYDRANTS SHALL BE LOCATED 2' FROM AND WITHIN 5' OF THE CURB OR EDGE OF PAVEMENT AND 4" OPENING TO FACE THE STREET. THE FIRE HYDRANT IS TO BE INSTALLED AS PER THE DETAIL LOCATED WITHIN THE CITY OF HUBER HEIGHTS STANDARD DRAWINGS.
10. WATER LINES CROSSING ANY AND ALL SEWERS SHALL HAVE A MINIMUM VERTICAL SEPARATION OF 18" BETWEEN THE OUTSIDES OF THE WATER MAIN PIPE AND THE SEWER PIPE. ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING SUCH THAT BOTH JOINTS WILL BE EQUIDISTANT AND AS FAR FROM THE SEWER AS POSSIBLE. IF WATER CROSSES BELOW SANITARY SEWERS, THE SEWER MUST BE WATER MAIN MATERIAL FOR THAT SPAN.
11. ALL SERVICE LATERALS ARE TO BE INSTALLED FROM MAIN TO RIGHT OF WAY OR EASEMENT BEFORE STREETS ARE SURFACED.
12. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING WATER MAINS BEFORE CONSTRUCTION OF NEW WATER MAIN AT PROPOSED CONNECTIONS.
13. ALL GATE VALVES ARE TO BE LOCATED AT TEES OR CROSSES WITH A L' MAXIMUM NIPPLE BETWEEN TEE OR CROSS AND VALVE. ALL PLUGS ARE TO BE CONNECTED TO VALVES EXCEPT WHERE SHOWN ON PLANS. PLUGS SHALL BE TAPPED WITH A 3/4" SHUT OFF VALVE FOR RELEASE OF AIR AND FOR FLUSHING.
14. ALL VALVES AND FIRE HYDRANTS SHALL HAVE RIGHT HAND (CLOCKWISE) OPENING DIRECTION.
15. GATE VALVES SHALL HAVE RESILIENT SEATS RATHER THAN BRASS SEATS. OPERATING RODS SHALL HAVE O-RING WATER SEALS RATHER THAN PACKING GLANDS.
16. ALL FIRE HYDRANTS IN SINGLE FAMILY RESIDENTIAL DISTRICTS SHALL BE MUELLER CENTURION 250 MODEL A- 423 WITH 5-1 1/4" MAIN VALVE OPENING WITH ONE 5" STORTZ OUTLET WITH CAP AND 2 2-½" OUTLETS WITH CITY OF DAYTON THREADS.
17. ALL FIRE HYDRANTS IN MULTI FAMILY RESIDENTIAL AND COMMERCIAL DISTRICTS SHALL BE MUELLER CENTURION 200 MODEL A-425 WITH 5-1 1/4" MAIN VALVE OPENING TWO WAY WITH ONE 4" STORTZ OUTLET WITH CAP AND ONE 5" STORTZ OUTLET WITH CAP. OPERATING NUT TO BE A 1" SQUARE.
18. THE FIRE HYDRANT BREAKAWAY FLANGE SHALL BE LOCATED 4" ABOVE THE TOP OF CURB.
19. FIRE HYDRANTS SHALL BE PRIMED WITH RED OXIDE PRIMER AND PAINTED WITH TWO (2) COATS OF RED ENAMEL FROM THE BREAK-AWAY FLANGE TO THE TOP OF THE HYDRANT. LOWER SECTIONS OF THE HYDRANT, INCLUDING THE BARREL SHALL BE PAINTED WITH AN ASPHALTUM PAINT.
20. WATER SERVICE LINES SHALL BE 1" TYPE K COPPER PER CITY STANDARDS. METER YOKES AND METER VAULTS SHALL BE PER MONTGOMERY COUNTY STANDARDS.
21. BOLLARDS, WHERE REQUIRED, SHALL BE CONCRETE FILLED 8" DIAMETER POSTS WITH FOUNDATIONS SET 42" BELOW GRADE IN A CONCRETE FILLED EXCAVATION.
22. ALL HYDRANTS SHALL HAVE CITY OF DAYTON THREADS RATHER THAN NATIONAL STANDARD THREADS EXCEPT FOR THE STREAMER CONNECTION WHICH SHALL BE A STORTZ FITTING.

EARTHWORK NOTES

1. GENERAL
   1.1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE SOIL AND GROUNDWATER CONDITIONS AT THE SITE.
   1.2. ANY QUANTITIES IN THE BID PROPOSAL ARE INTENDED AS A GUIDE FOR THE CONTRACTOR'S USE IN DETERMINING THE SCOPE OF THE COMPLETED PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALL MATERIAL QUANTITIES AND BE KNOWLEDGEABLE OF ALL SITE CONDITIONS.
   1.3. THE CONTRACTOR WILL NOTE THAT THE ELEVATIONS SHOWN ON THE CONSTRUCTION PLANS ARE FINISHED GRADE AND THAT PAVEMENT THICKNESS, TOPSOIL, ETC., MUST BE ACCOUNTED FOR.
   1.4. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE DURING CONSTRUCTION AND PREVENT STORMWATER FROM RUNNING INTO OR STANDING IN EXCAVATED AREAS. THE FAILURE TO PROVIDE PROPER DRAINAGE WILL NEGATE ANY POSSIBLE ADDED COMPENSATION REQUESTED DUE TO DELAYS OR UNSUITABLE MATERIALS CREATED AS A RESULT THEREOF. FINAL GRADES SHALL BE PROTECTED AGAINST DAMAGE FROM EROSION, SEDIMENTATION, AND TRAFFIC.
   1.5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF THE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES. THE INITIAL ESTABLISHMENT OF EROSION CONTROL PROCEDURES AND THE PLACEMENT OF SILT AND FILTER FENCING, ETC., TO PROTECT ADJACENT PROPERTY, WETLANDS, ETC., SHALL OCCUR BEFORE GRADING BEGINS.
   1.6. PRIOR TO COMMENCEMENT OF GRADING ACTIVITIES, THE CONTRACTOR SHALL ERECT A CONSTRUCTION FENCE AROUND ANY TREE DESIGNATED TO BE PRESERVED. SAID FENCE SHALL BE PLACED IN A CIRCLE CENTERED AROUND THE TREE, THE DIAMETER OF WHICH SHALL BE SUCH THAT THE ENTIRE DRIP ZONE (EXTENT OF FURTHEST EXTENDING BRANCHES) SHALL BE WITHIN THE FENCE LIMITS. THE EXISTING GRADE WITHIN THE FENCED AREA SHALL NOT BE DISTURBED.
2. TOPSOIL EXCAVATION INCLUDES:
   2.1. EXCAVATION OF TOPSOIL AND OTHER STRUCTURALLY UNSUITABLE MATERIALS WITHIN THOSE AREAS THAT WILL REQUIRE EARTH EXCAVATION OR COMPACTED EARTH FILL MATERIAL. EXISTING VEGETATION SHALL BE REMOVED PRIOR TO STRIPPING TOPSOIL OR FILLING AREAS.
   2.2. PLACEMENT OF EXCAVATED MATERIAL IN OWNER-DESIGNATED AREAS FOR FUTURE USE WITHIN AREAS TO BE LANDSCAPED AND THOSE AREAS NOT REQUIRING STRUCTURAL FILL MATERIAL. PROVIDE NECESSARY EROSION CONTROL MEASURES FOR STOCKPILE.
   2.3. TOPSOIL STOCKPILED FOR RESPREAD SHALL BE FREE OF CLAY AND SHALL NOT CONTAIN ANY OF THE TRANSITIONAL MATERIAL BETWEEN THE TOPSOIL AND CLAY. THE TRANSITIONAL MATERIAL SHALL BE USED IN NON-STRUCTURAL FILL AREAS OR DISPOSED OF OFF-SITE.
   2.4. TOPSOIL RESPREAD SHALL INCLUDE HAULING AND SPREADING SIX (6) INCHES OF TOPSOIL DIRECTLY OVER AREAS TO BE LANDSCAPED WHERE SHOWN ON THE PLANS OR AS DIRECTED BY THE OWNER.
   2.5. MODERATE COMPACTION IS REQUIRED IN NON-STRUCTURAL FILL AREAS.
3. EARTH EXCAVATION INCLUDES:
   3.1. EXCAVATION OF SUBSURFACE MATERIALS WHICH ARE SUITABLE FOR USE AS STRUCTURAL FILL. THE EXCAVATION SHALL BE TO WITHIN A TOLERANCE OF 0.1 FEET OF THE PLAN SUBGRADE ELEVATIONS WHILE MAINTAINING PROPER DRAINAGE. THE TOLERANCE WITHIN PAVEMENT AREAS SHALL BE SUCH THAT THE EARTH MATERIALS SHALL "BALANCE" DURING THE FINE GRADING OPERATION.
   3.2. PLACEMENT OF SUITABLE MATERIALS SHALL BE WITHIN THOSE AREAS REQUIRING STRUCTURAL FILL IN ORDER TO ACHIEVE THE PLAN SUBGRADE ELEVATIONS TO WITHIN A TOLERANCE OF 0.1 FEET. THE FILL MATERIALS SHALL BE PLACED IN LOOSE LIFTS THAT SHALL NOT EXCEED EIGHT (8) INCHES IN THICKNESS, AND THE WATER CONTENT SHALL BE ADJUSTED IN ORDER TO ACHIEVE REQUIRED COMPACTION.
   3.3. STRUCTURAL FILL MATERIAL MAY BE PLACED WITHIN THOSE PORTIONS OF THE SITE NOT REQUIRING STRUCTURAL FILL, WITHIN SIX (6) INCHES OF THE PLAN FINISHED GRADE ELEVATION. IN AREAS REQUIRING STRUCTURAL FILL, HOWEVER, THIS MATERIAL SHALL NOT BE PLACED OVER TOPSOIL OR OTHER UNSUITABLE MATERIALS UNLESS SPECIFICALLY DIRECTED BY A SOILS ENGINEER WITH THE CONCURRENCE OF THE OWNER.
   3.4. COMPACTION OF SUITABLE MATERIALS SHALL BE TO AT LEAST 93% OF THE MODIFIED PROCTOR DRY DENSITY WITHIN PROPOSED PAVEMENT AREAS, SIDEWALK, ETC. COMPACTION SHALL BE AT LEAST 95% OF THE MODIFIED PROCTOR WITHIN PROPOSED BUILDING PAD AREAS.
4. UNSUITABLE MATERIAL: UNSUITABLE MATERIALS SHALL BE CONSIDERED MATERIAL THAT IS NOT SUITABLE FOR THE SUPPORT OF PAVEMENT AND BUILDING CONSTRUCTION, AND IS ENCOUNTERED BELOW NORMAL TOPSOIL DEPTHS AND THE PROPOSED SUBGRADE ELEVATION. THE DECISION TO REMOVE SAID MATERIAL AND TO WHAT EXTENT SHALL BE MADE BY THE ENGINEER WITH THE CONCURRENCE OF THE OWNER.
5. MISCELLANEOUS. THE CONTRACTOR SHALL:
   5.1. SPREAD AND COMPACT UNIFORMLY TO THE DEGREE SPECIFIED ALL EXCESS TRENCH SPOIL AFTER COMPLETION OF THE UNDERGROUND IMPROVEMENTS.
   5.2. SCARIFY, DISC, AERATE, AND COMPACT, TO THE DEGREE SPECIFIED, THE UPPER TWELVE (12) INCHES OF THE SUITABLE SUBGRADE MATERIAL IN ALL AREAS THAT MAY BE SOFT DUE TO EXCESS MOISTURE CONTENT. THIS APPLIES TO CUT AREAS AS WELL AS FILL AREAS.
   5.3. PROVIDE WATER TO ADD TO DRY MATERIAL IN ORDER TO ADJUST THE MOISTURE CONTENT FOR THE PURPOSE OF ACHIEVING THE SPECIFIED COMPACTION.
   5.4. BACKFILL THE CURB AND GUTTER AFTER ITS CONSTRUCTION AND PRIOR TO THE PLACEMENT OF THE BASE COURSE MATERIAL.
6. TESTING AND FINAL ACCEPTANCE
   6.1. THE CONTRACTOR SHALL PROVIDE AS A MINIMUM A FULLY LOADED SIX-WHEEL TANDEM AXLE TRUCK FOR PROOF ROLLING THE PAVEMENT SUBGRADE PRIOR TO THE PLACEMENT OF THE CURB AND GUTTER AND THE BASE MATERIAL. THIS SHALL BE WITNESSED BY THE ENGINEER AND THE OWNER. (SEE PAVING SPECIFICATION.)
   6.2. ANY UNSUITABLE AREA ENCOUNTERED AS A RESULT OF PROOF ROLLING SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL OR OTHERWISE CORRECTED AND APPROVED BY THE ENGINEER.

PAVING NOTES

1. GENERAL
   1.1. PAVING WORK INCLUDES FINAL SUBGRADE SHAPING, PREPARATION, AND COMPACTION; PLACEMENT OF SUBBASE OR BASE COURSE MATERIALS; BITUMINOUS BINDER AND/OR SURFACE COURSES; FORMING, FINISHING, AND CURING CONCRETE PAVEMENT, CURBS, AND WALKS; AND FINAL CLEAN-UP AND ALL RELATED WORK.
   1.2. COMPACTION REQUIREMENTS [REFERENCE ASTM D-1557 (MODIFIED PROCTOR)]: SUBGRADE = 93%; SUBBASE = 93%; AGGREGATE BASE COURSE = 95%; BITUMINOUS COURSES = 95% OF MAXIMUM DENSITY, PER OHIO DEPARTMENT OF TRANSPORTATION (ODOT) HIGHWAY STANDARDS.
   1.3. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROVIDE PROPER BARRICADING WARNING DEVICES, AND THE SAFE MANAGEMENT OF TRAFFIC WITHIN THE AREA OF CONSTRUCTION. ALL SUCH DEVICES AND THEIR INSTALLATION SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION, AND IN ACCORDANCE WITH THE CITY OF HUBER HEIGHTS CODE.
2. SUBGRADE PREPARATION
   2.1. EARTHWORK FOR PROPOSED PAVEMENT SUBGRADE SHALL BE FINISHED TO WITHIN 0.1 FOOT, PLUS OR MINUS, OF PLAN ELEVATION. THE CONTRACTOR SHALL CONFIRM THAT THE SUBGRADE HAS BEEN PROPERLY PREPARED AND THAT THE FINISHED TOP SUBGRADE ELEVATION HAS BEEN GRADED WITHIN TOLERANCES ALLOWED IN THESE SPECIFICATIONS, UNLESS THE CONTRACTOR ADVISES THE ENGINEER IN WRITING PRIOR TO FINE GRADING FOR BASE COURSE CONSTRUCTION. IT IS UNDERSTOOD THAT THE CONTRACTOR HAS APPROVED AND ACCEPTS THE RESPONSIBILITY FOR THE SUBGRADE.
   2.2. PRIOR TO THE PLACEMENT OF THE BASE COURSE, THE SUBGRADE MUST BE PROOF-ROLLED AND INSPECTED FOR UNSUITABLE MATERIALS AND/OR EXCESSIVE MOVEMENT. IF UNSUITABLE SUBGRADE IS ENCOUNTERED, IT SHALL BE CORRECTED. THIS MAY INCLUDE ONE OR MORE OF THE FOLLOWING METHODS:
      2.2.1. SCARIFY, DISC, AND AERATE.
      2.2.2. REMOVE AND REPLACE WITH STRUCTURAL CLAY FILL.
      2.2.3. REMOVE AND REPLACE WITH GRANULAR MATERIAL.
      2.2.4. USE OF GEOTEXTILE FABRIC.

      MAXIMUM DEFLECTION ALLOWED IN ISOLATED AREAS MAY BE ONE-QUARTER (1/4) INCH TO ONE-HALF (1/2) INCH IF NO DEFLECTION OCCURS OVER THE MAJORITY OF THE AREA.
   2.3. PRIOR TO THE CONSTRUCTION OF THE CURB AND GUTTER AND THE PLACEMENT OF THE BASE MATERIAL, THE PAVEMENT AREA SHALL BE FINE-GRADED TO WITHIN 0.04 FEET (1/2 INCH) OF FINAL SUBGRADE ELEVATION, TO A POINT TWO (2) FEET BEYOND THE BACK OF THE CURB, SO AS TO ENSURE THE PROPER THICKNESS OF PAVEMENT COURSES. NO CLAIMS FOR EXCESS QUANTITY OF BASE MATERIALS DUE TO IMPROPER SUBGRADE PREPARATION WILL BE HONORED.
   2.4. PRIOR TO PLACEMENT OF THE BASE COURSE, THE SUBGRADE SHALL BE APPROVED BY THE TESTING ENGINEER.
3. CONCRETE WORK
   3.1. ALL EXTERIOR CONCRETE SHALL BE PORTLAND CEMENT CONCRETE WITH AIR ENTRAINMENT OF NOT LESS THAN FIVE (5%) OR MORE THAN EIGHT (8%) PERCENT. CONCRETE SHALL BE A MINIMUM OF SIX (6) BAG MIX AND SHALL DEVELOP A MINIMUM OF 3,500 PSI COMPRESSIVE STRENGTH AT FOURTEEN (14) DAYS AND A MINIMUM OF 4,000 PSI COMPRESSIVE STRENGTH AT TWENTY-EIGHT (28) DAYS. ALL CONCRETE SHALL BE BROOM-FINISHED PERPENDICULAR TO THE DIRECTION OF TRAVEL.
   3.2. CONCRETE CURB AND/OR COMBINATION CURB AND GUTTER SHALL BE OF THE TYPE SHOWN ON THE PLANS. THE CONTRACTOR IS CAUTIONED TO REFER TO THE CONSTRUCTION STANDARDS AND THE PAVEMENT CROSS SECTION TO DETERMINE THE GUTTER FLAG THICKNESS AND THE AGGREGATE BASE COURSE THICKNESS BENEATH THE CURB AND GUTTER. PRE-MOLDED FIBER EXPANSION JOINTS, WITH TWO 3/4-INCH BY 18-INCH EPOXY-COATED STEEL DOWEL BARS, SHALL BE GREASED AND FITTED WITH METAL EXPANSION TUBES
   3.3. CURBS SHALL BE DEPRESSED AND MEET THE SLOPE REQUIREMENTS OF THE OHIO ACCESSIBILITY CODE AT LOCATIONS WHERE PUBLIC WALKS INTERSECT CURB LINES AND OTHER LOCATIONS, AS DIRECTED, FOR THE PURPOSE OF PROVIDING ACCESSIBILITY.
   3.4. THE CURBS SHALL BE BACKFILLED AFTER THEIR CONSTRUCTION AND PRIOR TO THE PLACEMENT OF THE BASE COURSE.
   3.5. CONCRETE SIDEWALK SHALL BE IN ACCORDANCE WITH THE ABOVE AND THE PLANS. PROVIDE SCORED JOINTS AT 5-FOOT INTERVALS AND 1/2-INCH PRE-MOLDED FIBER EXPANSION JOINTS AT 20-FOOT INTERVALS AND ADJACENT TO CONCRETE CURBS, DRIVEWAYS, FOUNDATIONS, AND OTHER STRUCTURES.
   3.6. CONCRETE CURING AND PROTECTION SHALL BE PER ODOT STANDARDS. TWO (2) COATS OF ODOT APPROVED CURING AGENT SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES.
   3.7. THE COST OF AGGREGATE BASE OR SUBBASE UNDER CONCRETE WORK SHALL BE INCLUDED IN THE COST OF THE RESPECTIVE CONCRETE ITEM.
4. FLEXIBLE PAVEMENT
   4.1. THE PAVEMENT MATERIALS FOR BITUMINOUS STREETS, PARKING LOTS, AND DRIVE AISLES SHALL BE AS DETAILED ON THE PLANS. UNLESS OTHERWISE SHOWN ON THE PLANS, THE FLEXIBLE PAVEMENTS SHALL CONSIST OF AGGREGATE BASE COURSE, ODOT TYPE 304, BITUMINOUS CONCRETE BINDER COURSE, ODOT 448 TYPE 2; AND BITUMINOUS CONCRETE SURFACE COURSE, ODOT 448 TYPE 1, OF THE THICKNESS AND MATERIALS SPECIFIED ON THE PLANS. THICKNESSES SPECIFIED SHALL BE CONSIDERED TO BE THE MINIMUM COMPACTED THICKNESS.
   4.2. PRIOR TO PLACEMENT OF THE SURFACE COURSE, THE BINDER COURSE SHALL BE CLEANED AND TACK-COATED IF DUSTY OR DIRTY. ALL DAMAGED AREAS IN THE BINDER, BASE, OR CURB SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER PRIOR TO LAYING THE SURFACE COURSE. THE CONTRACTOR SHALL PROVIDE WHATEVER EQUIPMENT AND STAFF NECESSARY, INCLUDING THE USE OF POWER BROOMS IF REQUIRED BY THE OWNER, TO PREPARE THE PAVEMENT FOR APPLICATION OF THE SURFACE COURSE. THE TACK COAT SHALL BE UNIFORMLY APPLIED TO THE BINDER COURSE AT A RATE OF 0.05 TO 0.10 GALLONS PER SQUARE YARD. TACK COAT SHALL BE AS PER ODOT STANDARDS.
   4.3. SEAMS IN BAM, BINDER, AND SURFACE COURSE SHALL BE STAGGERED A MINIMUM OF 6 INCHES.
5. TESTING AND FINAL ACCEPTANCE.
   5.1. THE CONTRACTOR SHALL FOLLOW THE QUALITY CONTROL TESTING PROGRAM FOR CONCRETE AND PAVEMENT MATERIALS ESTABLISHED BY THE ENGINEER.
   5.2. PRIOR TO PLACEMENT OF THE BITUMINOUS CONCRETE SURFACE COURSE, THE CONTRACTOR, WHEN REQUIRED BY THE CITY OF HUBER HEIGHTS, SHALL OBTAIN SPECIMENS OF THE BINDER COURSE WITH A CORE DRILL WHERE DIRECTED, FOR THE PURPOSE OF THICKNESS VERIFICATION.
   5.3. WHEN REQUIRED BY THE CITY OF HUBER HEIGHTS, THE CONTRACTOR SHALL OBTAIN SPECIMENS OF THE FULL DEPTH BITUMINOUS CONCRETE PAVEMENT STRUCTURE WITH A CORE DRILL WHERE DIRECTED IN ORDER TO CONFIRM THE PLAN THICKNESS. DEFICIENCIES IN THICKNESS SHALL BE ADJUSTED FOR BY THE METHOD REQUIRED BY ODOT STANDARDS.
   5.4. FINAL ACCEPTANCE OF THE TOTAL PAVEMENT INSTALLATION SHALL BE SUBJECT TO THE TESTING AND CHECKING REQUIREMENTS CITED ABOVE.
6. ALL MATERIAL AND CONSTRUCTION SHALL CONFORM TO THE CITY OF HUBER HEIGHTS CODE. WHEN CONFLICTS ARISE BETWEEN MUNICIPAL CODE, GENERAL NOTES AND SPECIFICATIONS, THE MORE STRINGENT SHALL TAKE PRECEDENCE.

SIGNAGE AND PAVEMENT MARKING NOTES

1. ALL SIGNING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE OHIO DEPARTMENT OF TRANSPORTATION (ODOT) STANDARDS.
2. SIGNS: SIGNS SHALL BE CONSTRUCTED OF 0.080-INCH THICK FLAT ALUMINUM PANELS WITH REFLECTORIZED LEGEND ON THE FACE. LEGEND SHALL BE IN ACCORDANCE WITH THE MUTCD.
3. POSTS: SIGN POSTS SHALL BE A HEAVY-DUTY STEEL "U" SHAPED CHANNEL WEIGHING 3.0 POUNDS/FOOT, SUCH AS A TYPE B METAL POST, AS PER THE IDOT STANDARDS (OR 2-INCH PERFORATED STEEL TUBE).
4. SIGNS AND POSTS SHALL BE INSTALLED IN ACCORDANCE WITH ODOT STANDARDS.
5. PAVEMENT MARKINGS: ALL PAVEMENT MARKINGS IN THE PUBLIC RIGHT-OF-WAY, SUCH AS STOP LINES, CENTERLINES, CROSSWALKS, AND DIRECTIONAL ARROWS, SHALL BE REFLECTORIZED THERMOPLASTIC.
6. PAVEMENT MARKINGS ON BIKE PATHS, PARKING LOT STALLS, AND SIMILAR "LOW-WEAR" APPLICATIONS, SHALL BE PAINT IN ACCORDANCE WITH ODOT STANDARDS.
7. COLOR, WIDTH, STYLE, AND SIZE OF ALL MARKINGS SHALL BE IN ACCORDANCE WITH THE MUTCD AND LOCAL CODE. STANDARD PARKING SPACES SHALL BE PAINTED WHITE OR YELLOW PER LOCAL CODE.
8. THERMOPLASTIC MARKINGS SHALL BE INSTALLED WHEN THE PAVEMENT TEMPERATURE IS 55 DEGREES FAHRENHEIT AND RISING. PAINT MARKINGS MAY BE INSTALLED WHEN THE AIR TEMPERATURE IS 50 DEGREES FAHRENHEIT AND RISING.

STORM SEWER NOTES

1. STORM SEWER PIPE: ALL STORM SEWER PIPE MATERIAL, SIZE AND TYPE SHALL BE INSTALLED AS INDICATED ON THE UTILITY PLAN. UNLESS OTHERWISE NOTED ON THE PLANS, ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE PIPE, IN ACCORDANCE WITH ODOT STANDARD SPECIFICATIONS FOR DETERMINING PIPE CLASS AND CONFORMING TO ASTM C76. ANY CHANGES TO THE PIPE MATERIAL, SIZE AND TYPE MUST BE APPROVED BY THE OWNER, ENGINEER AND MONTGOMERY COUNTY PRIOR TO ORDERING MATERIALS

Drawing name: K:\CLB_LDEV\190081001-Larkspur_Huberheights_SW\2 Design\CAD\PlanSheets\Final Plans\DEMOLITION PLAN.dwg Layout1 Oct 14, 2021 8:08am by: MattShiflett
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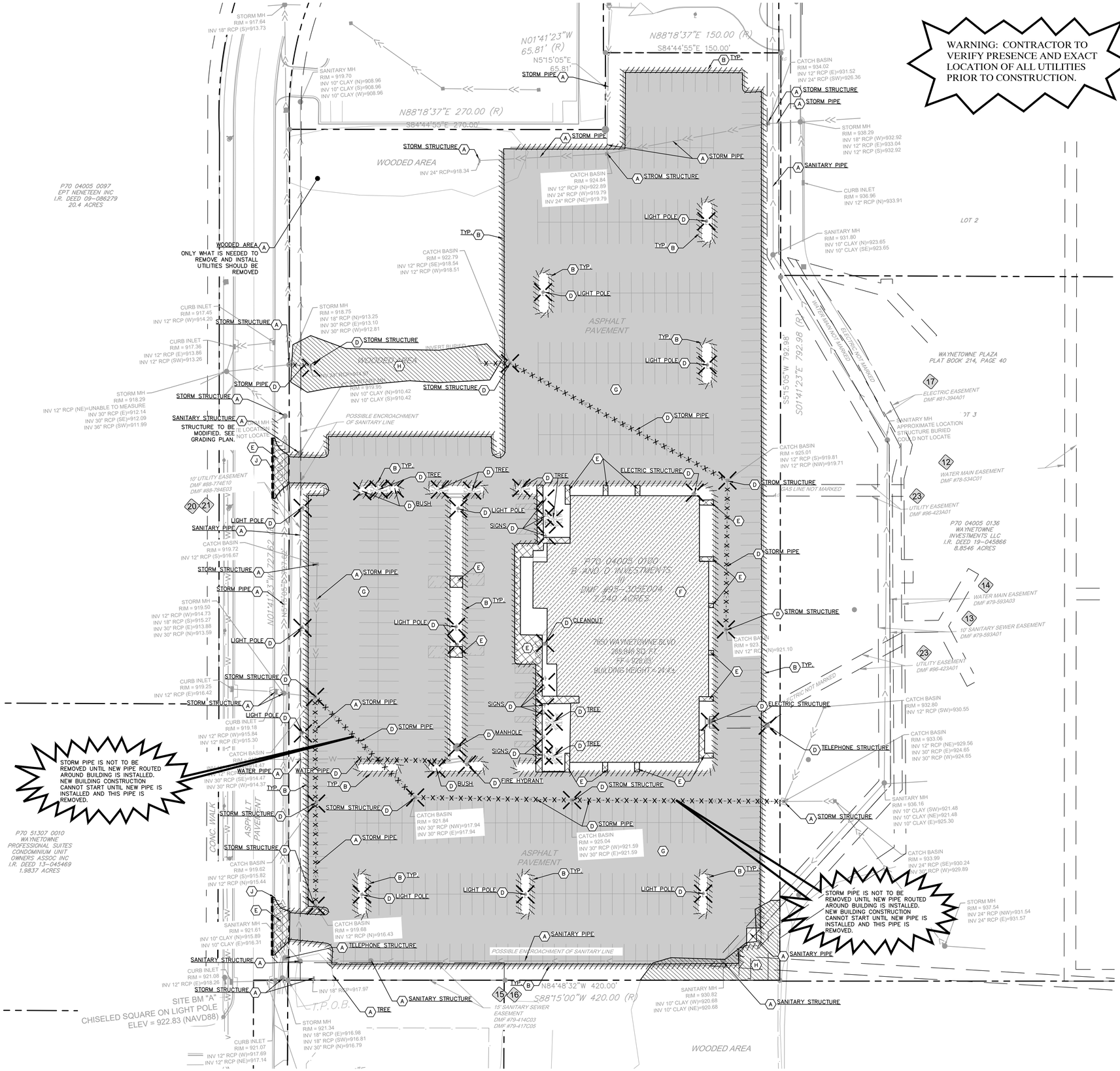

WARNING: CONTRACTOR TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

NORTH

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DEMOLITION NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF THE EXISTING STRUCTURES, RELATED UTILITIES, PAVING, AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED. CONTRACTOR TO CONTACT UTILITY COMPANIES TO TURN OFF ALL SERVICES AS SOON AS PROJECT IS AWARDED.
2. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
3. THE GENERAL CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT. CONTRACTOR SHALL NOT DEMOLISH ANYTHING OUTSIDE THE OWNERS LEASE/PROPERTY LINE UNLESS SPECIFICALLY MENTIONED ON THIS SHEET.
4. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
5. IF DEMOLITION OR CONSTRUCTION ON SITE WILL INTERFERE WITH THE ADJACENT PROPERTY OWNER'S TRAFFIC FLOW, THE CONTRACTOR SHALL COORDINATE WITH ADJACENT PROPERTY OWNER, TO MINIMIZE THE IMPACT ON TRAFFIC FLOW. TEMPORARY RE-ROUTING OF TRAFFIC IS TO BE ACCOMPLISHED BY USING ODOT APPROVED TRAFFIC BARRICADES, BARRELS, AND/OR CONES. TEMPORARY SIGNAGE AND FLAGMEN MAY BE ALSO NECESSARY.
6. QUANTITIES DEPICTED ON THIS SHEET SHALL SERVE AS A GUIDE ONLY. CONTRACTOR TO VERIFY ALL DEMOLITION QUANTITIES.
7. REFER TO GEOTECHNICAL REPORT PROVIDED BY OTHERS FOR ALL SUBSURFACE INFORMATION.
8. CONTRACTOR SHALL BEGIN CONSTRUCTION OF ANY LIGHT POLE BASES FOR RELOCATED LIGHT FIXTURES AND RELOCATION OF ELECTRICAL SYSTEM AS SOON AS DEMOLITION BEGINS. CONTRACTOR SHALL BE AWARE THAT INTERRUPTION OF POWER TO ANY LIGHT POLES OR SIGNS SHALL NOT EXCEED 24 HOURS.
9. EROSION CONTROL MUST BE ESTABLISHED PRIOR TO ANY WORK ON SITE INCLUDING DEMOLITION.
10. THE EXTENT OF SITE DEMOLITION WORK IS AS SHOWN ON THE CONTRACT DOCUMENTS AND AS SPECIFIED HEREIN.
11. CONTRACTOR MUST RECEIVE APPROVAL FROM CIVIL ENGINEER AND GEOTECHNICAL ENGINEER FOR THE MATERIAL TYPE AND USE IF CONTRACTOR DESIRES TO REUSE DEMOLISHED SITE PAVEMENT AS STRUCTURAL FILL.
12. EXISTING UTILITIES, WHICH DO NOT SERVICE STRUCTURES BEING DEMOLISHED, ARE TO BE KEPT IN SERVICE AND PROTECTED AGAINST DAMAGE DURING DEMOLITION OPERATIONS. CONTRACTOR SHALL ARRANGE FOR SHUT-OFF OF UTILITIES SERVING STRUCTURES TO BE DEMOLISHED. CONTRACTOR IS RESPONSIBLE FOR TURNING OFF, DISCONNECTING, AND SEALING INDICATED UTILITIES BEFORE STARTING DEMOLITION OPERATIONS. EXISTING UTILITIES TO BE ABANDONED ARE TO BE CAPPED AT BOTH ENDS AND FILLED WITH APPROVED EQUAL. ALL UNDERGROUND UTILITIES TO BE REMOVED ARE TO BE BACKFILLED WITH ENGINEERED FILL OR SELECT EXCAVATED MATERIAL, AS APPROVED BY THE GEOTECHNICAL ENGINEER, TO 95% OF MODIFIED PROCTOR DENSITY WITHIN PAVED AREAS AND TO 90% OF MODIFIED PROCTOR DENSITY FOR GREEN SPACE AREAS, IN ACCORDANCE WITH THE EARTHWORK SPECIFICATIONS. ALL PRIVATE UTILITIES (ELECTRIC, CABLE, TELEPHONE, FIBER OPTIC, GAS) SHALL BE REMOVED AND RELOCATED PER THE UTILITY OWNER AND THE LOCAL MUNICIPALITY'S REQUIREMENTS.
13. UNDERGROUND UTILITIES SHOWN ARE BASED ON ATLASES AND AVAILABLE INFORMATION PRESENTED AT THE TIME OF SURVEY. CONTRACTOR SHOULD CALL "811" (1-800-362-2764) TO COORDINATE FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES BEFORE ORDERING MATERIALS OR COMMENCING CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES IMMEDIATELY. CONTRACTOR SHALL LOCATE AND PROTECT EXISTING UNDERGROUND AND OVERHEAD UTILITIES DURING CONSTRUCTION. UTILITY PROTECTION SHALL BE COORDINATED WITH THE RESPECTIVE UTILITY OWNER AND AS DIRECTED BY THE GOVERNING MUNICIPALITY. DAMAGED CABLES/CONDUITS SHALL BE REPLACED IMMEDIATELY. ALL EXISTING STRUCTURES TO REMAIN SHALL BE PROTECTED THROUGHOUT THE CONSTRUCTION PROCESS. ALL DAMAGED STRUCTURES SHALL BE REPLACED IN-KIND AND THEIR REPLACEMENT COST SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. PROPER NOTIFICATION TO THE OWNERS OF THE EXISTING UTILITIES SHALL BE MADE AT LEAST 48 HOURS BEFORE CONSTRUCTION COMMENCES.
14. USE WATER SPRINKLING, TEMPORARY ENCLOSURES, AND OTHER SUITABLE METHODS TO LIMIT DUST AND DIRT RISING AND SCATTERING IN THE AIR TO THE LOWEST LEVEL. COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION. SEE EROSION CONTROL SHEETS FOR FURTHER EROSION CONTROL REQUIREMENTS.
15. COMPLETELY FILL BELOW-GRADE AREAS AND VOIDS RESULTING FROM DEMOLITION OF STRUCTURES TO THE FINAL LINES AND GRADES SHOWN ON THE CONTRACT DOCUMENTS. BACKFILL MATERIAL SHALL BE GEOTECHNICAL APPROVED CRUSHED LIMESTONE. USE SATISFACTORY SOIL MATERIALS CONSISTING OF STONE, GRAVEL AND SAND, FREE FROM DEBRIS, TRASH, FROZEN MATERIALS, ROOTS AND OTHER ORGANIC MATTER. PRIOR TO PLACEMENT OF FILL MATERIALS, ENSURE THAT AREAS TO BE FILLED ARE FREE OF STANDING WATER, FROST, FROZEN MATERIAL, TRASH AND DEBRIS. PLACE FILL MATERIALS IN HORIZONTAL LAYERS NOT EXCEEDING 9" IN LOOSE DEPTH. COMPACT EACH LAYER AT OPTIMUM MOISTURE CONTENT OF FILL MATERIAL TO 95% OF MODIFIED PROCTOR DENSITY UNLESS SUBSEQUENT EXCAVATION FOR NEW WORK IS REQUIRED.

DEMOLITION LEGEND

A	ITEM TO REMAIN, PROTECT DURING CONSTRUCTION
B	CURB REMOVAL
C	UTILITY REMOVAL
D	ITEM TO BE REMOVED
E	CONCRETE REMOVAL
F	BUILDING REMOVAL
G	ASPHALT REMOVAL
H	LANDSCAPE REMOVAL
I	SAWCUT LINE
J	ITEM TO BE RELOCATED

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Larkspur Properties
REAL ESTATE PARTNERSHIP

DEMOLITION PLAN

DETAILED DEVELOPMENT PLANS

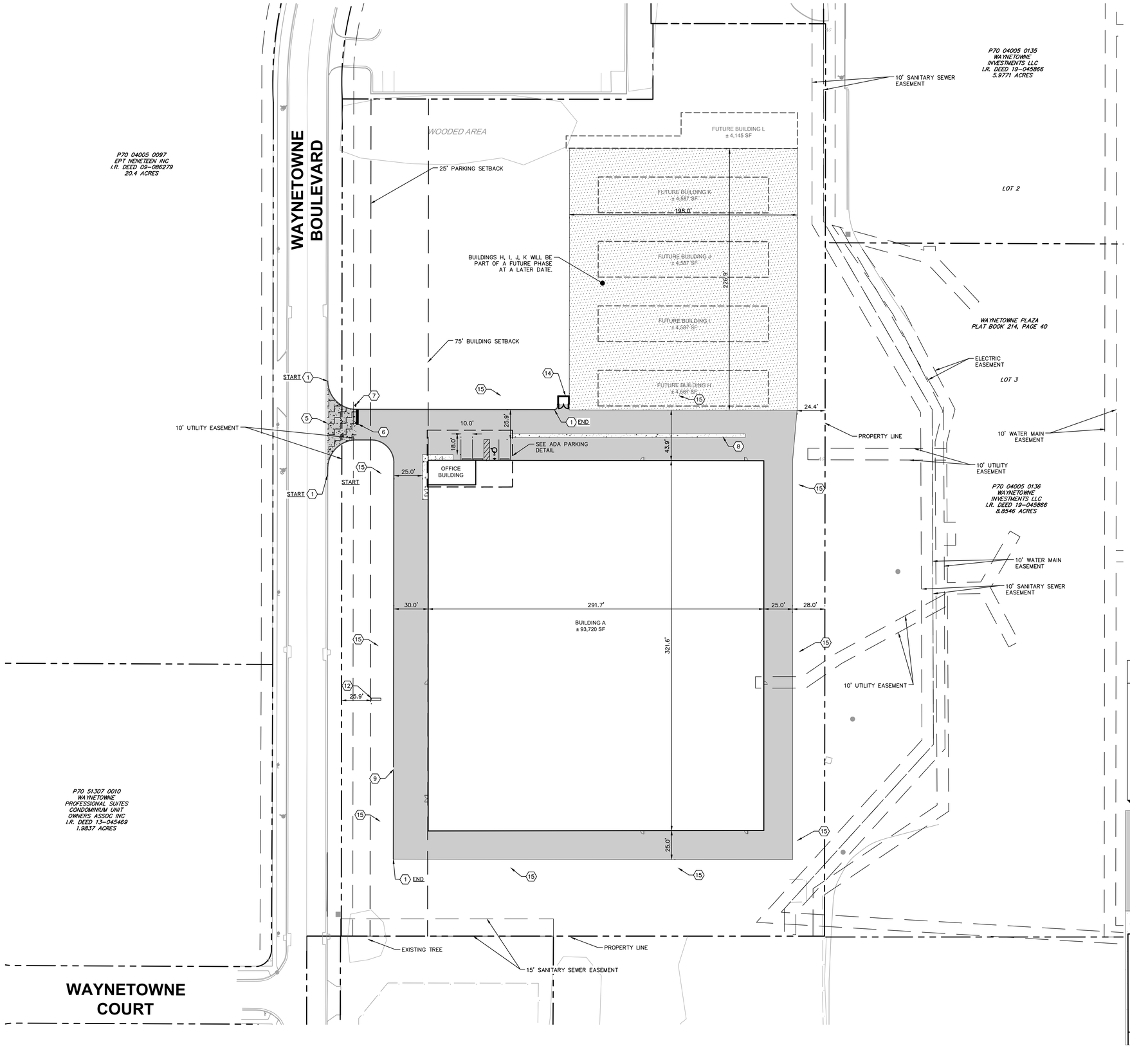
7650 WAYNETOWNE BLVD
HUBER HEIGHTS, OH 45424

ORIGINAL ISSUE:
10/12/2021

KHA PROJECT NO.
190081001

SHEET NUMBER

C2.0



NORTH

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0 20 40 80

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PAVING AND CURB LEGEND

- STANDARD DUTY ASPHALT PAVEMENT — SEE CONSTRUCTION DETAILS FOR PAVEMENT SECTION
- GRAVEL – 6" ODOT 304 BASE COURSE — SEE CONSTRUCTION DETAILS FOR PAVEMENT SECTION
- STANDARD DUTY CONCRETE — SEE SHEET C7.1 FOR PAVEMENT SECTION
- CONCRETE SIDEWALK — SEE CONSTRUCTION DETAILS FOR PAVEMENT SECTION
- STANDARD PITCH CONCRETE CURB AND GUTTER
- CONCRETE DEPRESSED CURB AND GUTTER

KEY NOTES

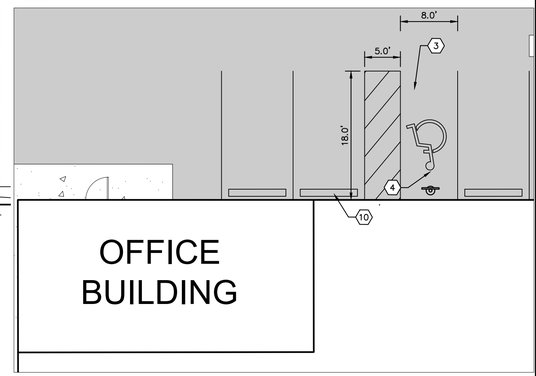
1. BARRIER CURB, TYP. (SEE DETAILS SHEET C7.0)
2. CONCRETE SIDEWALK, TYP. (SEE DETAILS SHEET C7.0)
3. ACCESSIBLE PAVEMENT MARKINGS (SEE DETAILS SHEET C7.0)
4. ACCESSIBLE PARKING SIGN, TYP. (SEE DETAILS SHEET C7.0)
5. CONNECT TO EXISTING PAVEMENT, SIDEWALK, CURB, TYP.
6. 24" WIDE STOP BAR, TYP. (SEE DETAILS SHEET C7.0)
7. STOP SIGN, TYP. (SEE DETAILS SHEET C7.0)
8. 24" CONCRETE VALLEY GUTTER (SEE DETAILS SHEET C7.0)
9. 3' CURB CUT (SEE DETAILS SHEET C7.0)
10. CONCRETE WHEEL STOP (SEE DETAILS SHEET C7.0)
11. N/A
12. GROUND SIGN (SEE SIGNAGE PLAN, BY OTHERS)
13. N/A
14. TRASH ENCLOSURE (SEE ARCHITECT PLANS FOR DETAIL)
15. LIGHT POLE AND BASE, TYP. (SEE PHOTOMETRIC PLAN)
16. COMBINED BARRIER CURB AND GUTTER (SEE DETAILS SHEET C7.2)

GENERAL NOTES

1. ALL DIMENSIONS REFER TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
2. BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
3. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS.
4. RADII ADJACENT TO PARKING STALL AND NOT DIMENSIONED ON THIS PLAN SHALL BE 3-FEET, TYPICAL.
5. REFER TO ARCHITECTURAL PLANS FOR MONUMENT SIGN DETAILS. SEE MEP PLANS FOR SITE ELECTRICAL DRAWINGS.
6. ALL PROPOSED ON-SITE STRIPING SHALL BE PAINTED UNLESS OTHERWISE NOTED.

