Monroe County
Historic Preservation Board of Review

Monday, September 18, 2023
5:30 p.m.

Hybrid Meeting

In-person

Monroe County Government Center
Planning Department
501 N. Morton Street, Room 100B
Bloomington, IN 47404

Virtual

Zoom Link: https://monroecounty-in.zoom.us/j/85490430168?pwd=OGIxT0JENUFVN0ovM24vaWdxMnFzUT09
If calling into the Zoom meeting, dial (312) 626 6799
Meeting ID: 854 9043 0168
Password: 214096

AGENDA

MONROE COUNTY HISTORIC PRESERVATION

BOARD OF REVIEW

Monday, September 18, 2023

5:30 PM

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1) Call to Order

2) Approval of Meeting Minutes: May 15, 2023 PAGE 3

3) Administrative Business

a) Reminder: Preserving Historic Places Conference, September 19-22, Muncie, IN

4) Old Business

a) Potential Overlay District for Sunset Hill
b) Coordination Letter, FHWA Project: INDOT Des. No. 2200020; High Street Multi-Use Path; Monroe County, Indiana
c) INDOT Early Coordination Letter: Hot Mixed Asphalt (HMA) Overlay, Minor Structural Project along SR 46, from the SR 446 intersection to the W Junction (JCT) of SR 135
d) Bloomington Ops Tower (Project) – Historic Properties Review
e) Future Road Work Project: On-Ramp to I-69 via W Arlington Road from Stonelake Drive
f) FHWA Project Des. No. 1801941; Mid-States Corridor Project Tier 1 FEIS PAGE 7

5) New Business

a) Section 106 Letter: Habitat for Humanity – 1505 N Breckenridge RD PAGE 15
b) Section 106 Letter: New Sidewalk & Accessibility Ramp – 410 W Kirkwood AVE PAGE 51
c) Section 106 Letter: CDBG Physical Improvement Grant – 1020 N Monroe ST PAGE 86
d) 2023 Work Plan Updates PAGE 97

6) Adjournment

NEXT MEETING: October 16, 2023

Anyone who requires an auxiliary aid or service for effective communication, or a modification of policies or procedures to participate in a program, service, or activity of Monroe County, should contact Monroe County Title VI Coordinator Angie Purdie, (812)-349-2553, apurdie@co.monroe.in.us, as soon as possible but no later than forty-eight (48) hours before the scheduled event.

Individuals requiring special language services should, if possible, contact the Monroe County Government Title VI Coordinator at least seventy-two (72) hours prior to the date on which the services will be needed.

The meeting will be open to the public.

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DRAFT MINUTES

MONROE COUNTY HISTORIC PRESERVATION

BOARD OF REVIEW

Monday, May 15, 2023

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HYBRID MEETING INFO

IN-PERSON: Monroe Government Center 501 N Morton ST Room 100 B, Bloomington IN 47404

VIRTUAL LINK: https://monroecounty-in.zoom.us/j/82305485858?pwd=c2lrWFp0eGFNQUtqK0NQQlFLazRTQT09

If calling into the Zoom meeting, dial: 312-626-6799.

When prompted, enter the Meeting ID #: **823 0548 5858**

Password: **214096**

Attendees:	Debby Reed, Devin Blankenship, Donn Hall, Don Maxwell, Polly Root Sturgeon, Susan Snider Salmon
Absent:	Duncan Campbell, Doug Wilson
Staff:	Drew Myers, Tech Services to assist with meeting
Public:	None.

1) **Call to Order @ 5:32 PM.**

2) **Approval of Meeting Minutes: None.**

3) **Administrative Business:**

   a) **Follow-up to potential HP Overlay District for Sunset Hill (fka. Annexation Area 4)**

Myers: Spoke with Commissioner Thomas to schedule a date and time to meet an interested property owner and discuss the HP Overlay and tour the neighborhood.

   b) **RD-23-1 – HPB to provide comment or staff can use letter provided from the PUO**

Myers: Summarized the status of the petition. Planning Staff is seeking formal comment from HP Board to be included in the presentation at the next Plan Commission Administrative meeting where this petition will be discussed. Planning Staff is looking to hear from the HP Board on their preference to have W Hunter Valley RD extend to the intersection of W State Road 46 or extend further all the way the roundabout intersection with W Woodyard RD.

Sturgeon: Clarified that the historical Hunter Valley area does not extend west that far.

Blankenship: Reiterated that this portion of roadway transitions from a North-South direction to a East-West direction. Changing the name from N Curry PIKE to W Hunter Valley RD in this area makes sense in this regard. Deferred to the County's addressing authority's preference with this recommendation.

Maxwell: Concerned about changing road names at a roundabout that is already considered unsafe.

Reed: Explained that this section of road is closer to the Hunter Valley historic area than it is the Curry historic area. Also mentioned how the historic Hunter Valley Limestone District map could be used to compare to current day maps to give a better idea of western boundary of Hunter Valley.

Blankenship: Asked if the historic map includes township lines and if it has been scanned.

Reed: Stated she was unsure if the township lines are depicted on the old map and reminded the Board that said map was included in the letter to the Plan Commission in support of preserving the Hunter Valley Road name.

Maxwell: Retracted his earlier comment and is now in support of changing the road name up to the roundabout intersection citing the road's change in direction to a more East-West direction as well as the legacy being more in lined with Hunter Valley than Curry.

Snider Salmon: Questioned if the Board's determination this evening was more of a broad determination of unique to this specific situation with respect to Hunter Valley RD.

Myers: Stated the discussion and recommendation is specific to this situation.

[Discussion of how the Board's recommendation letter will be drafted and provided to the Plan Commission for the Administrative meeting].

Reed: Mentioned for the record that the area immediately adjacent to the west and south of I-69 in this area has various types of limestone. All of it may not be marketable, but it is worth mentioning.

c) Limestone Symposium Request (added late; not on original agenda)

Myers: Stated that Patty Robertson of the Indiana Limestone Symposium reached out to request someone from the Historic Preservation Board to give a presentation during this year's symposium or recommend someone who may be interested.

Sturgeon: Mentioned she gave a presentation last year and was asked this year as well; however, her schedule is too busy.

Reed: Suggested Todd Schnatzmeyer of the Indiana Limestone Institute or the retired director of the Institute, Jim Owens.

d) New Rumpke Facility Open House Invitation

Myers: Informed the Board that they are invited to Rumpke's Ceremonial Ribbon Cutting and Open House event from 11am – 2pm. The Dry Stone Conservancy will be in attendance and will perform a dry stone wall repair demonstration and feature the work they have already completed.

[Discussion on Susan's upcoming presentation for the Monroe County History Club – "If Stone Walls Could Talk" on May 30, 2023].

4) Old Business

a) Coordination Letter, FHWA Project: INDOT Des. No. 2200020; High Street Multi-Use Path; Monroe County, Indiana

Myers: Reported there are no updates from staff on this topic. MCHP to remain a consulting party. Opened the floor for discussion.

~~**b) Dry Stone Conservancy Report – Rumpke Stone Wall Preservation & Maintenance Plan**~~

Myers: Removed the above item from the agenda as the Rumpke project is almost finished.

c) INDOT Early Coordination Letter: Hot Mixed Asphalt (HMA) Overlay, Minor Structural Project along SR 46, from the SR 446 intersection to the

W Junction (JCT) of SR 135

Myers: Reported there are no updates from staff on this topic. MCHP to remain a consulting party. MCHP should send a follow-up email with more information regarding potentially affected historic resources, like the geologically sensitive bioherm present in the potential area of effect.

d) Bloomington Ops Tower (Project) – Historic Properties Review

Myers: Reported there are no updates from staff on this topic. MCHP's last message to the project coordinator conveyed a general objection to the project at this location.

e) Future Road Work Project: On-Ramp to I-69 via W Arlington Road from Stonelake Drive

Myers: Reported there are no updates from staff on this topic. Opened the floor for discussion.

f) FHWA Project Des. No. 1801941; Mid-States Corridor Project Tier 1 EIS, Consulting Party Letter; New Terrain Roadway

Myers: Reported there are no updates from staff on this topic. MCHP to remain a consulting party. At last meeting, Board determined they had no comment given project does not cross into Monroe County.

g) Early Coordination Letter, FHWA Project: INDOT Des. No. 2002978

Myers: Reported there are no updates from staff on this topic. MCHP to remain a consulting party. Opened the floor for discussion.

5) New Business

a) 2023 Work Plan Updates

Myers: Opened the floor to discussion of project updates.

Sturgeon: Mentioned that Limestone Festival is about a month away. More vendors will be present than years past. More word will be put out this year. A postcard will go out to ever staff member of the IU Bloomington campus regarding this year's Limestone Festival. Stated that Susan will be staffing the HP booth for this year's festival.

Snider Salmon: Stated that help setting up the booth would be appreciated. Mentioned she will be talking mostly about the ongoing dry stone walls project at the HP Board's booth.

Sturgeon: Talked about the upcoming limestone teachers' workshop. Gave a synopsis of the workshop's itinerary.

[Discussion on the details of the workshop, how it's been marketed, who can sign up, how many, etc.].

Blankenship: Asked if it was Susan or someone else that was going to talk to Cheryl Munson about the driving tour flyers.

Snider Salmon: Said she talked with her briefly but talked with the Monroe County Library and found one embedded in a folder at the History Center.

Blankenship: Informed the Board that he has PDF versions of Harrodsburg, Maple Grove, Sanders-Smithville driving tours, but he does not have the originals.

Snider Salmon: Asked if the driving tours could be project for which the Board seeks grant money to update the tours.

Blankenship: Stated that it is possible, especially considering that more information can be added to them including dry stone wall information as it becomes more available through Susan's research.

Snider Salmon: Mentioned she wanted to include information regarding the historic limestone districts into the driving tours.

Reed: Voiced her support for including the historic limestone districts in the tours. Asked if there was some way that MCHP Board could be notified when there is proposed development in these areas.

Myers: Talked about a possible GIS layer for the boundaries of historic limestone districts if we can find enough data to provide to the GIS Coordinator or Elevate GIS.

Sturgeon: Mentioned that the old maps have never been geo-referenced; just hand drawn.

Reed: Recommended IU Geology Library and IGWS as a data reference.

Blankenship: Mentioned the existence of a past intern project that included a map of historic sites for a bicycle tour.

Reed: Recommended another data source as Willis Blatchley. He wrote several good books that may be useful for knowing more about the limestone districts.

[Discussion about limestone cleaning dos and don'ts and potential aspects to include in the limestone teachers' workshop].

Sturgeon: Asked if anyone had any more updates with respect to the workplan.

Blankenship: Responded that he is still working on potential signage for the limestone districts. Asked if this year was a year where continuing education credits are being tracked.

Myers: Stated that he would check on that.

[Discussion on continuing education credit opportunities. Board members recommended attending presentations, reading through story maps or other online education media, and attending other education events].

6) Adjournment @ 6:44 PM

From:	Tammy Behrman
To:	Drew Myers
Subject:	FW: Mid-States Corridor FEIS/ROD (DES# 1801941)
Date:	Friday, September 8, 2023 9:32:02 AM
Attachments:	image585661.png image277180.png image112920.png image028538.png image245836.png image145001.png image080223.png image087781.png

FYI

Tammy Behrman, AICP
Assistant Director
Monroe County Planning Department
tbehrman@co.monroe.in.us
(812) 349-2560

Monroe County Comprehensive Development Ordinance "Listening Session" events on August 29th, August 31st, and September 5th. See flyer or monroecdo.com for more info!

From: Jason DuPont <JDuPont@lochgroup.com>
Sent: Thursday, September 7, 2023 5:03 PM
To: Gretchen Anderson <gretchen.anderson1@yahoo.com>; lukebaker36@gmail.com; BJ Elmore <thebjelmore@gmail.com>; himseljames@gmail.com; dring@psci.net; 148markn@gmail.com; mranslow <mranslow@achp.gov>; Steve Wyatt <bri@bloomingtonrestorations.org>; daleclerktreas@psci.net; Slider, Chad (DNR) <CSlider@dnr.IN.gov>; McCord, Beth K <bmccord@dnr.in.gov>; _ChiBuick07 <ChiBuick07@lochgroup.com>; Kauffmann, Danielle M <DKauffmann@dnr.IN.gov>; WTharp1 (WTharp1@dnr.IN.gov) <WTharp1@dnr.IN.gov>; Chad A. Blessinger <cablessinger@duboiscountyin.org>; williamellis@ellettsville.in.us; kentyeager@gmail.com; castone@purdue.edu; Danielle Bachant-Bell <dbachant-bell@indianalandmarks.org>; bell@indianalandmarks.org; jeff@indianaforestalliance.org; Alex Brooks <abrooks@indianalandmarks.org>; Greg Sekula <gsekula@indianalandmarks.org>; lrenwick@indianalandmarks.org; Danielle Bachant-Bell <dbachant-bell@indianalandmarks.org>; bell@indianalandmarks.org; ron bell <bell.ron@yahoo.com>; president@lcmuseum.org; historical@frontier.com; historical@frontier.com; mayordwinkler@thecityofrockport.com; Tammy Behrman <tbehrman@co.monroe.in.us>; lhughes@newburgh-in.gov; slmcbeth@yahoo.com; kentyeager@gmail.com; Terry and Brenda Cornwell <tcornwell@msn.com>; cecilragsdale0182@gmail.com; readymartincounty@gmail.com; lannan12@gmail.com
Cc: Michael Grovak <MGrovak@lochgroup.com>; David Goffinet <DGoffinet@lochgroup.com>; Nicole Minton <Nicole.Minton@lochgroup.com>; Wheeler, Kyanna <KWheeler@indot.IN.gov>; Herrell, Michelle (FHWA) <Michelle.Herrell@dot.gov>; Carpenter, Patrick (FHWA) <patrick.carpenter@dot.gov>; Corbin, Daniel <dcorbin@indot.in.gov>; Kelly, Clint <ckelly1@indot.in.gov>; Coon, Matthew <mcoon@indot.in.gov>
Subject: Mid-States Corridor FEIS/ROD (DES# 1801941)

Dear Consulting Party,

Thank you for your interest in the Mid-States Corridor Tier 1 Study and the contribution of your involvement in the Section 106 process.

As a Section 106 Consulting Party, we would like to notify you that the Federal Highway Administration (FHWA) and the Indiana Department of Transportation (INDOT) have issued a Tier 1 Combined Final Environmental Impact Statement and Record of Decision (FEIS/ROD) for the Mid-States Corridor Study. The document includes changes to the Draft Environmental Impact Statement (DEIS) based on agency, Consulting Party and public input. The FEIS/ROD was published today and is anticipated to be in the Federal Register on September 15, 2023.

The FEIS/ROD includes updates to the Tier 1 DEIS. Responses to public and agency comments received on the Tier 1 DEIS are in Volume IV of the FEIS/ROD.

The Preferred Alternative extends 54 miles from I-64/US 231 to I-69 at the existing US 231 interchange. The FEIS/ROD is available for viewing online at https://midstatescorridor.com/feis/ and at a number of libraries and other public locations listed on the website. Click on the link for location addresses.

The Mid-States Corridor Study is a tiered environmental document consistent with the guidance established by the Council of Environmental Quality (CEQ) under the National Environmental Policy Act (NEPA) and conforming to processes developed by FHWA and INDOT. Tiering separates the broader issues, such as selection of the general location and mode choice in Tier 1, from the more detailed site-specific impacts in Tier 2. With the selection of Refined Preferred Alternative P, INDOT is following department processes for proceeding with the Tier 2 studies. Procedures include reviewing section priority before determining a timeline for the next phase of study.

Under Title 23 U.S.C. Section 139, the FHWA has issued a single document that consists of a FEIS and ROD. Therefore, the 30-day wait/review period under NEPA does not apply to this action.

Thank you for providing feedback on the Mid-States Corridor Tier 1 Study. Please contact me with any questions.

Sincerely,

LOCHMUELLER GROUP

Web: http://lochgroup.com

Jason DuPont, PE

Director of Environmental Services

Lochmueller Group
6200 Vogel Road, Evansville, IN 47715

Email: JDuPont@lochgroup.com

Direct: 812.759.4129
Mobile: 812.459.4403

EIS SUMMARY

The following substantive changes have been made to this chapter since the Draft Environmental Impact Statement (DEIS) was published:

- Impacts for Alternative R and Refined Preferred Alternative P (RPA P) have been added.
- Narratives have been updated to describe project activities including the publication of the DEIS, consideration of comments on the DEIS and subsequent Tier 1 regulatory activities.
- In response to comments, an explanation of the role of the Regional Development Authority (RDA) has been added.

ES 1 A Summary of the Statement

The Mid-States Corridor Study is a tiered environmental document consistent with the guidance established by the Council of Environmental Quality (CEQ) under the National Environmental Policy Act (NEPA) and conforming to processes developed by the Federal Highway Administration (FHWA) and Indiana Department of Transportation (INDOT). Tiering separates the broader issues such as selection of the general location and mode choice in Tier 1 from the more detailed site-specific impacts in Tier 2. See **Section ES 1.2** for more details. This Tier 1 Final Environmental Impact Statement (FEIS) defines the need for the study, the analyses undertaken, alternatives considered and their effects and identifies a Preferred Alternative. The intent of the Tier 1 Study is to determine the Purpose and Need for the proposed action and, if a Build Alternative is selected, identify a preferred corridor. All effects presented are estimates based on the best available resource information, supplemented by community input and some field reviews. Final resource impacts will be identified in subsequent Tier 2 NEPA studies for the selected alternative. These Tier 2 studies will calculate impacts based upon field surveys. This summary highlights the key processes followed, estimated effects of the alternatives and decision outcomes.

Section ES 1 describes the entire study process. It summarizes the primary elements of the entire FEIS. **Sections ES 2** through **ES 7** give details about important components of this FEIS. **Section ES 8** addresses implementation of the project. **ES 9** provides a glossary of key terms used in the EIS.

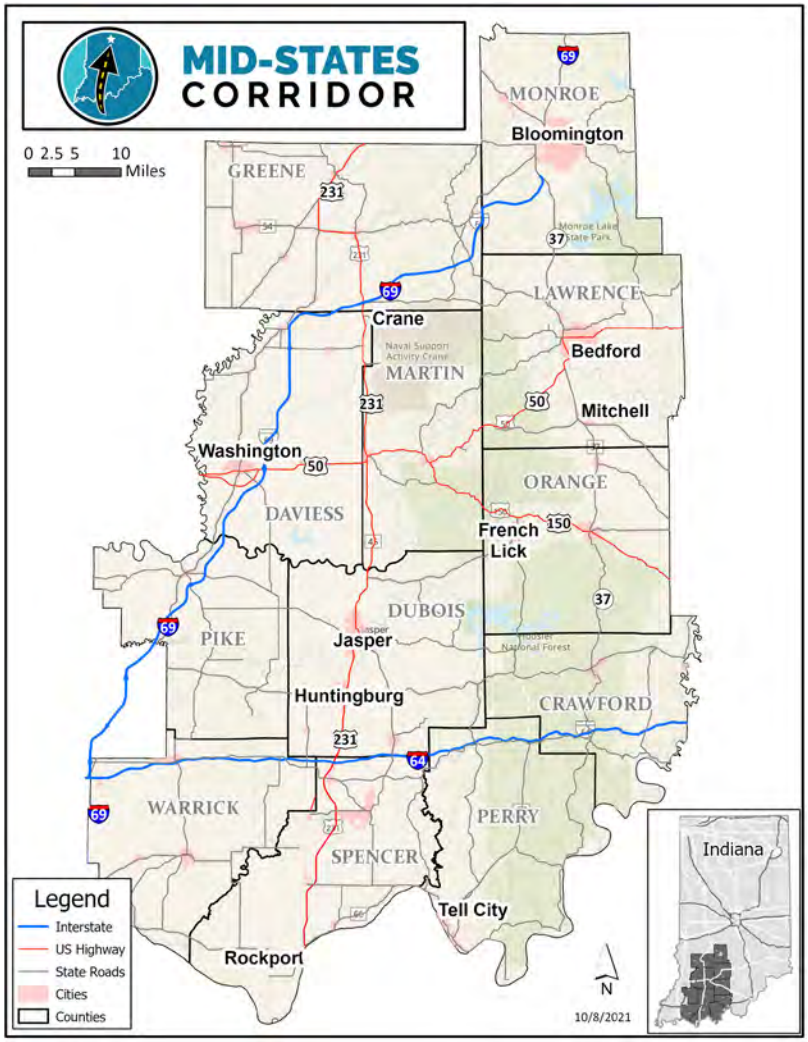


Figure ES-1: Project Study Area

ES 1.1 Purpose and Need

The Notice of Intent (NOI) for the study was published in the Federal Register on July 5, 2019. The project is intended to improve the transportation linkage between SR 66 and I-69 in Southern Indiana. Regarding the connection to I-69, this could be either a direct connection or via connection through SR 37, which is an existing four-lane expressway north from Mitchell. The Study Area includes 12 counties: Crawford, Daviess, Dubois, Greene, Lawrence, Martin, Monroe, Orange, Perry, Pike, Spencer and Warrick (**Figure ES-1**).

Five previous studies provided support of the need for improved linkage. These include the *Conexus Indiana Southwest Regional Council – A Plan for Growing Southwest Indiana's Logistic Sector* (2015); *Blue Ribbon Panel on Transportation Infrastructure – Final Report to Governor Pence* (2014); *I-67 Corridor Feasibility Study* (2012); *US 231 Jasper/Huntingburg – 2004 DEIS and 2011 SDEIS and the US 231 Corridor Assessment* (2018). After the release of the NOI, robust engagement efforts with stakeholders, the public and resource agencies occurred. Five key themes of need were identified from stakeholder engagement and were as follows. While anecdotal in nature, the points below represent consistent input received multiple times from stakeholders:

- **Economic Significance of Dubois County.** Dubois County is a major economic center in Southern Indiana. It is home to many large national corporations. Access to northern and southern markets is restricted by the design and capacity of US 231. This inhibits business growth and business attraction, causes unpredictable delivery times, increases freight costs and inhibits access to Crane Naval Surface Warfare Center and its supporting contractors. Access to major intermodal facilities in Indianapolis, Louisville and Chicago is limited.
- **Poor Safety, Unreliability and Inadequacy of US 231**. US 231 is the north/south transportation "spine" for the Study Area. Many local stakeholders described it as having poor safety, speed, congestion and travel time predictability. In most parts of the Study Area, it is a two-lane road with narrow shoulders, hilly topography, unrestricted county road access and slow-moving seasonal farm equipment. These factors lead to reduced speeds and unpredictable travel times. This restricts its use for motor freight.
- **Lack of North-South Connectivity throughout 12-county Study Area**. Businesses east of I-69 and west of I-65 generally have inadequate access to northern and southern markets. Many businesses avoid US 231 to/from northern markets, and instead go south to I-64 to go north on I-69 or I-65. This added time and distance raises freight costs.
- **Importance of Improved Intermodal Access to Business Expansion and Attraction**. Large airports with air freight services, such as FedEx in Indianapolis or UPS in Louisville, provide advantages to businesses. Air freight opportunities are limited by poor connections to intermodal centers. Improved access to rail centers such as Indianapolis and Chicago also would be advantageous to businesses. In addition, there are two major Ohio River ports (Tell City River Port and the Port of Indiana in Jeffersonville). Major businesses in the Study Area both source their business inputs and serve customers throughout many parts of the nation. Access to a range of transportation options is an important part of business operations.
- **Importance of Transportation to Business Attraction**. An important consideration in business location decisions is the presence of high-level, multi-lane roads. Many stated that the combination of poor access/ logistics to the north and the competitive labor market discourages business attraction.

Sentiment received from the public in support of the study tended to focus on economic development issues. Specific locations which would be helped by improved access included Jasper, Huntingburg, Washington, French Lick, Mitchell, Bedford and the Naval Support Activity (NSA) center/base in Crane. Support for a broad range of industries, including tourism, was cited.

Analysis of the transportation needs in the Study Area found accessibility limits to Dubois County and aligned with the issues expressed by the stakeholders. Forecasting travel times using existing roadway speeds and speeds associated with a higher facility identified the potential to create higher trip time reductions (e.g., up to a potential 10-minute round trip reduction between Jasper and Crane).

To determine whether alternatives created would address the needs identified, seven goals were established as measurement tools. Three of these were classified as core goals and four as secondary goals. Core and secondary goals differ in that a proposed alternative must demonstrate adequate improvements on each core goal while secondary goals represent additional benefits. These are "other desirable outcomes"[1] but are not required to be addressed by the selected alternative. Goals 1, 2 and 7 are core goals, and Goals 3, 4, 5 and 6 are secondary goals. The seven goals and their performance criteria are as follows:

1) **Increase accessibility to major business markets (Core Goal). Alternatives must demonstrate:**
    a. Reduced travel time from Jasper to Indianapolis, Chicago and Louisville
    b. Reduced travel time from NSA Crane to Jasper, Rockport and Louisville
    c. Reduced travel time from Bedford to Rockport and Louisville
    d. Reduced travel time from French Lick to Indianapolis, Louisville and Rockport
    e. Reduced travel time between I-64/US 231 and I-69/US 231
    f. Increased labor force with 30-minute access to Jasper, Crane, Washington, French Lick and Bedford.
2) **Provide more efficient truck/freight travel in Southern Indiana (Core Goal). Alternatives must demonstrate:**
    a. Reduced truck vehicle hours of travel (VHT) in 12-county Study Area for trips to, from or within the Study Area.
3) **Reduction in localized congestion in Dubois County (Secondary Goal). Alternatives must demonstrate:**
    a. Reduced congestion at key locations within Jasper and Huntingburg.
4) **Reduce crashes at key locations in Southern Indiana (Secondary Goal). Alternatives must demonstrate:**
    a. Reduction in annual crash costs at key locations in Southern Indiana.
5) **Increase levels of business activity within Southern Indiana (Secondary Goal). Alternatives must demonstrate:**
    a. Increased regional gross domestic product within 12-county Study Area.
    b. Increased total employment within 12-county Study Area.
    c. Increased employment in high-wage industries in 12-county Study Area.
    d. Increased employment in high-growth industries in 12-county Study Area.
6) **Increase personal economic well-being in Southern Indiana (Secondary Goal). Alternatives must demonstrate:**
    a. Increased personal income within 12-county Study Area.

1 Measurement of adequacy is defined in Chapter 1

7) **Increase access to major intermodal centers from Southern Indiana (Core Goal). Alternatives must demonstrate:**

   a. Reduced travel from Jasper to CSX Avon Yard, Senate Ave. Yard, Tell City River Port, Port of Indiana, Louisville Airport and Indianapolis Airport.

   b. Reduced travel time from Crane to CSX Avon Yard, Senate Ave. Yard, Tell City River Port, Port of Indiana, Louisville Airport and Indianapolis Airport.

ES 1.2 Process Overview

NEPA established the framework to consider how federal actions may have an impact on the environment. From this framework, the CEQ created the three levels of environmental reviews, which are the EIS, Environmental Assessment (EA) and Categorical Exclusion (CE). Additionally, the CEQ provided the opportunity for major transportation actions processed as an EIS to be tiered (40 CFR § 1508.28: Tiering). Tiering separates the broader issues such as selection of the general location and mode choice in Tier 1 from the more detailed site-specific impacts that can be determined in Tier 2. For large, complex transportation projects tiering is beneficial for both the lead federal agency providing approval and the lead state agency planning the transportation improvement. With its 12-county Study Area, it was determined a tiered approach was appropriate for the Mid-States Corridor Study.

A participant in this Study is the Mid-States Corridor Regional Development Authority (RDA). It was established as provided in *IC 36-7.6, Regional Development Authorities*. This legislation allows RDAs to be formed throughout Indiana. It is an additional form of local government. An RDA allows local governments to collaborate for regional benefits.

RDAs may be formed to fund and develop projects of regional importance. These include airport projects, commuter transportation districts or other rail projects, regional transportation authority projects and services, economic development projects, intermodal transportation projects, regional trail or greenway projects, regional transportation infrastructure projects or any project that enhances the region with the goal of attracting people or business of regional economic importance.

On September 26, 2018, the RDA and INDOT entered into an agreement for the RDA to provide funding for the Tier 1 Environmental Impact Statement. The RDA is one of 17 participating agencies for this project. See **Table 7-1** in this FEIS. It does not direct the study or its findings. The project sponsor for this Mid-States Corridor Tier 1 EIS is the Indiana Department of Transportation, with the Federal Highway Administration as the lead federal agency.

Coordination between FHWA and INDOT resulted in determining the Tier 1 DEIS Build Alternatives should establish a continuous corridor through the entire project area and identify how it will connect to I-69 and propose what its Sections of Independent Utility (SIUs) would be in Tier 2. The SIUs would define their logical termini and prioritization for Tier 2 staging. Determination of a facility type will be deferred until Tier 2; however, the effects analysis must be based on construction footprints associated with design criteria of a given type of facility. To address this, each alternative has a range of costs and impacts for a partial access expressway and Super-2 rural arterial. A fully access-controlled freeway was removed from consideration during the study.

This Tier 1 FEIS and Record of Decision (ROD) selects a corridor, not an exact alignment. The Tier 2 projects will develop an alignment and construction footprint for determining environmental impacts. The type of environmental documentation, EIS, EA or CE for each Tier 2 project, will be determined during Tier 2 studies. Tier 1 regulatory actions involving agencies are described in **Section ES 7**. Anticipated permits and other regulatory actions during and after Tier 2 studies are described in **Section ES 1.5.1**. Environmental commitments described in Chapter 6 will be carried forward into Tier 2 as well as subsequent design and construction.

The ROD selected a preferred Build Alternative. As will be later described, the Build Alternative includes localized improvements to existing roadways associated with the selected corridor. The combination of these localized improvements with the new corridor enhanced the benefits obtained. Each localized improvement associated with the Preferred Alternative is illustrative, shown with approximate termini and will be processed as an individual Tier 2 project. Although these localized improvements may be processed as CEs, the level of environmental documentation will be determined later. Localized improvements not associated with the selected alternative will not be developed as a part of Mid-States Corridor Tier 2 activities. These may be evaluated for further development through INDOT's annual project evaluation process. These other localized improvements are associated with alternatives other than the selected alternative.

The Mid-States Corridor Tier 1 EIS uses several terms to describe the highway alignments considered. For details, see **FEIS Volume I, Sections 2.2 through 2.4** and **Volume II, Appendices C and D.**

- **Route.** In the conceptual and preliminary stages of this project, alignments were proposed by project staff, agencies and the public. These alignments were designated as "routes." They were proposed as portions of an alignment connecting I-64 and I-69/SR 37. A two-mile wide Study Band was identified for each route, with the route in the center of the Study Band.
- **Alternative.** When routes were combined to connect I-64 with I-69/SR 37, these were designated as alternatives. The term "route" continued to be used to refer to portions of alternatives. When an end-to-end alignment was combined with a single facility type, it also was designated as an "Alternative." Facility types considered in the Screening of Alternatives included freeway, expressway and Super-2. Subsequent to the Screening of Alternatives, the freeway facility type was eliminated. Alternatives then were designated as a single entity with a range of potential facility types (expressway and/or Super-2).
- **Corridor.** After identifying alternatives carried forward in the Screening of Alternatives, a corridor was identified for each alternative. That corridor is generally 2,000-feet wide, centered around the center line of the alternative. This Tier 1 study selects a preferred corridor. RPA P has four corridors in SIU 4 at Loogootee. During Tier 2 studies, a final alignment and facility type(s) will be selected within its Tier 1 corridor. This will include selecting a single corridor at Loogootee in SIU 4.
- **Discontinuing Use of Route.** Subsequent to the Screening of Alternatives, the decision was made to defer selection of specific facility type(s) until Tier 2 studies. The decision also was made to remove the freeway facility type from consideration. At this point, the use of "route" was discontinued. In the detailed analysis of alternatives in **Chapters 3 through 6**, only "alternative" is used to designate alignments connecting I-64 with I-69/SR 37. Each alternative was evaluated using a range of costs, impacts and benefits for both the expressway and Super-2 facility types.
- **Variation.** This term is used to refer to individual discrete elements within an alternative in this EIS. It is used to refer to a single corridor location where multiple corridors occur as part of the same alternative. It also is used to refer to a single facility type for a given alternative. For example, "Super-2 variation of Alternative X."

ES 1.3 Preliminary Screening and Alternatives Carried Forward

ES 1.3.1 Defining the Study Area

The Study Area encompasses 12 counties in Southern Indiana. While proposed Build Alternatives would provide a continuous alignment to connect the northern and southern termini, three distinct sections/regions were identified that would influence potential conceptual routes. These were divided into Sections 1-3 starting from the southern terminus and progressing north. Section 1 occupies the area between the southern terminus at SR 66 and I-64.

Section 2 continues from I-64 to north of Jasper, generally extending to the vicinity of the East Fork White River. Section 3 occupies the area between Section 2 and a connection point with I-69, either directly or via SR 37.

Section 1 is represented by the portion of US 231 which was upgraded to a four-lane expressway in 2011. At the initiation of the study, a fully access controlled freeway facility type was considered. This section would not have evaluated a new alignment, but could have resulted in converting this section of US 231 to a freeway. With the removal of freeway as a facility type, potential effects within this section became limited to identification of specific locations of access control, spot improvements and signage. However, no changes to access control or spot improvements were proposed as part of any alternative.

Section 2 is represented by the portion of the study which generally considered improvements near or on the existing alignment of US 231 in Dubois County near Huntingburg and Jasper.

Section 3 is represented by a much broader area and as such was further subdivided into three "families" within which alternatives were assigned. The intent was to categorize those that split off to the northwest to connect to I-69, those that maintain a relatively straight north-south alignment along the existing US 231 corridor and those that split off to the northeast to connect to SR 37. Each of these families would serve different communities in the Study Area. The Northwest Family more directly links population centers in or near Petersburg and Washington, the North Central Family more directly to Crane NSA and the Northeast Family to Bedford and Mitchell.

Figure ES-1a shows the general location of these Sections in the Study Area.

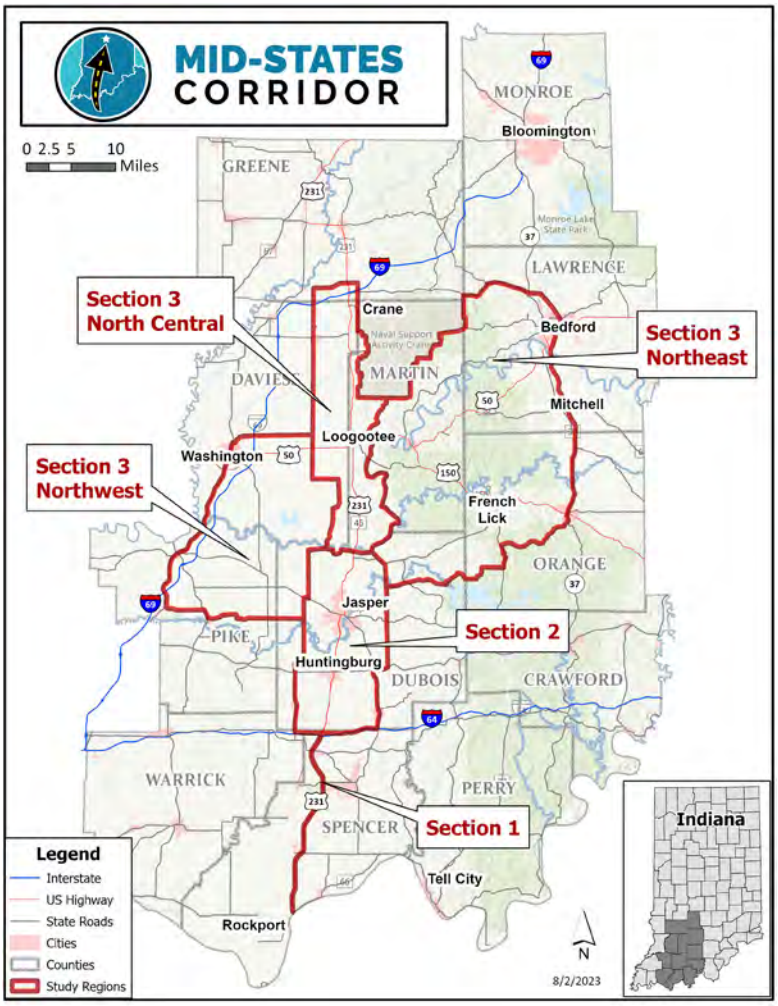


Figure ES-1a: Sections within Study Area

ES 1.3.2 Public and Agency Outreach

Public and resource agencies were engaged throughout each stage of the study and followed the *Indiana Department of Transportation and Federal Highway Administration Streamlined Environmental Impact Statement Procedures*, September 2007, which included both a formal Public Involvement Plan (PIP) and Coordination Plan. These plans were regularly updated during the project study and posted to the project website. The final version of these plans is provided in **Appendix BB**. The engagement strategy for the public involved in-person outreach, providing virtual connectivity and establishing a community presence. Agency coordination and engagement involved in-person coordination meetings, regular correspondence and workshops.

Public Engagement

Outreach included providing correspondence to key public representatives throughout the entire 12-county area at major milestones, in addition

CITY OF
BLOOMINGTON
HOUSING AND NEIGHBORHOOD DEVELOPMENT

August 31, 2023

Drew Myers
Senior Planner
Monroe County Historic Preservation Board of Review
501 N Morton St.
Bloomington, IN 47404

Re: Construction of affordable single family homes in a multi-family development at Arlington Heights, Bloomington, Monroe County, Indiana using HOME Funds through the Housing and Urban Development Department

Dear Mr. Myers,

The City of Bloomington, Indiana is considering funding the project listed above with federal funds from the U.S. Department of Housing and Urban Development (HUD). Under HUD regulation 24 CFR 58.4, the City of Bloomington has assumed HUD's environmental review responsibilities for the project, including consulting with interested parties related to historic properties. Historic properties include archeological sites and structures.

City of Bloomington will conduct a review of this project to comply with Section 106 of the National Historic Preservation Act and its implementing regulations 36 CFR Part 800. We would like to invite you to be a consulting party in this review to help identify historic properties in the project area that may have local historical significance and to help assess how the project might affect them. If the project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

To meet project timeframes, if you would like to be a consulting party on this project, can you please let us know of your interest within 30 days? If you have any initial concerns with impacts of the project on religious or cultural properties, can you please note them in your response?

The project consists of the construction of about 40 single house families on undeveloped land near the intersection of I-69 and Indiana West State 45 in Bloomington, Indiana. Two streets have already been built for this development, Denver Road and North Breckenridge Road. These roads connect to N Telluride Street. The project will take place over the next few years with Habitat for Humanity and the Bloomington Housing Authority using a combination of public and private funding to build one house at a time, with each design to be chosen from a catalog.

More information on the Section 106 review process is available at http://www.onecpd.info/environmental-review/historic-preservation/.

If you do not wish to consult on this project, no reply to this letter is needed. Thank you very much. We value your assistance and look forward to consulting further if there are historic properties that may be affected by this project.

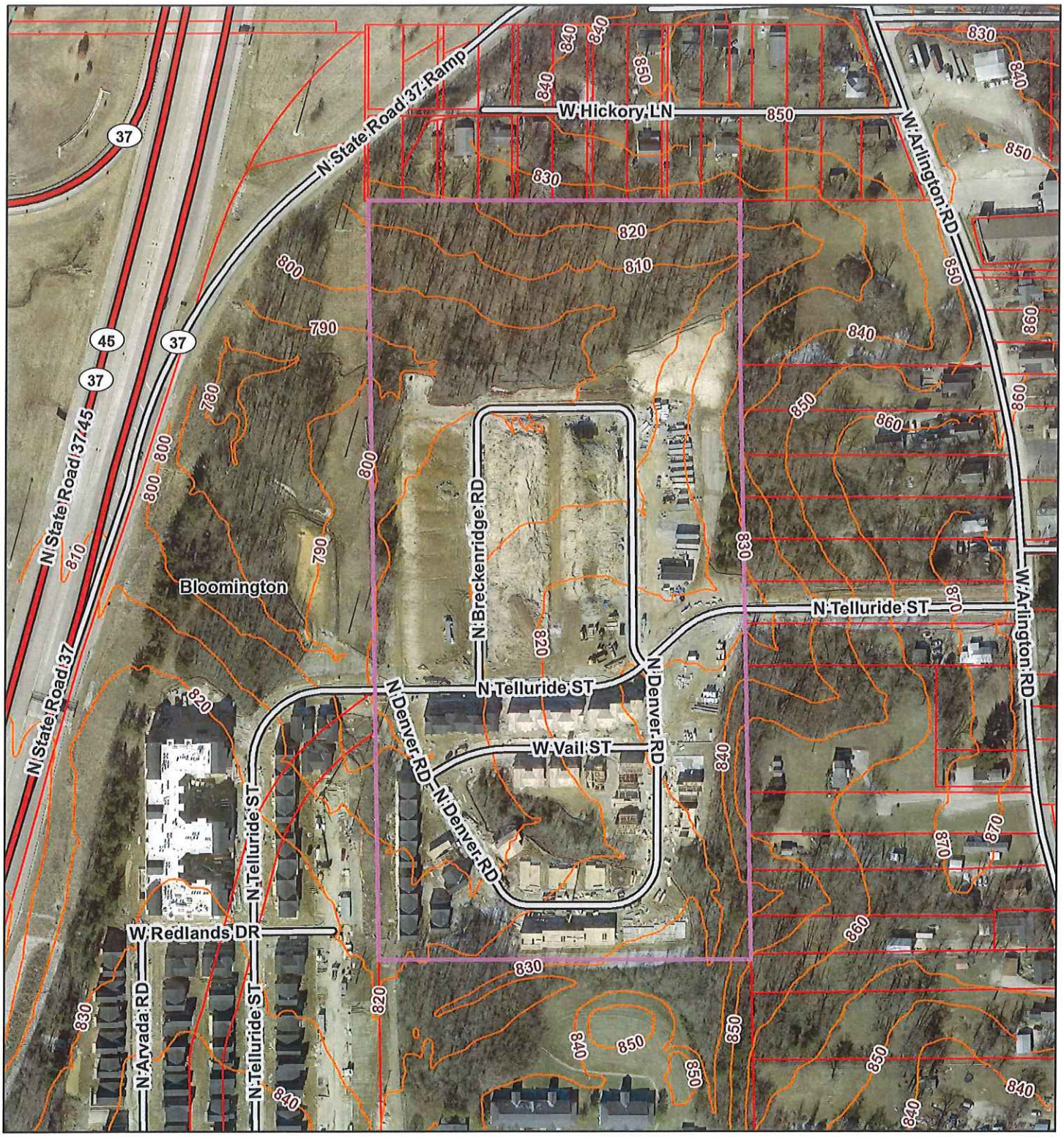
Sincerely,

Gloria M. Colom Braña
Historic Preservation Program Manager
City of Bloomington, Indiana

Cc: Department of Historic Preservation and Archeology, Department of Natural Resources, Indiana

Attachments

Habitat for Humanity - Arlington Place Development



1:3,000

0 0.025 0.05 0.1 mi

0 0.04 0.08 0.16 km

Arlington Place - SHAARD Map

8/30/2023, 4:31:00 PM

1:4,514

0 0.0375 0.075 0.15 mi

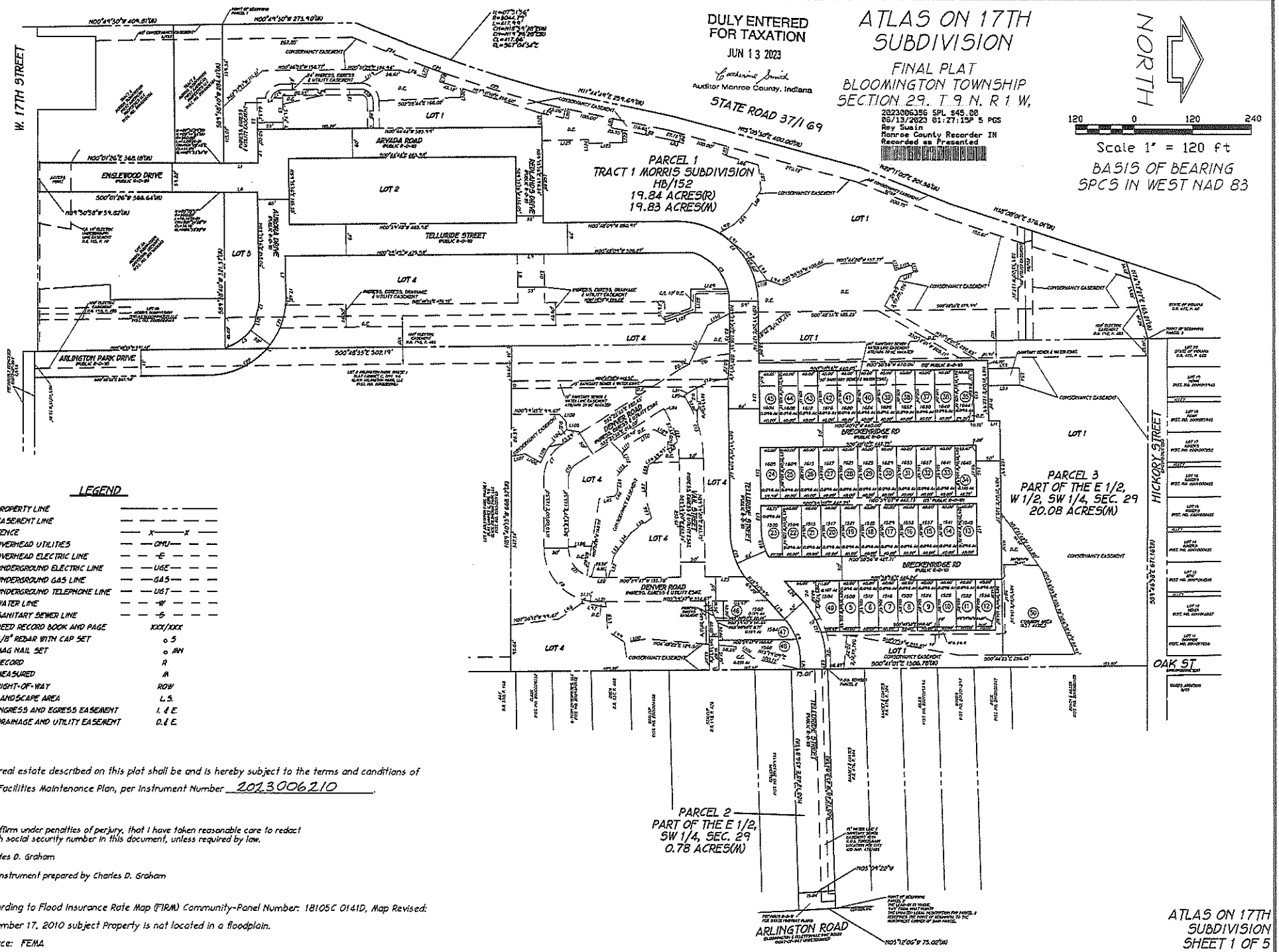
0 0.05 0.1 0.2 km

County Survey Sites

- Contributing

Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

INSTRUMENT NO. _____ PLAT CABINET _____ ENVELOPE _____



19

LEGEND

PROPERTY LINE	
EASEMENT LINE	
FENCE	X X
OVERHEAD UTILITIES	OHU
OVERHEAD ELECTRIC LINE	E
UNDERGROUND ELECTRIC LINE	UGE
UNDERGROUND GAS LINE	GAS
UNDERGROUND TELEPHONE LINE	UGT
WATER LINE	W
SANITARY SEWER LINE	S
DEED RECORD BOOK AND PAGE	XXX/XXX
5/8" REBAR WITH CAP SET	o S
MAG NAIL SET	o AN
RECORD	R
MEASURED	M
RIGHT-OF-WAY	ROW
LANDSCAPE AREA	L.S.
INGRESS AND EGRESS EASEMENT	I. & E.
DRAINAGE AND UTILITY EASEMENT	D.& E.

The real estate described on this plat shall be and is hereby subject to the terms and conditions of the Facilities Maintenance Plan, per Instrument Number 2023006210.

I affirm under penalties of perjury, that I have taken reasonable care to redact each social security number in this document, unless required by law.

Charles D. Graham

This instrument prepared by Charles D. Graham

According to Flood Insurance Rate Map (FIRM) Community-Panel Number: 18105C 0141D, Map Revised: December 17, 2010 subject Property is not located in a floodplain.