PARKING SUMMARY

LOCATION:	7650 WAYNETOWNE BLVD
JURISDICTION:	CITY OF HUBER HEIGHTS, MONTGOMERY COUNTY, OHIO
TOTAL SITE AREA:	±7.234 ACRES
PARKING CALCULATIONS	
PARKING REQUIRED:	1 SPACE PER EMPLOYEE = 4 SPACES
PARKING PROVIDED:	4 SPACES
HANDICAP PARKING REQUIRED:	1 SPACE
HANDICAP PARKING PROVIDED:	1 SPACE



ADA PARKING DETAIL
1" = 10'

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Larkspur Properties
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SITE PLAN

DETAILED DEVELOPMENT PLANS

7650 WAYNETOWNE BLVD
HUBER HEIGHTS, OH 45424

ORIGINAL ISSUE: 10/12/2021
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Drawing name: K:\CLB_LDEV\190081001 Larkspur_HuberHeights_OH\2 Design\CAD\PlotSheets\Final Plans\SITE PLAN.dwg SITE PLAN Oct 14, 2021 8:09am by: MattSchiffett
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Drawing name: K:\CLB_LDEV\190081001_Larkspur_HuberHeights_OH\2 Design\CAD\PlanSheets\Final Plans\SITE PLAN.dwg TRUCK ROUTE PLAN Oct 14, 2021 8:09am by: MattShiflett
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P70 04005 0097
EPT NENETEEN INC
I.R. DEED 09-086279
20.4 ACRES

WAYNETOWNE BOULEVARD

WOODED AREA

FUTURE BUILDING L
± 4,145 SF

FUTURE BUILDING K
± 4,587 SF

FUTURE BUILDING J
± 4,587 SF

FUTURE BUILDING I
± 4,587 SF

FUTURE BUILDING H
± 4,587 SF

OFFICE BUILDING

BUILDING A
± 93,720 SF

P70 04005 0135
WAYNETOWNE
INVESTMENTS LLC
I.R. DEED 19-045866
5.9771 ACRES

LOT 2

WAYNETOWNE PLAZA
PLAT BOOK 214, PAGE 40

LOT 3

P70 04005 0136
WAYNETOWNE
INVESTMENTS LLC
I.R. DEED 19-045866
8.8546 ACRES

P70 51307 0010
WAYNETOWNE
PROFESSIONAL SUITES
CONDOMINIUM UNIT
OWNERS ASSOC INC
I.R. DEED 13-045469
1.9837 ACRES

WAYNETOWNE COURT

NORTH

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0 20 40 80

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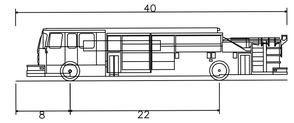

Pumper Fire Truck	
Overall Length	40.000ft
Overall Width	8.167ft
Overall Body Height	7.745ft
Min Body Ground Clearance	0.656ft
Track Width	8.167ft
Lock-to-lock time	5.00s
Max Wheel Angle	45.00°

FIRE TRUCK DETAIL
N.T.S.

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FIRE TRUCK ROUTE PLAN

DETAILED DEVELOPMENT PLANS

7650 WAYNETOWNE BLVD
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ORIGINAL ISSUE:
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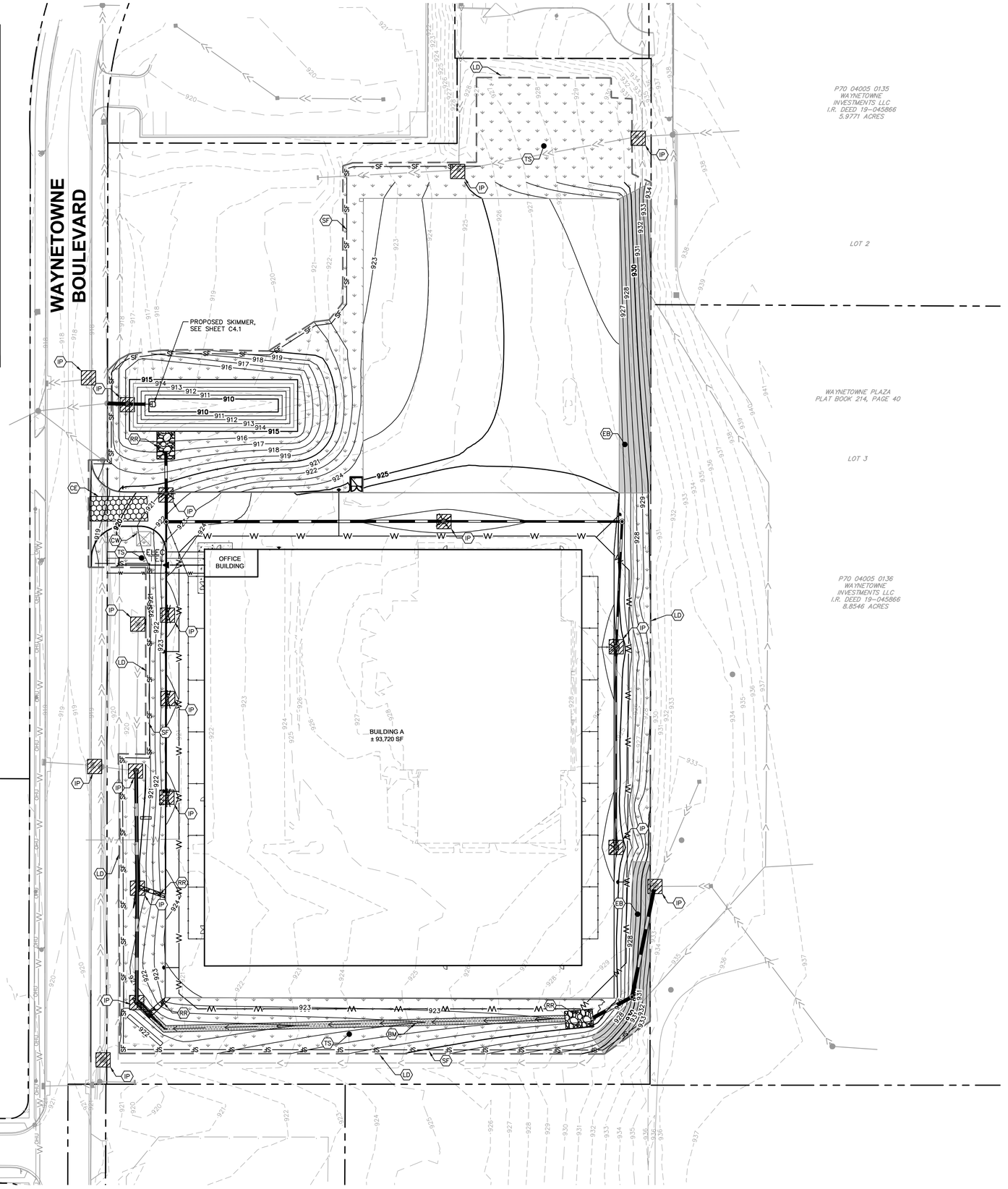
C3.1

EROSION CONTROL LEGEND

	TS	TEMPORARY SEEDING (SEE EROSION CONTROL DETAILS)
	EB	TEMPORARY EROSION CONTROL BLANKET (SEE EROSION CONTROL NOTE #7)
	BM	ODOT TIED CONCRETE BLOCK MAT, TYPE 1
	CE	CONSTRUCTION ENTRANCE (SEE EROSION CONTROL DETAILS)
SF	SF	SILT FENCE (SEE EROSION CONTROL DETAILS)
	IP	INLET PROTECTION (SEE EROSION CONTROL DETAILS)
	CW	CONCRETE WASHOUT (SEE EROSION CONTROL DETAILS) (TO BE DETERMINED BY CONTRACTOR)
	RR	RIP RAP (SEE DETAILS)
	LD	LIMITS OF DISTURBANCE (±6.18 ACRES)
XXX		EXISTING CONTOURS
XXX		PROPOSED CONTOURS
		DRAINAGE SWALE



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EROSION CONTROL NOTES

1. CONSTRUCTION ENTRANCE SHALL BE LOCATED SO AS TO PROVIDE THE LEAST AMOUNT OF DISTURBANCE TO THE FLOW OF TRAFFIC IN AND OUT OF THE SITE. ADDITIONALLY, CONSTRUCTION ENTRANCE SHALL BE LOCATED TO COINCIDE WITH THE PHASING OF THE PAVEMENT REPLACEMENT.
2. POST CONSTRUCTION STORM WATER POLLUTION CONTROL MEASURES INCLUDE STABILIZATION BY PERMANENT PAVING, DRAINAGE SYSTEM STRUCTURE, OR LANDSCAPING.
3. TEMPORARY AND PERMANENT STABILIZATION PRACTICES AND BMP'S SHALL BE INSTALLED AT THE EARLIEST POSSIBLE TIME DURING THE CONSTRUCTION SEQUENCE. AS AN EXAMPLE, PERIMETER SILT FENCE SHALL BE INSTALLED BEFORE COMMENCEMENT OF ANY GRADING ACTIVITIES. OTHER BMP'S SHALL BE INSTALLED AS SOON AS PRACTICABLE AND SHALL BE MAINTAINED UNTIL FINAL SITE STABILIZATION IS ATTAINED. CONTRACTOR SHALL ALSO REFERENCE CIVIL AND LANDSCAPE PLANS SINCE PERMANENT STABILIZATION IS PROVIDED BY LANDSCAPING, THE BUILDING(S), AND SITE PAVING.
4. BMP'S HAVE BEEN LOCATED AS INDICATED ON THIS PLAN IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES IN ORDER TO MINIMIZE SEDIMENT TRANSFER. FOR EXAMPLE: SILT FENCES LOCATED AT TOE OF SLOPE AND INLET PROTECTION FOR INLETS RECEIVING SEDIMENT FROM SITE RUN-OFF.
5. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN.
6. ANY MAJOR VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS WILL REQUIRE A REVISION AND MUST BE APPROVED BY THE REVIEWING ENGINEER, ENVIRONMENTAL SPECIALIST, OR ARBORIST AS APPROPRIATE. MAJOR REVISIONS MUST BE APPROVED BY THE PLANNING AND DEVELOPMENT DEPARTMENT AND THE DRAINAGE UTILITY DEPARTMENT. MINOR CHANGES OR ADDITIONAL CONTROL MEASURES TO BE MADE AS FIELD REVISIONS TO THE EROSION AND SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE ENVIRONMENTAL INSPECTOR DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES AT NO ADDITIONAL COST TO THE OWNER.
7. CONTRACTOR SHALL PLACE EROSION CONTROL BLANKET (NORTH AMERICAN GREEN S150BN OR APPROVED EQUAL) ON ALL SITE AREAS WITH SLOPES GREATER THAN 4:1, AND IN THE BOTTOM AND SIDE SLOPES OF ALL SWALES.
8. PRIOR TO FINAL ACCEPTANCE, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING SHALL BE DISPOSED OF IN APPROVED SPOIL DISPOSAL SITES.
9. PERMANENT, FINAL PLANT COVERING OR STRUCTURES SHALL BE INSTALLED PRIOR TO FINAL ACCEPTANCE.
10. ALL CONTROL DEVICES THAT FUNCTION SIMILARLY TO SILT FENCE OR FIBER ROLLS MUST BE REPAIRED, REPLACED OR SUPPLEMENTED WITH EFFECTIVE CONTROLS WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES ONE-THIRD THE HEIGHT OF THE DEVICE. THESE REPAIRS MUST BE MADE WITHIN 24 HOURS OF THE RAINFALL EVENT OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS.
11. ALL SEDIMENT DELTAS AND DEPOSITS MUST BE REMOVED FROM SURFACE WATERS, DRAINAGE WAYS, CATCH BASINS AND OTHER DRAINAGE SYSTEMS. ALL AREAS WHERE SEDIMENT REMOVAL RESULTED IN EXPOSED SOIL MUST BE RESTABILIZED. THE REMOVAL AND STABILIZATION MUST TAKE PLACE IMMEDIATELY, BUT NO MORE THAN 7 DAYS AFTER THE RAINFALL EVENT UNLESS PRECLUDED BY LEGAL, REGULATORY OR PHYSICAL ACCESS CONSTRAINTS. ALL REASONABLE EFFORTS MUST BE USED TO OBTAIN ACCESS. ONCE ACCESS IS OBTAINED, REMOVAL AND STABILIZATION MUST TAKE PLACE IMMEDIATELY, BUT NO MORE THAN 7 DAYS LATER. CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL APPROPRIATE AUTHORITIES AND RECEIVING THE APPLICABLE PERMITS PRIOR TO CONDUCTING ANY WORK.
12. ACCUMULATIONS OF TRACKED AND DEPOSITED SEDIMENT MUST BE REMOVED FROM OFF-SITE PAVED SURFACES WITHIN 24 HOURS OR SOONER IF REQUIRED. SEDIMENT TRACKING MUST BE MINIMIZED BY THE APPROPRIATE MANAGEMENT PRACTICE, LIKE A DEDICATED SITE EXIT WITH AN AGGREGATE SURFACE OR DESIGNATED OFFSITE PARKING AREA. CONTRACTOR IS RESPONSIBLE FOR STREET SWEEPING AND/OR SCRAPING IF YOUR PRACTICES ARE NOT ADEQUATE TO PREVENT SEDIMENT FROM BEING TRACKED FROM THE SITE.
13. SURFACE WATERS, DRAINAGE DITCHES AND CONVEYANCE SYSTEMS MUST BE INSPECTED FOR SEDIMENT DEPOSITS.
14. PUMPING SEDIMENT LADEN WATER INTO ANY STORMWATER FACILITY THAT IS NOT DESIGNATED TO BE A SEDIMENT TRAP, DRAINAGEWAY, OR OFFSITE AREA EITHER DIRECTLY OR INDIRECTLY WITHOUT FILTRATION IS PROHIBITED.
15. SOIL STOCKPILES SHALL NOT BE LOCATED IN A DRAINAGEWAY, FLOOD PLAIN AREA OR A DESIGNATED BUFFER, UNLESS OTHERWISE APPROVED, UNDER SPECIFIC CONDITIONS TO BE ESTABLISHED BY THE DIRECTOR OR ADMINISTRATOR.
16. STOCKPILES TO REMAIN IN PLACE FOR MORE THAN THREE DAYS SHALL BE PROVIDED WITH SESC MEASURES. MATERIAL IS TO BE HAULED OFF IMMEDIATELY AND LEGALLY IF NO STOCKPILE IS TO REMAIN IN PLACE.
17. ALL TEMPORARY SESC MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED.TRAPPED SEDIMENT AND OTHER DISTURBED SOILS RESULTING FROM TEMPORARY MEASURES SHALL BE PROPERLY DISPOSED OF PRIOR TO PERMANENT STABILIZATION.
18. WATER REMOVED FROM TRAPS, BASINS, AND OTHER WATER HOLDING DEPRESSIONS OR EXCAVATIONS MUST FIRST PASS THROUGH A SEDIMENT CONTROL AND/OR FILTRATION DEVICE. WHEN DEWATERING DEVICES ARE USED, DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION.
19. SITE STABILIZATION REQUIREMENTS ARE AS FOLLOWS:
    - 19.1. WHERE THE INITIATION OF STABILIZATION MEASURE BY THE 7TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASES ON A PORTION OF THE SITE IS PRECLUDED BY SNOW COVER, STABILIZATION MEASURE SHALL BE INITIATED AS SOON AS PRACTICABLE.
    - 19.2. WHERE CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN 14 DAYS FROM WHEN ACTIVITIES CEASED, (E.G. THE TOTAL TIME PERIOD THAT CONSTRUCTION ACTIVITY IS TEMPORARILY CEASED IS LESS THAN 14 DAYS) THEN STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE BY THE 7TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY CEASED.

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Larkspur Properties
REAL ESTATE PARTNERSHIP

EROSION CONTROL PLAN

DETAILED DEVELOPMENT PLANS

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Drawing name: K:\CLB_LDEV\190081001_Larkspur_HuberHeights_OH\2 Design\CAD\PlanSheets\Final Plans\EROSION CONTROL DETAILS.dwg Layout1 Oct 14, 2021 8:09am by MattShiflett
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PLAN DESIGNER: KIMLEY HORN & ASSOCIATES, INC.
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CURRENT OWNER: B AND D INVESTMENTS III
8050 HOSBROOK ROAD, STE 203
CINCINNATI, OH 45236

DEVELOPER: LARKSPUR ACQUISITIONS, LLC
10800 BISCAYNE BLVD
MIAMI, FL 33161
(786) 540-4130
EMAIL: DAVID.BERNSTEIN@LARKSPURPROP.COM
CONTACT: DAVID BERNSTEIN

PROJECT DESCRIPTION: THE PROJECT CONSISTS OF THE DEMOLITION OF THE CURRENT BUILDING AND REMOVAL OF SURROUNDING PARKING LOT AND SOME ASSOCIATED UTILITIES. THE PROPOSED SITE WILL CONSIST OF AN OFFICE BUILDING, STORAGE UNIT BUILDINGS, ASSOCIATED PARKING, STORMWATER ADDITIONS, UTILITIES, DETENTION BASIN, AND LANDSCAPING.

RECEIVING STREAM: GREAT MIAMI RIVER

ADJACENT AREAS: THE DEVELOPMENT IS BORDERED ON THE EAST BY THE WAYNETOWNE PLAZA SHOPPING CENTER, ON THE WEST BY WAYNETOWNE BOULEVARD, AND TO THE NORTH AND SOUTH BY COMMERCIAL PROPERTIES.

THE SOILS ON THE SITE CONSIST OF:
MrA – MILLSDALE SILTY CLAY LOAM, 0 TO 2 PERCENT SLOPES
MsB – MILTON SILT LOAM, 2 TO 6 PERCENT SLOPES
MsB2 – MILTON SILT LOAM, 2 TO 6 PERCENT SLOPES, MODERATELY ERODED
RcA – RANDOLPH SILT LOAM, 0 TO 2 PERCENT SLOPES

EROSION AND SEDIMENT CONTROL MEASURES: PERIMETER SEDIMENT FENCE AND STORM SEWER INLET PROTECTION WILL BE USED TO ASSIST WITH THE MANAGEMENT OF THE CONSTRUCTION SITE STORMWATER RUNOFF.

PERMANENT STABILIZATION: THE SITE WILL BE STABILIZED BY THE USE OF SEEDING OR SODDING IN OVERLOT AREAS.

MAINTENANCE: ALL EROSION CONTROL DEVICES ARE TO BE INSPECTED BY THE CONSTRUCTION SUPERINTENDENT DAILY AND AFTER SIGNIFICANT RAINFALLS. ANY DAMAGED FACILITIES ARE TO BE REPLACED/REPAIRED IMMEDIATELY AS MAY BE NECESSARY.

CONSTRUCTION SEQUENCE:

1. INSTALL TEMPORARY GRAVEL CONSTRUCTION ENTRANCE.
2. INSTALL PERIMETER EROSION AND SEDIMENT CONTROL.
3. CLEAR AND GRUB AS NECESSARY FOR THE INSTALLATION OF EROSION AND SEDIMENT CONTROL DEVICES.
4. CONSTRUCT DIVERSION DITCHES AND DETENTION BASIN PER DETAILS ON SHEET C5.2, INSTALL SKIMMER ON OUTLET CONTROL STRUCTURE.
5. CONSTRUCT STORM SEWER, INSTALL INLET PROTECTION AND OTHER INLET CONTROL DEVICES AS STORM SEWERS ARE COMPILED.
6. FINE GRADING, PAVEMENT & CURB INSTALLATION.
7. PERMANENTLY STABILIZE/SEED AND MULCH OR SOD DISTURBED AREAS PER SPECIFICATIONS.
8. REMOVE REMAINING EROSION AND SEDIMENT CONTROL DEVICES.

SCHEDULE: THE CONTRACTOR SHALL PROVIDE A SCHEDULE OF OPERATIONS TO THE OWNER. SEDIMENTATION AND EROSION CONTROL FEATURES SHALL BE PLACED IN ACCORDANCE WITH THIS SCHEDULE.

OHIO EPA FACILITY/ PERMIT NUMBER: TBD

SITE CONTACT: LARKSPUR PROPERTIES
10800 BISCAYNE BLVD, SUITE 300
MIAMI, FL 33161
TEL: (786) 540-4424
CONTACT: JEFF PATTEK

EROSION AND SEDIMENT CONTROL NOTES

THE LIMITS OF SEEDING AND MULCHING ARE AS SHOWN WITHIN THE PLAN AS INDICATED BY THE LIMITS OF DISTURBANCE. ALL AREAS NOT DESIGNATED TO BE SEEDED SHALL REMAIN UNDER NATURAL GROUND COVER. THOSE AREAS DISTURBED OUTSIDE THE SEEDING LIMITS SHALL BE SEEDED AND MULCHED AT THE CONTRACTOR'S EXPENSE.

TEMPORARY SEEDING: ANY DISTURBED AREAS WITHIN 50 FEET OF A SURFACE WATER OF THE STATE AND NOT AT FINAL GRADE SHALL BE STABILIZED WITHIN TWO DAYS OF THE MOST RECENT DISTURBANCE IF THE AREA WILL REMAIN IDLE FOR MORE THAN 14 DAYS. ANY DISTURBED AREAS THAT WILL BE DORMANT FOR MORE THAN 14 DAYS BUT LESS THAN ONE YEAR, AND NOT WITHIN 50 FEET OF A SURFACE WATER OF THE STATE SHALL BE STABILIZED WITHIN SEVEN DAYS OF THE MOST RECENT DISTURBANCE WITHIN THE AREA. FOR RESIDENTIAL SUBDIVISIONS, DISTURBED AREAS MUST BE STABILIZED AT LEAST SEVEN DAYS PRIOR TO TRANSFER OF PERMIT COVERAGE FOR THE INDIVIDUAL LOT(S). DISTURBED AREAS THAT WILL BE IDLE OVER WINTER MUST BE STABILIZED PRIOR TO THE ONSET OF WINTER WEATHER.

MARCH 1 TO AUGUST 15
SEED: OATS 2 LBS./1,000 SQ. FT.
FERTILIZER: (12: 12: 12) 25 LBS./1,000 SQ. FT.
MULCH: (STRAW OR HAY) 2 TONS /ACRE

AUGUST 15 TO NOVEMBER 1
SEED: ANNUAL RYE 2 LBS./1,000 SQ. FT.
FERTILIZER: (12:12:12) 25 LBS./1,000 SQ. FT.
MULCH: (STRAW OR HAY) 2 TONS/ACRE

NOVEMBER 1 TO MARCH 1
MULCH (ONLY): (STRAW OR HAY)2 TONS/ACRE

PERMANENT SEEDING: ANY AREAS THAT WILL LIE DORMANT FOR ONE YEAR OR MORE MUST BE STABILIZED WITHIN SEVEN DAYS OF THE MOST RECENT DISTURBANCE. ANY AREAS WITHIN 50 FEET OF A SURFACE WATER OF THE STATE AND AT FINAL GRADE MUST BE STABILIZED WITHIN TWO DAYS OF REACHING FINAL GRADE. OTHER AREAS AT FINAL GRADE MUST BE STABILIZED WITHIN SEVEN DAYS OF REACHING FINAL GRADE WITHIN THAT AREA.

RATES OF APPLICATION OF ITEM 659:
SEED: 4 LBS/1000 SQ. FT.
FERTILIZER: (12:12:12) 20 LBS/1000 SQ. FT.
MULCH: STRAW (HAY) 2 TONS/ACRE (3 TONS/ACRE)

STABILIZATION TYPE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
PERMANENT SEEDING			A			*	*					
DORMANT SEEDING	B										B	
TEMPORARY SEEDING			C				D					
SODDING			E **									
MULCHING	F											

A KENTUCKY BLUEGRASS 90 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 30 LBS/ACRE
B KENTUCKY BLUEGRASS 135 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 45 LBS/ACRE + 2 TONS STRAW MULCH/ACRE
C SPRING OATS 100 LBS/ACRE
D WHEAT OR CEREAL RYE 150 LBS/ACRE
E SOD
F STRAW MULCH 2 TONS/ACRE
* WATERING NEEDED DURING JUNE AND JULY
** WATERING NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD

SEEDING CHART

PROHIBITED CONSTRUCTION ACTIVITIES
THE CONTRACTOR SHALL NOT USE CONSTRUCTION PROCEEDINGS, ACTIVITIES OR OPERATIONS THAT MAY UNNECESSARILY IMPACT THE NATURAL ENVIRONMENT OR THE PUBLIC HEALTH AND SAFETY. PROHIBITED CONSTRUCTION PROCEEDINGS, ACTIVITIES, OR OPERATIONS INCLUDE BUT NOT LIMITED TO:

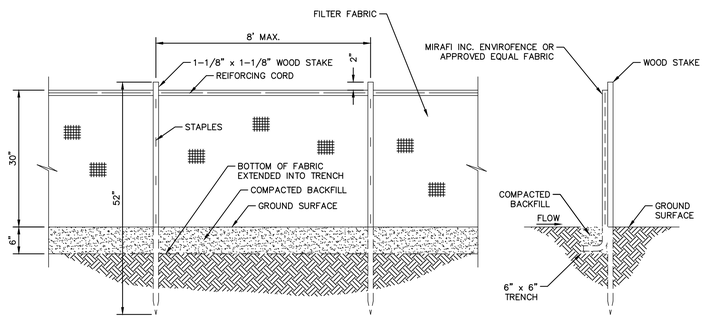
1. DISPOSING OF EXCESS OR UNSUITABLE EXCAVATED MATERIAL IN WETLANDS OR FLOODPLAIN, EVEN WITH THE PERMISSION OF THE PROPERTY OWNER.
2. INDISCRIMINATE, ARBITRARY, OR CAPRICIOUS OPERATION OF EQUIPMENT IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR OUTSIDE THE EASEMENT LIMITS
3. PUMPING OF SEDIMENT-LADEN WATER FROM TRENCHES OR OTHER EXCAVATIONS INTO ANY SURFACE WATERS, ANY STREAM CORRIDORS, ANY WETLANDS OR STORM DRAINS.
4. DISCHARGING POLLUTANTS SUCH AS CHEMICAL, FUEL, LUBRICANTS, BITUMINOUS MATERIALS, RAW SEWERAGE, AND OTHER HARMFUL WASTE INTO OR ALONGSIDE OF RIVERS, STREAMS IMPOUNDMENTS OR INTO NATURAL OR MAN-MADE CHANNELS LEADING THERETO.
5. PERMANENT OR UNSPECIFIED ALTERATIONS OF THE CONSTRUCTED AREA.
6. DAMAGING VEGETATION OUTSIDE OF THE CONSTRUCTION AREA.
7. DISPOSAL OF TREES, BRUSH AND OTHER DEBRIS IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SUBSURFACE WATERS, OR AT UNSPECIFIED LOCATIONS.
8. OPEN BURNING OF PROJECT DEBRIS WITHOUT A PERMIT.
9. STORING CONSTRUCTION EQUIPMENT AND VEHICLES AND/OR STOCKPILING CONSTRUCTION MATERIALS ON PROPERTY, PUBLIC OR PRIVATE, NOT PREVIOUSLY SPECIFIED BY THE CITY ENGINEER FOR SAID PURPOSE.

SEDIMENT FENCE
THIS SEDIMENT BARRIER UTILIZES STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRICS. IT IS DESIGNED FOR SITUATIONS IN WHICH ONLY SHEET OR OVERLAND FLOWS ARE EXPECTED. MATERIAL PROPERTIES ARE LISTED IN THE PROVIDED TABLE.

1. SILT FENCE SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTURBANCE BEGINS.
2. ALL SILT FENCE SHALL BE PLACED AS CLOSE TO THE CONTOUR AS POSSIBLE SO THAT WATER WILL NOT CONCENTRATE AT LOW POINTS IN THE FENCE AND SO THAT SMALL SWALES OR DEPRESSIONS WHICH MAY CARRY SMALL CONCENTRATED FLOWS TO THE SILT FENCE ARE DISSIPATED ALONG ITS LENGTH.
3. ENDS OF THE SILT FENCES SHALL BE BROUGHT UPSLOPE SLIGHTLY SO THAT WATER PONDED BY THE SILT FENCE WILL BE PREVENTED FROM FLOWING AROUND THE ENDS.
4. SILT FENCE SHALL BE PLACED ON THE FLATTEST AREA AVAILABLE.
5. WHERE POSSIBLE, VEGETATION SHALL BE PRESERVED FOR 5 FEET (OR AS MUCH AS POSSIBLE) UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE REESTABLISHED WITHIN 7 DAYS FROM THE INSTALLATION OF THE SILT FENCE.
6. THE HEIGHT OF THE SILT FENCE SHALL BE A MINIMUM OF 16 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
7. THE SILT FENCE SHALL BE PLACED IN AN EXCAVATED OR SLICED TRENCH CUT A MINIMUM OF 6 INCHES DEEP. THE TRENCH SHALL BE MADE WITH A TRENCHER, CABLE LAYING MACHINE, SLICING MACHINE, OR OTHER SUITABLE DEVICE THAT WILL ENSURE AN ADEQUATELY UNIFORM TRENCH DEPTH.
8. THE SILT FENCE SHALL BE PLACED WITH THE STAKES ON THE DOWNSLOPE SIDE OF THE GEOTEXTILE AND SO THAT 8 INCHES OF GEOTEXTILE MUST BE BELOW THE GROUND SURFACE. EXCESS MATERIAL SHALL LAY ON THE BOTTOM OF THE 6 INCH DEEP TRENCH. THE TRENCH SHALL BE BACKFILLED AND COMPACTED ON BOTH SIDES OF THE FABRIC.
9. SEAMS BETWEEN SECTION OF SILT FENCE SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST WITH A MINIMUM 6 INCHES OVERLAP PRIOR TO DRIVING INTO THE GROUND. (SEE DETAILS)
10. MAINTENANCE – SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE, IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER OR AROUND THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW DISCHARGE, ONE OF THE FOLLOWING SHALL BE PERFORMED, AS APPROPRIATE: 1) THE LAYOUT OF THE SILT FENCE SHALL BE CHANGED, 2) ACCUMULATED SEDIMENT SHALL BE REMOVED, OR 3) OTHER PRACTICES SHALL BE INSTALLED. SILT FENCE SHALL BE INSPECTED AFTER EACH RAINFALL AND AT LEAST DAILY TO ENSURE ITS PROPER LOCATION AND EFFECTIVENESS. IF DAMAGED, THE SILT FENCE SHALL BE REPAIRED IMMEDIATELY.

CRITERIA FOR SILT FENCE MATERIALS:
1. FENCE POSTS – THE LENGTH SHALL BE A MINIMUM OF 32 INCHES LONG. WOOD POSTS WILL BE 2-BY-2 INCH NOMINAL DIMENSIONED HARDWOOD OF SOUND QUALITY. THEY SHALL BE FREE OF KNOTS, SPLITS AND OTHER VISIBLE IMPERFECTIONS THAT WILL WEAKEN THE POSTS. THE MAXIMUM SPACING BETWEEN POSTS SHALL BE 10 FT. POSTS SHALL BE DRIVEN A MINIMUM 16 INCHES INTO THE GROUND, WHERE POSSIBLE. IF NOT POSSIBLE, THE POSTS SHALL BE ADEQUATELY SECURED TO PREVENT OVERTURNING OF THE FENCE DUE TO SEDIMENT/WATER LOADING.
2. SEDIMENT FENCE FABRIC SHALL BE ODOT, TYPE C GEOTEXTILE FABRIC OR THE EQUIVALENT TO THE PROPERTIES IN THE TABLE BELOW.

FABRIC PROPERTIES	VALUES	TEST METHOD
MINIMUM TENSILE STRENGTH	120 LBS (535 N)	ASTM D 4632
MINIMUM ELONGATION AT 60 LBS	50%	ASTM D 4632
MINIMUM PUNCTURE STRENGTH	50 LBS (220 N)	ASTM D 4833
MINIMUM TEAR STRENGTH	40 LBS (180 N)	ASTM D 4533
APPARENT OPENING SIZE	< OR = 0.84 MM	ASTM D 4751
MINIMUM PERMITTIVITY	1X10-2 SEC.$^{-1}$	ASTM D 4491
UV EXPOSURE STRENGTH RETENTION	70%	ASTM G 4355



FRONT VIEW SIDE VIEW

SEDIMENTATION/SILT FENCE SF
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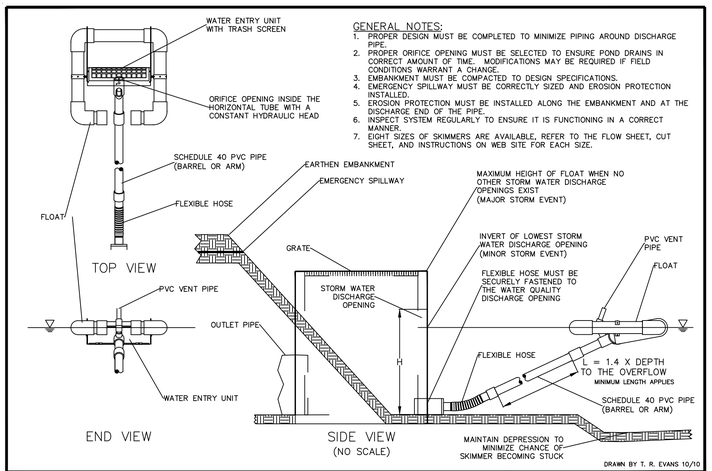
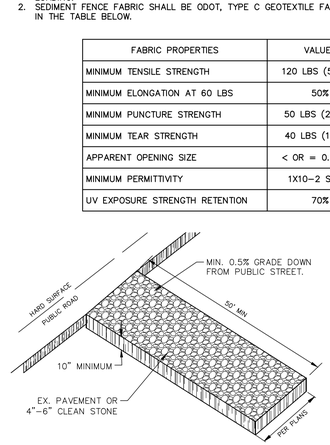


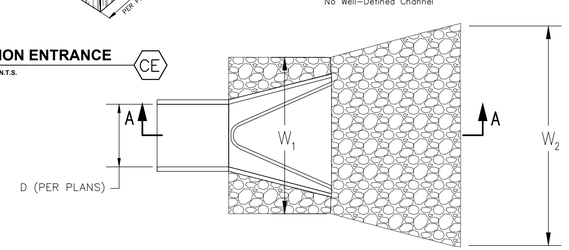
GENERAL NOTES:
1. PROPER DESIGN MUST BE COMPLETED TO MINIMIZE PIPING AROUND DISCHARGE PIPE.
2. PROPER ORIFICE OPENING MUST BE SELECTED TO ENSURE POND DRAINS IN CORRECT AMOUNT OF TIME. MODIFICATIONS MAY BE REQUIRED IF FIELD CONDITIONS WARRANT A CHANGE.
3. EMBANKMENT MUST BE COMPACTED TO DESIGN SPECIFICATIONS.
4. EMERGENCY SPILLWAY MUST BE CORRECTLY SIZED AND EROSION PROTECTION INSTALLED.
5. EROSION PROTECTION MUST BE INSTALLED ALONG THE EMBANKMENT AND AT THE DISCHARGE END OF THE PIPE.
6. INSPECT SYSTEM REGULARLY TO ENSURE IT IS FUNCTIONING IN A CORRECT MANNER.
7. EIGHT SIZES OF SKIMMERS ARE AVAILABLE, REFER TO THE FLOW SHEET, CUT SHEET, AND INSTRUCTIONS ON WEB SITE FOR EACH SIZE.

FAIRCLOTH SKIMMER® DISCHARGE SYSTEM WITH OUTLET STRUCTURE	J. W. FAIRCLOTH & SON INC. WWW.FAIRCLOTHSKIMMER.COM TELEPHONE: (919) 732-1244 FAX: (919) 732-1266 EMAIL: WARREN@FAIRCLOTHSKIMMER.COM

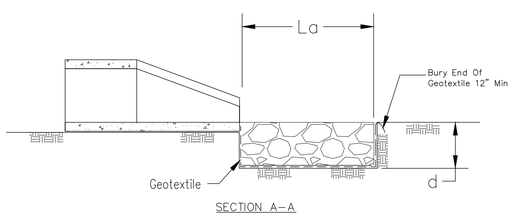
SKIMMER DISCHARGE SYSTEM DETAIL
N.T.S.



CONSTRUCTION ENTRANCE CE
N.T.S.



PLAN



SECTION A-A

NOTES:
1. The rock riprap shall meet ODOT requirements.
2. Geotextile (non-woven) minimum criteria:
   Weight of Geotextile (oz/sq.yd.)_____6
   Tensile strength (lb) ASTM D 4632_____180
   Elongation at failure (%) ASTM D 4632_____≥ 50
   Puncture (lb) ASTM D 4833_____80
   Ultraviolet light (% residual tensile strength) ASTM D 4355_____min 70
   Apparent opening size (AOS) ASTM D 4751_____max 40 sieve
   Permittivity sec^{-1} ASTM D 4491_____min 0.70
3. Any geotextile splices shall overlap a minimum of 18 inches, with upstream or upslope geotextile overlapping the abutting downslope geotextile.
4. Apron width W_2 shall be 3 times the culvert pipe diameter. Apron width W_2 shall be equal to L_a plus the pipe diameter.
5. Rock thickness d shall be at least 1.5 times the riprap D_{100} size.

TABLE 1

PIPE SIZE	La
12"	12'
24"	14'
36"	22'

RIP RAP DETAIL OUTLET PROTECTION IP
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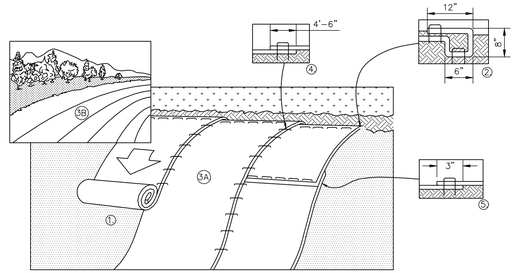

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH AS SHOWN IN DETAIL 2. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS PER MANUFACTURES RECOMMENDATION.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH MINIMUM 6" OVERLAP. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.
6. PLACE STAPLES/STAKES PER MANUFACTURER'S RECOMMENDATION FOR THE APPROPRIATE SLOPE BEING APPLIED.

NOTES:
1. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.
2. FOLLOW EROSION CONTROL TECHNOLOGY COUNCIL SPECIFICATION FOR PRODUCT SELECTION.

EROSION CONTROL BLANKET (SLOPE INSTALLATION) EB
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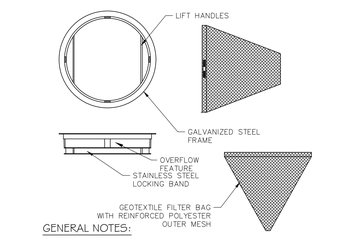

GENERAL NOTES:
ALL PRODUCTS MANUFACTURED BY INLET AND PIPE PROTECTION, INC OR APPROVED EQUAL.

NOTE: INLET FILTERS ARE SLIGHTLY SMALLER THAN THE INLET GRATE SIZES. WHEN IDENTIFYING OR SPECIFYING FILTERS/CASTINGS PLEASE REFER TO THE DIAMETER "D" OR WIDTH "W" AND HEIGHT "H" OF FILTER FRAMES OR CASTING GRATES. YOU MAY ALSO REFER TO OUR CASTING CROSS REFERENCE GUIDE FOR ODOT STANDARDS

NOTE: ROUND AND SQUARE INLET FILTERS AVAILABLE FOR MOST NEENAH AND EAST JORDAN BEEHIVE, ROLL CURB AND CURB BOX FRAME TYPES

INLET PROTECTION IP
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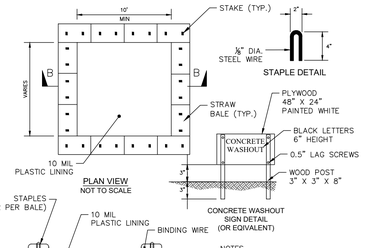

NOTES
1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT OF THE TEMPORARY CONCRETE WASHOUT FACILITY

CONCRETE WASHOUT CW
N.T.S.

No.	REVISIONS	DATE	BY

Kimley»Horn
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SCALE: AS NOTED
DESIGNED BY: IC
DRAWN BY: NAB
CHECKED BY: DDL

Larkspur Properties
REAL ESTATE PARTNERSHIP

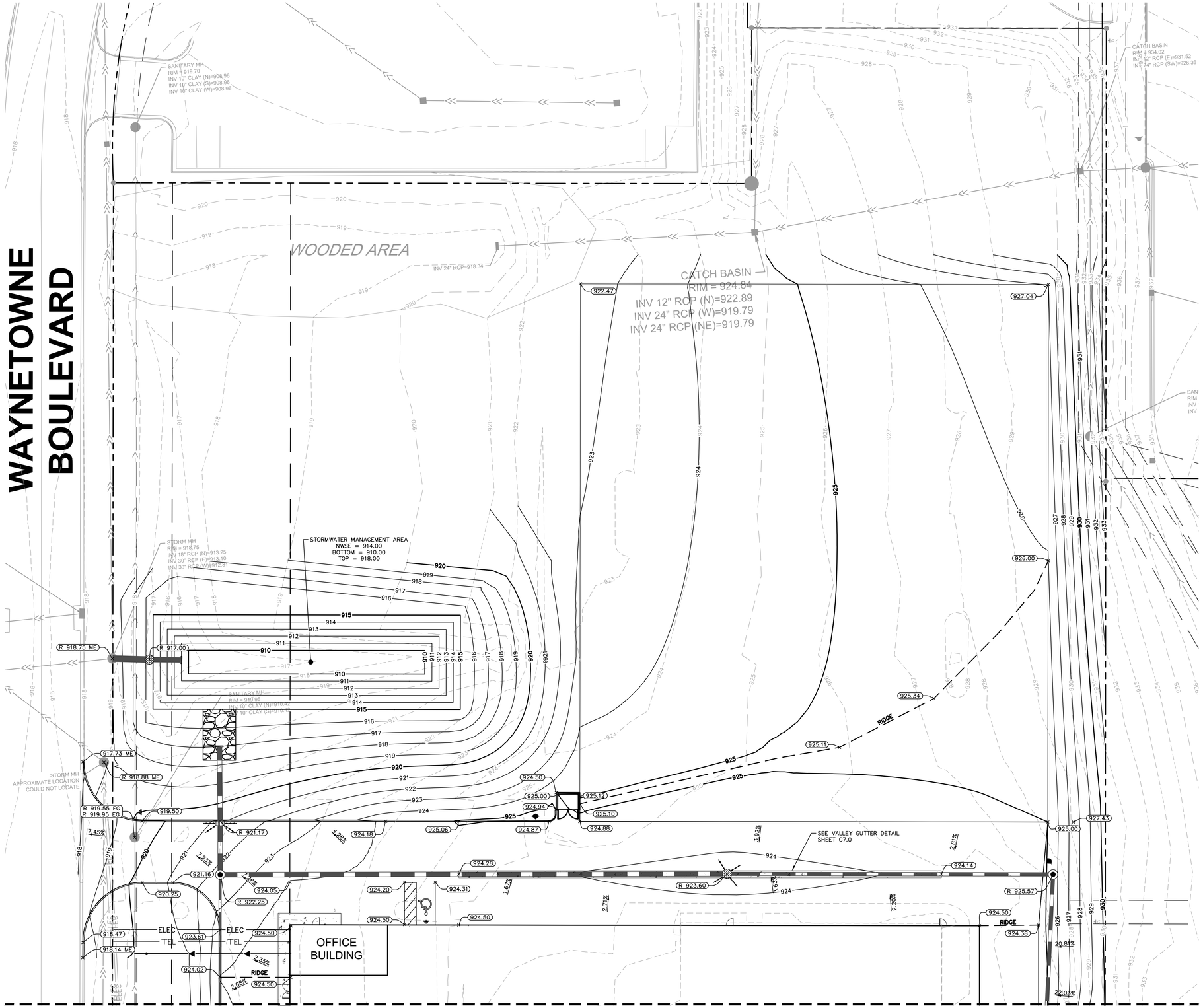
EROSION CONTROL DETAILS

DETAILED DEVELOPMENT PLANS

7650 WAYNETOWNE BLVD
HUBER HEIGHTS, OH 45424

ORIGINAL ISSUE: 10/12/2021
KHA PROJECT NO. 190081001
SHEET NUMBER
C4.1

WAYNETOWNE BOULEVARD



NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

OHIO Utilities Protection SERVICE
Click, Call or Tap Before You Dig

GRADING NOTES

1. CONTRACTOR TO VERIFY ALL EXISTING TOPOGRAPHY AND STRUCTURES ON THE SITE AND IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING WORK.
2. ALL PAVEMENT SPOT GRADE ELEVATIONS AND RIM ELEVATIONS WITHIN OR ALONG CURB AND GUTTER REFER TO FLOW LINE ELEVATIONS UNLESS OTHERWISE NOTED.
3. ALL ELEVATIONS SHOWN DEPICT FINISHED GRADE UNLESS OTHERWISE NOTED. GENERAL CONTRACTOR TO COORDINATE WITH EXCAVATION, LANDSCAPE AND PAVING SUBCONTRACTORS REGARDING TOPSOIL THICKNESS FOR LANDSCAPE AREAS AND PAVEMENT SECTION THICKNESS FOR PAVED AREAS TO PROPERLY ENSURE ADEQUATE CUT TO ESTABLISH SUBGRADE ELEVATIONS.
4. NO EARTHEN SLOPE SHALL BE GREATER THAN 3:1, UNLESS OTHERWISE NOTED.
5. MAXIMUM SLOPE IN ACCESSIBLE PARKING SPACES AND LOADING ZONES SHALL NOT EXCEED 2.0% IN ALL DIRECTIONS.
6. MAXIMUM RUNNING SLOPE SHALL NOT EXCEED 5% AND CROSS SLOPE SHALL NOT EXCEED 2% ON ALL SIDEWALKS AND ACCESSIBLE ROUTES.
7. WHEN NATURAL FLOW OF DRAINAGE IS AWAY FROM CURB, CONTRACTOR TO INSTALL REVERSE GUTTER PITCH.
8. MATCH EXISTING ELEVATIONS AT THE PROPERTY LIMITS. UNLESS SHOWN OTHERWISE.

GRADING LEGEND

	FL = FLOW LINE
	TC = TOP OF CURB
	ME = MATCH ELEVATION
	R = RIM ELEVATION
	EG = EXISTING GRADE
	FG = FINISHED GRADE
XXX	PROPOSED CONTOUR
XXX	EXISTING CONTOUR
RIDGE	RIDGE LINE
X.XX%	SLOPE AND FLOW DIRECTION
	DRAINAGE SWALE

No.	REVISIONS	DATE	BY

Kimley»Horn

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COLUMBUS, OH 43235
PHONE: 614-459-0599
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SCALE: AS NOTED
DESIGNED BY: IC
DRAWN BY: NAB
CHECKED BY: DDL

Larkspur Properties
REAL ESTATE PARTNERSHIP

GRADING PLAN

DETAILED DEVELOPMENT PLANS
7650 WAYNETOWNE BLVD
HUBER HEIGHTS, OH 45424

ORIGINAL ISSUE: 10/12/2021
KHA PROJECT NO. 190081001
SHEET NUMBER
C5.0

Drawing name: K:\CIB_JDEV\190081001_Larkspur_HuberHeights_OH\2 Design\CAD\PlanSheets\Final Plans\GRADING PLAN.dwg Layout1 Oct 14, 2021 8:09am by: MattStiffett
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MATCHLINE - SEE SHEET C5.0

BUILDING A
± 93,720 SF

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

OHIO Utilities Protection SERVICE
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GRADING NOTES

1. CONTRACTOR TO VERIFY ALL EXISTING TOPOGRAPHY AND STRUCTURES ON THE SITE AND IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING WORK.
2. ALL PAVEMENT SPOT GRADE ELEVATIONS AND RIM ELEVATIONS WITHIN OR ALONG CURB AND GUTTER REFER TO FLOW LINE ELEVATIONS UNLESS OTHERWISE NOTED.
3. ALL ELEVATIONS SHOWN DEPICT FINISHED GRADE UNLESS OTHERWISE NOTED. GENERAL CONTRACTOR TO COORDINATE WITH EXCAVATION, LANDSCAPE AND PAVING SUBCONTRACTORS REGARDING TOPSOIL THICKNESS FOR LANDSCAPE AREAS AND PAVEMENT SECTION THICKNESS FOR PAVED AREAS TO PROPERLY ENSURE ADEQUATE CUT TO ESTABLISH SUBGRADE ELEVATIONS.
4. NO EARTHEN SLOPE SHALL BE GREATER THAN 3:1, UNLESS OTHERWISE NOTED.
5. MAXIMUM SLOPE IN ACCESSIBLE PARKING SPACES AND LOADING ZONES SHALL NOT EXCEED 2.0% IN ALL DIRECTIONS.
6. MAXIMUM RUNNING SLOPE SHALL NOT EXCEED 5% AND CROSS SLOPE SHALL NOT EXCEED 2% ON ALL SIDEWALKS AND ACCESSIBLE ROUTES.
7. WHEN NATURAL FLOW OF DRAINAGE IS AWAY FROM CURB, CONTRACTOR TO INSTALL REVERSE GUTTER PITCH.
8. MATCH EXISTING ELEVATIONS AT THE PROPERTY LIMITS. UNLESS SHOWN OTHERWISE.

GRADING LEGEND

	FL = FLOW LINE
	TC = TOP OF CURB
	ME = MATCH ELEVATION
	R = RIM ELEVATION
	EG = EXISTING GRADE
	FG = FINISHED GRADE
——XXX——	PROPOSED CONTOUR
- - XXX - -	EXISTING CONTOUR
RIDGE	RIDGE LINE
X.XX%	SLOPE AND FLOW DIRECTION
	DRAINAGE SWALE

CURB INLET
RIM = 919.18
12" RCP (W)=915.84
12" RCP (E)=915.30

CATCH BASIN
RIM = 919.57
INV 12" RCP (N)=914.47
INV 12" RCP (S)=914.47
INV 30" RCP (SE)=914.47
INV 30" RCP (W)=914.37

CATCH BASIN
RIM = 919.62
INV 12" RCP (S)=915.82
INV 12" RCP (N)=915.44

SANITARY MH
RIM = 921.61
V 10" CLAY (N)=915.89
IV 10" CLAY (E)=916.31

SANITARY MH
RIM = 930.82
INV 10" CLAY (W)=920.68
INV 10" CLAY (NE)=920.68

INV 18" RCP=917.97

Drawing name: K:\CLB_LDEV\190081001_Larkspur_HuberHeights_DW\2 Design\CAD\PlanSheets\Final Plans\GRADING PLAN.dwg Layout1 (2) Oct 14, 2021 8:09am by: Matt.Shiflett
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SCALE: AS NOTED
DESIGNED BY: IC
DRAWN BY: NAB
CHECKED BY: DDL

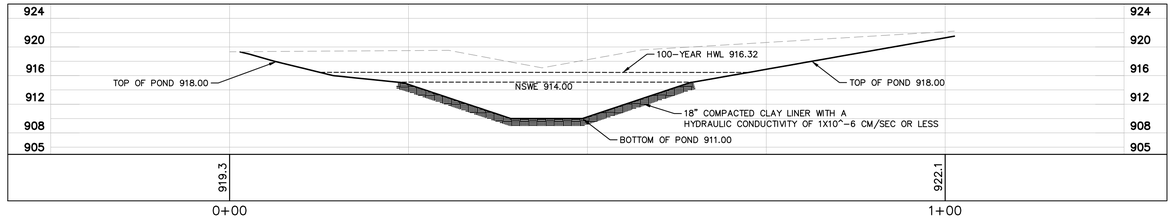
Larkspur Properties
REAL ESTATE PARTNERSHIP

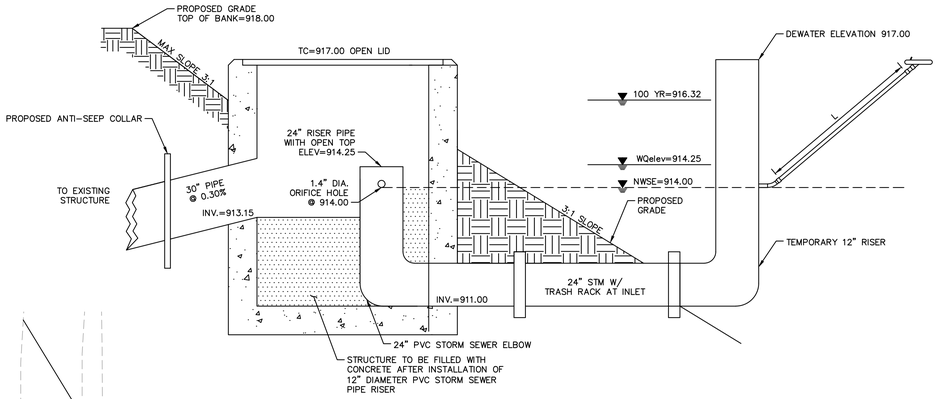
DETAILED DEVELOPMENT PLANS

7650 WAYNETOWNE BLVD
HUBER HEIGHTS, OH 45424

GRADING PLAN

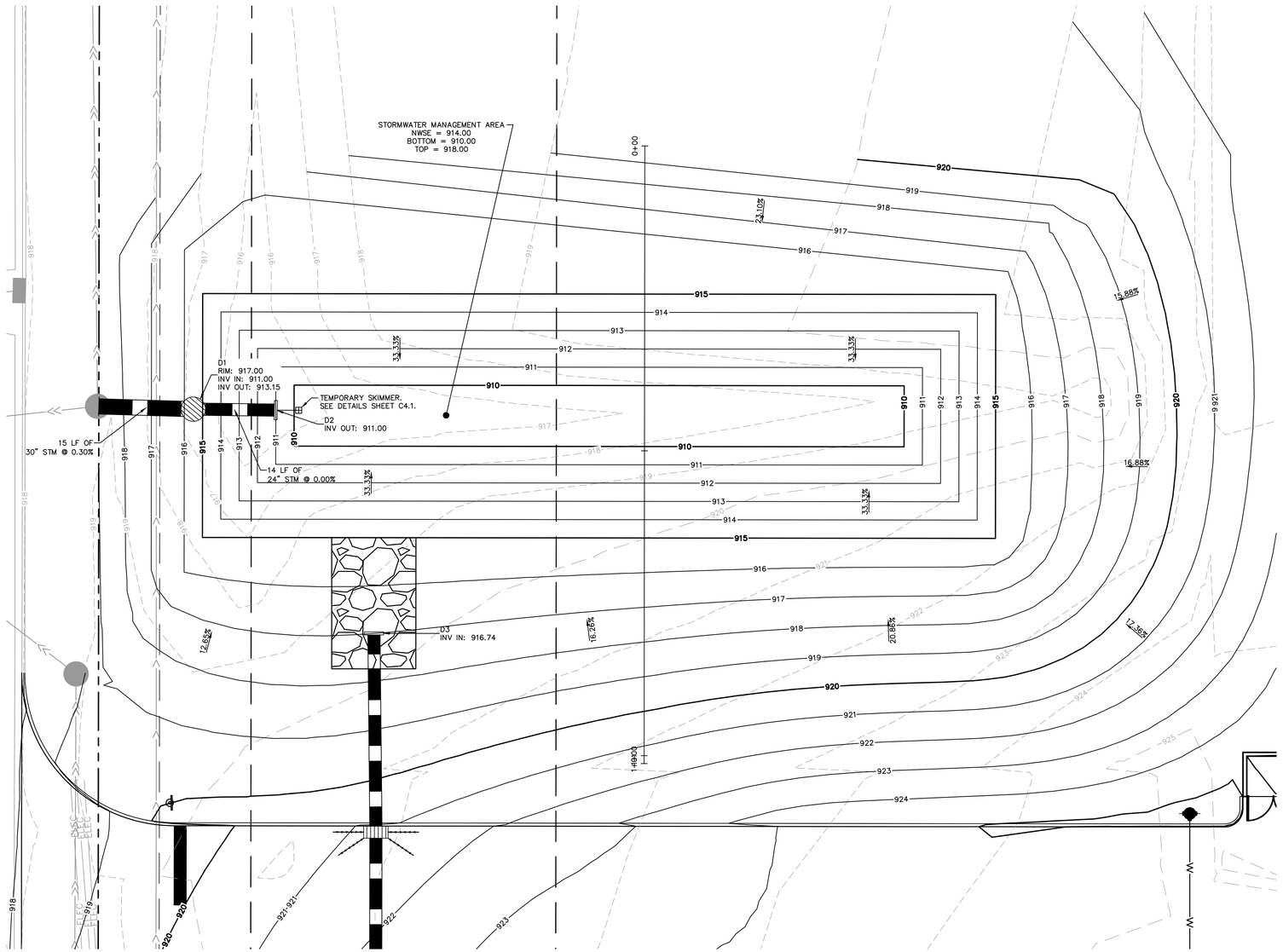
ORIGINAL ISSUE: 10/12/2021
KHA PROJECT NO. 190081001
SHEET NUMBER
C5.1





TEMPORARY SEDIMENT SKIMMER AND RISER DETAIL FOR STRUCTURE D1 DURING CONSTRUCTION

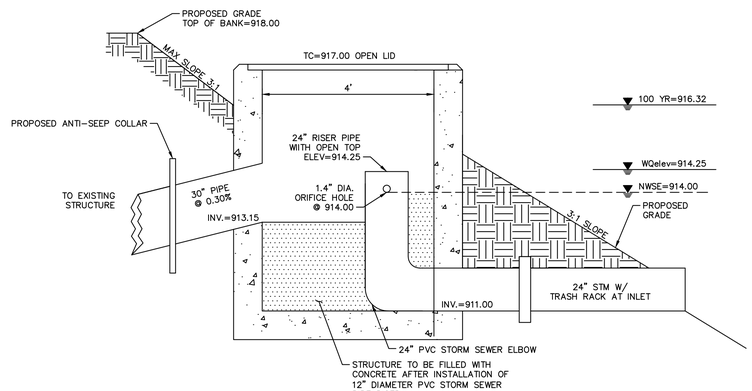
NOT TO SCALE



TEMPORARY SEDIMENT BASIN SCHEDULE										
CONTROL STRUCTURE										
LOCATION	TRIBUTARY ACREAGE	DISTURBED ACREAGE	REQUIRED BASIN DEWATERING VOLUME (1,800 CF/ACRE)	PROVIDED BASIN DEWATERING VOLUME	REQUIRED SEDIMENT STORAGE VOLUME (1,000 CF/DISTURBED AC)	PROVIDED SEDIMENT STORAGE VOLUME	DEWATERING VOLUME DRAWDOWN (HR)	SEDIMENT RISER	HEIGHT	SKIMMER DEWATERING HOLE
1	9.01	7.24	16218	20168	7240	10030	> 48 HRS	12"	6.0'	2.8" @ 917.0
BMP WATER QUALITY STRUCTURE NOTICE										
NOTE: THE EXTENDED WET DETENTION BASIN AND ASSOCIATED WATER QUALITY STRUCTURE ARE STORMWATER QUALITY BMP'S AND ARE AN INTEGRAL PART OF THE PRIVATE STORM SEWER SYSTEM DEPICTED IN THESE DRAWINGS. RESPONSIBILITY AND ASSURANCE OF PERIODIC MAINTENANCE AND THE CONTINUOUS FUNCTIONALITY OF THE STORMWATER QUALITY DEVISE IS PERPETUAL, BEGINNING WITH THE OWNER AT THE TIME OF INSTALLATION AND CONTINUING TO ALL FUTURE OWNER AT THE TIME OF INSTALLATION AND CONTINUING TO ALL FUTURE OWNERS OF SAID PRIVATE STORM SEWER SYSTEMS.									

NOTE: SHOP DRAWING FOR STRUCTURE TO BE REVIEWED AND APPROVED BY CIVIL ENGINEER

SKIMMER SPECIFICATIONS			
	SKIMMER SIZE (IN.)	SKIMMER ORIFICE DIAMETER (IN.)	SKIMMER PIPE LENGTH, L (FT.)
BASIN	4.0	2.8	8.5



PROPOSED WATER QUALITY BASIN OUTLET DETAIL FOR OUTLET CONTROL STRUCTURE D1

NOT TO SCALE

NOTE: THIS SHEET IS FOR REFERENCE ONLY. REFER TO GRADING AND UTILITY PLANS FOR ALL STORM SEWER RIM AND INVERT INFORMATION.

NORTH

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DRAWN BY: NAB
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Larkspur Properties
REAL ESTATE PARTNERSHIP

BASIN DETAIL SHEET

DETAILED DEVELOPMENT PLANS
7650 WAYNETOWNE BLVD
HUBER HEIGHTS, OH 45424

ORIGINAL ISSUE: 10/12/2021
KHA PROJECT NO. 190081001
SHEET NUMBER
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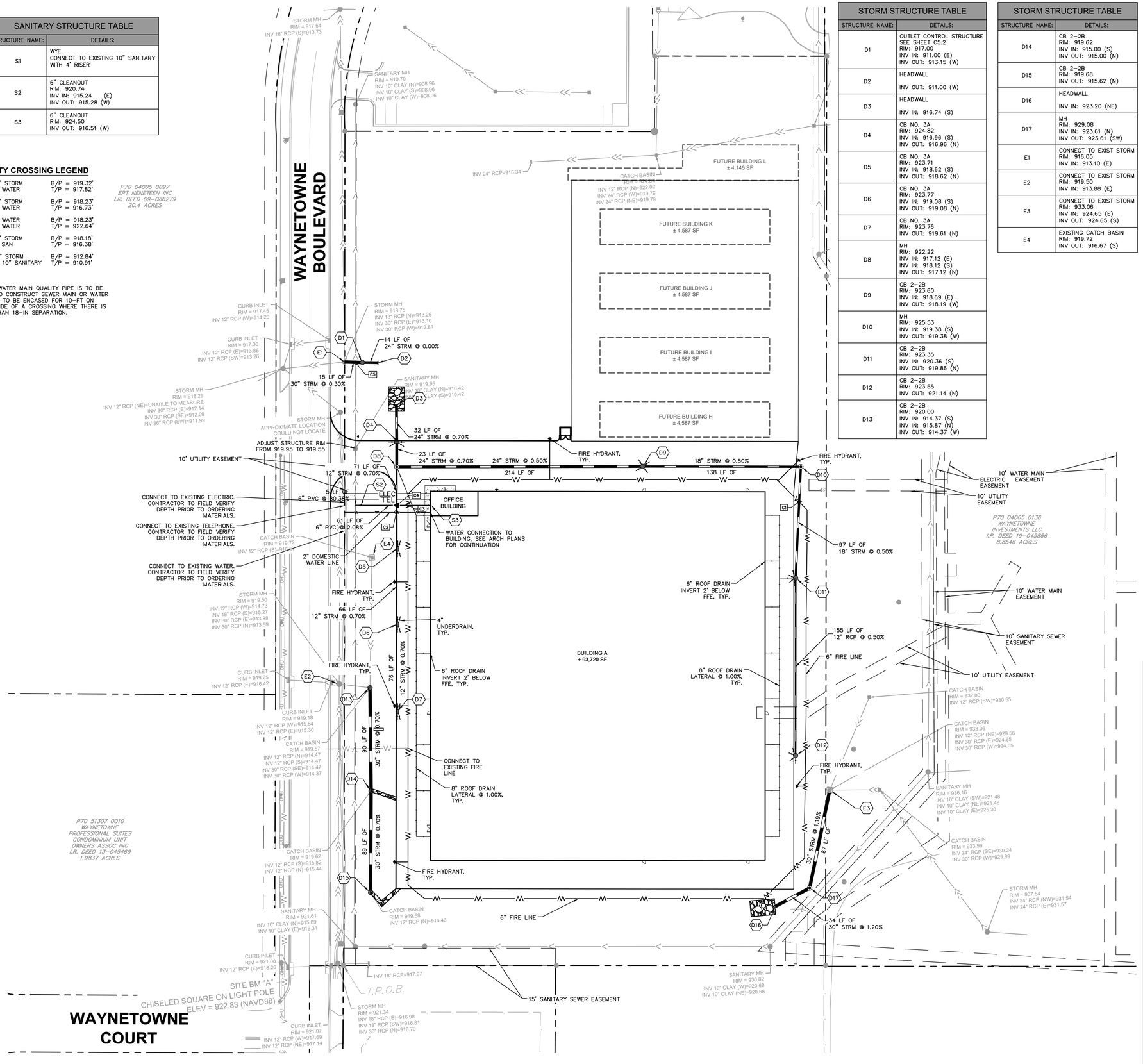
SANITARY STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
S1	WYE CONNECT TO EXISTING 10" SANITARY WITH 4' RISER
S2	6" CLEANOUT RIM: 920.74 INV IN: 915.24 (E) INV OUT: 915.28 (W)
S3	6" CLEANOUT RIM: 924.50 INV OUT: 916.51 (W)

UTILITY CROSSING LEGEND

C1	18" STORM 6" WATER	B/P = 919.32' T/P = 917.82'	P70 04005 0097 EPT NENETEEN INC I.R. DEED 09-086279 20.4 ACRES
C2	12" STORM 2" WATER	B/P = 918.23' T/P = 916.73'	
C3	6" WATER 2" WATER	B/P = 918.23' T/P = 922.64'	
C4	12" STORM 6" SAN	B/P = 918.18' T/P = 916.38'	
C5	24" STORM EX 10" SANITARY	B/P = 912.84' T/P = 910.91'	

NOTE: WATER MAIN QUALITY PIPE IS TO BE USED TO CONSTRUCT SEWER MAIN OR WATER MAIN IS TO BE ENCASED FOR 10-FT ON EACH SIDE OF A CROSSING WHERE THERE IS LESS THAN 18-IN SEPARATION.



STORM STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
D1	OUTLET CONTROL STRUCTURE SEE SHEET C5.2 RIM: 917.00 INV IN: 911.00 (E) INV OUT: 913.15 (W)
D2	HEADWALL INV OUT: 911.00 (W)
D3	HEADWALL INV IN: 916.74 (S)
D4	CB NO. 3A RIM: 924.82 INV IN: 916.96 (S) INV OUT: 916.96 (N)
D5	CB NO. 3A RIM: 923.71 INV IN: 918.62 (S) INV OUT: 918.62 (N)
D6	CB NO. 3A RIM: 923.77 INV IN: 919.08 (S) INV OUT: 919.08 (N)
D7	CB NO. 3A RIM: 923.76 INV OUT: 919.61 (N)
D8	MH RIM: 922.22 INV IN: 917.12 (E) INV IN: 918.12 (S) INV OUT: 917.12 (N)
D9	CB 2-2B RIM: 923.60 INV IN: 918.69 (E) INV OUT: 918.19 (W)
D10	MH RIM: 925.53 INV IN: 919.38 (S) INV OUT: 919.38 (W)
D11	CB 2-2B RIM: 923.35 INV IN: 920.36 (S) INV OUT: 919.86 (N)
D12	CB 2-2B RIM: 923.55 INV OUT: 921.14 (N)
D13	CB 2-2B RIM: 920.00 INV IN: 914.37 (S) INV IN: 915.87 (N) INV OUT: 914.37 (W)

STORM STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
D14	CB 2-2B RIM: 919.62 INV IN: 915.00 (S) INV OUT: 915.00 (N)
D15	CB 2-2B RIM: 919.68 INV OUT: 915.62 (N)
D16	HEADWALL INV IN: 923.20 (NE)
D17	MH RIM: 929.08 INV IN: 923.61 (N) INV OUT: 923.61 (SW)
E1	CONNECT TO EXIST STORM RIM: 916.05 INV IN: 913.10 (E)
E2	CONNECT TO EXIST STORM RIM: 919.50 INV IN: 913.88 (E)
E3	CONNECT TO EXIST STORM RIM: 933.06 INV IN: 924.65 (E) INV OUT: 924.65 (S)
E4	EXISTING CATCH BASIN RIM: 919.72 INV OUT: 916.67 (S)

NORTH

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UTILITY LEGEND

- EX. HYDRANT
- EX. WATER VALVE
- EX. SANITARY SEWER LINE
- EX. SANITARY SEWER MANHOLE
- EX. STORM DRAIN LINE
- EX. STORM MANHOLE
- EX. STORM STRUCTURE/INLET
- OHU — OHU — EX. OVERHEAD POWER LINE
- EX. POWER POLE
- G — G — EX. WATER LINE
- W — W — EX. GAS LINE
- ELEC — EX. UNDERGROUND POWER LINE
- PUGC — PROPOSED UNDERGROUND CONDUIT LINE
- ELEC — PROPOSED UNDERGROUND ELECTRIC LINE
- GAS — GAS — GAS LINE (BY GAS COMPANY)
- T'EL — PROPOSED PHONE LINE
- PROPOSED ROOF DRAIN
- PROPOSED STORM SEWER LINE
- PROPOSED OPEN LID STORM STRUCTURE (USE NEENAH R-4859-C)
- PROPOSED CLOSED LID STORM STRUCTURE (PAVEMENT USE NEENAH R-1772) (GRASS USE NEENAH R-1786)
- PROPOSED OPEN LID CURB STRUCTURE (NEENAH R-3281-A)
- PROPOSED SANITARY SEWER LINE
- PROPOSED SANITARY MANHOLE
- PROPOSED STORM/SANITARY CLEANOUT
- W — W — PROPOSED 6" FIRE WATER LINE
- w — w — w — w — PROPOSED 2" DOMESTIC WATER LINE
- PROPOSED FIRE HYDRANT
- 4" UNDERDRAIN (SEE DETAIL ON C7.0)
- PROPOSED LIGHT POLE

UTILITY NOTES

1. ALL WATER LINES ≥ 3" SHALL BE DUCTILE IRON PIPE, CLASS 52. ALL WATER LINES <3" SHALL BE TYPE K COPPER PIPE.
2. ALL SANITARY SEWER LINES SHALL BE PVC MEETING, SJ034 SDR 26. PROVIDE 42" MINIMUM COVER.
3. CONTRACTOR SHALL COORDINATE ANY DISRUPTIONS TO EXISTING UTILITY SERVICES WITH ADJACENT PROPERTY OWNERS.
4. ALL ELECTRIC AND TELEPHONE EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.
5. CONSTRUCTION SHALL NOT START ON ANY PUBLIC UTILITY SYSTEM UNTIL WRITTEN APPROVAL HAS BEEN RECEIVED BY THE ENGINEER FROM THE APPROPRIATE GOVERNING AUTHORITY AND CONTRACTOR HAS BEEN NOTIFIED BY THE ENGINEER.
6. CONTRACTOR TO CALL 811 TO COORDINATE FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES BEFORE ORDERING MATERIALS OR COMMENCING CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES IMMEDIATELY.
7. PRIOR TO THE CONSTRUCTION OF OR CONNECTION TO ANY STORM DRAIN, SANITARY SEWER, WATER MAIN OR ANY OTHER UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND INFORM THE ENGINEER AND THE OWNER / DEVELOPER OF ANY CONFLICT OR REQUIRED DEVIATIONS FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION. THE CITY OF HUBER HEIGHTS SHALL BE NOTIFIED OF ANY AND ALL CHANGES TO THE DESIGN PLANS.
8. CONTRACTOR SHALL COMPLY COMPLETELY WITH THE LATEST STANDARDS OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING AND OTHER MEANS OF PROTECTION. THIS IS TO INCLUDE, BUT NOT LIMITED FOR ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH PERFORMANCE CRITERIA AS REQUIRED BY OSHA.
9. CONTRACTOR TO AVOID DISRUPTION OF ANY ADJACENT TENANT'S TRAFFIC OPERATIONS DURING INSTALLATION OF UTILITIES.
10. ALL DIMENSIONS ARE TO CENTERLINE OF PIPE OR CENTER OF MANHOLE UNLESS NOTED OTHERWISE.
11. SEE ARCHITECTURAL AND MEP PLANS FOR EXACT UTILITY CONNECTION LOCATIONS AT BUILDING.
12. LIGHT POLES SHOWN FOR COORDINATION PURPOSES ONLY AND DO NOT REPRESENT ACTUAL SIZE. SEE SITE LIGHTING PLANS BY OTHERS FOR MORE INFORMATION.
13. SEE DETAILS FOR LOCATING STORM STRUCTURES WITHIN THE CURB LINE.
14. STORMWATER FACILITIES MUST BE FUNCTIONAL BEFORE BUILDING CONSTRUCTION BEGINS.

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Larkspur Properties
REAL ESTATE PARTNERSHIP

UTILITY PLAN

DETAILED DEVELOPMENT PLANS

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Drawing name: K:\CLB_DEV\190081001 Larkspur_Huberheights_DW\2 Design\CAD\PlanSheets\Final Plans\UTILITY PLAN.dwg Layout1 Oct 14, 2021 8:09am by: MattSchiffett
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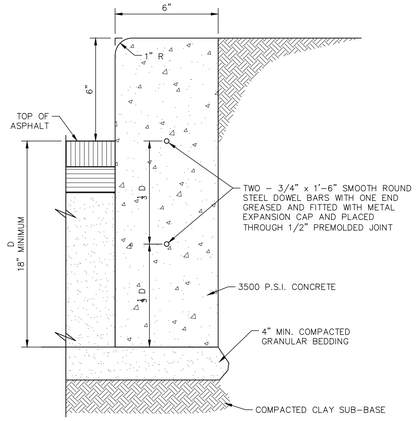
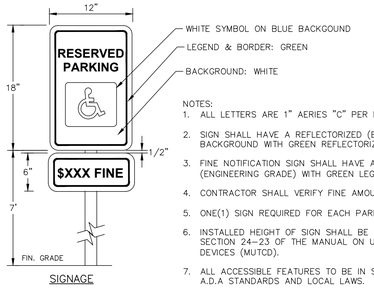


NOTES:

1. USE TWO #5 REBARS FOR 10 L.F. ON EITHER SIDE OF ALL UTILITY TRENCHES.
2. INSTALL EXPANSION JOINTS EVERY 50 FT. AND SAW-CUT CONSTRUCTION JOINTS EVERY 25 FT.

BARRIER CURB
N.T.S.

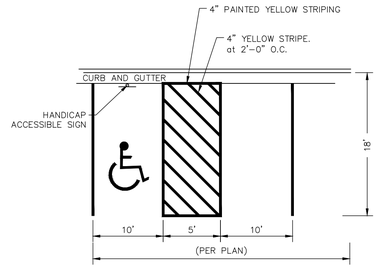


SIGNAGE

NOTES:

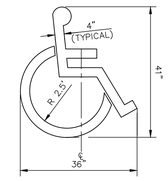
1. ALL LETTERS ARE 1" AERIES "C" PER MUTCD.
2. SIGN SHALL HAVE A REFLECTORIZED (ENGINEERING GRADE) WHITE BACKGROUND WITH GREEN REFLECTORIZED LEGEND AND BORDER.
3. FINE NOTIFICATION SIGN SHALL HAVE A REFLECTORIZED (ENGINEERING GRADE) WITH GREEN LEGEND AND BORDER.
4. CONTRACTOR SHALL VERIFY FINE AMOUNT.
5. ONE(1) SIGN REQUIRED FOR EACH PARKING SPACE.
6. INSTALLED HEIGHT OF SIGN SHALL BE IN ACCORDANCE WITH SECTION 24-23 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
7. ALL ACCESSIBLE FEATURES TO BE IN STRICT ACCORDANCE WITH A.D.A STANDARDS AND LOCAL LAWS.

ACCESSIBLE PARKING SIGNAGE
N.T.S.

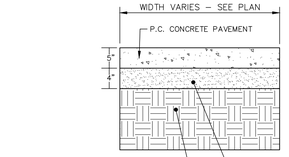


NOTE: REFER TO PLAN FOR DETAILED LAYOUT AND DIMENSIONS

TYPICAL HANDICAP STRIPING
N.T.S.



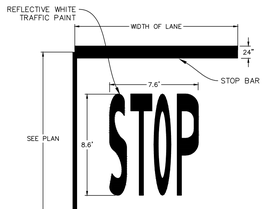
ACCESSIBLE PARKING SYMBOL
N.T.S.



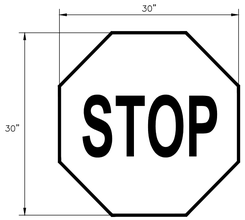
NOTES:

1. ALL SIDEWALK SHALL BE CONSTRUCTED WITH CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI AT 14 DAYS.
2. PROVIDE 1/2" EXPANSION JOINTS AT 20', MAXIMUM, SPACING AND FILLED WITH PREMOLDED BITUMINOUS EXPANSION JOINT FILLER MATERIAL OR REDWOOD. EXPANSION JOINTS SHALL HAVE #4 DOWELS, LUBRICATED, 18" LONG, AT 12" CENTERS, 6" FROM EDGE.
3. PROVIDE 3/8" GROOVED CONTROL JOINTS AT 5' CENTERS.
4. WELDED WIRE FABRIC (6X6-6X6) SHALL BE INSTALLED THROUGH DRIVEWAYS AT 2" ABOVE SLAB BOTTOM.
5. PROVIDE 1/2" BITUMINOUS EXPANSION JOINT FILLER MATERIAL WHERE WALK ABUTS EXISTING IMPROVEMENTS AND AT ALL CHANGES IN GRADE.
6. USE 2-#4 REINFORCING BARS, 10' LONG OVER ALL UTILITY TRENCHES FOR NEW SIDEWALK AND CONNECTIONS TO EXISTING SIDEWALK.
7. AT DRIVE APPROACHES, SIDEWALK PCC AND BASE THICKNESS SHALL MATCH THAT OF THE DRIVE.

CONCRETE SIDEWALK
N.T.S.

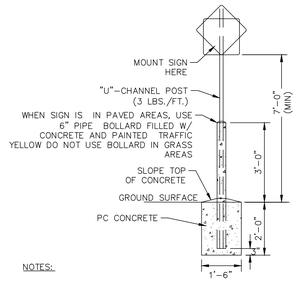


STOP BAR
N.T.S.



30" X 30" R1-1

STOP SIGN
N.T.S.

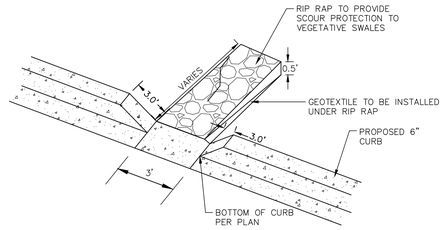


NOTES:

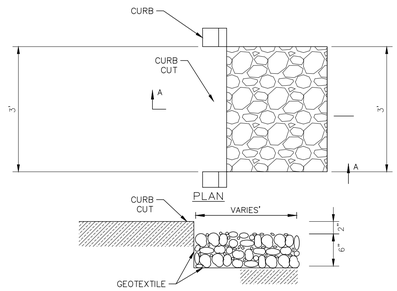
POLE AND SIGN TO BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.

ALL SIGNS SHALL COMPLY WITH U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", LOCAL CODES AND AS SPECIFIED. MOUNT SIGNS TO POST IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

STANDARD SIGN BASE
N.T.S.



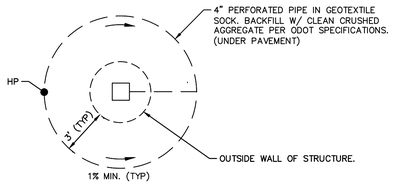
3' CURB CUT WITH RIP RAP
N.T.S.



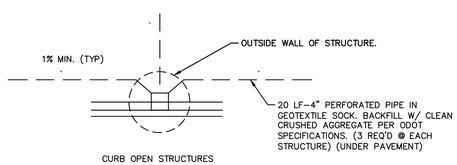
SECTION A-A

NOTES:

1. GEOTEXTILE TO BE PER ODOT REQUIREMENTS
2. RIP RAP TO BE ITEM 601 TYPE C OR D ROCK



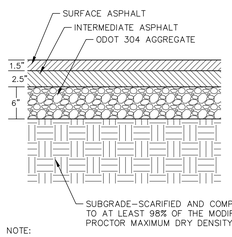
PAVEMENT OPEN STORM STRUCTURES



CURB OPEN STRUCTURES

NOTE: WHERE THE DISTANCE FROM THE TOP OF STORM PIPE TO RIM ELEVATIONS EXCEED 4', INSTALL UNDERDRAIN INVERT AT 3' BELOW RIM ELEVATION. IN AREAS WHERE THE DISTANCE FROM THE TOP OF STORM PIPE TO RIM ELEVATIONS ARE LESS THAN 4', INSTALL UNDERDRAIN AT AN ELEVATION AT THE STRUCTURE THAT IS AT THE OUTFLOW PIPE ELEVATION.

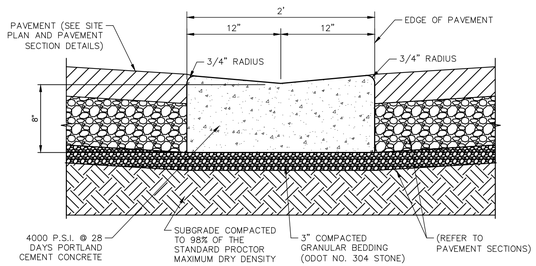
UNDERDRAIN DETAIL
N.T.S.



NOTE:

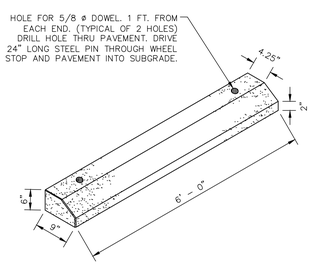
1. PAVEMENT THICKNESS, SUBGRADE PREP, ETC. DETERMINED FROM GEOTECHNICAL REPORT PERFORMED BY INTERTEK PSI, DATED 8/28/2020. REFER TO REPORT FOR ALL INFORMATION RELATED TO PAVING.
2. INSTALLING MEDIUM DUTY GEOGRID (TENSAR BX 1200, OR EQUIVALENT) BELOW THE BASE COURSE AGGREGATE IN AREAS SUBJECTED TO STOPPING AND TURNING TRAFFIC OR CONCENTRATED TRAFFIC FLOW, IS SUGGESTED. SEE GEOTECH PLAN FOR MORE INFORMATION.

STANDARD DUTY ASPHALTIC PAVEMENT SECTION
N.T.S.



NOTE: THE CROSS SLOPE OF THE GUTTER SHALL MATCH THE CROSS SLOPE OF THE ADJACENT PAVEMENT.

24" CONCRETE VALLEY GUTTER
N.T.S.



WHEEL STOP DETAIL
NTS

Drawing name: K:\CLB_DEV\190081001_Larkspur_HuberHeights_DrV2 Design\CAD\PlanSheets\Final Plans\CONSTRUCTION DETAILS.dwg Layout1 Oct 14, 2021 8:09am by: MattShiflett
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NO.	REVISIONS	DATE	BY

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SCALE: AS NOTED
DESIGNED BY: IC
DRAWN BY: NAB
CHECKED BY: DDL

Larkspur Properties
REAL ESTATE PARTNERSHIP

CONSTRUCTION DETAILS

DETAILED DEVELOPMENT PLANS
7650 WAYNETOWNE BLVD
HUBER HEIGHTS, OH 45424

ORIGINAL ISSUE: 10/12/2021
KHA PROJECT NO. 190081001
SHEET NUMBER
C7.0

Drawing name: K:\OLD_DES\190081001_Larkspur_HuberHeights_OH\2 Design\CAD\ProjSheets\Final Plans\CONSTRUCTION DETAILS.dwg Layout1 (2) Oct 14, 2021 8:09am by: MattSchlett
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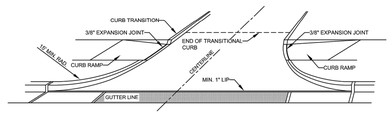
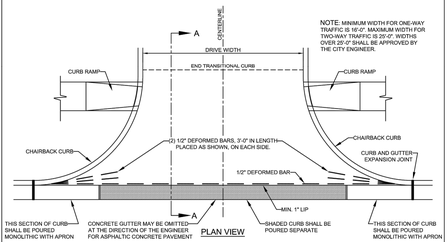
NOTE: WHERE DISTANCE FROM FACE OF CURB TO FRONT FACE OF WALK EXCEEDS 16' A 2' TRANSVERSE DUMMY JOINT SHALL BE PLACED AT THE RADIUS POINT, OR AS DIRECTED BY THE CITY ENGINEER.



PERSPECTIVE VIEW

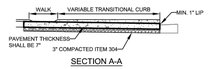


PLAN VIEW

NOTE: MINIMUM WIDTH FOR ONE-WAY TRAFFIC IS 16'-0". MAXIMUM WIDTH FOR TWO-WAY TRAFFIC IS 25'-0" WIDTH OVER 25'-0" SHALL BE APPROVED BY THE CITY ENGINEER.

GENERAL NOTES:

1. JOINTS SHALL BE CLEANED AND EDGED BY A 1/4" RADIUS EDGER. LONGITUDINAL JOINTS SHALL BE AS DIRECTED BY THE ENGINEER. EXPANSION JOINTS SHALL BE OF SUCH DIMENSIONS AS SHOWN ON STANDARD DRAWINGS FOR CONSTRUCTION JOINTS.
2. MATERIAL SHALL MEET THE REQUIREMENTS OF THESE SPECIFICATIONS.



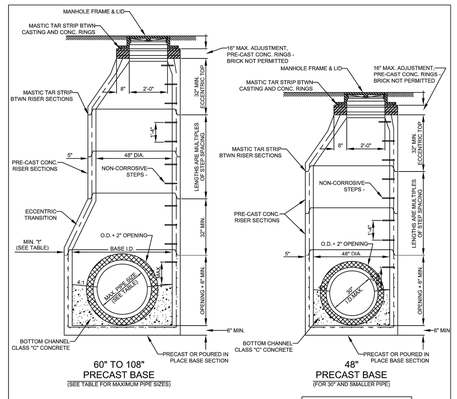
SECTION A-A

CITY OF HUBER HEIGHTS
ENGINEERING DEPARTMENT
6131 TAYLORSVILLE RD.
HUBER HEIGHTS, OH 45424
(937) 233-1423

TITLE OF DRAWING:
COMMERCIAL SERVICE DRIVE APPROACH

CITY OF HUBER HEIGHTS ENGINEERING DEPARTMENT ISSUE DATE: 2017

DWG. No. PV-6.0



60" TO 108" PRECAST BASE
[SEE TABLE FOR MAXIMUM PIPE SIZES]

48" PRECAST BASE
[FOR 30" AND SMALLER PIPE]

MAXIMUM PIPE SIZES		
BASE I.D.	MIN. "t"	MAX. PIPE SIZE
60"	5"	36"
72"	6"	48"
84"	7"	54"
90"	7.5"	60"
96"	8"	66"
108"	9"	72"

MANHOLE No. 3

FOR ADDITIONAL NOTES REFER TO THE LATEST EDITION OF THE ODOT HYDRAULIC STANDARD CONSTRUCTION DRAWINGS

CITY OF HUBER HEIGHTS
ENGINEERING DEPARTMENT
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HUBER HEIGHTS, OH 45424
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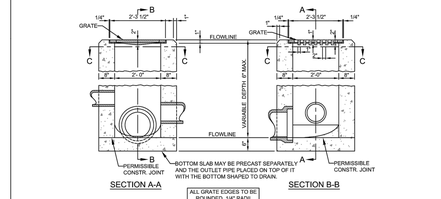
TITLE OF DRAWING:
MANHOLE No. 3

CITY OF HUBER HEIGHTS ENGINEERING DEPARTMENT ISSUE DATE: 2017

DWG. No. MH-1.2



CONCRETE: USE 4000 PSI COMPRESSIVE STRENGTH FOR CAST-IN-PLACE CONCRETE. MEET THE REQUIREMENTS OF OMS 706.13 FOR ALL PRECAST CONCRETE AND MARK WITH CATCH BASIN NUMBER.

CONSTRUCTION INFORMATION
MIN. WEIGHT OF GRATE: 120 lbs.

CATCH BASIN	OUTLET PIPE SIZE
2-2B	12" TO 21"

CATCH BASIN No. 2-2B

FOR ADDITIONAL NOTES REFER TO THE LATEST EDITION OF THE ODOT HYDRAULIC STANDARD CONSTRUCTION DRAWINGS

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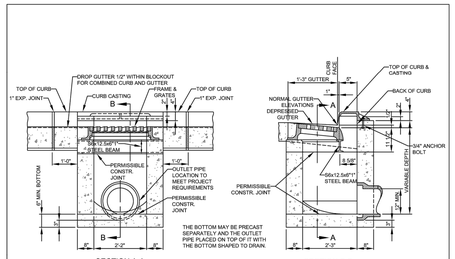
TITLE OF DRAWING:
CATCH BASIN No. 2-2B

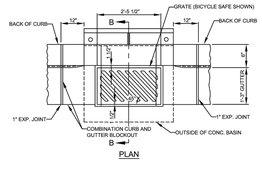
CITY OF HUBER HEIGHTS ENGINEERING DEPARTMENT ISSUE DATE: 2017

DWG. No. CB-1.1



SECTION A-A

SECTION B-B
WITH CURB & GUTTER
(1/2" DEPRESSION)



PLAN

CATCH BASIN No. 3A MODIFIED

FOR ADDITIONAL NOTES REFER TO THE LATEST EDITION OF THE ODOT HYDRAULIC STANDARD CONSTRUCTION DRAWINGS

CITY OF HUBER HEIGHTS
ENGINEERING DEPARTMENT
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HUBER HEIGHTS, OH 45424
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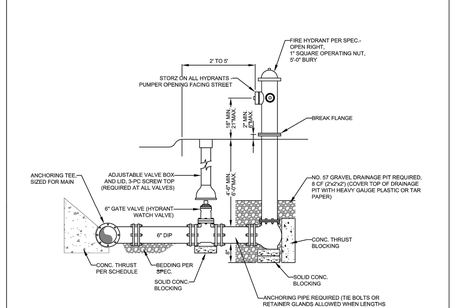
TITLE OF DRAWING:
CATCH BASIN No. 3A MODIFIED

CITY OF HUBER HEIGHTS ENGINEERING DEPARTMENT ISSUE DATE: 2017

DWG. No. CB-2.2



GENERAL NOTES:

1. NO NATURAL OR MAN-MADE BARRIERS SUCH AS WALLS FENCES, POSTS,CURBS, SHRUBBERY, OR TREES SHALL BE INSTALLED SO AS TO IMPEDE THE USE, ACCESS, OR OPERATION OF HYDRANTS. MINIMUM CLEAR DISTANCE TO HYDRANT SHALL BE THREE (3) FEET.
2. ALL FIRE HYDRANT INSTALLATION IS TO BE IN ROADWAY. PARKING LOT OR OTHER AREAS WHERE VEHICULAR TRAFFIC MAY CAUSE DAMAGE TO THE HYDRANT, PROTECTIVE BARRIERS ARE TO BE INSTALLED, AS DIRECTED BY THE ENGINEER.
3. HYDRANTS ALONG STREETS SHALL BE LOCATED IN THE TREE LAWN AREA OF THE RIGHT-OF-WAY, NOT LESS THAN 2' FROM THE BACK OF CURB AND NOT MORE THAN 5'.