Source: FEMA

ATLAS ON 17TH SUBDIVISION
SHEET 1 OF 5
JOB NO. 401334

PREPARED BY BYNUM FANYO & ASSOCIATES INC. 528 N. WALNUT ST. BLOOMINGTON, IN. 47404

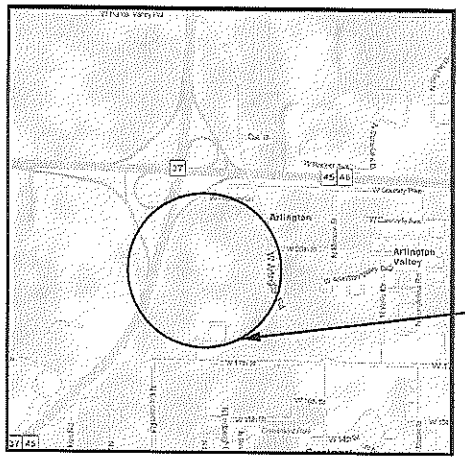
INSTRUMENT NO. _____ PLAT CABINET _____ ENVELOPE _____

ATLAS ON 17TH SUBDIVISION

FINAL PLAT
BLOOMINGTON TOWNSHIP
SECTION 29, T 9 N, R 1 W,

NUMBER	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD LENGTH
C1	17°33'55"	105.00	32.19	N80°30'52"W	32.06
C3	42°07'22"	110.00	80.87	S39°31'42"E	79.06
C4	87°36'09"	164.00	250.75	N45°31'16"E	227.03
C5	72°05'24"	105.00	132.11	S53°16'38"W	123.57
C6	28°15'15"	225.00	110.95	S17°39'32"E	109.83
C7	57°36'27"	85.00	85.46	S61°11'47"E	81.91
C8	90°00'02"	110.00	172.79	N44°59'59"E	155.56
C9	41°18'11"	125.00	90.11	N68°40'23"E	88.17
C10	57°36'03"	35.00	35.19	S61°11'35"E	33.72
C11	90°00'02"	60.00	94.25	N44°59'59"E	84.85
C12	30°53'14"	185.00	99.73	S73°32'43"W	98.53
C13	30°53'14"	235.00	126.68	S73°32'43"W	125.16
C14	23°37'21"	175.00	78.86	N18°47'53"W	77.61
C15	35°25'33"	166.00	102.64	N73°01'40"E	101.01
C16	29°27'04"	116.00	59.65	N74°35'49"E	58.97
C17	41°18'11"	177.00	127.59	N68°40'23"E	124.85
C18	90°00'00"	25.00	39.27	S44°15'16"W	35.36
C19	70°54'52"	25.00	30.94	S36°12'00"E	29.00
C21	41°44'24"	160.01	116.57	S69°29'32"E	114.01
C23	00°33'52"	3074.79	30.30	N19°35'21"E	30.30
C24	03°06'05"	3074.79	166.44	N21°15'20"E	166.42
C25	04°05'53"	3074.79	219.92	N17°05'28"E	219.87

NUMBER	DIRECTION	DISTANCE	NUMBER	DIRECTION	DISTANCE
L1	N00°44'42"W	70.93'	L88	S57°02'05"E	50.85'
L2	S89°16'54"W	37.64'	L89	S45°59'07"E	39.40'
L3	S89°12'10"W	92.57'	L90	S29°46'33"E	33.62'
L4	N00°47'50"W	53.00'	L91	N39°00'15"E	59.67'
L5	N89°12'10"E	64.59'	L92	N45°15'59"E	33.34'
L6	N00°44'44"W	69.32'	L93	N54°10'59"E	44.56'
L7	N89°15'16"E	83.03'	L94	N17°42'59"E	31.85'
L8	N89°15'16"E	99.26'	L96	N34°20'58"W	57.39'
L9	N00°26'53"W	55.00'	L97	N08°24'02"E	50.78'
L10	S89°15'16"W	98.92'	L98	N87°11'42"E	49.78'
L11	N00°40'46"W	22.83'	L99	N32°15'44"E	43.86'
L12	S89°20'29"W	48.11'	L100	N10°39'35"W	43.96'
L13	S89°20'29"W	104.85'	L101	N35°27'18"E	39.59'
L14	S89°19'20"W	105.16'	L102	N46°21'01"E	17.90'
L15	N89°20'53"E	105.00'	L103	N65°41'20"E	17.51'
L16	N89°21'04"E	104.99'	L104	S43°21'00"E	50.69'
L17	N89°21'04"E	105.16'	L105	S63°00'26"E	37.46'
L18	S79°34'14"E	21.46'	L106	S29°44'55"W	36.18'
L19	N48°01'18"E	50.38'	L107	S10°14'54"E	29.03'
L20	N89°19'29"E	21.40'	L108	N85°52'47"W	25.95'
L21	N00°00'02"W	15.22'	L109	S28°49'20"W	34.17'
L22	N00°00'02"W	14.93'	L110	S31°17'10"E	47.65'
L23	N00°39'47"W	80.67'	L111	S44°59'24"E	34.28'
L24	S58°26'07"W	8.22'	L112	N68°23'36"E	26.64'
L25	S58°26'07"W	8.95'	L113	S46°23'35"E	30.02'
L26	N48°01'18"E	57.82'	L114	N70°28'26"E	16.70'
L27	N89°19'29"E	21.39'	L115	N18°00'55"W	34.79'
L28	S89°15'16"W	56.39'	L116	N71°59'05"E	15.00'
L29	S00°44'44"E	160.25'	L117	S18°00'55"E	28.86'
L31	S32°23'33"E	19.39'	L118	N15°41'59"W	23.99'
L76	N15°08'03"E	51.92'	L119	N30°21'59"W	53.72'
L77	N72°33'45"W	20.90'	L120	N88°44'11"E	19.01'
L78	S71°48'47"E	19.72'	L121	S87°16'18"W	28.46'
L79	N11°30'25"E	46.56'	L122	N88°44'11"E	25.66'
L80	N78°15'11"W	19.58'	L123	S01°15'49"E	70.06'
L81	S78°15'11"E	19.40'	L124	S88°44'11"W	7.46'
L82	N11°11'39"E	126.54'	L125	S01°15'49"E	95.34'
L83	N15°30'08"E	16.19'	L126	N00°14'37"W	47.51'
L84	N74°56'30"W	17.70'	L127	N20°01'10"W	61.62'
L85	S74°56'30"E	18.47'	L128	N89°12'22"W	37.56'
L86	N15°45'41"E	68.32'	L129	N00°10'10"W	71.47'
L87	N84°01'21"E	51.79'	L130	S29°11'25"E	50.64'
			L131	S64°04'08"E	90.47'



PROJECT LOCATION

LOCATION MAP

Statement of Plat Vacation, Tract 1 of Morris Subdivision is approved

Scott Robinson, Director — 6/12/2023 Date

Easements to be vacated per this plat:

1. 60' Roadway and Utility Easement recorded in MB 152 in the office of the Recorder of Monroe County, IN. as granted in that certain Warranty Deed from James T. Morris and Donetta S. Morris, husband and wife, to James T. Morris, as Trustee under the James T. Morris Revocable Trust Agreement dated October 25, 1999, an undivided 50% interest and Donetta S. Morris, as Trustee under the Donetta S. Morris Revocable Trust Agreement dated October 25, 1999 an undivided 50%, dated February 11, 2000 and recorded February 15, 2000 as Document No. 2000002353.

2. All that portion of a certain easement that is located on the subject property, more defined as follows: 20' & 15' Waterline and Sanitary Sewer Easement record in Deed book 478, Page 426 in the office of the Recorder of Monroe County, IN.

These easements are being vacated at the request of the property owners and with consent and approval of City of Bloomington Utilities.

Approved by the City of Bloomington Utilities June 5 2023

Signature — Director Position

Victor A. Kelson
Name Printed

I certify that I am a Registered Land Surveyor licensed under the laws of Indiana; that this plat accurately represents a survey made by me on October 22, 2020, _____ and that the monuments shown on it exist; and that their locations, sizes, types, and materials are accurately shown.

Charles D. Graham
Indiana L.S. 29500014
Bynum Fanyo & Associates, Inc.
528 North Walnut Street
Bloomington, Indiana 47404-3804
812-332-8030

CHARLES D. GRAHAM REGISTERED No. LS29500014 STATE OF (IND.) LAND SURVEYOR

2023006356 SPL $45.00
06/13/2023 01:27:15P 5 PGS
Amy Swain
Monroe County Recorder IN
Recorded as Presented

LEGAL DESCRIPTION

Updated Parcel 1:

Tract 1 in Morris Subdivision, as per plat thereof, recorded in Plat Book MB 152, in the Office of the Recorder of Monroe County, Indiana, recorded May 12, 1999, more particularly described as follows:

A part of the Southwest Quarter of Section 29, Township 9 North, Range 1 West, Monroe County, Indiana being more particularly described as follows; commencing at the Southwest corner of the aforesaid Quarter section; thence on the West line of said Quarter section North 00 degrees 49 minutes 30 seconds West 409.81 feet to the point of beginning;

Thence continuing North 00 degrees 49 minutes 30 seconds West 273.90 feet to a point on the Easterly right-of-way of State Road No. 37and the beginning on a non-tangent curve concave northwesterly having a radius of 5044.79 feet to which a radial line bears South 67 degrees 04 minutes 34 seconds East; thence on said curve and right-of-way Northeasterly 417.99 feet through a central angle of 07 degrees 51 minutes 56 seconds; thence North 11 degrees 44 minutes 49 seconds East 259.69 feet; thence North 15 degrees 03 minutes 30 seconds East 400.00 feet; thence North 22 degrees 11 minutes 00 seconds East 201.56 feet; thence North 15 degrees 08 minutes 01 seconds East 376.01 feet; thence leaving said right-of-way North 74 degrees 17 minutes 27 seconds East 163.21 feet; thence South 00 degrees 48 minutes 33 seconds East 1893.54 feet; thence South 89 degree 58 minutes 40 seconds West 321.57 feet to the beginning of a curve concave southeasterly having a radius of 300.00 feet to which a radial line North 86 degrees 53 minutes 22 seconds West; thence on said curve Southerly 16.16 feet through a central angle of 03 degrees 05 minutes 11 seconds; thence South 00 degrees 01 minutes 26 seconds West 366.64 feet; thence North 89 degrees 50 minutes 58 seconds West 59.82 feet thence North 00 degrees 01 minutes 26 seconds West 368.18 feet to the beginning of a curve concave southeasterly having a radius of 360.00 to which a radial line bears North 89 degrees 53 minutes 34 seconds West; thence on said curve Northerly 14.08 feet through a central angle of 02 degrees 14 minutes 34 seconds; thence North 89 degrees 38 minutes 40 seconds East 284.41 feet to the point of beginning, containing 19.85 acres, more or less.

Updated Parcel 2:

A part of the East half of the Southwest Quarter of Section 29, Township 9 North, Range 1 West, Monroe County, Indiana being more particularly described as follows;

Commencing at the Southwest corner of the aforesaid Quarter section; thence on the West line of said Quarter section North 00 degrees 49 minutes 30 seconds West 409.81 feet; thence continuing North 00 degrees 49 minutes 30 seconds West 273.90 feet to a point on the Easterly right-of-way of State Road No. 37and the beginning on a non-tangent curve concave northwesterly having a radius of 5044.79 feet to which a radial line bears South 67 degrees 04 minutes 34 seconds East; thence on said curve and right-of-way Northeasterly 417.99 feet through a central angle of 07 degrees 51 minutes 56 seconds; thence North 11 degrees 44 minutes 49 seconds East 259.69 feet; thence North 15 degrees 03 minutes 30 seconds East 400.00 feet; thence North 22 degrees 11 minutes 00 seconds East 201.56 feet; thence North 18 degrees 08 minutes 01 seconds East 376.01 feet; thence leaving said right-of-way North 74 degrees 17 minutes 27 seconds East 163.21 feet to the southwest corner of the plat of Chandlersville as shown by the plat recorded in Plat Cabinet b, Envelope 23 in the office of the Recorder of Monroe County, Indiana; thence on and along the south line of said plat South 89 degrees 46 minutes 58 seconds East 671.16 feet; thence leaving said south line South 00 degrees 41 minutes 01 second East 655.29 feet and the Point of beginning;

Thence continuing South 00 degrees 41 minutes 01 second East 75.01; thence North 88 degrees 12 minutes 48 seconds East 456.89 to the west right-of-way line of Arlington Road; thence on said right-of-way line North 03 degrees 09 minutes 22 seconds West 75.04 feet; thence leaving said right-of-way South 88 degrees 12 minutes 48 seconds West 452.84 feet to the point of beginning, containing within said bounds 0.78 acres, more or less.

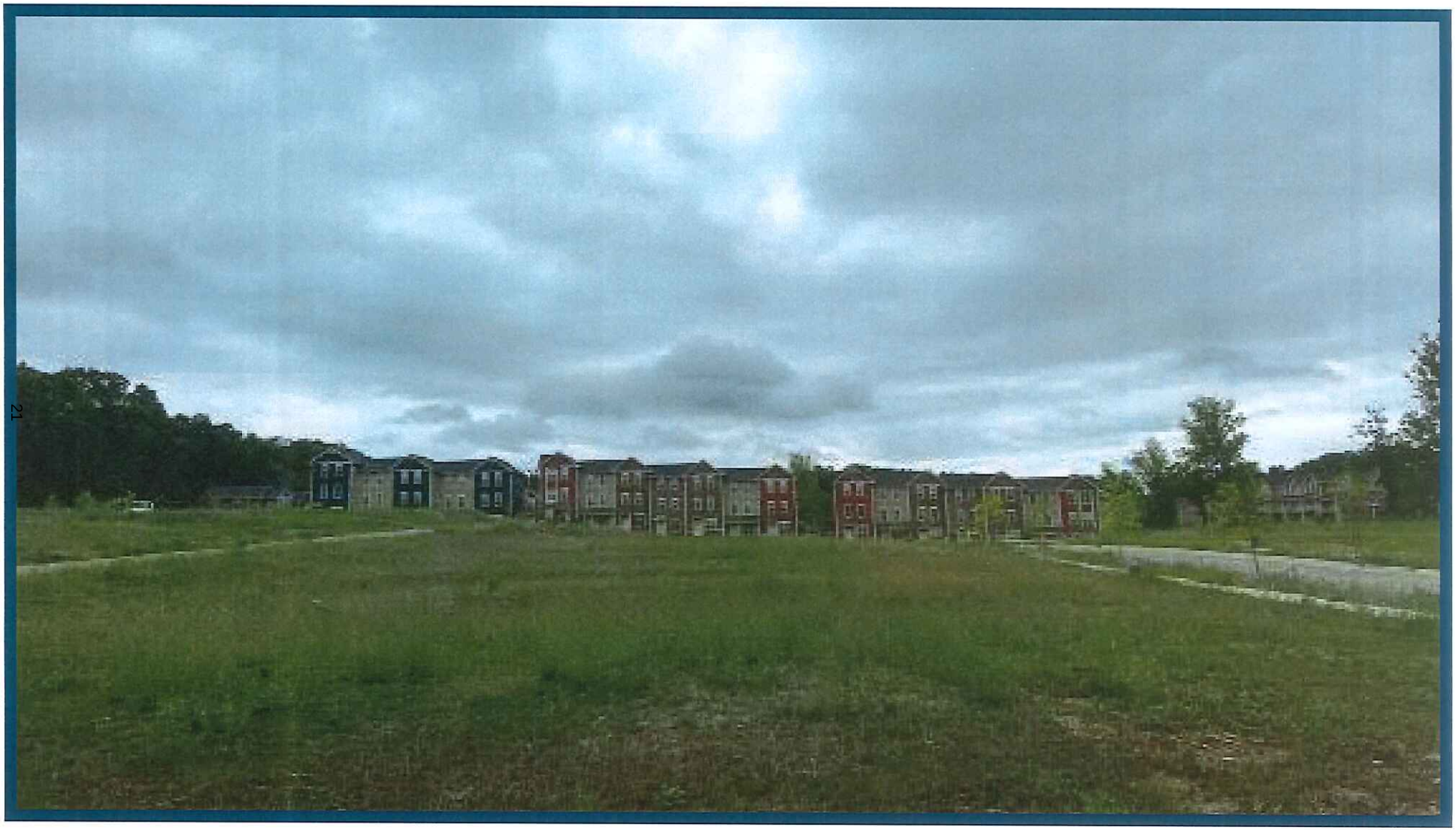
Updated Parcel 3:

A part of the East half of the west half of the Southwest Quarter of Section 29, Township 9 North, Range 1 West, Monroe County, Indiana being more particularly described as follows;

Commencing at the Southwest corner of the aforesaid Quarter section; thence on the West line of said Quarter section North 00 degrees 49 minutes 30 seconds West 409.81 feet; thence continuing North 00 degrees 49 minutes 30 seconds West 273.90 feet to a point on the Easterly right-of-way of State Road No. 37and the beginning on a non-tangent curve concave northwesterly having a radius of 5044.79 feet to which a radial line bears South 67 degrees 04 minutes 34 seconds East; thence on said curve and right-of-way Northeasterly 417.99 feet through a central angle of 07 degrees 51 minutes 56 seconds; thence North 11 degrees 44 minutes 49 seconds East 259.69 feet; thence North 15 degrees 03 minutes 30 seconds East 400.00 feet; thence North 22 degrees 11 minutes 00 seconds East 201.56 feet; thence North 18 degrees 08 minutes 01 seconds East 376.01 feet; thence leaving said right-of-way North 74 degrees 17 minutes 27 seconds East 163.21 feet to the southwest corner of the plat of Chandlersville as shown by the plat recorded in Plat Cabinet b, Envelope 23 in the office of the Recorder of Monroe County, Indiana and the Point of beginning;

Thence on and along the south line of said plat South 89 degrees 46 minutes 58 seconds East 671.16 feet; thence leaving said south line South 00 degrees 41 minutes 01 second East 1506.78 feet to the north line of Lot 2 Arlington Park Phase 1 as shown by the plat recorded in Plat Cabinet C, Envelope 96, in said office of the Recorder; thence on and along said north line North 89 degrees 40 minutes 15 seconds West 662.52 feet; thence leaving said north line North 00 degrees 48 minutes 33 seconds West 1525.52 feet to the point of beginning, containing within said bounds 20.08 acres, more or less.

ATLAS ON 17TH SUBDIVISION
SHEET 3 OF 5
JOB NO. 401334



Arlington Park
Photo 1
Site Visit August 15, 2023 View from the north to the south.

CITY OF BLOOMINGTON
HOUSING AND NEIGHBORHOOD DEVELOPMENT

Arlington Park
Photo 2
Site Visit August 15, 2023 View standing on the north and looking towards the west.

CITY OF BLOOMINGTON
HOUSING AND NEIGHBORHOOD DEVELOPMENT

Arlington Park
Photo 3
Site Visit August 15, 2023 View standing on the north and looking towards the north east

CITY OF BLOOMINGTON
HOUSING AND NEIGHBORHOOD DEVELOPMENT

Arlington Park
Photo 4
Site Visit August 15, 2023 View standing on the middle south side of the lot and looking towards the north.

CITY OF BLOOMINGTON
HOUSING AND NEIGHBORHOOD DEVELOPMENT

Arlington Park
Photo 5
Site Visit August 15, 2023 View standing on the south and looking eastward.

CITY OF BLOOMINGTON
HOUSING AND NEIGHBORHOOD DEVELOPMENT

HABITAT FOR HUMANITY OF MONROE COUNTY
OSAGE PLACE
2-BEDROOM HOUSE - FRONT FACING GABLE

AUGUST 2, 2021

DRAWING INDEX

DRAWING REVISIONS

VERSION	DATE	DESCRIPTION
1	08.28.2021	REVISIONS: TO UPDATE PORCH FOUND. DIMS. AND ADD DETAILS; ADD PANTRY TO REAR ENTRY PLAN OPTION; CHANGE TO IN-SWING EXTERIOR DOORS; RAISE PORCH BEAM BRG.; ADD REAR ENTRY ELEC. & POWER PLANS

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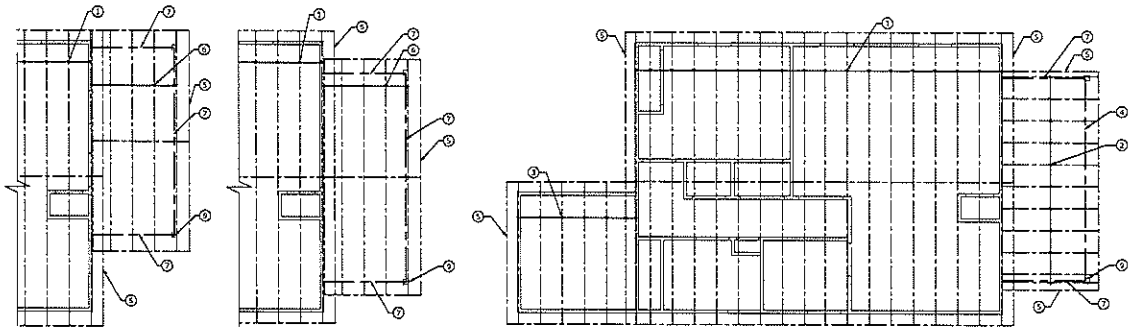
STRUCTURAL GENERAL NOTES

A. ROOF TRUSS DESIGN CRITERIA:
20 PSF LL TOP CHORD
10 PSF DL TOP CHORD
10 PSF DL BOTTOM CHORD
40 PSF TOTAL LL & DL

FRAMING KEY NOTES

1. PRE-ENGINEERED GABLE TRUST AT 24" O.C. WITH HEEL, TYPICAL, REFERENCE F/ASSY.
2. PRE-ENGINEERED MONOSLOPE PORCH TRUSS AT 24" O.C., TYPICAL
3. PRE-ENGINEERED GABLE TRUSS AT 24" O.C., TYPICAL
4. 5-1/4" X 9-1/2" LVL. ATTACH TO POST W/ SIMPSON HUC610 HANGER
5. 2 x 6 FLY RAFTER
6. PRE-ENGINEERED GABLE PORCH TRUSS AT 24" O.C., TYPICAL
7. (2)1-3/4" X 9-1/2 " LVL. ATTACH TO POST W/SIMPSON HUSC410 HANGER
8. (3)2 X 10, ATTACH TO POST W/ SIMPSON HUC 26-3 HANGER
9. 6 X 6 POST, TREATED, TYPICAL



G OPTION C: OFFSET GABLE PORCH ROOF
ROOF FRAMING PLAN
SCALE: 3/16" = 1'-0"

F OPTION B: GABLE PORCH ROOF
ROOF FRAMING PLAN
SCALE: 3/16" = 1'-0"

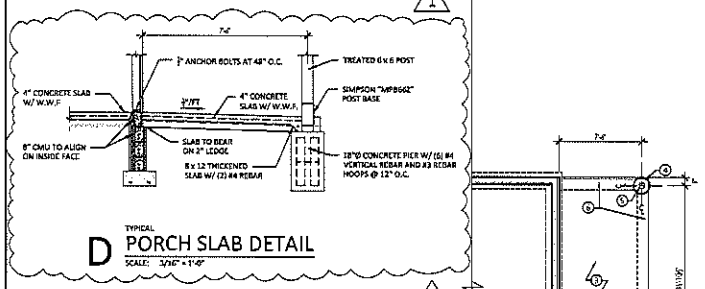
E OPTION A: SHED ROOF
FRAMING PLAN
SCALE: 3/16" = 1'-0"

FOUNDATION GENERAL NOTES

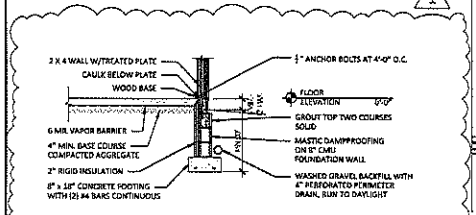
A. TOP OF SLAB ELEVATION TO BE 6" MIN. TO 12" MAX. OF FINAL GRADE.

FOUNDATION KEY NOTES

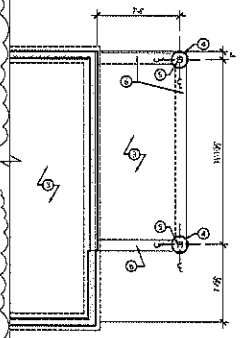
1. 6" CMU TOP COURSE ON 8" CMU FOUNDATION WALL. ALIGN BLOCK AT OUTSIDE FACE, TYPICAL. REF. DETAIL C/S101
2. 8" X 16" CONCRETE FOOTING W/(2) #4 BARS, CONT., TYP.
3. 4" CONCRETE SLAB W/6 x 6 W1.4x W1.4 WIRE FABRIC, OVER 6- MIL VAPOR BARRIER, MIN. 4" COMPACTED No. 53 GRANULAR FILL
4. 18" DIA. SONOTUBE FOUNDATION
5. SIMPSON MPBBZ POST BASE
6. 8" x 12" THICKENED SLAB W/ (2) #4 RCBAR
7. SHIFT 8" CMU TO PROVIDE LEDGE FOR CONCRETE PORCH SLAB



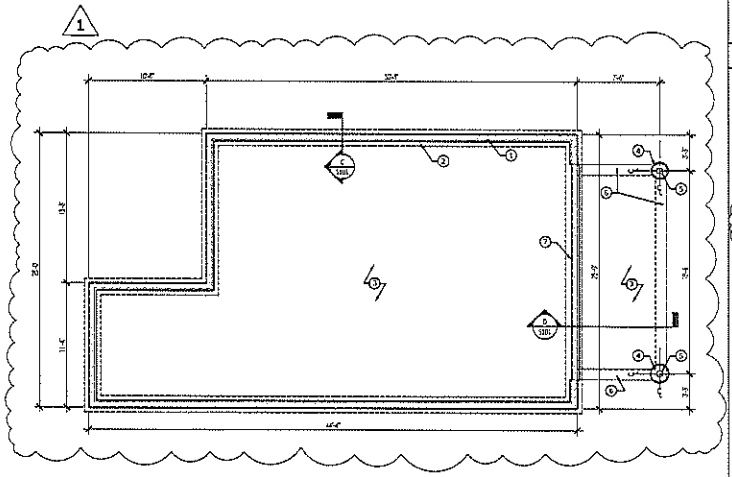
TYPICAL
D PORCH SLAB DETAIL
SCALE: 3/16" = 1'-0"



TYPICAL
C FOUNDATION DETAIL
SCALE: 3/16" = 1'-0"



B OPTION C: OFFSET GABLE PORCH ROOF
FOUNDATION PLAN
SCALE: 3/16" = 1'-0"



A OPTION A: SHED ROOF & OPTION B: GABLE PORCH ROOF
FOUNDATION PLAN
SCALE: 3/16" = 1'-0"

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project title

HABITAT FOR HUMANITY OF MONROE COUNTY
OSAGE PLACE
2-BEDROOM HOUSE
BLOOMINGTON INDIANA

project information

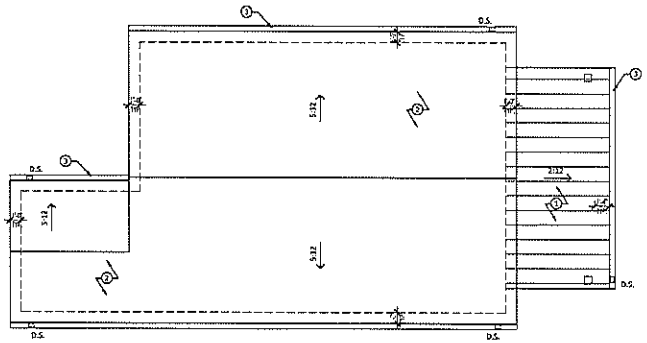
PROJECT NUMBER: 19-43
ISSUE DATE: 08.02.21
REVISION DATE: 08.28.21 1

sheet title

FOUNDATION PLAN
FRAMING PLAN

sheet number

S101



C ROOF PLAN
SCALE: 3/16" = 1'-0"

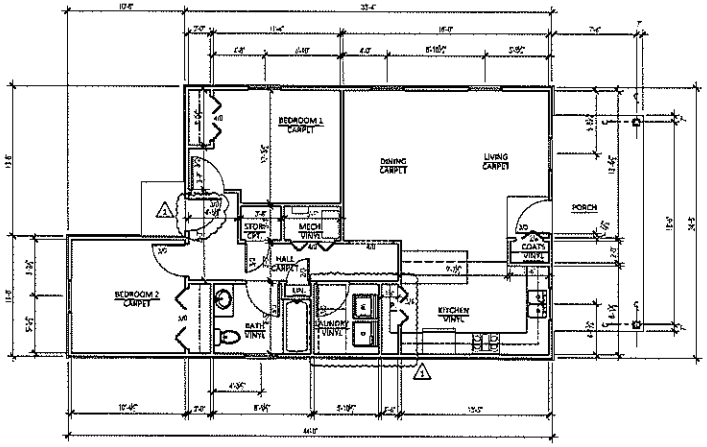
GENERAL ROOF NOTES

A. PROVIDE SELF-ADHERED UNDERLAYMENT AT ALL EAVES, VALLEYS AND ROOF PENETRATIONS AS PER MANUFACTURER'S REQUIREMENTS.

B. PAINT ROOF PENETRATIONS TO MATCH ROOF COLOR.

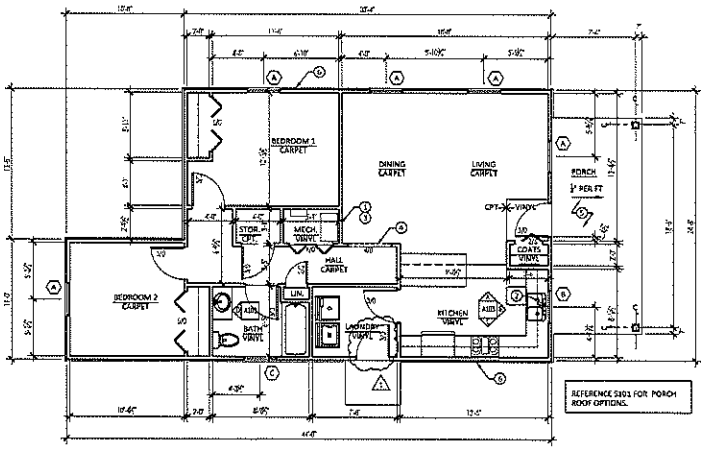
ROOF KEY NOTES

1. STANDING SEAM METAL ROOF SYSTEM
2. ASPHALT SHINGLES OVER 15# UNDERLAYMENT FELT. ½" OSB DECKING WITH H-CLIPS
3. 5" PREFINISHED ALUMINUM GUTTER WITH 4" DOWNSPOUT, TIE INTO PVC BODY, TIED INTO STORM DRAIN



B REAR ENTRY - 940 SF
FLOOR PLAN
SCALE: 3/16" = 1'-0"

REFERENCE FLOOR PLAN 'A' FOR TYPICAL NOTES.



A SIDE ENTRY - 940 SF
FLOOR PLAN
SCALE: 3/16" = 1'-0"

GENERAL PLAN NOTES

A. EXTERIOR WALLS TO BE 2 x 4 WOOD STUDS AT 16" O.C. WITH R-13 BATT INSULATION, ½" OSB, 1" INSULATION BOARD, AIR INFILTRATION BARRIER AND VINYL SIDING SYSTEM. ½" GYPSUM WALLBOARD AT INTERIOR SIDE, PAINTED.

B. INTERIOR WALLS TO BE 2x4 WOOD STUDS AT 16" O.C. WITH ½" GYPSUM BOARD BOTH SIDES, PAINTED.

C. PROVIDE SOUND ATTENUATION BATTS IN BATHROOM WALLS.

D. PROVIDE BLOCKING FOR CABINETS, TOILET ACCESSORIES, HANDRAILS, ETC.

E. CEILINGS TO RECEIVE LIGHT KNOCKDOWN FINISH.

F. WINDOW SIZES:
- (A) 3' x 5' WINDOW
- (B) 3' x 3'-3" WINDOW
- (C) 2' x 3' WINDOW, TEMPERED GLASS

PLAN KEY NOTES

2. RETURN AIR LOUVER IN WALL
3. WINDOW TO BE CENTERED OVER KITCHEN SINK
5. 2x4 STUD WALL WITH ½" FIRE-RATED GYPSUM BOARD, FIRE-TAPED. INSULATE WALLS ADJACENT TO LIVING SPACES
6. CASED OPENING
7. 4" CONCRETE PORCH SLAB
8. EDGE OF FOUNDATION WALL BELOW, TYPICAL

LEGEND

NEW 2x4 WALL @ 16" O.C., U.N.O.

NEW DOOR.

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HABITAT FOR HUMANITY OF MONROE COUNTY
OSAGE PLACE
2-BEDROOM HOUSE
BLOOMINGTON INDIANA

project information

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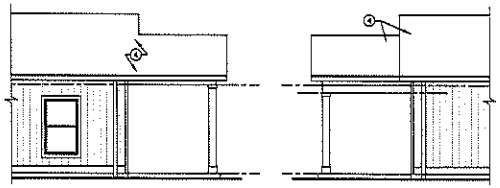
FLOOR PLANS
ROOF PLAN

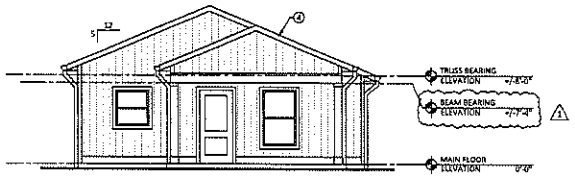
sheet number

A101



J SIDE
SCALE: 3/16" = 1'-0"

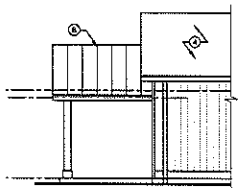
H SIDE
SCALE: 3/16" = 1'-0"



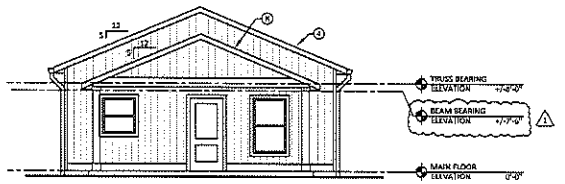
G FRONT
SCALE: 3/16" = 1'-0"

REFERENCE FLOOR PLAN 'A' FOR TYPICAL NOTES.

OPTION C
OFFSET GABLE PORCH ROOF



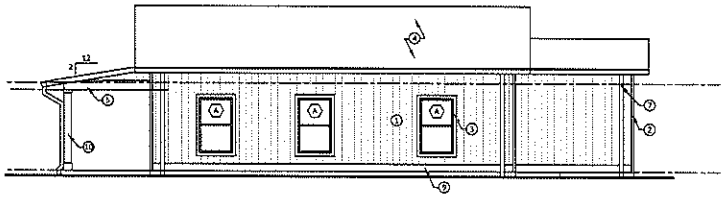
F SIDE
SCALE: 3/16" = 1'-0"



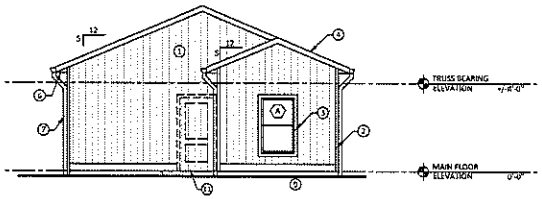
E FRONT
SCALE: 3/16" = 1'-0"

REFERENCE FLOOR PLAN 'A' FOR TYPICAL NOTES.

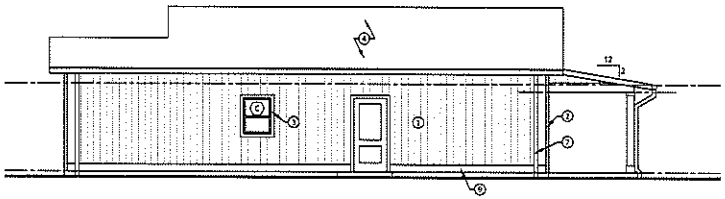
OPTION B
GABLE PORCH ROOF



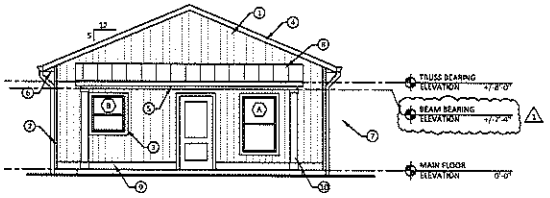
D SIDE
SCALE: 3/16" = 1'-0"



C BACK
SCALE: 3/16" = 1'-0"



B SIDE
SCALE: 3/16" = 1'-0"



A FRONT
SCALE: 3/16" = 1'-0"

OPTION A
SHED PORCH ROOF

ELEVATION GENERAL NOTES

A. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, CONDITIONS AND LOCATIONS. REPORT DISCREPANCIES TO ARCHITECT.

B. COORDINATE WORK OF OTHER TRADES WITH YOUR TRADE BEFORE STARTING ANY CONSTRUCTION.

ELEVATION KEY NOTES

1. SINGLE 8" VERTICAL BOARD & BATTEN VINYL SIDING SYSTEM
2. VINYL CORNER TRIM
3. 3½" VINYL WINDOW TRIM
4. ASPHALT SHINGLES OVER 15# UNDERLAYMENT FELT ON ½" OSB DECKING WITH H-CLIPS
5. SOLID SOFFIT ON PORCHES AND RAKES
6. VENTED SOFFIT ON HORIZONTAL EAVES
7. 5" GUTTER AND 4" DOWNSPOUT. TIE INTO ROOT FOR BELOW GRADE STORM LINE
8. STANDING SEAM METAL ROOFING SYSTEM
9. 7¼" VINYL BAND BOARD
10. 8x8 POST FIN. DIM. WITH 1 x 8 BASE TRIM AND 1 x 4 TOP TRIM
11. ALTERNATE DOOR LOCATION

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HABITAT FOR HUMANITY OF MONROE COUNTY
OSAGE PLACE
2-BEDROOM HOUSE
BLOOMINGTON INDIANA

project information

PROJECT NUMBER:	19-43
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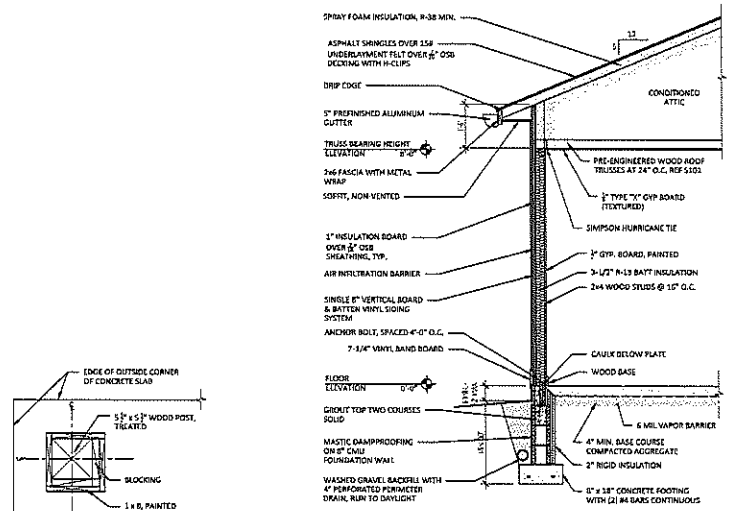
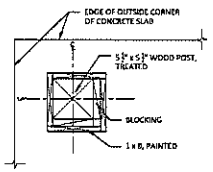
FRONT FACING GABLE
EXTERIOR ELEVATIONS

sheet number

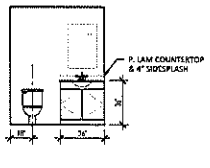
A201



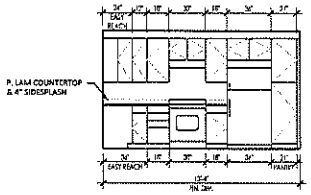
F TYPICAL SECTION
SCALE: 1/2" = 1'-0"



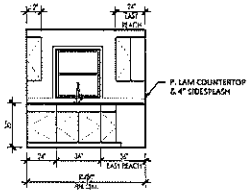
G COLUMN DETAIL
SCALE: 1-1/2" = 1'-0"



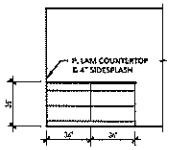
D BATH ELEVATION
SCALE: 1/4" = 1'-0"



C KITCHEN ELEVATION
SCALE: 1/4" = 1'-0"



B KITCHEN ELEVATION
SCALE: 1/4" = 1'-0"



A KITCHEN ELEVATION
SCALE: 1/4" = 1'-0"

PROVIDE FINISHED PANELS AT ALL EXPOSED CABINET ENDS

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HABITAT FOR HUMANITY OF MONROE COUNTY
OSAGE PLACE
2-BEDROOM HOUSE
BLOOMINGTON INDIANA

project information

PROJECT NUMBER: 19-43
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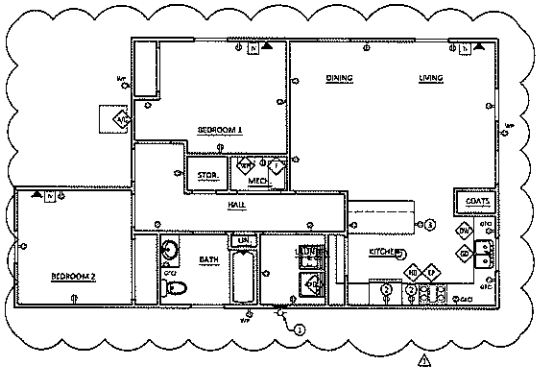
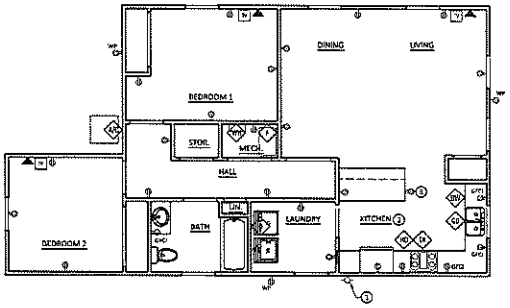
CABINET ELEVATIONS
WALL SECTION & DETAILS

sheet number

A501



D SIDE ENTRY
POWER PLAN
SCALE: 3/16" = 1'-0"



B POWER PLAN
SCALE: 3/16" = 1'-0"

ELECTRICAL GENERAL NOTES

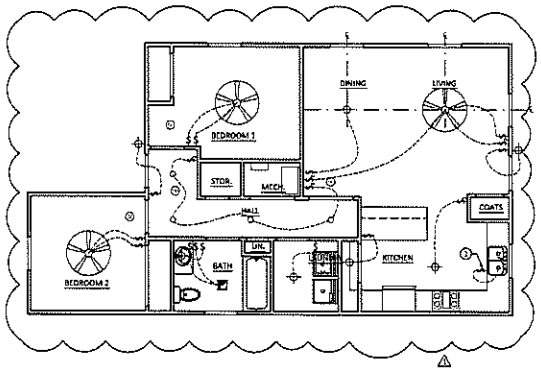
A. ELECTRICAL WORK SHALL BE IN COMPLIANCE WITH ALL LOCAL, STATE AND NATIONAL ELECTRICAL CODES.
B. PROVIDE POWER OUTLETS TO MEET CODE.
C. ALL INTERIOR GFCI RECEPTACLES SHALL BE MOUNTED 44" A.F.F., U.N.O.
D. ALL EXTERIOR RECEPTACLES SHALL BE WEATHERPROOF, GFCI, MOUNTED 18" A.F.F. U.N.O.
E. ALL DISTRIBUTION PANELS SHALL HAVE TYPE-WRITTEN CIRCUIT DIRECTORIES.
F. TELEPHONE LOCATION BY OWNER.
G. ELECTRICAL PANEL TO BE PAINTED.

POWER PLAN NOTES

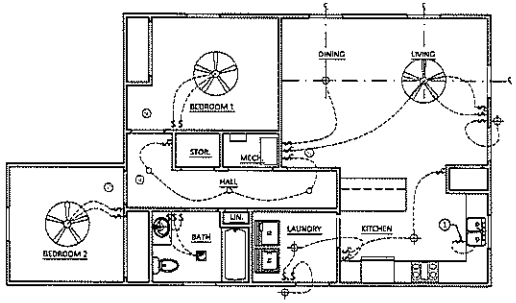
1. ELECTRICAL METER LOCATION
2. MOUNT RECEPTECLES AT 44" A.F.F. ABOVE COUNTER TOP, U.N.O., THIS ROOM
3. RECESS AT SIDE OF CABINET

POWER PLAN LEGEND

- TV — CABLE OUTLET
- HD — 1 20V HOOD J.B. DIRECT WIRE
- A/C — 240V/1 WEATHERPROOF A/C DISCONNECT - LOCATION TO BE DETERMINED
- TELEPHONE JACK
- WH — 1 20V J.B. FOR GAS WATER HEATER
- F — 1 20V J.B. FOR FURNACE UNIT
- D — 240V ELECTRIC DYER RECEPTACLE - SIZE AS REQUIRED BY DRYER SELECTED
- DW — 1 20V DISHWASHER J.B. - DIRECT WIRE
- ER — ELECTRIC RANGE - 240V, 50A RECEPTACLE
- GD — 1 30V GARBAGE DISPOSAL J.B., DIRECT WIRE
- ELECTRICAL PANEL



C REAR ENTRY
LIGHTING PLAN
SCALE: 3/16" = 1'-0"



A LIGHTING PLAN
SCALE: 3/16" = 1'-0"

LIGHTING PLAN NOTES

1. MOUNT SWITCH TO CONTROL GARBAGE DISPOSAL INSIDE BASE CABINET

LIGHTING PLAN LEGEND

- 1 20V SINGLE POLE SWITCH, +48" TO TOP, U.N.O
- 1 20V THREE-WAY LIGHT SWITCH, +48" TO TOP
- 1 20V DUPLEX RECEPTACLE, +16" TO BOTTOM
- GFCI — GROUND FAULT CIRCUIT INTERRUPTER - HEIGHT DETERMINED BY LOCATION
- 1 20V RECEPTACLE WATERPROOF OUTLET - GFCI
- 240V RECEPTACLE, +16" TO BOTTOM
- LED WAFER LIGHT FIXTURE
- CEILING MOUNTED OR PENDANT LIGHT FIXTURE
- WALL MOUNTED SCONCE
- SD — 1 20V BATTERY BACKUP SMOKE DETECTOR, INTERCONNECTED - SEE NOTE BELOW
- EXHAUST FAN WITH LIGHT
- CEILING FAN

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OSAGE PLACE
2-BEDROOM HOUSE
BLOOMINGTON INDIANA

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ELECTRIC & LIGHTING

sheet number

E101

HABITAT FOR HUMANITY OF MONROE COUNTY
OSAGE PLACE
4-BEDROOM HOUSE - STAIR ON RIGHT

APRIL 14, 2022

DRAWING INDEX

ARCHITECT

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GENERAL FRAMING NOTES

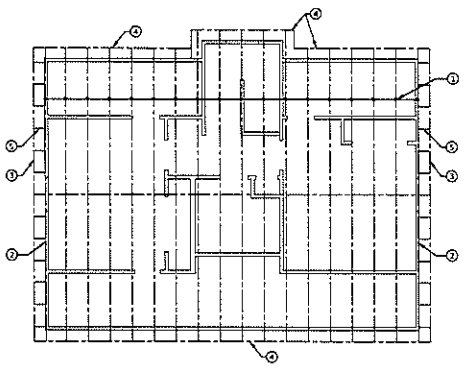
A. ROOF TRUSS DESIGN CRITERIA:
20 PSF LL TOP CHORD
10 PSF DL TOP CHORD
10 PSF DL BOTTOM CHORD
40 PSF TOTAL LL & DL

UPPER ROOF FRAMING KEYNOTES

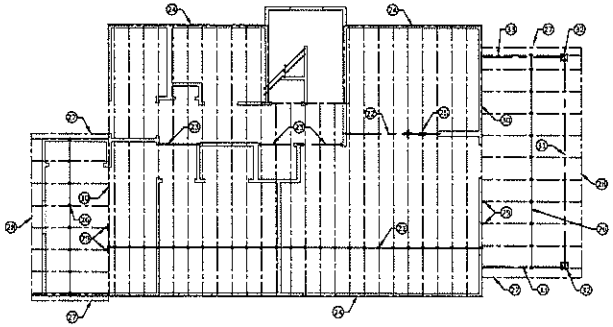
1. SCISSOR TRUSSES AT 24" O.C.
2. GABLE TRUSS
3. 2 x 6 PLY RAFTER
4. 2 x 6 FASCIA BOARD
5. 2x6 BLOCKING AT 24" O.C., TYPICAL

SECOND FLOOR FRAMING KEY NOTES

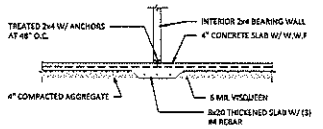
21. 2 x 10 JOISTS AT 16" O.C.
22. 5 1/2" x 9 1/4" LVL BEAM, RECESS UP INTO FLOOR STRUCTURE
23. (2) 2 x 10 W/ 1/2" PLYWOOD HEADER
24. 2 x 10 BAND JOIST
25. JOIST HANGERS, TYPICAL
26. MONOPITCH TRUSSES AT 24" O.C.
27. 2 x 6 PLY RAFTER
28. 2 x 6 FASCIA BOARD
29. TRUSS HANGERS
30. 2 x 4 LEDGER BOARD
31. 3-PLY 1 3/4" x 9 1/4" LVL BEAM
32. 6 x 6 POST (TREATED)
33. 2 PLY 1 3/4" x 9 1/4" LVL BEAM



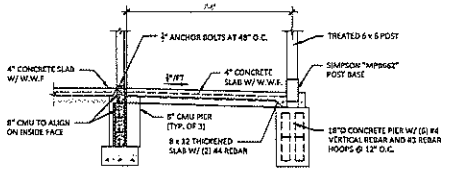
G UPPER ROOF FRAMING PLAN
SCALE: 3/16" = 1'-0"



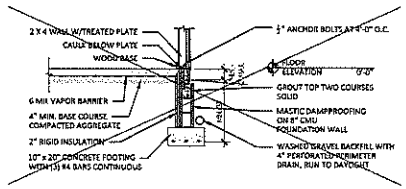
F SECOND FLOOR FRAMING PLAN
SCALE: 3/16" = 1'-0"



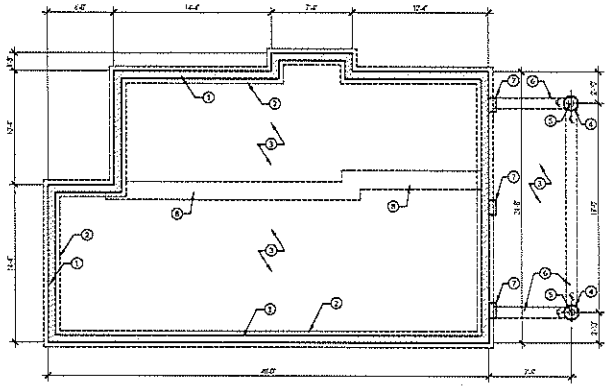
E THICKENED SLAB SECTION
SCALE: 3/8" = 1'-0"



D PORCH SLAB DETAIL
SCALE: 3/8" = 1'-0"



C TYPICAL FOUNDATION DETAIL
SCALE: 3/8" = 1'-0"



A FOUNDATION PLAN
SCALE: 3/16" = 1'-0"

GENERAL FOUNDATION NOTES

A. TOP OF SLAB ELEVATION TO BE -0" MIN. TO 12" MAX. OF FINAL GRADE.

FOUNDATION KEYNOTES

1. 6" CMU TOP COURSE ON 8" CMU FOUNDATION WALL, ALIGN BLOCK AT OUTSIDE FACE, TYPICAL. REF. DETAIL C/S101
2. 10 x 20 FOOTING W/ (3) #4 REBAR, TYPICAL
3. 4" CONCRETE SLAB W/ 6 x 6 W1.4xW1.4 WIRE FABRIC OVER 6 MIL VAPOR BARRIER OVER 4" MIN. COMPACTED NO. 53
4. 18" DIA. SONOTUBE FOUNDATION
5. SIMPSON MPB66Z POST BASE
6. 8 x 12 THICKENED SLAB W/ (2) #4 REBAR
7. 8" CMU PIER, TYPICAL OF 3
8. 8 x 20 THICKENED SLAB W/ (3) #4 REBAR

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HABITAT FOR HUMANITY OF MONROE COUNTY
OSAGE PLACE
4-BEDROOM HOUSE
STAIR ON RIGHT
BLOOMINGTON INDIANA

project information

PROJECT NUMBER: 19-43
ISSUE DATE: 04.14.21
REVISION DATE:

sheet title

FOUNDATION PLAN & FRAMING PLANS

sheet number

S101

GENERAL ROOF NOTES

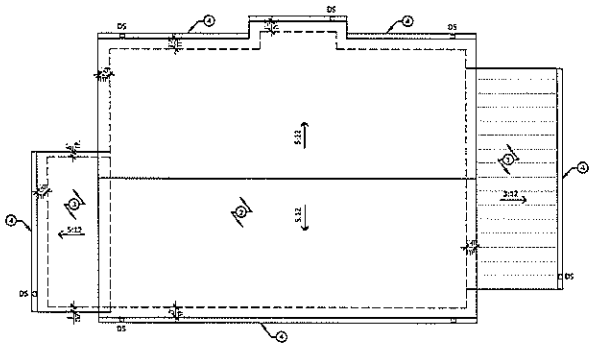
A. PROVIDE SELF ADHERED UNDERLAYMENT AT ALL EAVES, VALLEYS AND ROOF PENETRATIONS AS PER MANUFACTURER'S REQUIREMENTS.

B. PAINT ROOF PENETRATIONS TO MATCH ROOF COLOR.

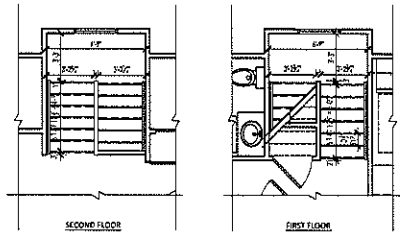
C. COORDINATE DOWNSPOUT LOCATIONS WITH SPECIFIC HOUSE LOCATION.