CITY OF HUBER HEIGHTS
ENGINEERING DEPARTMENT
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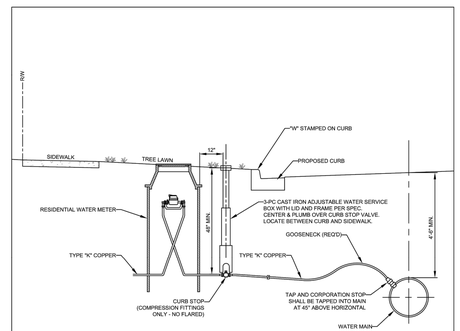
TITLE OF DRAWING:
FIRE HYDRANT ASSEMBLY

CITY OF HUBER HEIGHTS ENGINEERING DEPARTMENT ISSUE DATE: 2017

DWG. No. WT-1.0



WATER MAIN SERVICE CONNECTION

GENERAL NOTES:

1. TYPE "K" COPPER TUBING MEETING FEDERAL REQUIREMENTS WW-T-799.
2. TAP, CORPORATION STOP & CURB STOP SHALL BE MUELLER TYPE.
3. WATER SERVICES SHALL BE A MINIMUM OF 10' MEASURED HORIZONTALLY FROM SEWER SERVICE AND SHALL BE A MINIMUM OF 18" ABOVE CROWN OF THE SANITARY SEWER MAIN WHERE THE WATER SERVICE CROSSES THE SEWER MAIN. WATER SERVICES MAY BE LAID ON BENCH IN SEWER LATERAL TRENCH IF CROWN OF SEWER IS AT LEAST 18" BELOW INVERT OF WATER SERVICE.
4. ALL FITTINGS SHALL BE COMPRESSION FITTINGS ONLY.
5. A PERMIT FROM THE CITY OF HUBER HEIGHTS IS REQUIRED TO TAP-IN TO THE WATER MAIN. INSTALL WATER METER AND METER PIT.
6. INSPECTION BY MONTGOMERY COUNTY IS REQUIRED TO INSTALL THE SERVICE FROM THE METER TO THE RESIDENCE.
7. FOR RESIDENTIAL USE WATER METER PIT SHOULD BE 21 1/2" TO 24" BEHIND CURB.
8. IRRIGATION METER SHOULD BE ALWAYS INSTALLED IN A SEPARATE PIT ON THE LEFT SIDE OF THE MAIN METER.
9. DO NOT INSTALL IN ANY STREET, ALLEY, PARKING AREA, DRIVEWAY, SIDEWALK, DRAINAGE DITCH OR DETENTION BASIN.
10. NO LANDSCAPING (SHRUBS, BOULDERS, ETC.) OR STRUCTURES TO BE WITHIN 4' OF THE METER BOX, OR NO TREES WITHIN 10' OF METER BOX.
11. SLOPE GROUND SURROUNDING METER BOX AWAY FROM LID AT 2% MINIMUM GRADE.
12. MULTI-FAMILY HOMES SHALL BE AT LEAST 1" WITH 24" PIT MINIMUM.
13. ALL TEES AND CONNECTION FITTINGS TO BE A MINIMUM OF 5' FROM METER BOX WALL ON OUTLET SIDE.
14. INSTALLATION OF THE METER BOX INSTALLATION REQUIRES THAT THE OWNER ADJUST METER BOX COVER TO 1/2" ABOVE FINAL GRADE.
15. IF A PRESSURE REDUCING VALVE IS REQUIRED BY PLUMBING CODE, INSTALL VALVE INSIDE THE BUILDING, IMMEDIATELY FOLLOWING THE MAIN SHUT-OFF VALVE.

CITY OF HUBER HEIGHTS
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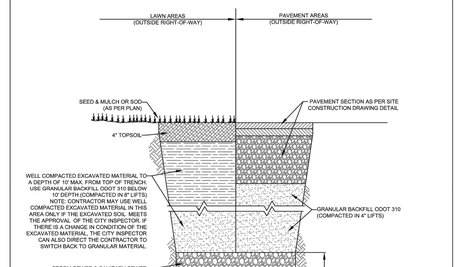
HUBER HEIGHTS, OH 45424
(937) 233-1423

TITLE OF DRAWING:
WATER MAIN SERVICE CONNECTION

CITY OF HUBER HEIGHTS ENGINEERING DEPARTMENT ISSUE DATE: 2017

DWG. No. WT-4.0



NOTE:
1. THE CONTRACTOR MAY WIDEN THE TRENCH OPENING BEGINNING AT A POINT 12" ABOVE THE TOP OF PIPE.
2. NO TRENCH SHALL REMAIN OPEN OVERNIGHT. THE CONTRACTOR SHALL BACKFILL THE TRENCH OR USE STEEL PLATING.

CITY OF HUBER HEIGHTS
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HUBER HEIGHTS, OH 45424
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TITLE OF DRAWING:
UTILITY TRENCH-DETAIL (OUTSIDE RIGHT-OF-WAY)

CITY OF HUBER HEIGHTS ENGINEERING DEPARTMENT ISSUE DATE: 2017

DWG. No. MS-2.0

No.	REVISIONS	DATE	BY

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SCALE: AS NOTED
DESIGNED BY: IC
DRAWN BY: NAB
CHECKED BY: DDL

Larkspur Properties
REAL ESTATE PARTNERSHIP

CONSTRUCTION DETAILS

DETAILED DEVELOPMENT PLANS

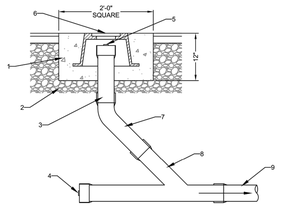
7650 WAYNETOWNE BLVD
HUBER HEIGHTS, OH 45424

ORIGINAL ISSUE: 10/12/2021

KHA PROJECT NO. 190081001

SHEET NUMBER

C7.1



KEYED NOTES:

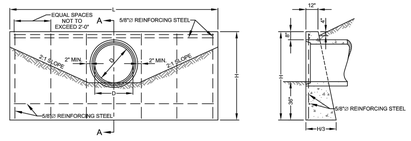
1. CONCRETE, MATCH PAVEMENT SPEC.
2. 6" (MIN.) AGGREGATE BASE
3. 6" DIA. CLEAN-OUT PIPE
4. CAP AND SEAL CONDUIT
5. THREADED CLEAN-OUT CAP
6. CAST-IRON MONUMENT BOX, EJIW 1570 OR APPROVED EQUAL.
7. 45°BEND
8. WYE
9. SEWER

CITY OF HUBER HEIGHTS
ENGINEERING DEPARTMENT
6131 TAYLORSVILLE RD.
HUBER HEIGHTS, OH 45424
(937) 233-1423

TITLE OF DRAWING:
STANDARD CLEAN-OUT
FOR PAVEMENT AREA

CITY OF HUBER HEIGHTS
ENGINEERING DEPARTMENT
ISSUE DATE: 2017

DWG. No.
MS-3.0



ELEVATION

SECTION A-A

L CIRCULAR SECTIONS =5D+4T
L ELLIPTICAL OR PIPE-ARCH =4R+4T+S
H CIRCULAR SECTIONS =D+T+4"
H ELLIPTICAL OR PIPE-ARCH =R+T+4"
D= DIAMETER OF PIPE
R= RISE OF PIPE
S= SPAN OF PIPE
T= THICKNESS OF BARREL
L= LENGTH OF HEADWALL
H= HEIGHT OF HEADWALL

DIMENSIONS			QUANTITIES ONE HEADWALL	
DIAMETER	H	L	CONCRETE CU. YDS.	REINFORCING STEEL
15"	5'-2"	7'-0"	1.7	41
18"	5'-5"	8'-4"	2.2	57
21"	5'-8"	9'-8"	2.8	62
24"	5'-11"	11'-0"	3.3	69
30"	6'-5"	13'-8"	4.7	92
36"	7'-0"	16'-4"	6.5	105

FULL HEIGHT HEADWALL
(FOR SEWERS 36" OR LESS IN DIAMETER)

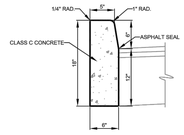
FOR ADDITIONAL NOTES REFER TO THE LATEST EDITION OF THE ODOT HYDRAULIC STANDARD CONSTRUCTION DRAWINGS

CITY OF HUBER HEIGHTS
ENGINEERING DEPARTMENT
6131 TAYLORSVILLE RD.
HUBER HEIGHTS, OH 45424
(937) 233-1423

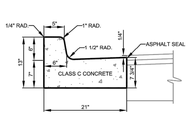
TITLE OF DRAWING:
FULL HEIGHT HEADWALL
(FOR SEWERS 36" OR LESS IN DIAMETER)

CITY OF HUBER HEIGHTS
ENGINEERING DEPARTMENT
ISSUE DATE: 2017

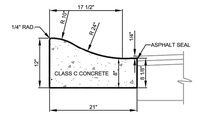
DWG. No.
HW-1.2



BARRIER CURB TYPE 6



COMBINED BARRIER
CURB AND GUTTER



COMBINED MOUNTABLE (ROLL)
CURB AND GUTTER

GENERAL NOTES:

1. ALL BARRIER TYPE SHALL BE DEPRESSED AT DRIVE APPROACHES. SEE CONCRETE DRIVEWAY DETAIL.
2. ALL CURB AND COMBINATION CURB AND GUTTER SHALL HAVE 1/4" CONTRACTION JOINTS CONSTRUCTED AT 5' INTERVALS. THE DEPTH SHALL AVERAGE 2" OR MORE FOR COMBINATION CURB AND GUTTER, AND FOR CURB SHALL AVERAGE 1/3 OR MORE OF THE CURB HEIGHT. ALL CONTRACTION JOINTS SHALL BE TOOLED RATHER THAN BEING SAWED AFTER BROOM FINISHING.
3. ALL CURB AND COMBINATION CURB AND GUTTER SHALL HAVE 1/2" NON-EXTRUDING EXPANSION JOINTS AT FORTY (40) FOOT INTERVALS UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
4. PROVIDE BROOM FINISH AND EDGING TO ALL EXPOSED SURFACES.
5. PROVIDE A MINIMUM 3" OF COMPACTED AGGREGATE - ITEM 304 BELOW CURB AND EXTENDED 12" FROM BACK OF CURB ON THE COMPACTED SUBGRADE. SEE STREET PAVEMENT SECTIONS.

CITY OF HUBER HEIGHTS
ENGINEERING DEPARTMENT
6131 TAYLORSVILLE RD.
HUBER HEIGHTS, OH 45424
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TITLE OF DRAWING:
CURB SECTION DETAILS

CITY OF HUBER HEIGHTS
ENGINEERING DEPARTMENT
ISSUE DATE: 2017

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PV-3.0

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Larkspur Properties
REAL ESTATE PARTNERSHIP

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DETAILED DEVELOPMENT PLANS
7650 WAYNETOWNE BLVD
HUBER HEIGHTS, OH 45424

ORIGINAL ISSUE:
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KHA PROJECT NO.
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SHEET NUMBER
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Drawing name: K:\CLD_LDEV\190081001_Larkspur_HuberHeights_OH\2 Design\CAD\PlanSheets\Final Plans\CONSTRUCTION DETAILS.dwg Layout1 (3) Oct 14, 2021 8:09am by: MattShiflett
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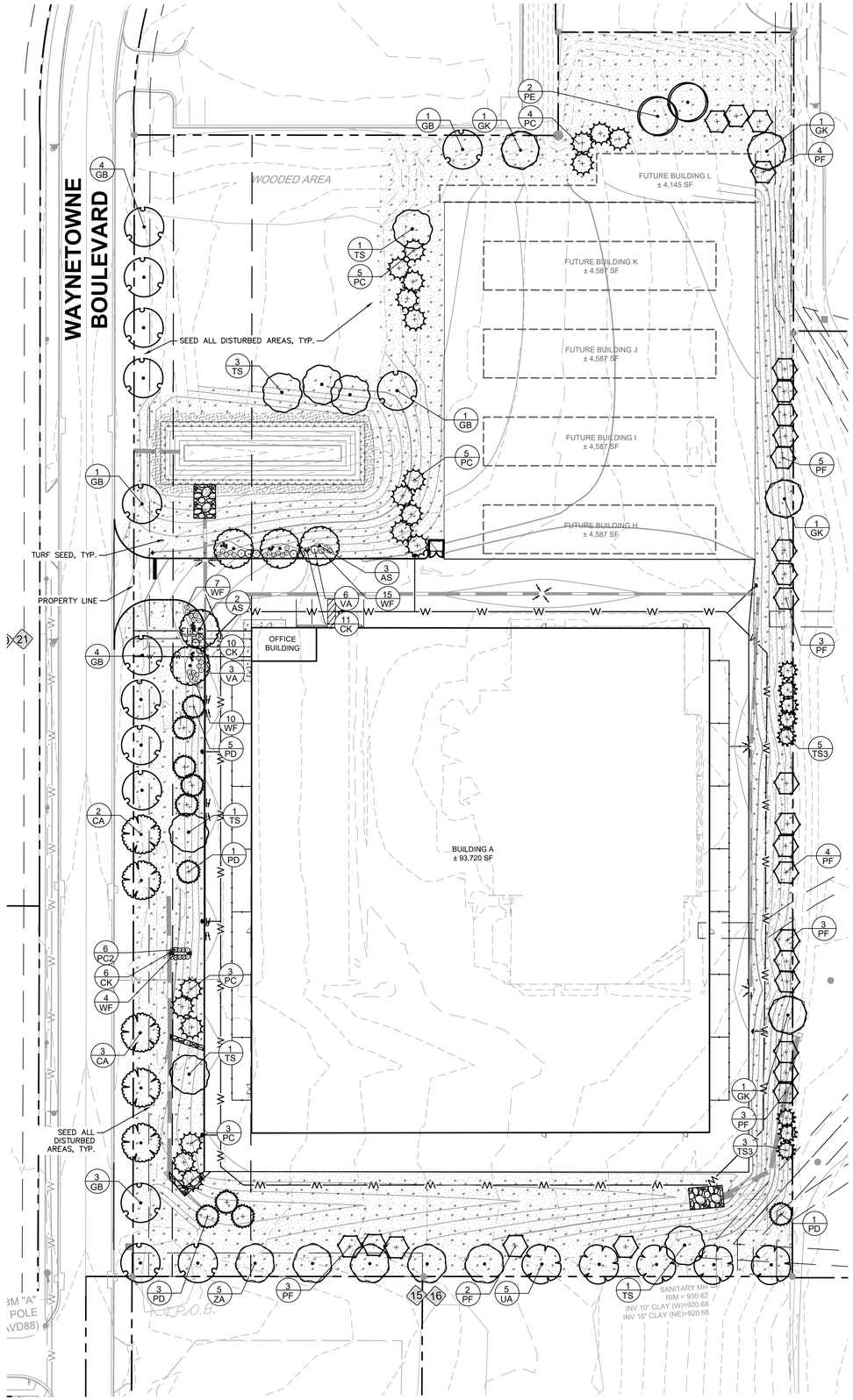

LANDSCAPE CODE REQUIREMENTS - HUBER HEIGHTS, OHIO		
ZONING ORDINANCE	REQUIREMENT	PROVIDED
1182.03 B.3.A - LANDSCAPE REGULATIONS AND REQUIREMENTS		
ONE SHADE TREE IS REQUIRED PER 2,000 SQ. FT. OF OPEN SPACE.	OPEN SPACE ON THE SITE = 103,580.33-WOODLAND AREAS 10,306 93,274 SQ. FT. / 2,000 SQ. FT = 46.63 **47 SHADE TREES TOTAL TREES ON SITE**	47 SHADE TREES PROVIDED ON SITE
1182.04 - PARKING LOT REQUIREMENTS		
PROVIDE A MINIMUM 10 FT. WIDE LANDSCAPED STRIP BETWEEN THE RIGHT-OF-WAY AND THE PARKING LOT. THIS STRIP IS TO BE PLANTED WITH A MINIMUM OF ONE SHADE TREE AND 10 SHRUBS PER 35 FT. OF FRONTAGE.	PARKING FRONTAGE = 44 FT. 44 FT. / 35 FT. = 1.26 **2 SHADE TREES AND 20 SHRUBS REQUIRED**	2 SHADE TREES AND 20 SHRUBS PROVIDED IN THE LANDSCAPE STRIP
PROVIDE A MINIMUM 10 FT. WIDE LANDSCAPED STRIP BETWEEN THE PARKING LOT AND ANY ADJACENT PROPERTY LINE. THIS STRIP IS TO BE PLANTED WITH A MINIMUM OF 1 SHADE TREE AND 3 SHRUBS PER 35 FT. OF PARKING PERIMETER ADJACENT TO A PROPERTY LINE.	PARKING PERIMETER = 82 FT. 82 FT. / 35 FT. = 2.34 **3 SHADE TREES AND 9 SHRUBS REQUIRED**	3 SHADE TREES AND 21 SHRUBS PROVIDED FOR THE PARKING PERIMETER STRIP
AT LEAST TWO SHADE TREES SHALL BE LOCATED WITHIN 60 FT. OF EVERY PARKING SPACE.	N/A	SHADE TREES PROVIDED WITHIN 60 FT. FROM ALL 3 PARKING SPACES
1182.05 - BUFFER AND SCREENING REQUIREMENTS		
SCREENING IS REQUIRED ON THE PROPERTY ADJACENT TO ALL PUBLIC RIGHTS-OF-WAY. SCREENING MATERIAL SHALL CONSIST OF EVERGREEN TREES AND SHRUBS, WALLS, FENCES AND EARTHEN BERMS.	SCREENING REQUIRED ALONG THE WEST SIDE OF THE SITE (WAYNETOWNE ROAD)	EVERGEEN SCREENING PROVIDED
	SCREENING REQUIRED ALONG THE EAST SIDE OF THE SITE	EVERGEEN SCREENING PROVIDED

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

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GROUND SIGN
32 SF SIGN FACE EACH SIDE= 64 SF OF LANDSCAPE REQUIRED
82.4 SF OF LANDSCAPE PROVIDED

PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
	AS	5	ACER MIYABEI `STATE STREET` / MIYABEI MAPLE	B & B	2.5" CAL MIN	
	CA	5	CARPINUS CAROLINIANA / AMERICAN HORNBEAM	B & B	2.5" CAL MIN	
	GB	14	GINKGO BILOBA / MAIDENHAIR TREE	B & B	2.5" CAL MIN	
	GK	4	GYMNOCLADUS DIOICA / KENTUCKY COFFEE TREE	B & B	2.5" CAL MIN	
	PE	2	PLATANUS X ACERIFOLIA `EXCLAMATION` TM / EXCLAMATION LONDON PLANE TREE	B & B	2.5" CAL MIN	
	TS	7	TILIA TOMENTOSA `STERLING` / STERLING SILVER LINDEN	B & B	2.5" CAL MIN	
	UA	5	ULMUS X `ACCOLADE` / ACCOLADE ELM	B & B	2.5" CAL MIN	
	ZA	5	ZELKOVA SERRATA `AUTUMN GLOW` / AUTUMN GLOW JAPANESE ZELKOVA	B & B	2.5" CAL MIN	
EVERGREEN TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
	PC	20	PICEA PUNGENS / COLORADO SPRUCE	B & B		5` HT MIN
	PD	10	PICEA GLAUCA `DENSATA` / BLACK HILLS SPRUCE	B & B		5` HT MIN
	PF	27	PINUS FLEXILIS `VANDERWOLF`S PYRAMID` / VANDERWOLF`S PYRAMID PINE	B & B		5` HT MIN
	TS3	8	THUJA OCCIDENTALIS `SMARAGD` / EMERALD GREEN ARBORVITAE	B & B		5` HT MIN
SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	CONT	SPACING	SIZE
	PC2	6	PINUS MUGO `VALLEY CUSHION` / VALLEY CUSHION MUGO PINE	-	SEE PLAN	18" HT MIN
	VA	9	VIBURNUM DENTATUM `CHRISTOM` / BLUE MUFFIN VIBURNUM	-	SEE PLAN	36" HT MIN
	WF	36	WEIGELA FLORIDA `MINUET` / MINUET WEIGELA	-	SEE PLAN	24" HT MIN
GRASSES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	SPACING	SIZE
	CK	27	CALAMAGROSTIS X ACUTIFLORA `KARL FOERSTER` / FEATHER REED GRASS	1 GAL	SEE PLAN	

GROUND COVERS	BOTANICAL / COMMON NAME
	EMERGENT PLUG MIX
	MESIC LOW-PROFILE PRAIRIE SEED MIX
	TURF SEED

MESIC LOW-PROFILE PRAIRIE SEED MIX

BOTANICAL NAME	COMMON NAME	LBS / ACRE	% OF TOTAL
GRASSES, SEDGES, & RUSHES			
Avena sativa	Common Oat	20.0	50.0%
Bouteloua curtipendula	Side-Oats Grama	5.0	12.5%
Lolium multiflorum	Annual Rye	10.0	25.0%
Panicum virgatum	Switch Grass	0.5	1.3%
Schizachyrium scoparium	Little Bluestem	4.0	10.0%
Sporobolus heterolepsis	Prairie Dropseed	0.25	0.6%
	TOTAL LBS PER ACRE:	**39.75**	**99.4%**
FORBS & BROADLEAVES			
Coreopsis palmata	Prairie Coreopsis	0.10	0.3%
Echinacea purpurea	Purple Coneflower	0.15	0.4%
	FORBS & BROADLEAVES LBS PER ACRE:	**0.25**	**0.6%**
	SEED MIX TOTAL LBS PER ACRE:	**40.00**	

EMERGENT WETLAND PLUG MIX

BOTANICAL NAME	COMMON NAME	QTY / ACRE	% OF TOTAL
Acorus calamus	Sweet Flag	300	5%
Asclepias incarnata	Swamp Milkweed	300	5%
Iris virginica	Iris	300	5%
Lobelia siphilitica	Great Blue Lobelia	300	5%
Lythrum alatum	Winged Loosestrife	200	3%
Polygonum amphibium	Knotweed	500	8%
Pontedaria cordata	Pickerel Plant	500	8%
Rudbeckia laciniata	Cut Leaf Coneflower	300	5%
Sagitaria latifolia	Arrowhead	300	5%
Scirpus acutus	Hard Stemmed Bulrush	500	8%
Scirpus atrovirens	Dark Green Bulrush	500	8%
Scirpus fluviatilis	River Bulrush	500	8%
Solidago riddellii	Riddell's Goldenrod	200	3%
Sparganium americanum	Bur Reed	500	8%
Symphyotrichum puniceum	Stemmed Aster	300	5%
Zizania aquatica	Wild Rice	500	8%
	TOTAL PLUGS PER ACRE:	6,000	

No.	REVISIONS	DATE	BY

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SCALE: AS NOTED
DESIGNED BY: IC
DRAWN BY: NAB
CHECKED BY: DDL

Larkspur Properties
REAL ESTATE PARTNERSHIP

LANDSCAPE PLAN

DETAILED DEVELOPMENT PLANS

7650 WAYNETOWNE BLVD
HUBER HEIGHTS, OH 45424

ORIGINAL ISSUE: 10/12/2021
KHA PROJECT NO. 190081001
SHEET NUMBER
L1.0

Drawing name: K:\CLB_JDEV\190081001_Larkspur_HuberHeights_OH\2 Design\CAD\PlanSheets\Final Plans\LANDSCAPE PLAN.dwg LI.0 LANDSCAPE PLAN Oct 14, 2021 8:09am by: MattShiflett
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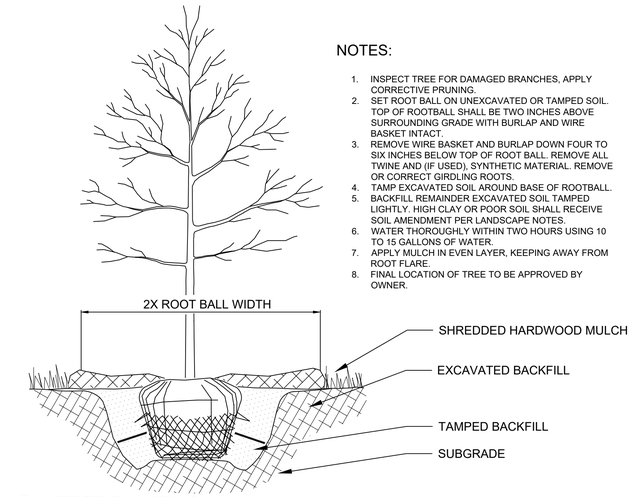
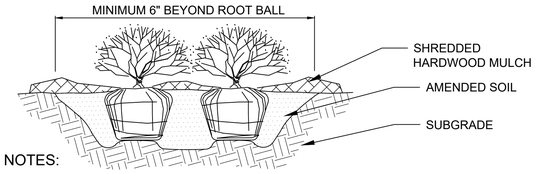


NOTES:

1. INSPECT TREE FOR DAMAGED BRANCHES, APPLY CORRECTIVE PRUNING.
2. SET ROOT BALL ON UNEXCAVATED OR TAMPED SOIL. TOP OF ROOTBALL SHALL BE TWO INCHES ABOVE SURROUNDING GRADE WITH BURLAP AND WIRE BASKET INTACT.
3. REMOVE WIRE BASKET AND BURLAP DOWN FOUR TO SIX INCHES BELOW TOP OF ROOT BALL. REMOVE ALL TWINE AND (IF USED), SYNTHETIC MATERIAL. REMOVE OR CORRECT GIRDLING ROOTS.
4. TAMP EXCAVATED SOIL AROUND BASE OF ROOTBALL.
5. BACKFILL REMAINDER EXCAVATED SOIL TAMPED LIGHTLY. HIGH CLAY OR POOR SOIL SHALL RECEIVE SOIL AMENDMENT PER LANDSCAPE NOTES.
6. WATER THOROUGHLY WITHIN TWO HOURS USING 10 TO 15 GALLONS OF WATER.
7. APPLY MULCH IN EVEN LAYER, KEEPING AWAY FROM ROOT FLARE.
8. FINAL LOCATION OF TREE TO BE APPROVED BY OWNER.

1 TREE PLANTING

NTS



NOTES:

1. APPLY CORRECTIVE PRUNING.
2. SET ROOT BALL OR CONTAINER ON UNEXCAVATED OR TAMPED SOIL. TOP OF ROOTBALL (CONTAINER) SHALL BE ONE INCH ABOVE SURROUNDING GRADE. FOR LARGER SHRUBS WITHIN PLANTING BED DIG A DEEPER PIT ONLY FOR THOSE SHRUBS.
3. REMOVE BURLAP FROM TOP HALF THE LENGTH OF ROOTBALL. TWINE AND (IF USED) SYNTHETIC MATERIAL SHALL BE REMOVED FROM PLANTING BED. FOR CONTAINER GROWN SHRUBS, REMOVE CONTAINER AND LOOSEN ROOTS PRIOR TO INSTALLATION.
4. REMOVE OR CORRECT GIRDLING ROOTS.
5. PLUMB AND BACKFILL WITH AMENDED SOIL PER LANDSCAPE NOTES. WATER THOROUGHLY WITHIN TWO HOURS.
6. APPLY MULCH IN EVEN LAYER, KEEPING AWAY FROM ROOT FLARE. MULCH LIMITS FOR SHRUBS EXTEND TO ALL LIMITS OF PLANTING BED, SEE PLANS FOR BED LAYOUTS.

2 SHRUB PLANTING

NTS

OHIO Utilities Protection SERVICE
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LANDSCAPE NOTES

1. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING MATERIALS AND PLANTS SHOWN ON THE LANDSCAPE PLAN. THE CONTRACTOR IS RESPONSIBLE FOR THE COST TO REPAIR UTILITIES, ADJACENT LANDSCAPE, PUBLIC AND PRIVATE PROPERTY THAT IS DAMAGED BY THE CONTRACTOR OR THEIR SUBCONTRACTOR'S OPERATIONS DURING INSTALLATION OR DURING THE SPECIFIED MAINTENANCE PERIOD. CALL FOR UTILITY LOCATIONS PRIOR TO ANY EXCAVATION.
2. THE CONTRACTOR SHALL REPORT ANY DISCREPANCY IN PLAN VS. FIELD CONDITIONS IMMEDIATELY TO THE LANDSCAPE ARCHITECT, PRIOR TO CONTINUING WITH THAT PORTION OF WORK.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY OF THEIR TRENCHES OR EXCAVATIONS THAT SETTLE.
4. ALL NURSERY STOCK SHALL BE WELL BRANCHED, HEALTHY, FULL, PRE-INOCULATED AND FERTILIZED. DECIDUOUS TREES SHALL BE FREE OF FRESH SCARS. TRUNKS WILL BE WRAPPED IF NECESSARY TO PREVENT SUN SCALD AND INSECT DAMAGE. THE LANDSCAPE CONTRACTOR SHALL REMOVE THE WRAP AT THE PROPER TIME AS A PART OF THIS CONTRACT.
5. ALL NURSERY STOCK SHALL BE GUARANTEED, BY THE CONTRACTOR, FOR ONE YEAR FROM DATE OF FINAL INSPECTION.
6. AMENDED SOIL SHALL BE PROVIDED AND GRADED BY THE GENERAL CONTRACTOR UP TO 6 INCHES BELOW FINISHED GRADE IN TURF AREAS AND 18 INCHES IN PLANTING AREAS.
7. PLANTING AREA SOIL SHALL BE AMENDED WITH 25% SPHANGUM PEATMOSS, 5% HUMUS AND 65% PULVERIZED SOIL FOR ALL SHRUB, ORNAMENTAL GRASS, PERENNIAL AND ANNUAL BEDS. AMENDED TURF AREA SOIL SHALL BE STANDARD TOPSOIL.
8. SEED/SOD LIMIT LINES ARE APPROXIMATE. CONTRACTOR SHALL SEED/SOD ALL AREAS WHICH ARE DISTURBED BY GRADING WITH THE SPECIFIED SEED/SOD MIXES.
9. CONTRACTOR SHALL INSTALL SHREDDED HARDWOOD MULCH AT A 3" DEPTH TO ALL TREES, SHRUB, PERENNIAL, AND GROUNDCOVER AREAS. TREES PLACED IN AREA COVERED BY TURF SHALL RECEIVE A 4 FT WIDE MAXIMUM TREE RING WITH 3" DEPTH SHREDDED HARDWOOD MULCH. A SPADED BED EDGE SHALL SEPARATE MULCH BEDS FROM TURF OR SEEDED AREAS. A SPADED EDGE IS NOT REQUIRED ALONG CURBED EDGES.
10. INSTALLATION OF TREES WITHIN PARKWAYS SHALL BE COORDINATED IN THE FIELD WITH LOCATIONS OF UNDERGROUND UTILITIES. TREES SHALL NOT BE LOCATED CLOSER THAN 5' FROM UNDERGROUND UTILITY LINES AND NO CLOSER THAN 10' FROM UTILITY STRUCTURES.
11. DO NOT DISTURB THE EXISTING PAVING, LIGHTING, OR LANDSCAPING THAT EXISTS ADJACENT TO THE SITE UNLESS OTHERWISE NOTED ON PLAN.
12. PLANT QUANTITIES SHOWN ARE FOR THE CONVENIENCE OF THE OWNER AND JURISDICTIONAL REVIEW AGENCIES. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL PLANT QUANTITIES AS DRAWN.
13. THE OWNER'S REPRESENTATIVE MAY REJECT ANY PLANT MATERIALS THAT ARE DISEASED, DEFORMED, OR OTHERWISE NOT EXHIBITING SUPERIOR QUALITY.
14. THE CONTINUED MAINTENANCE OF ALL REQUIRED LANDSCAPING SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY ON WHICH SAID MATERIALS ARE REQUIRED. ALL PLANT MATERIALS REQUIRED BY THIS SECTION SHALL BE MAINTAINED AS LIVING VEGETATION AND SHALL BE PROMPTLY REPLACED IF THE PLANT MATERIAL HAS DIED PRIOR TO FINAL ACCEPTANCE. PLANTING AREAS SHALL BE KEPT FREE OF TRASH, LITTER, AND WEEDS AT ALL TIMES.

No.	REVISIONS	DATE	BY

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PHONE: 614-456-0599
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SCALE: AS NOTED
DESIGNED BY: IC
DRAWN BY: NAB
CHECKED BY: DDL

Larkspur Properties
REAL ESTATE PARTNERSHIP

LANDSCAPE NOTES AND DETAILS

DETAILED DEVELOPMENT PLANS
7650 WAYNETOWNE BLVD
HUBER HEIGHTS, OH 45424

ORIGINAL ISSUE: 10/12/2021
KHA PROJECT NO. 190081001
SHEET NUMBER
L2.0

Drawing name: K:\CLB_LDEV\190081001_Larkspur_HuberHeights_OH\2 Design\CAD\PlanSheets\Final Plans\LANDSCAPE PLAN.dwg L2.0 LANDSCAPE NOTES AND DETAILS Oct 14, 2021 8:09am by: Matt.Shiflett
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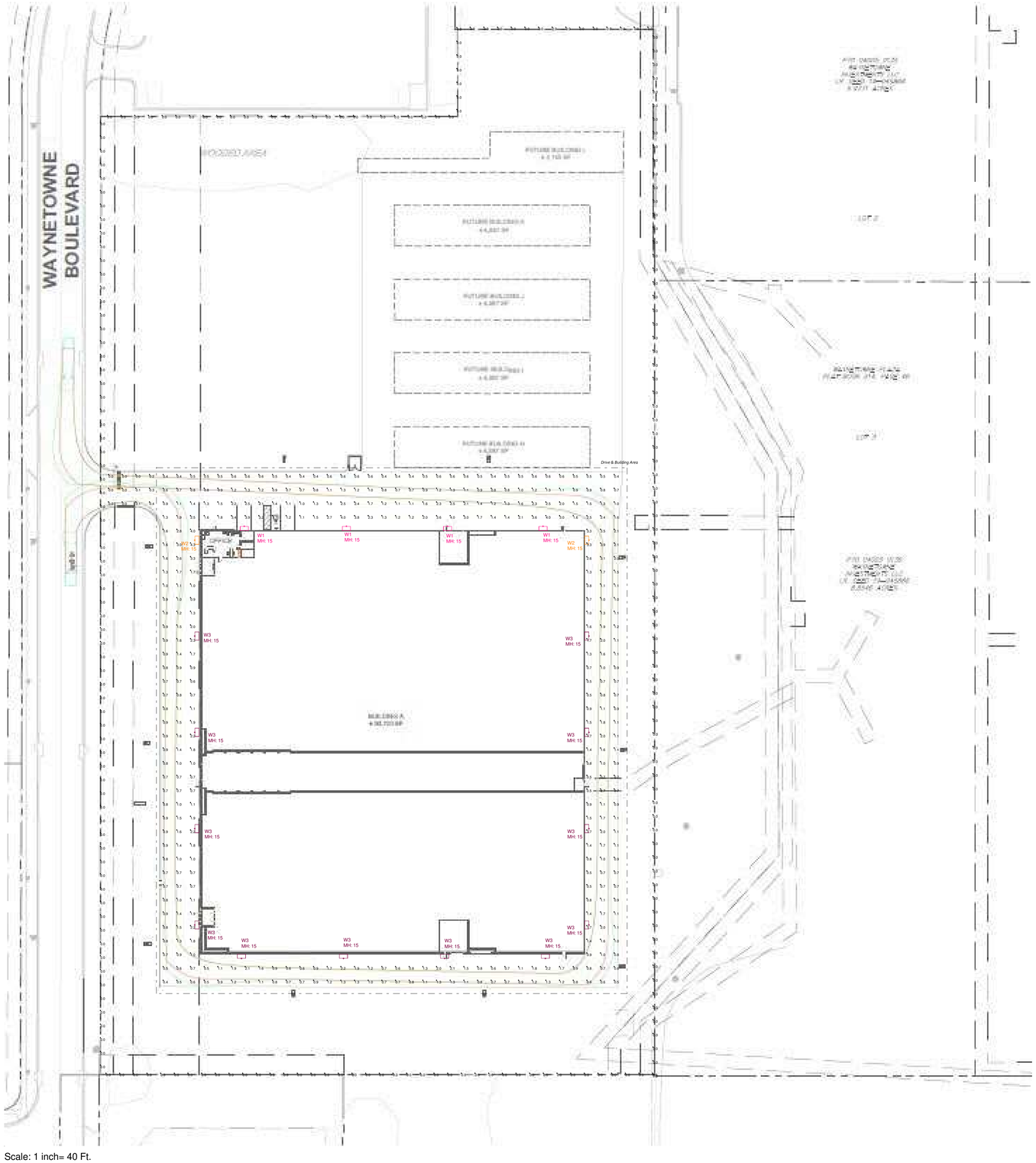


Scale: 1 inch= 40 Ft.

Luminaire Schedule								
Symbol	Label	Qty	LLF	Lum. Lumens	Manufacturer	Series	Lum. W	Total W
	W1	4	0.900	6757	SIGNIFY GARDCO	101L-32L-700-NW-G1-4	70	280
	W2	2	0.900	6609	SIGNIFY GARDCO	101L-32L-700-NW-G1-3	70	140
	W3	12	0.900	3458	SIGNIFY GARDCO	101L-16L-700-NW-G1-3	37	444

Calculation Summary						
Label	CalcType	Units	Avg	Max	Min	Avg/Min
Property Line	Illuminance	Fc	0.00	0.0	0.0	N.A.
Site & Parking	Illuminance	Fc	1.23	4.3	0.0	N.A.
Drive & Building Area	Illuminance	Fc	1.27	4.3	0.4	3.18

CALCULATION NOTES:
A. BASED ON THE INFORMATION PROVIDED, ALL DIMENSIONS AND LUMINAIRE LOCATIONS SHOWN REPRESENT RECOMMENDED POSITIONS. THE ENGINEER AND/OR ARCHITECT MUST DETERMINE THE APPLICABILITY OF THE LAYOUT TO EXISTING OR FUTURE FIELD CONDITIONS.
B. THIS LIGHTING PLAN REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH THE ILLUMINATING ENGINEERING SOCIETY (IES) APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRES MAY VARY DUE TO CHANGES IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS/LED'S AND OTHER VARIABLE FIELD CONDITIONS.
C. CALCULATIONS SHOWN ARE MAINTAINED ILLUMINANCE UNLESS NOTED OTHERWISE.
D. CALCULATIONS ARE TAKEN AT GRADE UNLESS NOTED OTHERWISE.

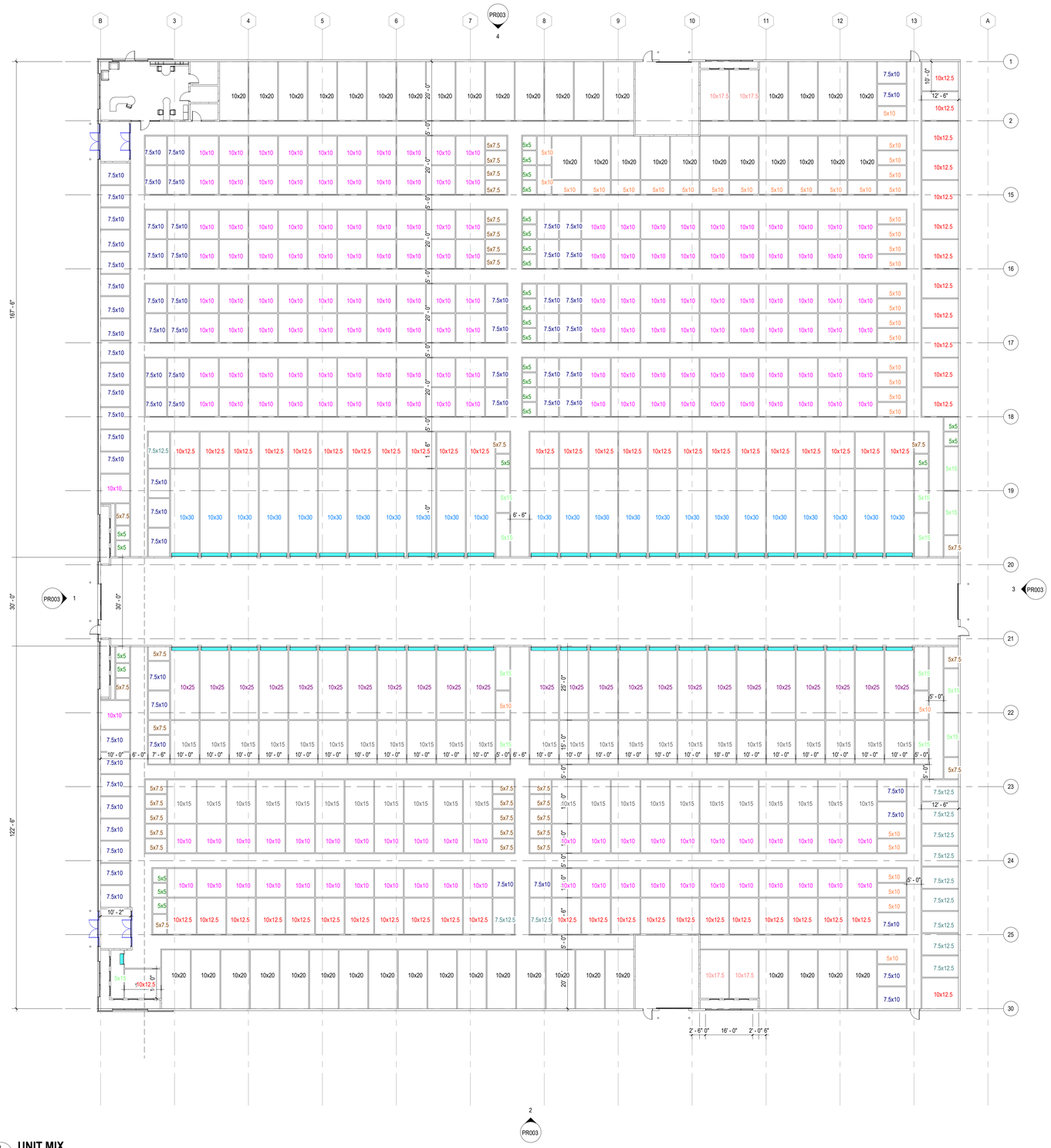
BR LIGHTING & CONTROLS
9753 CRESENT PARK DR
WEST CHESTER, OH 45069
513-761-6360

NORTH

LIGHTING PROPOSAL: BRLC21-037

LARKSPUR HUBER HEIGHTS
7650 WAYNETOWNE BLVD.
HUBER HEIGHTS, OHIO 45424

By: C.B.	Date: 10/12/2021	Scale: AS NOTED	REV:	SHEET 1 OF 1



UNIT MIX

1/16" = 1'-0"

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CONSULTANT LOGO

SEALS

CLIENT NAME

PROJECT NAME

CITY, STATE

SHEET ISSUE:

NO.	DATE	DESCRIPTION	BY

NOT FOR CONSTRUCTION

PRINCIPAL IN CHARGE: WJG
PROJECT ARCHITECT: CAF
DRAWN BY: Author

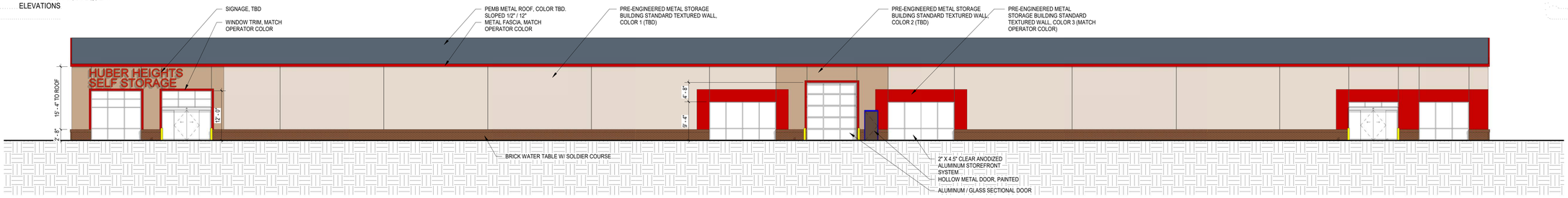
SHEET TITLE:

UNIT MIX

SHEET NO. PROJ. NO.

PR004

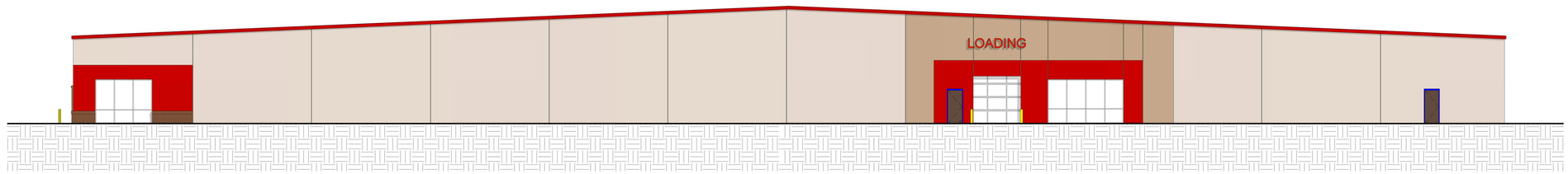
NOTE: FINISHES INDICATED ARE THE SAME ON SUBSEQUENT ELEVATIONS



D

WAYETOWNE BLVD. ELEVATION (WEST)

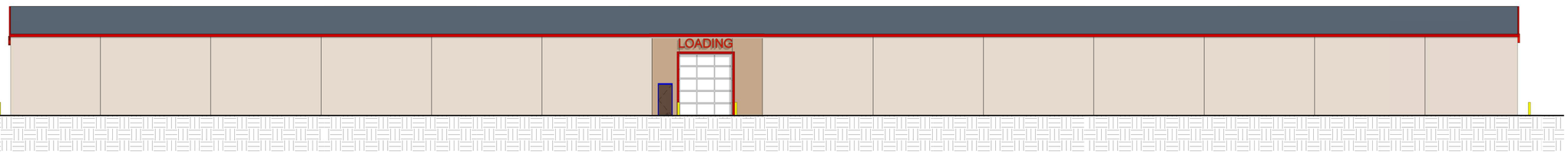
3/32" = 1'-0"



C

SOUTH ELEVATION

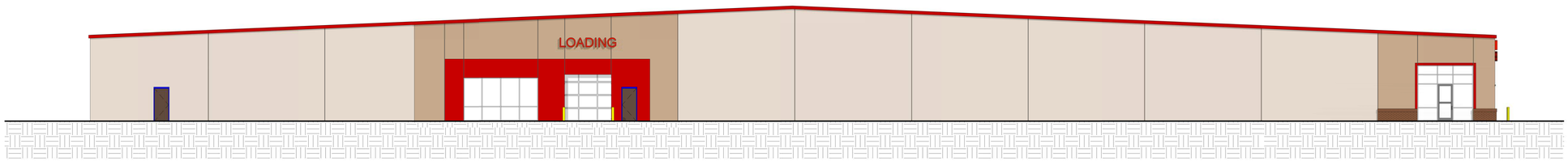
3/32" = 1'-0"



B

EAST ELEVATION

3/32" = 1'-0"



A

NORTH ELEVATION

3/32" = 1'-0"

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mcmillan pazdan smith ARCHITECTURE

CONSULTANT LOGO

SEALS

CLIENT NAME

PROJECT NAME

CITY, STATE

SHEET ISSUE:

NO.	DATE	DESCRIPTION	BY

NOT FOR CONSTRUCTION

PRINCIPAL IN CHARGE:	WJG
PROJECT ARCHITECT:	CAF
DRAWN BY:	CAF

SHEET TITLE:

CONCEPT ELEVATIONS

SHEET NO. PROJ. NO.