ROOF KEYNOTES

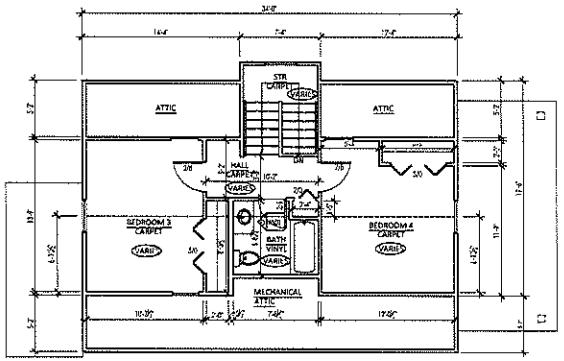
1. STANDING SEAM METAL ROOF SYSTEM
2. ASPHALT SHINGLES OVER 15# UNDERLAYMENT FELT, ½" OSB DECKING WITH H-CLIPS
3. ASPHALT SHINGLES OVER (2) LAYERS 15# UNDERLAYMENT FELT, ½" OSB DECKING WITH H-CLIPS
4. 5" PREFINISHED ALUMINUM GUTTER WITH 4" DOWNSPOUT INTO PVC BOOT, TIED INTO STORM DRAIN



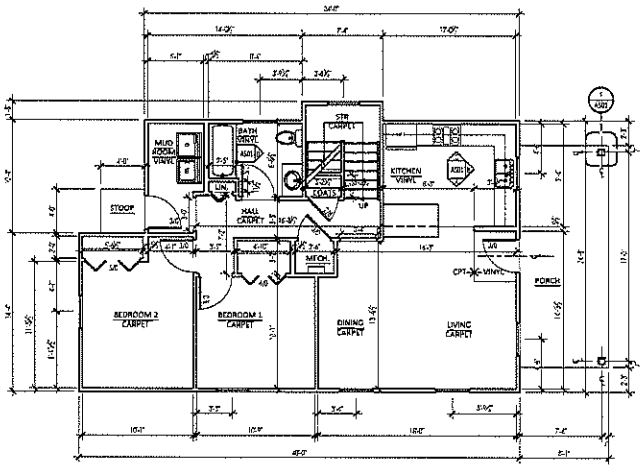
D ROOF PLAN
SCALE: 3/16" = 1'-0"



C ENLARGED STAIR PLANS
SCALE: 1/4" = 1'-0"



B SECOND FLOOR PLAN
SCALE: 3/16" = 1'-0"



A FIRST FLOOR PLAN
SCALE: 3/16" = 1'-0"

GENERAL PLAN NOTES

A. EXTERIOR WALLS TO BE 2 x 4 WOOD STUDS AT 16" O.C. WITH R-13 BATT INSULATION, ½" OSB, 1" INSULATION BOARD, AIR INFILTRATION BARRIER AND VINYL SIDING SYSTEM. ½" GYPSUM WALLBOARD AT INTERIOR SIDE, PAINTED.

B. INTERIOR WALLS TO BE 2x4 WOOD STUDS AT 16" O.C. WITH ½" GYPSUM BOARD BOTH SIDES, PAINTED.

C. PROVIDE SOUND ATTENUATION BATTS IN BATHROOM WALLS.

D. PROVIDE BLOCKING FOR CABINETS, TOILET ACCESSORIES, HANDRAILS, ETC.

E. CEILINGS TO RECEIVE LIGHT KNOCKDOWN FINISH. CEILING HEIGHT TO BE 8'-0" U.N.O.

F. WINDOW SIZES:

- (A) 3' x 5' DH WINDOW
- (B) 3' x 3" DH WINDOW
- (C) 3' x 3' DH WINDOW, TEMPERED GLASS
- (D) 2'-6" x 3'-4" CASEMENT WINDOW, TO MEET EGRESS

PLAN KEYNOTES

1. RETURN AIR LOUVER IN WALL
2. WINDOW TO BE CENTERED OVER KITCHEN SINK
3. 2x4 STUD WALL WITH ½" FIRE-RATED GYPSUM BOARD. FIRE-TAPED. INSULATE WALLS ADJACENT TO LIVING SPACES
4. CASED OPENING
5. 4" CONCRETE PORCH SLAB
6. EDGE OF FOUNDATION WALL BELOW, TYPICAL
7. PARTIAL HEIGHT WALL WITH 1 x WOOD CAP, STAINED
8. 1-1/4" WOOD HANDRAIL, STAINED
9. HOSE BIB LOCATION
10. ATTIC ACCESS PANEL, 30" X 48" MIN.
11. CENTER DOOR IN FRONT ELEVATION

LEGEND

- NEW 2 x 4 WALL AT 16" O.C., U.N.O.
- NEW DOOR, REFERENCE SCHEDULE
- (9'-0") CEILING HEIGHT

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OSAGE PLACE
4-BEDROOM HOUSE
STAIR ON RIGHT
BLOOMINGTON INDIANA

project information

PROJECT NUMBER: 19-43
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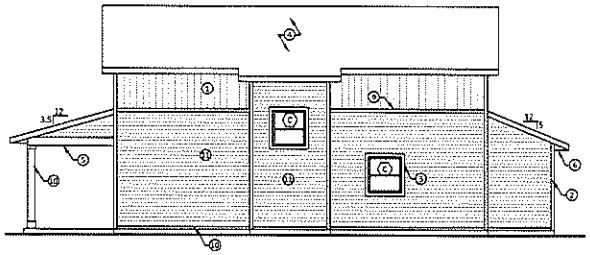
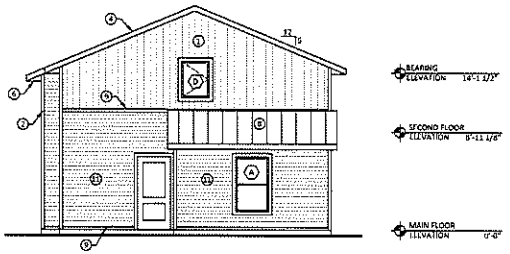
FLOOR PLANS & ROOF PLAN

sheet number

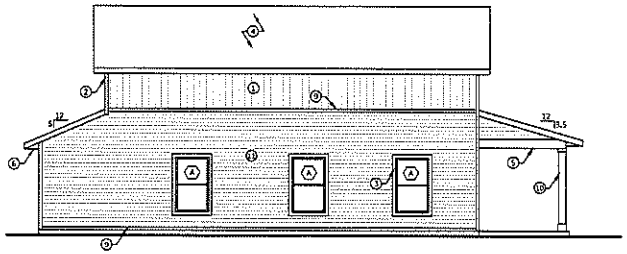
A101



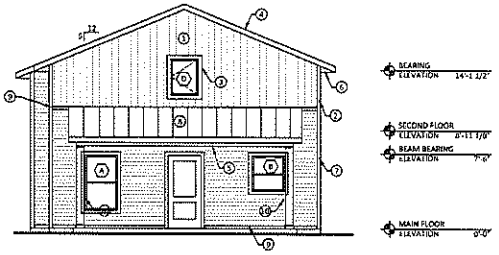
D SIDE ELEVATION
SCALE: 3/16" = 1'-0"



B REAR ELEVATION
SCALE: 3/16" = 1'-0"



C SIDE ELEVATION
SCALE: 3/16" = 1'-0"



A FRONT ELEVATION
SCALE: 3/16" = 1'-0"

GENERAL ELEVATION NOTES

A. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, CONDITIONS AND LOCATIONS. REPORT DISCREPANCIES TO ARCHITECT.

B. COORDINATE WORK OF OTHER TRADES WITH YOUR TRADE BEFORE STARTING ANY CONSTRUCTION.

ELEVATION KEYNOTES

1. SINGLE 8" VERTICAL BOARD & BATTEN VINYL SIDING SYSTEM
2. VINYL CORNER TRIM
3. VINYL WINDOW TRIM
4. ASPHALT SHINGLES OVER 15# UNDERLAYMENT FELT ON ½" OSB DECKING WITH H-CLIPS
5. SOLID SOFFIT ON PORCHES AND RAKES
6. VENTED SOFFIT ON HORIZONTAL EAVES
7. 5" GUTTER AND 4" DOWNSPOUT. TIE INTO BOOT FOR BELOW GRADE STORM LINE
8. STANDING SEAM METAL ROOFING SYSTEM
9. 3 ½" VINYL TRIM BOARD
10. 8 x 8 POST FIN. DIM. WITH 1 x 8 BASE TRIM AND 1 x 4 TOP TRIM
11. DOUBLE-4 VINYL SIDING

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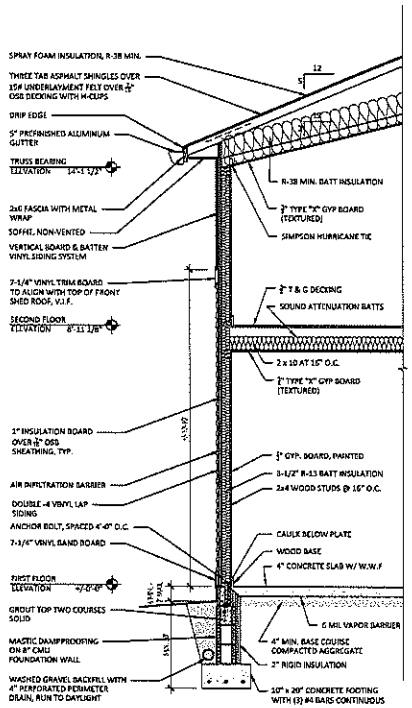
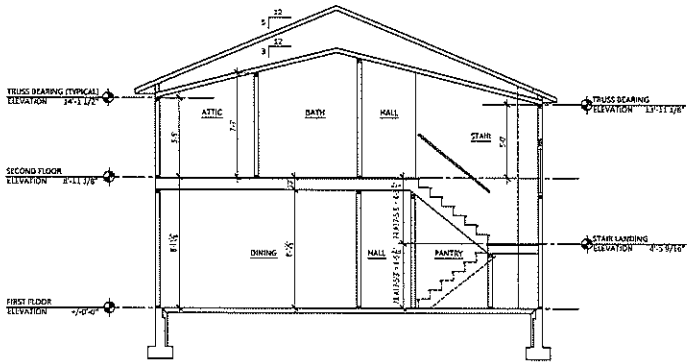
EXTERIOR ELEVATIONS

sheet number

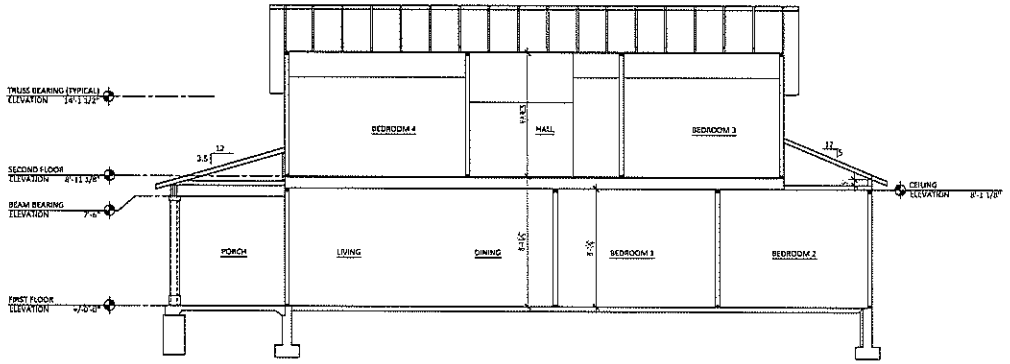
A201



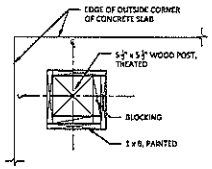
J TYPICAL SECTION
SCALE: 1/2" = 1'-0"



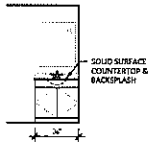
H SECTION
SCALE: 1/4" = 1'-0"



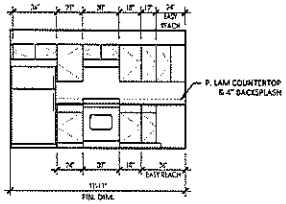
G SECTION
SCALE: 1/4" = 1'-0"



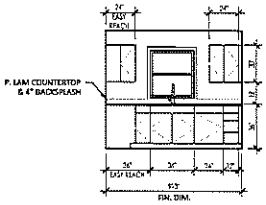
F COLUMN DETAIL
SCALE: 1-1/2" = 1'-0"



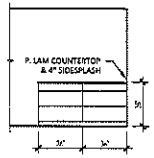
D BATH ELEVATION
SCALE: 1/4" = 1'-0"



C KITCHEN ELEVATION
SCALE: 1/4" = 1'-0"



B KITCHEN ELEVATION
SCALE: 1/4" = 1'-0"



A KITCHEN ELEVATION
SCALE: 1/4" = 1'-0"

PROVIDE FINISHED PANELS AT ALL EXPOSED CABINET FACES

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OSAGE PLACE
4-BEDROOM HOUSE
STAIR ON RIGHT
BLOOMINGTON INDIANA

project information

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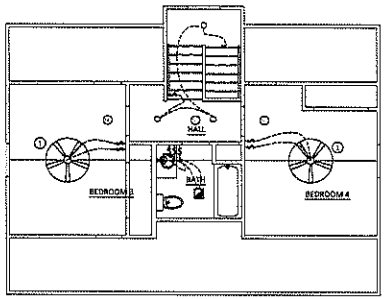
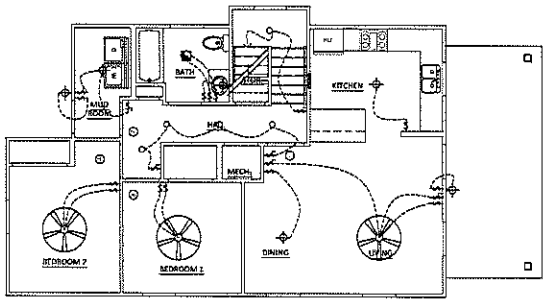
INTERIOR ELEVATIONS, SECTIONS, WALL SECTION & DETAILS

sheet number

A501



D SECOND FLOOR
LIGHTING PLAN
SCALE: 3/16" = 1'-0"



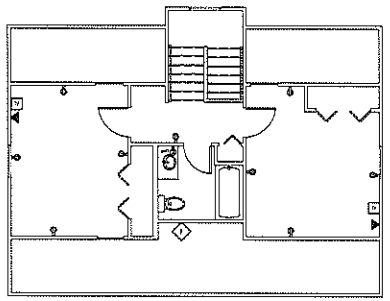
C FIRST FLOOR
LIGHTING PLAN
SCALE: 3/16" = 1'-0"

LIGHTING PLAN KEYNOTES

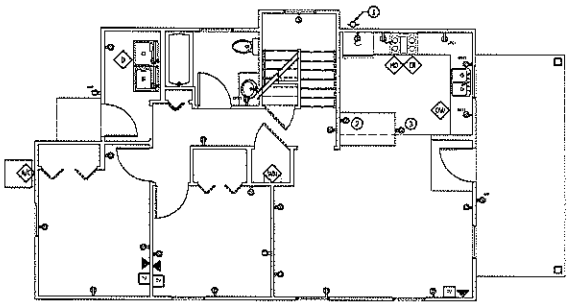
1. PROVIDE MOUNTING BLOCK FOR CEILING FAN AT SLOPED CEILING

LIGHTING PLAN LEGEND

- 120V SINGLE POLE SWITCH, +48" TO TOP, U.N.O
- 120V THREE-WAY LIGHT SWITCH, +48" TO TOP
- 120V DUPLEX RECEPTACLE, +16" TO BOTTOM
- GFCI — GROUND FAULT CIRCUIT INTERRUPTER - HEIGHT DETERMINED BY LOCATION
- 120V RECEPTACLE WATERPROOF OUTLET - GFCI
- 240V RECEPTACLE, +16" TO BOTTOM
- LED WAFER LIGHT FIXTURE
- CEILING MOUNTED OR PENDANT LIGHT FIXTURE
- WALL MOUNTED SCONCE
- 120V BATTERY BACKUP SMOKE DETECTOR, INTERCONNECTED - SEE NOTE BELOW
- EXHAUST FAN WITH LIGHT
- CEILING FAN WITH LIGHT FIXTURE



B SECOND FLOOR
POWER PLAN
SCALE: 3/16" = 1'-0"



A FIRST FLOOR
POWER PLAN
SCALE: 3/16" = 1'-0"

GENERAL ELECTRICAL NOTES

A. ELECTRICAL WORK SHALL BE IN COMPLIANCE WITH ALL LOCAL, STATE AND NATIONAL ELECTRICAL CODES.
B. PROVIDE POWER OUTLETS TO MEET CODE.
C. ALL INTERIOR GFCI RECEPTACLES SHALL BE MOUNTED 44" A.F.F., U.N.O.
D. ALL EXTERIOR RECEPTACLES SHALL BE WEATHERPROOF, GFCI, MOUNTED 12" A.F.F. U.N.O.
E. ALL DISTRIBUTION PANELS SHALL HAVE TYPE-WRITTEN CIRCUIT DIRECTORIES.
F. TELEPHONE LOCATION BY OWNER.
G. ELECTRICAL PANEL TO BE PAINTED.

POWER PLAN KEYNOTES

1. ELECTRICAL METER LOCATION
2. MOUNT AT 44" A.F.F.
3. RECESS AT SIDE OF CABINET

POWER PLAN LEGEND

- TV — CABLE OUTLET
- HD — 120V HOOD J.B, DIRECT WIRE
- AC — 240V/1 WEATHERPROOF A/C DISCONNECT - LOCATION TO BE DETERMINED
- TELEPHONE JACK
- WH — 120V J.B. FOR GAS WATER HEATER
- F — 120V J.B. FOR FURNACE UNIT
- D — 240V ELECTRIC DYER RECEPTACLE - SIZE AS REQUIRED BY DRYER SELECTED
- DW — 120V DISHWASHER J.B. - DIRECT WIRE
- R — ELECTRIC RANGE - 240V, 50A RECEPTACLE
- ELECTRICAL PANEL

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LIGHTING PLAN & POWER PLAN

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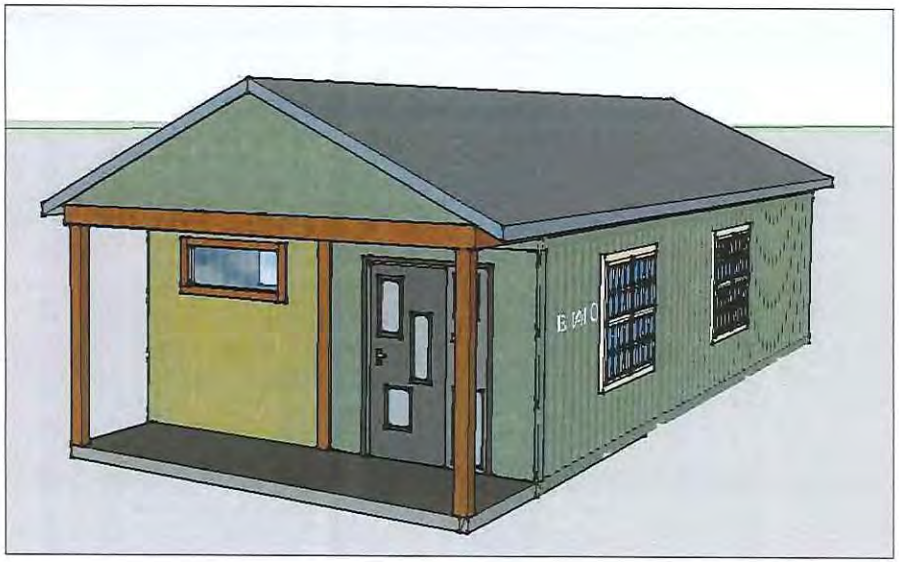


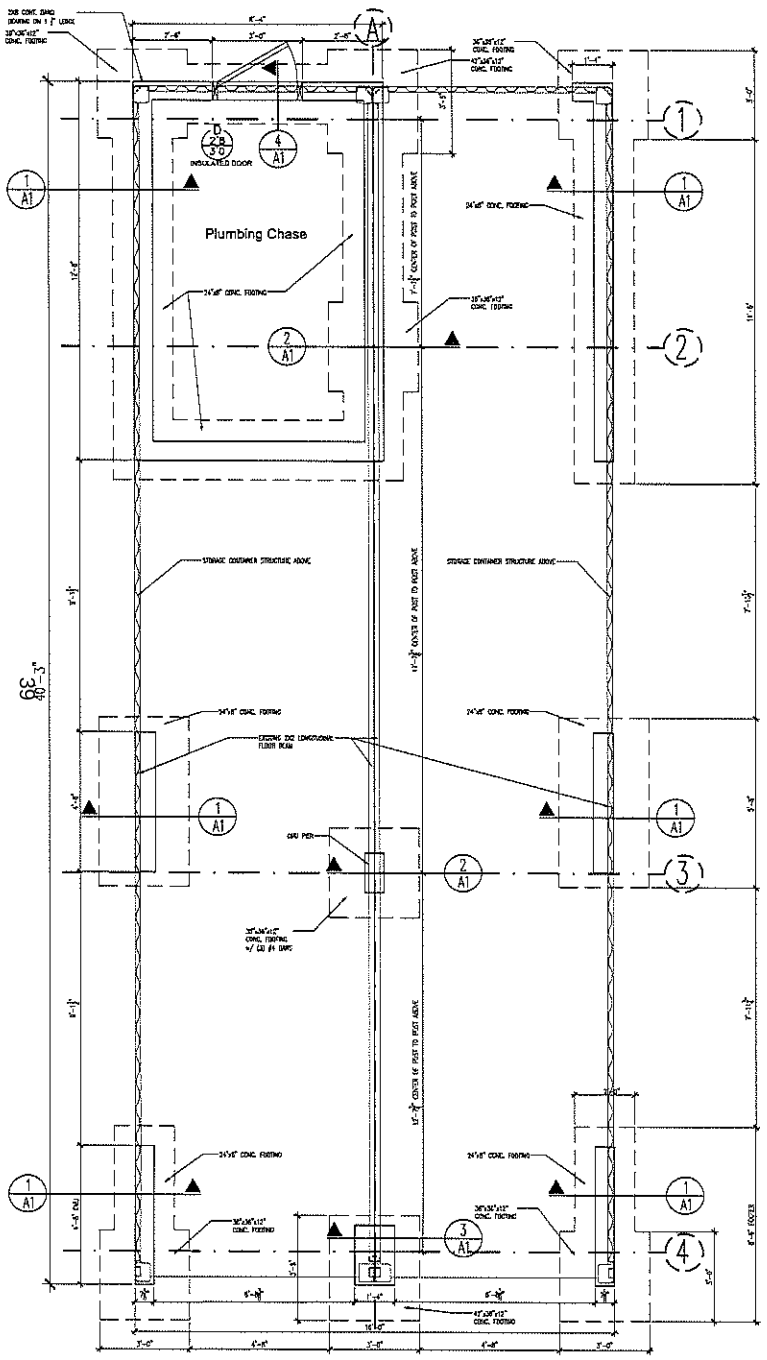
SITE LOCATION

Live/Work Storage Container Unit

136 York St. 40508
Lexington, KY
09/03/15

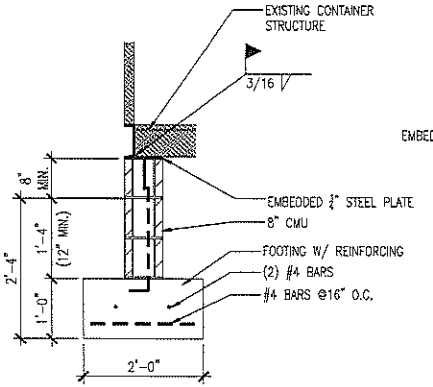
Index

EMERGE
CONTRACTING
941 National Ave, Ste 120
LEXINGTON, KY 40502
emergelex.com / 859-212-3077

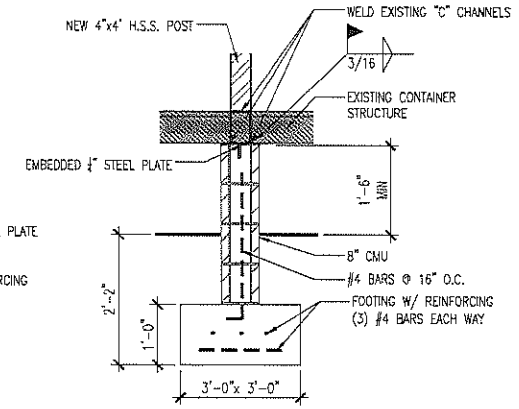


Foundation Notes

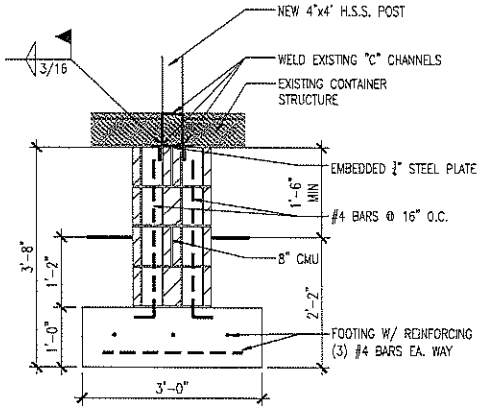
1. CRAWL SPACE MIN. 18"
2. ALL REBAR TO BE 3" ABOVE BOTTOM
3. TYPICAL FOOTING: MIN. 3000 PSI W/ (2) #4 REBAR UNLESS NOTED OTHERWISE, SEE PLAN FOR FOOTER SIZES AND LOCATIONS
4. DAMP PROOF BLOCK BELOW GRADE ONLY AT PLUMBING CHASE



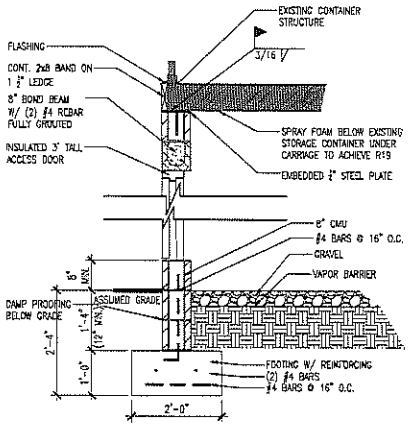
1 CMU Foundation Detail
1"=1'



2 Pier Detail-Midspan Connection
1"=1'



3 Pier Detail-Front Wall
1"=1'



4 Plumbing Chase Access Door
3/4"=1'

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Elkhorn Container Home

136 York Street
Lexington, KY

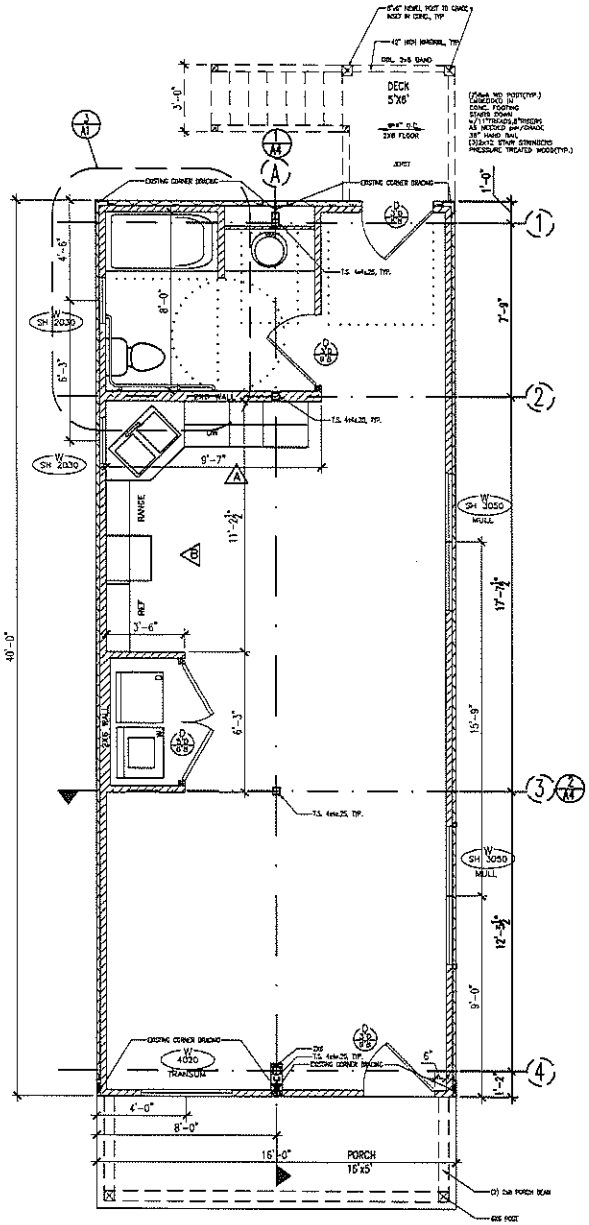
Foundation

RESIDENTIAL PLAN

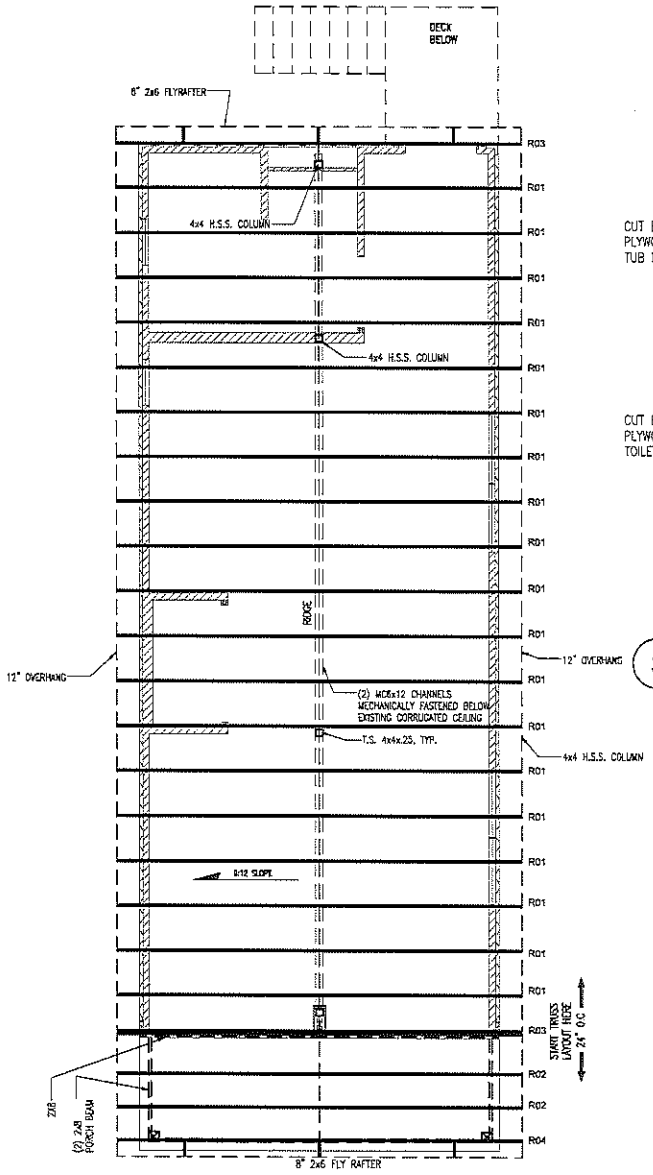
Designer	JCC
Scale	AS NOTED
Date	07/24/15

Date/Revision Notes

A-1



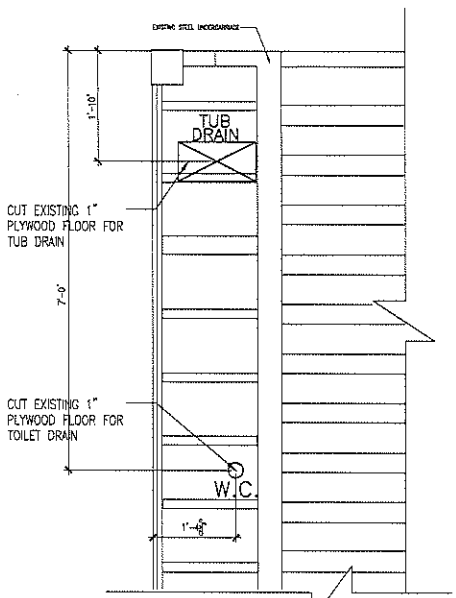
1 Floor Plan
3/8"=1'



2 Roof Plan
3/8"=1'

Notes

1. SPRAY FOAM EXISTING UNDER DECK TO ACHIEVE R19.
2. FURR OUT INTERIOR WALLS W/ 2x4 AND INSTALL R13 BATT INSUL.
3. FURR DOWN CEILING AND INSTALL R38 BATT INSUL.
4. 23" RIDGE VENT VENT CENTERED ON RIDGE



3 Plumbing Drain Locations
1/2"=1'

EMERGE
CONTRACTING
941 National Ave, Ste 120
LEXINGTON, KY 40502
emergeky.com / 859-219-3077

Elkhorn
Container Home
136 York Street
Lexington, KY

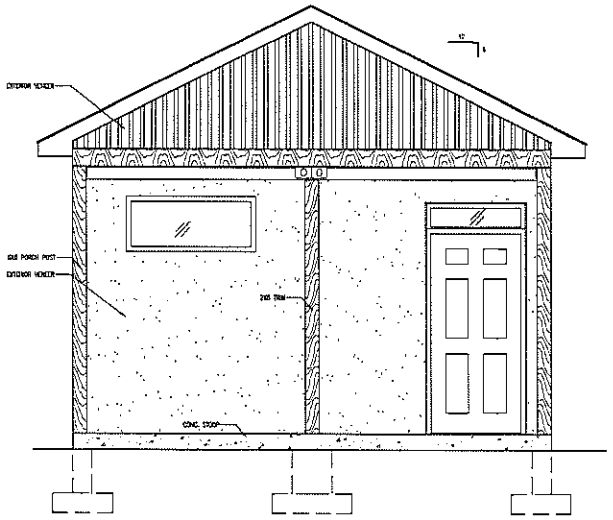
Floor Plan
Roof Plan
Plumbing

RESIDENTIAL PLAN

Designer	KSC
Scale	AS NOTED
Date	09/09/15
Date/Revision Notes	

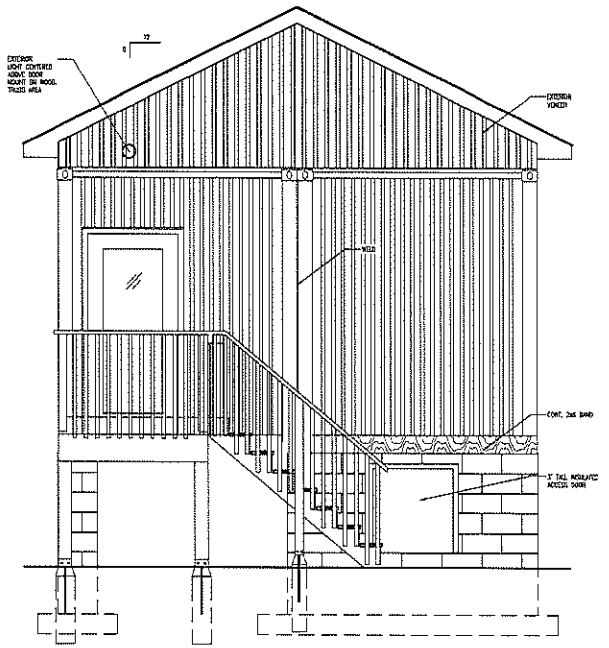
A-2

40

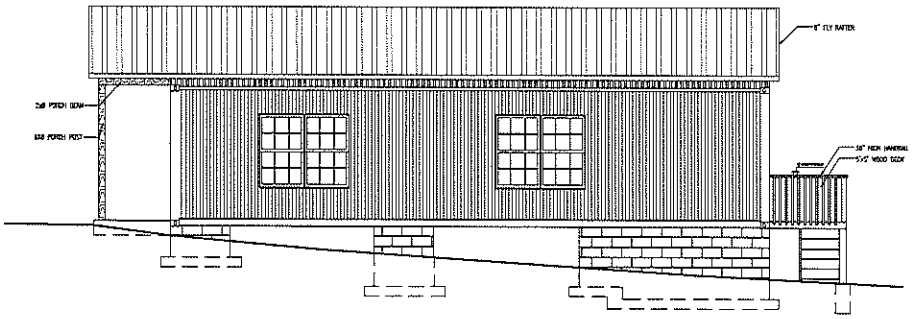


41

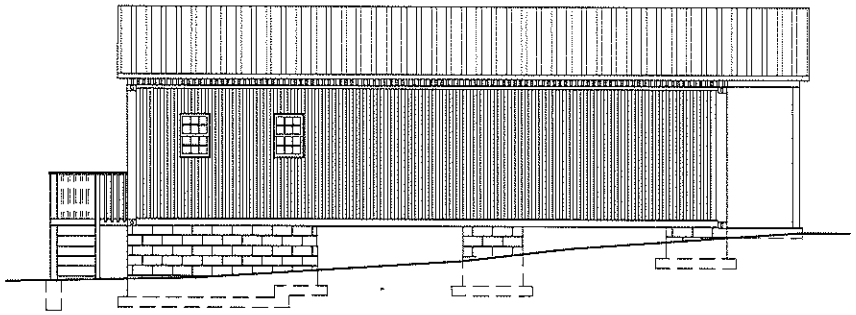
1 Front Elevation
1/2"=1'



2 Rear Elevation
1/2"=1'



3 Right Elevation
1/4"=1'



4 Left Elevation
1/4"=1'

EMERGE
CONTRACTING
941 National Ave, Ste 120
LEXINGTON, KY 40502
emergeky.com / 859.212.3677

Elkhorn
Container Home
136 York Street
Lexington, KY

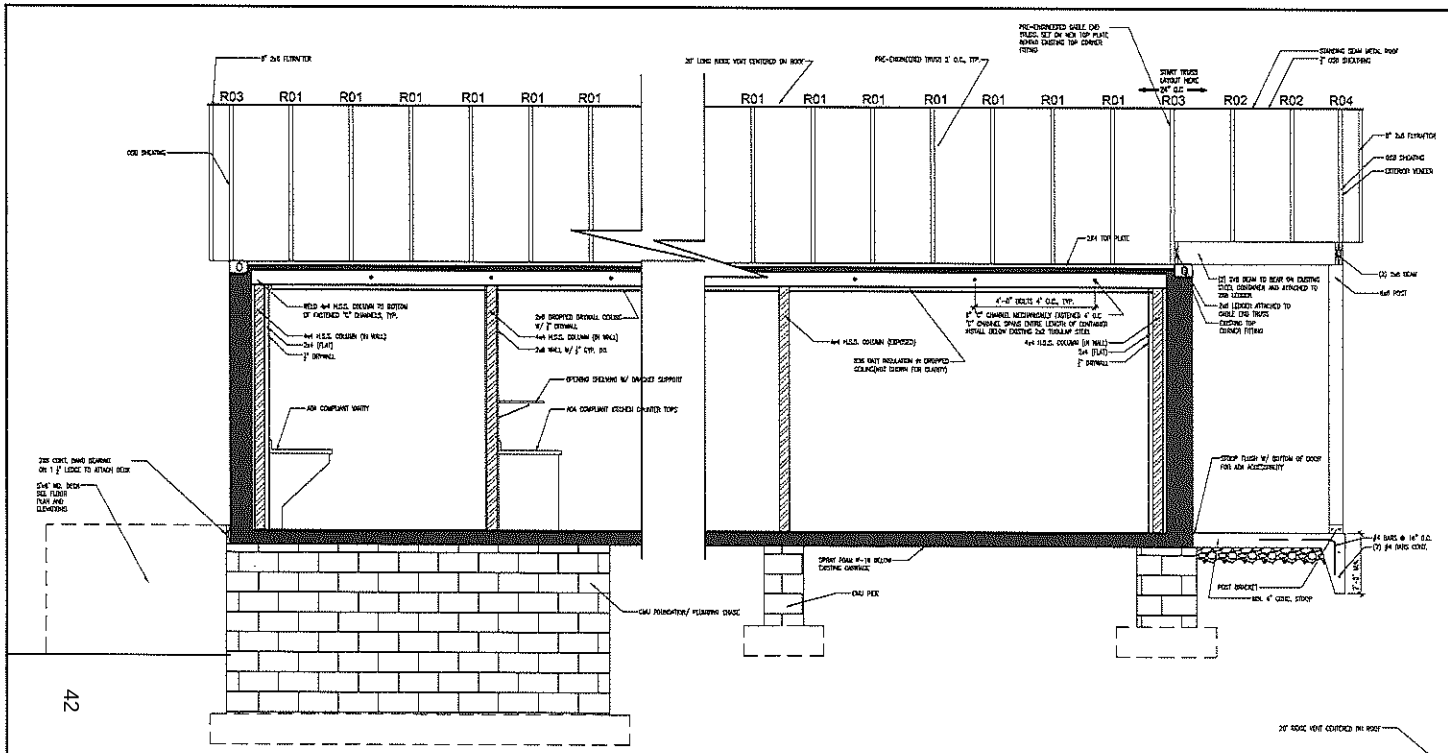
Elevations

RESIDENTIAL PLAN

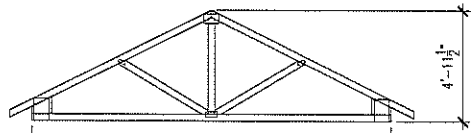
Designer	KC
Scale	AS NOTED
Date	08/03/15

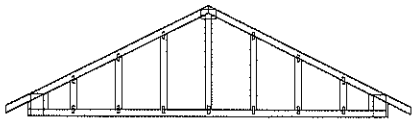
Date/Revision Notes

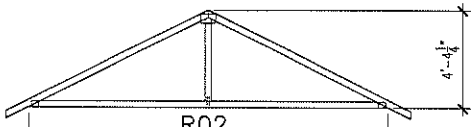
A-3

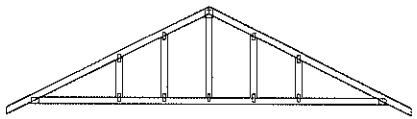


1 Section
1/2"=1'

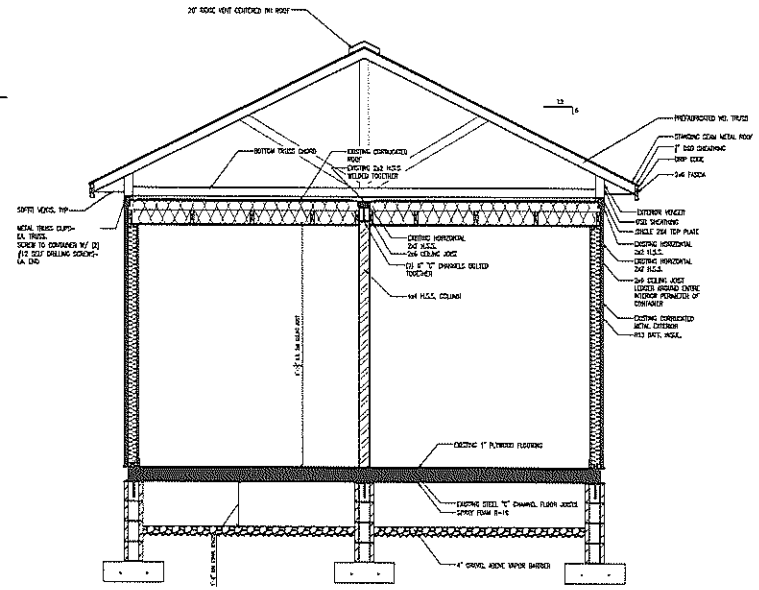








3 Truss Profile
1/2"=1'



2 Section
1/2"=1'

EMERGE CONTRACTING
941 National Ave, Ste 120
LEXINGTON, KY 40502
emergelex.com / 859.212.3077

Elkhorn Container Home
196 York Street
Lexington, KY

Sections
Truss Profiles

RESIDENTIAL PLAN

Designer	JCC
Scale	AS NOTED
Date	07/09/15
Date/Revision Notes	

A-4

Casework Schedule - Building 10	
CASEWORK TYPE	AMOUNT
B9	8
B24	4
B36	4
RSB30	4
VSB24	4
VSB30	4
W930	8
W2430	4
W3015	4
W3615	5

Window Schedule - Building 10		
TAG NUMBER	WINDOW TYPE	AMOUNT
3	2'-6" x 5'-0" SINGLE HUNG	12
5	3'-0" x 5'-0" SINGLE HUNG	20
10	2'-0" x 3'-0" SINGLE HUNG	1
10-T	2'-0" x 3'-0" SINGLE HUNG TEMPERED	4

Door Schedule- Building 10		
TAG NUMBER	DOOR TYPE	AMOUNT
1	3'-0" x 6'-8" EXTERIOR DOOR	4
2	3'-0" x 6-8" EXTERIOR DOOR W/ GLASS	4
10	1'-8" x 6'-8" PRE-HUNG PASSAGE	4
13	2'-8" x 6'-8" PRE-HUNG PASSAGE	4
14	2'-8" x 6'-8" PRE-HUNG PASSAGE	16
15	3'-0" x 6'-8" PRE-HUNG PASSAGE	4
30	2'-0" x 6'-8" BYPASS FINGER PULL, SET W/ HARDWARE	12

*SCHEDULES REFLECT COUNTS FOR ENTIRE BUILDING. AMOUNTS ARE NOT PER UNIT

GENERAL CONSTRUCTION NOTES

1- ALL DIMENSIONS ARE TO THE FACE OF FRAMING MEMBERS

2- EXTERIOR WALLS ARE CONSTRUCTED WITH 2X6 @ 24"O.C. FRAMING UNLESS OTHERWISE NOTED, ALL BEARING WALLS ARE CONSTRUCTED WITH 2X6 FRAMING @ 24" O.C. UNLESS OTHERWISE NOTED

3- INTERIOR WALLS ARE CONSTRUCTED WITH 2X4 @ 24" O.C. FRAMING UNLESS OTHERWISE NOTED

4- TYPICAL HALF WALLS W/ MDF CAP, 40" A.A.F.

5- TYPICAL BAR HEIGHT, 46-1/2" A.F.F.

6- PROVIDE SOLID CORE, INSULATED, 2-PANEL PAINTABLE EXTERIOR FIBERGLASS DOOR W/ DEADBOLT LOCK

7- ALL INTERIOR DOORS ARE PREHUNG HOLLOW CORE, SMOOTH, 2-PANEL W/ A PAINT GRADE FINISH, PRIMED WHITE. ALL JAMBS AND TRIM ARE FINGER JOINTED.

8- ALL WINDOWS ARE INSULATED VINYL W/ LOW-E GLAZING, UNLESS OTHERWISE NOTED, STC25 OR HIGHER, U-VALUE IS .30

9- SMOKE DETECTORS TO BE INSTALLED PER 2015 IRC GUIDELINES, SECTION R314

10- CARBON DETECTORS TO BE INSALLED PER 2015 IRC GUIDELINES, SECTION R315

11- TYPICAL ROD AND SHELF, 72" A.F.F.

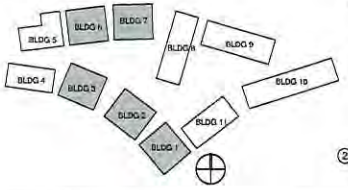
12- TYPICAL LINEN SHELVING, 4 TOTAL AT VARIED HEIGHTS (FIELD DETERMINED UNLESS OTHERWISE NOTED)

13- HANDRAILS REQUIRED @ ALL STAIRS PER 2015 IRC SEC.311.7.8, MIN. 34" ABOVE TREAD NOSE. HANDRAIL REQUIRED ON AT LEAST ONE SIDE OF STAIR AND RETURNED TO WALL AT TOP AND BOTTOM

14- PRE FABRICATED SOLID SURFACE TUB SURROUND TO BE USED IN THE TUB/SHOWER AREA, UNLESS OTHERWISE NOTED

15- GRAB BAR BLOCKING SHALL BE INSTALLED BETWEEN 32" AND 38" A.F.F. IN WALLS BEHIND AND NEXT TO TOILETS AND WALLS BEHIND THE TUB SURROUND IN FIRST FLOOR BATHS. CONFIRM BLOCKING LOCATIONS WITH PLUMBING CONTRACTOR

16- WRAP USEABLE SPACE UNDER STAIRS WITH 1/2" TYPE X GYPSUM WALLBOARD



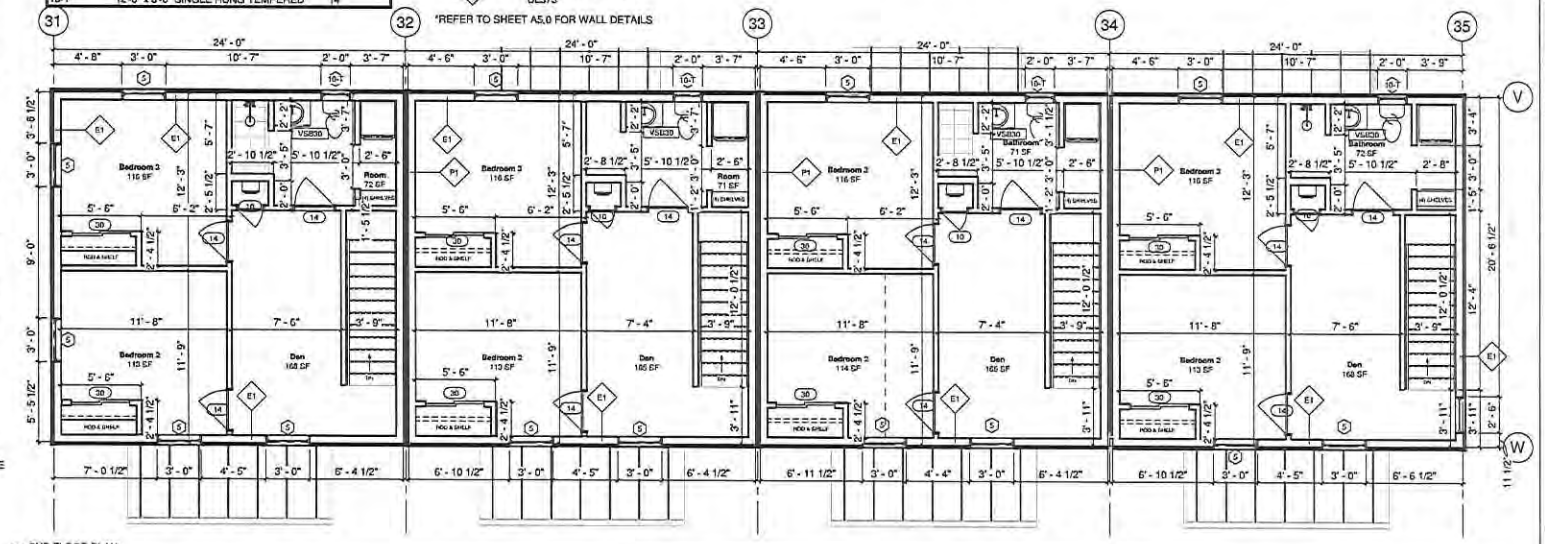
WALL LEGEND

E1 — NON RATED SEPARATION

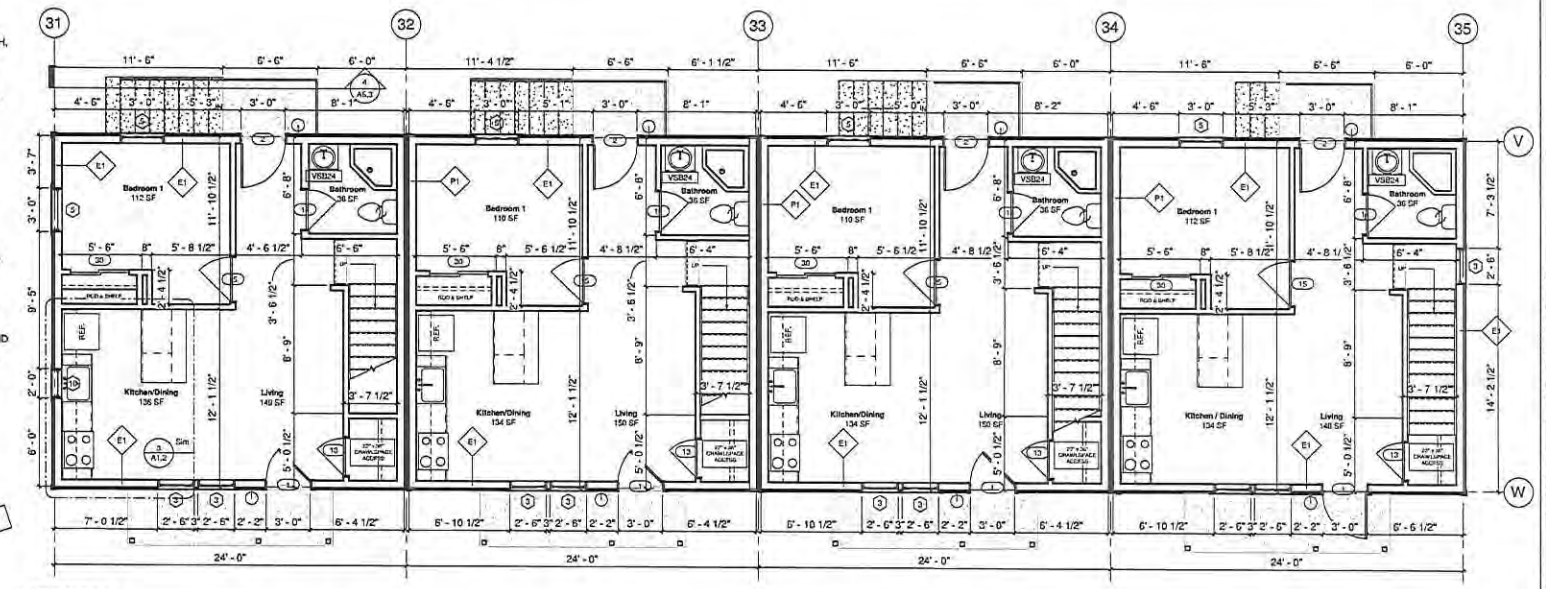
E2 — 1 HOUR SEPARATION WA 50-01 (PYROTITE FACING OUT)

P1 — 2 HOUR SEPARATION UL373

*REFER TO SHEET A5.0 FOR WALL DETAILS



1 2ND FLOOR PLAN
1/4" = 1'-0"



2 1ST FLOOR PLAN
1/4" = 1'-0"

**REFER TO OVERALL CODE PLAN (G0.2) FOR LOCATIONS OF 1-HOUR RATED WALLS

Habitat for Humanity of Metro Denver

Contact Info:
Habitat for Humanity of Metro Denver
3245 Eliot Street, Denver, CO 80211
(303) 534-2929

Kory Whitaker
Real Estate Manager
(720) 496-2729

STATE OF COLORADO
JAMES S. BERGHOF
B1132
LICENSED ARCHITECT

ARIA POCKET
2801 - 2831 W 53RD AVE
DENVER, COLORADO

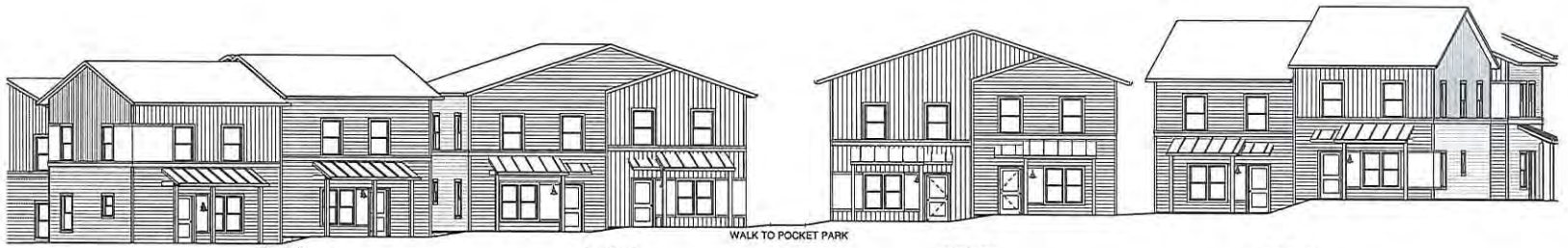
No.	Description	Date
	ISSUE FOR PERMIT	08.30.2019

ARIA POCKET
2801 - 2831 W 53RD AVE
DENVER, COLORADO

JOB NUMBER	PR0104
DRAWN BY	CH
CHECKED BY	JB

FLOOR PLANS - BLDG 10

A1.6



1 OVERALL SOUTH VIEW
1/8" = 1'-0"

2 OVERALL EAST VIEW
1/8" = 1'-0"

Habitat for Humanity of Metro Denver

Contact Info
Habitat for Humanity of Metro Denver
3245 Eliot Street, Denver, CO 80211
(303) 534-2929
Kory Wildsoet
Real Estate Manager
(720) 496-2729

STATE OF COLORADO
JAMES S. BERGHOFF
B1132
LICENSED ARCHITECT

ARIA POCKET
2801 - 2831 W 53RD AVE
DENVER, COLORADO

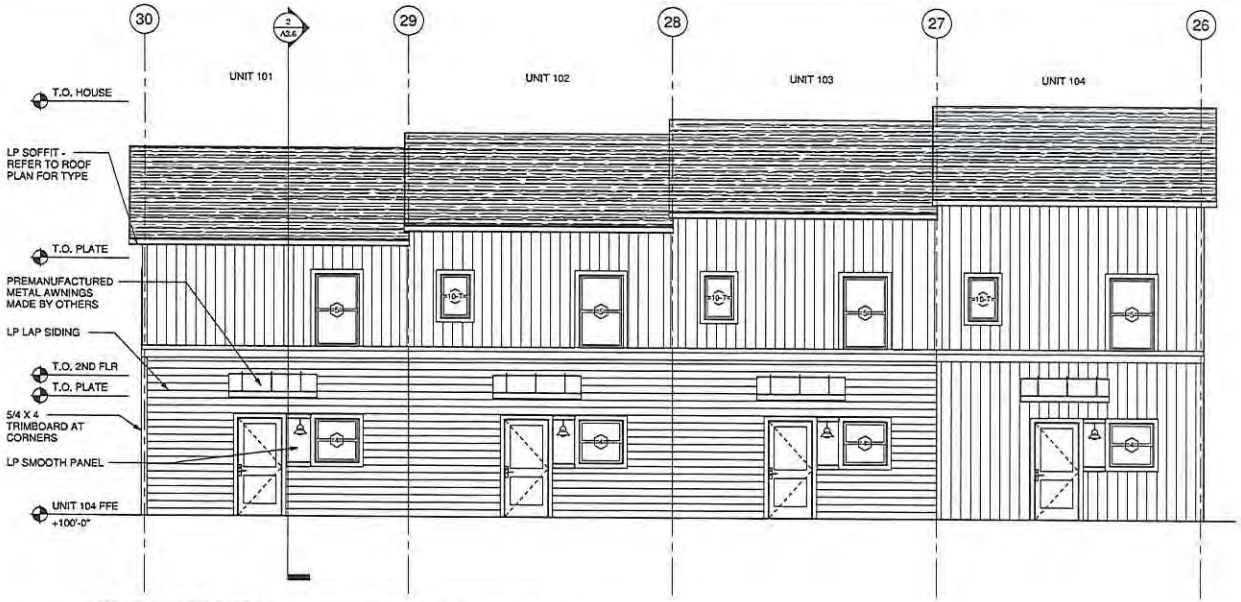
No.	Description	Date
	ISSUE FOR PERMIT	08.30.2019

ARIA POCKET
2801 - 2831 W 53RD AVE
DENVER, COLORADO

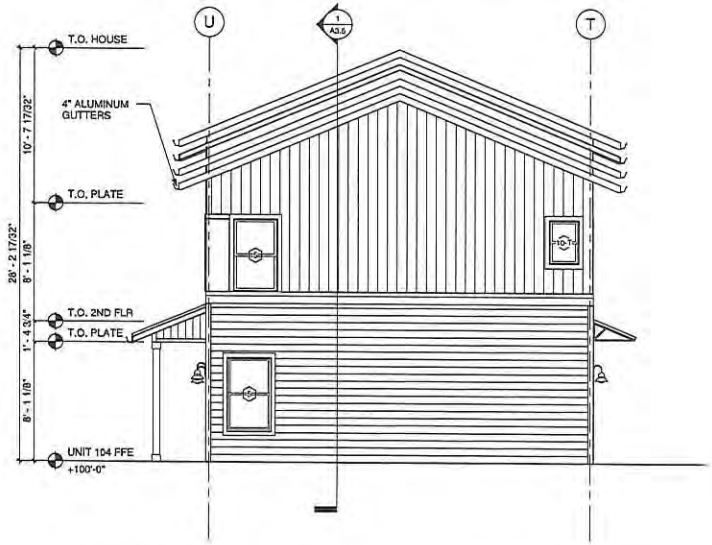
JOB NUMBER	PR0104
DRAWN BY	Author
CHECKED BY	Checker

OVERALL ELEVATIONS

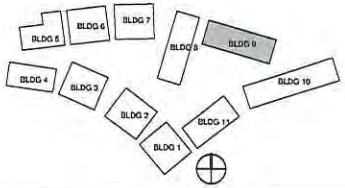
A2.00



1 SOUTH ELEVATION - BUILDING 9
1/4" = 1'-0"



2 WEST ELEVATION - BUILDING 9
1/4" = 1'-0"



45

Habitat for Humanity of Metro Denver

Contact Info
Habitat for Humanity of Metro Denver
3245 Eliot Street, Denver, CO 80211
(303) 534-2929

Kerry Whitaker
Real Estate Manager
(720) 496-2729

STATE OF COLORADO
JAMES S. BERSHOF
B1132
LICENSED ARCHITECT

ARIA POCKET
2801 - 2831 W 53RD AVE
DENVER, COLORADO

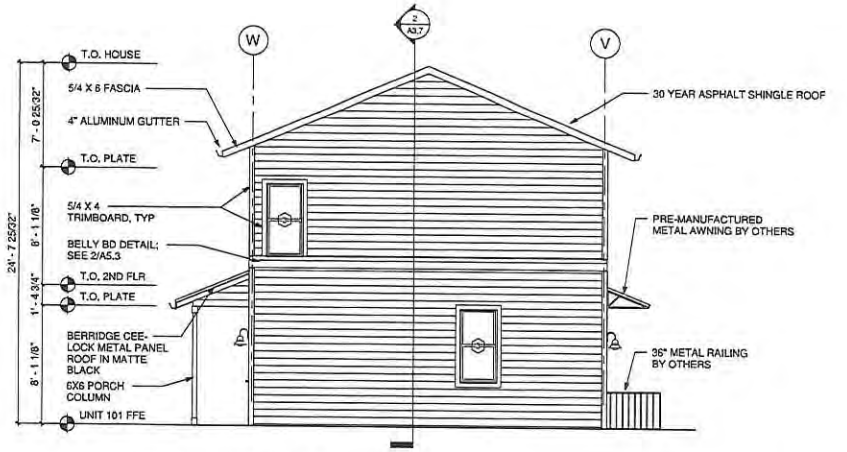
No.	Description	Date
	ISSUE FOR PERMIT	08.30.2019

ARIA POCKET
2801 - 2831 W 53RD AVE
DENVER, COLORADO

JOB NUMBER	PR0104
DRAWN BY	CH
CHECKED BY	JB

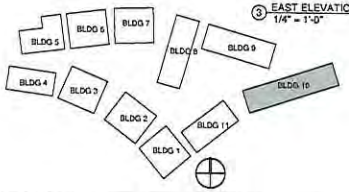
ELEVATIONS - BLDG 9

A2.18B



1 NORTH ELEVATION - BUILDING 10
1/4" = 1'-0"

3 EAST ELEVATION - BUILDING 10
1/4" = 1'-0"



Habitat for Humanity of Metro Denver

Contact Info

Habitat for Humanity of Metro Denver
3245 Eliot Street, Denver, CO 80211
(303) 534-2629

Kory Whitaker
Real Estate Manager
(720) 490-2729

STATE OF COLORADO
JAMES S. PESCHKE
B1132
LICENSED ARCHITECT

ARIA POCKET
2801 - 2831 W 53RD AVE
DENVER, COLORADO

No.	Description	Date
	ISSUE FOR PERMIT	09.30.2019

ARIA POCKET	
2801 - 2831 W 53RD AVE DENVER, COLORADO	
JOB NUMBER	PR0104
DRAWN BY	CH
CHECKED BY	JB

ELEVATIONS - BLDG 10

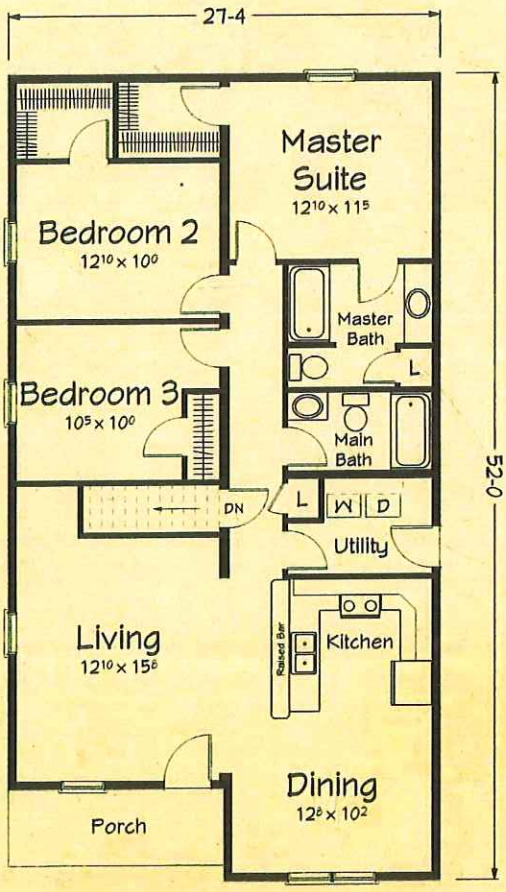
A2.19A

CALABASH

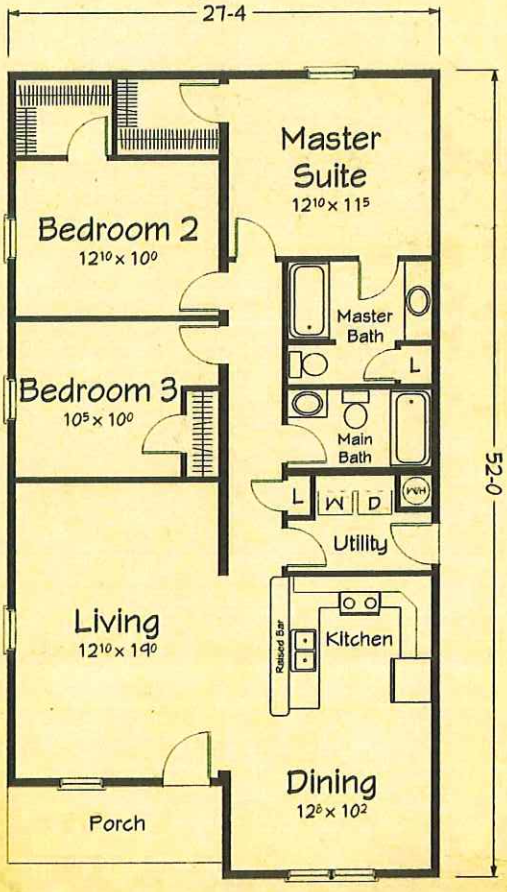
Ranch

1339 Square Feet

Basement Plan



Crawlspace Plan



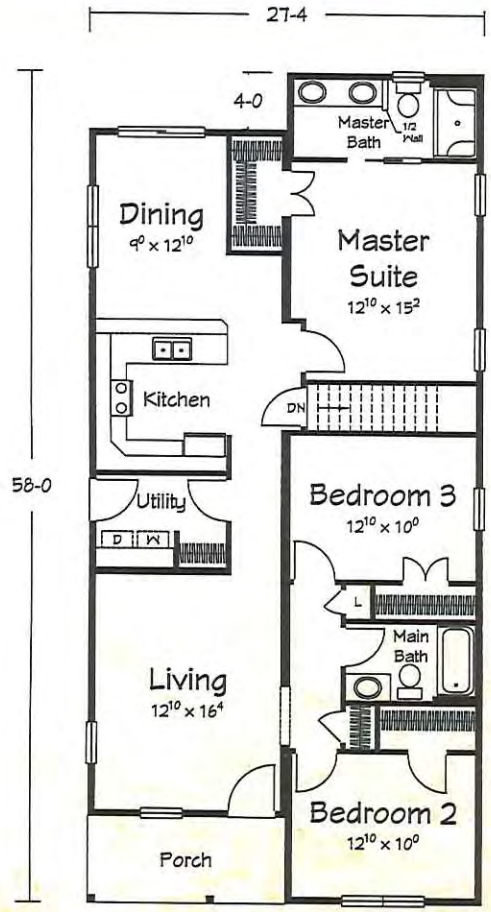
Artist renderings depict homes as they may be built on a typical site. Renderings may include optional or site installed features. Refer to "Heritage Collection" specifications and be sure to thoroughly discuss all aspects of your building project with your homebuilder.

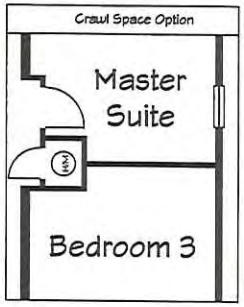
RITZ-CRAFT CORPORATION
The Distinction is in Our Differences.

Hillsdale

RANCH PLAN

AMERIC
HERITA
SERIE

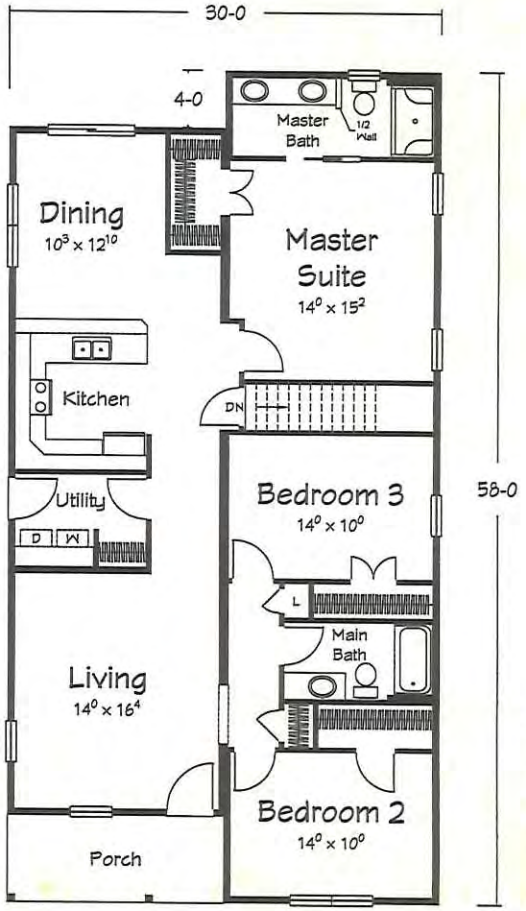




Hillsdale I

1449 sq. ft. Living Area

- 3 Bedrooms
- 2 Baths



Hillsdale II

1590 sq. ft. Living Area

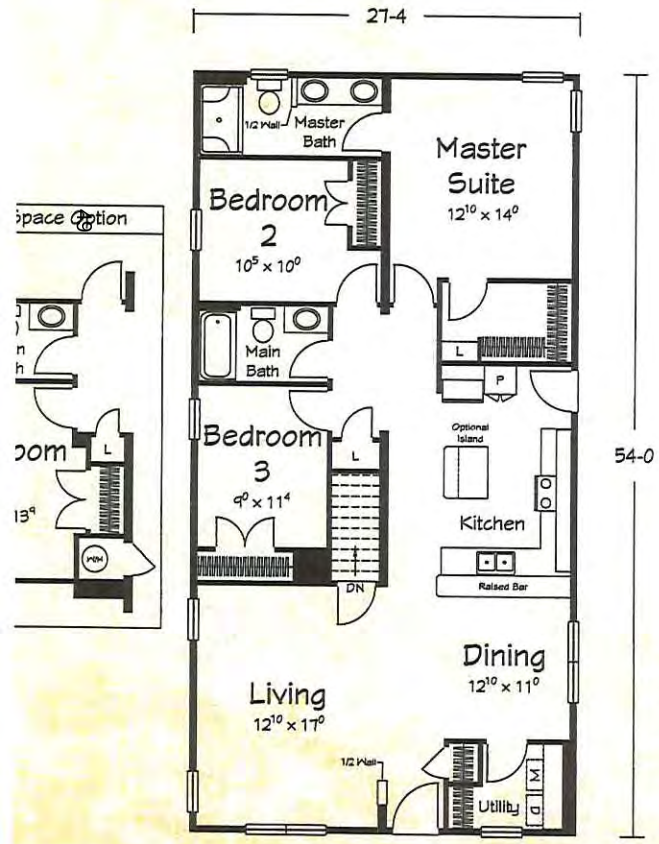
- 3 Bedrooms
- 2 Baths

Ritz-Cr

Mallard Walk

RANCH PLAN

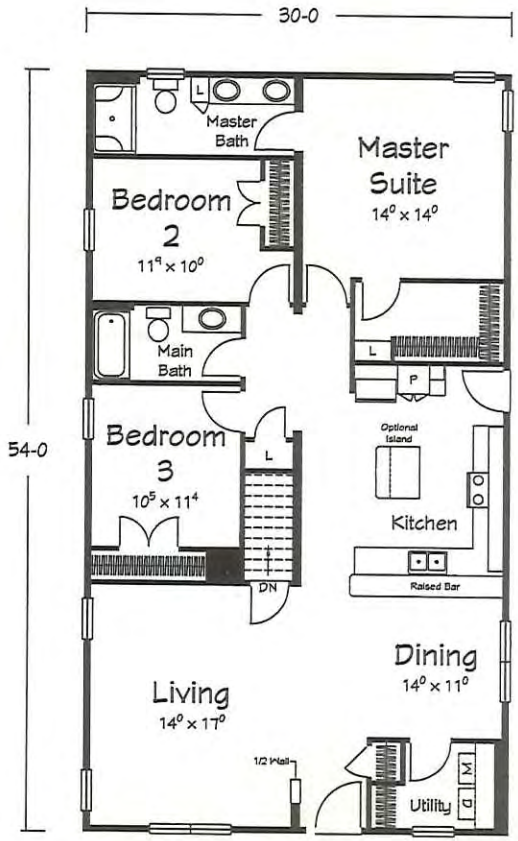
Shown with site built porch



Mallard Walk I

1476 sq. ft. Living Area

- 3 Bedrooms
- 2 Baths



Mallard Walk II

1620 sq. ft. Living Area

- 3 Bedrooms
- 2 Baths

lan exterior dimensions and interior room sizes are accurate, but may have been led" for brochure plans. Always refer to Ritz Craft provided prints for actual dimensions.

A HOMESTEAD
Ranch
Plan

Shown with site built porch.

MALVERN

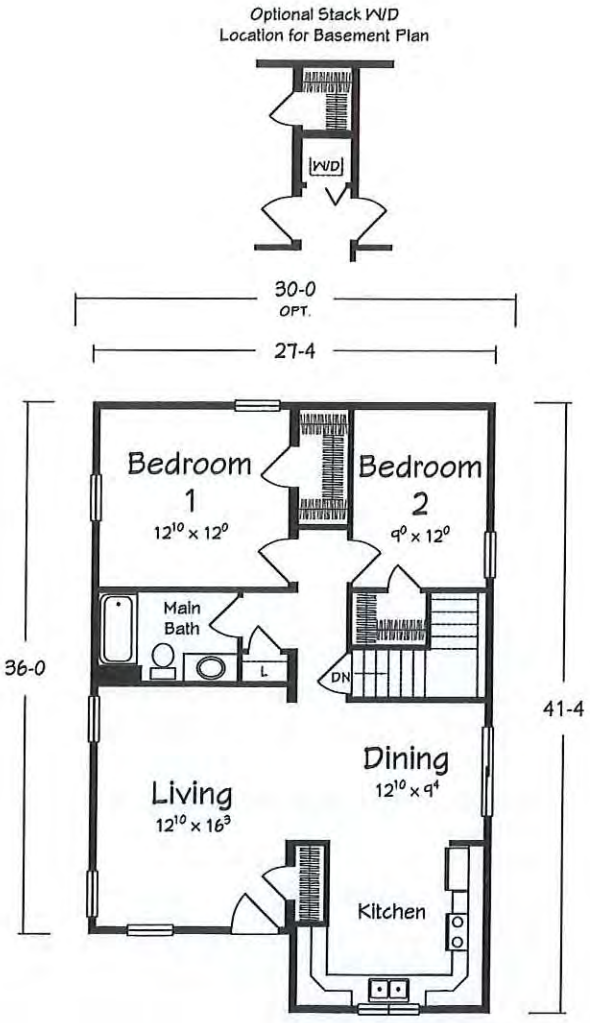
RANCH

1057-1160 square feet

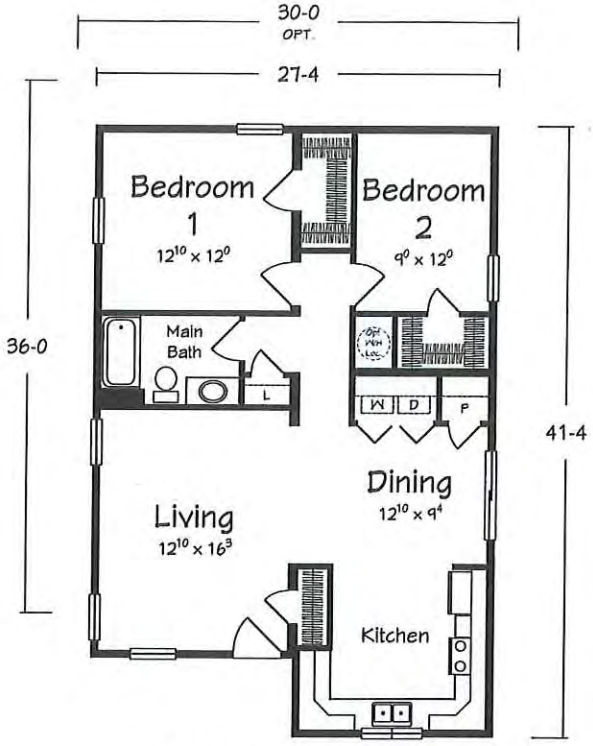
2 Bedrooms • 1 Bath

28 wide #8533

30 wide #8633



Basement Plan



Crawlspace Configuration

Artist's renderings depict homes as they may be built on a typical site. Renderings may include optional or site installed features. Refer to Ritz-Craft's standard "Homestead Specifications" and be sure to thoroughly discuss all aspects of your building project with your selected homebuilder.

Ritz-Craft
Custom Building Simplified

CITY OF BLOOMINGTON
HOUSING AND NEIGHBORHOOD DEVELOPMENT

September 5, 2023

Drew Myers
Senior Planner
Monroe County Historic Preservation Board of Review
501 N Morton St.
Bloomington, IN 47404

Re: Invitation to consult regarding the installation of new sidewalk and accessibility ramp at 410 W Kirkwood Ave, Bloomington, IN using Community Development Block Grant funds for Physical Improvements.

Dear Mr. Myers,

The City of Bloomington, Indiana is considering funding the project listed above with federal funds from the U.S. Department of Housing and Urban Development (HUD). Under HUD regulation 24 CFR 58.4, the City of Bloomington has assumed HUD's environmental review responsibilities for the project, including consulting with interested parties related to historic properties. Historic properties include archeological sites and structures.

City of Bloomington will conduct a review of this project to comply with Section 106 of the National Historic Preservation Act and its implementing regulations 36 CFR Part 800. We would like to invite you to be a consulting party in this review to help identify historic properties in the project area that may have local historical significance and to help assess how the project might affect them. If the project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

To meet project timeframes, if you would like to be a consulting party on this project, can you please let us know of your interest within 30 days? If you have any initial concerns with impacts of the project on religious or cultural properties, can you please note them in your response?

The project is located at 410 W Kirkwood Avenue, Bloomington, Monroe County, Indiana. The site has a non-contributing structure and the scope of work that breaks ground consists of completing site work and excavation, especially regarding utility connections and utility permit, building a new ADA accessible sidewalk on the west and south side of the building, including a ramp and a staircase and installing walkway pavers. The sub-recipients have already begun working on the site, which already had the sidewalk and ramp installed as of September 5, 2023.

More information on the Section 106 review process is available at http://www.onecpd.info/environmental-review/historic-preservation/.

If you do not wish to consult on this project, no reply to this letter is needed. Thank you very much. We value your assistance and look forward to consulting further if there are historic properties that may be affected by this project.

Sincerely,

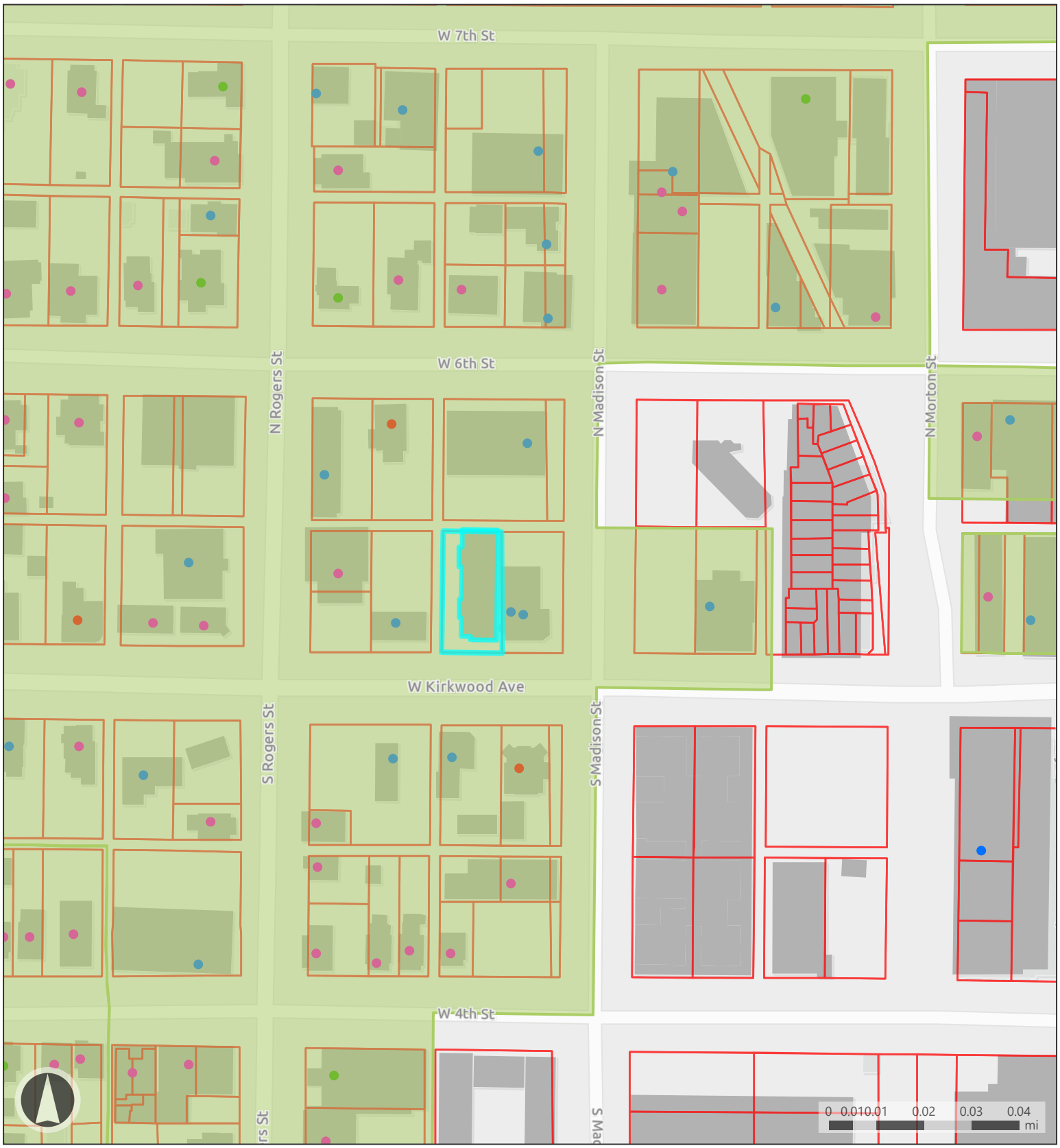
Gloria M. Colom Braña
Historic Preservation Program Manager
City of Bloomington, Indiana

Cc: Department of Historic Preservation and Archeology, Department of Natural Resources, Indiana

Attachments

City of Bloomington

410 W Kirkwood Ave - Location and Historic



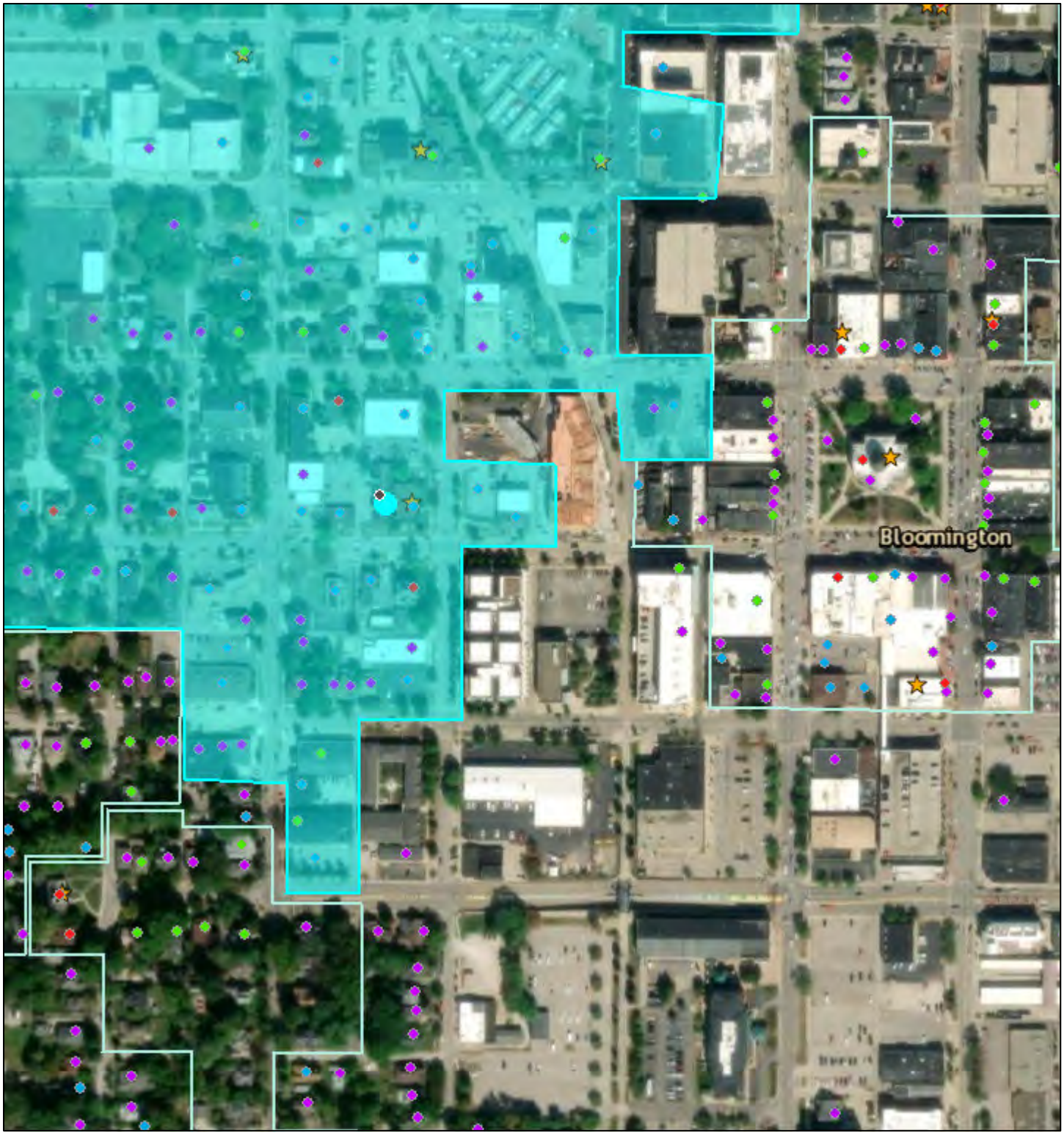
Map Legend

- National Historic Register
- Outstanding
- Notable
- Contributing
- Non-Contributing
- Monroe County Parcels
- Building Areas
- Township Boundaries
- Bloomington Municipal Boundary

Created: 9/1/2023 *Map By:*

For use as map information only, information is NOT warranted.

Historic Buildings, Bridges, and Cemeteries Map



9/1/2023, 2:56:54 PM

1:4,514

0 0.0375 0.075 0.15 mi

0 0.05 0.1 0.2 km

County Survey Sites

- Outstanding
- Notable
- Contributing
- Non-Contributing

Override 1

National Register Sites

Historic Districts

Override 1

Historic Districts

Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Bloomington Cooperative Living (410 W Kirkwood Ave., Bloomington, IN)
Photo 1
Site Visit September 5, 2023
403 W Kirkwood Ave. - View from north to south, property across the street.

CITY OF BLOOMINGTON
HOUSING AND NEIGHBORHOOD DEVELOPMENT

Bloomington Cooperative Living (410 W Kirkwood Ave., Bloomington, IN)
Photo 2
Site Visit September 5, 2023
View from south to north of 410 W Kirkwood Ave. (left) and 404 W Kirkwood Ave. (right)

CITY OF BLOOMINGTON
HOUSING AND NEIGHBORHOOD DEVELOPMENT

Bloomington Cooperative Living (410 W Kirkwood Ave., Bloomington, IN)
Photo 3
Site Visit September 5, 2023
View standing on the south and looking north east.

CITY OF BLOOMINGTON
HOUSING AND NEIGHBORHOOD DEVELOPMENT

Bloomington Cooperative Living (410 W Kirkwood Ave., Bloomington, IN)
Photo 4
Site Visit September 5, 2023
View looking from the west to the east.

CITY OF BLOOMINGTON
HOUSING AND NEIGHBORHOOD DEVELOPMENT

Bloomington Cooperative Living (410 W Kirkwood Ave., Bloomington, IN)
Photo 4
Site Visit September 5, 2023
View looking from the west to the south east.

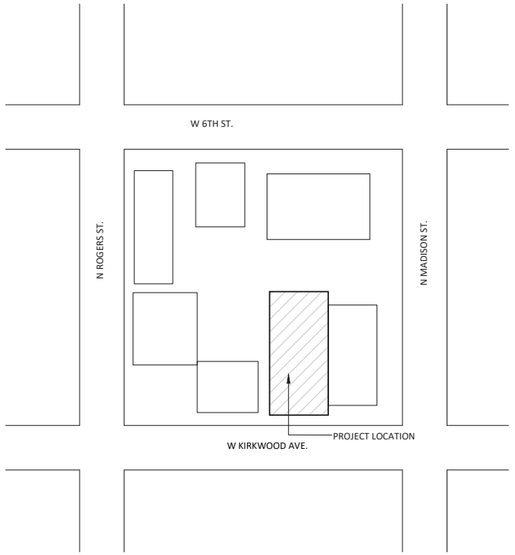
CITY OF BLOOMINGTON
HOUSING AND NEIGHBORHOOD DEVELOPMENT

ARCHITECT'S PROJECT NO. 2022-26

BLOOMINGTON COOPERATIVE LIVING

410 W. KIRKWOOD AVENUE, BLOOMINGTON, IN

12/19/2022 Revised SEPTEMBER 23, 2022



A LOCATION MAP
SCALE: 1/16" = 1'-0"

LEGAL DESCRIPTION: 013-10490-00 ORIGINAL; PLAT; 151
PARCEL NUMBER: 53-05-32-413-066.000-005

DRAWING INDEX

BARRE ALAINE KLAPPER REGISTERED No. AR11400042 INDIANA ARCHITECT

9.23.22

CIVIL ENGINEER

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ARCHITECT

springpoint ARCHITECTS, inc

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CODE REVIEW

2014 Indiana Building Code (IBC) 12/01/2014 – comprised of 2012 International Building Code & A117.1 Accessible and Usable Buildings and Facilities, 2009 Edition

The one-story existing office building contains 4,058 square feet. The building is of unrated construction with a concrete slab foundation, wood-framed walls, and wood truss roof structure. The building will be renovated to accommodate a 2,940 square foot cooperative living unit with twelve (12) bedrooms and shared kitchen, living and laundry and bathrooms and a 940 square foot meeting space. The R-3 occupancy will be sprinkled with an NFPA 13D system.

Use and Occupancy Classification:

Business Group B to change to Residential Group R-3 (Congregate Living Facilities (non-transient) with 16 occupants or less) and Assembly Group A-2 (Future Tenant).

Section 503 General Building Height and Area Limitations

Group		Type of Construction Type V B	Actual Area
A-2	Stories	1	1
	Area (sf)	6,000	940
R-3	Stories	3	1
	Area (sf)	Unlimited	3,118

Section 420 Groups I-1, R-1, R-2, R-3

420.2 Separation walls. Walls separating dwellings units in the same building, walls separating sleeping units in the same building and walls separating dwellings or sleeping units from other occupancies contiguous to them in the same building shall be constructed as fire partitions in accordance with Section 708.

Section 508 Mixed Use and Occupancy

Uses do not need to be separated under 508.3. However, Exception 2 does apply, and the uses will be separated with a 2-hour fire barrier.

Table 508.4 Required Separation of Occupancies (Hours)

Occupancy	B	
	S	NS
A & R	1	2

Section 708 Fire Partitions

708.3 Fire-resistance rating. Fire partitions shall have a fire-resistance rating of not less than 1 hour.

Exceptions:

1. Corridor walls permitted to have a ½ hour fire-resistance rating by Table 1018.1.
2. Dwelling unit and sleeping unit separations in buildings of Type IIB, IIIB, and VB construction shall have fire-resistance ratings of not less than ½ hour in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

Section 707 Fire Barriers

707.3.9 Separated Occupancies. Where the provisions of Section 508.4 are applicable, the fire barrier separating mixed occupancies shall have a fire-resistance rations of not less than indicated in Table 508.4.

707.5 Continuity. Fire barriers shall extend from the top of the foundation...to the underside of the floor or roof sheathing, slab or deck above and shall be securely attached thereto. Such fire barriers shall be continuous through concealed space...

Chapter 9 – Fire Protection Systems

Section 903 Automatic Sprinkler Systems
The Group A-2 fire area *does not meet the criteria* established in 903.2.1.3 for an automatic sprinkler system to be installed.

The R-3 fire area requires an automatic sprinkler system to be installed throughout in accordance with NFPA 13D under 903.3.1.3.

Chapter 10 - Means of Egress

Table 1004.1.2 Maximum Floor Area Allowance per Occupant

Function of Space	Occupant Load Factor	Actual Area	Actual Occupant Load
Assembly, concentrated	7 net	644	96
Residential	200 gross	2,940	15
TOTAL			111

Section 1015. Exit and Exit Access Doorways
1015.1 Exits or exit access doorways from spaces. Two exits or exit excess doorways from any space shall be provided where the occupant load of the space exceeds one of the values on Table 1015.1.

Table 1015.1 Spaces with One Exit or Exit Access Doorway

Occupancy	Maximum Occupant Load	Actual Occupant Load
A	49	96
R	10	15

1015.2.1 Two exits or exit access doorways. Where two exits or exit access doorways are required from any portion of the exit access, the exit doors shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the building or are to be served measured in a straight line between exit doors.

Table 1018.2 Exit Access Travel Distance

Occupancy	Without Sprinkler System	With Sprinkler System
A, R	200	250

Table 1018.1 Corridor Fire-Resistance Rating

Occupancy	Occupant Load Served by Corridor	Required Fire-Resistance Rating (hours)	
		Without Sprinkler System	With Sprinkler System
R	Greater than 10	Not Permitted	.5

Chapter 11 – Accessibility

1107.2 Design. Dwelling units and sleeping units that are required to be Accessible Units, Type A units and Type B units shall comply with the applicable portions of Chapter 10 if ICC A117.1...

1107.6.3 Group R-3. In the Group R-3 occupancies where there are four or more dwelling units or sleeping units intended to be occupied as a residence in a single structure, every dwelling unit and sleeping unit intended to be occupied as a residence shall be a Type B unit.

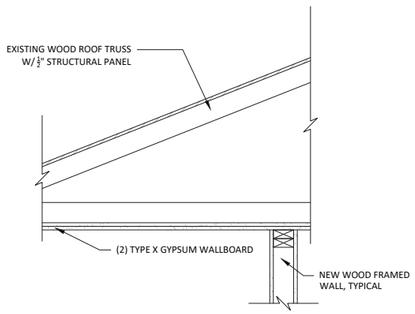
Chapter 29 – Plumbing Systems

Table 2902.1 Minimum Number of Required Plumbing Fixtures

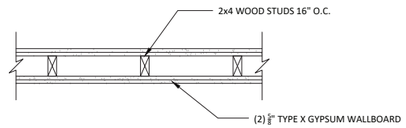
Classification	Occupancy	Water Closets M	Water Closets F	Lavatories M	Lavatories F	Bathtubs or Showers	Drinking Fountains	Other
Assembly	A-2	1 per 75		1 per 200		0	Footnote 'h' & 'f'	1 service sink
Residential	R-3	1 per 10		1 per 10		1 per 8	1 per 100	1 service sink

Footnote 'h' – Drinking fountains not required where water is served in restaurants free of charge or water. Water will be provided.

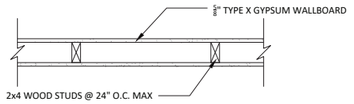
Section 2902.2 Separate Facilities
Where plumbing fixtures are required, separate facilities shall be provided for each sex.



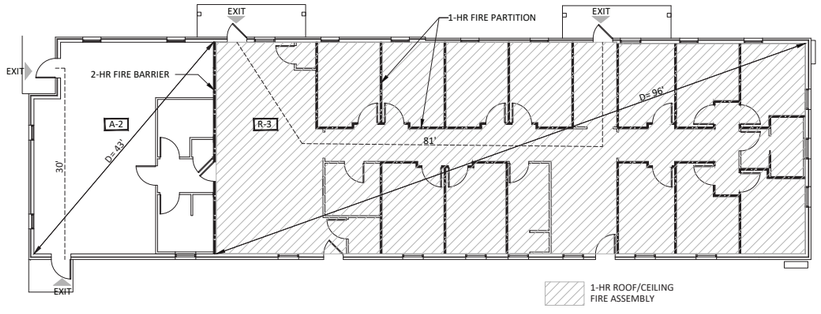
D 1-HR RATED ROOF/CEILING - 21.2 FROM IBC
FIRE ASSEMBLY
SCALE: 1/2" = 1'-0"



C 2-HR RATED FIRE BARRIER - GA NO. WP 4135
FIRE ASSEMBLY
SCALE: 1" = 1'-0"



B 1-HR RATED FIRE PARTITION - GA FILE NO. WP 4136
FIRE ASSEMBLY
SCALE: 1" = 1'-0"



A CODE PLAN
SCALE: 3/32" = 1'-0"

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certified

ALAINE KAPPER BARR REGISTERED No. AR11400042 INDIANA ARCHITECT
9.23.22

project title

BLOOMINGTON COOPERATIVE LIVING
410 W. KIRKWOOD AVE
BLOOMINGTON, IN

project information

PROJECT NUMBER: 22-27
ISSUE DATE: 09.23.2022
REVISION DATE: 12.19.2022

sheet title

CODE REVIEW, PLANS, & DRAWING INDEX

sheet number

CODE

DEMOLITION GENERAL NOTES

A. CONTRACTOR SHALL VERIFY IN FIELD LIMITS OF DEMOLITION REQUIRED FOR NEW WORK. NOTIFY ARCHITECT OF DISCREPANCIES.

B. SECURE STRUCTURE WHEN REMOVING ITEMS. NOTIFY ARCHITECT OF ANY STRUCTURAL ISSUES.

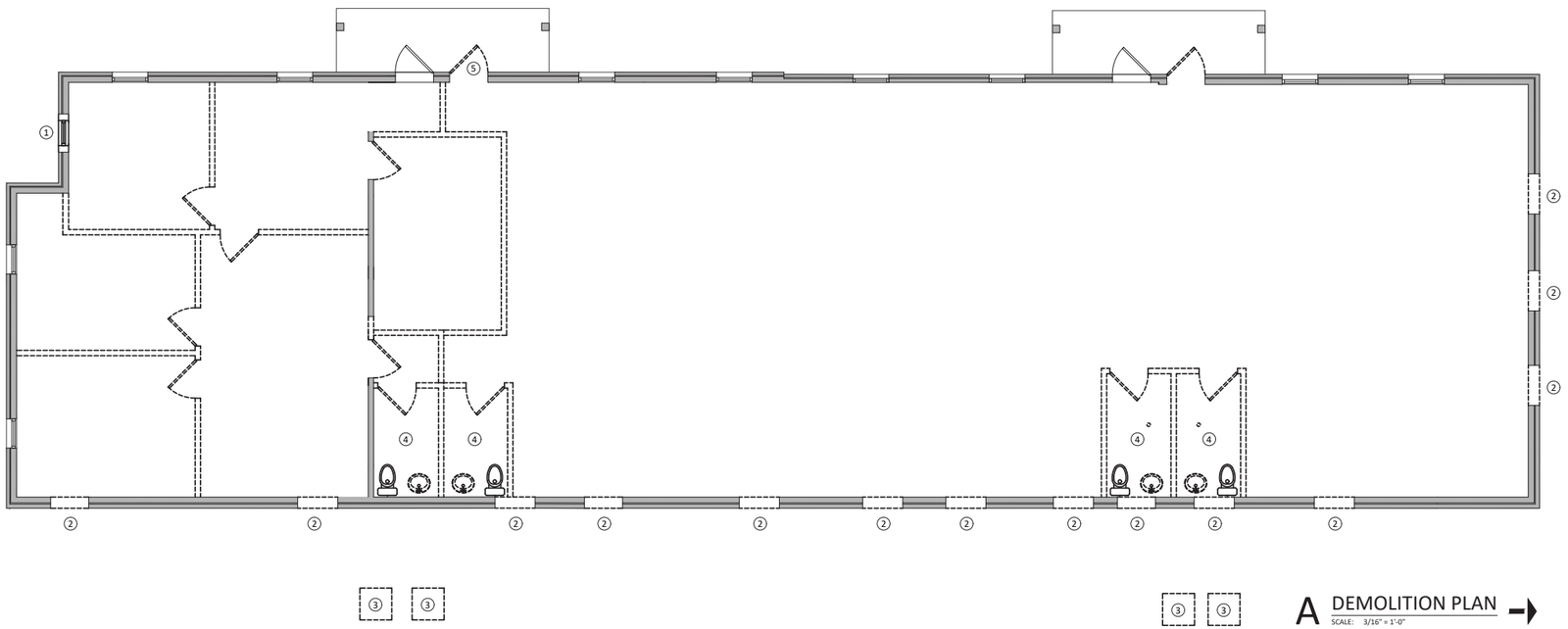
C. WHERE REMOVAL OF ITEMS LEAVES HOLES AND DAMAGED SURFACES THAT WILL BE EXPOSED IN FINISHED WORK, PATCH AND REPAIR TO MATCH ADJACENT SURFACES.