PR003

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ARCHITECTURE

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ARCHITECTURE

DRAINAGE REPORT – SELF STORAGE

7650 WAYNESTOWN BLVD

HUBER HEIGHTS, OH 45424

Prepared by:
Kimley-Horn and Associates, Inc.
7965 N. High Street, Suite 200
Columbus, OH 43235
Contact: Derik Leary, P.E.

Prepared: October 12, 2021

Kimley»Horn

TABLE OF CONTENTS

1. PROJECT INFORMATION 2

2. STORM SEWER DESIGN SUMMARY 3

3. PROPOSED WATER QUALITY..... 3

EXHIBITS

Exhibit 1 – FEMA Map Panel

Exhibit 2 – NRCS Web Soil Survey

Exhibit 3 – Local Tributary Map

Exhibit 4 – HydroCAD Model

Exhibit 5 – Hydraflow Model

1. PROJECT INFORMATION

Kimley-Horn and Associates, Inc. serves as the civil engineering consultant for Larkspur Properties who is proposing to build a storage unit building totaling approximately 94,000-square-feet at 7650 Waynetowne Boulevard, in Huber Heights, Ohio. The proposed scope of work includes the demolition of the existing building and parking lot located on the site of interest, construction of the self-storage buildings, underground utility construction, stormwater management, site paving and landscaping.

1.1. Pre-Development Conditions

The site of interest is located at 7650 Waynetowne Boulevard, in Huber Heights, Ohio, Montgomery County. The site is approximately 7.24-acres and is currently developed with a 288,848-square-foot building with associated parking. The majority of the site generally drains from east to west to an existing detention area. Approximately 1/3 of the site drains to the storm sewer in Waynetowne Boulevard and is routed west. The total disturbed acreage of the site is 6.59 acres. The disturbed area of the site contains approximately 1.11 acres of pervious area and 5.48 acres of impervious pavement and buildings. The overall CN is 94 of the disturbed area. The 1-year runoff volume is 1.027 ac-ft. NRCS data of the site indicate that the underlying soils are Millsdale silty clay loam and Milton silt loam. Refer to **Exhibit 2** for NRCS Soils Map. Per FEMA FIRM Number 39113C0157E, dated 1/6/2005, the site lies in “Zone X” – “Area of Minimal Flood Hazard” (**Exhibit 1)**.

1.2. Post-Development Conditions

The proposed development consists of a 94,000± self-storage building with associated parking with drive aisles around the perimeter. Furthermore, underground utilities, paving, grading and landscaping also fall within the project scope. The site is intended to drain to proposed storm sewer catch basins and be piped to the existing stormwater management area at the northwest area of the project limits. The site improvements (disturbed areas) have approximately 4.18 acres of impervious roof and paved areas, and 2.41 acres of pervious areas. The proposed impervious area accounts for potential future impervious storage areas. The proposed disturbed area has a CN of 90. The 1-year runoff rate is 0.841 ac-ft. This is a 18.1% decrease from predeveloped conditions, which means that additional detention is not required for this site. There are 2 drainage areas on the south side of the site in existing conditions. This same area will drain to Waynestown Blvd. in the proposed conditions as well. The rest of the site is routed to the stormwater management area. See **Exhibit 3** for the delineation of the drainage areas. The stormwater management area and outlet control structure were modeled and designed using HydroCAD software.

2. STORMWATER SEWER DESIGN SUMMARY

2.1. Storm Sewer Design

A storm sewer network will be constructed to convey runoff to the existing storm sewer that outfalls across Waynetown Blvd and the proposed storm sewer that outfalls to the existing stormwater management area in the northwest corner of the site. The proposed storm sewer conveyance system was designed to meet the City requirements using Hydraflow Storm Sewer Extensions, Version 10. The existing storm system was also checked to ensure capacity. Overall, the volume draining to the existing storm sewer was reduced due to the majority of the site being routed to the stormwater management area.

A runoff coefficient of 0.9 was used for the impervious area (Huber Heights Commercial Requirement) and 0.4 was used for the pervious area per Ohio EPA requirements. Each drainage area based on the Huber Heights Design Criteria Guidelines of the Subdivision Regulations. A minimum time of concentration of 10 minutes was assumed for each drainage area.

For the relocation of the existing storm sewer crossing the southern end of the site, the slopes of the existing and proposed 30" pipe were analyzed to determine capacity. In the existing condition, the storm ran across the site from E3 to D13. This 30" existing pipe at 2.37% slope and flowing 75% full had a capacity of 47.30 cfs. This capacity was used to model and size the proposed system to convey the stormwater from E3 to a D16, where it outlets into a swale and enters the existing system to the west at D15. From structures D13 to D15, the pipe had to be upsized to ensure the hydraulic grade line was within the rim of the structures.

A Storm Sewer Drainage Area Map has been provided in **Exhibit 3** and the Hydraflow analysis is provided in **Exhibit 5**.

3. PROPOSED WATER QUALITY

3.1. Wet Basin

The stormwater network will be constructed to collect runoff and treat the water quality prior to its discharge into the existing storm sewer network. The orifice for this water quality area was sized based on the Ohio EPA General Construction Permit requirements for previously developed areas. The following equation was used to calculate the required water quality volume:

$$WQv = P*A*[(Rv1*0.2)+(Rv2-Rv1)]/12$$

P=0.90 inches

A=area draining to the BMP in acres

Rv1=volumetric runoff coefficient for existing conditions (current site impervious area)

Rv2=volumetric runoff coefficient for proposed conditions (post-construction site impervious area)

It is assumed that the entire site acreage is draining to the basin to account for a potential future development at the north half of the site. The total existing pervious area is 2.02 acres and the impervious area is 5.22 acres. The total assumed future pervious area is 2.41 acres and impervious area is 4.18 acres.

WQv = 0.9*7.24acres*[(0.699*0.2)+(0.597-0.699)]/12

WQv=0.021 ac-ft

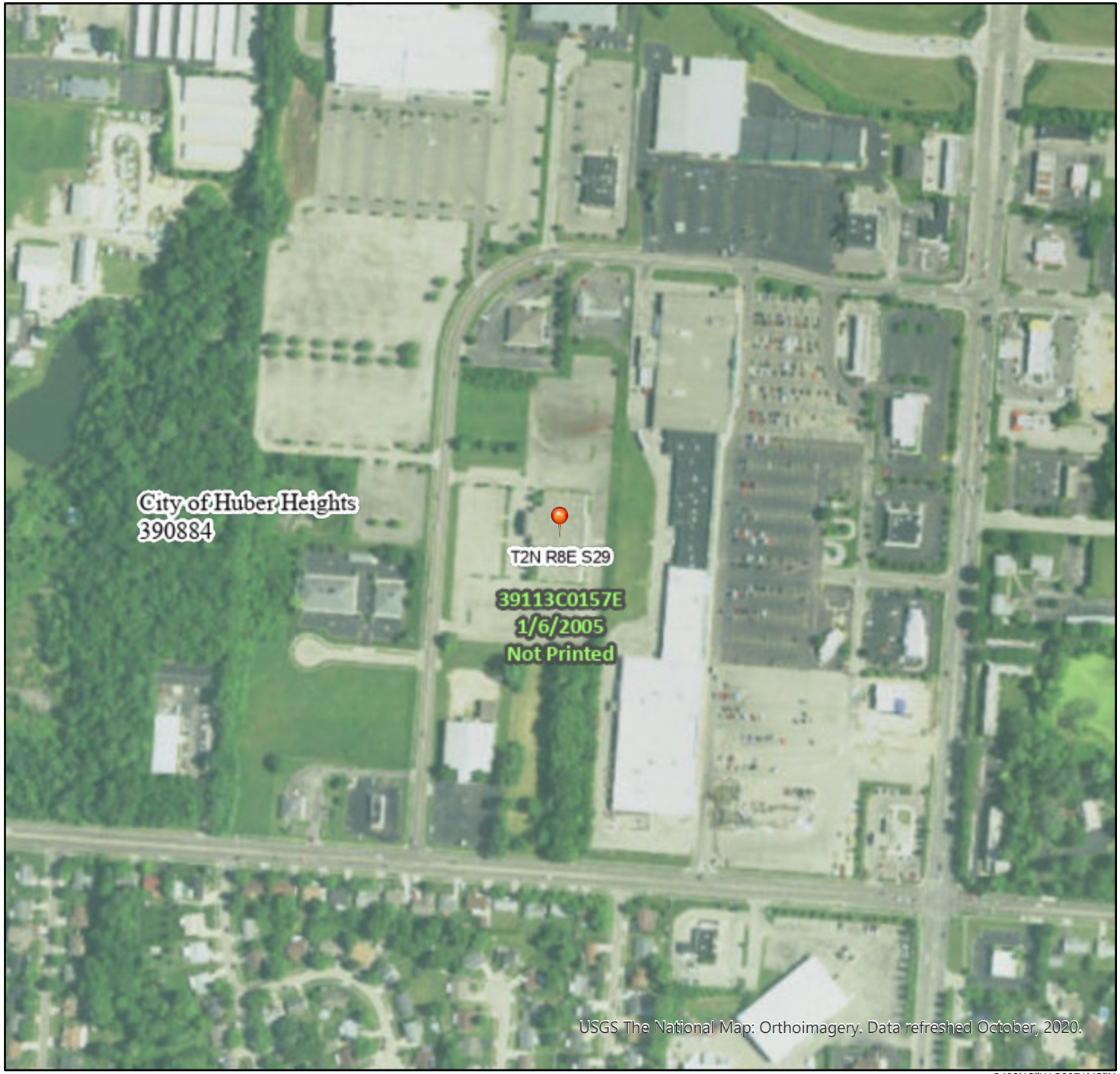
The water quality elevation of the pond is 914.25. The storage at this elevation is 0.025 ac-ft. The outlet control structure consists of a 1.4” orifice at 914.00. This drains less than half the provided water quality volume in the first 8 hours. There is a 24” riser within the structure at 914.25. The top of structure is a 36”x36” open grate at 917.00. The 100-year HWL is 916.32, providing over 1.5-ft of freeboard. See **Exhibit 4** for the Hydrocad model and see **Exhibit 3** for the delineation of total area draining to the basin.

Exhibit 1 – FEMA Map Panel

Exhibit 2 – NRCS Web Soil Survey

National Flood Hazard Layer FIRMette

84°8'49"W 39°52'10"N



84°8'12"W 39°51'42"N

Feet
0 250 500 1,000 1,500 2,000

1:6,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

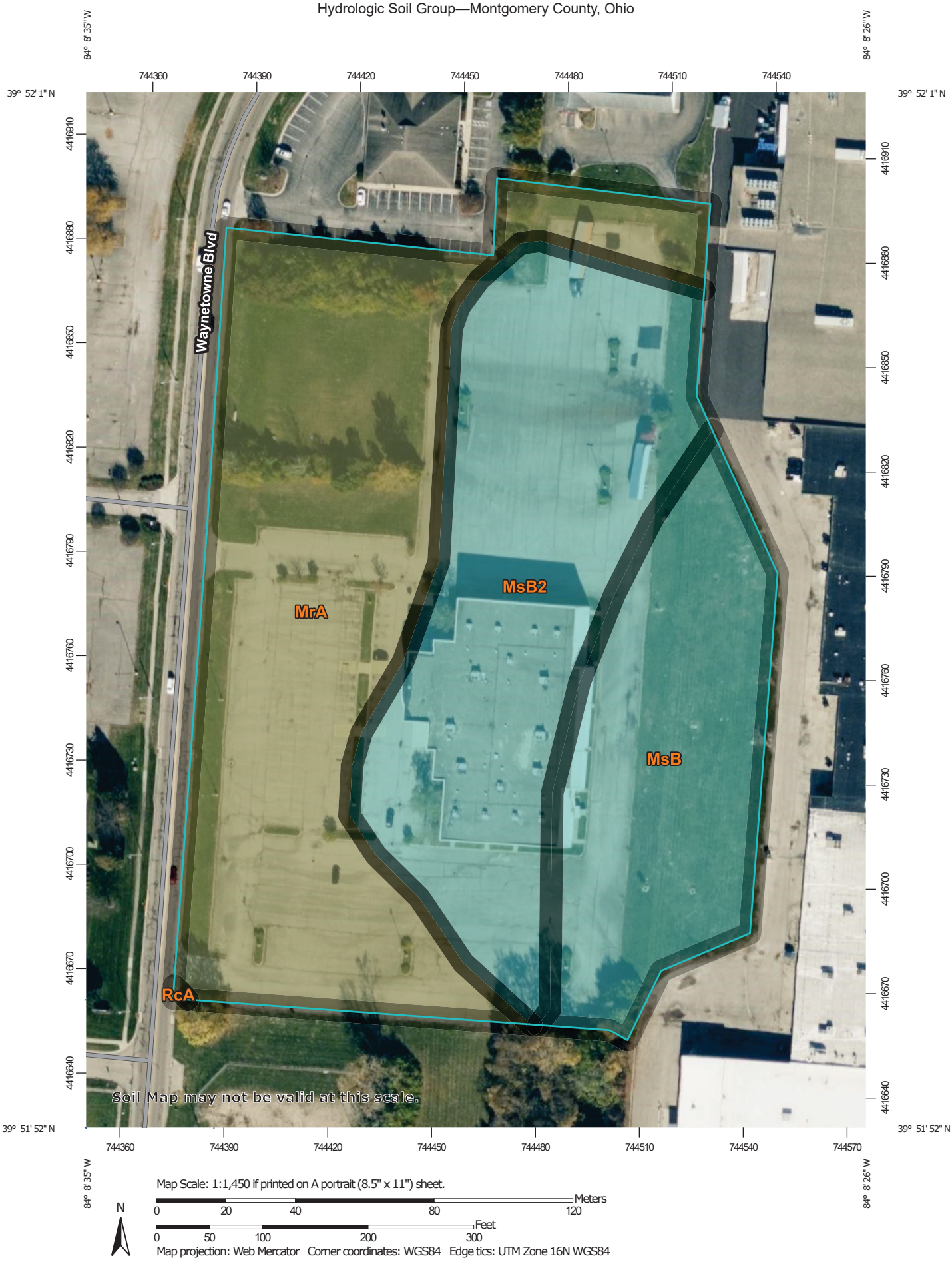
N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/19/2020 at 5:15 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.


84° 8' 35" W
84° 8' 26" W
39° 52' 1" N
39° 51' 52" N
744360
744390
744420
744450
744480
744510
744540
744570
4416910
4416880
4416850
4416820
4416790
4416760
4416730
4416700
4416670
4416640
Waynetowne Blvd
MrA
MsB2
MsB
RcA
Soil Map may not be valid at this scale.
Map Scale: 1:1,450 if printed on A portrait (8.5" x 11") sheet.
N
Meters
0 20 40 80 120
Feet
0 50 100 200 300
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A
A/D
B
B/D
C
C/D
D
Not rated or not available

Soil Rating Lines

A
A/D
B
B/D
C
C/D
D
Not rated or not available

Soil Rating Points

A
A/D
B
B/D
C
C/D
D
Not rated or not available

Water Features

Streams and Canals

Transportation

Rails
Interstate Highways
US Routes
Major Roads
Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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

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

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

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

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

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

Soil Survey Area: Montgomery County, Ohio
Survey Area Data: Version 19, Jun 11, 2020

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

Date(s) aerial images were photographed: Oct 28, 2019—Dec 5, 2019

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
MrA	Millsdale silty clay loam, 0 to 2 percent slopes	C/D	3.9	44.3%
MsB	Milton silt loam, 2 to 6 percent slopes	C	1.9	21.7%
MsB2	Milton silt loam, 2 to 6 percent slopes, moderately eroded	C	3.0	34.0%
RcA	Randolph silt loam, 0 to 2 percent slopes	C/D	0.0	0.0%
Totals for Area of Interest			**8.8**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Exhibit 4 – HydoCAD Model

Pipe Listing (selected nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	11P	913.15	913.10	15.0	0.0033	0.012	30.0	0.0	0.0

Summary for Pond 11P: Water Quality Pond

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.02 cfs @ 0.00 hrs, Volume= 0.024 af, Atten= 0%, Lag= 0.0 min
Primary = 0.02 cfs @ 0.00 hrs, Volume= 0.024 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Starting Elev= 914.25' Surf.Area= 0.102 ac Storage= 0.025 af
Peak Elev= 914.25' @ 0.00 hrs Surf.Area= 0.102 ac Storage= 0.025 af

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no inflow)

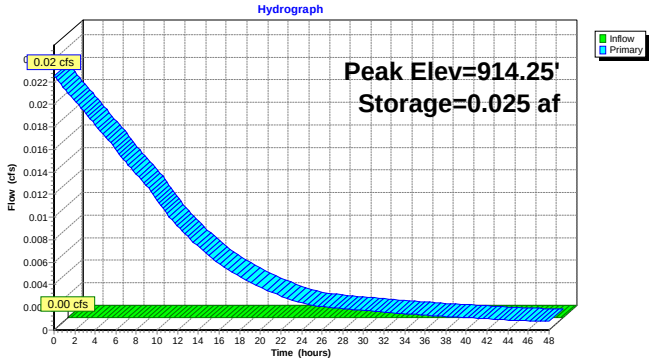
Volume	Invert	Avail.Storage	Storage Description
#1	914.00'	0.769 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
914.00	0.097	0.000	0.000
915.00	0.119	0.108	0.108
916.00	0.176	0.148	0.255
917.00	0.243	0.210	0.465
918.00	0.365	0.304	0.769

Device	Routing	Invert	Outlet Devices
#1	Primary	913.15'	**30.0" Round Culvert** L= 15.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 913.15' / 913.10' S= 0.0033 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#2	Device 1	914.00'	**1.4" Vert. Orifice/Grate** C= 0.600
#3	Device 1	914.25'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	917.00'	**36.0" x 36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

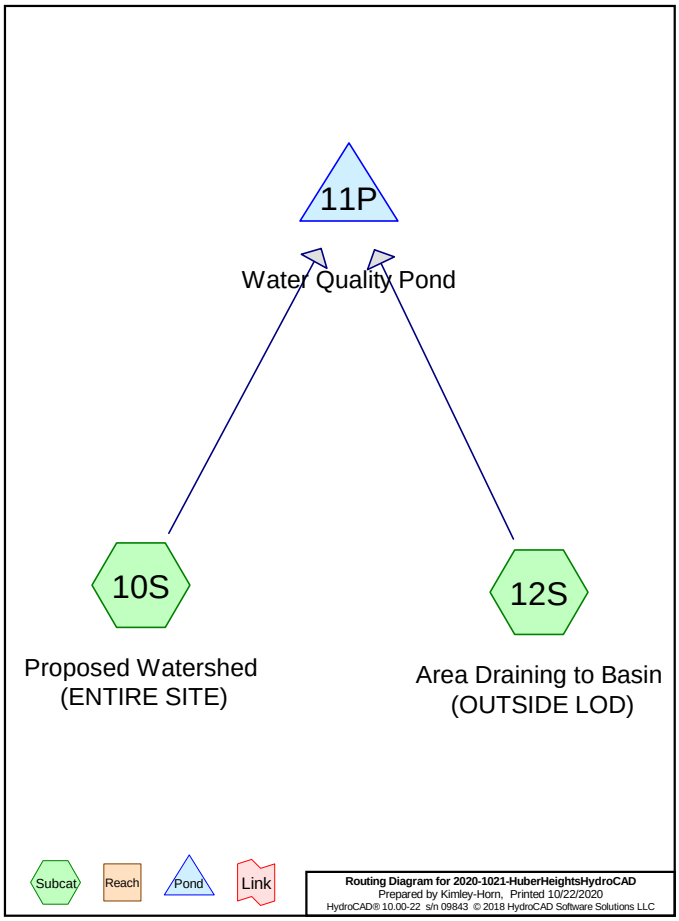
Primary OutFlow Max=0.02 cfs @ 0.00 hrs HW=914.25' (Free Discharge)
└─**1=Culvert** (Passes 0.02 cfs of 4.99 cfs potential flow)
  └─**2=Orifice/Grate** (Orifice Controls 0.02 cfs @ 2.11 fps)
  └─**3=Orifice/Grate** (Controls 0.00 cfs)
  └─**4=Orifice/Grate** (Controls 0.00 cfs)

Pond 11P: Water Quality Pond



Hydrograph for Pond 11P: Water Quality Pond

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	**0.00**	**0.025**	**914.25**	**0.02**
1.00	0.00	0.023	914.23	0.02
2.00	0.00	0.021	914.22	0.02
3.00	0.00	0.020	914.20	0.02
4.00	0.00	0.018	914.18	0.02
5.00	0.00	0.017	914.17	0.02
6.00	0.00	0.015	914.16	0.02
7.00	0.00	0.014	914.14	0.01
8.00	0.00	0.013	914.13	0.01
9.00	0.00	0.012	914.12	0.01
10.00	0.00	0.011	914.11	0.01
11.00	0.00	0.010	914.10	0.01
12.00	0.00	0.009	914.09	0.01
13.00	0.00	0.008	914.09	0.01
14.00	0.00	0.008	914.08	0.01
15.00	0.00	0.007	914.07	0.01
16.00	0.00	0.007	914.07	0.01
17.00	0.00	0.006	914.06	0.01
18.00	0.00	0.006	914.06	0.00
19.00	0.00	0.005	914.06	0.00
20.00	0.00	0.005	914.05	0.00
21.00	0.00	0.005	914.05	0.00
22.00	0.00	0.004	914.05	0.00
23.00	0.00	0.004	914.04	0.00
24.00	0.00	0.004	914.04	0.00
25.00	0.00	0.004	914.04	0.00
26.00	0.00	0.004	914.04	0.00
27.00	0.00	0.004	914.04	0.00
28.00	0.00	0.003	914.03	0.00
29.00	0.00	0.003	914.03	0.00
30.00	0.00	0.003	914.03	0.00
31.00	0.00	0.003	914.03	0.00
32.00	0.00	0.003	914.03	0.00
33.00	0.00	0.003	914.03	0.00
34.00	0.00	0.003	914.03	0.00
35.00	0.00	0.002	914.02	0.00
36.00	0.00	0.002	914.02	0.00
37.00	0.00	0.002	914.02	0.00
38.00	0.00	0.002	914.02	0.00
39.00	0.00	0.002	914.02	0.00
40.00	0.00	0.002	914.02	0.00
41.00	0.00	0.002	914.02	0.00
42.00	0.00	0.002	914.02	0.00
43.00	0.00	0.002	914.02	0.00
44.00	0.00	0.002	914.02	0.00
45.00	0.00	0.002	914.02	0.00
46.00	0.00	0.001	914.01	0.00
47.00	0.00	0.001	914.01	0.00
48.00	0.00	0.001	914.01	0.00



Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.770	74	(12S)
4.400	98	impervious (10S)
2.840	74	pervious (10S)

Summary for Subcatchment 10S: Proposed Watershed (ENTIRE SITE)

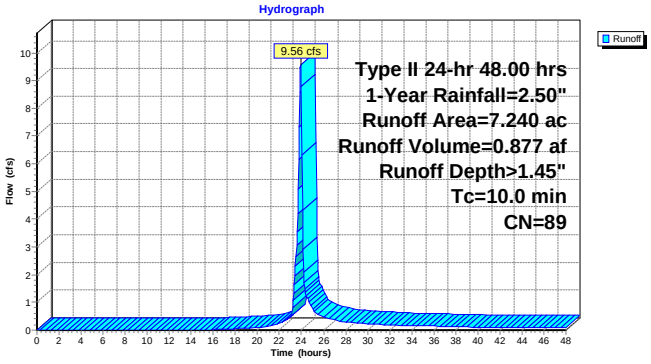
Runoff = 9.56 cfs @ 23.92 hrs, Volume= 0.877 af, Depth> 1.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 48.00 hrs 1-Year Rainfall=2.50"

	Area (ac)	CN	Description
*	4.400	98	impervious
*	2.840	74	pervious
	7.240	89	Weighted Average
	2.840		39.23% Pervious Area
	4.400		60.77% Impervious Area

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

Subcatchment 10S: Proposed Watershed (ENTIRE SITE)



Hydrograph for Subcatchment 10S: Proposed Watershed (ENTIRE SITE)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	27.00	2.00	1.03	0.37
0.50	0.01	0.00	0.00	27.50	2.03	1.05	0.33
1.00	0.01	0.00	0.00	28.00	2.05	1.07	0.29
1.50	0.02	0.00	0.00	28.50	2.07	1.09	0.27
2.00	0.03	0.00	0.00	29.00	2.09	1.11	0.26
2.50	0.03	0.00	0.00	29.50	2.11	1.12	0.25
3.00	0.04	0.00	0.00	30.00	2.13	1.14	0.23
3.50	0.05	0.00	0.00	30.50	2.15	1.16	0.22
4.00	0.05	0.00	0.00	31.00	2.17	1.17	0.21
4.50	0.06	0.00	0.00	31.50	2.19	1.18	0.20
5.00	0.07	0.00	0.00	32.00	2.20	1.20	0.18
5.50	0.08	0.00	0.00	32.50	2.21	1.21	0.18
6.00	0.09	0.00	0.00	33.00	2.23	1.22	0.17
6.50	0.09	0.00	0.00	33.50	2.24	1.23	0.17
7.00	0.10	0.00	0.00	34.00	2.25	1.24	0.16
7.50	0.11	0.00	0.00	34.50	2.27	1.25	0.16
8.00	0.12	0.00	0.00	35.00	2.28	1.26	0.15
8.50	0.13	0.00	0.00	35.50	2.29	1.27	0.15
9.00	0.14	0.00	0.00	36.00	2.30	1.28	0.14
9.50	0.15	0.00	0.00	36.50	2.31	1.29	0.14
10.00	0.16	0.00	0.00	37.00	2.32	1.30	0.13
10.50	0.17	0.00	0.00	37.50	2.33	1.31	0.13
11.00	0.18	0.00	0.00	38.00	2.34	1.32	0.12
11.50	0.19	0.00	0.00	38.50	2.35	1.33	0.12
12.00	0.20	0.00	0.00	39.00	2.36	1.34	0.11
12.50	0.21	0.00	0.00	39.50	2.37	1.34	0.11
13.00	0.22	0.00	0.00	40.00	2.38	1.35	0.10
13.50	0.24	0.00	0.00	40.50	2.39	1.36	0.10
14.00	0.25	0.00	0.00	41.00	2.40	1.36	0.10
14.50	0.26	0.00	0.00	41.50	2.40	1.37	0.10
15.00	0.27	0.00	0.01	42.00	2.41	1.38	0.10
15.50	0.29	0.00	0.01	42.50	2.42	1.38	0.10
16.00	0.30	0.00	0.01	43.00	2.43	1.39	0.10
16.50	0.31	0.00	0.02	43.50	2.43	1.40	0.10
17.00	0.33	0.01	0.03	44.00	2.44	1.40	0.10
17.50	0.35	0.01	0.04	44.50	2.45	1.41	0.09
18.00	0.37	0.01	0.05	45.00	2.46	1.42	0.09
18.50	0.39	0.01	0.05	45.50	2.46	1.42	0.09
19.00	0.41	0.02	0.06	46.00	2.47	1.43	0.09
19.50	0.43	0.02	0.07	46.50	2.48	1.44	0.09
20.00	0.45	0.03	0.09	47.00	2.49	1.44	0.09
20.50	0.48	0.04	0.11	47.50	2.49	1.45	0.09
21.00	0.51	0.05	0.14	48.00	**2.50**	**1.45**	0.09
21.50	0.55	0.06	0.18				
22.00	0.59	0.07	0.24				
22.50	0.64	0.09	0.33				
23.00	0.71	0.12	0.47				
23.50	0.97	0.27	**2.67**				
24.00	1.66	0.75	**8.20**				
24.50	1.77	0.84	1.17				
25.00	1.84	0.89	0.77				
25.50	1.89	0.94	0.58				
26.00	1.93	0.97	0.49				
26.50	1.97	1.00	0.42				

Summary for Subcatchment 12S: Area Draining to Basin (OUTSIDE LOD)

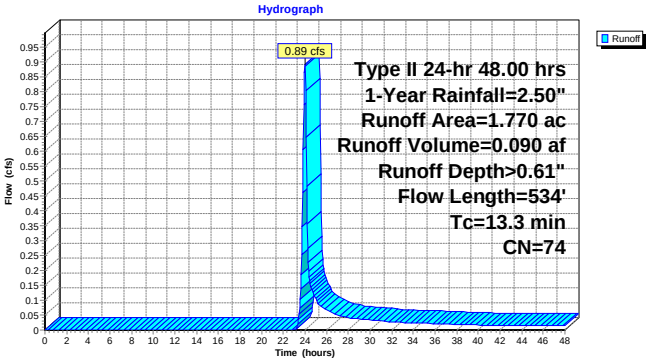
Runoff = 0.89 cfs @ 23.98 hrs, Volume= 0.090 af, Depth> 0.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 48.00 hrs 1-Year Rainfall=2.50"

	Area (ac)	CN	Description
*	1.770	74	
	1.770		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**
0.3	276	0.0528	17.93	56.31	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
3.0	258	0.0091	1.43		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
13.3	534	Total			

Subcatchment 12S: Area Draining to Basin (OUTSIDE LOD)



Hydrograph for Subcatchment 12S: Area Draining to Basin (OUTSIDE LOD)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	27.00	2.00	0.35	0.05
0.50	0.01	0.00	0.00	27.50	2.03	0.36	0.05
1.00	0.01	0.00	0.00	28.00	2.05	0.37	0.04
1.50	0.02	0.00	0.00	28.50	2.07	0.38	0.04
2.00	0.03	0.00	0.00	29.00	2.09	0.39	0.04
2.50	0.03	0.00	0.00	29.50	2.11	0.40	0.04
3.00	0.04	0.00	0.00	30.00	2.13	0.41	0.03
3.50	0.05	0.00	0.00	30.50	2.15	0.42	0.03
4.00	0.05	0.00	0.00	31.00	2.17	0.43	0.03
4.50	0.06	0.00	0.00	31.50	2.19	0.44	0.03
5.00	0.07	0.00	0.00	32.00	2.20	0.45	0.03
5.50	0.08	0.00	0.00	32.50	2.21	0.45	0.03
6.00	0.09	0.00	0.00	33.00	2.23	0.46	0.03
6.50	0.09	0.00	0.00	33.50	2.24	0.47	0.02
7.00	0.10	0.00	0.00	34.00	2.25	0.48	0.02
7.50	0.11	0.00	0.00	34.50	2.27	0.48	0.02
8.00	0.12	0.00	0.00	35.00	2.28	0.49	0.02
8.50	0.13	0.00	0.00	35.50	2.29	0.49	0.02
9.00	0.14	0.00	0.00	36.00	2.30	0.50	0.02
9.50	0.15	0.00	0.00	36.50	2.31	0.51	0.02
10.00	0.16	0.00	0.00	37.00	2.32	0.51	0.02
10.50	0.17	0.00	0.00	37.50	2.33	0.52	0.02
11.00	0.18	0.00	0.00	38.00	2.34	0.52	0.02
11.50	0.19	0.00	0.00	38.50	2.35	0.53	0.02
12.00	0.20	0.00	0.00	39.00	2.36	0.53	0.02
12.50	0.21	0.00	0.00	39.50	2.37	0.54	0.02
13.00	0.22	0.00	0.00	40.00	2.38	0.54	0.02
13.50	0.24	0.00	0.00	40.50	2.39	0.55	0.02
14.00	0.25	0.00	0.00	41.00	2.40	0.55	0.02
14.50	0.26	0.00	0.00	41.50	2.40	0.56	0.02
15.00	0.27	0.00	0.00	42.00	2.41	0.56	0.02
15.50	0.29	0.00	0.00	42.50	2.42	0.56	0.02
16.00	0.30	0.00	0.00	43.00	2.43	0.57	0.02
16.50	0.31	0.00	0.00	43.50	2.43	0.57	0.01
17.00	0.33	0.00	0.00	44.00	2.44	0.58	0.01
17.50	0.35	0.00	0.00	44.50	2.45	0.58	0.01
18.00	0.37	0.00	0.00	45.00	2.46	0.58	0.01
18.50	0.39	0.00	0.00	45.50	2.46	0.59	0.01
19.00	0.41	0.00	0.00	46.00	2.47	0.59	0.01
19.50	0.43	0.00	0.00	46.50	2.48	0.60	0.01
20.00	0.45	0.00	0.00	47.00	2.49	0.60	0.01
20.50	0.48	0.00	0.00	47.50	2.49	0.60	0.01
21.00	0.51	0.00	0.00	48.00	**2.50**	**0.61**	0.01
21.50	0.55	0.00	0.00				
22.00	0.59	0.00	0.00				
22.50	0.64	0.00	0.00				
23.00	0.71	0.00	0.00				
23.50	0.97	0.02	0.07				
24.00	1.66	0.20	**0.89**				
24.50	1.77	0.25	0.16				
25.00	1.84	0.28	0.10				
25.50	1.89	0.30	0.08				
26.00	1.93	0.32	0.07				
26.50	1.97	0.33	0.06				

Summary for Pond 11P: Water Quality Pond

Inflow Area = 9.010 ac, 48.83% Impervious, Inflow Depth > 1.29" for 1-Year event
Inflow = 10.40 cfs @ 23.93 hrs, Volume= 0.966 af
Outflow = 9.77 cfs @ 23.98 hrs, Volume= 0.964 af, Atten= 6%, Lag= 3.0 min
Primary = 9.77 cfs @ 23.98 hrs, Volume= 0.964 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Starting Elev= 914.25' Surf.Area= 0.102 ac Storage= 0.025 af
Peak Elev= 914.86' @ 23.98 hrs Surf.Area= 0.116 ac Storage= 0.091 af (0.066 af above start)

Plug-Flow detention time= 53.7 min calculated for 0.938 af (97% of inflow)
Center-of-Mass det. time= (not calculated: outflow precedes inflow)

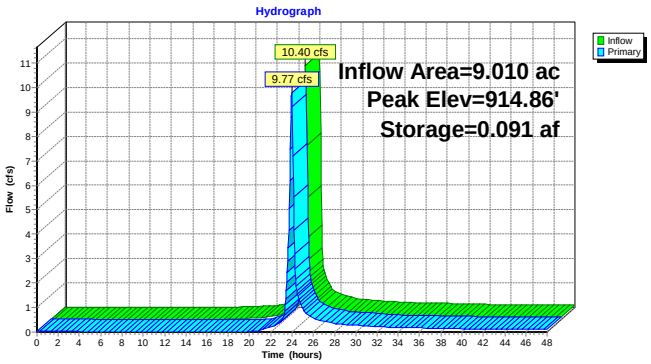
Volume	Invert	Avail.Storage	Storage Description
#1	914.00'	0.769 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
914.00	0.097	0.000	0.000
915.00	0.119	0.108	0.108
916.00	0.176	0.148	0.255
917.00	0.243	0.210	0.465
918.00	0.365	0.304	0.769

Device	Routing	Invert	Outlet Devices
#1	Primary	913.15'	**30.0" Round Culvert** L= 15.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 913.15' / 913.10' S= 0.0033 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#2	Device 1	914.00'	**1.4" Vert. Orifice/Grate** C= 0.600
#3	Device 1	914.25'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	917.00'	**36.0" x 36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=9.65 cfs @ 23.98 hrs HW=914.85' (Free Discharge)
└**1=Culvert** (Passes 9.65 cfs of 10.98 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.05 cfs @ 4.29 fps)
  ├**3=Orifice/Grate** (Weir Controls 9.60 cfs @ 2.54 fps)
  └**4=Orifice/Grate** (Controls 0.00 cfs)

Pond 11P: Water Quality Pond



Hydrograph for Pond 11P: Water Quality Pond

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.025	914.25	0.02
1.00	0.00	0.023	914.23	0.02
2.00	0.00	0.021	914.22	0.02
3.00	0.00	0.020	914.20	0.02
4.00	0.00	0.018	914.18	0.02
5.00	0.00	0.017	914.17	0.02
6.00	0.00	0.015	914.16	0.02
7.00	0.00	0.014	914.14	0.01
8.00	0.00	0.013	914.13	0.01
9.00	0.00	0.012	914.12	0.01
10.00	0.00	0.011	914.11	0.01
11.00	0.00	0.010	914.10	0.01
12.00	0.00	0.009	914.09	0.01
13.00	0.00	0.008	914.09	0.01
14.00	0.00	0.008	914.08	0.01
15.00	0.01	0.007	914.08	0.01
16.00	0.01	0.008	914.08	0.01
17.00	0.03	0.009	914.09	0.01
18.00	0.05	0.011	914.11	0.01
19.00	0.06	0.014	914.14	0.02
20.00	0.09	0.019	914.19	0.02
21.00	0.14	0.026	914.26	0.07
22.00	0.24	0.029	914.29	0.22
23.00	**0.47**	0.032	914.32	0.42
24.00	**9.08**	**0.091**	**914.85**	**9.66**
25.00	0.87	0.038	914.38	0.98
26.00	0.55	0.034	914.34	0.58
27.00	0.42	0.032	914.32	0.44
28.00	0.33	0.031	914.31	0.35
29.00	0.30	0.031	914.30	0.30
30.00	0.27	0.030	914.30	0.27
31.00	0.24	0.030	914.30	0.24
32.00	0.21	0.029	914.29	0.21
33.00	0.20	0.029	914.29	0.20
34.00	0.19	0.029	914.29	0.19
35.00	0.17	0.029	914.29	0.18
36.00	0.16	0.028	914.29	0.17
37.00	0.15	0.028	914.28	0.16
38.00	0.14	0.028	914.28	0.14
39.00	0.13	0.028	914.28	0.13
40.00	0.12	0.028	914.28	0.12
41.00	0.12	0.028	914.28	0.12
42.00	0.11	0.028	914.28	0.12
43.00	0.11	0.027	914.28	0.11
44.00	0.11	0.027	914.27	0.11
45.00	0.11	0.027	914.27	0.11
46.00	0.11	0.027	914.27	0.11
47.00	0.10	0.027	914.27	0.10
48.00	0.10	0.027	914.27	0.10

Summary for Subcatchment 10S: Proposed Watershed (ENTIRE SITE)

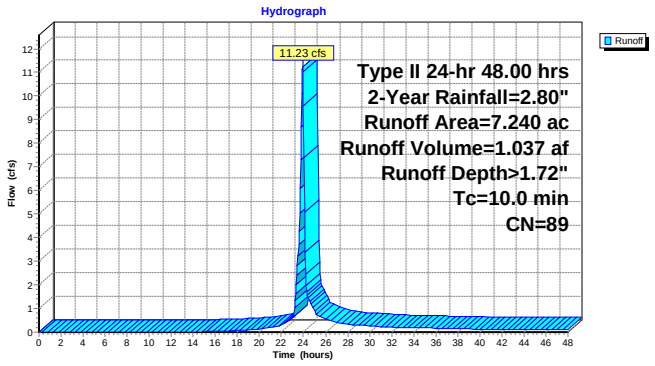
Runoff = 11.23 cfs @ 23.92 hrs, Volume= 1.037 af, Depth> 1.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 48.00 hrs 2-Year Rainfall=2.80"

	Area (ac)	CN	Description
*	4.400	98	impervious
*	2.840	74	pervious
	7.240	89	Weighted Average
	2.840		39.23% Pervious Area
	4.400		60.77% Impervious Area

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

Subcatchment 10S: Proposed Watershed (ENTIRE SITE)



Hydrograph for Subcatchment 10S: Proposed Watershed (ENTIRE SITE)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	27.00	2.24	1.23	0.43
0.50	0.01	0.00	0.00	27.50	2.27	1.25	0.38
1.00	0.01	0.00	0.00	28.00	2.30	1.28	0.34
1.50	0.02	0.00	0.00	28.50	2.32	1.30	0.31
2.00	0.03	0.00	0.00	29.00	2.35	1.32	0.30
2.50	0.04	0.00	0.00	29.50	2.37	1.34	0.29
3.00	0.05	0.00	0.00	30.00	2.39	1.36	0.27
3.50	0.05	0.00	0.00	30.50	2.41	1.38	0.26
4.00	0.06	0.00	0.00	31.00	2.43	1.39	0.24
4.50	0.07	0.00	0.00	31.50	2.45	1.41	0.22
5.00	0.08	0.00	0.00	32.00	2.46	1.42	0.21
5.50	0.09	0.00	0.00	32.50	2.48	1.44	0.20
6.00	0.10	0.00	0.00	33.00	2.50	1.45	0.20
6.50	0.11	0.00	0.00	33.50	2.51	1.46	0.19
7.00	0.12	0.00	0.00	34.00	2.52	1.48	0.19
7.50	0.12	0.00	0.00	34.50	2.54	1.49	0.18
8.00	0.13	0.00	0.00	35.00	2.55	1.50	0.17
8.50	0.14	0.00	0.00	35.50	2.57	1.51	0.17
9.00	0.15	0.00	0.00	36.00	2.58	1.52	0.16
9.50	0.17	0.00	0.00	36.50	2.59	1.53	0.16
10.00	0.18	0.00	0.00	37.00	2.60	1.55	0.15
10.50	0.19	0.00	0.00	37.50	2.61	1.56	0.15
11.00	0.20	0.00	0.00	38.00	2.63	1.57	0.14
11.50	0.21	0.00	0.00	38.50	2.64	1.57	0.14
12.00	0.22	0.00	0.00	39.00	2.65	1.58	0.13
12.50	0.24	0.00	0.00	39.50	2.66	1.59	0.12
13.00	0.25	0.00	0.00	40.00	2.67	1.60	0.12
13.50	0.26	0.00	0.00	40.50	2.67	1.61	0.12
14.00	0.28	0.00	0.01	41.00	2.68	1.62	0.12
14.50	0.29	0.00	0.01	41.50	2.69	1.62	0.11
15.00	0.31	0.00	0.02	42.00	2.70	1.63	0.11
15.50	0.32	0.00	0.02	42.50	2.71	1.64	0.11
16.00	0.34	0.01	0.03	43.00	2.72	1.65	0.11
16.50	0.35	0.01	0.03	43.50	2.73	1.66	0.11
17.00	0.37	0.01	0.04	44.00	2.74	1.66	0.11
17.50	0.39	0.01	0.06	44.50	2.74	1.67	0.11
18.00	0.41	0.02	0.07	45.00	2.75	1.68	0.11
18.50	0.43	0.02	0.08	45.50	2.76	1.68	0.11
19.00	0.46	0.03	0.09	46.00	2.77	1.69	0.11
19.50	0.48	0.04	0.10	46.50	2.78	1.70	0.10
20.00	0.51	0.05	0.12	47.00	2.78	1.71	0.10
20.50	0.54	0.06	0.15	47.50	2.79	1.71	0.10
21.00	0.57	0.07	0.19	48.00	**2.80**	**1.72**	0.10
21.50	0.61	0.08	0.24				
22.00	0.66	0.10	0.30				
22.50	0.72	0.13	0.42				
23.00	0.79	0.17	0.58				
23.50	1.08	0.34	**3.23**				
24.00	1.86	0.91	**9.59**				
24.50	1.98	1.01	1.36				
25.00	2.06	1.08	0.89				
25.50	2.11	1.12	0.67				
26.00	2.16	1.16	0.56				
26.50	2.20	1.20	0.49				

Summary for Subcatchment 12S: Area Draining to Basin (OUTSIDE LOD)

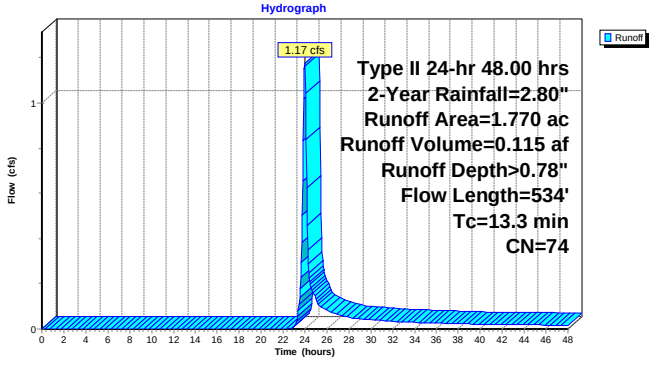
Runoff = 1.17 cfs @ 23.98 hrs, Volume= 0.115 af, Depth> 0.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 48.00 hrs 2-Year Rainfall=2.80"

	Area (ac)	CN	Description
*	1.770	74	
	1.770		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**
0.3	276	0.0528	17.93	56.31	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
3.0	258	0.0091	1.43		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
13.3	534	Total			

Subcatchment 12S: Area Draining to Basin (OUTSIDE LOD)