D. AS A RESULT OF NEWLY EXPOSED CONDITIONS, NOTIFY ARCHITECT OF NEEDED REPLACEMENT OF DAMAGED MATERIALS.

E. DISCONNECT ALL SWITCHES, RECEPTACLES AND DEVICES IN AREAS OF WALL TO BE DEMOLISHED.

DEMOLITION KEY NOTES

1. REMOVE WINDOW AND SECTION OF WALL FOR NEW DOOR LOCATION
2. REMOVE SECTION OF WALL FOR NEW OPENING
3. REMOVE A/C UNIT
4. REMOVE BATHROOM COMPLETE
5. REMOVE DOOR, SALVAGE FOR REINSTALLATION



A DEMOLITION PLAN
SCALE: 3/16" = 1'-0"

LEGEND

EXISTING WALL TO REMAIN

WALL OR ITEM TO BE REMOVED

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BARRY ALAINE KLAPPER
REGISTERED
No. AR11400042
INDIANA
ARCHITECT
9.23.22

project title

BLOOMINGTON COOPERATIVE LIVING

410 W. KIRKWOOD AVE

BLOOMINGTON, IN

project information

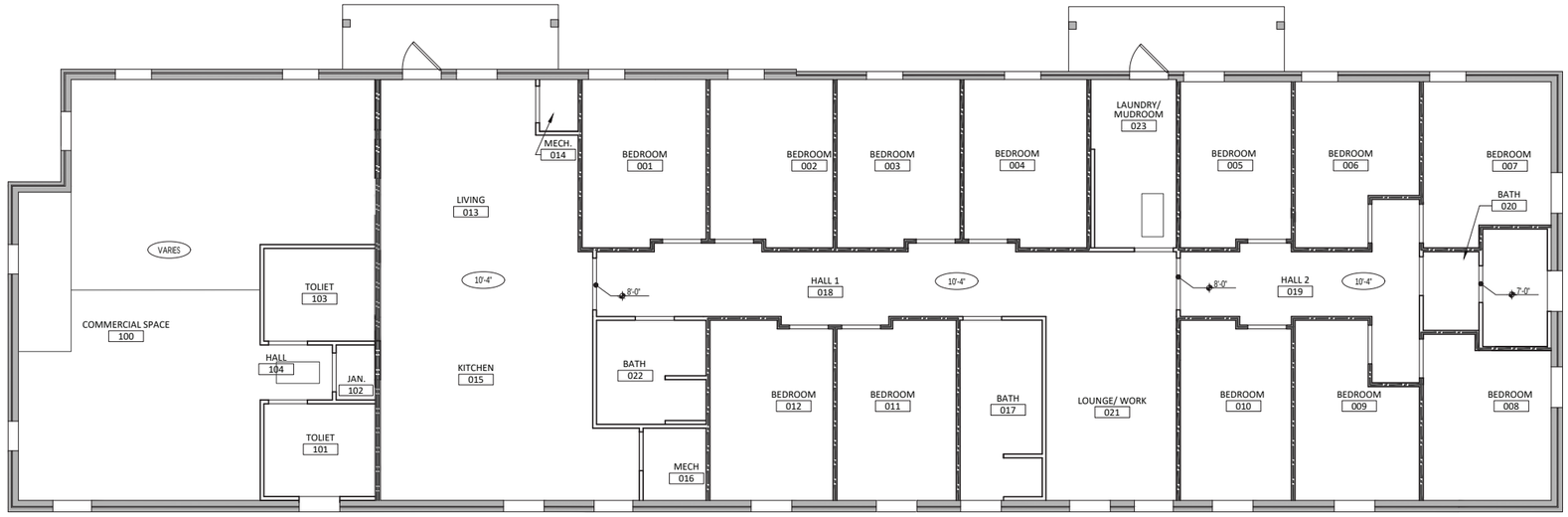
PROJECT NUMBER: 22-27
ISSUE DATE: 09.23.2022
REVISION DATE: 12.19.2022

sheet title

DEMOLITION PLANS

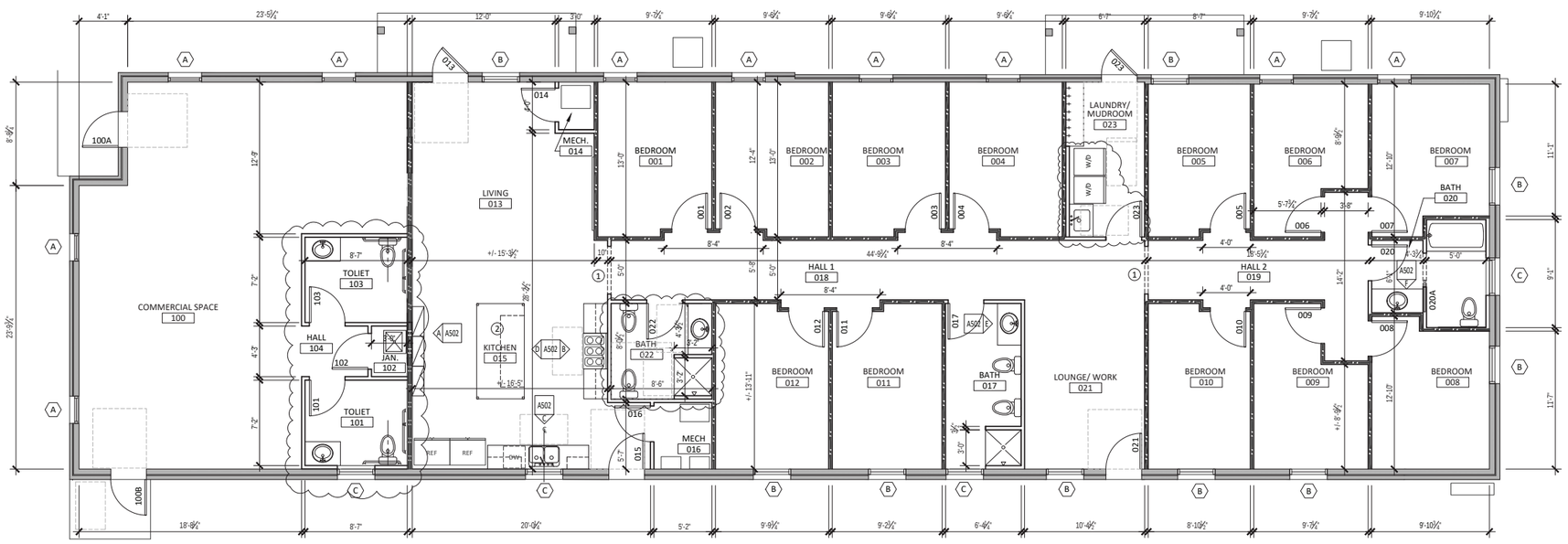
sheet number

D101



B REFLECTED CEILING PLAN

SCALE: 3/16" = 1'-0"



A FLOOR PLAN

SCALE: 3/16" = 1'-0"

GENERAL PLAN NOTES

A. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, CONDITIONS AND LOCATIONS. REPORT DISCREPANCIES TO ARCHITECT.

B. COORDINATE WORK OF OTHER TRADES WITH YOUR TRADE BEFORE STARTING ANY CONSTRUCTION.

C. DIMENSIONS ARE TO FACE OF FRAMING AT NEW WALLS AND FACE OF FINISH AT EXISTING WALLS. DRAWINGS ARE NOT TO BE SCALED.

D. PROVIDE FIRE BLOCKING IN ALL WALLS AT 10'-0" AFF.

E. PROVIDE SOUND ATTENUATION BATTS IN ALL NEW INTERIOR WALLS.

F. PROVIDE BLOCKING FOR CABINETS, TOILET ACCESSORIES, HANDRAILS, ETC.

G. REFERENCE A502 FOR ENLARGED BATHROOM PLANS.

H. REFERENCE A501 FOR CABINET ELEVATIONS AND SCHEDULES.

PLAN KEY NOTES

1. PROVIDE CASED DOOR OPENING
2. SUSPENDED PAN RACK

GENERAL CEILING PLAN NOTES

A. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, CONDITIONS AND LOCATIONS. REPORT DISCREPANCIES TO ARCHITECT.

B. COORDINATE WORK OF OTHER TRADES WITH YOUR TRADE BEFORE STARTING ANY CONSTRUCTION.

REF. CEILING PLAN NOTES

0 --

LEGEND

- EXISTING WALL TO REMAIN
- 2 x 4 WALL, U.N.O.
- 1-HR RATED FIRE PARTITION REF. CODE SHEET
- 2-HR RATED FIRE BARRIER REF. CODE SHEET
- EXISTING DOOR TO REMAIN
- NEW DOOR, REFERENCE SCHEDULE
- REQUIRED ACCESSIBLE FIXTURE OR DOOR FLOOR CLEARANCE, SIZE VARIES DEPENDING ON PURPOSE
- LOWER GYPSUM WALLBOARD CEILING

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project title

BLOOMINGTON COOPERATIVE LIVING

410 W. KIRKWOOD AVE BLOOMINGTON, IN

project information

PROJECT NUMBER:	22-27
ISSUE DATE:	08.26.2022
REVISION DATE:	11.08.2022
	12.19.2022

sheet title

FLOOR PLAN & REFLECTED CEILING PLAN

sheet number

A101

HARDWARE SCHEDULE

SET NO.	SPECIFICATION			
1	LIVING UNIT ENTRY (013 & 023)			
	EXISTING		--	HINGES
	1 EA.		--	KEYPAD ENTRY LOCK*
	EXISTING		--	CLOSER
	EXISTING		--	THRESHOLD
	EXISTING		--	HEAD & JAMB WEATHERSTRIP
	EXISTING		--	BOTTOM SWEEP
2	LIVING UNIT ENTRY-2 (015 & 021)			
	3 EA. BB1279 NRP	4½ x 4½	US26D	HINGES
	1 EA.		--	KEYPAD ENTRY LOCK*
	1 EA. BY DOOR MANUFACTURER		ALUM	THRESHOLD
	1 SET BY DOOR MANUFACTURER		ALUM	HEAD & JAMB WEATHERSTRIP
	1 SET BY DOOR MANUFACTURER		ALUM	BOTTOM SWEEP
3	COMMERCIAL SPACE ENTRY (100A)			
	EXISTING		--	HINGES
	1 EA. CD98L-NL		626	RIM EXIT DEVICE
	1 EA. 1E72		626	RIM CYLINDER
	EXISTING		--	CLOSER
	EXISTING		--	THRESHOLD
	EXISTING		--	HEAD & JAMB WEATHERSTRIP
	EXISTING		--	BOTTOM SWEEP
4	COMMERCIAL SPACE ENTRY-2 (100B)			
	3 EA. BB1279 NRP	4½ x 4½	US26D	HINGES
	1 EA. CD98L-NL		626	RIM EXIT DEVICE
	1 EA. 1E72		626	RIM CYLINDER
	2 EA. 4041	SCUSH	ALUM	CLOSER
	1 EA. BY DOOR MANUFACTURER		ALUM	THRESHOLD
	1 SET BY DOOR MANUFACTURER		ALUM	HEAD & JAMB WEATHERSTRIP
	1 SET BY DOOR MANUFACTURER		ALUM	BOTTOM SWEEP
5	COMMERCIAL SPACE ENTRY - 90 MINUTE FIRE RATED OPENING (104)			
	3 EA. BB1279 NRP	4½ x 4½	US26D	HINGES
	1 EA.			KEYPAD ENTRY LOCK*
	1 SET 8703		ALUM	SMOKE GASKETING
	1 EA. 4041XP	SCUSH	ALUM	CLOSER
	1 EA. 236W		US26D	STOP
6	PASSAGE (100C, 102, 014, 016, 022)			
	3 EA. BB1279	4½ x 4½	US26D	HINGES
	1 EA. 9K30N15D		626	PASSAGE
	1 EA. 236W		US26D	WALL STOP
7	PRIVACY-RESTROOM (101, 103, 017, 020)			
	3 EA. BB1279 NRP	4½ x 4½	US26D	HINGES
	1 EA. 9K30N15D		**626**	PASSAGE
	1 EA. 3216		626	DEADBOLT W/OCCUPANCY INDICATOR
	1 EA. 4041	SCUSH	ALUM	CLOSER
	1 EA. 236W		US26D	WALL STOP
	1 EA. 190S - 6x34		US26D	MOP PLATE
8	PRIVACY-BEDROOM - 20 MINUTE FIRE RATED OPENING (001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012)			
	3 EA. BB1279 NRP	4½ x 4½	US26D	HINGES
	1 EA. 9K37L15D		626	PRIVACY LOCK
	1 EA. 4041	SCUSH	ALUM	CLOSER
	1 SET 8703		ALUM	SMOKE GASKETING
	1 EA. 236W		US26D	WALL STOP

GENERAL:
1. CONTRACTOR TO COORDINATE THE FINAL DOOR HARDWARE SETS WITH DOORS, FRAMES, AND RELATED WORK TO ENSURE PROPER SIZE, THICKNESS, HAND, FUNCTION, AND FINISH OF DOOR.
2. SUBMIT THE FINAL DOOR HARDWARE SETS AT EARLIEST POSSIBLE DATE. INCLUDE PRODUCT DATA, SAMPLES, SHOP DRAWINGS AND OTHER INFORMATION ESSENTIAL TO THE COORDINATED REVIEW OF THE DOOR HARDWARE SET.
3. KEYING SCHEDULE: PREPARED BY OR UNDER THE SUPERVISION OF THE INSTALLER, DETAILING OWNER'S FINAL KEYING INSTRUCTIONS FOR LOCKS. INCLUDES SCHEMATIC KEYING DIAGRAM AND INDEX EACH KEY SET TO UNIQUE DOOR DESIGNATIONS.
4. ALL DOOR TRIM TO BE LEVER STYLE, ADA COMPLIANT.

PRODUCTS:
KEYPAD ENTRY LOCKSET: COORDINATE WITH OWNER
HINGES: STAINLESS STEEL, MCKINNEY OR EQUAL
LOCKSET: CYLINDRICAL, BEST ACESS OR EQUAL, LEVERS - CAST
RIM DEVICES: VON DUPRIN OR EQUAL
SURFACE CLOSERS: LCN OR EQUAL
TRIM UNITS, STOPS & HOLDERS: HAGER OR EQUAL

DOOR SCHEDULE

NUMBER	MATERIAL	TYPE	WIDTH	HEIGHT	FIRE RATING	HARDWARE SET	REMARKS
001	SOLID CORE	HINGED	3' - 0"	7' - 0"	20 MIN	8	-
002	SOLID CORE	HINGED	3' - 0"	7' - 0"	20 MIN	8	-
003	SOLID CORE	HINGED	3' - 0"	7' - 0"	20 MIN	8	-
004	SOLID CORE	HINGED	3' - 0"	7' - 0"	20 MIN	8	-
005	SOLID CORE	HINGED	3' - 0"	7' - 0"	20 MIN	8	-
006	SOLID CORE	HINGED	3' - 0"	7' - 0"	20 MIN	8	-
007	SOLID CORE	HINGED	3' - 0"	7' - 0"	20 MIN	8	-
008	SOLID CORE	HINGED	3' - 0"	7' - 0"	20 MIN	8	-
009	SOLID CORE	HINGED	3' - 0"	7' - 0"	20 MIN	8	-
010	SOLID CORE	HINGED	3' - 0"	7' - 0"	20 MIN	8	-
011	SOLID CORE	HINGED	3' - 0"	7' - 0"	20 MIN	8	-
012	SOLID CORE	HINGED	3' - 0"	7' - 0"	20 MIN	8	-
013	ETR	ETR	ETR	ETR	-	1	-
014	SOLID CORE	HINGED	3' - 0"	7' - 0"	-	6	-
015	INSL. FBGL.	HINGED	3' - 0"	7' - 0"	-	2	2
016	SOLID CORE	HINGED	3' - 0"	7' - 0"	-	6	-
017	SOLID CORE	HINGED	3' - 0"	7' - 0"	-	7	-
020	SOLID CORE	HINGED	3' - 0"	7' - 0"	-	7	-
021	INSL. FBGL.	HINGED	3' - 0"	7' - 0"	-	2	2
022	SOLID CORE	HINGED	3' - 0"	7' - 0"	-	6	-
023	ETR	ETR	ETR	ETR	-	1	-
100A	ETR	HINGED	3' - 0"	7' - 0"	-	3	1
100B	INSL. FBGL.	HINGED	3' - 0"	7' - 0"	-	4	-
100C	SOLID CORE	HINGED	3' - 0"	7' - 0"	-	6	-
101	SOLID CORE	HINGED	3' - 0"	7' - 0"	-	7	-
102	SOLID CORE	HINGED	3' - 0"	7' - 0"	-	6	-
103	SOLID CORE	HINGED	3' - 0"	7' - 0"	-	7	-
104	SOLID CORE	HINGED	3' - 0"	7' - 0"	90 MIN	5	-

GENERAL NOTES:
A. DOORS TO BE SOLID CORE MDF, PAINTED, 2- PANEL.

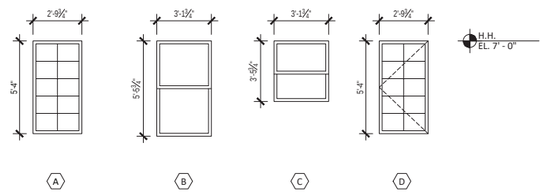
REMARKS:
1. EXISTING DOOR RELOCATED.
2. HALF-LITE DOOR.

WINDOW SCHEDULE

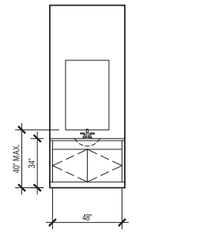
WINDOW	MFR.	SERIES	OPERATION	MODEL NO.	R.O. WIDTH	R.O. HEIGHT	REMARKS
A	EXISTING	EXISTING	FIXED	NA	2'-9 3/4"	5'-4"	-
B	PELLA	LIFESTYLE SERIES WOOD OR EQUAL	DOUBLE HUNG	3765	3'-1 3/4"	5'-5 3/4"	-
C	PELLA	LIFESTYLE SERIES WOOD OR EQUAL	DOUBLE HUNG	3741	3'-1 3/4"	3'-5 3/4"	-
D	PELLA	LIFESTYLE SERIES WOOD OR EQUAL	CASEMENT	CUSTOM	2'-9 3/4"	5'-4"	1

GENERAL NOTES:
A. WINDOWS TO MEET SHGC-0.25 AND U-3.69.
B. COORDINATE INTERIOR & EXTERIOR FINISHES OF NEW WINDOWS WITH EXISTING.
C. WINDOWS IN BATHROOMS AND TOILET ROOMS TO BE TEMPERED AND HAVE OBSCURE GLAZING.
D. WINDOWS ADJACENT TO DOORS TO BE TEMPERED.

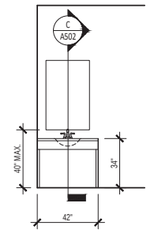
REMARKS:
1. VERIFY SIZE IN FIELD.



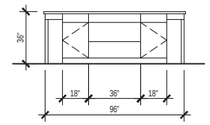
G WINDOW ELEVATION
SCALE: 1/4" = 1'-0"



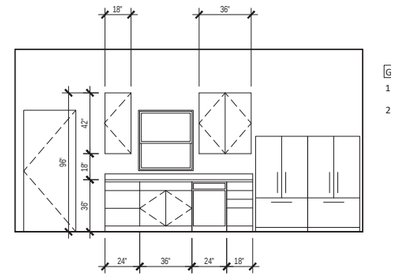
F BATH 020 ELEVATION
SCALE: 1/4" = 1'-0"



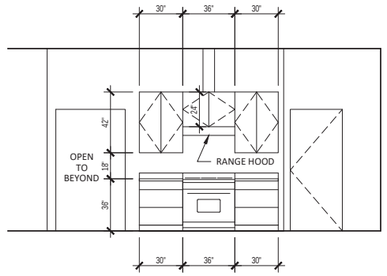
E TOLIET 103, OPP. HAND - TOLIET 101 & BATH 017 ELEVATION
SCALE: 1/4" = 1'-0"



D KITCHEN ELEVATION
SCALE: 1/4" = 1'-0"

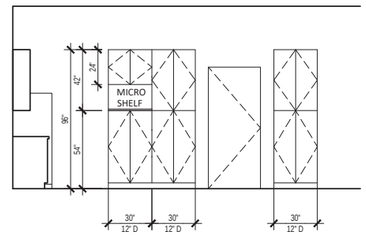


C KITCHEN ELEVATION
SCALE: 1/4" = 1'-0"



B KITCHEN ELEVATION
SCALE: 1/4" = 1'-0"

GENERAL NOTES
1. PROVIDE FILLER PANELS AS REQUIRED.
2. PROVIDE FINISHED ENDS AT EXPOSED CABINET SIDES.



A KITCHEN ELEVATION
SCALE: 1/4" = 1'-0"

springpoint ARCHITECTS
522 WEST SECOND STREET
BLOOMINGTON, INDIANA 47403
812.318.2930
www.springpointarchitects.com

certified

CLAIRE ELAINE KLAPPER REGISTERED No. AR11400042 INDIANA ARCHITECT
9.23.22

project title

BLOOMINGTON COOPERATIVE LIVING
410 W. KIRKWOOD AVE
BLOOMINGTON, IN

project information

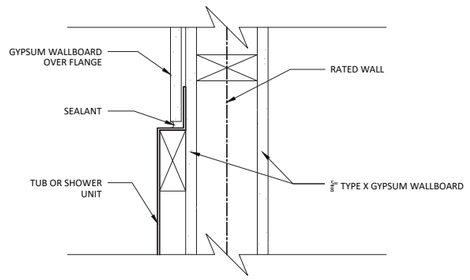
PROJECT NUMBER: 22-27
ISSUE DATE: 09.23.2022
REVISION DATE: 12.19.2022

sheet title

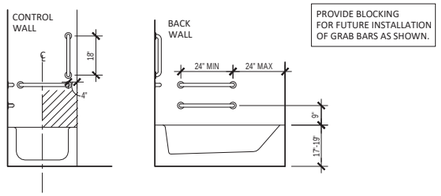
CABINET ELEVATIONS & WINDOW & DOOR SCHEDULES

sheet number

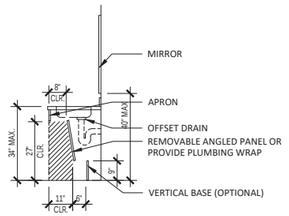
A501



L BATH 020
TUB FIRE WALL
SCALE: 3" = 1'-0"

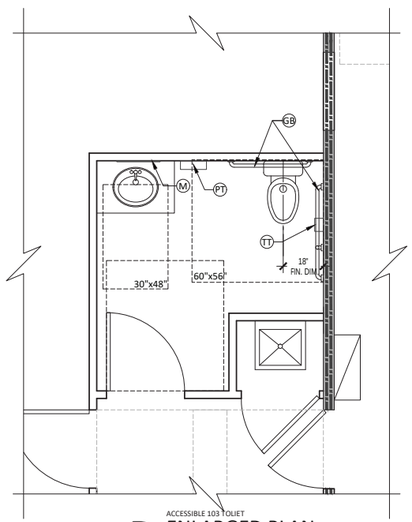


K BATH 020
GRAB BARS
SCALE: 3/8" = 1'-0"

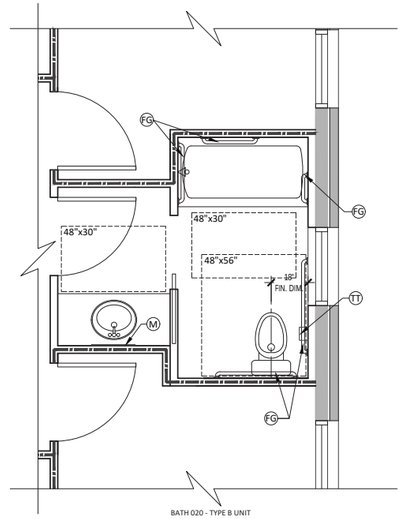


G ACCESSIBLE TOLIETS 101 & 103 & BATHS 017 & 020
VANITY DETAIL, TYPICAL
SCALE: 3/8" = 1'-0"

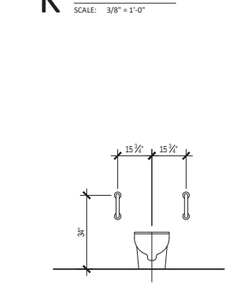
TOILET ACCESSORY KEY:			
TAG (XX)	**ACCESSORY**	**REMARKS**	**MOUNTING HEIGHT**
TT	TOILET TISSUE DISPENSER	PROVIDED BY OWNER, INSTALLED BY CONTRACTOR	SEE DETAIL THIS SHEET
PT	PAPER TOWEL DISPENSER	PROVIDED BY OWNER, INSTALLED BY CONTRACTOR	42" TO BOTTOM
GB	GRAB BARS	(1) 42", (1) 36" AND (1) 18"	SEE DETAIL THIS SHEET
FG	FUTURE GRAB BARS	BLOCKING FOR FUTURE INSTALLATION	SEE DETAIL THIS SHEET
M	MIRROR	20" x 36"	40" TO BOTTOM
S	SHOWER SEAT	PROVIDED BY OWNER, INSTALLED BY CONTRACTOR	SEE DETAIL THIS SHEET
FS	FUTURE SHOWER SEAT	PROVIDED BY OWNER, INSTALLED BY CONTRACTOR	SEE DETAIL THIS SHEET



D ACCESSIBLE 103 TOLIET
ENLARGED PLAN
SCALE: 3/8" = 1'-0"

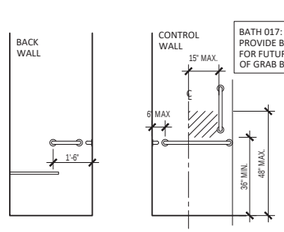


B BATH 020 - TYPE B UNIT
ENLARGED PLAN
SCALE: 3/8" = 1'-0"



PROVIDE BLOCKING FOR FUTURE INSTALLATION OF GRAB BARS AS SHOWN.

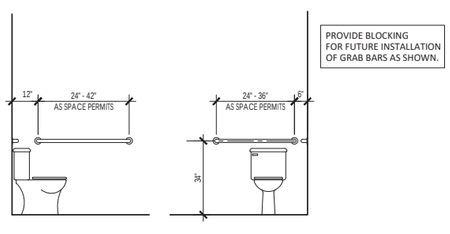
J BATH 017
BIDET SWING-UP GRAB BARS
SCALE: 3/8" = 1'-0"



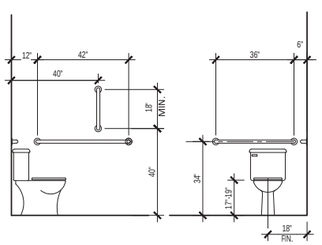
F ACCESSIBLE TOLIET 103 & BATH 017
SHOWER GRAB BARS
SCALE: 3/8" = 1'-0"

C ACCESSIBLE TOLIET 101
ENLARGED PLAN
SCALE: 3/8" = 1'-0"

A BATH 017 - TYPE B UNIT
ENLARGED PLAN
SCALE: 3/8" = 1'-0"



H BATHS 017 & 020
TOLIET GRAB BARS
SCALE: 3/8" = 1'-0"



E ACCESSIBLE TOLIETS 101 & 103
TOLIET GRAB BARS
SCALE: 3/8" = 1'-0"

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certified

ALAINE WAPPER BARRIE REGISTERED No. AR11400042 INDIANA ARCHITECT
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project information

PROJECT NUMBER: 22-27
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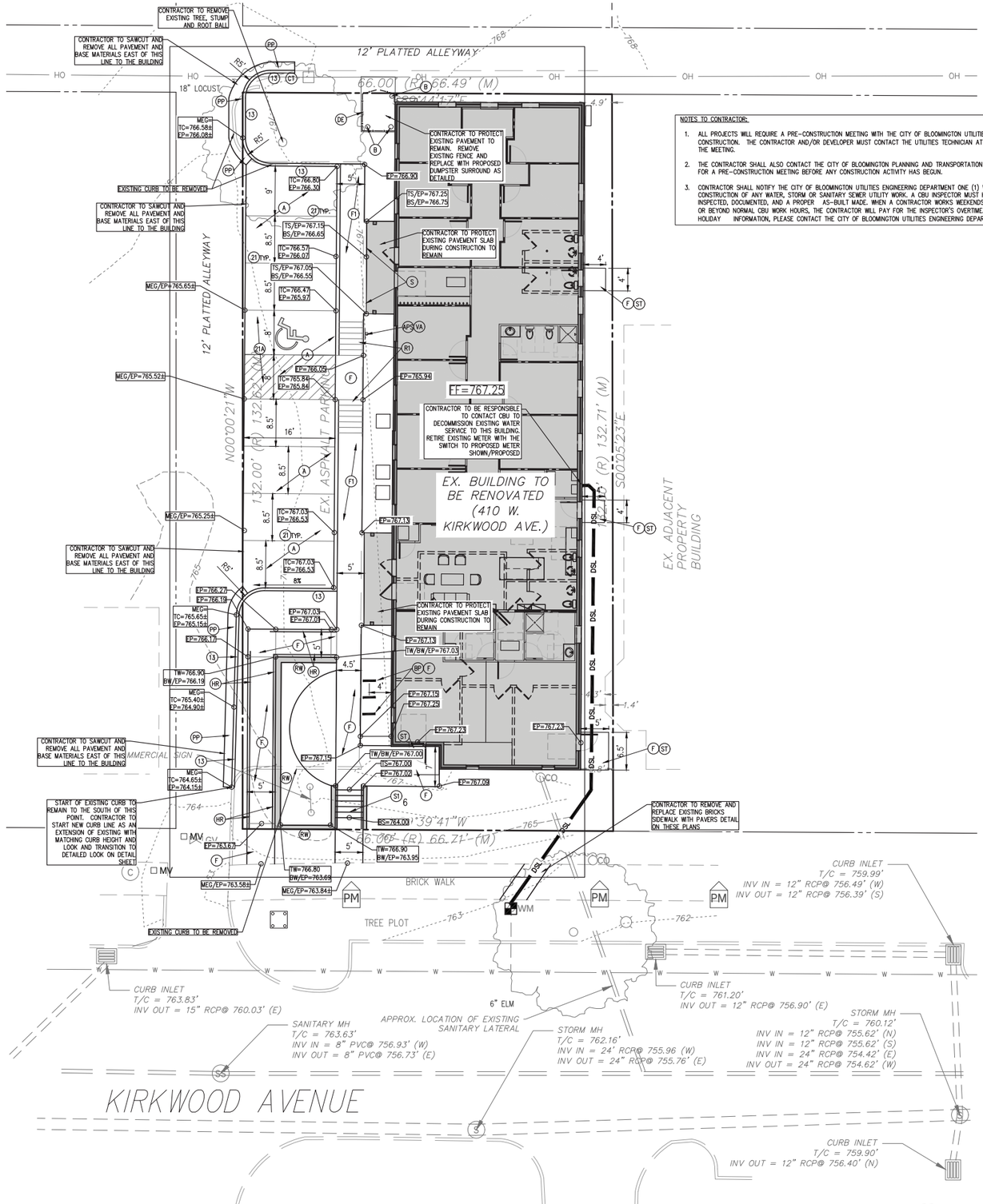
sheet title

ENLARGED PLANS & DETAILS

sheet number

A502



SCALE: 1"=10'

NOTES TO CONTRACTOR:

1. ALL PROJECTS WILL REQUIRE A PRE-CONSTRUCTION MEETING WITH THE CITY OF BLOOMINGTON UTILITIES PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR AND/OR DEVELOPER MUST CONTACT THE UTILITIES TECHNICIAN AT (812)349-3676 TO SCHEDULE THE MEETING.
2. THE CONTRACTOR SHALL ALSO CONTACT THE CITY OF BLOOMINGTON PLANNING AND TRANSPORTATION DEPARTMENT AT 812-349-3423 FOR A PRE-CONSTRUCTION MEETING BEFORE ANY CONSTRUCTION ACTIVITY HAS BEGUN.
3. CONTRACTOR SHALL NOTIFY THE CITY OF BLOOMINGTON UTILITIES ENGINEERING DEPARTMENT ONE (1) WORKING DAY PRIOR TO CONSTRUCTION OF ANY WATER, STORM OR SANITARY SEWER UTILITY WORK. A CBU INSPECTOR MUST HAVE NOTICE SO WORK CAN BE INSPECTED, DOCUMENTED, AND A PROPER AS-BUILT MADE. WHEN A CONTRACTOR WORKS WEEKENDS, A CBU DESIGNATED HOLIDAY, OR BEYOND NORMAL CBU WORK HOURS, THE CONTRACTOR WILL PAY FOR THE INSPECTOR'S OVERTIME. FOR CBU WORK HOURS AND HOLIDAY INFORMATION, PLEASE CONTACT THE CITY OF BLOOMINGTON UTILITIES ENGINEERING DEPARTMENT AT (812)349-3660.

SITE LEGEND

A	PROPOSED ASPHALT PAVEMENT – REFER TO DETAIL
F	PROPOSED CONCRETE SIDEWALK – REFER TO DETAIL
F1	PROPOSED MONOLITHIC CURB AND SIDEWALK – REFER TO DETAIL
PP	PROPOSED ROAD PAVEMENT PATCH, 18" WIDE MIN. – REFER TO DETAIL
13	PROPOSED 6" STANDING CURB – REFER TO DETAIL
R1	PROPOSED SIDEWALK ADA ACCESSIBLE CURB RAMP – REFER TO DETAIL
21	PROPOSED PARKING MARKING; PAINTED, SOLID, WHITE, 4" WIDE – REFER TO PLAN FOR LAYOUT
21A	PROPOSED ADA PARKING MARKING; PAINTED, SOLID, BLUE – REFER TO DETAIL
ST	PROPOSED CONCRETE STOOP TO CONNECT TO SIDEWALK WITH EXPANSION JOINT – REFER TO GRADING PLAN AND DETAILS IN ARCHITECT'S PLANS FOR CONNECTION TO BUILDING
APS	ACCESSIBLE PARKING SIGN, REFER TO DETAIL
VA	VAN ACCESSIBLE SUPPLEMENTAL SIGN ACCORDING TO NATIONAL ADA STANDARDS – FASTEN BELOW ACCESSIBLE PARKING SIGN WHERE INDICATED, REFER TO DETAIL
RW	PROPOSED RETAINING WALL AND RAILING – REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION AND DETAILS
CT	PROPOSED CONCRETE CURB TRANSITION, 6' LENGTH FROM 0" TO 6" CURB HEIGHT
BP	SURFACE MOUNT THREE (3) ULINE BRAND MODEL H-2892 U-RACKS – REFER TO MANUFACTURER'S RECOMMENDATIONS ON INSTALLATION – SPACING SHALL BE 3' BETWEEN RACKS AND 4' MIN. FROM BUILDING AND EDGE OF PAVEMENT TO SOUTH AND NORTH TO MIDDLE OF RACK
DE	PROPOSED DUMPSTER SURROUND – REFER TO DETAILS
B	PROPOSED BOLLARDS – REFER TO DETAILS
ST REQUIRED	PROPOSED CONCRETE STAIRS WITH CHEEK WALLS AND HANDRAILS AS INDICATED ON PLANS – REFER TO THESE PLANS FOR DETAILS
HR	PROPOSED HANDRAIL ON BOTH SIDES OF CONCRETE SIDEWALK/RAMPING CONDITION FOR ACCESSIBLE USE – REFER TO DETAILS
	SEE ARCHITECTURAL & STRUCTURAL DRAWINGS/SPECIFICATIONS FOR ALL SHADED AREAS
	PROPOSED 'ADA' ACCESSIBLE PARKING SPACE

PARKING AND PAVEMENT NOTES

1. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC DEVICES, 1988 EDITION AS AMENDED.
2. ALL PAVEMENT MARKINGS SHALL BE PAINTED WHITE ON ASPHALT PAVEMENT / YELLOW ON CONCRETE PAVEMENT AND SHALL BE FOUR (4) INCHES WIDE UNLESS INDICATED OTHERWISE.
3. ALL DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS INDICATED OTHERWISE. ALL CURB RADIUS ARE TO BE 5' UNLESS INDICATED OTHERWISE.
4. CONTRACTOR SHALL FURNISH AND INSTALL PAVEMENT MARKINGS AS SHOWN ON THE PLANS.
5. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES WITH OTHER CONTRACTORS ON THE SITE.
6. JOINTS OR SCORE MARKS ARE TO BE SHARP AND CLEAN WITHOUT SHOWING EDGES OF JOINTING TOOLS.
7. CONTRACTOR SHALL SAW-CUT TIE-INS AT EXISTING CURBS AS NECESSARY TO INSURE SMOOTH TRANSITIONS. CONTRACTOR SHALL SAW-CUT AND TRANSITION TO MEET EXISTING PAVEMENT AS NECESSARY AND AS DIRECTED BY INSPECTOR TO INSURE POSITIVE DRAINAGE. (TYPICAL AT ALL INTERSECTIONS).
8. CONTRACTOR SHALL COMPLY WITH ALL PERTINENT PROVISIONS OF THE "MANUAL OF ACCIDENT PREVENTION IN CONSTRUCTION" ISSUED BY A.G.C. OF AMERICA, INC. AND THE HEALTH AND SAFETY REGULATIONS FOR CONSTRUCTION ISSUED BY THE U.S. DEPARTMENT OF LABOR.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ANY EXISTING PAVEMENT MARKINGS WITHIN THE PUBLIC RIGHT-OF-WAY THAT GET REMOVED WITH THE PROPOSED SCHEDULED WORK. THE CONTRACTOR SHALL TAKE NOTE OF LOCATION, SIZE, MATERIAL, AND TYPE OF PAVEMENT MARKINGS THAT ARE BEING REPLACED TO ENSURE ACCURATE REPLACEMENT AFTER CONSTRUCTION HAS COMMENCED.

UTILITY CONTACT INFORMATION

GAS
CENTER POINT
600 INDUSTRIAL DRIVE
FRANKLIN, IN 46131
KIM BURTON-KELLY (317)736-2915

SEWER AND WATER
CITY OF BLOOMINGTON UTILITIES
600 E. MILLER DR.
BLOOMINGTON, IN 47402
NANCY AXSOM (812)349-3689

ELECTRIC
DUKE ENERGY
1100 W 2ND ST
BLOOMINGTON, IN 47403
CHAD HEACOX (812)337-3043

TELEPHONE
AT&T
P.O. BOX 56
BLOOMINGTON, IN 47402
RUSS OWEN (812)606-2973

CABLE TELEVISION
COMCAST
2450 SOUTH HENDERSON STREET
BLOOMINGTON, IN 47404
STEVE McCARTOR (812)355-7822

UNDERGROUND UTILITY LOCATION
INDIANA UNDERGROUND
PLANT PROTECTION
1-(800)382-5544

NOTE: ALL ITEMS SCHEDULED TO BE REMOVED SHALL BE DISPOSED OF APPROPRIATELY OFF SITE INCLUDING ANY TREES/VEGETATION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY ITEMS THAT ARE NOT SCHEDULED FOR REMOVAL BUT WOULD IMPEDE THE SUCCESSFUL CONSTRUCTION OF ALL IMPROVEMENTS AND A COMPLETE FUNCTIONAL PROPOSED SITE PLAN. ALL ITEMS NOT SCHEDULED FOR REMOVAL SHALL REMAIN IN PLACE AND PROTECTED DURING CONSTRUCTION.

ALL WORK WITHIN EXISTING AND PROPOSED RIGHT-OF-WAY MUST BE CONDUCTED IN ACCORDANCE WITH CITY STANDARDS AND SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH THE CITY ALL REQUIRED INSPECTIONS AND TESTS. ALL REQUIRED TESTS SHALL BE PROVIDED AND PAID FOR BY THE CONTRACTOR

EXISTING LEGEND

EXISTING FENCE	X X X
EXISTING WATER LINE	W
EXISTING OVERHEAD UTILITY LINES	OHU
EXISTING UNDERGROUND ELECTRIC LINES	UGE
EXISTING UNDERGROUND TELEPHONE LINES	UGT
EXISTING UNDERGROUND FIBER OPTIC LINES	FO
EXISTING GAS LINE	GAS
EXISTING SANITARY FORCEMAIN	FM
EXISTING CONTOUR	XXX
EXISTING SANITARY SEWER AND MANHOLE	
EXISTING STORM SEWER AND INLET	
SANITARY MANHOLE	SS
STORM MANHOLE	S
MONITORING VALVE	MV
GAS VALVE	GV
COMMUNICATIONS MANHOLE	C
PARKING METER	PM
WATER METER	WM
OVERHANG SIGN POST	
CURB INLET	
CLEANOUT	CO
LIGHT POLE	
POWER POLE	
PROPERTY LINE	

UTILITY LEGEND

PROPOSED 2" PRIVATE DOMESTIC SERVICE LINE: DSL
ALL DOMESTIC SERVICE LINES USE SDR-21 AND FITTINGS FOR DOMESTIC WATER SERVICE LINES. THE MINIMUM SDR-21 ALLOWABLE MATERIAL SHALL BE SHALL BE PR200 AND CONFORM TO ASTM D2241 AND D3139 WITH PUSH-ON JOINTS. SOLVENT CEMENT JOINTS WILL NOT BE ALLOWED FOR PVC. ALL FITTINGS SHALL BE OF THE TYPE AND MATERIAL RECOMMENDED BY THE MANUFACTURER. ELECTROMETRIC GASKETS SHALL BE MANUFACTURED TO CONFORM TO ASTM F-477 , 48" COVER MIN., REFER TO THE 'P' SERIES DRAWINGS FOR MORE INFORMATION AND FINAL SIZE DETERMINATION ON THIS WATER LINE.

CONTRACTOR TO REUSE EXISTING WATER METER PIT WITH NEW PROPOSED WATER LINE AS INDICATED TO IT FROM BUILDING. USE A 2" DOMESTIC METER YOKESETTER IN METER PIT PER CBU STANDARDS. REFER TO CBU SPECIFICATIONS. COORDINATE FINAL SIZE OF REQUIRED METER WITH CBU

PROPOSED WATER VALVE PER CBU SPECIFICATIONS

NOTE: ALL WATER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF BLOOMINGTON UTILITY SPECIFICATIONS.

GENERAL NOTES

1. BOUNDARY AND TOPO BY BYNUM FANYO AND ASSOCIATES, 528 NORTH WALNUT STREET, BLOOMINGTON, INDIANA 47404. PHONE (812) 332-8030
2. DEVELOPER: BLOOMINGTON COOPERATIVE LIVING – 404 W KIRKWOOD AVE, BLOOMINGTON, IN 47404 (CONTACT: (812) 339-5829)
3. PROJECT ADDRESS: 410 W KIRKWOOD AVE, BLOOMINGTON, INDIANA 47404
4. ALL WORK IS TO BE IN ACCORDANCE WITH ALL STATE AND LOCAL REGULATIONS.
5. ALL PERMITS ARE TO BE OBTAINED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
6. HYDRANT LOCATION SHALL BE APPROVED BY THE LOCAL FIRE MARSHALL/INSPECTOR.
7. EXISTING UTILITIES ON SITE SHALL BE RELOCATED AS REQUIRED. CONTRACTOR SHALL PAY ALL COSTS ASSOCIATED WITH RELOCATION.
8. SAFE, CLEARLY MARKED PEDESTRIAN AND VEHICULAR ACCESS TO ALL ADJACENT PROPERTIES MUST BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS.

THE CURRENT EDITION OF THE INDIANA DEPARTMENT OF TRANSPORATION, MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES & CITY OF BLOOMINGTON UTILITIES STANDARD SPECIFICATIONS IS TO BE USED WITH THESE PLANS

SITE INFORMATION

TOTAL LOT ACREAGE:
8,835 SQ. FT. = 0.20 ACRES

TOTAL PROPOSED IMPERVIOUS AREA (WITHIN LOT AREA) = 6,891 SQ. FT. = 0.16 ACRES = 78%

TOTAL PROPOSED PARKING: 7 STALLS WITH 1 ADA = 8 TOTAL

NOTE TO CONTRACTOR

CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS & DEPTHS AND NOTIFY ENGINEER OF ANY INACCURACIES IN LOCATION OR ELEVATION OR ANY CONFLICTS PRIOR TO & AFTER ANY EXCAVATION. NO PAYMENT SHALL BE MADE TO CONTRACTOR FOR UTILITY DESTRUCTION OR UNDERGROUND CHANGES REQUIRED DUE TO CONFLICTING ELEVATIONS.

revisions:
12.19.2022

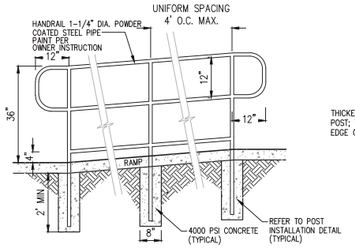
BYNUM FANYO & ASSOCIATES, INC.
ARCHITECTURE
CIVIL ENGINEERING
PLANNING
528 north walnut street (812) 332-8030
bloomington, indiana (812) 339-2990 (fax)

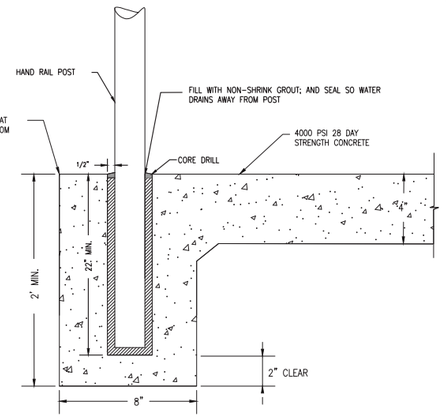
JEFFREY S. FANYO
No. 18283
STATE OF INDIANA
PROFESSIONAL ENGINEER
12.02.22
certified by:

PROPOSED
BLOOMINGTON COOPERATIVE LIVING
410 W. KIRKWOOD AVENUE
BLOOMINGTON, INDIANA 47404

title: SITE PLAN

designed by: DJB
drawn by: DJB
checked by: JSF
sheet no: C101
project no.: 402240





POST INSTALLATION DETAIL

GENERAL NOTES:

ALL NEW HANDRAILS, GUARDRAILS AND FITTINGS TO BE OF 1-1/4" POWDER COATED STEEL PIPE.

SUPPLY COMPONENTS REQUIRED FOR PROPER ANCHORAGE OF HANDRAIL.
A. GROUT: CORE DRILL & SET IN CONCRETE B. EXPANSION ANCHORS: TYPE AND SIZE TO FIT APPLICATION.

VERIFY ALL DIMENSIONS AND EXIST. CONDITIONS BEFORE BEGINNING WORK.

FABRICATE BENDS SMOOTH AND WRINKLE FREE. "TIG" WELD COMPONENTS TOGETHER, GRIND WELDS SMOOTH AND FINISH TO MATCH.

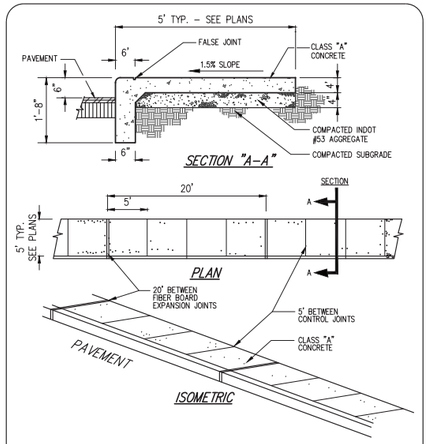
FIT AND SHOP ASSEMBLY IN LARGEST PRACTICAL SECTIONS FOR DELIVERY TO SITE AND INSTALLATION. PERFORM FIELD WELDING IN ACCORDANCE WITH AWS D1.1.

ERECT WORK SQUARE, LEVEL, ACCURATE TO SIZES AND FREE FROM DISTORTION OR DEFECTS DETRIMENTAL TO APPEARANCE AND PERFORMANCE.

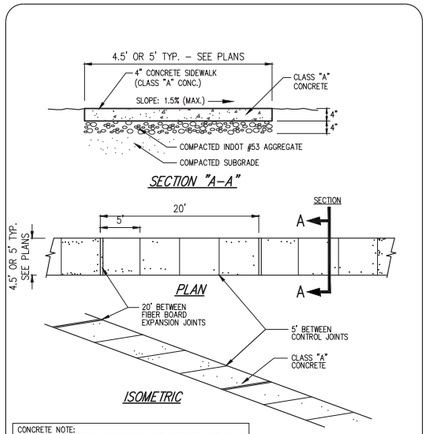
AFTER INSTALLATION, TOUCH UP FIELD WELDS, SCRATCHED OR DAMAGED SURFACES TO MATCH SPECIFIED FINISH.

INSTALLED RAILINGS TO RESIST LATERAL FORCES OF 200 LBS. AT TOP MEMBER, WITHOUT PERMANENT SET OR DAMAGE TO MEMBERS OR ANCHORS.

HR — HANDRAIL FOR ACCESSIBLE RAMPS GREATER THAN 5% SLOPE — NOT TO SCALE

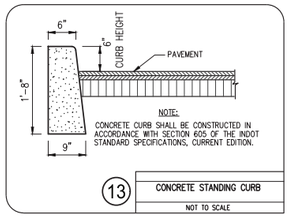


F1 — MONOLITHIC CONCRETE CURB & SIDEWALK — NOT TO SCALE



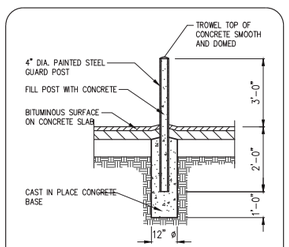
CONCRETE NOTE:
ALL CONCRETE SIDEWALKS AND CONCRETE PATIO ON-SITE SHALL RECEIVE COLOR ADDITIVE. CONTRACTOR TO CONTACT OWNER FOR COLOR SPECIFICATION

F — CONCRETE SIDEWALK — NOT TO SCALE

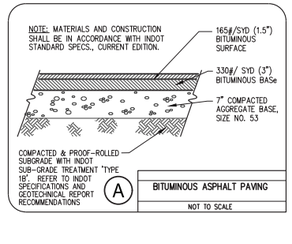


NOTE:
CONCRETE CURB SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 605 OF THE INDOT STANDARD SPECIFICATIONS, CURRENT EDITION.

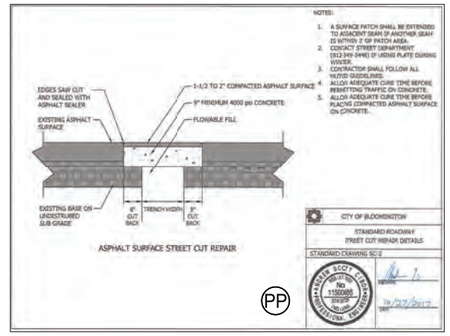
13 — CONCRETE STANDING CURB — NOT TO SCALE



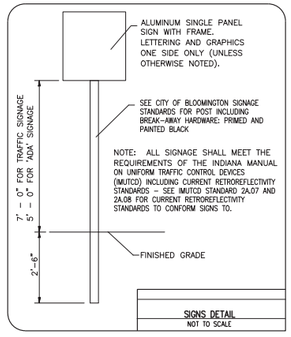
B — STEEL BOLLARD (FOR USE IN DUMPTER AREA) — NOT TO SCALE



A — BITUMINOUS ASPHALT PAVING — NOT TO SCALE

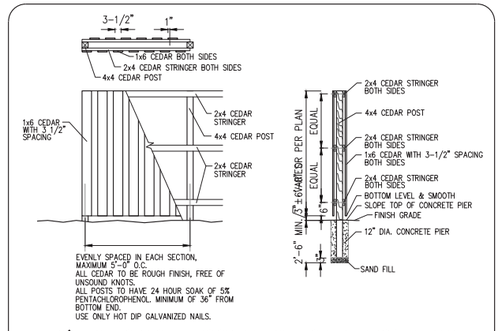


PP

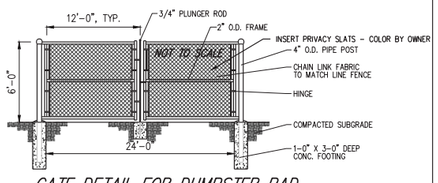


NOTE: ALL SIGNAGE SHALL MEET THE REQUIREMENTS OF THE INDIANA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) INCLUDING CURRENT RETRO-REFLECTIVITY STANDARDS – SEE MUTCD STANDARD 2A.07 AND 2A.08 FOR CURRENT RETROREFLECTIVITY STANDARDS TO CONFORM SIGNS TO.