Hydrograph for Subcatchment 12S: Area Draining to Basin (OUTSIDE LOD)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	27.00	2.24	0.47	0.06
0.50	0.01	0.00	0.00	27.50	2.27	0.48	0.06
1.00	0.01	0.00	0.00	28.00	2.30	0.50	0.05
1.50	0.02	0.00	0.00	28.50	2.32	0.51	0.05
2.00	0.03	0.00	0.00	29.00	2.35	0.52	0.05
2.50	0.04	0.00	0.00	29.50	2.37	0.54	0.04
3.00	0.05	0.00	0.00	30.00	2.39	0.55	0.04
3.50	0.05	0.00	0.00	30.50	2.41	0.56	0.04
4.00	0.06	0.00	0.00	31.00	2.43	0.57	0.04
4.50	0.07	0.00	0.00	31.50	2.45	0.58	0.04
5.00	0.08	0.00	0.00	32.00	2.46	0.59	0.03
5.50	0.09	0.00	0.00	32.50	2.48	0.60	0.03
6.00	0.10	0.00	0.00	33.00	2.50	0.61	0.03
6.50	0.11	0.00	0.00	33.50	2.51	0.61	0.03
7.00	0.12	0.00	0.00	34.00	2.52	0.62	0.03
7.50	0.12	0.00	0.00	34.50	2.54	0.63	0.03
8.00	0.13	0.00	0.00	35.00	2.55	0.64	0.03
8.50	0.14	0.00	0.00	35.50	2.57	0.65	0.03
9.00	0.15	0.00	0.00	36.00	2.58	0.65	0.03
9.50	0.17	0.00	0.00	36.50	2.59	0.66	0.03
10.00	0.18	0.00	0.00	37.00	2.60	0.67	0.02
10.50	0.19	0.00	0.00	37.50	2.61	0.67	0.02
11.00	0.20	0.00	0.00	38.00	2.63	0.68	0.02
11.50	0.21	0.00	0.00	38.50	2.64	0.69	0.02
12.00	0.22	0.00	0.00	39.00	2.65	0.69	0.02
12.50	0.24	0.00	0.00	39.50	2.66	0.70	0.02
13.00	0.25	0.00	0.00	40.00	2.67	0.70	0.02
13.50	0.26	0.00	0.00	40.50	2.67	0.71	0.02
14.00	0.28	0.00	0.00	41.00	2.68	0.71	0.02
14.50	0.29	0.00	0.00	41.50	2.69	0.72	0.02
15.00	0.31	0.00	0.00	42.00	2.70	0.72	0.02
15.50	0.32	0.00	0.00	42.50	2.71	0.73	0.02
16.00	0.34	0.00	0.00	43.00	2.72	0.73	0.02
16.50	0.35	0.00	0.00	43.50	2.73	0.74	0.02
17.00	0.37	0.00	0.00	44.00	2.74	0.75	0.02
17.50	0.39	0.00	0.00	44.50	2.74	0.75	0.02
18.00	0.41	0.00	0.00	45.00	2.75	0.76	0.02
18.50	0.43	0.00	0.00	45.50	2.76	0.76	0.02
19.00	0.46	0.00	0.00	46.00	2.77	0.76	0.02
19.50	0.48	0.00	0.00	46.50	2.78	0.77	0.02
20.00	0.51	0.00	0.00	47.00	2.78	0.77	0.02
20.50	0.54	0.00	0.00	47.50	2.79	0.78	0.02
21.00	0.57	0.00	0.00	48.00	**2.80**	**0.78**	0.02
21.50	0.61	0.00	0.00				
22.00	0.66	0.00	0.00				
22.50	0.72	0.00	0.00				
23.00	0.79	0.00	0.01				
23.50	1.08	0.04	0.14				
24.00	1.86	0.29	**1.16**				
24.50	1.98	0.34	0.20				
25.00	2.06	0.38	0.13				
25.50	2.11	0.40	0.10				
26.00	2.16	0.43	0.08				
26.50	2.20	0.45	0.07				

Summary for Pond 11P: Water Quality Pond

Inflow Area = 9.010 ac, 48.83% Impervious, Inflow Depth > 1.53" for 2-Year event
Inflow = 12.31 cfs @ 23.92 hrs, Volume= 1.152 af
Outflow = 11.63 cfs @ 23.97 hrs, Volume= 1.149 af, Atten= 6%, Lag= 2.9 min
Primary = 11.63 cfs @ 23.97 hrs, Volume= 1.149 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Starting Elev= 914.25' Surf.Area= 0.102 ac Storage= 0.025 af
Peak Elev= 914.93' @ 23.97 hrs Surf.Area= 0.118 ac Storage= 0.100 af (0.075 af above start)

Plug-Flow detention time= 48.0 min calculated for 1.124 af (98% of inflow)
Center-of-Mass det. time= (not calculated: outflow precedes inflow)

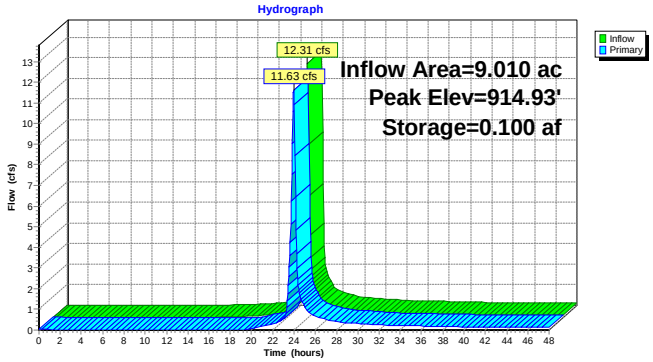
Volume	Invert	Avail.Storage	Storage Description
#1	914.00'	0.769 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
914.00	0.097	0.000	0.000
915.00	0.119	0.108	0.108
916.00	0.176	0.148	0.255
917.00	0.243	0.210	0.465
918.00	0.365	0.304	0.769

Device	Routing	Invert	Outlet Devices
#1	Primary	913.15'	**30.0" Round Culvert** L= 15.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 913.15' / 913.10' S= 0.0033 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#2	Device 1	914.00'	**1.4" Vert. Orifice/Grate** C= 0.600
#3	Device 1	914.25'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	917.00'	**36.0" x 36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=11.53 cfs @ 23.97 hrs HW=914.93' (Free Discharge)
└**1=Culvert** (Passes 11.53 cfs of 11.84 cfs potential flow)
├**2=Orifice/Grate** (Orifice Controls 0.05 cfs @ 4.49 fps)
├**3=Orifice/Grate** (Weir Controls 11.48 cfs @ 2.69 fps)
└**4=Orifice/Grate** (Controls 0.00 cfs)

Pond 11P: Water Quality Pond



Hydrograph for Pond 11P: Water Quality Pond

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.025	914.25	0.02
1.00	0.00	0.023	914.23	0.02
2.00	0.00	0.021	914.22	0.02
3.00	0.00	0.020	914.20	0.02
4.00	0.00	0.018	914.18	0.02
5.00	0.00	0.017	914.17	0.02
6.00	0.00	0.015	914.16	0.02
7.00	0.00	0.014	914.14	0.01
8.00	0.00	0.013	914.13	0.01
9.00	0.00	0.012	914.12	0.01
10.00	0.00	0.011	914.11	0.01
11.00	0.00	0.010	914.10	0.01
12.00	0.00	0.009	914.09	0.01
13.00	0.00	0.008	914.09	0.01
14.00	0.01	0.008	914.08	0.01
15.00	0.02	0.008	914.09	0.01
16.00	0.03	0.010	914.10	0.01
17.00	0.04	0.012	914.12	0.01
18.00	0.07	0.015	914.15	0.02
19.00	0.09	0.020	914.20	0.02
20.00	0.12	0.026	914.26	0.07
21.00	0.19	0.029	914.29	0.17
22.00	0.30	0.030	914.30	0.28
23.00	**0.59**	**0.034**	**914.33**	**0.54**
24.00	**10.75**	**0.099**	**914.93**	**11.48**
25.00	1.02	0.040	914.39	1.14
26.00	0.64	0.035	914.35	0.68
27.00	0.49	0.033	914.33	0.51
28.00	0.39	0.032	914.32	0.40
29.00	0.35	0.031	914.31	0.35
30.00	0.31	0.031	914.31	0.32
31.00	0.28	0.030	914.30	0.28
32.00	0.24	0.030	914.30	0.25
33.00	0.23	0.029	914.29	0.23
34.00	0.21	0.029	914.29	0.22
35.00	0.20	0.029	914.29	0.20
36.00	0.19	0.029	914.29	0.19
37.00	0.18	0.029	914.29	0.18
38.00	0.16	0.029	914.29	0.17
39.00	0.15	0.028	914.28	0.15
40.00	0.14	0.028	914.28	0.14
41.00	0.13	0.028	914.28	0.14
42.00	0.13	0.028	914.28	0.13
43.00	0.13	0.028	914.28	0.13
44.00	0.13	0.028	914.28	0.13
45.00	0.13	0.028	914.28	0.13
46.00	0.12	0.028	914.28	0.12
47.00	0.12	0.028	914.28	0.12
48.00	0.12	0.028	914.28	0.12

Summary for Subcatchment 10S: Proposed Watershed (ENTIRE SITE)

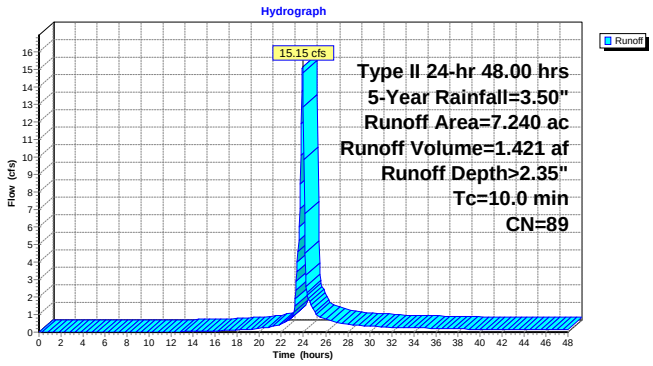
Runoff = 15.15 cfs @ 23.92 hrs, Volume= 1.421 af, Depth> 2.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 48.00 hrs 5-Year Rainfall=3.50"

	Area (ac)	CN	Description
*	4.400	98	impervious
*	2.840	74	pervious
	7.240	89	Weighted Average
	2.840		39.23% Pervious Area
	4.400		60.77% Impervious Area

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

Subcatchment 10S: Proposed Watershed (ENTIRE SITE)



Hydrograph for Subcatchment 10S: Proposed Watershed (ENTIRE SITE)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	27.00	2.80	1.72	0.56
0.50	0.01	0.00	0.00	27.50	2.84	1.75	0.50
1.00	0.02	0.00	0.00	28.00	2.87	1.78	0.44
1.50	0.03	0.00	0.00	28.50	2.90	1.81	0.41
2.00	0.04	0.00	0.00	29.00	2.93	1.84	0.39
2.50	0.05	0.00	0.00	29.50	2.96	1.86	0.37
3.00	0.06	0.00	0.00	30.00	2.99	1.89	0.35
3.50	0.07	0.00	0.00	30.50	3.01	1.91	0.33
4.00	0.08	0.00	0.00	31.00	3.04	1.93	0.31
4.50	0.09	0.00	0.00	31.50	3.06	1.95	0.29
5.00	0.10	0.00	0.00	32.00	3.08	1.97	0.27
5.50	0.11	0.00	0.00	32.50	3.10	1.99	0.26
6.00	0.12	0.00	0.00	33.00	3.12	2.01	0.25
6.50	0.13	0.00	0.00	33.50	3.14	2.02	0.25
7.00	0.14	0.00	0.00	34.00	3.16	2.04	0.24
7.50	0.16	0.00	0.00	34.50	3.17	2.06	0.23
8.00	0.17	0.00	0.00	35.00	3.19	2.07	0.23
8.50	0.18	0.00	0.00	35.50	3.21	2.09	0.22
9.00	0.19	0.00	0.00	36.00	3.22	2.10	0.21
9.50	0.21	0.00	0.00	36.50	3.24	2.12	0.21
10.00	0.22	0.00	0.00	37.00	3.25	2.13	0.20
10.50	0.23	0.00	0.00	37.50	3.27	2.14	0.19
11.00	0.25	0.00	0.00	38.00	3.28	2.16	0.18
11.50	0.26	0.00	0.00	38.50	3.30	2.17	0.18
12.00	0.28	0.00	0.01	39.00	3.31	2.18	0.17
12.50	0.30	0.00	0.02	39.50	3.32	2.19	0.16
13.00	0.31	0.00	0.02	40.00	3.33	2.20	0.15
13.50	0.33	0.01	0.03	40.50	3.34	2.21	0.15
14.00	0.35	0.01	0.03	41.00	3.35	2.22	0.15
14.50	0.36	0.01	0.04	41.50	3.37	2.23	0.15
15.00	0.38	0.01	0.05	42.00	3.38	2.24	0.15
15.50	0.40	0.02	0.06	42.50	3.39	2.25	0.15
16.00	0.42	0.02	0.06	43.00	3.40	2.26	0.14
16.50	0.44	0.03	0.07	43.50	3.41	2.27	0.14
17.00	0.46	0.03	0.09	44.00	3.42	2.28	0.14
17.50	0.49	0.04	0.11	44.50	3.43	2.29	0.14
18.00	0.51	0.05	0.13	45.00	3.44	2.30	0.14
18.50	0.54	0.06	0.14	45.50	3.45	2.31	0.14
19.00	0.57	0.07	0.15	46.00	3.46	2.32	0.14
19.50	0.60	0.08	0.17	46.50	3.47	2.33	0.13
20.00	0.63	0.09	0.20	47.00	3.48	2.34	0.13
20.50	0.67	0.11	0.25	47.50	3.49	2.35	0.13
21.00	0.71	0.13	0.30	48.00	**3.50**	**2.36**	0.13
21.50	0.76	0.15	0.37				
22.00	0.82	0.18	0.46				
22.50	0.90	0.22	0.63				
23.00	0.99	0.28	0.86				
23.50	1.35	0.52	**4.61**				
24.00	2.32	1.30	**12.84**				
24.50	2.47	1.43	1.80				
25.00	2.57	1.52	1.17				
25.50	2.64	1.58	0.88				
26.00	2.70	1.63	0.74				
26.50	2.75	1.68	0.64				

Summary for Subcatchment 12S: Area Draining to Basin (OUTSIDE LOD)

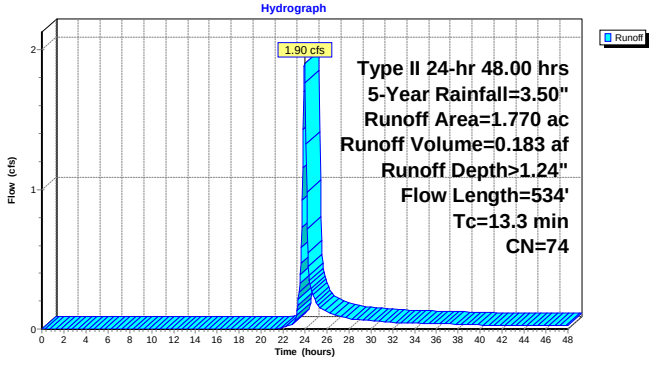
Runoff = 1.90 cfs @ 23.97 hrs, Volume= 0.183 af, Depth> 1.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 48.00 hrs 5-Year Rainfall=3.50"

	Area (ac)	CN	Description
*	1.770	74	
	1.770		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**
0.3	276	0.0528	17.93	56.31	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
3.0	258	0.0091	1.43		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
13.3	534	Total			

Subcatchment 12S: Area Draining to Basin (OUTSIDE LOD)



Hydrograph for Subcatchment 12S: Area Draining to Basin (OUTSIDE LOD)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	27.00	2.80	0.78	0.09
0.50	0.01	0.00	0.00	27.50	2.84	0.81	0.08
1.00	0.02	0.00	0.00	28.00	2.87	0.83	0.08
1.50	0.03	0.00	0.00	28.50	2.90	0.85	0.07
2.00	0.04	0.00	0.00	29.00	2.93	0.87	0.07
2.50	0.05	0.00	0.00	29.50	2.96	0.88	0.06
3.00	0.06	0.00	0.00	30.00	2.99	0.90	0.06
3.50	0.07	0.00	0.00	30.50	3.01	0.92	0.06
4.00	0.08	0.00	0.00	31.00	3.04	0.93	0.05
4.50	0.09	0.00	0.00	31.50	3.06	0.95	0.05
5.00	0.10	0.00	0.00	32.00	3.08	0.96	0.05
5.50	0.11	0.00	0.00	32.50	3.10	0.97	0.05
6.00	0.12	0.00	0.00	33.00	3.12	0.98	0.04
6.50	0.13	0.00	0.00	33.50	3.14	1.00	0.04
7.00	0.14	0.00	0.00	34.00	3.16	1.01	0.04
7.50	0.16	0.00	0.00	34.50	3.17	1.02	0.04
8.00	0.17	0.00	0.00	35.00	3.19	1.03	0.04
8.50	0.18	0.00	0.00	35.50	3.21	1.04	0.04
9.00	0.19	0.00	0.00	36.00	3.22	1.05	0.04
9.50	0.21	0.00	0.00	36.50	3.24	1.06	0.04
10.00	0.22	0.00	0.00	37.00	3.25	1.07	0.04
10.50	0.23	0.00	0.00	37.50	3.27	1.08	0.03
11.00	0.25	0.00	0.00	38.00	3.28	1.09	0.03
11.50	0.26	0.00	0.00	38.50	3.30	1.10	0.03
12.00	0.28	0.00	0.00	39.00	3.31	1.11	0.03
12.50	0.30	0.00	0.00	39.50	3.32	1.12	0.03
13.00	0.31	0.00	0.00	40.00	3.33	1.13	0.03
13.50	0.33	0.00	0.00	40.50	3.34	1.13	0.03
14.00	0.35	0.00	0.00	41.00	3.35	1.14	0.03
14.50	0.36	0.00	0.00	41.50	3.37	1.15	0.03
15.00	0.38	0.00	0.00	42.00	3.38	1.16	0.03
15.50	0.40	0.00	0.00	42.50	3.39	1.16	0.03
16.00	0.42	0.00	0.00	43.00	3.40	1.17	0.03
16.50	0.44	0.00	0.00	43.50	3.41	1.18	0.03
17.00	0.46	0.00	0.00	44.00	3.42	1.18	0.03
17.50	0.49	0.00	0.00	44.50	3.43	1.19	0.03
18.00	0.51	0.00	0.00	45.00	3.44	1.20	0.03
18.50	0.54	0.00	0.00	45.50	3.45	1.21	0.02
19.00	0.57	0.00	0.00	46.00	3.46	1.21	0.02
19.50	0.60	0.00	0.00	46.50	3.47	1.22	0.02
20.00	0.63	0.00	0.00	47.00	3.48	1.23	0.02
20.50	0.67	0.00	0.00	47.50	3.49	1.23	0.02
21.00	0.71	0.00	0.00	48.00	**3.50**	**1.24**	0.02
21.50	0.76	0.00	0.00				
22.00	0.82	0.00	0.01				
22.50	0.90	0.01	0.02				
23.00	0.99	0.02	0.04				
23.50	1.35	0.10	**0.32**				
24.00	2.32	0.51	**1.87**				
24.50	2.47	0.59	0.30				
25.00	2.57	0.65	0.20				
25.50	2.64	0.69	0.14				
26.00	2.70	0.73	0.12				
26.50	2.75	0.76	0.11				

Summary for Pond 11P: Water Quality Pond

Inflow Area = 9.010 ac, 48.83% Impervious, Inflow Depth > 2.14" for 5-Year event
Inflow = 16.93 cfs @ 23.92 hrs, Volume= 1.603 af
Outflow = 14.81 cfs @ 23.99 hrs, Volume= 1.600 af, Atten= 12%, Lag= 4.3 min
Primary = 14.81 cfs @ 23.99 hrs, Volume= 1.600 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Starting Elev= 914.25' Surf.Area= 0.102 ac Storage= 0.025 af
Peak Elev= 915.20' @ 23.99 hrs Surf.Area= 0.131 ac Storage= 0.133 af (0.108 af above start)

Plug-Flow detention time= 38.8 min calculated for 1.573 af (98% of inflow)
Center-of-Mass det. time= 0.0 min (1,617.2 - 1,617.2)

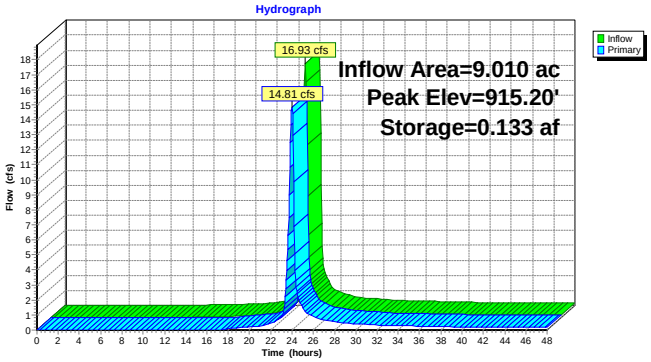
Volume	Invert	Avail.Storage	Storage Description
#1	914.00'	0.769 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
914.00	0.097	0.000	0.000
915.00	0.119	0.108	0.108
916.00	0.176	0.148	0.255
917.00	0.243	0.210	0.465
918.00	0.365	0.304	0.769

Device	Routing	Invert	Outlet Devices
#1	Primary	913.15'	**30.0" Round Culvert** L= 15.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 913.15' / 913.10' S= 0.0033 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#2	Device 1	914.00'	**1.4" Vert. Orifice/Grate** C= 0.600
#3	Device 1	914.25'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	917.00'	**36.0" x 36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=14.78 cfs @ 23.99 hrs HW=915.20' (Free Discharge)
↑**1=Culvert** (Passes 14.78 cfs of 15.04 cfs potential flow)
↑**2=Orifice/Grate** (Orifice Controls 0.05 cfs @ 5.14 fps)
3=Orifice/Grate (Orifice Controls 14.73 cfs @ 4.69 fps)
4=Orifice/Grate (Controls 0.00 cfs)

Pond 11P: Water Quality Pond



Hydrograph for Pond 11P: Water Quality Pond

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.025	914.25	0.02
1.00	0.00	0.023	914.23	0.02
2.00	0.00	0.021	914.22	0.02
3.00	0.00	0.020	914.20	0.02
4.00	0.00	0.018	914.18	0.02
5.00	0.00	0.017	914.17	0.02
6.00	0.00	0.015	914.16	0.02
7.00	0.00	0.014	914.14	0.01
8.00	0.00	0.013	914.13	0.01
9.00	0.00	0.012	914.12	0.01
10.00	0.00	0.011	914.11	0.01
11.00	0.00	0.010	914.10	0.01
12.00	0.01	0.009	914.10	0.01
13.00	0.02	0.010	914.10	0.01
14.00	0.03	0.011	914.12	0.01
15.00	0.05	0.014	914.14	0.01
16.00	0.06	0.017	914.17	0.02
17.00	0.09	0.022	914.22	0.02
18.00	0.13	0.027	914.27	0.09
19.00	0.15	0.028	914.28	0.14
20.00	0.20	0.029	914.29	0.19
21.00	0.30	0.030	914.30	0.28
22.00	0.47	0.033	914.32	0.44
23.00	**0.90**	0.037	914.37	0.84
24.00	**14.71**	**0.133**	**915.20**	**14.81**
25.00	1.37	0.043	914.42	1.51
26.00	0.86	0.037	914.37	0.90
27.00	0.65	0.035	914.35	0.68
28.00	0.52	0.034	914.33	0.53
29.00	0.46	0.033	914.33	0.46
30.00	0.41	0.032	914.32	0.42
31.00	0.37	0.032	914.32	0.38
32.00	0.32	0.031	914.31	0.33
33.00	0.30	0.031	914.30	0.30
34.00	0.28	0.030	914.30	0.29
35.00	0.27	0.030	914.30	0.27
36.00	0.25	0.030	914.30	0.25
37.00	0.23	0.030	914.30	0.24
38.00	0.22	0.029	914.29	0.22
39.00	0.20	0.029	914.29	0.20
40.00	0.18	0.029	914.29	0.19
41.00	0.18	0.029	914.29	0.18
42.00	0.17	0.029	914.29	0.17
43.00	0.17	0.029	914.29	0.17
44.00	0.17	0.029	914.29	0.17
45.00	0.16	0.028	914.28	0.16
46.00	0.16	0.028	914.28	0.16
47.00	0.16	0.028	914.28	0.16
48.00	0.15	0.028	914.28	0.15

Summary for Subcatchment 10S: Proposed Watershed (ENTIRE SITE)

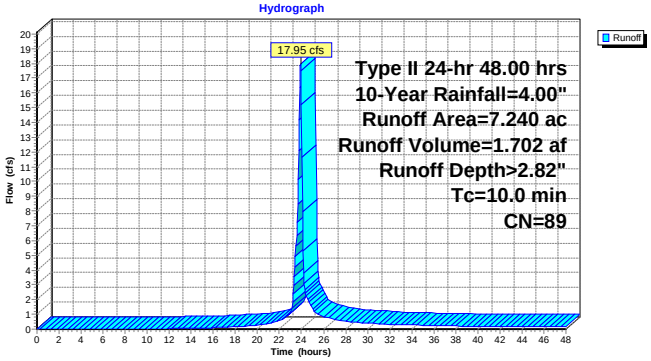
Runoff = 17.95 cfs @ 23.92 hrs, Volume= 1.702 af, Depth> 2.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 48.00 hrs 10-Year Rainfall=4.00"

	Area (ac)	CN	Description
*	4.400	98	impervious
*	2.840	74	pervious
	7.240	89	Weighted Average
	2.840		39.23% Pervious Area
	4.400		60.77% Impervious Area

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

Subcatchment 10S: Proposed Watershed (ENTIRE SITE)



Hydrograph for Subcatchment 10S: Proposed Watershed (ENTIRE SITE)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	27.00	3.20	2.08	0.65
0.50	0.01	0.00	0.00	27.50	3.24	2.12	0.58
1.00	0.02	0.00	0.00	28.00	3.28	2.15	0.52
1.50	0.03	0.00	0.00	28.50	3.32	2.19	0.48
2.00	0.04	0.00	0.00	29.00	3.35	2.22	0.46
2.50	0.05	0.00	0.00	29.50	3.38	2.25	0.43
3.00	0.06	0.00	0.00	30.00	3.41	2.28	0.41
3.50	0.08	0.00	0.00	30.50	3.44	2.30	0.39
4.00	0.09	0.00	0.00	31.00	3.47	2.33	0.36
4.50	0.10	0.00	0.00	31.50	3.50	2.35	0.34
5.00	0.11	0.00	0.00	32.00	3.52	2.38	0.32
5.50	0.13	0.00	0.00	32.50	3.54	2.40	0.30
6.00	0.14	0.00	0.00	33.00	3.56	2.42	0.30
6.50	0.15	0.00	0.00	33.50	3.59	2.44	0.29
7.00	0.16	0.00	0.00	34.00	3.61	2.46	0.28
7.50	0.18	0.00	0.00	34.50	3.63	2.47	0.27
8.00	0.19	0.00	0.00	35.00	3.65	2.49	0.26
8.50	0.21	0.00	0.00	35.50	3.67	2.51	0.26
9.00	0.22	0.00	0.00	36.00	3.68	2.53	0.25
9.50	0.24	0.00	0.00	36.50	3.70	2.54	0.24
10.00	0.25	0.00	0.00	37.00	3.72	2.56	0.23
10.50	0.27	0.00	0.01	37.50	3.74	2.58	0.22
11.00	0.28	0.00	0.01	38.00	3.75	2.59	0.21
11.50	0.30	0.00	0.02	38.50	3.77	2.60	0.21
12.00	0.32	0.00	0.03	39.00	3.78	2.62	0.20
12.50	0.34	0.01	0.03	39.50	3.79	2.63	0.19
13.00	0.36	0.01	0.04	40.00	3.81	2.64	0.18
13.50	0.38	0.01	0.05	40.50	3.82	2.66	0.18
14.00	0.40	0.02	0.06	41.00	3.83	2.67	0.17
14.50	0.42	0.02	0.07	41.50	3.85	2.68	0.17
15.00	0.44	0.03	0.07	42.00	3.86	2.69	0.17
15.50	0.46	0.03	0.08	42.50	3.87	2.70	0.17
16.00	0.48	0.04	0.09	43.00	3.88	2.71	0.17
16.50	0.50	0.04	0.11	43.50	3.90	2.73	0.17
17.00	0.53	0.05	0.13	44.00	3.91	2.74	0.16
17.50	0.56	0.06	0.15	44.50	3.92	2.75	0.16
18.00	0.59	0.07	0.17	45.00	3.93	2.76	0.16
18.50	0.62	0.09	0.19	45.50	3.94	2.77	0.16
19.00	0.65	0.10	0.20	46.00	3.95	2.78	0.16
19.50	0.69	0.11	0.23	46.50	3.97	2.79	0.16
20.00	0.72	0.13	0.27	47.00	3.98	2.80	0.15
20.50	0.77	0.15	0.32	47.50	3.99	2.81	0.15
21.00	0.82	0.18	0.38	48.00	**4.00**	**2.82**	0.15
21.50	0.87	0.21	0.47				
22.00	0.94	0.25	0.58				
22.50	1.02	0.30	0.79				
23.00	1.13	0.37	1.07				
23.50	1.55	0.67	**5.61**				
24.00	2.65	1.59	**15.16**				
24.50	2.82	1.74	2.11				
25.00	2.94	1.85	1.37				
25.50	3.02	1.92	1.03				
26.00	3.09	1.98	0.86				
26.50	3.15	2.03	0.75				

Summary for Subcatchment 12S: Area Draining to Basin (OUTSIDE LOD)

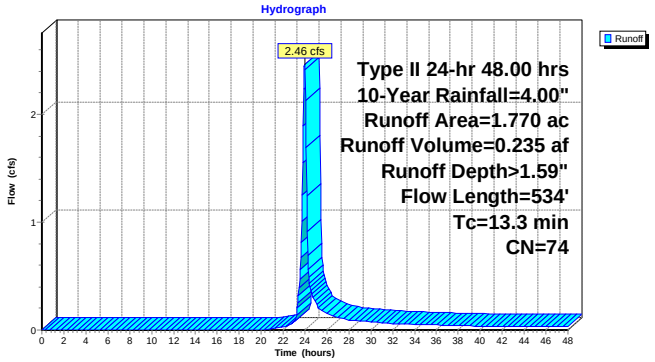
Runoff = 2.46 cfs @ 23.97 hrs, Volume= 0.235 af, Depth> 1.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 48.00 hrs 10-Year Rainfall=4.00"

	Area (ac)	CN	Description
*	1.770	74	
	1.770		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**
0.3	276	0.0528	17.93	56.31	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
3.0	258	0.0091	1.43		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
13.3	534	Total			

Subcatchment 12S: Area Draining to Basin (OUTSIDE LOD)



Hydrograph for Subcatchment 12S: Area Draining to Basin (OUTSIDE LOD)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	27.00	3.20	1.03	0.12
0.50	0.01	0.00	0.00	27.50	3.24	1.06	0.10
1.00	0.02	0.00	0.00	28.00	3.28	1.09	0.09
1.50	0.03	0.00	0.00	28.50	3.32	1.11	0.09
2.00	0.04	0.00	0.00	29.00	3.35	1.14	0.08
2.50	0.05	0.00	0.00	29.50	3.38	1.16	0.08
3.00	0.06	0.00	0.00	30.00	3.41	1.18	0.07
3.50	0.08	0.00	0.00	30.50	3.44	1.20	0.07
4.00	0.09	0.00	0.00	31.00	3.47	1.22	0.07
4.50	0.10	0.00	0.00	31.50	3.50	1.24	0.06
5.00	0.11	0.00	0.00	32.00	3.52	1.25	0.06
5.50	0.13	0.00	0.00	32.50	3.54	1.27	0.06
6.00	0.14	0.00	0.00	33.00	3.56	1.28	0.05
6.50	0.15	0.00	0.00	33.50	3.59	1.30	0.05
7.00	0.16	0.00	0.00	34.00	3.61	1.31	0.05
7.50	0.18	0.00	0.00	34.50	3.63	1.33	0.05
8.00	0.19	0.00	0.00	35.00	3.65	1.34	0.05
8.50	0.21	0.00	0.00	35.50	3.67	1.36	0.05
9.00	0.22	0.00	0.00	36.00	3.68	1.37	0.05
9.50	0.24	0.00	0.00	36.50	3.70	1.38	0.04
10.00	0.25	0.00	0.00	37.00	3.72	1.39	0.04
10.50	0.27	0.00	0.00	37.50	3.74	1.40	0.04
11.00	0.28	0.00	0.00	38.00	3.75	1.42	0.04
11.50	0.30	0.00	0.00	38.50	3.77	1.43	0.04
12.00	0.32	0.00	0.00	39.00	3.78	1.44	0.04
12.50	0.34	0.00	0.00	39.50	3.79	1.45	0.04
13.00	0.36	0.00	0.00	40.00	3.81	1.46	0.03
13.50	0.38	0.00	0.00	40.50	3.82	1.47	0.03
14.00	0.40	0.00	0.00	41.00	3.83	1.48	0.03
14.50	0.42	0.00	0.00	41.50	3.85	1.48	0.03
15.00	0.44	0.00	0.00	42.00	3.86	1.49	0.03
15.50	0.46	0.00	0.00	42.50	3.87	1.50	0.03
16.00	0.48	0.00	0.00	43.00	3.88	1.51	0.03
16.50	0.50	0.00	0.00	43.50	3.90	1.52	0.03
17.00	0.53	0.00	0.00	44.00	3.91	1.53	0.03
17.50	0.56	0.00	0.00	44.50	3.92	1.54	0.03
18.00	0.59	0.00	0.00	45.00	3.93	1.55	0.03
18.50	0.62	0.00	0.00	45.50	3.94	1.55	0.03
19.00	0.65	0.00	0.00	46.00	3.95	1.56	0.03
19.50	0.69	0.00	0.00	46.50	3.97	1.57	0.03
20.00	0.72	0.00	0.00	47.00	3.98	1.58	0.03
20.50	0.77	0.00	0.00	47.50	3.99	1.59	0.03
21.00	0.82	0.00	0.01	48.00	**4.00**	**1.60**	0.03
21.50	0.87	0.01	0.02				
22.00	0.94	0.02	0.03				
22.50	1.02	0.03	0.04				
23.00	1.13	0.05	0.07				
23.50	1.55	0.16	**0.47**				
24.00	2.65	0.70	**2.41**				
24.50	2.82	0.80	0.38				
25.00	2.94	0.87	0.24				
25.50	3.02	0.92	0.18				
26.00	3.09	0.96	0.15				
26.50	3.15	1.00	0.13				

Summary for Pond 11P: Water Quality Pond

Inflow Area = 9.010 ac, 48.83% Impervious, Inflow Depth > 2.58" for 10-Year event
Inflow = 20.28 cfs @ 23.92 hrs, Volume= 1.937 af
Outflow = 16.71 cfs @ 24.01 hrs, Volume= 1.933 af, Atten= 18%, Lag= 5.3 min
Primary = 16.71 cfs @ 24.01 hrs, Volume= 1.933 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Starting Elev= 914.25' Surf.Area= 0.102 ac Storage= 0.025 af
Peak Elev= 915.46' @ 24.01 hrs Surf.Area= 0.145 ac Storage= 0.169 af (0.144 af above start)

Plug-Flow detention time= 34.6 min calculated for 1.906 af (98% of inflow)
Center-of-Mass det. time= 1.9 min (1,609.1 - 1,607.1)

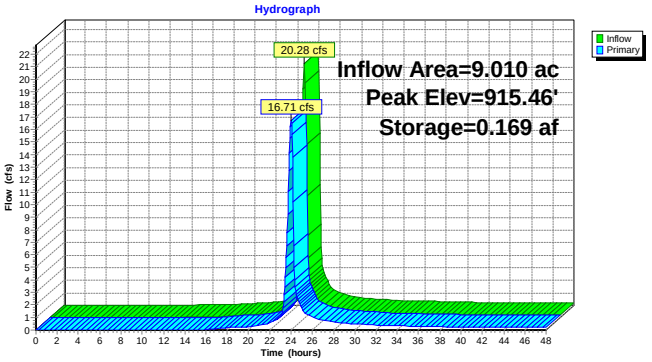
Volume	Invert	Avail.Storage	Storage Description
#1	914.00'	0.769 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
914.00	0.097	0.000	0.000
915.00	0.119	0.108	0.108
916.00	0.176	0.148	0.255
917.00	0.243	0.210	0.465
918.00	0.365	0.304	0.769

Device	Routing	Invert	Outlet Devices
#1	Primary	913.15'	**30.0" Round Culvert** L= 15.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 913.15' / 913.10' S= 0.0033 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#2	Device 1	914.00'	**1.4" Vert. Orifice/Grate** C= 0.600
#3	Device 1	914.25'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	917.00'	**36.0" x 36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=16.65 cfs @ 24.01 hrs HW=915.45' (Free Discharge)
└**1=Culvert** (Passes 16.65 cfs of 18.19 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.06 cfs @ 5.69 fps)
  ├**3=Orifice/Grate** (Orifice Controls 16.59 cfs @ 5.28 fps)
  └**4=Orifice/Grate** (Controls 0.00 cfs)

Pond 11P: Water Quality Pond



Hydrograph for Pond 11P: Water Quality Pond

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.025	914.25	0.02
1.00	0.00	0.023	914.23	0.02
2.00	0.00	0.021	914.22	0.02
3.00	0.00	0.020	914.20	0.02
4.00	0.00	0.018	914.18	0.02
5.00	0.00	0.017	914.17	0.02
6.00	0.00	0.015	914.16	0.02
7.00	0.00	0.014	914.14	0.01
8.00	0.00	0.013	914.13	0.01
9.00	0.00	0.012	914.12	0.01
10.00	0.00	0.011	914.11	0.01
11.00	0.01	0.010	914.11	0.01
12.00	0.03	0.011	914.11	0.01
13.00	0.04	0.013	914.13	0.01
14.00	0.06	0.016	914.16	0.02
15.00	0.07	0.019	914.20	0.02
16.00	0.09	0.025	914.25	0.02
17.00	0.13	0.027	914.27	0.11
18.00	0.17	0.028	914.28	0.16
19.00	0.20	0.029	914.29	0.19
20.00	0.27	0.030	914.30	0.25
21.00	0.39	0.032	914.31	0.37
22.00	0.61	0.034	914.34	0.58
23.00	**1.14**	0.039	914.39	1.07
24.00	**17.57**	**0.169**	**915.46**	**16.69**
25.00	1.62	0.045	914.44	1.78
26.00	1.01	0.039	914.39	1.06
27.00	0.77	0.036	914.36	0.80
28.00	0.61	0.035	914.34	0.63
29.00	0.54	0.034	914.34	0.55
30.00	0.49	0.033	914.33	0.49
31.00	0.43	0.032	914.32	0.44
32.00	0.38	0.032	914.32	0.39
33.00	0.35	0.031	914.31	0.35
34.00	0.33	0.031	914.31	0.34
35.00	0.31	0.031	914.31	0.32
36.00	0.29	0.030	914.30	0.30
37.00	0.27	0.030	914.30	0.28
38.00	0.25	0.030	914.30	0.26
39.00	0.23	0.030	914.30	0.24
40.00	0.21	0.029	914.29	0.22
41.00	0.21	0.029	914.29	0.21
42.00	0.20	0.029	914.29	0.20
43.00	0.20	0.029	914.29	0.20
44.00	0.20	0.029	914.29	0.20
45.00	0.19	0.029	914.29	0.19
46.00	0.19	0.029	914.29	0.19
47.00	0.18	0.029	914.29	0.18
48.00	0.18	0.029	914.29	0.18

Summary for Subcatchment 10S: Proposed Watershed (ENTIRE SITE)

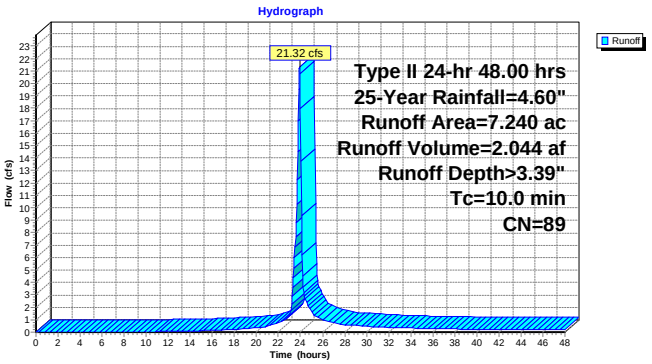
Runoff = 21.32 cfs @ 23.91 hrs, Volume= 2.044 af, Depth> 3.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 48.00 hrs 25-Year Rainfall=4.60"

	Area (ac)	CN	Description
*	4.400	98	impervious
*	2.840	74	pervious
	7.240	89	Weighted Average
	2.840		39.23% Pervious Area
	4.400		60.77% Impervious Area

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

Subcatchment 10S: Proposed Watershed (ENTIRE SITE)



Hydrograph for Subcatchment 10S: Proposed Watershed (ENTIRE SITE)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	27.00	3.68	2.52	0.77
0.50	0.01	0.00	0.00	27.50	3.73	2.57	0.68
1.00	0.02	0.00	0.00	28.00	3.77	2.61	0.60
1.50	0.04	0.00	0.00	28.50	3.81	2.65	0.56
2.00	0.05	0.00	0.00	29.00	3.85	2.69	0.53
2.50	0.06	0.00	0.00	29.50	3.89	2.72	0.51
3.00	0.07	0.00	0.00	30.00	3.93	2.75	0.48
3.50	0.09	0.00	0.00	30.50	3.96	2.79	0.45
4.00	0.10	0.00	0.00	31.00	3.99	2.81	0.43
4.50	0.12	0.00	0.00	31.50	4.02	2.84	0.40
5.00	0.13	0.00	0.00	32.00	4.05	2.87	0.37
5.50	0.14	0.00	0.00	32.50	4.07	2.89	0.36
6.00	0.16	0.00	0.00	33.00	4.10	2.92	0.35
6.50	0.17	0.00	0.00	33.50	4.12	2.94	0.34
7.00	0.19	0.00	0.00	34.00	4.15	2.96	0.33
7.50	0.20	0.00	0.00	34.50	4.17	2.98	0.32
8.00	0.22	0.00	0.00	35.00	4.19	3.01	0.31
8.50	0.24	0.00	0.00	35.50	4.22	3.03	0.30
9.00	0.25	0.00	0.00	36.00	4.24	3.05	0.29
9.50	0.27	0.00	0.01	36.50	4.26	3.07	0.28
10.00	0.29	0.00	0.02	37.00	4.28	3.08	0.27
10.50	0.31	0.00	0.02	37.50	4.30	3.10	0.26
11.00	0.33	0.00	0.03	38.00	4.31	3.12	0.25
11.50	0.35	0.01	0.04	38.50	4.33	3.14	0.24
12.00	0.37	0.01	0.05	39.00	4.35	3.15	0.23
12.50	0.39	0.01	0.06	39.50	4.36	3.17	0.22
13.00	0.41	0.02	0.07	40.00	4.38	3.18	0.21
13.50	0.43	0.02	0.08	40.50	4.39	3.19	0.21
14.00	0.46	0.03	0.09	41.00	4.41	3.21	0.20
14.50	0.48	0.04	0.10	41.50	4.42	3.22	0.20
15.00	0.50	0.04	0.11	42.00	4.44	3.24	0.20
15.50	0.53	0.05	0.12	42.50	4.45	3.25	0.20
16.00	0.55	0.06	0.13	43.00	4.47	3.26	0.20
16.50	0.58	0.07	0.15	43.50	4.48	3.28	0.19
17.00	0.61	0.08	0.17	44.00	4.49	3.29	0.19
17.50	0.64	0.10	0.20	44.50	4.51	3.30	0.19
18.00	0.68	0.11	0.23	45.00	4.52	3.32	0.19
18.50	0.71	0.13	0.25	45.50	4.53	3.33	0.19
19.00	0.75	0.15	0.26	46.00	4.55	3.34	0.18
19.50	0.79	0.17	0.30	46.50	4.56	3.35	0.18
20.00	0.83	0.19	0.35	47.00	4.57	3.37	0.18
20.50	0.88	0.22	0.41	47.50	4.59	3.38	0.18
21.00	0.94	0.25	0.49	48.00	**4.60**	**3.39**	0.18
21.50	1.00	0.29	0.60				
22.00	1.08	0.34	0.73				
22.50	1.18	0.40	0.99				
23.00	1.30	0.49	1.32				
23.50	1.78	0.85	**6.82**				
24.00	3.05	1.94	**17.94**				
24.50	3.25	2.13	2.48				
25.00	3.38	2.25	1.61				
25.50	3.47	2.33	1.21				
26.00	3.55	2.40	1.01				
26.50	3.62	2.47	0.87				

Summary for Subcatchment 12S: Area Draining to Basin (OUTSIDE LOD)

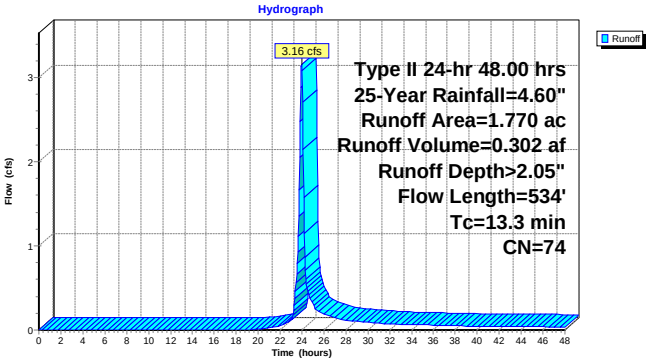
Runoff = 3.16 cfs @ 23.97 hrs, Volume= 0.302 af, Depth> 2.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 48.00 hrs 25-Year Rainfall=4.60"

	Area (ac)	CN	Description
*	1.770	74	
	1.770		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**
0.3	276	0.0528	17.93	56.31	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
3.0	258	0.0091	1.43		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
13.3	534	Total			

Subcatchment 12S: Area Draining to Basin (OUTSIDE LOD)



Hydrograph for Subcatchment 12S: Area Draining to Basin (OUTSIDE LOD)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	27.00	3.68	1.36	0.14
0.50	0.01	0.00	0.00	27.50	3.73	1.40	0.13
1.00	0.02	0.00	0.00	28.00	3.77	1.43	0.11
1.50	0.04	0.00	0.00	28.50	3.81	1.46	0.11
2.00	0.05	0.00	0.00	29.00	3.85	1.49	0.10
2.50	0.06	0.00	0.00	29.50	3.89	1.52	0.10
3.00	0.07	0.00	0.00	30.00	3.93	1.54	0.09
3.50	0.09	0.00	0.00	30.50	3.96	1.57	0.09
4.00	0.10	0.00	0.00	31.00	3.99	1.59	0.08
4.50	0.12	0.00	0.00	31.50	4.02	1.61	0.08
5.00	0.13	0.00	0.00	32.00	4.05	1.63	0.07
5.50	0.14	0.00	0.00	32.50	4.07	1.65	0.07
6.00	0.16	0.00	0.00	33.00	4.10	1.67	0.07
6.50	0.17	0.00	0.00	33.50	4.12	1.69	0.07
7.00	0.19	0.00	0.00	34.00	4.15	1.71	0.06
7.50	0.20	0.00	0.00	34.50	4.17	1.72	0.06
8.00	0.22	0.00	0.00	35.00	4.19	1.74	0.06
8.50	0.24	0.00	0.00	35.50	4.22	1.76	0.06
9.00	0.25	0.00	0.00	36.00	4.24	1.77	0.06
9.50	0.27	0.00	0.00	36.50	4.26	1.79	0.05
10.00	0.29	0.00	0.00	37.00	4.28	1.80	0.05
10.50	0.31	0.00	0.00	37.50	4.30	1.82	0.05
11.00	0.33	0.00	0.00	38.00	4.31	1.83	0.05
11.50	0.35	0.00	0.00	38.50	4.33	1.84	0.05
12.00	0.37	0.00	0.00	39.00	4.35	1.86	0.05
12.50	0.39	0.00	0.00	39.50	4.36	1.87	0.04
13.00	0.41	0.00	0.00	40.00	4.38	1.88	0.04
13.50	0.43	0.00	0.00	40.50	4.39	1.89	0.04
14.00	0.46	0.00	0.00	41.00	4.41	1.90	0.04
14.50	0.48	0.00	0.00	41.50	4.42	1.91	0.04
15.00	0.50	0.00	0.00	42.00	4.44	1.92	0.04
15.50	0.53	0.00	0.00	42.50	4.45	1.94	0.04
16.00	0.55	0.00	0.00	43.00	4.47	1.95	0.04
16.50	0.58	0.00	0.00	43.50	4.48	1.96	0.04
17.00	0.61	0.00	0.00	44.00	4.49	1.97	0.04
17.50	0.64	0.00	0.00	44.50	4.51	1.98	0.04
18.00	0.68	0.00	0.00	45.00	4.52	1.99	0.04
18.50	0.71	0.00	0.00	45.50	4.53	2.00	0.04
19.00	0.75	0.00	0.00	46.00	4.55	2.01	0.04
19.50	0.79	0.00	0.01	46.50	4.56	2.02	0.04
20.00	0.83	0.00	0.01	47.00	4.57	2.03	0.04
20.50	0.88	0.01	0.02	47.50	4.59	2.04	0.04
21.00	0.94	0.01	0.02	48.00	**4.60**	**2.05**	0.04
21.50	1.00	0.02	0.03				
22.00	1.08	0.04	0.05				
22.50	1.18	0.06	0.07				
23.00	1.30	0.09	0.11				
23.50	1.78	0.25	**0.67**				
24.00	3.05	0.94	**3.08**				
24.50	3.25	1.07	0.47				
25.00	3.38	1.16	0.30				
25.50	3.47	1.22	0.22				
26.00	3.55	1.28	0.19				
26.50	3.62	1.32	0.16				

Summary for Pond 11P: Water Quality Pond

Inflow Area = 9.010 ac, 48.83% Impervious, Inflow Depth > 3.12" for 25-Year event
Inflow = 24.32 cfs @ 23.92 hrs, Volume= 2.345 af
Outflow = 18.89 cfs @ 24.02 hrs, Volume= 2.341 af, Atten= 22%, Lag= 6.2 min
Primary = 18.89 cfs @ 24.02 hrs, Volume= 2.341 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Starting Elev= 914.25' Surf.Area= 0.102 ac Storage= 0.025 af
Peak Elev= 915.80' @ 24.02 hrs Surf.Area= 0.165 ac Storage= 0.221 af (0.196 af above start)

Plug-Flow detention time= 31.0 min calculated for 2.314 af (99% of inflow)
Center-of-Mass det. time= 3.5 min (1,600.4 - 1,597.0)

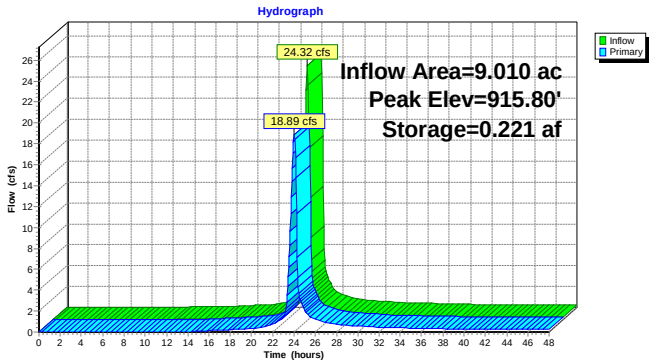
Volume	Invert	Avail.Storage	Storage Description
#1	914.00'	0.769 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
914.00	0.097	0.000	0.000
915.00	0.119	0.108	0.108
916.00	0.176	0.148	0.255
917.00	0.243	0.210	0.465
918.00	0.365	0.304	0.769

Device	Routing	Invert	Outlet Devices
#1	Primary	913.15'	**30.0" Round Culvert** L= 15.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 913.15' / 913.10' S= 0.0033 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#2	Device 1	914.00'	**1.4" Vert. Orifice/Grate** C= 0.600
#3	Device 1	914.25'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	917.00'	**36.0" x 36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=18.81 cfs @ 24.02 hrs HW=915.79' (Free Discharge)
└**1=Culvert** (Passes 18.81 cfs of 22.30 cfs potential flow)
├**2=Orifice/Grate** (Orifice Controls 0.07 cfs @ 6.33 fps)
├**3=Orifice/Grate** (Orifice Controls 18.75 cfs @ 5.97 fps)
└**4=Orifice/Grate** (Controls 0.00 cfs)

Pond 11P: Water Quality Pond



Hydrograph for Pond 11P: Water Quality Pond

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.025	914.25	0.02
1.00	0.00	0.023	914.23	0.02
2.00	0.00	0.021	914.22	0.02
3.00	0.00	0.020	914.20	0.02
4.00	0.00	0.018	914.18	0.02
5.00	0.00	0.017	914.17	0.02
6.00	0.00	0.015	914.16	0.02
7.00	0.00	0.014	914.14	0.01
8.00	0.00	0.013	914.13	0.01
9.00	0.00	0.012	914.12	0.01
10.00	0.02	0.011	914.12	0.01
11.00	0.03	0.012	914.12	0.01
12.00	0.05	0.014	914.15	0.02
13.00	0.07	0.018	914.18	0.02
14.00	0.09	0.023	914.23	0.02
15.00	0.11	0.027	914.27	0.09
16.00	0.13	0.028	914.28	0.12
17.00	0.17	0.028	914.28	0.16
18.00	0.23	0.029	914.29	0.22
19.00	0.26	0.030	914.30	0.26
20.00	0.36	0.031	914.31	0.34
21.00	0.51	0.033	914.33	0.49
22.00	0.78	0.036	914.36	0.74
23.00	**1.43**	0.042	914.41	1.35
24.00	**21.02**	**0.219**	**915.79**	**18.82**
25.00	1.92	0.048	914.47	2.10
26.00	1.20	0.041	914.40	1.25
27.00	0.91	0.038	914.37	0.94
28.00	0.72	0.036	914.36	0.74
29.00	0.64	0.035	914.35	0.64
30.00	0.57	0.034	914.34	0.58
31.00	0.51	0.033	914.33	0.52
32.00	0.44	0.033	914.32	0.45
33.00	0.41	0.032	914.32	0.42
34.00	0.39	0.032	914.32	0.39
35.00	0.37	0.032	914.31	0.37
36.00	0.34	0.031	914.31	0.35
37.00	0.32	0.031	914.31	0.33
38.00	0.30	0.031	914.30	0.30
39.00	0.27	0.030	914.30	0.28
40.00	0.25	0.030	914.30	0.26
41.00	0.24	0.030	914.30	0.24
42.00	0.24	0.030	914.30	0.24
43.00	0.23	0.030	914.30	0.24
44.00	0.23	0.029	914.29	0.23
45.00	0.23	0.029	914.29	0.23
46.00	0.22	0.029	914.29	0.22
47.00	0.22	0.029	914.29	0.22
48.00	0.21	0.029	914.29	0.21

Summary for Subcatchment 10S: Proposed Watershed (ENTIRE SITE)

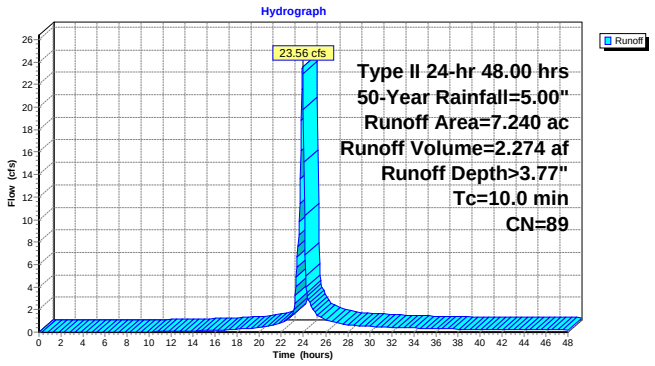
Runoff = 23.56 cfs @ 23.91 hrs, Volume= 2.274 af, Depth> 3.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 48.00 hrs 50-Year Rainfall=5.00"

	Area (ac)	CN	Description
*	4.400	98	impervious
*	2.840	74	pervious
	7.240	89	Weighted Average
	2.840		39.23% Pervious Area
	4.400		60.77% Impervious Area

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

Subcatchment 10S: Proposed Watershed (ENTIRE SITE)



Hydrograph for Subcatchment 10S: Proposed Watershed (ENTIRE SITE)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	27.00	4.00	2.82	0.84
0.50	0.01	0.00	0.00	27.50	4.05	2.87	0.75
1.00	0.03	0.00	0.00	28.00	4.10	2.92	0.66
1.50	0.04	0.00	0.00	28.50	4.15	2.96	0.62
2.00	0.05	0.00	0.00	29.00	4.19	3.00	0.59
2.50	0.07	0.00	0.00	29.50	4.23	3.04	0.56
3.00	0.08	0.00	0.00	30.00	4.27	3.07	0.53
3.50	0.10	0.00	0.00	30.50	4.30	3.11	0.50
4.00	0.11	0.00	0.00	31.00	4.34	3.14	0.47
4.50	0.13	0.00	0.00	31.50	4.37	3.17	0.44
5.00	0.14	0.00	0.00	32.00	4.40	3.20	0.41
5.50	0.16	0.00	0.00	32.50	4.43	3.23	0.39
6.00	0.17	0.00	0.00	33.00	4.46	3.25	0.38
6.50	0.19	0.00	0.00	33.50	4.48	3.28	0.37
7.00	0.21	0.00	0.00	34.00	4.51	3.30	0.36
7.50	0.22	0.00	0.00	34.50	4.53	3.33	0.35
8.00	0.24	0.00	0.00	35.00	4.56	3.35	0.34
8.50	0.26	0.00	0.00	35.50	4.58	3.37	0.33
9.00	0.28	0.00	0.01	36.00	4.61	3.39	0.32
9.50	0.30	0.00	0.02	36.50	4.63	3.42	0.31
10.00	0.32	0.00	0.03	37.00	4.65	3.44	0.29
10.50	0.34	0.01	0.04	37.50	4.67	3.46	0.28
11.00	0.36	0.01	0.05	38.00	4.69	3.47	0.27
11.50	0.38	0.01	0.06	38.50	4.71	3.49	0.26
12.00	0.40	0.02	0.07	39.00	4.73	3.51	0.25
12.50	0.42	0.02	0.08	39.50	4.74	3.53	0.24
13.00	0.45	0.03	0.09	40.00	4.76	3.54	0.23
13.50	0.47	0.03	0.10	40.50	4.78	3.56	0.22
14.00	0.50	0.04	0.11	41.00	4.79	3.57	0.22
14.50	0.52	0.05	0.12	41.50	4.81	3.59	0.22
15.00	0.55	0.06	0.13	42.00	4.82	3.60	0.22
15.50	0.57	0.07	0.14	42.50	4.84	3.62	0.22
16.00	0.60	0.08	0.15	43.00	4.85	3.63	0.21
16.50	0.63	0.09	0.18	43.50	4.87	3.65	0.21
17.00	0.66	0.10	0.21	44.00	4.89	3.66	0.21
17.50	0.70	0.12	0.24	44.50	4.90	3.68	0.21
18.00	0.74	0.14	0.27	45.00	4.91	3.69	0.21
18.50	0.78	0.16	0.29	45.50	4.93	3.70	0.20
19.00	0.82	0.18	0.31	46.00	4.94	3.72	0.20
19.50	0.86	0.20	0.35	46.50	4.96	3.73	0.20
20.00	0.91	0.23	0.40	47.00	4.97	3.75	0.20
20.50	0.96	0.26	0.48	47.50	4.99	3.76	0.20
21.00	1.02	0.30	0.56	48.00	**5.00**	**3.77**	0.19
21.50	1.09	0.34	0.69				
22.00	1.18	0.40	0.84				
22.50	1.28	0.47	1.12				
23.00	1.42	0.57	1.49				
23.50	1.94	0.97	**7.64**				
24.00	3.31	2.19	**19.79**				
24.50	3.53	2.39	2.73				
25.00	3.67	2.52	1.77				
25.50	3.78	2.61	1.33				
26.00	3.86	2.69	1.11				
26.50	3.93	2.76	0.96				

Summary for Subcatchment 12S: Area Draining to Basin (OUTSIDE LOD)

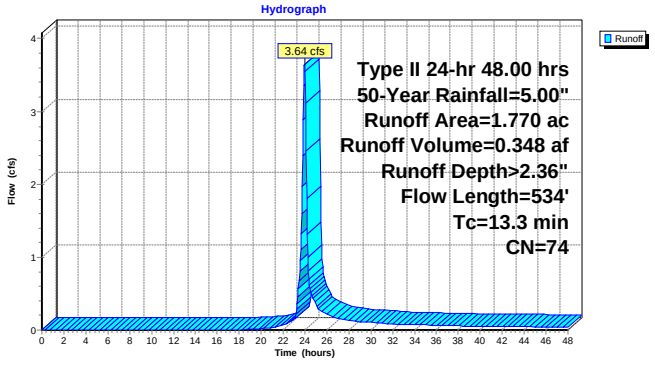
Runoff = 3.64 cfs @ 23.96 hrs, Volume= 0.348 af, Depth> 2.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 48.00 hrs 50-Year Rainfall=5.00"

	Area (ac)	CN	Description
*	1.770	74	
	1.770		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**
0.3	276	0.0528	17.93	56.31	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
3.0	258	0.0091	1.43		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
13.3	534	Total			

Subcatchment 12S: Area Draining to Basin (OUTSIDE LOD)



Hydrograph for Subcatchment 12S: Area Draining to Basin (OUTSIDE LOD)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	27.00	4.00	1.59	0.16
0.50	0.01	0.00	0.00	27.50	4.05	1.63	0.14
1.00	0.03	0.00	0.00	28.00	4.10	1.67	0.13
1.50	0.04	0.00	0.00	28.50	4.15	1.70	0.12
2.00	0.05	0.00	0.00	29.00	4.19	1.74	0.11
2.50	0.07	0.00	0.00	29.50	4.23	1.77	0.11
3.00	0.08	0.00	0.00	30.00	4.27	1.80	0.10
3.50	0.10	0.00	0.00	30.50	4.30	1.82	0.10
4.00	0.11	0.00	0.00	31.00	4.34	1.85	0.09
4.50	0.13	0.00	0.00	31.50	4.37	1.87	0.09
5.00	0.14	0.00	0.00	32.00	4.40	1.90	0.08
5.50	0.16	0.00	0.00	32.50	4.43	1.92	0.08
6.00	0.17	0.00	0.00	33.00	4.46	1.94	0.08
6.50	0.19	0.00	0.00	33.50	4.48	1.96	0.07
7.00	0.21	0.00	0.00	34.00	4.51	1.98	0.07
7.50	0.22	0.00	0.00	34.50	4.53	2.00	0.07
8.00	0.24	0.00	0.00	35.00	4.56	2.02	0.07
8.50	0.26	0.00	0.00	35.50	4.58	2.04	0.07
9.00	0.28	0.00	0.00	36.00	4.61	2.05	0.06
9.50	0.30	0.00	0.00	36.50	4.63	2.07	0.06
10.00	0.32	0.00	0.00	37.00	4.65	2.09	0.06
10.50	0.34	0.00	0.00	37.50	4.67	2.10	0.06
11.00	0.36	0.00	0.00	38.00	4.69	2.12	0.05
11.50	0.38	0.00	0.00	38.50	4.71	2.13	0.05
12.00	0.40	0.00	0.00	39.00	4.73	2.15	0.05
12.50	0.42	0.00	0.00	39.50	4.74	2.16	0.05
13.00	0.45	0.00	0.00	40.00	4.76	2.17	0.05
13.50	0.47	0.00	0.00	40.50	4.78	2.19	0.05
14.00	0.50	0.00	0.00	41.00	4.79	2.20	0.04
14.50	0.52	0.00	0.00	41.50	4.81	2.21	0.04
15.00	0.55	0.00	0.00	42.00	4.82	2.22	0.04
15.50	0.57	0.00	0.00	42.50	4.84	2.24	0.04
16.00	0.60	0.00	0.00	43.00	4.85	2.25	0.04
16.50	0.63	0.00	0.00	43.50	4.87	2.26	0.04
17.00	0.66	0.00	0.00	44.00	4.89	2.27	0.04
17.50	0.70	0.00	0.00	44.50	4.90	2.28	0.04
18.00	0.74	0.00	0.00	45.00	4.91	2.30	0.04
18.50	0.78	0.00	0.00	45.50	4.93	2.31	0.04
19.00	0.82	0.00	0.01	46.00	4.94	2.32	0.04
19.50	0.86	0.01	0.01	46.50	4.96	2.33	0.04
20.00	0.91	0.01	0.02	47.00	4.97	2.34	0.04
20.50	0.96	0.02	0.02	47.50	4.99	2.35	0.04
21.00	1.02	0.03	0.03	48.00	**5.00**	**2.36**	0.04
21.50	1.09	0.04	0.05				
22.00	1.18	0.06	0.06				
22.50	1.28	0.08	0.09				
23.00	1.42	0.12	0.14				
23.50	1.94	0.32	**0.81**				
24.00	3.31	1.11	**3.55**				
24.50	3.53	1.26	0.53				
25.00	3.67	1.36	0.35				
25.50	3.78	1.43	0.25				
26.00	3.86	1.49	0.21				
26.50	3.93	1.55	0.18				

Summary for Pond 11P: Water Quality Pond

Inflow Area = 9.010 ac, 48.83% Impervious, Inflow Depth > 3.49" for 50-Year event
Inflow = 27.02 cfs @ 23.92 hrs, Volume= 2.622 af
Outflow = 20.27 cfs @ 24.03 hrs, Volume= 2.617 af, Atten= 25%, Lag= 6.7 min
Primary = 20.27 cfs @ 24.03 hrs, Volume= 2.617 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Starting Elev= 914.25' Surf.Area= 0.102 ac Storage= 0.025 af
Peak Elev= 916.03' @ 24.03 hrs Surf.Area= 0.178 ac Storage= 0.261 af (0.236 af above start)

Plug-Flow detention time= 29.3 min calculated for 2.592 af (99% of inflow)
Center-of-Mass det. time= 4.2 min (1,595.3 - 1,591.1)

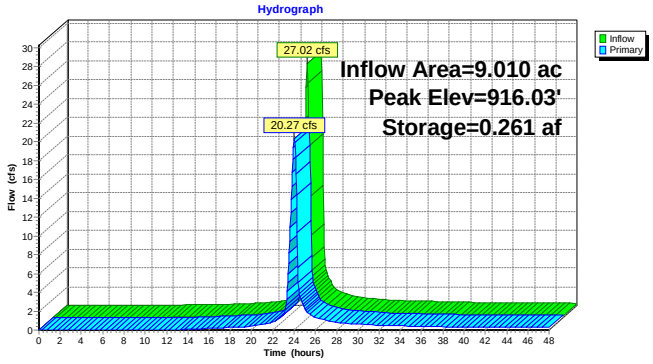
Volume	Invert	Avail.Storage	Storage Description
#1	914.00'	0.769 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
914.00	0.097	0.000	0.000
915.00	0.119	0.108	0.108
916.00	0.176	0.148	0.255
917.00	0.243	0.210	0.465
918.00	0.365	0.304	0.769

Device	Routing	Invert	Outlet Devices
#1	Primary	913.15'	**30.0" Round Culvert** L= 15.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 913.15' / 913.10' S= 0.0033 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#2	Device 1	914.00'	**1.4" Vert. Orifice/Grate** C= 0.600
#3	Device 1	914.25'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	917.00'	**36.0" x 36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=20.19 cfs @ 24.03 hrs HW=916.02' (Free Discharge)
└**1=Culvert** (Passes 20.19 cfs of 25.03 cfs potential flow)
├**2=Orifice/Grate** (Orifice Controls 0.07 cfs @ 6.74 fps)
├**3=Orifice/Grate** (Orifice Controls 20.11 cfs @ 6.40 fps)
└**4=Orifice/Grate** (Controls 0.00 cfs)

Pond 11P: Water Quality Pond



Hydrograph for Pond 11P: Water Quality Pond

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.025	914.25	0.02
1.00	0.00	0.023	914.23	0.02
2.00	0.00	0.021	914.22	0.02
3.00	0.00	0.020	914.20	0.02
4.00	0.00	0.018	914.18	0.02
5.00	0.00	0.017	914.17	0.02
6.00	0.00	0.015	914.16	0.02
7.00	0.00	0.014	914.14	0.01
8.00	0.00	0.013	914.13	0.01
9.00	0.01	0.012	914.12	0.01
10.00	0.03	0.012	914.13	0.01
11.00	0.05	0.014	914.14	0.02
12.00	0.07	0.017	914.18	0.02
13.00	0.09	0.022	914.22	0.02
14.00	0.11	0.027	914.27	0.09
15.00	0.13	0.028	914.28	0.12
16.00	0.15	0.028	914.28	0.15
17.00	0.21	0.029	914.29	0.20
18.00	0.27	0.030	914.30	0.26
19.00	0.31	0.031	914.31	0.31
20.00	0.42	0.032	914.32	0.40
21.00	0.59	0.034	914.34	0.57
22.00	0.90	0.037	914.37	0.86
23.00	**1.63**	0.043	914.43	1.55
24.00	**23.34**	**0.257**	**916.01**	**20.13**
25.00	2.12	**0.049**	**914.48**	**2.31**
26.00	1.32	0.042	914.41	1.37
27.00	1.00	0.039	914.38	1.04
28.00	0.79	0.037	914.36	0.81
29.00	0.70	0.036	914.35	0.71
30.00	0.63	0.035	914.35	0.64
31.00	0.56	0.034	914.34	0.57
32.00	0.49	0.033	914.33	0.50
33.00	0.45	0.033	914.33	0.46
34.00	0.43	0.032	914.32	0.43
35.00	0.40	0.032	914.32	0.41
36.00	0.38	0.032	914.32	0.38
37.00	0.35	0.031	914.31	0.36
38.00	0.33	0.031	914.31	0.33
39.00	0.30	0.031	914.31	0.31
40.00	0.28	0.030	914.30	0.28
41.00	0.27	0.030	914.30	0.27
42.00	0.26	0.030	914.30	0.26
43.00	0.26	0.030	914.30	0.26
44.00	0.25	0.030	914.30	0.25
45.00	0.25	0.030	914.30	0.25
46.00	0.24	0.030	914.30	0.24
47.00	0.24	0.030	914.30	0.24
48.00	0.23	0.030	914.29	0.23

Summary for Subcatchment 10S: Proposed Watershed (ENTIRE SITE)

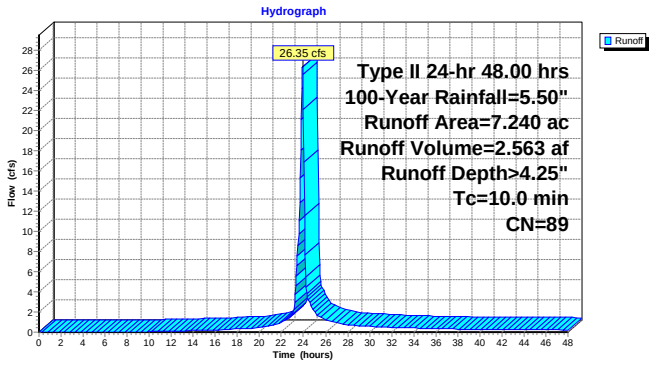
Runoff = 26.35 cfs @ 23.91 hrs, Volume= 2.563 af, Depth> 4.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 48.00 hrs 100-Year Rainfall=5.50"

	Area (ac)	CN	Description
*	4.400	98	impervious
*	2.840	74	pervious
	7.240	89	Weighted Average
	2.840		39.23% Pervious Area
	4.400		60.77% Impervious Area

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

Subcatchment 10S: Proposed Watershed (ENTIRE SITE)



Hydrograph for Subcatchment 10S: Proposed Watershed (ENTIRE SITE)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	27.00	4.39	3.20	0.93
0.50	0.01	0.00	0.00	27.50	4.46	3.25	0.83
1.00	0.03	0.00	0.00	28.00	4.51	3.30	0.73
1.50	0.04	0.00	0.00	28.50	4.56	3.35	0.68
2.00	0.06	0.00	0.00	29.00	4.61	3.40	0.65
2.50	0.07	0.00	0.00	29.50	4.65	3.44	0.62
3.00	0.09	0.00	0.00	30.00	4.69	3.48	0.58
3.50	0.10	0.00	0.00	30.50	4.73	3.52	0.55
4.00	0.12	0.00	0.00	31.00	4.77	3.55	0.52
4.50	0.14	0.00	0.00	31.50	4.81	3.59	0.48
5.00	0.15	0.00	0.00	32.00	4.84	3.62	0.45
5.50	0.17	0.00	0.00	32.50	4.87	3.65	0.43
6.00	0.19	0.00	0.00	33.00	4.90	3.68	0.42
6.50	0.21	0.00	0.00	33.50	4.93	3.71	0.41
7.00	0.23	0.00	0.00	34.00	4.96	3.73	0.40
7.50	0.24	0.00	0.00	34.50	4.99	3.76	0.39
8.00	0.26	0.00	0.00	35.00	5.01	3.79	0.37
8.50	0.28	0.00	0.01	35.50	5.04	3.81	0.36
9.00	0.30	0.00	0.02	36.00	5.07	3.83	0.35
9.50	0.32	0.00	0.03	36.50	5.09	3.86	0.34
10.00	0.35	0.01	0.04	37.00	5.11	3.88	0.33
10.50	0.37	0.01	0.05	37.50	5.14	3.90	0.31
11.00	0.39	0.02	0.06	38.00	5.16	3.92	0.30
11.50	0.42	0.02	0.08	38.50	5.18	3.94	0.29
12.00	0.44	0.03	0.09	39.00	5.20	3.96	0.28
12.50	0.47	0.03	0.10	39.50	5.22	3.98	0.27
13.00	0.49	0.04	0.11	40.00	5.24	4.00	0.25
13.50	0.52	0.05	0.12	40.50	5.25	4.02	0.25
14.00	0.54	0.06	0.14	41.00	5.27	4.03	0.25
14.50	0.57	0.07	0.15	41.50	5.29	4.05	0.24
15.00	0.60	0.08	0.16	42.00	5.31	4.07	0.24
15.50	0.63	0.09	0.18	42.50	5.32	4.08	0.24
16.00	0.66	0.10	0.19	43.00	5.34	4.10	0.24
16.50	0.69	0.12	0.22	43.50	5.36	4.11	0.23
17.00	0.73	0.13	0.25	44.00	5.37	4.13	0.23
17.50	0.77	0.15	0.29	44.50	5.39	4.15	0.23
18.00	0.81	0.18	0.33	45.00	5.41	4.16	0.23
18.50	0.85	0.20	0.35	45.50	5.42	4.18	0.23
19.00	0.90	0.22	0.36	46.00	5.44	4.19	0.22
19.50	0.94	0.25	0.41	46.50	5.45	4.21	0.22
20.00	1.00	0.28	0.47	47.00	5.47	4.22	0.22
20.50	1.05	0.32	0.56	47.50	5.48	4.24	0.22
21.00	1.12	0.36	0.65	48.00	**5.50**	**4.25**	0.21
21.50	1.20	0.42	0.80				
22.00	1.29	0.48	0.97				
22.50	1.41	0.56	1.29				
23.00	1.56	0.67	1.71				
23.50	2.13	1.14	**8.66**				
24.00	3.65	2.49	**22.09**				
24.50	3.88	2.71	3.03				
25.00	4.04	2.86	1.97				
25.50	4.15	2.97	1.47				
26.00	4.25	3.05	1.23				
26.50	4.33	3.13	1.07				

Summary for Subcatchment 12S: Area Draining to Basin (OUTSIDE LOD)

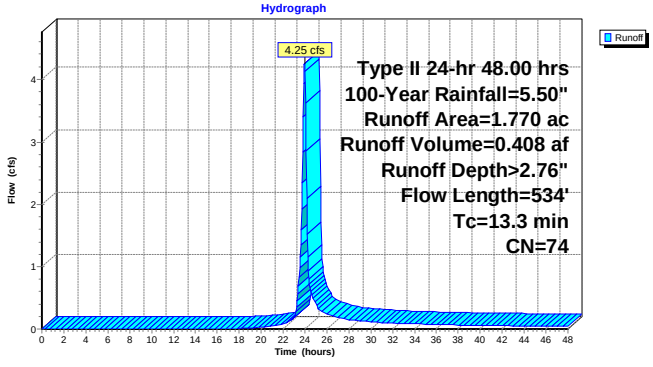
Runoff = 4.25 cfs @ 23.96 hrs, Volume= 0.408 af, Depth> 2.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 48.00 hrs 100-Year Rainfall=5.50"

	Area (ac)	CN	Description
*	1.770	74	
	1.770		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**
0.3	276	0.0528	17.93	56.31	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
3.0	258	0.0091	1.43		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
13.3	534	Total			

Subcatchment 12S: Area Draining to Basin (OUTSIDE LOD)



Hydrograph for Subcatchment 12S: Area Draining to Basin (OUTSIDE LOD)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	27.00	4.39	1.89	0.19
0.50	0.01	0.00	0.00	27.50	4.46	1.94	0.17
1.00	0.03	0.00	0.00	28.00	4.51	1.98	0.15
1.50	0.04	0.00	0.00	28.50	4.56	2.02	0.14
2.00	0.06	0.00	0.00	29.00	4.61	2.05	0.13
2.50	0.07	0.00	0.00	29.50	4.65	2.09	0.12
3.00	0.09	0.00	0.00	30.00	4.69	2.12	0.12
3.50	0.10	0.00	0.00	30.50	4.73	2.15	0.11
4.00	0.12	0.00	0.00	31.00	4.77	2.18	0.10
4.50	0.14	0.00	0.00	31.50	4.81	2.21	0.10
5.00	0.15	0.00	0.00	32.00	4.84	2.24	0.09
5.50	0.17	0.00	0.00	32.50	4.87	2.26	0.09
6.00	0.19	0.00	0.00	33.00	4.90	2.29	0.09
6.50	0.21	0.00	0.00	33.50	4.93	2.31	0.08
7.00	0.23	0.00	0.00	34.00	4.96	2.33	0.08
7.50	0.24	0.00	0.00	34.50	4.99	2.35	0.08
8.00	0.26	0.00	0.00	35.00	5.01	2.38	0.08
8.50	0.28	0.00	0.00	35.50	5.04	2.40	0.07
9.00	0.30	0.00	0.00	36.00	5.07	2.42	0.07
9.50	0.32	0.00	0.00	36.50	5.09	2.44	0.07
10.00	0.35	0.00	0.00	37.00	5.11	2.45	0.07
10.50	0.37	0.00	0.00	37.50	5.14	2.47	0.06
11.00	0.39	0.00	0.00	38.00	5.16	2.49	0.06
11.50	0.42	0.00	0.00	38.50	5.18	2.51	0.06
12.00	0.44	0.00	0.00	39.00	5.20	2.52	0.06
12.50	0.47	0.00	0.00	39.50	5.22	2.54	0.06
13.00	0.49	0.00	0.00	40.00	5.24	2.55	0.05
13.50	0.52	0.00	0.00	40.50	5.25	2.57	0.05
14.00	0.54	0.00	0.00	41.00	5.27	2.58	0.05
14.50	0.57	0.00	0.00	41.50	5.29	2.60	0.05
15.00	0.60	0.00	0.00	42.00	5.31	2.61	0.05
15.50	0.63	0.00	0.00	42.50	5.32	2.62	0.05
16.00	0.66	0.00	0.00	43.00	5.34	2.64	0.05
16.50	0.69	0.00	0.00	43.50	5.36	2.65	0.05
17.00	0.73	0.00	0.00	44.00	5.37	2.67	0.05
17.50	0.77	0.00	0.00	44.50	5.39	2.68	0.05
18.00	0.81	0.00	0.01	45.00	5.41	2.69	0.05
18.50	0.85	0.01	0.01	45.50	5.42	2.71	0.05
19.00	0.90	0.01	0.01	46.00	5.44	2.72	0.05
19.50	0.94	0.02	0.02	46.50	5.45	2.73	0.05
20.00	1.00	0.02	0.03	47.00	5.47	2.74	0.05
20.50	1.05	0.03	0.03	47.50	5.48	2.76	0.05
21.00	1.12	0.04	0.05	48.00	**5.50**	**2.77**	0.04
21.50	1.20	0.06	0.06				
22.00	1.29	0.08	0.08				
22.50	1.41	0.12	0.12				
23.00	1.56	0.17	0.18				
23.50	2.13	0.41	**0.99**				
24.00	3.65	1.34	**4.14**				
24.50	3.88	1.51	0.62				
25.00	4.04	1.63	0.40				
25.50	4.15	1.71	0.29				
26.00	4.25	1.78	0.24				
26.50	4.33	1.84	0.21				

Summary for Pond 11P: Water Quality Pond

Inflow Area = 9.010 ac, 48.83% Impervious, Inflow Depth > 3.96" for 100-Year event
Inflow = 30.41 cfs @ 23.92 hrs, Volume= 2.971 af
Outflow = 21.85 cfs @ 24.04 hrs, Volume= 2.966 af, Atten= 28%, Lag= 7.2 min
Primary = 21.85 cfs @ 24.04 hrs, Volume= 2.966 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Starting Elev= 914.25' Surf.Area= 0.102 ac Storage= 0.025 af
Peak Elev= 916.32' @ 24.04 hrs Surf.Area= 0.198 ac Storage= 0.316 af (0.291 af above start)

Plug-Flow detention time= 27.4 min calculated for 2.938 af (99% of inflow)
Center-of-Mass det. time= 4.9 min (1,589.5 - 1,584.5)

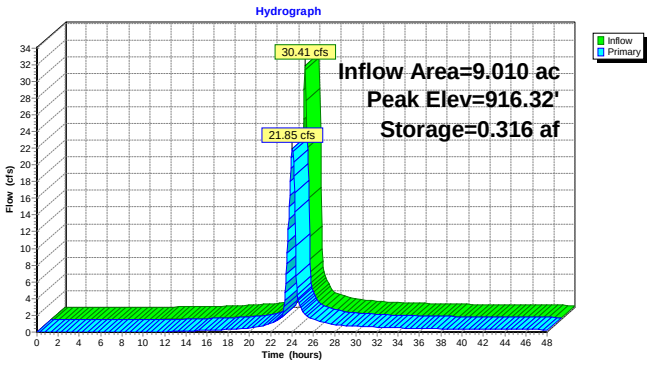
Volume	Invert	Avail.Storage	Storage Description
#1	914.00'	0.769 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
914.00	0.097	0.000	0.000
915.00	0.119	0.108	0.108
916.00	0.176	0.148	0.255
917.00	0.243	0.210	0.465
918.00	0.365	0.304	0.769

Device	Routing	Invert	Outlet Devices
#1	Primary	913.15'	**30.0" Round Culvert** L= 15.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 913.15' / 913.10' S= 0.0033 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#2	Device 1	914.00'	**1.4" Vert. Orifice/Grate** C= 0.600
#3	Device 1	914.25'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	917.00'	**36.0" x 36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=21.79 cfs @ 24.04 hrs HW=916.31' (Free Discharge)
↑**1=Culvert** (Passes 21.79 cfs of 28.00 cfs potential flow)
├**2=Orifice/Grate** (Orifice Controls 0.08 cfs @ 7.23 fps)
├**3=Orifice/Grate** (Orifice Controls 21.72 cfs @ 6.91 fps)
└**4=Orifice/Grate** (Controls 0.00 cfs)

Pond 11P: Water Quality Pond

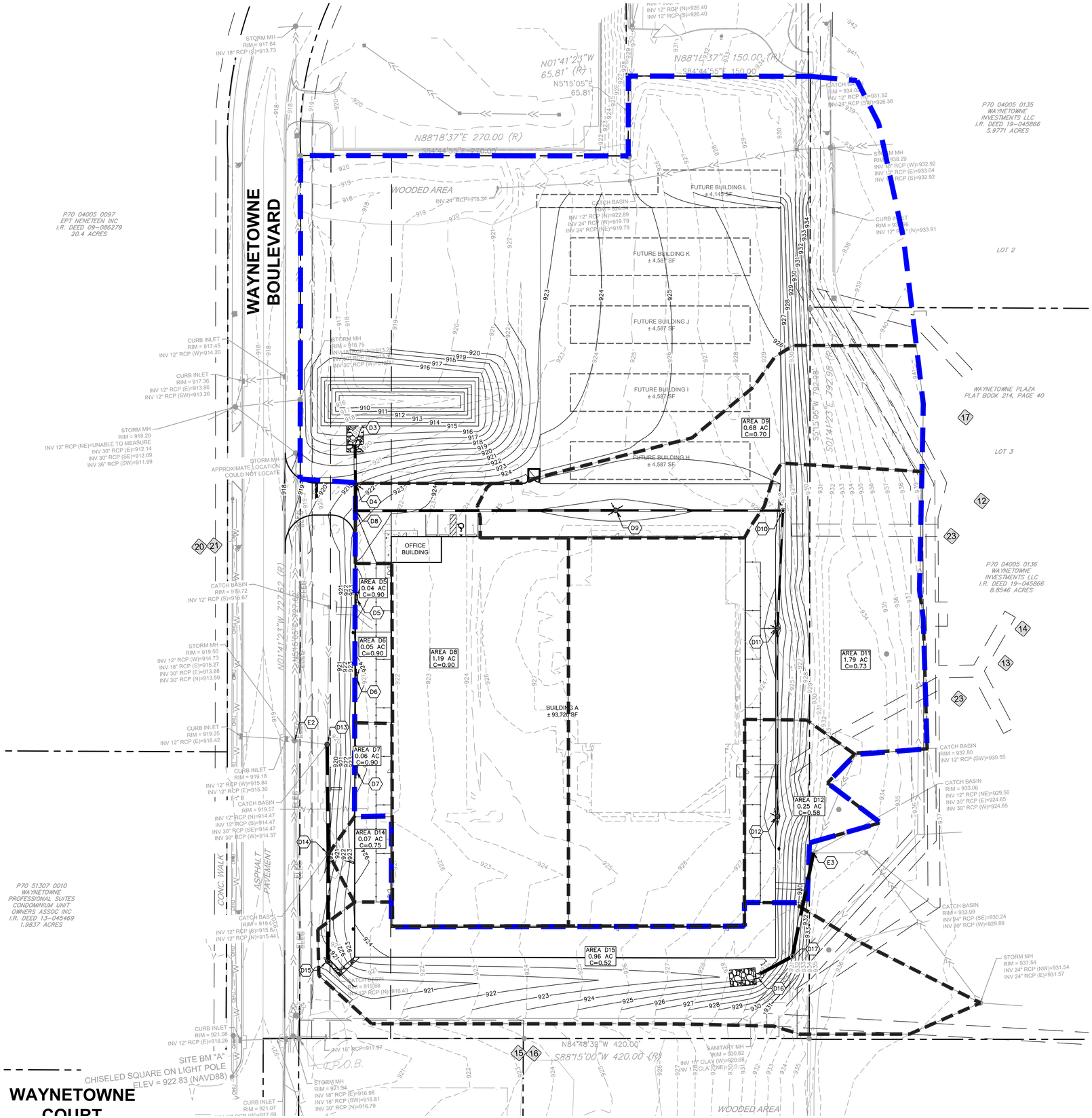


Hydrograph for Pond 11P: Water Quality Pond

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.025	914.25	0.02
1.00	0.00	0.023	914.23	0.02
2.00	0.00	0.021	914.22	0.02
3.00	0.00	0.020	914.20	0.02
4.00	0.00	0.018	914.18	0.02
5.00	0.00	0.017	914.17	0.02
6.00	0.00	0.015	914.16	0.02
7.00	0.00	0.014	914.14	0.01
8.00	0.00	0.013	914.13	0.01
9.00	0.02	0.013	914.13	0.01
10.00	0.04	0.014	914.15	0.02
11.00	0.06	0.018	914.18	0.02
12.00	0.09	0.022	914.22	0.02
13.00	0.11	0.027	914.27	0.09
14.00	0.14	0.028	914.28	0.13
15.00	0.16	0.028	914.28	0.16
16.00	0.19	0.029	914.29	0.18
17.00	0.25	0.030	914.30	0.24
18.00	0.33	0.031	914.31	0.32
19.00	0.38	0.032	914.31	0.37
20.00	0.50	0.033	914.33	0.48
21.00	0.70	0.035	914.35	0.67
22.00	1.05	0.038	914.38	1.01
23.00	**1.89**	0.045	914.44	1.79
24.00	**26.23**	**0.308**	**916.28**	**21.65**
25.00	2.37	**0.051**	**914.50**	**2.58**
26.00	1.48	0.043	914.42	1.53
27.00	1.12	0.040	914.39	1.16
28.00	0.88	0.038	914.37	0.91
29.00	0.78	0.036	914.36	0.79
30.00	0.70	0.036	914.35	0.71
31.00	0.62	0.035	914.34	0.63
32.00	0.54	0.034	914.34	0.55
33.00	0.51	0.033	914.33	0.51
34.00	0.48	0.033	914.33	0.48
35.00	0.45	0.033	914.33	0.45
36.00	0.42	0.032	914.32	0.43
37.00	0.39	0.032	914.32	0.40
38.00	0.36	0.032	914.31	0.37
39.00	0.34	0.031	914.31	0.34
40.00	0.31	0.031	914.31	0.31
41.00	0.30	0.030	914.30	0.30
42.00	0.29	0.030	914.30	0.29
43.00	0.29	0.030	914.30	0.29
44.00	0.28	0.030	914.30	0.28
45.00	0.28	0.030	914.30	0.28
46.00	0.27	0.030	914.30	0.27
47.00	0.26	0.030	914.30	0.26
48.00	0.26	0.030	914.30	0.26

Exhibit 3 – Proposed Tributary Map

Drawing name: K:\CLB_LDEV\190081001_Larkspur_HuberHeights_GA\2 Design\CAD\Exhibits\Drainage\2020-1020-LocalTributMap.dwg Layout: Oct 13, 2021 3:10pm by: MattShiflett
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



OHIO Utilities Protection SERVICE
Click, Call or Tap Before You Dig

LEGEND

- XXX — PROPOSED CONTOUR
- XXX — EXISTING CONTOUR
- PROPOSED STORM SEWER LINE
- PROPOSED OPEN LID STORM STRUCTURE
- PROPOSED CLOSED LID STORM STRUCTURE
- PROPOSED OPEN LID CURB STRUCTURE
- PROPOSED TRIBUTARY AREA BOUNDARY
- AREA TRIBUTARY TO STORMWATER MANAGEMENT AREA

No.	REVISIONS	DATE	BY

Kimley»Horn
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COLUMBUS, OH 43235
PHONE: 614-456-0599
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: IC
DRAWN BY: NAB
CHECKED BY: DDL

Larkspur Properties
REAL ESTATE PARTNERSHIP

PROPOSED TRIBUTARY MAP

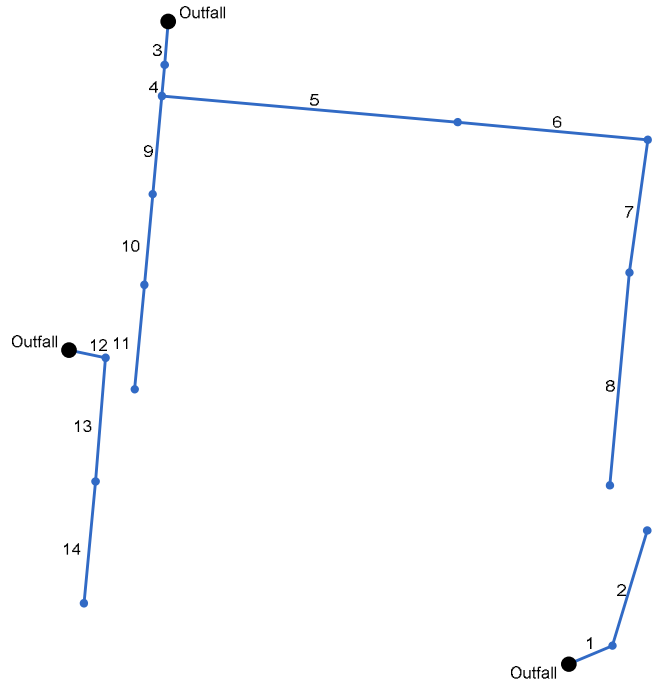
DETAILED DEVELOPMENT PLANS

7650 WAYNETOWNE BLVD
HUBER HEIGHTS, OH 45424

ORIGINAL ISSUE: 10/12/2021
KHA PROJECT NO. 190081001
SHEET NUMBER
EX-3

Exhibit 5 – Hydraflow Model

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: New.stm	Number of lines: 14	Date: 10/12/2021

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	34.250	0.00	0.00	0.00	0.00	0.00	0.0	0.2	0.0	47.30	48.61	10.13	30	1.20	923.20	923.61	925.46	925.87	926.08	929.08	D17 TO D16
2	1	87.180	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	47.30	48.53	10.13	30	1.19	923.61	924.65	925.87	926.91	929.08	933.06	E3 TO D17
3	End	31.594	0.00	4.06	0.00	0.00	3.13	0.0	16.3	4.5	14.02	20.45	6.23	24	0.70	916.74	916.96	918.09	918.31	919.07	924.82	D4 TO D3
4	3	22.674	1.19	4.06	0.90	1.07	3.13	10.0	16.2	4.5	14.05	20.58	6.24	24	0.71	916.96	917.12	918.31	918.47	924.82	922.22	D8 TO D4
5	4	214.460	0.68	2.72	0.70	0.48	1.93	10.0	13.4	4.9	9.43	17.31	4.77	24	0.50	917.12	918.19	918.47	919.29	922.22	923.60	D9 TO D8
6	5	137.927	0.00	2.04	0.00	0.00	1.45	0.0	12.9	5.0	7.23	8.05	5.15	18	0.50	918.69	919.38	919.80	920.49	923.60	925.53	D10 TO D9
7	6	97.155	1.79	2.04	0.73	1.31	1.45	10.0	12.5	5.0	7.32	8.00	4.20	18	0.49	919.38	919.86	920.90	921.26	925.53	923.35	D11 TO D10
8	7	154.942	0.25	0.25	0.58	0.15	0.15	10.0	10.0	5.5	0.80	2.74	2.01	12	0.50	920.36	921.14	921.31	921.51	923.35	923.55	D12 TO D11
9	4	71.425	0.04	0.15	0.90	0.04	0.14	10.0	14.9	4.7	0.63	3.23	2.68	12	0.70	918.12	918.62	918.47	918.95	922.22	923.72	D5 TO D8
10	9	65.999	0.05	0.11	0.90	0.05	0.10	10.0	13.3	4.9	0.49	3.22	2.37	12	0.70	918.62	919.08	918.95	919.37	923.72	923.77	D6 TO D5
11	10	76.001	0.06	0.06	0.90	0.05	0.05	10.0	10.0	5.5	0.30	3.22	1.92	12	0.70	919.08	919.61	919.37	919.83	923.77	923.77	D7 TO D6
12	End	27.041	0.66	1.69	0.50	0.33	0.88	10.0	10.3	5.5	52.11	59.81	10.96	30	1.81	913.88	914.37	916.20	916.69	919.50	920.00	D13 TO E2
13	12	89.878	0.07	1.03	0.75	0.05	0.55	10.0	10.1	5.5	50.33	37.20	10.25	30	0.70	914.37	915.00	916.87	918.02	920.00	919.62	D14 TO D13
14	13	88.687	0.96	0.96	0.52	0.50	0.50	10.0	10.0	5.5	50.05	37.15	10.20	30	0.70	915.00	915.62	918.27	919.40	919.62	919.68	D15 TO D14

Project File: New.stm | Number of lines: 14 | Run Date: 10/12/2021

NOTES:Intensity = 102.00 / (Inlet time + 14.50) ^ 0.91; Return period =Yrs. 10 ; c = cir e = ellip b = box

AI-7967 **9. A.**

Planning Commission

Meeting Date: 11/09/2021

Planning Commission October 26, 2021

Information

Agenda Title

Planning Commission October 26, 2021

Purpose and Background

Attachments

Minutes

Planning Commission
October 26, 2021 Meeting
City of Huber Heights

I. Chair Terry Walton called the meeting to order at approximately 6:03 p.m.

II. Present at the meeting: Mr. Jeffries, Ms. Opp, Ms. Thomas, Ms. Vargo and Mr. Walton.

Members absent: None.