SIGNS DETAIL — NOT TO SCALE

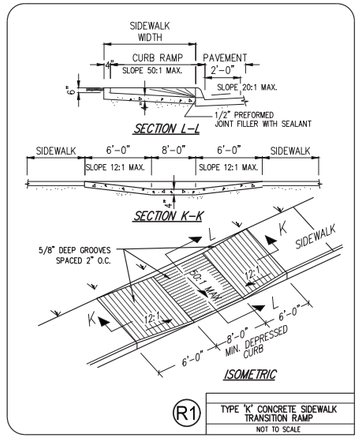


6' HIGH OPAQUE WOOD FENCE FOR DUMPSTER PAD
NOT TO SCALE

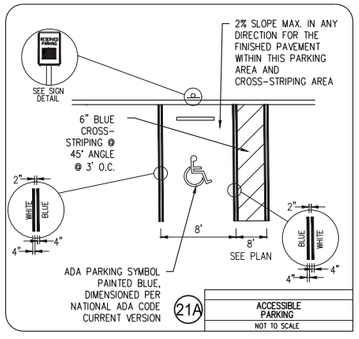


GATE DETAIL FOR DUMPSTER PAD
NOT TO SCALE

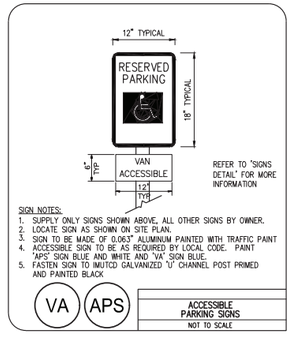
DE — DUMPSTER ENCLOSURE — NOT TO SCALE



R1 — TYPE "K" CONCRETE SIDEWALK TRANSITION RAMP — NOT TO SCALE

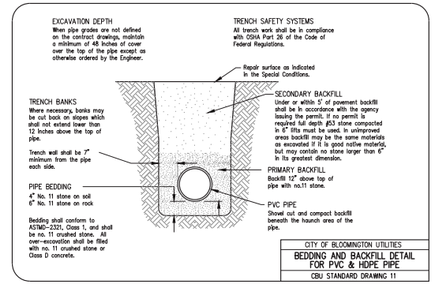


21A — ACCESSIBLE PARKING — NOT TO SCALE



SIGN NOTES:
1. SUPPLY ONLY SIGNS SHOWN ABOVE, ALL OTHER SIGNS BY OWNER.
2. LOCATE SIGN AS SHOWN ON SITE PLAN.
3. SIGN TO BE MADE OF 0.063" ALUMINUM PAINTED WITH TRAFFIC PAINT
4. ACCESSIBLE SIGN TO BE AS REQUIRED BY LOCAL CODE. PAINT "APS" SIGN BLUE AND WHITE AND "VA" SIGN BLUE.
5. FASTEN SIGN TO IMUTCD GALVANIZED "U" CHANNEL POST PRIMED AND PAINTED BLACK

VA APS — ACCESSIBLE PARKING SIGNS — NOT TO SCALE



CITY OF BLOOMINGTON UTILITIES
BEDDING AND BACKFILL DETAIL FOR PVC & HDPE PIPE
CBU STANDARD DRAWING 11

revisions:
12.19.2022

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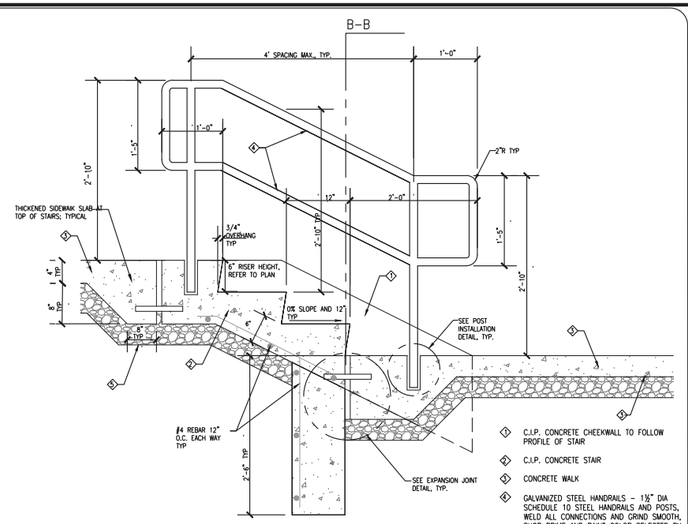
No. 18283
STATE OF INDIANA
PROFESSIONAL ENGINEER
12.02.22
certified by:

PROPOSED
BLOOMINGTON COOPERATIVE LIVING
410 W. KIRKWOOD AVENUE
BLOOMINGTON, INDIANA 47404

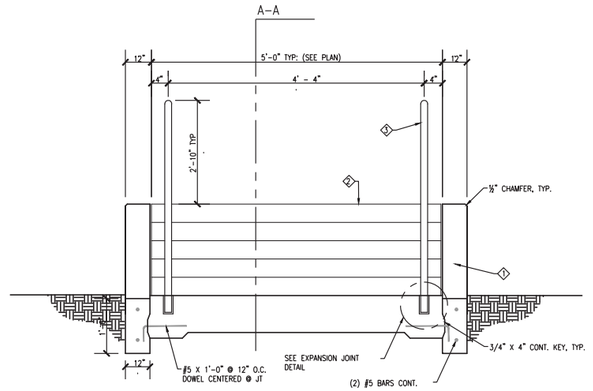
title: SITE & UTILITY DETAILS

designed by: DJB
drawn by: DJB
checked by: JSF
sheet no: C201
project no.: 402240

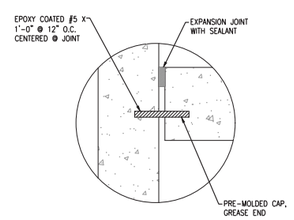


SECTION A-A

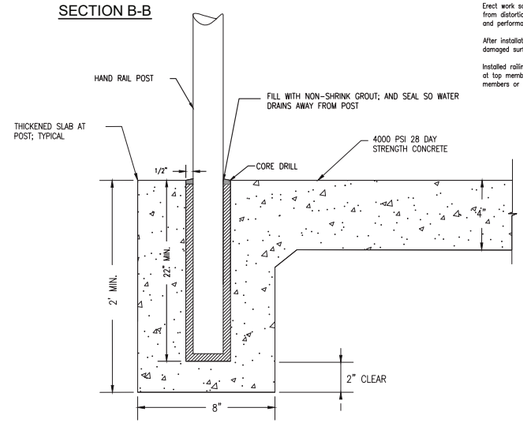
STAIRS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE.



SECTION B-B



EXPANSION JOINT DETAIL



POST INSTALLATION DETAIL

GENERAL NOTES:

Supply components required for proper anchorage of handrail.
A. Grout: Core drill & set in concrete
B. Expansion Anchors: Type and size to fit application

Verify all dimensions and exist. conditions before beginning work.

Fabricate bends smooth and wrinkle free. "Tig" weld components together. Grind welds smooth and finish to match.

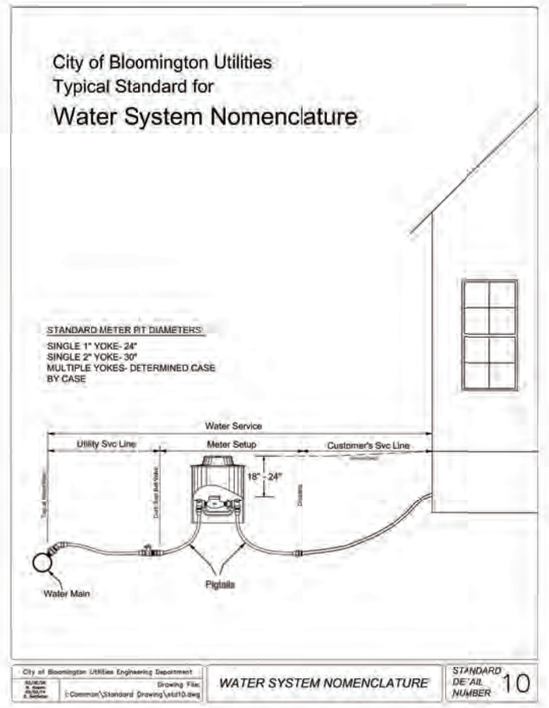
Fit and shop assembly in largest practical sections for delivery to site and installation. Perform field welding in accordance with AWS D1.1.

Erect work square, level, accurate to sizes and free from distortion or defects detrimental to appearance and performance.

After installation, touch up field welds, scratched or damaged surfaces to match specified finish.

Installed railings to resist lateral forces of 200 lbs. at top member, without permanent set or damage to members or anchors.

S1 CONCRETE STAIRS WITH CHEEK WALL DETAILS
NOT TO SCALE



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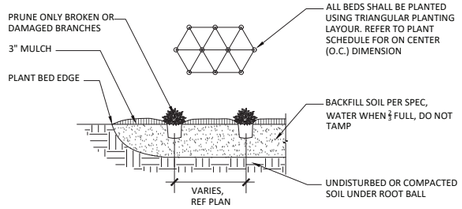
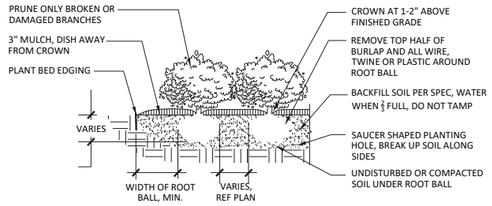
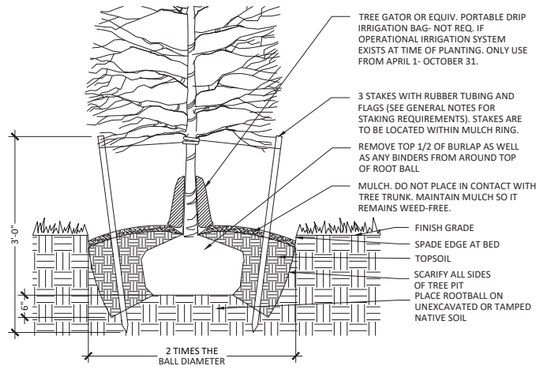


PERENNIAL PLANTING
E DETAIL
SCALE: 1"=1'-0"



SHRUB PLANTING
D DETAIL
SCALE: 1"=1'-0"



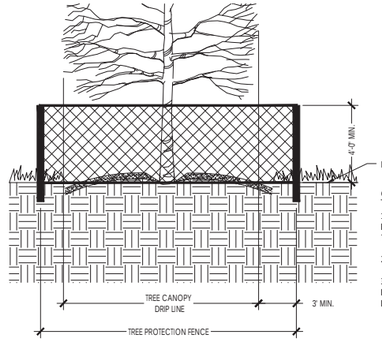
GENERAL NOTES

1. STAKE TREES ONLY IF THEY DO NOT REMAIN PLUMB.

2. DO NOT HEAVILY PRUNE TREES AT PLANTING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED; HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.

3. TREES MUST BE PLANTED SUCH THAT THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL. AFTER INSTALLATION, FINISH GRADE OF ROOT BALL SHOULD BE AT OR ABOVE SURROUNDING FINISH GRADE

TREE PLANTING
C DETAIL
SCALE: 1"=1'-0"



GENERAL NOTES

1. INSTALL FENCE IN ACCORDANCE WITH REQUIREMENTS OF SECTION 015626 - TEMPORARY FENCING.

2. INSTALL IN LOCATIONS SHOWN ON PLANS.

3. INSPECT SITE WITH OWNER'S REPRESENTATIVE TO DETERMINE FINAL LOCATIONS.

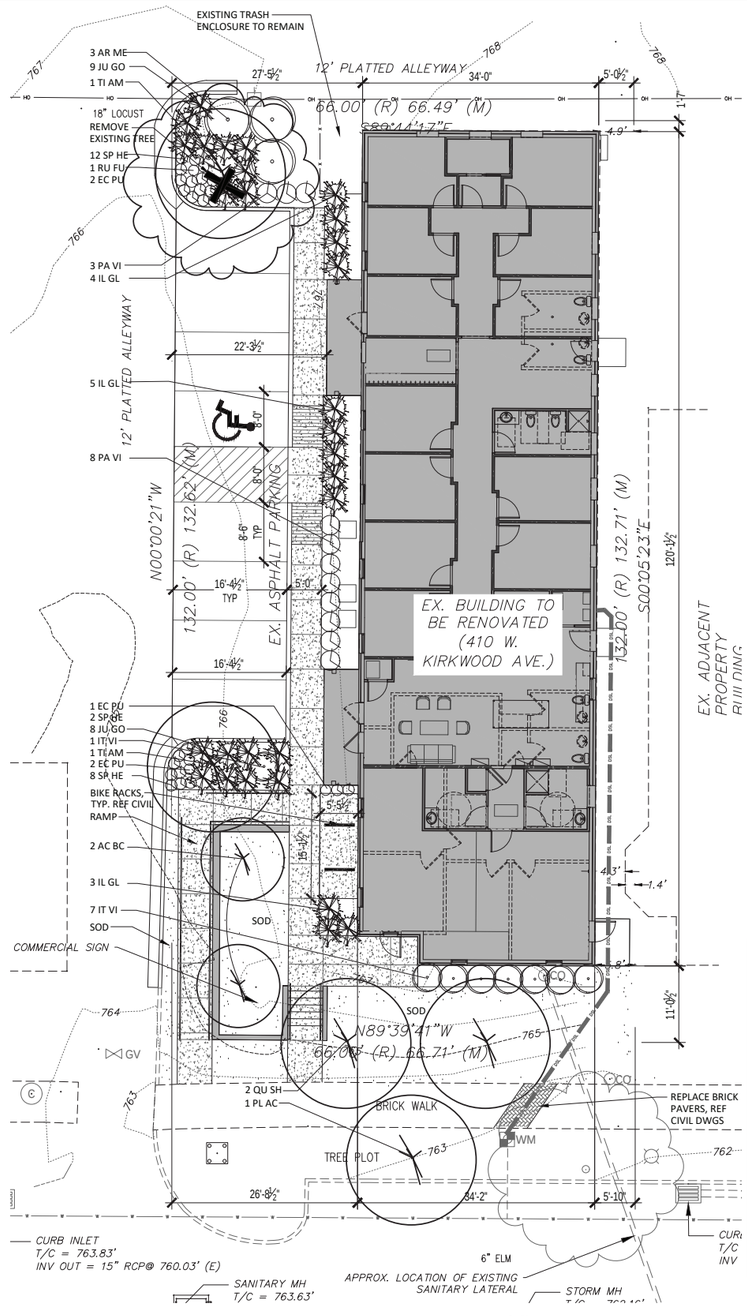
TREE PROTECTION
B DETAIL
SCALE: 1"=1'-0"

OVERALL PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	QNTY	SIZE	NOTES
DECIDUOUS AND EVERGREEN TREES					
PL AC	Platanus x acerifolia	London Planetree	1	2" cal	
QU SH	Quercus shumardii	Sumard Oak	2	2" cal	
TI AM	Tilia Americana	Linden	2	6'-8'h	
MED/SM TREES					
AC BC	Acer saccharum 'Barrett Cole'	Apollo Maple	2	2" cal	
SHRUBS/GRASSES					
IT VI	Itea virginica	Virginia Sweetspire	8	3 gal	
AR ME	Aronia melanocarpa	Black Chokeberry	3	3 gal	
IL GL	Ilex glabra 'Shamrock'	Dwarf Inkberry	12	3 gal	
JU GO	Juniperus virginiana 'Grey Owl'	Grey Owl Juniper	17	3 gal	
PERENNIALS/GRASSES					
EC PU	Echinacea purpurea	Purple Coneflower	5	1 gal	
PA VI	Panicum virgatum	Switchgrass	11	1 gal	
RU FU	Rudbeckia fulgida	Black Eyed Susan	2	1 gal	
SP HE	Sporobulus heterolepsis	Prairie Dropseed	21	1 gal	

LAWN: SHALL BE SOD

1. KENTUCKY BLUEGRASS / FINE FESCUE SOD
   -Nursery sod grown from a seed mixture containing 90 – 95% by weight of Kentucky bluegrass cultivars and 5 – 10% by weight of creeping red, chewings, or hard fescue cultivars.



OVERALL
A PLANTING PLAN
SCALE: 1"=10'-0"
0' 2.5' 5' 10'

GENERAL PLANTING NOTES

1. CONTRACTOR IS RESPONSIBLE FOR VERIFYING UTILITY LOCATIONS PRIOR TO CONSTRUCTION. CALL 811 FOR UTILITY LOCATES.

2. CONTRACTOR SHALL VERIFY DIMENSIONS AND LOCATIONS IN FIELD PRIOR TO CONSTRUCTION.

3. DAMAGE OCCURING DURING CONSTRUCTION THAT FALLS BEYOND THE LIMITS OF CONSTRUCTION SHALL BE REPAIRED BY CONTRACTOR TO ARCHITECT APPROVAL.

4. EXISTING TREES NOTED ON PLANS TO REMAIN SHALL BE PROTECTED DURING CONSTRUCTION. TREE PROTECTION FENCING SHALL BE LOCATED AT A THREE-FOOT MINIMUM RADIUS SURROUNDING THE DRIPLINE OF THE TREE. NO EQUIPMENT OR SUPPLY STORAGE, EQUIPMENT MOVEMENT, REST OR PICNICKING AREA, OR ANY LAND DISTURBING ACTIVITIES SHALL BE ALLOWED IN THE TREE PROTECTION ZONE.

5. MULCH: PROVIDE 2-3" LAYER OF ORGANIC SHREDDED BARK MULCH THROUGHOUT PLANT BEDS UNLESS OTHERWISE NOTED ON PLAN.

6. EDGING: BED EDGES SHALL BE SPADED UNLESS OTHERWISE NOTED ON PLAN.

7. CONTAINER OR BALL AND BURLAP ARE ACCEPTABLE

8. PLANT MATERIALS SHALL CONFORM TO THE REQUIREMENTS DESCRIBED IN THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, WHICH IS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN. PLANTS SHALL BE NURSERY GROWN.

9. THE CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING ALL PLANTING AND LAWN AREAS INCLUDING, BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, PRUNING, FERTILIZING, ETC., UNTIL WORK IS ACCEPTED IN FULL BY THE OWNER.

10. THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE (1) YEAR BEGINNING ON THE DATE OF TOTAL ACCEPTANCE. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS BEFORE OR AT THE END OF THE GUARANTEE PERIOD.

11. THE OWNER/ARCHITECT SHALL APPROVE THE STAKING LOCATION OF ALL PLANT MATERIAL PRIOR TO INSTALLATION.

12. ALL DISTURBED AREAS NOT INCLUDED IN LANDSCAPE MULCH BEDS ARE TO BE DEBRIS-RAKED AND FINED-GRADED AS NEEDED, THEN MULCH SEEDED (OR SODDED, PER PLAN) AND WATERED UNTIL A HEALTHY STAND OF TURF IS ESTABLISHED.

13. ANY PLANT OR OTHER LANDSCAPE MATERIAL SUBSTITUTIONS INSTALLED WITHOUT DESIGNER AND/OR OWNER APPROVAL SHALL BE REPLACED AT CONTRACTOR'S EXPENSE. ALL PLANTS ARE SUBJECT TO THE APPROVAL OF THE OWNER/ARCHITECT BEFORE, DURING AND AFTER INSTALLATION.

14. TREES SHALL BE PLANTED TO MAINTAIN A MINIMUM 10' DISTANCE BETWEEN TREE TRUNK AND UTILITY MAINS SUCH AS WATER, SANITARY SEWER, GAS, AND STORM. TREES SHALL ALSO MAINTAIN AN 8' CLEARANCE BETWEEN TREE TRUNK AND STRUCTURES, BUILDING OVERHANGS, WALLS, FENCES, AND OTHER TREES.

15. SOIL IN LANDSCAPE AREAS MUST BE A MINIMUM OF 18" DEPTH OF A MIX APPROPRIATE FOR PLANTING AND DRAINAGE.

MDDE LANDSCAPE REQUIREMENTS

TOTAL SITE AREA = 8,835.20 SF = .20 AC
IMP. SURFACING = 6,183.03 SF = .14 AC
OPEN SPACE = 2,652.17 SF = .06 AC

STREET TREES:
- SOUTH BOUNDARY: 1 LARGE DEC. TREE PER 40 LF @ 66 L.F. = 2 TREES
  -- HAVE = 1 EXISTING + 1 PROP. LARGE DEC. TREE

INTERIOR LANDSCAPE:
- 1 DECIDUOUS TREES PER 500 SF = 6 DEC. TREES
  -- HAVE = 6 DEC TREES
- 8 SHRUBS PER 500 SF = 43 SHRUBS
  -- HAVE = 43 SHRUBS, 36 PERENNIALS/GRASSES

PARKING REQUIREMENTS: (8 TOTAL SPACES)
- PARKING LOT PERIMETER LANDSCAPE:
  -- NOT APPLICABLE, DOES NOT FACE OR ABUT PROPERTY BOUNDARY OR R.O.W.
- LANDSCAPE BUMPOUTS, ISLANDS, ENDCAPS:
  -- NOT APPLICABLE, UNDER 12 SPACES

LEGEND

- EXISTING TREES TO BE REMOVED
- EXISTING TREES TO REMAIN
- PROPOSED LARGE SHADE/STREET TREE
- PROPOSED MED/SMALL TREE
- PROPOSED EVERGREEN TREE
- PROPOSED EVERGREEN SHRUBS
- PROPOSED DECIDUOUS SHRUBS
- PROPOSED PERENNIALS/GRASSES
- TURF

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project information

PROJECT NUMBER:	22-26
ISSUE DATE:	08.10.22
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	12.19.2022

sheet title

LANDSCAPE PLAN

sheet number

L101

GENERAL NOTES:

A. EVERYTHING SHOWN IS NEW UNLESS OTHERWISE NOTED.

B. FOR GENERAL DUCT CONSTRUCTION SEE DETAILS.

C. ALL WORK SHALL BE IN ACCORDANCE WITH THE BEST QUALITY STANDARDS OF THE TRADE, AND SHALL CONFORM WITH ALL FEDERAL, STATE, AND LOCAL CODES AND STANDARDS.

D. THE CONTRACTOR SHALL INCLUDE IN BID PROPOSAL ALL COSTS REQUIRED TO COMPLETELY AND PROPERLY INSTALL ALL WORK REQUIRED FOR THE PROJECT, AND SHALL EXAMINE THE SCOPE OF WORK OF OTHER TRADES PRIOR TO SUBMITTING A BID PROPOSAL.

E. CONSTRUCTION DOCUMENTS SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE, HOWEVER, SYSTEMS HAVE BEEN SHOWN DIAGRAMMATICALLY AND IN SOME CASES, ENLARGED FOR CLARITY. ANY OFFSETS, ADDITIONAL FITTINGS, AND/OR APPURTENANCES REQUIRED TO PROVIDE A COMPLETE AND COORDINATED SYSTEM SHALL BE BORNE BY THE CONTRACTOR.

F. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF CEILING MOUNTED MATERIALS INCLUDING ALL DIFFUSERS, GRILLES, AND REGISTERS. THE H.C. SHALL COORDINATE DUCTWORK INSTALLATIONS WITH OTHER TRADES. LIGHTING AND DUCTWORK DESIGNS INDICATED ON CONTRACT DRAWINGS WERE COORDINATED, HOWEVER CONFLICTS WITH DUCTWORK AND LIGHTS MAY ARISE DUE TO GRID INSTALLATION. H.C. SHALL BE RESPONSIBLE FOR ALL DUCTWORK MODIFICATIONS AND OFFSETS REQUIRED TO AVOID FIELD CONDITIONS.

G. BALANCE DAMPERS SHALL BE LOCATED AT BRANCH CONNECTION TO THE MAIN.

H. FLEXIBLE DUCTWORK IS LIMITED TO A MAXIMUM LENGTH OF 3 FEET, WITH NO DIPS, SAGS, OR TIGHT ELBOWS; AND ON SUPPLY DUCTWORK ONLY. FLEXIBLE DUCTWORK SHALL BE AN INSULATED, SEMI-RIGID AND LIGHT WEIGHT AIR DUCT, MANUFACTURED BY USING DEAD SOFT ALUMINUM STRIP WHICH IS SPIRALLY WOUND AND MECHANICALLY JOINED TOGETHER FORMING AN AIR TIGHT-LEAKPROOF TRIPLE LOCK SEAM. DUCT TO BE SELF-SUPPORTING AND CORROSIVE RESISTANT UL-181 CLASS I PRODUCT, WITH A POLYETHYLENE VAPOR BARRIER. FLEXIBLE DUCTWORK TO BE LIKE MASTERFIT UPC-018 (ACOUSTICAL) OR AN APPROVED EQUAL.

I. LABEL ALL THERMOSTAT, SENSOR, ETC. AS TO WHAT THE DEVICE CONTROLS WITH AN ENLARGED, PLASTIC LABEL; MOUNTED UNDER OR ON THE DEVICE.

J. PROVIDE NECK PLENUMS ON RETURN AND EXHAUST GRILLES AS REQUIRED. SEE DETAILS.

K. PROVIDE TURNING VANES IN ALL SQUARE ELBOWS. SEE DETAILS.

L. ALL EQUIPMENT INCLUDING BUT NOT LIMITED TO DUCTWORK, PIPING, UNIT HEATERS, ETC. SHALL BE HUNG FROM THE TOP CHORD OF THE STRUCTURAL STEEL.

M. ALL EXTERIOR PENETRATIONS SHALL BE WEATHER AND WATER TIGHT.

N. PROVIDE DUCT CLEANOUTS AS REQUIRED.

O. REFRIGERANT PIPE SIZING AND CONFIGURATION BY UNIT MANUFACTURER.

P. HVAC CONTRACTOR SHALL COORDINATE DUCT, DIFFUSERS, REGISTERS AND GRILLES WITH LIGHT FIXTURE LOCATIONS.

Q. CONTRACTORS ARE TO REVIEW STRUCTURAL PLANS AND ACTUAL LAYOUT OF BEAMS, JOISTS, ETC. TO AVOID CONFLICT BETWEEN DUCT. ADJUST DUCT ROUTING TO ACCEPT STRUCTURAL CONDITIONS.

R. ALL EXHAUST DISCHARGES AND GAS FLUES WHERE INDICATED SHALL BE LOCATED A MINIMUM OF 10'-0" AWAY FROM OUTSIDE AND COMBUSTION AIR INTAKES UNLESS LOCAL AND STATE CODES MANDATE ADDITIONAL DISTANCE.

S. CONTRACTOR SHALL VERIFY ELECTRICAL CHARACTERISTICS OF ALL MECHANICAL EQUIPMENT WITH THE ELECTRICAL CONTRACTOR PRIOR TO PLACING EQUIPMENT ON ORDER.

T. WHERE WALL TYPE LOUVERS ARE INDICATED, MECHANICAL CONTRACTOR SHALL SEAL WATER-TIGHT ALL AROUND LOUVER WITH SILICON CAULKING. CONTRACTOR SHALL COORDINATE PAINTING REQUIREMENTS FOR LOUVERS WITH GENERAL CONTRACTOR PRIOR TO SUBMITTING BID.

Furnace, DX Coil and Condensing Unit Schedule

Furnace																Condensing Unit										
GENERAL INFORMATION		INDOOR FAN			HEATING PERFORMANCE		DX COOLING COIL				ELECTRICAL					GENERAL INFORMATION					ELECTRICAL					
TAG	OA CFM	CFM	E.S.P.	HP	MBH INPUT	MBH OUTPUT	MBH TOTAL	MBH SENSIBLE	EDB	EWB	Voltage	FLA	MOP	Approx Weight LBS	Furnace Manufacturer Model Number	TAG	NOMINAL TONS	AMB. AIR TEMP F.	TOTAL MBH	MIN. SEER	Voltage	MCA	MOP	Approx Weight LBS	Condensing Unit Manufacturer Model Number	NOTES
F-1	160	1400	0.5"	1.0	100.0	97.0	42.0	34.9	80	67	120	19.1	20	261	CARRIER 53MN7A100V21--20	CU-1	3.5	95	42.0	14.0	208/1	27.8	40	363	CARRIER 24ACB742A0030	2,3.4.5
F-2	160	1400	0.5"	1.0	100.0	97.0	42.0	34.9	80	67	120	19.1	20	261	CARRIER 53MN7A100V21--20	CU-2	3.5	95	42.0	14.0	208/1	27.8	40	363	CARRIER 24ACB742A0030	2,3,4,5
F-3	160	1400	0.5"	1.0	100.0	97.0	42.0	34.9	80	67	120	19.1	20	261	CARRIER 53MN7A100V21--20	CU-3	3.5	95	42.0	14.0	208/1	27.8	40	363	CARRIER 24ACB742A0030	1,2,3,4

NOTES:
1. Horizontal condensing type furnace, modulating heating, variable speed motor wilth matching cased dx coil, filtered return, 3" vertical exterior concentric vent mounting kit.
2. Condensing Unit to be provided with start assist kit, low ambeint controls, crank case heaters, five minutes restart time delay, and service vavles.
3. 2-speed scroll compressor, internal pressure relief valve, internal thermal overload, low pressure switch, high pressure switch, filter drier, louvered coil guard,
4. 7-DAY SPECIFIED CONTROL PROGRAMMABLE THERMOSTAT WITH REMOTE SENSORS.
5. Vertical condensing type furnace, modulating heating, variable speed motor wilth matching cased dx coil, filtered return, 3" vertical exterior concentric vent mounting kit.

DUCT INSULATION SCHEDULE

SYSTEM	INTERIOR CONCEALED SUPPLY	EXTERIOR SUPPLY	EXTERIOR RETURN
FLUID TEMP. RANGE (°F)	40 & BELOW	100-300	40-75
INSULATION TYPE	MF OR FE	MF OR FE	MF OR FE
JACKET TYPE	FP	FP	FP
VAPOR BARRIER REQ'D	-	-	-
INSULATION THICKNESS (IN)	1-1/2"	2"	2"

ABBREVIATIONS

INSULATION TYPES
- FE FLEXIBLE ELASTOMERIC
- CG CELLULAR GLASS
- MF MINERAL FIBER (FIBERGLASS)
- PO POLYOLEFIN
- CS CALCIUM SILICATE
- CCF CLOSED-CELL FOAM

JACKETTYPES
- FP FOIL & KRAFT PAPER
- PVC CELLULAR GLASS
- AL ALUMINUM
- SS STAINLESS STEEL

GRILLE, REGISTER, DIFFUSER AND LOUVER SCHEDULE

[illegible]

EXHAUST FAN SCHEDULE

FAN DATA							ELECTRICAL DATA				GENERAL INFORMATION			
TAG	CFM	LOW SPEED CFM	ESP IN. W.C.	TIP SPEED	RPM	SONES	AMPS	VOLTAGE	BHP	CONTROLLED BY	MANUFACTURER AND MODEL NUMBER	FAN TYPE	LOCATION	NOTES
EF-1	100	40	0.35"	---	970	0.9	0.29	120/1	---	BATHROOM LIGHTS	PANASONIC FV-0510VSC1	Direct Drive	Ceiling	ALL
EF-2	100	40	0.35"	---	970	0.9	0.29	120/1	---	BATHROOM LIGHTS	PANASONIC FV-0510VSC1	Direct Drive	Ceiling	ALL
EF-3	75	40	0.35"	---	856	0.4	0.13	120/1	---	BATHROOM LIGHTS	PANASONIC FV-0510VSC1	Direct Drive	Ceiling	ALL
EF-4	75	30	0.35"	---	856	0.4	0.13	120/1	---	JAN. CLOSET LIGHTS	PANASONIC FV-0510VSC1	Direct Drive	Ceiling	ALL
EF-5	75	40	0.35"	---	856	0.4	0.13	120/1	---	BATHROOM LIGHTS	PANASONIC FV-0510VSC1	Direct Drive	Ceiling	ALL
EF-6	100	40	0.35"	---	970	0.9	0.29	120/1	---	BATHROOM LIGHTS	PANASONIC FV-0510VSC1	Direct Drive	Ceiling	ALL

1

NOTES
1. Unit mounted disconnect, speed controller, backdraft damper, wall cap or roof cap.

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WILLIAM J. SNODGRASS REGISTERED No. 17006 STATE OF INDIANA PROFESSIONAL ENGINEER

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BLOOMINGTON COOPERATIVE LIVING

410 W. KIRKWOOD AVE

BLOOMINGTON, IN

project information

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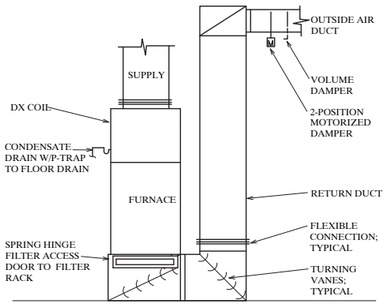
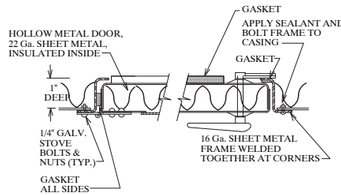
MECHANICAL SCHEDULES

sheet number

M001

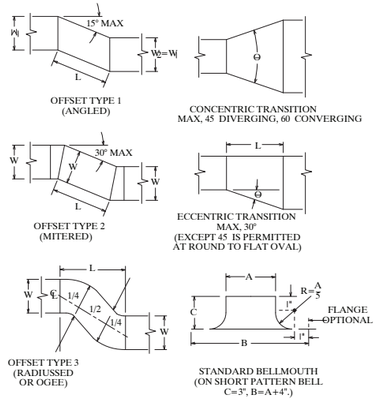


TYPICAL VERTICAL FURNACE DETAIL
NOT TO SCALE DET735

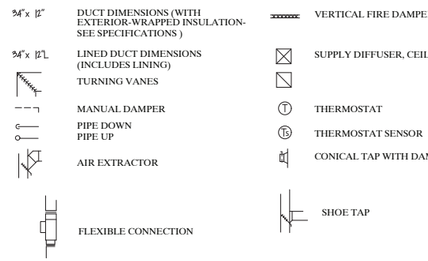


DUCT ACCESS DOOR DETAIL
NOT TO SCALE

OFFSETS 2 AND 3 AND TRANSITIONS MAY HAVE EQUAL OR UNEQUAL INLET AND OUTLET AREAS. TRANSITIONS MAY CONVERT DUCT PROFILES TO ANY COMBINATION FOR RECTANGULAR, ROUND, OR FLAT OVAL SHAPES.

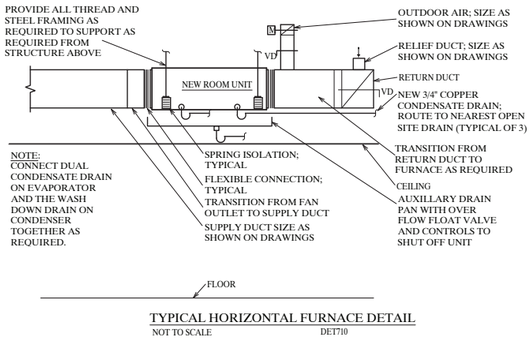


DUCT OFFSETS AND TRANSITIONS
NOT TO SCALE

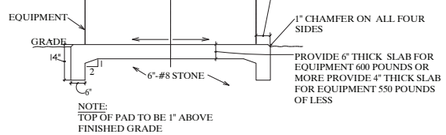


HVAC - TYPICAL SYMBOLS
NOT TO SCALE

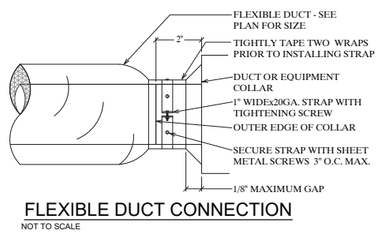
A



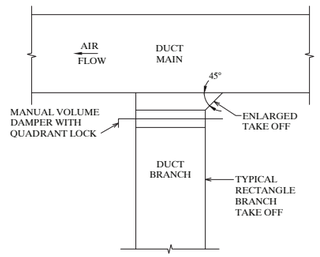
TYPICAL HORIZONTAL FURNACE DETAIL
NOT TO SCALE DET710



EXTERIOR EQUIPMENT PAD DETAIL
NOT TO SCALE

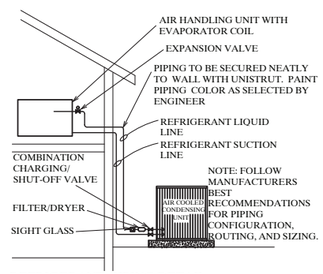


FLEXIBLE DUCT CONNECTION
NOT TO SCALE

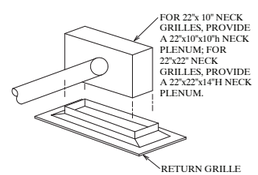


TYPICAL RECTANGLE BRANCH SUPPLY AIR TAKE OFF DETAIL
NOT TO SCALE

B

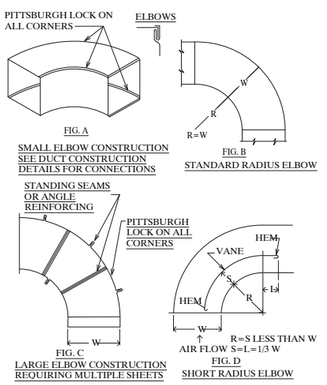


REFRIGERANT PIPING DETAIL
NOT TO SCALE



RETURN GRILLE NECK PLENUM DETAIL
NOT TO SCALE

C



ELBOW DETAILS
NOT TO SCALE

71

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MECHANICAL DETAILS

sheet number

M002

METAL DUCTS

1.1 SHEET METAL MATERIALS

A. GALVANIZED STEEL SHEETS: COMPLY WITH ASTM A653/A 653M, G60 (Z180) AND A MILL PHOSPHATIZED FINISH FOR SURFACES EXPOSED TO VIEW.

B. REINFORCEMENT SHAPES AND PLATES SHALL BE GALVANIZED STEEL DISSIMILAR MATERIALS SHALL BE SEPARATED USING APPROPRIATE GASKET MATERIALS.

C. GALVANIZED STEEL TIE RODS THAT ARE 1/4-INCH MINIMUM DIAMETER FOR LENGTHS 36 INCHES OR LESS AND 3/8-INCH DIAMETER FOR LONGER LENGTHS LONGER.

D. CARBON STEEL SHEETS: COMPLY WITH ASTM A/1008 100808M, WITH OILED, MATTE FINISH FOR EXPOSED DUCTS.

1.2 DUCT LINER

A. TYPE I, FLEXIBLE LINER SHALL HAVE A MAXIMUM THERMAL CONDUCTIVITY OF 0.27 BTU X IN./H X SQ. FT. X DEG F AT 75 DEG F MEAN TEMPERATURE.

B. TYPE II, RIGID: LINER SHALL HAVE A MAXIMUM THERMAL CONDUCTIVITY OF 0.23 BTU X IN./H X SQ. FT. X DEG F AT 75 DEG F MEAN TEMPERATURE.

C. ANTIMICROBIAL EROSION-RESISTANT COATING TESTED AND REGISTERED FOR USE IN HVAC SYSTEMS

D. WATER-BASED LINER ADHESIVE: COMPLY WITH NFPA 90A OR NFPA 90B AND WITH ASTM C 916.

E. INSULATION PINS AND WASHERS:

1. CUPPED-HEAD CAPACITOR-DISCHARGE-WELD PINS SHALL BE COPPER- OR ZINC-COATED STEEL PIN, FULLY ANNEALED FOR CAPACITOR-DISCHARGE WELDING, 0.106-INCH DIAMETER SHANK, LENGTH TO SUIT DEPTH OF INSULATION LINED WITH INTEGRAL 1-1/2-INCH GALVANIZED CARBON-STEEL WASHER.
2. INSULATION-RETAINING WASHERS SHALL BE SELF-LOCKING WASHERS FORMED FROM 0.016-INCH THICK GALVANIZED STEEL; WITH BEVELED EDGE SIZED AS REQUIRED TO HOLD INSULATION SECURELY IN PLACE BUT NOT LESS THAN IN DIAMETER.

F. SHOP APPLICATION OF DUCT LINER IS PERMITTED.

1.3 SEALANT AND GASKETS

A. WATER-BASED JOINT AND SEAM SEALANT SHALL BE BRUSHED ON WITH A MINIMUM SOLIDS CONTENT OF 65%, A MINIMUM SHORE A HARDNESS OF 20, WATER MOLD AND MILDEW RESISTANT AND A MAXIMUM VOC OF 75 G/L. MUST BE RATED FOR UP TO 10" WG AND FOR INDOOR AND OUTDOOR SERVICE. SHALL BE COMPATIBLE WITH METAL SUBSTRATE.

B. FLANGED JOINT SEALANT SHALL BE A SINGLE-COMPONENT, ACID-CURING, SILICONE ELASTOMERIC, TYPE S, GRADE NS, CLASS 25 AND O USE.

C. FLANGE GASKETS SHALL BE BUTYL RUBBER, NEOPRENE, OR EPDM POLYMER WITH POLYISOBUTYLENE PLASTICIZER.

1.4 HANGERS AND SUPPORTS

A. HANGER RODS SHALL BE CADMIUM-PLATED STEEL RODS AND NUTS.

B. STEEL CABLES FOR GALVANIZED-STEEL DUCTS.

C. STEEL CABLE END CONNECTIONS SHALL BE CADMIUM-PLATED STEEL ASSEMBLIES WITH BRACKETS, SWIVEL, AND BOLTS DESIGNED FOR DUCT HANGER SERVICE; WITH AN AUTOMATIC-LOCKING AND CLAMPING DEVICE.

D. SHEET METAL SCREWS, BLIND RIVETS, OR SELF-TAPPING METAL SCREWS SHALL BE COMPATIBLE WITH DUCT MATERIALS.

E. SUPPORT GALVANIZED-STEEL DUCTS WITH GALVANIZED-STEEL SHAPES AND PLATES.

1.5 DUCT INSTALLATION

A. PROTECT ALL MATERIALS, INSTALLED AND STORED, FROM DAMAGE.

B. COVER OPENINGS BETWEEN NON-FIRE RATED INTERIOR PARTITIONS AND DUCT (OR DUCT INSULATION) WITH SHEET METAL OVERLAPPING ON FOUR SIDES BY A MINIMUM OF 1 ½".

C. TRIM DUCT SEALANTS FLUSH WITH METAL. CREATE A SMOOTH AND UNIFORM EXPOSED BEAD.

D. REPAIR OR REPLACE DAMAGED SECTIONS AND FINISHED WORK THAT DOES NOT COMPLY WITH THESE REQUIREMENTS.

E. HANGERS AND SUPPORTS SHALL USE STRUCTURAL-STEEL FASTENERS APPROPRIATE FOR CONSTRUCTION MATERIALS TO WHICH HANGERS ARE BEING ATTACHED.

F. HANGERS EXPOSED TO VIEW SHALL BE THREADED ROD AND ANGLE OR CHANNEL SUPPORTS.

G. INSTALL UPPER ATTACHMENTS TO STRUCTURES. SELECT AND SIZE UPPER ATTACHMENTS WITH PULL-OUT, TENSION, AND SHEAR CAPACITIES APPROPRIATE FOR SUPPORTED LOADS AND BUILDING MATERIALS WHERE USED.

H. PAINT INTERIOR OF METAL DUCTS THAT ARE VISIBLE THROUGH REGISTERS AND GRILLES AND THAT DO NOT HAVE DUCT LINER. APPLY ONE COAT OF FLAT, BLACK, LATEX PAINT OVER A COMPATIBLE GALVANIZED-STEEL PRIMER.

I. PERFORM TESTS AND INSPECTIONS. DUCT SYSTEM WILL BE CONSIDERED DEFECTIVE IF IT DOES NOT PASS TESTS AND INSPECTIONS.

J. CLEAN EXISTING DUCT SYSTEMS BEFORE TESTING, ADJUSTING, AND BALANCING.

1.6 DUCT SCHEDULE

A. INTERMEDIATE REINFORCEMENT SHALL BE GALVANIZED STEEL.

DUCT ACCESSORIES

1.1 MATERIALS

A. REINFORCEMENT SHAPES AND PLATES SHALL MATCH OR BE COMPATIBLE WITH SHEET METAL DUCT MATERIAL.

B. TIE RODS SHALL BE STAINLESS STEEL, 1/4-INCH MINIMUM DIAMETER FOR LENGTHS 36 INCHES OR LESS; 3/8-INCH MINIMUM DIAMETER FOR LENGTHS LONGER THAN 36 INCHES.

1.2 MANUAL VOLUME DAMPERS

A. ALL STAINLESS STEEL DAMPER WITH STANDARD LEAKAGE RATING AND LINKAGE OUTSIDE OF AIRSTREAM. USE A HAT-SHAPED FRAME WITH STAINLESS STEEL CHANNELS, MITERED AND WELDED CORNERS, FLANGELESS FRAMES FOR INSTALLATION IN DUCTS, STAINLESS STIFFEN DAMPER BLADES AND OIL IMPREGNATED BRONZE BEARINGS.

1.3 FLANGE CONNECTORS

A. GALVANIZED STEEL MATCHING CONNECTING DUCTWORK IN GAGE AND SHAPE. IT SHALL BE AN ADD-ON, FACTORY-FABRICATED DEVICE WITH SLIDE-ON TRANSVERSE FLANGE CONNECTORS, GASKETS, AND COMPONENTS.

1.4 TURNING VANES

A. MANUFACTURED STAINLESS STEEL TURNING VANES WITH CURVED BLADES AND SUPPORTED WITH BARS PERPENDICULAR TO BLADES SET. INSTALL SINGLE WALL VANES FOR DUCTS UP TO 48" WIDE AND DOUBLE WALL FOR LARGER DUCTS.

1.5 DUCT-MOUNTED ACCESS DOORS

A. STAINLESS STEEL DOUBLE WALL RECTANGULAR DOOR WITH INSULATION PER DUCT PRESSURE CLASS AND 1"X1" BUTT OR PIANO HINGES AND CAM LATCHES. NUMBER OF HINGES SHALL BE APPROPRIATE TO DOOR SIZE. FRAME SHALL BE GALVANIZED WITH BED OVER TABS AND FOAM GASKETS.

1.6 FLEXIBLE CONNECTORS

A. FLEXIBLE CONNECTORS SHALL BE MADE OF FLAME-RETARDANT OR NONCOMBUSTIBLE FABRICS.

B. INDOOR SYSTEM FLEXIBLE CONNECTOR SHALL BE GLASS FABRIC DOUBLE COATED WITH NEOPRENE. MINIMUM WEIGHT SHALL BE 26 OZ/ SQ YD WITH A TENSILE STRENGTH OF 480 LBF/ INCH IN THE WRAP AND 360 LBF/INCH IN THE FILLING AT -40^{0}F TO 200^{0}F.

C. OUTDOOR SYSTEM FLEXIBLE CONNECTOR SHALL BE GLASS FABRIC DOUBLE COATED WITH PROOF, SYNTHETIC RUBBER RESISTANT TO UV RAYS AND OZONE. MINIMUM WEIGHT SHALL BE 24 OZ/ SQ YD WITH A TENSILE STRENGTH OF 500 LBF/ INCH IN THE WRAP AND 440 LBF/INCH IN THE FILLING AT -50^{0}F TO 250^{0}F.

1.7 FLEXIBLE DUCTS

A. NONINSULATED FLEXIBLE DUCT SHALL BE BLACK POLYMER FILM SUPPORTED BY HELICALLY WOUND, SPRING-STEEL WIRE WITH A PRESSURE RATING OF 4" WG TO -0.5" WG AT A MAXIMUM AIR VELOCITY OF 4000 FPM AND A TEMPERATURE RANGE OF -20^{0}F TO 175^{0}F.

B. INSULATED, FLEXIBLE DUCT SHALL BE BLACK POLYMER FILM SUPPORTED BY HELICALLY WOUND, SPRING-STEEL WIRE; FIBROUS-GLASS INSULATION WITH ALUMINIZED VAPOR-BARRIER FILM. PRESSURE RATING SHALL BE 4" WG TO -0.5" WG AT A MAXIMUM AIR VELOCITY OF 4000 FPM AND A TEMPERATURE RANGE OF -20^{0}F TO 175^{0}F.

C. STAINLESS STEEL CLAMPS WITH CADMIUM-PLATED HEX SCREW TO TIGHTN BAND WITH A WORM GEAR ACTION IN SIZES 3 THROUGH 18

D. ADHESIVE PLUS SHEET METAL SCREWS FOR NON-CLAMP CONNECTORS.

1.8 INSTALLATION

A. INSTALL DUCT ACCESSORIES OF MATERIALS THAT ARE COMPATIBLE WITH DUCT MATERIALS.

B. INSTALL VOLUME DAMPERS AT POINTS ON SUPPLY, RETURN, AND EXHAUST SYSTEMS WHERE INDICATED ON DRAWINGS. WHERE DAMPERS ARE INSTALLED IN DUCTS HAVING DUCT LINER, INSTALL DAMPERS WITH HAT CHANNELS OF SAME DEPTH AS LINER, AND TERMINATE LINER WITH NOSING AT HAT CHANNEL.

C. SET DAMPERS TO FULLY OPEN POSITION BEFORE TESTING, ADJUSTING, AND BALANCING.

D. INSTALL DUCT ACCESS DOORS ON SIDES OF DUCTS TO ALLOW FOR PROPER USE AT THE FOLLOWING LOCATIONS:

1. DOWNSTREAM FROM DAMPERS AND EQUIPMENT.
2. ADJACENT TO AND CLOSE ENOUGH TO FIRE OR SMOKE DAMPERS, TO RESET OR REINSTALL FUSIBLE LINKS. ACCESS DOORS FOR ACCESS TO FIRE OR SMOKE DAMPERS HAVING FUSIBLE LINKS SHALL BE PRESSURE RELIEF ACCESS DOORS AND SHALL BE OUTWARD OPERATION FOR ACCESS DOORS INSTALLED UPSTREAM FROM DAMPERS AND INWARD OPERATION FOR ACCESS DOORS INSTALLED DOWNSTREAM FROM DAMPERS.
3. CONTROL DEVICES REQUIRING INSPECTION.
4. ELSEWHERE AS INDICATED.

E. INSTALL ACCESS DOORS WITH SWING AGAINST DUCT STATIC PRESSURE.

F. ACCESS DOOR SIZES:

1. ONE-HAND OR INSPECTION ACCESS: 8 BY 5 INCHES.
2. TWO-HAND ACCESS: 12 BY 6 INCHES.
3. HEAD AND HAND ACCESS: 18 BY 10 INCHES.
4. HEAD AND SHOULDERS ACCESS: 21 BY 14 INCHES.
5. BODY ACCESS: 25 BY 14 INCHES.

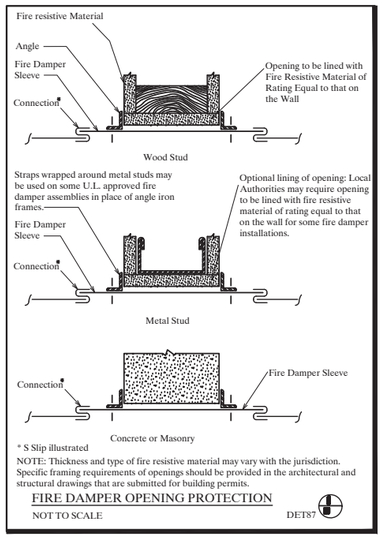
G. INSTALL FLEXIBLE CONNECTORS TO CONNECT DUCTS TO EQUIPMENT.