Staff Present: Scott Falkowski, Interim City Manager and Geri Hoskins, Planning & Zoning Administrative Secretary.

III. Opening Remarks by the Chairman and Commissioners

None.

IV. Citizens Comments

None.

V. Swearing of Witnesses

Mr. Walton explained the proceedings of tonight's meeting and administered the sworn oath to all persons wishing to speak or give testimony regarding items on the agenda. All persons present responded in the affirmative.

VI. Pending Business

None.

VII. New Business

1. **COMBINED BASIC AND DETAILED DEVELOPMENT PLAN - The applicant, MEGAN PRATHER, is requesting approval of a Combined Basic and Detailed Development Plan for 1.0 acres for property located at 6119 Brandt Pike, for Dogtown (ZC 21-37).**

Mr. Falkowski stated the request is for the following:

The applicant requests approval of a rezoning to Planned Mixed Use and a combined Basic and Detailed Development Plan for 1.0 acres at 6119 Brandt Pike for Dogtown.

The City's Comprehensive Plan calls for this area to be Mixed Use B Town Center which includes commercial uses.

Sanitary and water will connect into the City's public main system at the edges of the development parcel. Drainage will be handled through a public storm sewer

system which flows to an existing detention basin to the southwest. Twenty-one parking spaces are proposed with two of those being ADA accessible. The proposal calls for ten-foot-wide spaces which matches the City's Zoning Code. A drop off area is located at the front of the building. The entrance comes off an existing access easement that leads to Brandt Pike and Fishburg Road. Lighting shall follow standard City Code. Landscaping is provided in all drive and parking islands and around the monument sign.

The building is made of brick, EIFS and integral color masonry units. The plan is for two stories. The total height of the building is 27 feet at the lobby and 24 feet throughout the rest of the building. Two outdoor areas are proposed for dog use. They are further away from any residential use than the current outside dog runs for the existing dog day care business in the shopping center. These areas are surrounded by six-foot tall powder coated picket fences. The dumpster enclosure is proposed to at the rear and have masonry walls with a gate. The request is for a 10-foot-high monument sign. Staff recommends the sign be limited to six feet tall and seventy-five square feet total as per standard City code. One wall sign is proposed, which staff recommends to be a maximum of seventy-five square feet in area.

Timothy Foster said I just wanted to mention, there's not whole lot more I can add to the presentation that Mr. Falkowski gave. All I would mention is that the city recommendations related to the signage height and other things we're okay and can agree to those terms that were put in the resolution.

Action

Ms. Jeffries moved to approve the request by the applicant MEGAN PRATHER, for the approval of a Basic and Detailed Development Plan for property located at 6119 Brandt Pike (ZC 21-37) in accordance with the recommendation of Staff's Memorandum dated October 15, 2021, and the Planning Commission Decision Record attached thereto.

Seconded by Ms. Opp. Roll call showed: YEAS: Ms. Thomas, Ms. Vargo, Ms. Opp, Mr. Jeffries, and Mr. Walton. NAYS: None. Motion to approve carried 5-0.

2. **REZONING - The applicant, DANIEL GREENE, is requesting approval of a Rezoning to Planned Residential for .3445 acres of property located at 4270 Murdock Avenue (ZC 21-40).**

Mr. Falkowski stated that the applicant requests rezoning from B-1 Commercial to PR Planned Residential District.

The applicant requests a lot combination of five parcels including 0.344-acres in order to utilize the property for its current use. This new parcel combines five 25-foot frontage lots which has existing buildings that cross said property lines. This cleans up the parcel into one ownership parcel. The property is zoned B-1 Commercial but has a residential house on the property and the owner would like to continue to have that use. A rezoning will be required of the newly combined parcel for the residential use. The rezoning will be to Planned Residential to allow for the current locations of all buildings on the site. No additional right-of-

way was required with this split and rezoning. The surrounding uses at the area of the split are a combination of residential and commercial, so this use fits. No additional improvements are being requested with this application.

Ms. Vargo asked will they be able to sell each house individually if the desired? Mr. Falkowski stated there are five lots that will be combined into one, but it is just one house.

Action

Ms. Thomas moved to approve the request by the applicant DANIEL GREEN, for the approval of a Rezoning from B1 Commercial to PR Planned Residential 4.3445 acres located at 4270 Murdock Avenue (ZC 21-40) in accordance with the recommendation of Staff's Memorandum dated October 15, 2021, and the Planning Commission Decision Record attached hereto.

Seconded by Mr. Jeffries. Roll call showed: YEAS: Ms. Opp, Ms. Vargo, Mr. Jeffries, Ms. Thomas, and Mr. Walton. NAYS: None. Motion to approve carried 5-0.

3. **LOT SPLIT - The applicant, DANIEL GREENE, is requesting approval of a Lot Split of .3445 acres (ZC 21-39).**

Mr. Falkowski stated the applicant requests a lot combination of five parcels including 0.344-acres in order to utilize the property for its current use. This new parcel combines five 25-foot frontage lots which has existing buildings that cross said property lines. This cleans up the parcel into one ownership parcel. The property is zoned B-1 Commercial but has a residential house on the property and the owner would like to continue to have that use. A rezoning will be required of the newly combined parcel for the residential use. The rezoning will be to Planned Residential to allow for the current locations of all buildings on the site. No additional right-of-way is required with this combination. No new improvements are being requested with this application.

Action

Ms. Thomas moved to approve the request by the applicant, DANIEL GREENE, for approval of a Lot Split of .3445 acres at 4270 Murdock Avenue (ZC 21-39) in accordance with the recommendation of Staff's Memorandum dated October 15, 2021, and the Planning Commission Decision Record attached hereto.

Seconded by Mr. Jeffries. Roll call showed: YEAS: Ms. Opp, Ms. Vargo, Ms. Thomas, Mr. Jeffries, and Mr. Walton. NAYS: None. Motion to approve carried 5-0.

4. **BASIC DEVELOPMENT PLAN - The applicant, DARIN SCHMIDT, is requesting approval of a Basic Development Plan for 19.1 acres for an Airsoft and Paintball facility for property located at 7860 Bellefontaine Road (ZC 21-36).**

Mr. Falkowski stated the applicant requests approval of a Basic Development Plan for 19.1 acres at 7860 Bellefontaine Road for a paintball and airsoft facility.

The City's Comprehensive Plan calls for this area to be Agricultural/Low Density Residential.

There are no public sanitary and water connections available at the site. Drainage calculations shall be submitted by a licensed professional engineer and follow the standards for water quality and quantity. The proposal calls for areas to be set up for paint ball and airsoft facilities. Staff's recommendation is that any building follow the standard Commercial Design as per City Code. Also, the entrance shall be upgraded to the City Standard of a concrete drive apron for commercial standards. Parking and loading shall follow the City Standards as well, including materials, number of spaces and dimensions. The minimum standard for a landscaped buffer in 15 feet along the southern and eastern property lines. The parking and loading facilities shall be a distance of at least 25 feet from the established right-of-way line, and the building(s) or the structure(s) at least 75 feet from the established right-of-way line per the Official Thoroughfare Plan or the recorded plat. The nearest residential structure to this property is approximately 780 feet away.

There were some concerns that were in letters, potential noise, encroachment onto neighboring properties, drainage, traffic that have been provided to you.

Ms. Vargo stated she has concerns about paintball she has no idea what is in the paint, how far it shoots. Dry Lick Run Creek goes through our city and can't have that contaminated. What is the plan for cleanup? Ms. Thomas stated not quickly biodegradable. Ms. Opp stated harmful to animals. Mr. Jeffries asked about fencing around the perimeter.

Darin Schmidt CEO of G2 tactical, LLC Most of your concerns seem to be with the chemical makeup of the paintball itself. I've got the sts material sheet from belk and it says it's, non-toxic, there's like a 41% volume in there that says it's proprietary chemical stuff, cause they will not disclose that to the public. But also I believe you mentioned some of it being dangerous to animals that's if you ingest like 10 full balls, what it actually does is it creates, dehydration within the body. So you had to seek medical attention now that's not really capable. No one's pet should be roaming on our property anyways. Some of you mentioned about stuff going into the creek. We are going to be putting up a fence line right there. It's called it's an eight foot mesh netting that prevents any paint balls, any bee bees to go there. We do have now a days biodegradable bee bees that we use and we highly encourage them and we sell them if they're available now because of the pandemic, there's been a supply shortage a nd stuff. So we get what we can so that people can come out and play. But we're very environmentally conscious as well. We prefer bio degradable any day of the week.

Because yes, humans aren't going to be able to encroach your property, but what's to say the wildlife or the birds what is that going to do to the environment?
Well, I can't predict how many balls of paint they lick off the ground, just saying.
but if something were to happen, of course, that would probably cause complications for them, but then no air soft field repayable field should be

allowed to
be opened if that's the case, because we can not guarantee that no wildlif e is going to come in there, but it will be surrounded heavily in netting where there is only one entrance and one exit. I find that fairly unlikely, a land animal maybe a bird would come in there
but from my understanding , I've never
tested it myself, but it does not taste great. So I would hope that if they did get a sample of it, they would go I'm out of here.
Ms. Opp asked about the netting fence, how tall is that. 8 feet up to 27 feet tall. Does anything ever go over eight feet?
What about the visual? Um, it's not, unpleasing, it's just a black mesh net. It's surrounded by wildlife, all the trees and everything anyways. So you won't even see it from the road. Camping or grilling out of enjoying the outdoor movie theater that we hope to one day open. We are hoping that with us adding more vegetation to the
area, the trees, the flowers, all that stuff will actually increase we take very great pride in what we planning just around the actual paintball field itself so that the air softwares don't hit the pain, ballers and pain ballers. It's technically three different fields in one I'm understanding. Could you briefly explain to us the difference between the airsoft, the paintball and anything else you might have going on that facility?
Airsoft has a sense, it's just the same thing as paintball, except you can use different
style weapon , or I should say markers or guns, however you wanna label

it. They just use soft. They use little hard plastic pellets that are six millimeter in diameter
and they can range from 0.2 up to someone like four to six I've heard of

and seen it's very safe. You
know, they don't have a whole lot of power behind them. We
regulate the juul rating, which is the kinetic energy behind the actual

projectile itself. So it does not break skin. We
will require everybody to wear proper gear and safety equipment.

From what I read with some of them that we buy it only takes three

months to six months for the naturally biodegrade out in, out in the open.
What about the noise of the gun? I personally feel that the highway itself pollutes the air more than our noise and
guns with them and with all the trees and everything that's around too. I

highly doubt that any of the neighborhood even hear it. That's how confident I am in it.

Mr. Jeffries asked
If you were to you have an event going, I mean, what I'm assuming if able, you'd be happy to run all three courses at the same time to revenue all

running the same time. So how many people would that consist of?

I don't know. We don't do paintball right now, so we don't hardly get anybody for

that but we get on average from 50 to 80 people an event, for airsoft. Some of us vets, it's therapeutic for us.

So it's good for all of us in some way or fashion. During peak times a hundred to 150. Um, no probably at most at peak would be 80 something on average.

Ms. Thomas asked where are you currently operating? In Dayton right off North Irwin street. Pretty close to around route four. Ms. Thomas asked what are your, what's surrounding you there? Just a bunch of factory buildings basically. There's some open area and there's residential areas, not too far from this.

Ms. Vargo said I have several questions. Are the paint balls toxic? No. How about the plastic? Um, I would assume not either. How large are they? Six millimeters small My main concern again is the creek. Yeah. I fully understand. Do you have any kind of insurance to assure the City you can fix anything that goes wrong with the creek? I mean, we carry everything.

Ms. Vargo said
if something happened to the creek, what would you do? We would do our best to solve to the problem. I understand we're taking every precaution to make sure that does not happen, by using materials and so forth. So I don't foresee there being any way we could cause harm. I could submit that to you if you'd like, cause I have it at home.

Have you at your current facility, have you had any encounters with the epa or any kind of environmental company because of what

you're doing there? No.

How long have you been there? This year only because we used to host the other fields, like, Tim's. Tim's facility over at paintball, airsoft and fallen warrior and some other places too. I have never had a problem.

I do want to be clear so that everybody understands the creek itself.

The creek runs along the front portion, along the property line and then he ads the south there, south property line.

I feel to be honest that the farmer that was there, putting pesticides and

fertilizer on land would do more harm than we will.

Mr. Jeffries said under the mesh fencing that goes around, I'd like to make sure that, there's some kind of a maintenance inspection on that to make sure that over time it's not degrading and having holes where stuff continuing to fly. It's a five-year fence. five-year netting, I should say actually and we do go through and make sure there's no rips and cuts and stuff like that.

At least around the paintball area and along where highway 70 is.

Would you be open to putting it around the entire area to handle some of the neighbors concerns about encroachment from the properties? I would assume that probably would cause a problem with your 15 foot preservation zone though, because when you get the netting around it, like a lot of woods and stuff, we had to build, maintain that woods as well. If we're surrounding the whole thing then that's going to grow into our netting and really ruin it.

Ms. Thomas, I have one last question. I'd like to say for all the vets in the, in the room, thank you for your service. As you mentioned, what are your hours of operation?

We only operate on the weekend and I don't remember if I put in the report, but our primary, days are the first and third weekend of the month. We don't operate every weekend either. It works out well for us because we too have family jobs and stuff like that.
Ms. Vargo Will you have any kind of building there?
Yes.Where it says the gravel parking to the bottom, right of that we will have a 100 x 42 story building eventually as we get the funds for it.

For the time being, I did talk with Donald with the county about putting up some temporary sheds that we could operate out of.

That will be for your equipment? yeah for everything it'll be our shop and storage, everything. Someone mentioned about traffic. I was told by the engineer, we didn't have to have a traffic study.

Mr. Falkowski said the city engineer looked at this and said that the traffic study would not be needed that improvements to Bellefontaine Road would not be required with this, but we would require the entrance to meet commercial standard.

Ms. Vargo asked will you have water? Oh yes. It will be treated and filtered and everything else, like we mentioned to, that, you know, we're very environmentally conscious well. We will be actually using the same drinking fountains that you guys have so they can fill up their bottles

instead of a bunch of bottled water and throwing all the plastic.

You'll have a bathroom septic systems? Yes

Rich Moore - Opposed, read letter that is attached. Spoke to concerns with
Environmental
Bullet Encroachment
Potential Encroachment by visitors

Bruce Waley – Against, spoke to concerns with
Quality of Life
Litter Safety

Kim Williamson – Against, spoke to concerns with
Quality of Life
Safety
Litter

Susanne Moore – Against, spoke to concerns with
Environmental
Safety

Joe Dotson – Against, spoke to concerns with
Traffic
Noise

Charlie Rice – Against, spoke to concerns with
Home Values
Noise

Steve McClain – For
Mainly Airsoft
States paintballs are not an environmental problem
Outdoor Recreation
Destination Sport

Dennis Soro – For
Veteran Owned and operated
Airsoft an outlet for veterans

Luanne Flynn
Animals

Evan Bellinger – for

Kim Lukey – Against, spoke to concerns with
Worried about lights
Noise
Traffic

Shane Elliot – For
Guns are quiet
Rounds don't penetrate forest

Carl Tavener – Against, spoke to concerns with
Traffic

Jake Musser – For
Honor Sport

Nancy Byrge – spoke to concerns with
Environmental
What are specifications?

Ann Leach - spoke to concerns with
Not proper location

Logan Lehart
Vouch for applicant character

Dustin - spoke to concerns with
Doesn't want commercial use

Tim Hart - spoke to concerns with
Paintball can kill dogs
Noisy
Airsoft Grenades
Camping
Rounds can reach 170

Austin Harten
Fireworks
Night op

Robert Stevens – For

James Brant – For

Josh Mann - spoke to concerns with
Doesn't want it in the neighborhood

Ms. Vargo asked about complaints against I70 paintball?
How many Police Calls.

Mr. Walton asked if the commission had any other questions for staff. Ms. Vargo said a couple of things came up that she wasn't aware of. Camping wasn't part of the application. Nothing was said about pyrotechnics. I would want input from Fire. Discussion followed on tabling this issue for more information.

Action

Ms. Vargo moved to table the request by the applicant, DARIN SCHMIDT, for approval A Basic Development Plan for 19.1 acres for an Airsoft and paintball facility for property located at 7860 Bellefontaine Road (ZC 21-36).

Seconded by Ms. Opp. Roll call showed: YEAS: Ms. Thomas, Ms. Opp, Mr. Jeffries, and Ms. Vargo. NAYS: Mr. Walton. Motion to table carried 4-1.

5. **BASIC DEVELOPMENT PLAN - The applicant, DDC MANAGEMENT, is requesting approval of a Basic Development Plan for 172.5 acres property located at Chambersburg Road, Villages of Westport, a Planned Residential Development (ZC 21-35).**

Mr. Falkowski stated that the applicant requests approval of a Rezoning to Planned Residential and a Basic Development Plan for 172.5 acres on Chambersburg Road for a residential subdivision.

The applicant is looking to develop 172.5 acres on the north side of Chambersburg Road. The intent is to build two hundred and eighty-three (283) residential lots. The request is to rezone to Planned Residential for this development.

The City's Comprehensive Plan calls for this area to be Single Family Residential with a maximum of 6 units per acre. The proposed density is 1.65 dwelling units per acre.

Sanitary and water will connect into the City's public main system. Water and sanitary are located along the perimeter of the property. Drainage will be handled through a public storm sewer system including detention basins, following the City's Code for storm water drainage. Chambersburg Road will be improved to a forty-five (45) foot half right-of-way section per our City's Thoroughfare Plan. All streets will be public with curb and sidewalk on both sides.

Two styles of lot are being proposed. All lots are proposed to have a minimum of 120 feet in depth, twenty-five-foot front yards, five-foot side yards and twenty-five-foot rear yards. The two styles are fifty-one-foot minimum width lots and seventy- foot minimum width lots. The total lots count is 283 lots, with 98 of them

being the 70-foot lots and 185 being the 51-foot lots. The seventy foot lots are all located at the exterior of the development. The proposal calls for 101.58 acres of open space, or 59.4% of the development. Staff recommends that a minimum of 25% of the surface area of the front façade shall be finished with brick or stone masonry products.

Ms. Vargo asked about 5 ft side setbacks, Mr. Falkowski said yes.

Mr. Jeffries asked about buffering, Mr. Falkowski said development agreement through the City. City to have park land.

Ryan Reed, DDC Management said area donated to the City, public park. Ms. Vargo asked how many phases, Ryan responded 4 phases, mixture in all phases.

Ms. Byrge asked any street lighting and Mr. Falkowski said standard AES lights or individual.

Mr. Hart asked HOA and average price. Ryan Reed said market mid 200s lower 300s and Mr. Falkowski said yes to HOA.

Action

Ms. Thomas moved to approve the request by the applicant, DDC MANAGEMENT, for approval of a Basic Development Plan for 172.5 acres property located at Chambersburg Road, Parcel Numbers P70-04048-0006 and P70-04008-0004, Villages of Westport, of the Montgomery County Ohio records (ZC 21-35) in accordance with the recommendation of Staff's Memorandum dated October 15, 2021, and the Planning Commission Decision Record attached hereto.

Seconded by Mr. Jeffries. Roll call showed: YEAS: Ms. Opp, Ms. Vargo, Ms. Thomas, Mr. Jeffries, and Mr. Walton. NAYS: None. Motion to approve carried 5-0.

6. **BASIC DEVELOPMENT PLAN - The applicant, THE ANNEX GROUP, is requesting approval of a Basic Development Plan for 20 acres for property located at 6502 Old Troy Pike for 216 multi-family units in a Planned Residential Development (ZC 21-34).**

Mr. Falkowski stated the applicant requests approval of a rezoning to Planned Residential and a Basic Development Plan for 20.0 acres at the northeast corner of Old Troy Pike and Chambersburg Road.

The applicant is looking to develop 20 acres at the northeast corner of Old Troy Pike and Chambersburg Road. The current request is to rezone to PR Planned Residential for construction of 216 multi-family units.

The City's Comprehensive Plan calls for this area to be Commercial Business.

Sanitary and water will connect into the City's public main system and is located on Old Troy Pike and Chambersburg Road. Drainage will be handled through a

public storm sewer system including detention basins, following the City's Code for storm water drainage. Chambersburg Road shall be improved to a forty-five (45) foot half right-of-way section per our City's Thoroughfare Plan, including curbs and sidewalks. Two access points are proposed, one on Old Troy Pike and one on Chambersburg Road. The parking code for Multi-family residential is two spaces per dwelling unit. 322 parking spaces are proposed with 14 of those being ADA accessible.

Six buildings are proposed with 36 units in each building. The buildings are all three stories in height. The buildings are proposed to be all siding. Staff recommends that there be a minimum of 25% brick or stone.

Mr. Falkowski said Traffic Impact Study came in over the weekend and did not make it into the packets. One recommendation is the southern access point be a right in right out access point.

Ms. Opp asked about right in right out and parking spaces and Mr. Falkowski said room to add more further away.
Ms. Thomas asked what will divide from the bank. Mr. Falkowski said detention basin and drive.
When it comes back for a Detailed Plan, they will have a landscaping plan as well.
Mr. Jeffries parking will be 10-ft-wide, and Mr. Falkowski said yes.

Tyler Knox said 65 1 bedroom, 106 2 bedroom, and 45 3 bedroom. 1.5 parking ratio – we can look into more parking spaces.

Ms. Byrge asked about handicap and Mr. Falkowski stated 10 ft wide with stripped area. Also asked about elevators and they do not.

Mr. Hart asked normal space size will be narrower and Mr. Falkowski said no 10 ft wide spaces.

Mr. Jeffries hesitant to vote without seeing the traffic impact study. Mr. Falkowski could add condition to Decision Record that they follow any recommendation from the Traffic Impact Study.

Action

Ms. Vargo moved to approve the request by the applicant, THE ANNEX GROUP, for approval of a Basic Development Plan for 20 acres for property located at 6502 Old Troy Pike, Parcel Number P70-04004-0003 of the Montgomery County Ohio records (ZC 21-34) in accordance with the recommendation of Staff's Memorandum dated October 15, 2021, and the Planning Commission Decision Record as amended.

Seconded by Mr. Jeffries. Roll call showed: YEAS: Ms. Opp, Ms. Vargo, Ms. Thomas, Mr. Jeffries, and Mr. Walton. NAYS: None. Motion to approve carried 5-0.

7. **DETAILED DEVELOPMENT PLAN - The applicant, JPMORGAN CHASE BANK, is requesting approval of a Detailed Development Plan for .96 acres for property located at the northeast corner of Taylorsville Road and Old Troy Pike (ZC 21-33).**

Mr. Falkowski stated the applicant requests approval of a Detailed Development Plan for the infrastructure portion of a commercial and multi-family Mixed Use project at the above-described location.

The above-described property was rezoned from R-6 - Residence and B-3 - Commercial to PM – Planned Mixed Use in 2021. The site is located at the northeast corner of Taylorsville Road and Old Troy Pike. The overall proposal calls for the construction of six commercial buildings to be located on individual lots and 192 market rate apartment units housed in 6 multi-family buildings. The proposal before Planning Commission calls for the construction of a new 4,085 square foot Chase Bank Facility which is a permitted use in the Planned Mixed Use Zoning District as a commercial use. Staff's analysis of the proposal is broken into several segments as follows.
The building is 86 feet from the Old Troy Pike Right-of-Way and 90 feet from the Taylorsville Road Right-Of-Way. The building in this location is surrounded by other commercial uses. Pedestrian access is provided from Old Troy Pike and to the north within the development. The dumpster enclosure is located at the rear of the building.

Parking is as follows.
Financial establishment, bank or savings and loan association: one space per 200 square feet of gross floor area, plus one space per employee on the largest work shift, plus five stacking spaces per drive-in window or drive-thru machine.

By Code, thirty spaces would be required. Thirty-seven parking spaces are provided, with two being handicap accessible. The proposal calls for ten-foot width parking spaces.

Utilities:
The building will be serviced by connections to public water and sanitary sewer connections. Gas, telephone, and electric are also available at the site limits. Drainage is being collected through catch basins and storm sewer routing the flow to the existing retention pond to the east. There is no need for additional storm water detention. Lighting shall meet the standards of City Code 1181.21.

Signage:
Four wall signs are proposed on the building. The signs are to be located on all faces. The total sign area of the four signs shall not exceed 150 square feet as per that standard City Code for buildings with multiple visible faces. No ground sign will be approved at this location. A master development sign will be available for all users.

Landscaping:
Landscaping is being provided around the perimeter of the building and site. The landscaping consists of deciduous trees, evergreen trees, shrubs, grasses, and perennials. Staff recommends adding Autumn Fantasy Maple trees along Old

Troy Pike and Taylorsville Road to match the spacing that was approved with the Discount Tire Store.
Erin Gogolin and Seth Burk from JPMorgan Chase Bank said they are not sure if bank on Chambersburg will close.

Action

Ms. Thomas moved to approve the request by the applicant, JPMORGAN CHASE BANK, for approval of a Detailed Development Plan for property located at the northeast corner of Taylorsville Road and Old Troy Pike (ZC 21-33) in accordance with the recommendation of Staff's Memorandum dated October 15, 2021, and the Planning Commission Decision Record attached thereto.

Seconded by Ms. Vargo. Roll call showed: YEAS: Ms. Opp, Ms. Vargo, Ms. Thomas, Mr. Jeffries, and Mr. Walton. NAYS: None. Motion to approve carried 5-0.

8. **DETAILED DEVELOPMENT PLAN - The applicant, BROAD REACH RETAIL PARTNERS, LLC, is requesting approval of a Detailed Development Plan for 1.10 acres for property located at the northeast corner of Taylorsville Road and Old Troy Pike (ZC 21-32).**

Mr. Falkowski stated that the applicant requests approval of a Detailed Development Plan for a retail building in the Mixed-Use development at the above-described location.

The above-described property was rezoned from R-6 - Residence and B-3 - Commercial to PM – Planned Mixed Use in 2021. The site is located at the northeast corner of Taylorsville Road and Old Troy Pike. The overall proposal calls for the construction of six commercial buildings to be located on individual lots and 192 market rate apartment units housed in 6 multi-family buildings. The proposal before Planning Commission calls for the construction of a new 11,050 square foot retail Facility which is a permitted use in the Planned Mixed Use Zoning District as a commercial use. Staff's analysis of the proposal is broken into several segments as follows.

Building Elevations:
The building is made up of different shades of brick and different shades of EIFS. There is a good mix of colors and depth to the building. The total building height is twenty feet, eight inches. The dumpster enclosure is proposed to be made of masonry materials to match the building and have gates at the front.

The building is 86 feet from the Old Troy Pike Right-of-Way. The building in this location is surrounded by other commercial uses. Pedestrian access should be provided from Old Troy Pike. The dumpster enclosure is located at the rear of the building.

Parking is as follows.
Specialty retail commercial, specialty food store, personal service and commercial center, shopping center: one space for every 200 square feet of gross floor area less than 2,000 square feet and one space for every 250

square feet of gross floor area greater than 2,000 square feet, except that commercial entertainment uses in commercial centers shall provide additional parking as required in subsection (c)(6) hereof.

By Code, forty-six spaces would be required. Thirty-six parking spaces are provided, with two being handicap accessible. The proposal calls for nine-foot width parking spaces, while the standard City code is ten feet wide spaces.

Utilities:
The building will be serviced by connections to public water and sanitary sewer connections. Gas, telephone, and electric are also available at the site limits. Drainage is being collected through catch basins and storm sewer routing the flow to the existing retention pond to the east. There is no need for additional storm water detention. A lighting plan has been submitted and meets the standards of City Code 1181.21.

Signage:
A signage package for the building has not been submitted at this time. Three monument signs are proposed for the entire development. Sign A located at the new signalized intersection is planned to be sixteen feet eight inches tall and twelve feet wide. This will be a multi-tenant sign. The next sign, Sign B, would be located at the entrance to the development on Taylorsville Road. This multi-tenant sign is proposed to be fourteen feet two inches tall and nine feet wide. Finally, Sign C located at the intersection of Old Troy Pike and Taylorsville Road is proposed to be five feet tall and fourteen feet wide.

Landscaping:
Landscaping is being provided around the perimeter of the building and site. The landscaping consists of deciduous trees, evergreen trees, shrubs, grasses, and perennials. Staff recommends adding Autumn Fantasy Maple trees along Old Troy Pike to match the spacing that was approved with the Discount Tire Store.

Ms. Vargo asked about egress, Mr. Jeffries asked about how far off the curb. Mr. Falkowski stated right only Troy Pike, behind the building with 8 units and 15 ft off the Right-of-Way which is standard.

Mike Castellitto said intended all entrances on front. Discussion on parking spaces, back for loading and unloading. Mr. Falkowski said global sale there is enough.
Discussion on the total sign package.

Action

Ms. Thomas moved to approve the request by the applicant, BROAD REACH RETAIL PARTNERS, LLC, for approval of a Detailed Development Plan for property located at the northeast corner of Taylorsville Road and Old Troy Pike (ZC 21-32) in accordance with the recommendation of Staff's Memorandum dated October 15, 2021, and the Planning Commission Decision Record as amended.

Seconded by Mr. Jeffries. Roll call showed: YEAS: Ms. Opp, Ms. Vargo, Ms. Thomas, Mr. Jeffries, and Mr. Walton. NAYS: None. Motion to approve carried 5-0.

9. **FINAL PLAT - The applicant, CAMPBELL BERLING HUBER HEIGHTS, LLC, is requesting approval of a Final Plat for a residential subdivision for property located south of Chambersburg Road, east of Belmont Place, west of Stoney Creek Drive, north of Aaron Lane (ZC 21-38).**

Mr. Falkowski stated that in June 2021, the Planning Commission approved the Detailed Development Plan for the Quail Ridge Subdivision. The current request is for the Final Plat of the Quail Ridge Subdivision in order for the lots to be sold and developed for single-family houses. The construction of the infrastructure and streets is ongoing.

The forty-three (43) proposed single-family lots meet the minimum dimensional and area requirements of the 2021 Basic Development Plan conditions of approval. All required streets and easements, including utility, waterline, and drainage easements, will also be platted with this application. The final plat as presented complies with the previously approved Detailed Development Plan.

This is the only phase of the development which continues the growth on the south side of Chambersburg Road. The majority of lots have sixty (60) foot minimum widths with a twenty-five (25) foot minimum building setback. There are five (5) foot side yards and forty (40) foot rear yard minimums. There are four lots that are "flag" lots with 12.5-foot frontages along Quail Ridge Drive. Those lots have driveways that go back to lots that are a minimum of eighty (80) feet wide. There is a ten-foot preservation easement along the western property line and a twenty-foot preservation easement along the southern property line.

Mr Jeffries asked about working with the neighbor mentioned before. Mr. Krohngold said they did some grading, no issues at this time.

Action

Ms. Opp moved to approve the request by the applicant, CAMPBELL BERLING HUBER HEIGHTS, LLC, for approval of a Final Plat for Quail Ridge (ZC 21-38) in accordance with the recommendation of Staff's Memorandum dated October 15, 2021, and the Planning Commission Decision Record attached thereto.

Seconded by Ms. Vargo. Roll call showed: YEAS: Ms. Opp, Ms. Vargo, Ms. Thomas, Mr. Jeffries, and Mr. Walton. NAYS: None. Motion to approve carried 5-0.

10. **MINOR CHANGE - The applicant, SIGNS UNLIMITED, is requesting approval of a Minor Change for signage at property located at 7536 Brandt Pike, Take 5 Oil Change (ZC 21-41).**

Mr. Falkowski stated that the applicant requests approval of a Minor Change for signage for Take 5 Oil Change at 7536 Brandt Pike.

The applicant wishes to install a ground sign at the north side of the entrance drive. The request is to locate the sign fifteen (15) feet from the Brandt Pike right of way line. As described below the standard code for ground signs is for the sign to be located a minimum of fifteen feet from the right of way. The sign base would be thirteen (13) feet, one (1) inch wide, with an overall height of six (6) feet. The sign face itself is twelve (12) feet wide by four (4) feet tall. The sign area would by forty-eight (48) square feet per side, which is larger than the standard city code of seventy-five (75) square feet total. Landscaping shall be placed around the sign with a minimum square footage of the area of the sign face.

Wall signage is proposed on three faces. On the southern face, there are three components to the signage with a total of 67.4 square feet. On the western face, there are three components to the signage with a total of 73.7 square feet. On the eastern face, there is just informational messaging. Also, there are directional signs throughout the facility as shown on the submitted drawings.

James Stewart asked about directional signs and background area. Discussion on the celebrating signage, constant honking.

Action

Ms. Thomas moved to approve the request by the applicant, SIGNS UNLIMITED, for approval of a Minor Change for signage for Take 5 oil Change (ZC 21-41) in accordance with the recommendation of Staff's Memorandum dated October 11, 2021, and the Planning Commission Decision Record as amended.

Seconded by Mr. Jeffries. Roll call showed: YEAS: Ms. Opp, Ms. Vargo, Ms. Thomas, Mr. Jeffries, and Mr. Walton. NAYS: None. Motion to approve carried 5-0.

VIII. Additional Business

None

IX. Approval of the Minutes

None

X. Reports and Calendar Review

Minor Change - Texas Roadhouse
Major Change - Larkspur
Rezoning and Basic Development Plan - 6025 Taylorsville Road

XI. Upcoming Meetings

November 9, 2021
December 14, 2021

XII. Adjournment

There being no further business to come before the Commission, the meeting was adjourned at approximately 9:35 p.m.

Terry Walton, Chair **Date**

Geri Hoskins, Administrative Secretary **Date**

RECEIVED
OCT 26 2021
By

25 Oct 2021

Huber Heights Planning Commission

Re: Case No. 21-36
Address: 7860 Bellefontaine Road

My name is Rich Moore, and the back portion of my property is adjacent to the proposed airsoft and paintball facility. My family lives at 8787 Taylorsville Road. It is a beautiful 8 acre lot. We've lived at this property for almost 20 years, raising our four children, with two of them still in school. We moved to this property from inner Huber Heights for the peace, privacy, and natural surroundings. Quite frankly, if the proposed facility had been in place when we were househunting, we never would have bought the property. I have several concerns with this proposed action:

(1) Safety of Children: I have a son who frequently has friends over, and they like to hike in our back woods. I would not feel comfortable having them hike back there anymore, as they would be directly next to individuals running around with paintball and airsoft guns. I also worry that these individuals will not be screened for being child predators. There are numerous documented instances of paintball facilities being nuisances when they are located in neighborhoods.
(2) Safety of Others: My neighbors and I frequently walk through the portion of our property adjacent to this proposed facility. None of us want to be dodging errant paintball or airsoft bb's, or being forced to wear protective gear as we walk around our property. And, what about the I-70 drivers? While it is unlikely, though not impossible, for a paintball shot to reach I-70 drivers, it is very likely that Airsoft BB's could, as they can shoot up to 300 feet or more.
(3) Trespassing: There are no natural boundaries in that area, so individuals will be free to roam onto other's properties. What's to stop them from extending their games onto our property, and even towards our houses?
(4) Litter: These types of facilities produce a lot of trash, including the paintball capsules, airsoft BB's, batteries, and other material associated with the game. The participants can also leave behind other trash. I don't want that on my property.
(5) Environmental Impact: According to paintballusa.org:

"The paintball is made of a biodegradable gelatin that will dissolve with time. However, the paint inside of the paintball can at times be questionable. Cheaper paintballs or seconds sometimes use an oil-based fill. This oil can damage the environment, not to mention any animal that might find a few dropped paintballs on the ground and eat them.

In addition, the paintball is made of food-grade materials, which is excellent for those who might accidentally get some paint in their mouth. However, it is extremely toxic to both cats and dogs. If it is lethal to those animals, it is highly likely to be lethal to other animals as well."

According to bachbio.com, an airsoft promotional site:

"A traditional plastic BB can take years to fully decompose, with some studies showing that trace materials were still found after seven years. These pellets can leak toxic chemicals into the environment as they degrade and will cause landfill pollution during this process."

According to Wikipedia and ubuntumanual.org:

"These non-biodegradable plastics more often than not have a mineral or petroleum-based-center. When used on the environment, they could last for several centuries on end. These plastics end up making the soil infertile and as a result affect plant growth. Due to their smaller sizes and durability, they are bound to be picked up by kids or animals and consumed leading to complications. They may also be carried away by rain and be accumulated in drainage choke-points.

In large water bodies, they can be eaten by marine life and lead to complications and in severe cases lead to death.

Several countries and states have banned airsoft guns due to environmental impacts."

Everyone in this area has wells. And, Dry Lick Run Creek flows through the area, and I'm told it is controlled as a navigable waterway by the U.S. Army Corps of Engineers. There are several drainage lines from that field down towards our houses and Dry Lick Run Creek. And, that area is prone to flooding, increasing the chances the toxic material will flow to our properties and downstream in Dry Lick Run Creek. There is clear danger

for the fish, turtles, and amphibians in that area. There is also danger to the other wildlife in the area, including deer, fox, beaver, and others. And, most importantly, there is danger to our pets. I don't want that toxic waste anywhere near my two dogs.

(6) Quality of Life: We are blessed to live in one of the few remaining quiet, rural areas of HH. We are able to hike, fish, hunt, and do many other outdoor activities right in our backyards. This facility would drastically reduce and, in many cases, eliminate those opportunities. In my case, I've been working with the US Dept of Agriculture to reforest the land to make it more appealing for outdoor enjoyment and wildlife. I've removed over 4 acres of honeysuckle and planted over 700 trees, significantly improving the quality and value of my property. Much of the value of that work would be compromised by this facility.

(7) Noise: We live in a very peaceful area. The only noise we can hear on our property is the low hum of traffic on I-70. This facility would violate that peace with a constant pop-pop-pop sound of guns as well loud music being played during tournaments.

(8) Economics: According to IBISWorld, an industry research company for over 50 years:

"The market size of the Paintball Fields industry in the US has declined 0.3% per year on average between 2016 and 2021."

We already have I-70 Paintball & Airsoft in Huber Heights only 5 miles away. This new facility would only steal business from that company, not increase overall tax revenue for the city. And how much money are we talking about? According to howtostartanllc.com:

"With a good business plan, paintball business owners earn an average of between $20,000 and $30,000 per year."

And, those estimates are probably not considering having two facilities within 5 miles of each other … so the true earnings might only be half of that. Clearly, the economic value of this proposed facility will be very low.

Contrast that with the property values in that area. This is some of the highest value property in HH, with the 6 adjacent properties on Taylorsville Rd alone appraising for about $2M. That's ~100x more

than the annual earnings this proposed business might make. And the annual property taxes paid on these adjacent properties is likely double the earnings of the proposed business. A rough analysis of the net tax revenue implications for the city shows the proposed business would need to have earnings roughly 10x the $20-30K mentioned above to offset the loss of real estate taxes from even a modest 10% reduction in the property values of the adjacent properties. And that doesn't even consider the effect of reduced property values from the nearby, but not adjacent, properties. Again, who's going to want to buy a house with a paintball and airsoft facility as it's neighbor? This proposal doesn't make good economic sense for Huber Heights.

(9) Future: When this facility goes under, which the data suggests is certainly likely, what will be left? It will either be left as an eyesore for the neighborhood, or it will be turned into some other commercial facility that would again have detrimental effects on the area and it's residents.

In closing, due to concerns about safety, trespassing, litter, environmental impacts, quality of life, noise, and economics, I strongly urge the Planning Commission to protect our neighborhood and recommend disapproval of this application. Thank you.

Richard Moore
8787 Taylorsville Road
Huber Heights, OH 45424
937-993-6104

Meeting of City of Huber Heights
Planning Commission
October 26, 2021 – 6:00 P.M.

CITY COUNCIL CHAMBERS – 1ST FLOOR
6131 Taylorsville Road
Huber Heights, Ohio 45424

GUEST SIGN-IN SHEET

Name

TIM FOSTER	
Brian Schmidt	Anne Leak
Rich Moore	Duston Salyers
Bruce Wimley	Tim Hart
Kim Williamson	Robert Stevens
Susanne Moore	James Brandt
Joe Dotson	Josh Mann
Clay Rice	Ryan Reed
Ronnie/Sarah	Tyler Knox
Ken Hoy	ERin Gogolin
Bob Burkey	SETH BUCK
Shane Elliott	Jane Stine
Carol TAVENER	
Jacob Musser	
Mike Enstice 1772	