H. CONNECT DIFFUSERS OR LIGHT TROFFER BOOTS TO DUCTS WITH MAXIMUM 60-INCH LENGTHS OF FLEXIBLE DUCT CLAMPED OR STRAPPED IN PLACE.

I. CONNECT FLEXIBLE DUCTS TO METAL DUCTS WITH ADHESIVE PLUS SHEET METAL SCREWS.

J. FULLY TEST AND OPERATE ALL DAMPERS TO VERIFY FULL RANGE OF MOVEMENT.

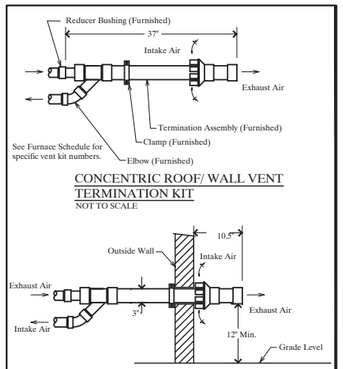
K. INSPECT ALL EQUIPMENT AND ACCESSORIES FOR PROPER INSTALLATION.



* S Slip illustrated

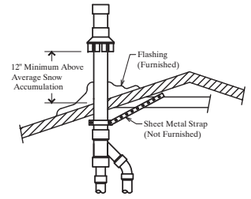
NOTE: Thickness and type of fire resistive material may vary with the jurisdiction. Specific framing requirements of openings should be provided in the architectural and structural drawings that are submitted for building permits.

FIRE DAMPER OPENING PROTECTION
NOT TO SCALE DETS7



CONCENTRIC ROOF/ WALL VENT TERMINATION KIT
NOT TO SCALE

CONCENTRIC WALL VENT TERMINATION APPLICATION
NOT TO SCALE



CONCENTRIC ROOF VENT TERMINATION APPLICATION
NOT TO SCALE DET39C

Typical Installation Details:

(A) Retaining Angles:
Minimum 1-1/2" x 1-1/2" x 0.054 (16 ga.)

Retaining angles must tap structural opening 1" minimum and cover corners of openings.

(B) Clearance: 1/8" per Linear Foot.
Both dimensions (see Note 1 below)

(C) Steel Sleeve: see table for Minimum Sleeve Thickness for Fire Dampers.

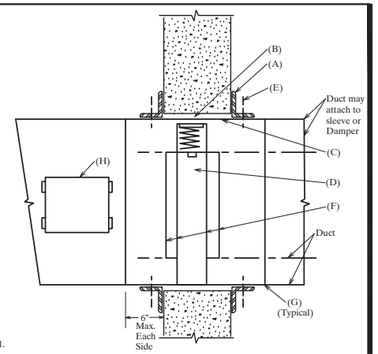
(D) Approved Fire Damper (curtain or blade type).

(E) Secure Retaining Angles to Sleeve ONLY, on 8" Centers with:
1. 1/2" long welds OR
2. 1/4" bolts and nuts, OR
3. No. 10 steel screws, OR
4. Minimum 3/16" steel rivets.

(F) Secure damper to sleeve on 8" centers with:
1. 1/2" long welds, OR
2. 1/4" bolts and nuts in holes provided, OR
3. No. 10 steel screws, OR
4. Minimum 3/16" steel rivets

(G) Connect duct to sleeve as shown on Breakaway Connections Detail and as outlined by Schedule 1.

(H) Install access door or panel as shown in detail.



Vertical position is shown; horizontal installation is similar.

Follow installation instruction for fusible links.

NOTES:

1. FIRE DAMPER SLEEVE CLEARANCE WITHIN WALL OPENING
Clearance requirements for damper sleeves within a wall opening is based on 1/8 inch per foot of width (or height) unless otherwise stated in the listing of the assembly. The sleeve may rest on the bottom of the opening, and need not be centered. (Fractional dimensions shall be taken as the next largest foot.)
Example: A 30 inch x 24 inch fire damper sleeve is installed in a wall opening. The opening shall be 30-3/8 inches wide (1/8 inch x 3 feet) by 24-1/4 inches high (1/8 inch x 2 feet.)
The sleeve is retained in the wall opening by the use of steel retaining angles (A). These must over-lap the edge of the framing by a minimum of one (1) inch over and beyond all material in the opening. This means that the minimum width of the retaining angle would be 1-3/8 inches (good practice calls for an additional safety factor by making the angle in this case 1-1/2 inches wide.)
The dimensions required for the opening shall be those remaining after the opening has been framed and fire resistive materials provided where required (see Fire Damper Opening Protection detail). The fire resistive materials shall be equal to the requirements for fire resistive materials used in the constructed wall so that a continuous rating exists at the wall penetration. The Contractor erecting the wall is responsible for providing the fire resistive material and correct size openings to achieve the required clearance.
2. MANUFACTURER'S INSTALLATION DETAILS
The fire damper manufacturers' installation details and instructions as tested and approved by U.L. Must be used in lieu of the above details where applicable.

BASIC FIRE DAMPER INSTALLATION DETAILS
NOT TO SCALE DET88

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MECHANICAL DETAILS

sheet number

M003

HVAC SEQUENCE OF OPERATION:

UNITS F-1/CU-1, F-2/CU-2 & F-3/CU-3:

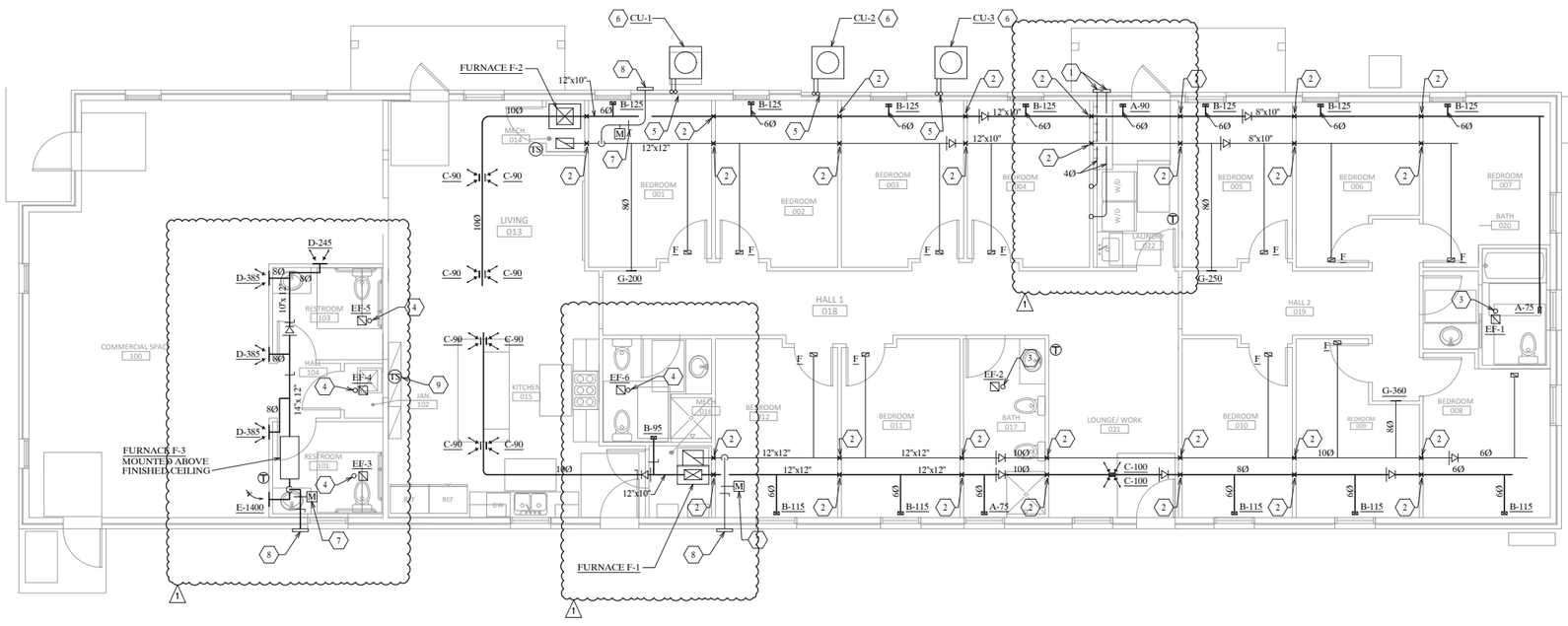
1. ALL UNITS SHALL BE CONTROLLED BY A 24HR/365 DAY PROGRAMABLE THERMOSTAT WITH WIFI ACCESS FOR REMOTE APP CONTROL. F-1 & F-2 SHALL HAVE THERMOSTATS WITH ONE REMOTE SENSOR FOR TEMPERATURE AVERAGING.
2. OUTSIDE AIR: UPON FAN MOTOR STARTING, THE 2-POSITION MOTORIZED OUTSIDE AIR DAMPER SHALL FULLY OPEN. THE MANUAL VOLUME DAMPER SHALL BE SET TO DELIVER THE CORRECT AMOUNT OF OUTSIDE AIR AS INDICATED ON THE DRAWINGS. UPON FAN MOTOR STOPPING, THE TWO 2-POSITION MOTORIZED DAMPER SHALL FULLY SHUT.
3. FAN OPERATION: SYSTEM/FANS SHALL BE SET TO AUTO.
4. COOLING MODE: UPON A TEMPERATURE RISE, DX COOLING SHALL START OPERATE ON ITS OWN CONTROLS TO SATISFY THERMOSTAT/SENSORS.
5. HEATING MODE: UPON A TEMPERATURE DROP PAST HEATING SETPOINT, FURNACE SHALL OPERATE ON ITS OWN CONTROLS TO SATISFY THERMOSTAT/SENSORS.

GENERAL NOTES:

PROVIDE REGISTER BOOTS/PLENUMS ON EACH GRILLE/REGISTERED AS REQUIRED.

(#) PLAN NOTES:

1. DRY CAP HOOD ON WALL.
2. FIRE DAMPER AT WALL PENETRATION. PROVIDE DUCT ACCESS PANEL IN DUCTWORK AS REQUIRED.
3. 6Ø UP TO ROOF JACK/HOOD. INSTALL FIRE DAMPER AT CEILING PENETRATION.
4. 6Ø UP TO ROOF JACK/HOOD.
5. PIPE REFRIGERANT PIPING BEST ROUTE TO COOLING COILS AS REQUIRED.
6. PROVIDE A MINIMUM OF 18" ON ALL SIDES OF CONDENSING UNITS.
7. MANUAL VOLUME DAMPER AND 2 POSITION MOTORIZED DAMPER TO OPEN WHEN FAN IS ON AND CLOSE WHEN FAN IS OFF.
8. OUTSIDE AIR INTAKE HOOD/LOUVER.
9. TEMPERATURE SENSOR, CONNECTED TO MAIN THERMOSTAT; TYPICAL.



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FLOOR PLAN - MECHANICAL

SCALE: 3/16"= 1'-0"

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WILLIAM J. SNODGRASS REGISTERED No. 17006 STATE OF INDIANA PROFESSIONAL ENGINEER

project title

BLOOMINGTON COOPERATIVE LIVING

410 W. KIRKWOOD AVE BLOOMINGTON, IN

project information

PROJECT NUMBER:	22100
ISSUE DATE:	09/23/2022
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FLOOR PLAN - MECHANICAL

sheet number

M200

GENERAL NOTES

1. SUBMIT MANUFACTURER'S PRODUCT DATA AND INSTALLATION INSTRUCTIONS FOR EACH MATERIAL AND PRODUCT USED.
2. COMPLY WITH GOVERNING CODES AND REGULATIONS. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS, WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
3. COORDINATE LOCATION OF PLUMBING SYSTEMS TO AVOID INTERFERENCE WITH LOCATION OF STRUCTURE AND OTHER BUILDING SYSTEMS. NOTIFY OWNER PRIOR TO CONSTRUCTION OF CONFLICTS, WHICH CANNOT BE RESOLVED.
4. ALL WORKMANSHIP AND MATERIALS SHALL BE OF THE HIGHEST QUALITY IN EVERY RESPECT. ALL MATERIALS AND EQUIPMENT SHALL BE NEW, OF THE LATEST DESIGN, AND FREE OF DEFECTS. ALL MATERIALS AND EQUIPMENT SHALL CONFORM TO THE LATEST AMENDED EDITION OF ALL APPLICABLE STANDARDS, INCLUDING BUT NOT LIMITED TO, SMACNA, UL, AND NEMA STANDARDS.
5. OBTAIN ALL EQUIPMENT OF THE SAME TYPE FROM THE SAME MANUFACTURER.
6. WATER QUALITY TESTING IS REQUIRED.
7. DISRUPTIONS TO EXISTING SERVICES MUST BE COORDINATED WITH THE CONSTRUCTION MANAGER AND THE OWNER NO LESS THAN 10 BUSINESS DAYS IN ADVANCE.
8. INSTALL DIELECTRIC FITTINGS AS REQUIRED
9. SEE OTHER SECTIONS FOR DETAILS ON EXCAVATION REQUIREMENTS.
10. DRAWINGS ARE ONLY SCHEMATIC AND DIAGRAMTIC IN NATURE. INSTALL PIPING AS GENERALLY INDICATED.
11. INSTALL VALVES AT ALL LOW POINT IN SYSTEM.
12. INSTALL AIR RELIEF VALVES AT ALL HIGH POINTS IN THE SYSTEM.
13. PROVIDE O&M MANUALS FOR ALL EQUIPMENT.
14. MINIMUM DESIGN WORKING PRESSURE SHALL BE 125 PSIG FOR ALL SUPPLY PIPING.
15. PROTECT ALL EQUIPMENT AND MATERIALS DURING WHILE IN STORAGE AND DURING CONSTRUCTION. REPLACE ANY DAMMAGED ITEMS. DO NOT ATTEMPT TO REPAIR.
16. INSTALL FORCE MAINS AT ELEVATIONS INDICATED.
17. PROVIDE FINAL CONNECTIONS TO EQUIPMENT WITH SHUT-OFF VALVES, BALANCE REGULATORS, UNIONS, ETC. AS SPECIFIED AND AS REQUIRED BY EQUIPMENT OPERATION. COORDINATE WITH OWNER'S REPRESENTATIVE FOR EQUIPMENT IDENTIFICATION, CONNECTION REQUIREMENTS, EXACT LOCATIONS AND MOUNTING HEIGHTS.

THE CONTRACTORS ARE REQUIRED TO VISIT THE SITE AND FULLY ACQUAINT THEMSELVES WITH THE EXISTING CONDITIONS AND THE DIFFICULTIES INVOLVED IN ACCOMPLISHING THE NEW WORK. PROBLEMS, DISCREPANCIES OR INFORMATION NEEDED SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER IN WRITING PRIOR TO SUBMITTING A PROPOSAL. THE SUBMISSION OF PROPOSAL WILL INDICATE THAT THE CONTRACTOR HAS FULLY UNDERSTOOD AND HAS INCLUDED ALL COSTS FOR THIS PROJECT.

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	MANUFACTURER	MODEL No.	TYPE	MATERIAL	STYLE	COLOR	FAUCET / VALVE MANUFACTURER	FAUCET / VALVE MODEL	FAUCET / VALVE SPOUT	FAUCET / VALVE HANDLES	FAUCET / VALVE CENTERS	SUPPLY STOPS	DRAIN TYPE/MFR/MODEL	DRAIN TRAP SIZE	DOMESTIC CW	DOMESTIC HW	SANITARY WASTE	SANITARY VENT	REMARKS	NOTES
P-1	WATER CLOSET ADA	TOTO	CST446CEMFGN	TWO-PIECE	VITREOUS CHINA	FLOOR MOUNTED	WHITE	---	---	---	---	---	MCGUIRE	---	---	1/2"	--	3"	2"	WITH SIDE SKIRTS; PROVIDE WITH ELONGATED WHITE SEAT LIKE TOTO SS114 SOFT CLOSE.	1,2
P-2	BIDET	TOTO	BT500B	ONE-PIECE	VITREOUS CHINA	FLOOR MOUNTED	WHITE	KOHLER	K-73077-4	---	---	---	MCGUIRE	---	---	1/2"	--	3"	2"	WITH POP-UP DRAIN, FLUSHING RIM AND VERTICAL SPRAY	1,2
P-5	SHOWER	OASIS	SHFW-3837/3SF	ONE-PIECE	GEL-CENT FIBER CLASS	---	WHITE	KOHLER	KSS-PURIST-4 -RTH5	---	---	---	---	---	---	3/4"	--	2"	1-1/2"	SHOWER FAUCET PACKAGE WITH HEADS, DIVERTER, HANDLES, HAND SHOWER, HOSE, SHOWER ARM, SLIDE BAR AND VALVE TRIM	1,2
P-8	MOP SINK	FIAT	MSB2424	FLOOR MOUNT	MOLDED STONE	---	WHITE	AMERICAN STANDARD	8344.212	---	---	---	---	---	---	1/2"	1/2"	2"	1-1/2"	24x24x10 MOP SERVICE BASIN. MOLDED HIGH DENSITY COMPOSITE BASIN WITH AND INTEGRALLY MOLDED, SELF-DRAINING MOP SHELF, PVC DRAIN BODY, S.S. DOME STRAINER/LINT BASKET, AND 3' GASKETED OUTLET CONNECTION LIKE ZURN Z1996-24 WITH STAINLESS STEEL BUMPER GUARD, HOSE AND HOSE BRACKET, MOP HANGER, AND STAINLESS STEEL WALL GUARDS, TOP OF WALL GUARDS SHALL BE 24" ABOVE TOP LIP OF BASIN. WITH CHROME-PLATED SERVICE FAUCET, COMPLETE WITH VACUUM BREAKER, INTEGRAL STOPS, ADJUSTABLE WALL BRACE, PAIL HOOK, FOUR-ARM HOT AND COLD HANDLES AND 3/4" HOSE THREAD ON SPOUT. WATER INLETS ARE FOR 1/2" PIPE AND ARE ECCENTRIC ON AN 8" CENTERLINE.	2,4
P-3	LAVATORY TRIM ADA	---	---	1-HOLE	---	---	---	DELTA	533LF-MPU	ARC	LEVER	8"	BRASS CRAFT CS400AC	DELTA RP26533	1-1/2"	1/2"	1/2"	2"	1-1/2"	WITH METAL POP-UP	1,2,5
P-4	S.S SINK	PROFLO	PFSR332274	DROP IN	S.S	DOUBLE BOWL	---	DELTA	16953-DST	ARC	LEVER	8"	BRASS CRAFT CS400AC	PROFLO PF1431BRSS	1-1/2	1/2"	1/2"	2"	1-1/2"	---	1,4
P-9	WASHER BOX	SIOUX CHIEF	696-2303CF	RECESSED	PLASTIC	---	WHITE	SIOUX CHIEF	---	---	---	---	---	---	1-1/2"	1/2"	1/2"	2"	1-1/2"	WITH WATER HAMMER ARRESTOR AND 1/4 TURN BALL VALVES	2,4
P-6	TUB & SHOWER	OASIS	TSFW-6030XAF	ALCOVE	ACRYLIC	---	WHITE	KOHLER	PURKT K-T14421-4	---	---	---	---	---	1-1/2"	1/2"	1/2"	2"	1-1/2"	---	1,2
P-7	LAUNDRY	FIAT	FL-1	FREE STANDING	---	---	WHITE	KRAUS	KPF-1610	ARC	LEVER	---	BRASS CRAFT CS400AC	PROFLO PF1431BRSS	1-1/2"	1/2"	1/2"	2"	1-1/2"	DRILL TOP FOR SINGLE HOLE	2
P-10	WATER/ICE BOX	SIOUX CHIEF	696-G1010XF	---	ABS	---	WHITE	---	---	---	---	---	---	---	---	1/2"	---	---	---	WITH VALVE AND ARRESTOR	---
P-11	WALL HYDRANT	WOODFORD	MODEL 65	---	---	FREEZE PROOF	---	---	---	---	---	---	---	---	---	1/2"	---	---	---	---	---

NOTE:
1. INSTALL ADA PLUMBING FIXTURES PER ANSI 117.1 GUIDELINES.
2. TRAPS, SUPPLIES, ETC TO BE CHROME.
3. PROVIDE ADA OFFSET GRID STRAINER AND PADDED SUPPLIES AND DRAIN.
4. SANITARY WASTE LINE SIZE AS INDICATED ON PLANS.
5. PROVIDE 0.5 AERATOR ON FAUCET.
6. PROVIDED AND INSTALLED UNDER TENANT PROVIDED PLANS.
7. FIXTURE TO HAVE MIXING VALVE MIX-1.

PIPING INSULATION SCHEDULE (INDOOR)

	SYSTEM	REFRIGERANT (SEE NOTE 4)	DOMESTIC HOT WATER & RETURN	DOMESTIC COLD WATER	HORIZONTAL STORM WATER (NOTE 3& 5)	CONDENSATE DRAIN
	FLUID TEMP. RANGE (°F)	40 & BELOW	100–300	40–75	40–75	40–55
	INSULATION TYPE	MF OR FE	MF OR FE	MF OR FE	MF OR FE	MF OR FE
	JACKET TYPE	FP	FP	FP	FP	FP
	VAPOR BARRIER REQ'D	--	--	--	--	--
INSULATION THICKNESS (IN)	RUNOUTS (NOTE 1& 2	1.0	0.5	--	--	--
	1" & LESS	1.0	0.5	0.5	--	0.5
	1.25" TO 2"	1.5	0.5	0.5	1.0	0.5
	2.5" TO 4"	1.5	1.0		1.0	0.5
	5" & ABOVE	--	--	--	--	--

NOTES:
1. INDOOR INSTALLATION – FLAME SPREAD INDEX OF 25 OR LESS AND SMOKE–DEVELOPED INDEX OF 50 OR LESS.
2. OUTDOOR INSTALLATION – FLAME SPREAD INDEX OF 75 OR LESS AND SMOKE–DEVELOPED INDEX OF 150 OR LESS.
3. MATERIALS MAY NOT CONTAIN ASBESTOS, LEAD, MERCURY OR MERCURY COMPOUNDS.
4. LONGITUDINAL SEAMS INSTALLED AT TOP AND BOTTOM OF HORIZONTAL RUNS.
5. MULTIPLE LAYERS SHALL HAVE STAGGERED SEAMS.
6. INSTALL WITH MINIMAL AMOUNT OF JOINTS.
7. AVOID COMPRESSING INSULATION TO 75% OR MORE OF ITS NOMINAL THICKNESS.
8. REPAIR ALL DAMAGED PRODUCT AS NECESSARY.
9. RUNOUTS NOT EXCEEDING 12 FEET IN LENGTH AND 2" PIPE TO INDIVIDUAL HVAC TERMINAL UNITS.
10. RUNOUTS THAT ARE NOT LARGER THAN 1" AND NON–CIRCULATING TO INDIVIDUAL PLUMBING UNITS.
11. INCLUDES ROOF DRAIN BODY AND VERTICAL RUN UP TO THE ROOF DRAIN BODY.
12. PROVIDE PVC JACKET ON EXTERIOR REFRIGERANT PIPING.
13. INSTALL 3'X3'X1" ARMAFLEX GLUED TO BOTTOM OF RD AND OFD BODY'S. (EXISTING & NEW

INSULATION TYPES

FE FLEXIBLE ELASTOMERIC – COMPLYING WITH ASTM C 534, TYPE 1
MF MINERAL FIBER BLANKET (FIBERGLASS) – COMPLYING WITH ASTM C 553, TYPE II AND ASTM C 1290, TYPE I
MINERAL FIBER, PREFORMED PIPE INSULATION – COMPLYING WITH ASTM C 547, TYPE 1 , GRADE A WITH FACTORY APPLIED ASJ–SSL
FP FOIL & KRAFT PAPER – COMPLYING WITH ASTM C 1136, TYPE II
SS STAINLESS STEEL

PLUMBING EQUIPMENT SCHEDULE

MARK	MANUFACTURER	MODEL	DESCRIPTION	ELECTRICAL HP	ELECTRICAL V/PH	NOTES
CO-1	SIOUX CHIEF	852-3PNR	CLEANOUT	---	---	
HWR-1	GOULDS/LAING	E1-BCANCT 1W-06	HOT WATER RECIRC PUMP	14 WATTS	120/1	SET TIMER FOR ON AT 6AM-7PM

SEWER AND VENT PIPING

	4" AND SMALLER	6" AND BIGGER
ABOVEGROUND SOIL AND WASTE PIPING	HUBLESS, CAST-IRON, CISPI COUPLINGS AND COUPLED JOINTS SOLID WALL PVC	HUBLESS, CAST-IRON, CISPI COUPLINGS AND COUPLED JOINTS SOLID WALL PVC
ABOVEGROUND VENT PIPING	HUBLESS, CAST-IRON, CISPI COUPLINGS AND COUPLED JOINTS SOLID WALL PVC	HUBLESS, CAST-IRON, CISPI COUPLINGS AND COUPLED JOINTS SOLID WALL PVC
UNDERGROUND SOIL AND WASTE PIPING	HUBLESS, CAST-IRON, CISPI COUPLINGS AND COUPLED JOINTS SOLID WALL PVC	HUBLESS, CAST-IRON, CISPI COUPLINGS AND COUPLED JOINTS SOLID WALL PVC
ABOVEGROUND SANITARY SEWER FORCE MAIN	GALVANIZED-STEEL PIPE , PRESSURE FITTINGS AND THREADED JOINTS	GROOVED-END, GALVANIZED-STEEL PIPE

1. JOIN DISSIMILAR MATERIALS WITH DIELECTRIC FITTINGS
2. IF APPLICABLE, MAINTAIN FIRE RATING AROUND PIPE PENETRATIONS

TANKLESS GAS WATER HEATER SCHEDULE

TAG	MBH INPUT MIN.	MBH INPUT MAX	THERMAL EFF	FLOW RATE GPM	TEMP. RISE	WEIGHT LBS	HEIGHT INCHES	WIDTH INCHES	DEPTH INCHES	ELECTRICAL VOLTAGE	ELECTRICAL AMPS	MANUFACTURER/MODEL	NOTES
WH–1	13.3	199.0	95%	5.2	75F	74	27.4	17.3"	13.2	120/1ø	4.0	NAVIEN NPE–240A2	ALL
WH–2	13.3	199.0	95%	5.2	75F	74	27.4	17.3"	13.2	120/1ø	4.0	NAVIEN NPE–240A2	ALL
WH–3	13.3	199.0	95%	5.2	75F	74	27.4	17.3"	13.2	120/1ø	4.0	NAVIEN NPE–240A2	ALL

NOTES:
1. Pipe T&P valve and condensate to FLOOR DRAIN.
2. With concentric vent kit through roof, LOW WATER CUT–OFF, INTERNAL CIRCULATOR & BUFFER TANK, AND NEUTRALIZATION TANK.
3. Provide intelligent cascading kit

SCHED15

DRAWING INDEX

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PLUMBING SCHEDULES

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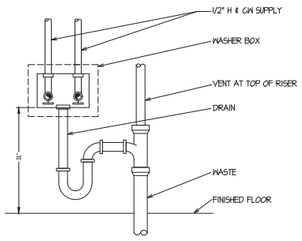
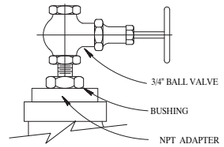
P001



CLOTHES WASHER SUPPLY AND DRAIN DETAIL (A1)
NOT TO SCALE



MANUAL AIR VENT DETAIL (A2)
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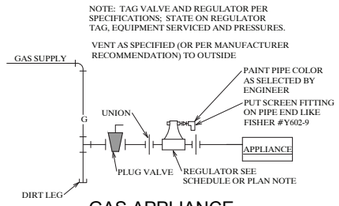

GAS APPLIANCE REGULATOR DETAIL (A3)
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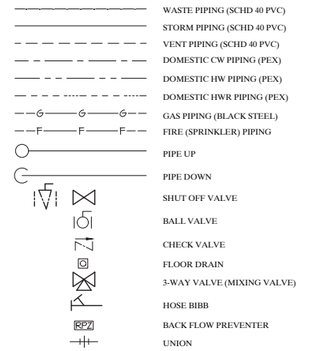
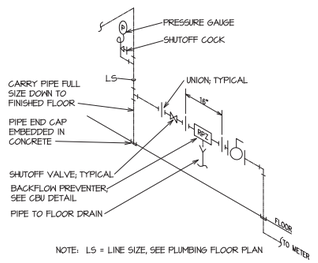


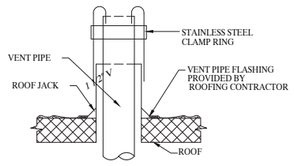
PIPING & SYMBOLS LEGEND (A4)

A



NOTE: LS = LINE SIZE, SEE PLUMBING FLOOR PLAN

BUILDING WATER SERVICE (B1)
NOT TO SCALE



PLUMBING VENT THRU ROOF DETAIL (B2)
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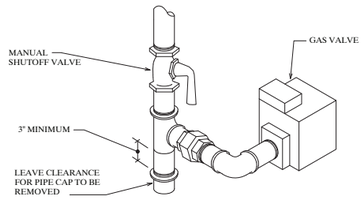

GAS DIRT LEG DETAIL (B3)
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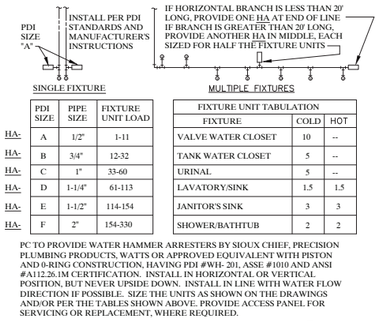


	PDI SIZE	PIPE SIZE	FIXTURE UNIT LOAD
HA-	A	1/2"	1-11
HA-	B	3/4"	12-32
HA-	C	1"	33-60
HA-	D	1-1/4"	61-113
HA-	E	1-1/2"	114-154
HA-	F	2"	154-330

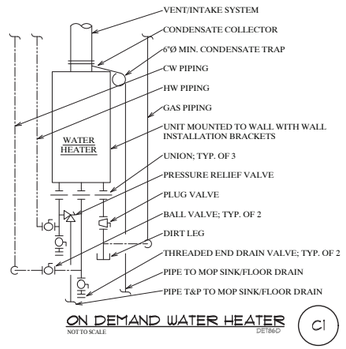
FIXTURE UNIT TABULATION

FIXTURE	COLD	HOT
VALVE WATER CLOSET	10	--
TANK WATER CLOSET	5	--
URINAL	5	--
LAVATORY/SINK	1.5	1.5
JANITOR'S SINK	3	3
SHOWER/BATHTUB	2	2

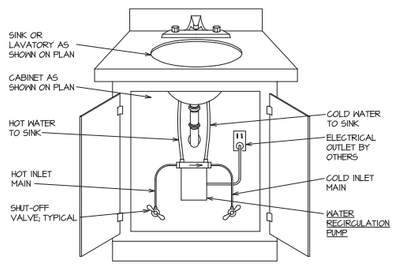
PC TO PROVIDE WATER HAMMER ARRESTERS BY SIOUX CHIEF, PRECISION PLUMBING PRODUCTS, WATTS OR APPROVED EQUIVALENT WITH PISTON AND O-RING CONSTRUCTION, HAVING PDI #WH- 201, ASSE #1010 AND ANSI #A112.26.1M CERTIFICATION. INSTALL IN HORIZONTAL OR VERTICAL POSITION, BUT NEVER UPSIDE DOWN. INSTALL IN LINE WITH WATER FLOW DIRECTION IF POSSIBLE. SIZE THE UNITS AS SHOWN ON THE DRAWINGS AND/OR PER THE TABLES SHOWN ABOVE. PROVIDE ACCESS PANEL FOR SERVICING OR REPLACEMENT, WHERE REQUIRED.

HAMMER ARRESTERS (B4)
NOT TO SCALE

B



ON DEMAND WATER HEATER (C1)
NOT TO SCALE



HOT WATER RETURN SYSTEM DETAIL (C2)
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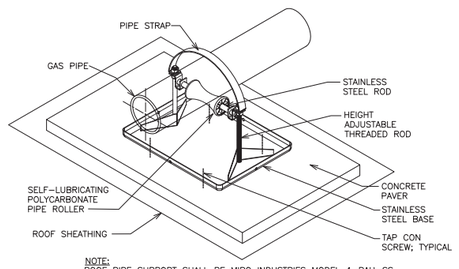
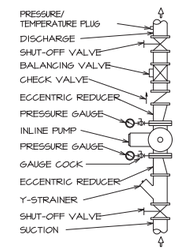


NOTE:
ROOF PIPE SUPPORT SHALL BE MIRO INDUSTRIES MODEL 4-RAH-SS PILLOW BLOCK PIPE STAND. PIPE SUPPORTS SHALL BE INSTALLED NO LESS THAN 10'-0" ON CENTER, AND NOT MORE THAN 12" FROM ANY CHANGE IN DIRECTION. ADDITIONALLY, PIPE SUPPORTS SHALL BE INSTALLED PER MANUFACTURERS INSTRUCTIONS.

ROOF GAS SUPPORT DETAIL (C3)
NOT TO SCALE

C



INLINE PUMP - PIPING DETAIL (C4)
NOT TO SCALE

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PLUMBING DETAILS

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P002

DOMESTIC WATER PIPING

1.1 COPPER TUBE AND FITTINGS

A. ASTM B 88, TYPE L (ASTM B 88M, TYPE B) HARD COPPER TUBE, WATER TUBE, DRAWN TEMPER WITH SOLDER OR PUSH-ON JOINT FITTINGS, BRONZE FLANGES, COPPER UNIONS WITH EPDM-RUBBER O-RING SEALS AND GROOVED-END FITTINGS AND COUPLINGS.

B. ASTM B 88, TYPE K (ASTM B 88M, TYPE A), SOFT COPPER TUBE, WATER TUBE, ANNEALED TEMPER WITH

WROUGHT-COPPER PRESSURE FITTINGS OR PRESSURE-SEAL-JOINT FITTINGS WITH EPDM-RUBBER O-RING SEALS.

1.2 PIPING JOINING MATERIALS

A. PIPE-FLANGE GASKET MATERIALS SHALL BE, NONMETALLIC AND ASBESTOS FREE, FULL-FACE OR RING TYPE.

B. METAL PIPE-FLANGE BOLTS AND NUTS ARE CARBON STEEL.

C. SOLDER FILLER METALS SHALL BE LEAD FREE ALLOYS WITH WATER-FLUSHABLE FLUX.

1.3 TRANSITION FITTINGS

A. TRANSITION FITTING SHALL BE THE SAME SIZE, PRESSURE RATING AND END CONNECTIONS AS THE ADJOINING PIPES.

1.4 DIELECTRIC FITTINGS

A. SEPARATE DISSIMILAR PIPE MATERIALS WITH NONCONDUCTIVE INSULATING MATERIAL THAT IS COMPATIBLE WITH THE FLUID AND ITS CHARACTERISTICS.

1.5 FLEXIBLE CONNECTORS

A. CORRUGATED-BRONZE TUBING WITH BRONZE WIRE-BRAID COVERING AND ENDS BRAZED TO INNER TUBING, MINIMUM OF 200 PSIG WORKING PRESSURE AND PLAIN ENDS.

B. CORRUGATED-STAINLESS-STEEL TUBING WITH STAINLESS-STEEL WIRE-BRAID COVERING AND ENDS WELDED TO INNER TUBING, MINIMUM OF 200 PSIG WORKING PRESSURE AND THREADED OR FLANGED ENDS.

1.10 PIPING INSTALLATION

A. INSTALL SHUTOFF VALVE IMMEDIATELY UPSTREAM OF EACH DIELECTRIC FITTING.

B. INSTALL UNIONS IN COPPER TUBING AT FINAL CONNECTION TO EACH PIECE OF EQUIPMENT, MACHINE, AND SPECIALTY.

C. IDENTIFY ALL PIPING USING PIPE LABELS.

1.11 HANGER AND SUPPORT INSTALLATION

A. INSTALL MSS TYPE 8 OR 42 CLAMPS FOR VERTICAL PIPING.

B. INSTALL MSS TYPE 1, ADJUSTABLE STEEL CLEVIS HANGERS FOR PIPING RUNS LESS THAN 100 FEET.

C. INSTALL MSS TYPE 43 ADJUSTABLE ROLLER HANGERS OR MSS TYPE 49 SPRING CUSHION ROLLS FOR PIPING RUNS GREATER THAN 100 FEET.

D. INSTALL MSS TYPE 44 PIPE ROLLS FOR MULTIPLE, STRAIGHT, HORIZONTAL PIPE RUNS 100 FEET OR LONGER. SUPPORT PIPE ROLLS ON TRAPEZE.

E. BASE OF VERTICAL PIPING: MSS TYPE 52, SPRING HANGERS.

F. SUPPORT VERTICAL PIPING AND TUBING AT BASE AND AT EACH FLOOR.

G. ROD DIAMETER MAY BE REDUCED ONE SIZE FOR DOUBLE-ROD HANGERS, TO A MINIMUM OF 3/8 INCH.

1.12 FIELD QUALITY CONTROL

A. PERFORM TESTS AND INSPECTIONS.

B. COMPLY WITH AUTHORITIES HAVING JURISDICTION ON APPROPRIATE TESTING AND INSPECTIONS. PREPARE INSPECTION REPORTS AS REQUIRED.

C. PIPING TESTS:

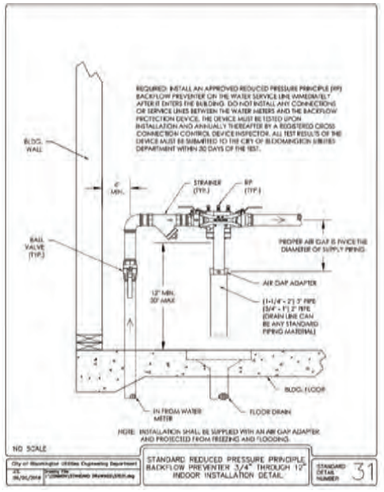
1. FILL DOMESTIC WATER PIPING. CHECK COMPONENTS TO DETERMINE THAT THEY ARE NOT AIR BOUND AND THAT PIPING IS FULL OF WATER.
2. TEST FOR LEAKS AND DEFECTS IN NEW PIPING AND PARTS OF EXISTING PIPING THAT HAVE BEEN ALTERED, EXTENDED, OR REPAIRED. IF TESTING IS PERFORMED IN SEGMENTS, SUBMIT A SEPARATE REPORT FOR EACH TEST, COMPLETE WITH DIAGRAM OF PORTION OF PIPING TESTED.
3. LEAVE NEW, ALTERED, EXTENDED, OR REPLACED DOMESTIC WATER PIPING UNCOVERED AND UNCONCEALED UNTIL IT HAS BEEN TESTED AND APPROVED. EXPOSE WORK THAT WAS COVERED OR CONCEALED BEFORE IT WAS TESTED.
4. CAP AND SUBJECT PIPING TO STATIC WATER PRESSURE OF 50 PSIG ABOVE OPERATING PRESSURE, WITHOUT EXCEEDING PRESSURE RATING OF PIPING SYSTEM MATERIALS. ISOLATE TEST SOURCE AND ALLOW TO STAND FOR FOUR HOURS. LEAKS AND LOSS IN TEST PRESSURE CONSTITUTE DEFECTS THAT MUST BE REPAIRED.
5. REPAIR LEAKS AND DEFECTS WITH NEW MATERIALS AND RETEST PIPING UNTIL ACCEPTABLE RESULTS ARE OBTAINED.
6. PREPARE REPORTS FOR TESTS AND FOR CORRECTIVE ACTION REQUIRED.

D. DOMESTIC WATER PIPING WILL BE CONSIDERED DEFECTIVE IF IT DOES NOT PASS TESTS AND INSPECTIONS.

E. PREPARE TEST AND INSPECTION REPORTS.

F. PERFORM ADJUSTMENTS AS NECESSARY TO ALL VALVES, HYDRANTS, HOSE BIBBS.

G. CLEAN AND DISINFECT POTABLE AND NON-POTABLE DOMESTIC WATER PIPING PER AWWA PROCEDURES.



SANITARY WASTE AND VENT PIPING

1.1 PVC PIPE AND FITTINGS

A. SCHEDULE 40 CELLULAR-CORE PVC PIPE WITH CORRESPONDING ADHESIVE PRIMER AND SOLVENT CEMENT.

1.2 SPECIALTY PIPE FITTINGS

A. TRANSITION COUPLINGS:

1. FITTING OR DEVICE FOR JOINING PIPING WITH SMALL DIFFERENCES IN OD'S OR OF DIFFERENT MATERIALS. INCLUDE END CONNECTIONS SAME SIZE AS AND COMPATIBLE WITH PIPES TO BE JOINED.
2. FITTING-TYPE TRANSITION COUPLINGS SHALL BE MANUFACTURED PIPING COUPLING OR SPECIFIED PIPING SYSTEM FITTING.
3. SHIELDED, NONPRESSURE TRANSITION COUPLINGS SHALL BE ELASTOMERIC OR RUBBER SLEEVE WITH FULL-LENGTH, CORROSION-RESISTANT OUTER SHIELD AND CORROSION-RESISTANT-METAL TENSION BAND AND TIGHTENING MECHANISM ON EACH END.
4. PRESSURE TRANSITION COUPLINGS SHALL BE METAL SLEEVE-TYPE AND THE SAME MATERIAL AND JOINING ENDS AS THE PIPE.

1.3 PERFORMANCE REQUIREMENTS

A. MINIMUM WORKING PRESSURE FOR SOIL, WASTE AND VENT PIPING SHALL BE 10-FOOT HEAD OF WATER.

1.4 PIPING INSTALLATION

A. INSTALL PIPING FREE OF SAGS AND BENDS.

B. INSTALL ONLY SANITARY FITTINGS APPROPRIATE TO THE APPLICATION.

C. INSTALL BUILDING SANITARY DRAIN: WITH A 2 PERCENT DOWNWARD IN DIRECTION OF FLOW FOR PIPING NPS 3 AND SMALLER AND 1 PERCENT DOWNWARD IN DIRECTION OF FLOW FOR PIPING NPS 4 AND LARGER.

D. DO NOT ENCLOSE, COVER, OR PUT PIPING INTO OPERATION UNTIL IT IS INSPECTED AND APPROVED BY AUTHORITIES HAVING JURISDICTION.

E. INSTALL SLEEVES FOR PIPING PENETRATIONS OF WALLS, CEILINGS, AND FLOORS.

1.5 SPECIALTY PIPE FITTING INSTALLATION

A. INSTALL TRANSITION COUPLINGS WHEN THERE ARE SMALL DIFFERENCES IN OD'S, IN SHIELDED NONPRESSURE DRAINAGE PIPING, AND FORCE MAIN PIPING.

B. INSTALL DIELECTRIC FITTINGS IN PIPING AT CONNECTIONS OF DISSIMILAR METAL PIPING AND TUBING.

1.6 HANGER AND SUPPORT INSTALLATION

A. INSTALL CARBON-STEEL PIPE HANGERS FOR HORIZONTAL PIPING IN NONCORROSIVE ENVIRONMENTS.

B. INSTALL FIBERGLASS PIPE HANGERS FOR HORIZONTAL PIPING IN CORROSIVE ENVIRONMENTS.

C. SUPPORT HORIZONTAL PIPING AND TUBING WITHIN 12 INCHES OF EACH FITTING AND COUPLING.

D. SUPPORT VERTICAL PIPING AND TUBING AT BASE AND AT EACH FLOOR.

E. ROD DIAMETER MAY BE REDUCED ONE SIZE FOR DOUBLE-ROD HANGERS, WITH 3/8-INCH MINIMUM RODS.

1.7 CONNECTIONS

A. CONNECT SANITARY AND VENT PIPING TO ALL INDICATED FIXTURES.

B. CONNECT WITH UNION IN PIPING THAT IS NPS 2 AND SMALLER.

C. CONNECT WITH FLANGES IN PIPING THAT NPS 2 ½ AND LARGER.

1.8 TESTING

A. DURING INSTALLATION, NOTIFY AUTHORITIES HAVING JURISDICTION AT LEAST 24 HOURS BEFORE INSPECTION MUST BE MADE. PERFORM ALL TESTS SPECIFIED BY AND IN THE PRESENCE OF AUTHORITIES HAVING JURISDICTION.

B. PREPARE INSPECTION REPORTS AND HAVE THEM SIGNED BY AUTHORITIES HAVING JURISDICTION.

C. REPAIR LEAKS AND DEFECTS WITH NEW MATERIALS AND RETEST PIPING UNTIL PIPES HAVE PASSING RESULTS.

1.9 CLEANING AND PROTECTION

A. STORE AND PROTECT ALL MATERIALS DURING THE ENTIRE CONSTRUCTION PROCESS.

HANGER SPACING												
	3/4"	1	1 1/4	1 1/2	2	2 1/2	3	4	6	8	10-12	VERTICAL SPACING
COPPER TUBING	5' (3/8" ROD)	6' (3/8" ROD)	6' (3/8" ROD)	8' (3/8" ROD)	8' (3/8" ROD)	9' (1/2" ROD)	10' (1/2" ROD)	10' (1/2" ROD)	10' (5/8" ROD)	10' (3/4" ROD)		SUPPORT VERTICAL PIPE EVERY 10'
STEEL PIPING	7' (3/8" ROD)	7' (3/8" ROD)	7' (3/8" ROD)	9' (3/8" ROD)	10' (3/8" ROD)	11' (3/8" ROD)	12' (1/2" ROD)	12' (5/8" ROD)	12' (3/4" ROD)	12' (7/8" ROD)		SUPPORT VERTICAL PIPE EVERY 15'
PEX	32" (3/8" ROD)	32" (3/8" ROD)	32" (3/8" ROD)	32" (3/8" ROD)	32" (3/8" ROD)							SUPPORT VERTICAL PIPE EVERY 48"
CAST IRON DRAINAGE PIPING				5' (3/8" ROD)	5' (3/8" ROD)		5' (1/2" ROD)	5' (5/8" ROD)	5' (3/4" ROD)	5' (3/4" ROD)	5' (7/8" ROD)	SUPPORT VERICAL PIPE EVERY 15'
PVC DRAINAGE PIPING				4' (3/8" ROD)	4' (3/8" ROD)		4' (1/2" ROD)	4' (5/8" ROD)	4' (3/4" ROD)	4' (3/4" ROD)	4' (7/8" ROD)	SUPPORT VERICAL PIPE EVERY 4'
CORRUGATED STAINLESS STEEL TUBING	7' (3/8" ROD)											
1. SUPPORT ALL OTHER PIPING AND TUBING PER MSS SP-69												

PLUMBING IDENTIFICATION

1.1 EQUIPMENT LABELS

A. METAL LABELS FOR EQUIPMENT SHALL BE A MINIMUM OF 2.5"X 0.75"X 0.025" THICK STAINLESS STEEL WITH PREDRILLED OR STAMPED HOLES FOR ATTACHMENT AND STAINLESS STEEL RIVETS OR SELF-TAPPING SCREWS. LETTER SIZING SHALL BE A MINIMUM OF 0.5" TALL. AT A MINIMUM THE LABEL SHALL INCLUDE THE UNIQUE EQUIPMENT NUMBER DESIGNATION AS SHOWN ON THE DRAWINGS OR SPECIFICATIONS. PROVIDE AN EQUIPMENT SCHEDULE FOR THE OWNER.

1.2 WARNING SIGNS AND LABELS

A. WARNING SIGNS AND LABELS SHALL BE MULTILAYERED, MULTICOLORED, PLASTIC LABELS FOR MECHANICAL ENGRAVING, **1/8"** THICK, AND HAVE PREDRILLED HOLES FOR ATTACHMENT HARDWARE. LETTERING SHALL BE RED WITH A WHITE BACKGROUND. THE MINIMUM SIZE SHALL BE 2.5" X 0.75" WITH LETTERING A MINIMUM 0.5" TALL. FASTENERS STALL BE STAINLESS STEEL RIVETS OR SELF-TAPPING SCREWS. INFORMATION SHOULD INCLUDE CAUTION AND WARNING INFORMATION AND EMERGENCY INSTRUCTIONS.

1.3 PIPE LABELS

A. ALL PIPE LABELS SHALL BE PREPRINTED, COLOR-CODED WITH LETTERING INDICATING SERVICE AND FLOW DIRECTION. LETTERING SIZE SHALL BE AT LEAST 1.5" TALL.

B. SELF-ADHESIVE PIPE LABELS SHALL BE PRINTED PLASTIC WITH CONTACT-TYPE, PERMANENT-ADHESIVE BACKING.

1.4 VALVE TAGS

A. VALVE TAGS SHALL BE STAINLESS STEEL, 0.025" THICK WITH PREDRILLED OR STAMPED HOLES FOR BRASS WIRE-LINK, BEADED CHAIN OR S-HOOK AND STAMPED OR ENGRAVED WITH 0.25" LETTERS FOR PIPING SYSTEM ABBREVIATION AND 0.5" NUMBERS. VALVE TAGS SHALL BE 2" ROUND WITH BLACK LETTERING. PROVIDE A VALVE SCHEDULE FOR OWNER.

1.5 WARNING TAGS

A. WARNING TAGS SHALL BE A MINIMUM OF 3"X5.25" AND PREPRINTED OR PARTIALLY PREPRINTED, ACCIDENT-PREVENTION TAGS, OF PLASTICIZED CARD STOCK WITH MATTE FINISH SUITABLE FOR WRITING. INCLUDE BRASS GROMMET AND WIRES FOR FASTENING. WRITING SHALL BE LARGE-SIZE WITH WORDS SUCH AS "DANGER" OR "CAUTION". USE BLACK LETTERING WITH A YELLOW BACKGROUND.

1.6 INSTALLATION

A. ENSURE THAT SURFACES ARE CLEAN AND READY TO ACCEPT LABEL.

B. LOCATE LABELS WHERE ACCESSIBLE AND VISIBLE.

C. LOCATE PIPE LABELS WHERE PIPING IS EXPOSED OR ABOVE ACCESSIBLE CEILINGS IN FINISHED SPACES. LOCATE A MAXIMUM OF 50' INTERVALS AND 25' IF IN CONGESTED AREAS. ALWAYS LOCATE NEAR EQUIPMENT AND DEVICES.

D. PIPE LABEL COLOR SCHEDULE:

1. LOW-PRESSURE, COMPRESSED-AIR PIPING WITH WHITE BACKGROUND AND BLACK LETTERING
2. MEDIUM-PRESSURE, COMPRESSED-AIR PIPING WITH WHITE BACKGROUND AND BLACK LETTERING.
3. DOMESTIC WATER PIPING WITH WHITE BACKGROUND AND BLUE LETTERING.
4. SANITARY WASTE PIPING WITH BLACK BACKGROUND AND WHITE LETTERING.

E. ON WARNING TAGS WRITE REQUIRED MESSAGE ON, AND ATTACH WARNING TAGS TO, EQUIPMENT AND OTHER ITEMS REQUIRED BY OWNER.

PIPING INSULATION

1.1 INSULATION MATERIALS

A. FLEXIBLE ELASTOMERIC INSULATION:

B. MINERAL-FIBER BLANKET INSULATION:

C. MINERAL-FIBER, PREFORMED PIPE INSULATION:

1.2 INSULATING CEMENTS

A. MINERAL-FIBER INSULATING CEMENT

B. EXPANDED OR EXFOLIATED VERMICULITE INSULATING CEMENT

C. MINERAL-FIBER, HYDRAULIC-SETTING INSULATING AND FINISHING CEMENT

1.3 ADHESIVES

A. MATERIALS SHALL BE COMPATIBLE WITH INSULATION MATERIALS, JACKETS, AND SUBSTRATES AND FOR BONDING INSULATION TO ITSELF AND TO SURFACES TO BE INSULATED, UNLESS OTHERWISE INDICATED.

B. FLEXIBLE ELASTOMERIC ADHESIVE: COMPLY WITH MIL-A-24179A, TYPE II, CLASS I.

C. MINERAL-FIBER ADHESIVE: COMPLY WITH MIL-A-3316C, CLASS 2, GRADE A.

D. ASJ ADHESIVE, AND FSK JACKET ADHESIVE: COMPLY WITH MIL-A-3316C, CLASS 2, GRADE A FOR BONDING INSULATION JACKET LAP SEAMS AND JOINTS.

E. PVC JACKET ADHESIVE: COMPATIBLE WITH PVC JACKET.

1.4 SEALANTS

A. ASJ FLASHING SEALANTS AND PVC JACKET FLASHING SEALANTS SHALL BE WHITE WITH FIRE AND WATER RESISTANT ELASTOMERIC AND SERVICE TEMPERATURE RATING OF -40 TO +250 DEG F.

1.5 FACTORY-APPLIED JACKETS

A. ASJ IS WHITE WITH KRAFT-PAPER AND FIBERGLASS-REINFORCED SCRIM WITH ALUMINUM-FOIL BACKING.

B. ASJ-SSL IS SELF-SEALING ASJ WITH PRESSURE-SENSITIVE, ACRYLIC-BASED ADHESIVE COVERED BY A REMOVABLE PROTECTIVE STRIP.

1.6 FIELD-APPLIED JACKETS

A. PVC JACKET SHALL BE HIGH-IMPACT-RESISTANT, UV-RESISTANT. FINISH COLOR SHALL BE CHOSEN BY THE OWNER. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

1.7 TAPES

A. ASJ TAPE SHALL BE 3" WIDE WHITE VAPOR-RETARDER TAPE MATCHING FACTORY-APPLIED JACKET WITH ACRYLIC ADHESIVE; 11.5 MILS THICK WITH A TENSILE STRENGTH OF 40LBF/INCH WIDTH AND USE PRECUT DISKS OR SQUARES.

B. PVC TAPE SHALL BE 2" WIDE WHITE VAPOR-RETARDER TAPE MATCHING FIELD-APPLIED PVC JACKET WITH ACRYLIC ADHESIVE AND SUITABLE FOR INDOOR AND OUTDOOR APPLICATIONS; 6 MILS THICK WITH A TENSILE STRENGTH OF 18 LBF/INCH IN WIDTH.

1.8 SECUREMENTS

A. 304 STAINLESS STEEL BANDS 0.015", ½" WIDE WITH WING SEAL.

B. STAPLES SHALL BE OUTWARD-CLINCHING INSULATION STAPLES, NOMINAL 3/4-INCH- WIDE, STAINLESS STEEL.

C. WIRE SHALL BE 0.062-INCH SOFT-ANNEALED, STAINLESS STEEL.

1.9 INSTALLATION

A. REVIEW CONDITIONS OF SUBSTRATES BEFORE BEGINNING INSTALLATION FOR COMPLIANCE WITH TOLERANCES, ETC.

B. INSTALL ACCESSORIES COMPATIBLE WITH INSULATION MATERIALS AND SUITABLE FOR THE SERVICE.

C. DO NOT WELD BRACKETS, CLIPS, OR OTHER ATTACHMENT DEVICES TO PIPING, FITTINGS, AND SPECIALTIES.

D. APPLY ADHESIVES, MASTICS, AND SEALANTS AT MANUFACTURER'S RECOMMENDED COVERAGE RATE AND WET AND DRY FILM THICKNESSES.

E. INSTALL INSULATION WITH FACTORY-APPLIED JACKETS PER MANUFACTURER'S RECOMMENDATIONS.

F. FINISH INSTALLATION WITH SYSTEMS AT OPERATING CONDITIONS. REPAIR JOINT SEPARATIONS AND CRACKING DUE TO THERMAL MOVEMENT.

G. REPAIR DAMAGED INSULATION FACINGS BY APPLYING SAME FACING MATERIAL OVER DAMAGED AREAS. EXTEND PATCHES AT LEAST 4 INCHES BEYOND DAMAGED AREAS. ADHERE, STAPLE, AND SEAL PATCHES SIMILAR TO BUTT JOINTS.

H. FOR ABOVE-AMBIENT SERVICES, DO NOT INSTALL INSULATION TO VIBRATION-CONTROL DEVICES, TESTING AGENCY LABELS AND STAMPS, NAMEPLATES AND DATA PLATES AND CLEANOUTS.

I. INSTALL INSULATION ON FITTINGS, VALVES, STRAINERS, FLANGES, AND UNIONS.

J. INSULATE INSTRUMENT CONNECTIONS FOR THERMOMETERS, PRESSURE GAGES, PRESSURE TEMPERATURE TAPS, TEST CONNECTIONS, FLOW METERS, SENSORS, SWITCHES, AND TRANSMITTERS ON INSULATED PIPES. SHAPE INSULATION AT THESE CONNECTIONS BY TAPERING IT TO AND AROUND THE CONNECTION WITH INSULATING CEMENT AND FINISH WITH FINISHING CEMENT, MASTIC, AND FLASHING SEALANT.

1.10 PENETRATIONS

A. INSTALL INSULATION CONTINUOUSLY THROUGH ROOF PENETRATIONS AND ABOVE GROUND EXTERIOR WALL PENETRATIONS. SEAL PENETRATIONS WITH FLASHING SEALANT. IF INSULATION IS ONLY REQUIRED INDOORS THEN TERMINATE INSULATION ABOVE ROOF SURFACE. IF REQUIRED OUTDOOR AS WELL THEN INSTALL INSULATION TIGHTLY JOINED TO INDOOR INSULATION AND SEAL THE JOINT WITH SEALANT.

B. INSTALL INSULATION AT UNDERGROUND EXTERIOR WALL PENETRATIONS AND TERMINATE INSULATION FLUSH WITH SLEEVE SEAL. SEAL TERMINATIONS WITH FLASHING SEALANT.

C. INSTALL INSULATION CONTINUOUSLY THROUGH WALLS AND PARTITIONS.

D. INSTALL INSULATION CONTINUOUSLY THROUGH FIRE-RATED WALL PARTITION PENETRATIONS AND FLOORS. SEAL WITH FIRE RATED SEALANT.

1.11 FIELD-APPLIED JACKET INSTALLATION

A. WHERE PVC JACKETS ARE INDICATED, INSTALL WITH 1-INCH (25-MM) OVERLAP AT LONGITUDINAL SEAMS AND END JOINTS. SEAL WITH MANUFACTURER'S RECOMMENDED ADHESIVE.

B. WHERE METAL JACKETS ARE INDICATED, INSTALL WITH 2-INCH (50-MM) OVERLAP AT LONGITUDINAL SEAMS AND END JOINTS. OVERLAP LONGITUDINAL SEAMS ARRANGED TO SHED WATER. SEAL END JOINTS WITH WEATHERPROOF SEALANT RECOMMENDED BY INSULATION MANUFACTURER. SECURE JACKET WITH STAINLESS-STEEL BANDS 12 INCHES (300 MM) O.C. AND AT END JOINTS.

1.12 FINISHES

A. INSULATION WITH ASJ SHALL HAVE TWO FINISH COATS OF FLAT ACRYLIC OVER A PRIMER THAT HAS A FUNGICIDAL AGENT.

B. FOR FLEXIBLE ELASTOMERIC THERMAL INSULATION APPLY TWO COATS OF MANUFACTURER'S RECOMMENDED PROTECTIVE COATING AFTER THE ADHESIVE HAS FULLY CURE.

C. DO NOT FIELD PAINT ALUMINUM OR STAINLESS-STEEL JACKETS.

1.13 FIELD QUALITY CONTROL

D. PERFORM TESTS AND INSPECTIONS. REPAIR ANY INSULATION THAT FAILS.

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project title

BLOOMINGTON COOPERATIVE LIVING
410 W. KIRKWOOD AVE
BLOOMINGTON, IN

project information

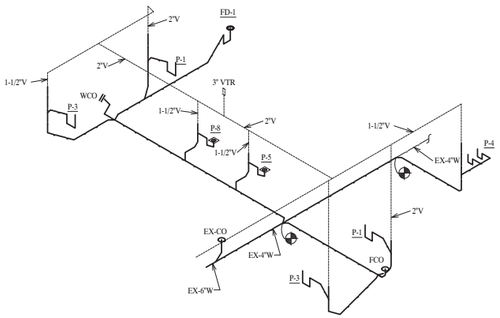
PROJECT NUMBER:	22100
ISSUE DATE:	09/23/2022
REVISION DATE:	
CBU DETAIL RPZ	11/07/2022
PLAN CHANGES	12/19/2022

sheet title

PLUMBING DETAILS

sheet number

P003



WASTE ISOMETRIC

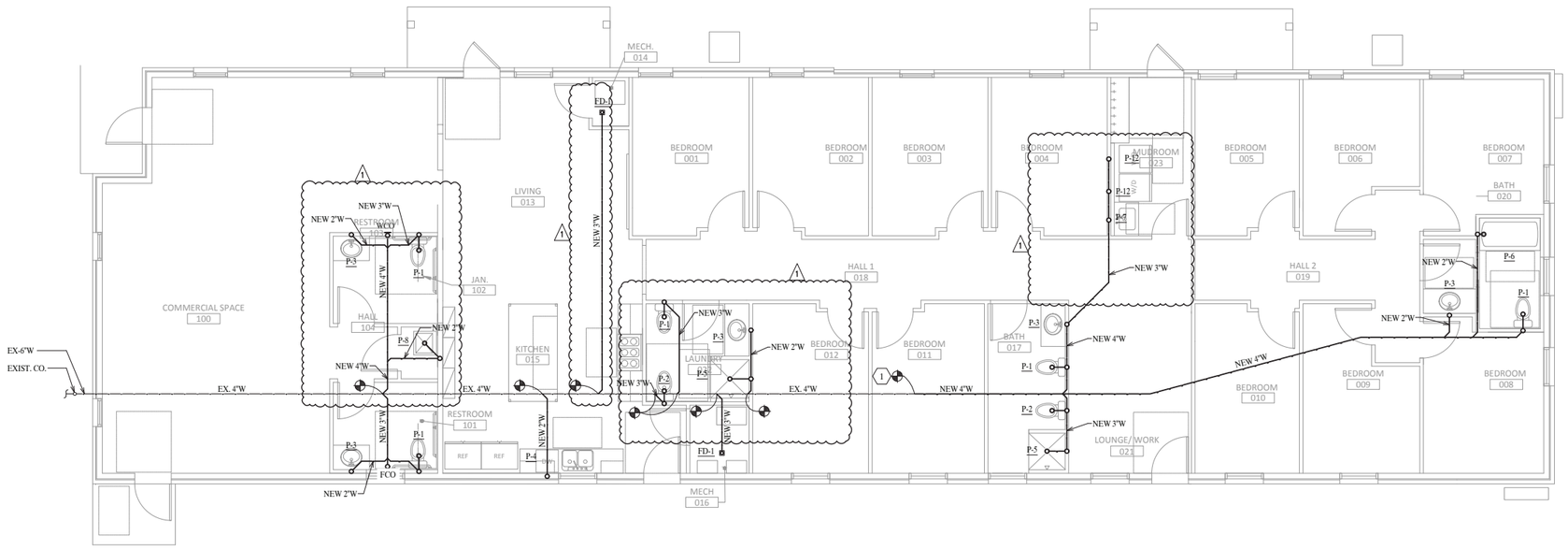
NO SCALE:

FIELD VERIFY:

INFORMATION CONCERNING THE LOCATION(S) AND SIZES OF EXISTING EQUIPMENT AND PIPING WAS OBTAINED FROM EXISTING DRAWINGS AND CURSORY FIELD OBSERVATION, HOWEVER, ACTUAL "ASBUILT" DRAWINGS WERE NOT AVAILABLE, CERTAIN INFORMATION CONCERNING THE LOCATION OF THE EXISTING CONDITIONS HAS BEEN ASSUMED IN THIS DRAWING. THE EXACT LOCATION(S) AND DIRECTION OF FLOW OF ALL EXISTING EQUIPMENT, ETC., IS UNKNOWN. REASONABLE EFFORT HAS BEEN MADE TO ACCURATELY DEPICT THE EXISTING CONDITIONS, HOWEVER, ALL EXISTING WORK MUST BE VERIFIED IN THE FIELD TO DETERMINE THE EXACT LOCATIONS, DIRECTIONS OF PIPE RUNS, SIZE, ETC.. PRIOR TO STARTING CONSTRUCTION. ANY CONFLICT BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER FOR VERIFICATION AND/OR CORRECTION.

(#) PLAN NOTES:

1. VERIFY LOCATION AND INVERT. IF INVERT IS TOO SHALLOW, PIPE NEW FIXTURES OUT EAST WALL AND RUN SOUTH DOWN SIDE OF BUILDING AND RECONNECT TO EXISTING 6" WASTE AT EXISTING CLEANOUT.



FLOOR PLAN - WASTE

SCALE: 3/16"= 1'-0"

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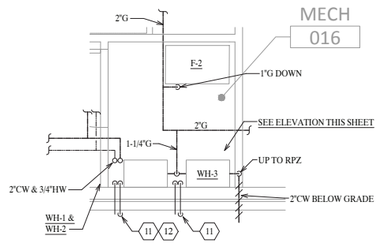
sheet title

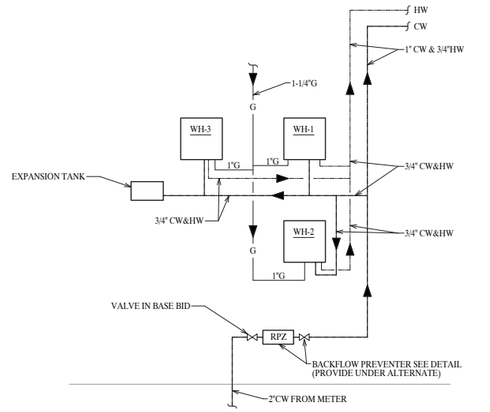
WASTE PLAN

sheet number

P200



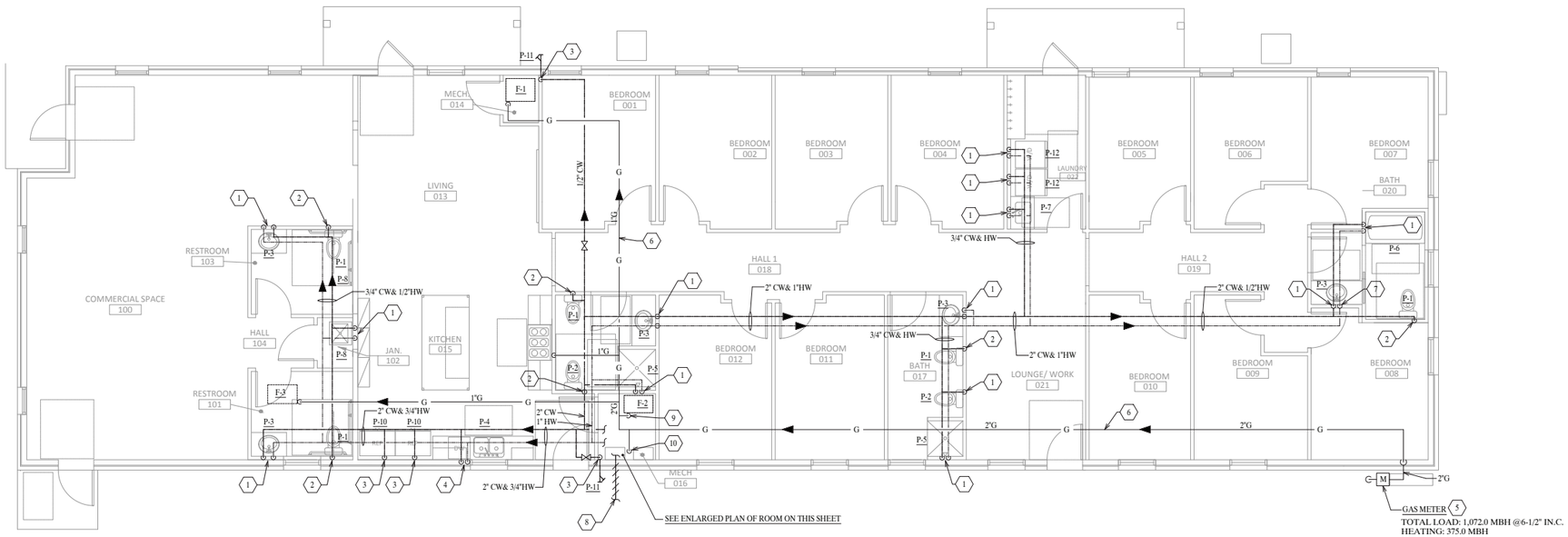
MECH 016 PLAN
SCALE: 1/4"= 1'-0"



WATER SERVICE & HEATING ELEVATION
NO SCALE:

PLAN NOTES:

1. 1/2"CW & HW DOWN TO FIXTURE.
2. 1/2"CW DOWN TO FIXTURE.
3. 1/2"CW DOWN TO FIXTURE.
4. 1/2"CW & HW DOWN IN WALL, PIPE OVER TO KITCHEN SINK AND DISH WASHER AS REQUIRED.
5. REMOVE 3 GAS METERS PER UTILITY REQUIREMENTS AND ASSOCIATED PIPING. MODIFY 1 METER FOR BUILDING USE AND RE-PIPE AS SHOWN.
6. GAS PIPING UP IN ATTIC.
7. HOT WATER RETURN PUMP LOCATED IN CABINET BELOW SINK. SEE DETAIL.
8. 2"CW BELOW GRADE. SEE CIVIL DRAWINGS.
9. 1" GAS DOWN.
10. 1-1/4" GAS DOWN.
11. 3" DIA. INTAKE AND FLUE; CONCENTRIC VENT KIT, EITHER SIDEWALL OR THROUGH ROOF AS REQUIRED.
12. TWO SETS OF INTAKE AND FLUE VENTS.



FLOOR PLAN - PIPING
SCALE: 3/16"= 1'-0"

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PIPING PLAN

sheet number

P300

POWER

- DUPLEX RECEPTACLE
- RECEPTACLE SPECIAL, NEMA CONFIGURATION
- FLUSH FLOOR OUTLET
- FLUSH FLOOR BOX, THREE GANG
- BAT — EMERGENCY BATTERY UNIT
- RECEPTACLE, SINGLE
- RECEPTACLE, DUPLEX
- RECEPTACLE CEILING MOUNTED, DUPLEX
- RECEPTACLE, QUADPLEX
- WP — RECEPTACLE, DUPLEX WEATHERPROOF ('WHILE-IN-USE' TYPE)
- E — RECEPTACLE ON EMERGENCY CIRCUIT, RECEPTACLE AND PLATE SHALL BE RED
- TL — RECEPTACLE, DUPLEX, EMERGENCY RED TWIST LOCK
- GFI — RECEPTACLE, DUPLEX, GROUND FAULT CIRCUIT INTERRUPTER
- USB — USB RECEPTACLE
- DOORBELL PUSH BUTTON
- DOOR BELL CHIME
- T LV — TRANSFORMER, 120V TO LOW VOLTAGE
- S — SECURITY ALARM POINT DOOR SWITCH
- S — SECURITY DOOR LOCK RELEASE - ELECTRIC STRIKE
- S — SECURITY MOTION DETECTOR
- S — SECURITY ALARM BELL
- C — CLOCK OUTLET
- Cc — CLOCK OUTLET WITH CONTROL STATION
- TV H — TELEVISION OUTLET (RG6)
- J — JUNCTION BOX 4 11/16 x 4 11/16 x 2 1/8" UNLESS NOTED OTHERWISE
- MDP — MAIN DISTRIBUTION OR POWER PANELBOARDS
- FLUSH OR SURFACE MOUNTED BRANCH PANELBOARDS 120/280V
- ELECTRICAL CONNECTION
- DISCONNECT SWITCH
- MOTOR CONTROLLER WITH AUX CONTACTS HOA, PB, PILOT AND CONTROL TRANSFORMER.
- TV A H — TELEVISION OUTLET (RG6 AND 2-CAT6)
- FUSED DISCONNECT SWITCH
- ELECTRICAL TRANSFORMER
- NON-FUSED DISCONNECT SWITCH RATING AS NOTED
- CIRCUIT POWER TRANSFORMER 480V PRIMARY, 120V SECONDARY
- CIRCUIT BREAKER
- FUSE
- GROUND
- ELECTRICAL MOTOR CONNECTION - VERIFY HP, AND PHASE
- ELECTRICAL CONNECTION

LIGHTS

- SURFACE MOUNTED OR RECESSED LED FIXTURE
- WALL MOUNTED LED FIXTURE
- SURFACE/RECESSED 1 x 4 LED LIGHT FIXTURE
- SURFACE/RECESSED 2 x 4 LED LIGHT FIXTURE
- PHOTOCELL
- EXIT LIGHT FIXTURE CEILING MOUNTED
- EXIT LIGHT FIXTURE WALL MOUNTED
- LIGHT FIXTURE CONNECTED TO EMERGENCY POWER
- BATTERY OPERATED EMERGENCY LIGHT - WALL MOUNTED
- POLE MOUNTED LIGHT FIXTURE - SINGLE HEAD
- SURFACE / RECESSED LED FIXTURE
- WALL MOUNTED LED FIXTURE
- BOLLARD LIGHT FIXTURE
- FLOOD LIGHT GROUND MOUNTED

WIRE

- HOMERUN
- or — WIRING CONCEALED IN CEILING OR WALL
- WIRING CONCEALED UNDER OR IN FLOOR
- WIRING EMERGENCY
- A= GROUND; B= NEUTRAL; C= HOT
- WIRING TURNED UP
- WIRING TURNED DOWN
- WIREMOLD APENDED NOTE DENOTES TYPE
- CABLE TRAY
- HEAT TRACE CABLE
- K — CARD KEY ACCESS CONTROL
- F — CEILING MOUNTED FIRE ALARM HORN / STROBE

FIRE

- I — IONIZATION SMOKE
- H — THERMAL DETECTOR 135° FIXED
- P — PHOTO DETECTOR PHOTO ELECTRIC
- F — PULL STATION
- STROBE UNIT 30CD
- D — FIRE ALARM, IONIZATION DUCT DETECTOR
- P CO — COMBINATION PHOTOELECTRIC & CARBON MONOXIDE DETECTOR
- FACP — FIRE ALARM CONTROL PANEL
- FAAP — FIRE ALARM ANNUNICATOR PANEL
- T — FIRE ALARM, TAMPER SWITCH
- F — FIRE ALARM, FLOW SWITCH
- F — HORN STROBE
- S — FIRE ALARM, SPEAKER
- S — FIRE ALARM, SPEAKER STROBE

SWITCHES

- $ — SWITCH, SINGLE POLE
- $3 — SWITCH, THREE-WAY
- $4 — SWITCH, FOUR-WAY
- $D — SWITCH, DIMMER
- $DS — SWITCH, DOOR SECURITY
- $K — SWITCH, KEYED
- $P — SWITCH, PILOT LIGHT
- $a — SWITCH, CONTROLLING FIXTURES MARKED WITH a
- $T — SWITCH, MANUAL TIMER
- $TT — TT SWITCH FOR MOTORS 1/2HP OR SMALLER
- PUSH BUTTON CONTROL STATION
- PUSH BUTTON "UP-DOWN-DN"
- PANIC BUTTON
- MOTION DETECTOR
- GB — SECURITY GLASS BREAK DETECTOR
- SINGLE CIRCUIT PIR WALL SENSOR 'SCHNEIDER ELECTRIC' #SLSPWS1277UX(COLOR).
- 2 — DUAL CIRCUIT PIR WALL SENSOR 'SCHNEIDER ELECTRIC' #SLSPWD1277UX(COLOR).
- U — LOW VOLTAGE ULTRASONIC CEILING SENSOR 'SCHNEIDER ELECTRIC' #SLSCUS2000 (SENSOR); 'SCHNEIDER ELECTRIC' #SLSPP1277 (POWER PACK)
- Z — LOW VOLTAGE CEILING MOUNT PIR OCCUPANCY SENSOR 'SCHNEIDER ELECTRIC' #SLSCI2000 (SENSOR); 'SCHNEIDER ELECTRIC' #SLSPP1277 (POWER PACK).
- D/T — LOW VOLTAGE CEILING MOUNT DUAL-TECHNOLOGY OCCUPANCY SENSOR 'SCHNEIDER ELECTRIC' #SLSCDT2000 (SENSOR); 'SCHNEIDER ELECTRIC' #SLSPP1277 (POWER PACK).

COMMUNICATION / SECURITY

- TELEPHONE OUTLET BOX AND COVER PLATE
- P — TELEPHONE OUTLET BOX, AND COVER PLATE, PUBLIC
- TELEPHONE OUTLET FLOOR BOX WITH COVER PLATE
- TELEDATA OUTLET
- TELEDATA OUTLET FLOOR BOX WITH COVER PLATE
- DATA OUTLET
- S — SPEAKER, FLUSH CEILING MOUNTED
- S — SPEAKER, WALL MOUNTED
- S — SPEAKER HORN TYPE, WALL MOUNTED
- PA — SOUND SYSTEM AMPLIFIER
- IC — INTERCOMM HANDSET
- IC M — INTERCOMM MASTER PANEL
- IPS — INTERCOMM SYSTEM POWER SUPPLY
- DEMO: POINT WHERE EXISTING TO REMAIN STOPS AND DEMOLITION BEGINS
  REVISED: POINT WHERE NEW WORK CONNECTS TO EXISTING TO REMAIN
- SECURITY CAMERA / (360°) — SECURITY CAMERA (360°)
- IR — AUDIO/VISUAL WALL DEVICE
- LI — AUDIO/VISUAL WALL DEVICE

APPLICABLE CODES AND STANDARDS

29 CFR 1910.144SAFETY COLOR CODE FOR MARKING PHYSICAL HAZARDS.

29 CFR 1910.145SPECIFICATIONS FOR ACCIDENT PREVENTION SIGNS AND TAGS.

ANSI A13.1	SCHEME FOR THE IDENTIFICATION OF PIPING SYSTEMS
ANSI C80.1	ELECTRIC RIGID STEEL CONDUIT
ANSI C80.3	ELECTRICAL METALLIC TUBING - STEEL (EMT-S)
ANSI C80.5	ELECTRICAL RIGID METAL CONDUIT - ALUMINUM (ERMC-A)
ANSI C80.6	ELECTRICAL INTERMEDIATE METAL CONDUIT
ANSI Z535.1	PRODUCT SAFETY PACKAGE
ANSI Z535.5	SAFETY TAGS AND BARRICADE TAPES (FOR TEMPORARY HAZARDS)
ANSI Z535.4	PRODUCT SAFETY SIGNS AND LABELS
ASTM A 36/ A 36M	STANDARD SPECIFICATION FOR CARBON STRUCTURAL STEEL
ASTM A 53/ A53M	STANDARD SPECIFICATION FOR PIPE, STEEL, BLACK AND HOT-DIPPED, ZINC-COATED, WELDED AND SEAMLESS
ASTM A 641/A 641M	STANDARD SPECIFICATION FOR ZINC–COATED (GALVANIZED) CARBON STEEL WIRE
ASTM A780	STANDARD PRACTICE FOR REPAIR OF DAMAGED AND UNCOATED AREAS OF HOT-DIP GALVANIZED COATINGS
ASTM B3	STANDARD SPECIFICATION FOR SOFT OR ANNEALED COPPER WIRE
ASTM B8	CONCENTRIC-LAY-STRANDED COPPER CONDUCTORS, HARD, MEDIUM-HARD, OR SOFT
ASTM B33	TIN-COATED SOFT OR ANNEALED COPPER WIRE FOR ELECTRICAL PURPOSES
ASTM C 1107	GROUT
AWS D1.1/ D1.1M	STRUCTURAL WELDING CODE--STEEL
ASTM D 638	STANDARD TEST METHOD FOR TENSILE PROPERTIES OF PLASTICS
ASTM D 882	STANDARD TEST METHOD FOR TENSILE PROPERTIES OF THIN PLASTIC SHEETING
IEEE C2	2017 NATIONAL ELECTRICAL SAFETY CODE(R) (NESC(R))
IEEE 344	SEISMIC QUALIFICATION OF SAFETY RELATED EQUIPMENT FOR CLASS 1E EQUIPMENT
MFMA-4	METAL FRAMING STANDARDS PUBLICATION
NECA 1	STANDARD FOR GOOD WORKMANSHIP IN ELECTRICAL CONSTRUCTION PDF
NECA 101	STANDARD FOR INSTALLING STEEL CONDUITS (RIGID, IMC, EMT)
NECA 407	STANDARD FOR INSTALLING AND MAINTAINING PANELBOARDS
NEMA AB 1	MOLDED-CASE CIRCUIT BREAKERS, MOLDED CASE SWITCHES, AND CIRCUIT-BREAKER ENCLOSURES
NEMA ICS 2	INDUSTRIAL CONTROL AND SYSTEMS CONTROLLERS, CONTACTORS AND OVERLOAD RELAYS RATED 600 VOLTS
NEMA ICS 5	CONTROL CIRCUIT AND PILOT DEVICES
NEMA ICS 6	ENCLOSURES
NEMA KS 1	HEAVY DUTY ENCLOSED AND DEAD-FRONT SWITCHES (600 VOLTS MAXIMUM)
NEMA FB1	CONDUIT FITTINGS
NEMA LE 4	RECESSED LUMINAIRES, CEILING COMPATIBILITY
NEMA OS 1	SHEET-STEEL OUTLET BOXES, DEVICE BOXES, COVERS AND BOX SUPPORTS
NEMA PB 1	PANELBOARDS
NEMA RN1	POLYVINYL CHLORIDE (PVC) EXTERNALLY COATED GALVANIZED RIGID STEEL CONDUIT AND INTERMEDIATE METAL CONDUIT
NEMA TC2	ELECTRICAL POLYVINYL CHLORIDE (PVC) CONDUIT
NEMA TC3	POLYVINYL CHLORIDE (PVC) FITTINGS FOR USE WITH RIGID PVC CONDUIT AND TUBING
NEMA TC13	ELECTRICAL NONMETALLIC TUBING (ENT)
NEMA WC 70	POWER CABLES RATED 2000 VOLTS OR LESS FOR THE DISTRIBUTION OF ELECTRICAL ENERGY
NEMA WD 1,	GENERAL COLOR REQUIREMENTS FOR WIRING DEVICES
NEMA WD 6	WIRING DEVICES--DIMENSIONAL SPECIFICATIONS
NETA MTS	STANDARD FOR MAINTENANCE TESTING SPECIFICATIONS FOR ELECTRICAL POWER EQUIPMENT AND SYSTEMS
NFPA 70	NATIONAL ELECTRICAL CODE
NFPA 70B	RECOMMENDED PRACTICE FOR ELECTRICAL EQUIPMENT MAINTENANCE
NEMA 250	ENCLOSURES FOR ELECTRICAL EQUIPMENT (1000 VOLTS MAXIMUM)
SSPC-PA1	FIELD AND MAINTENANCE COATING OF METALS
TIA/ ATIS J-STD-607-A	COMMERCIAL BUILDING GROUNDING (EARTHING) AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS
UL 50	ENCLOSURES FOR ELECTRICAL EQUIPMENT, NON-ENVIRONMENTAL CONSIDERATIONS
UL 94	STANDARD FOR TESTS FOR FLAMMABILITY OF PLASTIC MATERIALS FOR PARTS IN DEVICES AND APPLIANCES
UL 98	ENCLOSED AND DEAD-FRONT SWITCHES
UL 467	GROUNDING AND BONDING EQUIPMENT
UL486A	WIRE CONNECTORS
UL486B	UL STANDARD FOR SAFETY WIRE CONNECTORS FOR USE WITH ALUMINUM CONDUCTORS
UL 489	MOLDED-CASE CIRCUIT BREAKERS, MOLDED-CASE SWITCHES, AND CIRCUIT-BREAKER ENCLOSURES
UL 514B	CONDUIT, TUBING, AND CABLE FITTINGS
UL 514C	STANDARD FOR NONMETALLIC OUTLET BOXES, FLUSH-DEVICE BOXES, AND COVERS
UL 886	UL STANDARD FOR SAFETY OUTLET BOXES AND FITTINGS FOR USE IN HAZARDOUS (CLASSIFIED) LOCATIONS
UL 924	EMERGENCY LIGHTING AND EXIT SIGN REGULATIONS
UL 943	GROUND-FAULT CIRCUIT-INTERRUPTERS
UL 969	STANDARD FOR MARKING AND LABELING SYSTEMS
UL 1436.	STANDARD FOR OUTLET CIRCUIT TESTERS AND SIMILAR INDICATING DEVICES
UL 1660	LIQUID-TIGHT FLEXIBLE NONMETALLIC CONDUIT
UL 1863	STANDARD FOR COMMUNICATIONS-CIRCUIT ACCESSORIES

GENERAL NOTES

1. INSTALLATION SHALL COMPLY WITH 2009 INDIANA ELECTRIC CODE. ALL ITEMS/ EQUIPMENT INSTALLED EITHER IN PART OR ASSEMBLY SHALL BE UL/ NRTL LISTED PER CODE.
2. SUBMIT SUBMITTALS ON ALL EQUIPMENT, DEVICES AND MATERIALS.
3. COORDINATE WITH OTHER DISCIPLINES AND OWNER TO VERIFY FINAL LOCATIONS OF DEVICES AND CONNECTIONS.
4. SLOPED PIPING HAS RIGHT OF WAY OVER CONDUIT.
5. INSTALL PENETRATION FIRESTOPPING AS INDICATED AND REQUIRED.
6. HEIGHTS OF SUSPENDED EQUIPMENT SHALL BE TO THE BOTTOM OF THE UNIT.
7. HEIGHTS OF WALL MOUNTED EQUIPMENT SHALL BE TO THE CENTER OF THE UNIT.
8. IF MOUNTING HEIGHT IS NOT INDICATED, INSTALL AS HIGH AS POSSIBLE.
9. INSTALL SLEEVES AS NECESSARY:
   a. SLEEVES FOR RACEWAYS AND CABLES SHALL BE SCHEDULE 40 GALVANZIED STEEL PIPE SLEEVES, ASTM A53/ A53M TYPE E, GRADE B WITH PLAIN ENDS.
   b. FOR RECTANGULAR OPENSINGS USE GALVANIZED SHEET STEEL WITH A THICKNESS OF 0.052 INCHES FOR OPENINGS SMALLER THAN 50 INCHES IN PERIMETER AND 0.138 INCHES FOR THOSE LARGER.
   c. SLEEVES SHALL BE FLUSH WITH WALLS.
   d. EXTEND FLOOR SLEEVES 2" ABOVE FINISHED FLOOR LEVEL.
   e. IF NECESSARY GROUT SPACE OUTSIDE OF SLEEVE IN CONCRETE AND MASONRY WALLS AND FLOOR.
   f. IN NON RATED FIRE WALLS AND FLOORS SEAL ANNULAR SPACE WITH JOINT SEALANT.
   g. ALWAYS MAINTAIN FIRE RATING OF ASSEMBLY.
9. IF REQUIRED FOR HYDROSTATIC PRESSURE REASONS, INSTALL EPDM SEALING ELEMENTS WITH TWO PLASTIC PRESSURE PLATES AND STAINLESS STEEL CONNECTING BOLTS AND NUTS.
10. GROUT SHALL BE NONMETALIC SHRINK-RESISTANT TYPE THAT IS NONSTAINING AND NON CORROSIVE.
11. EXTEND FLOOR SLEEVES 2" ABOVE FINISHED FLOOR.
12. MAINTAIN FIRE RATING OF FIRE-RATED ASSEMBLIES.
13. SEAL PENETRATION OF INDIVIDUAL RACEWAYS AND CABLES WITH FLEXIBLE BOOT-TYPE FLASHING.

DRAWING INDEX

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WILLIAM J. SNODGRASS REGISTERED No. 17006 STATE OF INDIANA PROFESSIONAL ENGINEER

project title

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BLOOMINGTON, IN

project information

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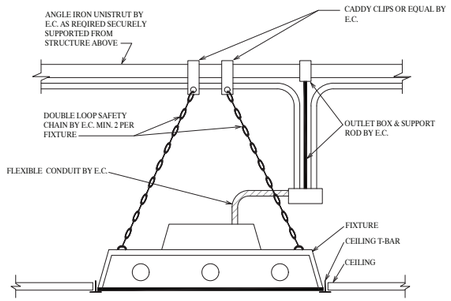
ELECTRICAL ABBREVIATIONS & SYMBOLS

sheet number

E001

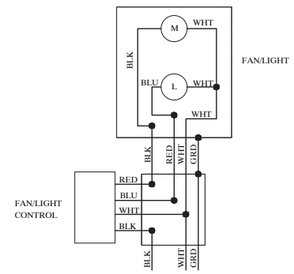
CONDUCTOR INSULATION AND MULTICONDUCTOR SCHEDULE TABLE

	THHN-THWN	XHHW	MI	NM	MC	UF	AC
SERVICE ENTRANCE	●						
EXPOSED FEEDERS	●						
CONCEALED FEEDERS	●				●		●
FEEDERS BELOW CONCRETE		●					
FEEDERS UNDERGROUND		●					
FEEDERS BELOW RAISED FLOORING	●						
FEEDERS IN CABLE TRAY	●				●		●
EXPOSED BRANCH CIRCUITS	●						
CONCEALED BRANCH CIRCUITS	●				●		●
BRANCH CIRCUITS BELOW CONCRETE	●						
BRANCH CIRCUITS UNDERGROUND		●					
BRANCH CIRCUITS BELOW RAISED FLOORING	●						
BRANCH CIRCUITS IN CABLE TRAY	●						
CLASS 1 CONTROL CIRCUITS	●						
CLASS 2 CONTROL CIRCUITS	●						



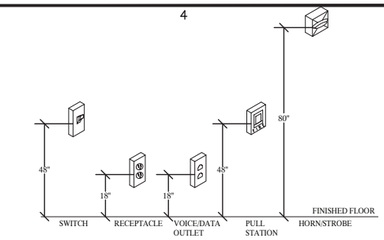
NOTE:
LIGHTING FIXTURES MUST BE SUPPORTED INDEPENDENTLY OF CEILING SYSTEM. UPON WRITTEN REQUEST TO THE ENGINEER, OTHER MEANS OF SUPPORT WILL BE CONSIDERED FOR APPROVAL.

LAY-IN FIXTURES SUPPORT DETAIL
NOT TO SCALE



AIR KING #AKDT60

FAN/LIGHT SWITCH SCHEMATIC
NOT TO SCALE



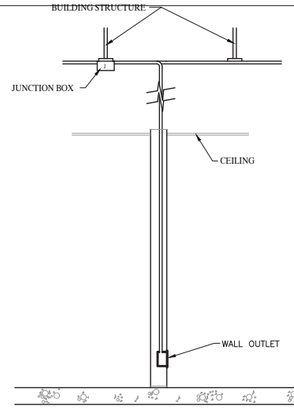
NOTE: ALL DIMENSIONS ARE TYPICAL FOR GIVEN DEVICE UNLESS OTHERWISE NOTED ON PLANS.

OPERABLE DEVICE MOUNTING HEIGHT DETAIL
NOT TO SCALE

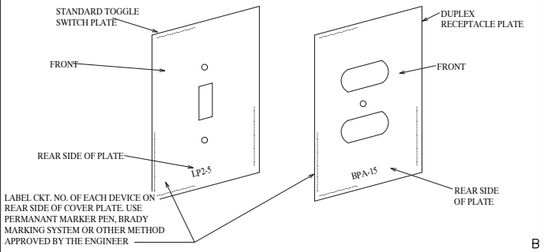
SCHEDULE OF CONDUIT APPLICATIONS

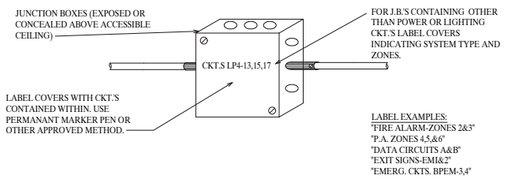
CONDUIT LOCATION OR APPLICATION	CONDUIT TYPE: RIGID	INTERMEDIATE	E.M.T.	FLEXIBLE	FLEXIBLE W/ W.P. JACKET	PVC SCHED 40	A.C. CABLE		
IN CONCRETE SLAB (NOT LARGER THAN 1"C)		(3)							
BELOW LOWEST FLOOR SLAB		(3)				(2)			
CONCEALED IN WALLS, ABOVE CEILINGS AND IN FURRED SPACES		(3)	(1)						
INSIDE, ABOVE BOTTOM OF ROOF STEEL							○		
FEEDER, POWER AND SIGNAL CIRCUITS RUN EXPOSED	(3)	(3)							
FINAL CONNECTION TO EQUIP. SUBJECT TO VIBRATION				○					
FINAL CONNECTION TO EQUIP. IN DAMP LOCATIONS					○				
SHORT CONNECTIONS WHERE NON-FLEXIBLE CONDUIT IS IMPRACTICAL				○					

NOTE:
○ - TYPE OF CONDUIT TO BE USED.
(1) - E.M.T. SHALL NOT BE USED IN SIZES LARGER THAN 2 INCH.
(2) - CONVERT TO RIGID OR INTER. THROUGH SLAB.
(3) - USE THREADED FITTINGS ONLY.



TYPICAL DETAIL FOR OVERHEAD FEED TO INTERIOR WALL OUTLET
NO SCALE





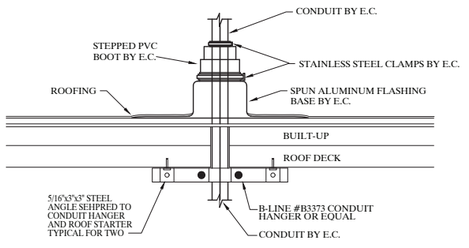
ELECTRICAL IDENTIFICATION DETAIL
NO SCALE

MINIMUM SIZE EQUIPMENT GROUNDING CONDUCTORS FOR GROUNDING RACEWAY AND EQUIPMENT

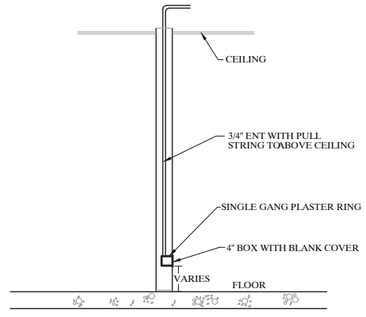
AUTOMATIC OVER CURRENT SETTING (AMPS - NOT EXCEEDING)	SIZE (AWG OR KCMIL) COOPER	ALUMINUM OR COPPER CLAD ALUMINUM
15	14	12
20	12	10
60	10	8
100	8	6
200	6	4
300	4	2
400	3	1
500	2	1/0
600	1	2/0
800	1/0	3/0
1000	2/0	4/0
1200	3/0	250
1600	4/0	350
2000	250	400
2500	350	400
3000	400	600
4000	500	600
5000	700	750
6000	800	1200

CONDUCTOR SIZING FOR RHW, THHW, THW, THWN, XHHW, USE, ZW AT 167F

SIZE AWG OR KCMIL	COOPER	ALUMINUM
12	25	20
10	35	30
8	50	40
6	65	50
4	85	65
3	100	75
2	115	90
1	130	100
1/0	150	120
2/0	175	135
3/0	200	155
4/0	230	180
250	255	205
300	285	230
350	310	250
400	335	270
500	380	310
600	420	340
700	460	375
750	475	385
800	490	395
900	520	425
1000	545	445
1250	590	485
1500	625	520
1750	650	545
2000	665	560



TYPICAL ROOF PENETRATION
NO SCALE



TYPICAL T.V. OUTLET ROUGH-IN DETAIL
NO SCALE

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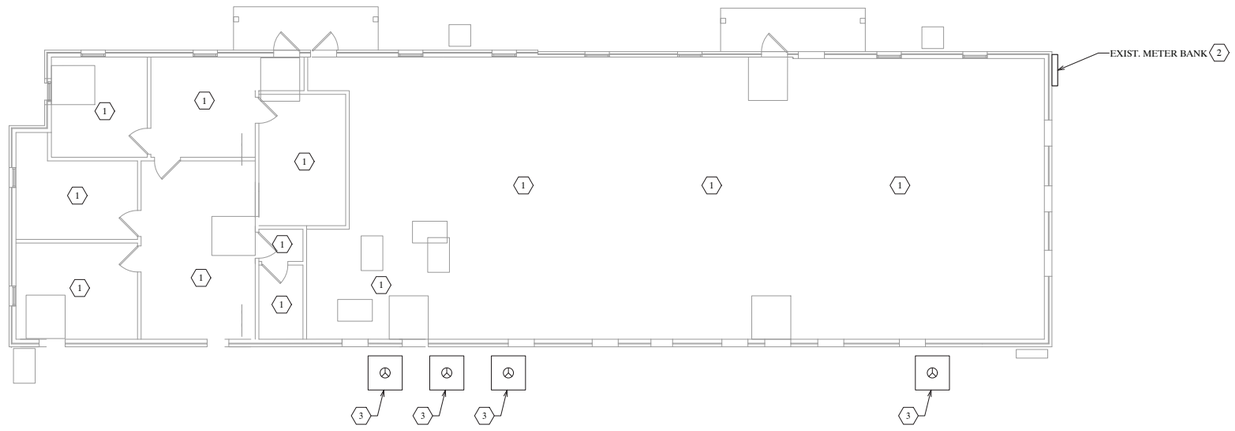
ELECTRICAL DETAILS

sheet number

E002

(#) PLAN NOTES:

1. REMOVE ALL EXISTING LIGHT FIXTURES INCLUDING EXIT AND EMERGENCY LIGHTING. REMOVE ALL ASSOCIATED BRANCH CIRCUIT FEEDERS COMPLETE BACK TO THE PANEL.
2. REMOVE EXISTING METER BANK (TOTAL OF 4-200A METER BASES).
3. DISCONNECT EXISTING CONDENSING UNIT AND ASSOCIATED FURNACE. REMOVE ALL ASSOCIATED DISCONNECTS AND CONTROLS. REMOVE ALL ASSOCIATED BRANCH CIRCUIT FEEDERS COMPLETE BACK TO THE PANEL.



N DEMOLITION FLOOR PLAN - ELETRICAL
SCALE: 3/16"= 1'-0"

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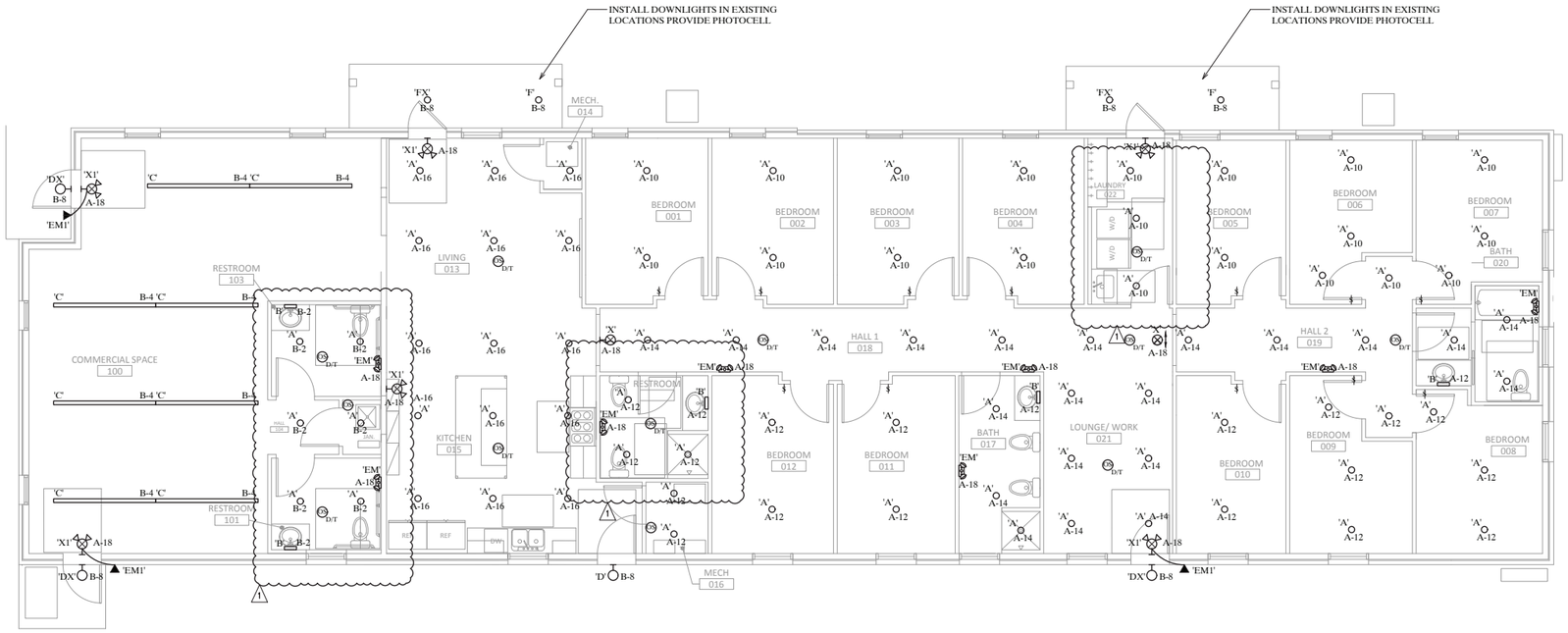
DEMOLITION PLAN ELECTRICAL

sheet number

E100



FLOOR PLAN - LIGHTING
SCALE: 3/16"= 1'-0"

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sheet title

LIGHTING PLAN

sheet number

E200

GENERAL NOTES:

A. ALL WORK SHALL BE IN ACCORDANCE WITH THE BEST QUALITY STANDARDS OF THE TRADE, AND SHALL CONFORM WITH ALL FEDERAL, STATE, AND LOCAL CODES AND STANDARDS.

B. THE CONTRACTOR SHALL INCLUDE IN BID PROPOSAL ALL COSTS REQUIRED TO COMPLETELY AND PROPERLY INSTALL ALL WORK REQUIRED FOR THE PROJECT, AND SHALL EXAMINE THE SCOPE OF WORK OF OTHER TRADES PRIOR TO SUBMITTING A BID PROPOSAL.

C. CONSTRUCTION DOCUMENTS SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE, HOWEVER, SYSTEMS HAVE BEEN SHOWN DIAGRAMMATICALLY AND IN SOME CASES, ENLARGED FOR CLARITY. ANY OFFSETS, ADDITIONAL FITTINGS, AND/OR APPURTENANCES REQUIRED TO PROVIDE A COMPLETE AND COORDINATED SYSTEM SHALL BE BORNE BY THE CONTRACTOR.

D. ALL CIRCUITS OVER 100' IN LENGTH SHALL BE A MINIMUM #10 AWG CONDUCTOR.

E. WIRING SYSTEM SHALL BE CONDUIT AND WIRE. MINIMUM WIRE SIZE SHALL BE #12 AWG. USE SOLID CONDUCTOR FOR #10 AWG AND SMALLER, USE STRANDED IN LARGER SIZES.

F. ALL COVER PLATES FOR ELECTRICAL DEVICES SHALL BE OF A COLOR TO MATCH THE AREA COLOR SCHEME AS DIRECTED BY THE OWNER.

G. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY CONDUIT, WIRING, PANELS, LIGHTING, ELECTRICAL DEVICES, SWITCHES AND OTHER COMPONENTS IN COMPLETE COMPLIANCE WITH ALL CURRENT FEDERAL, STATE AND LOCAL CODES AND ORDINANCES.

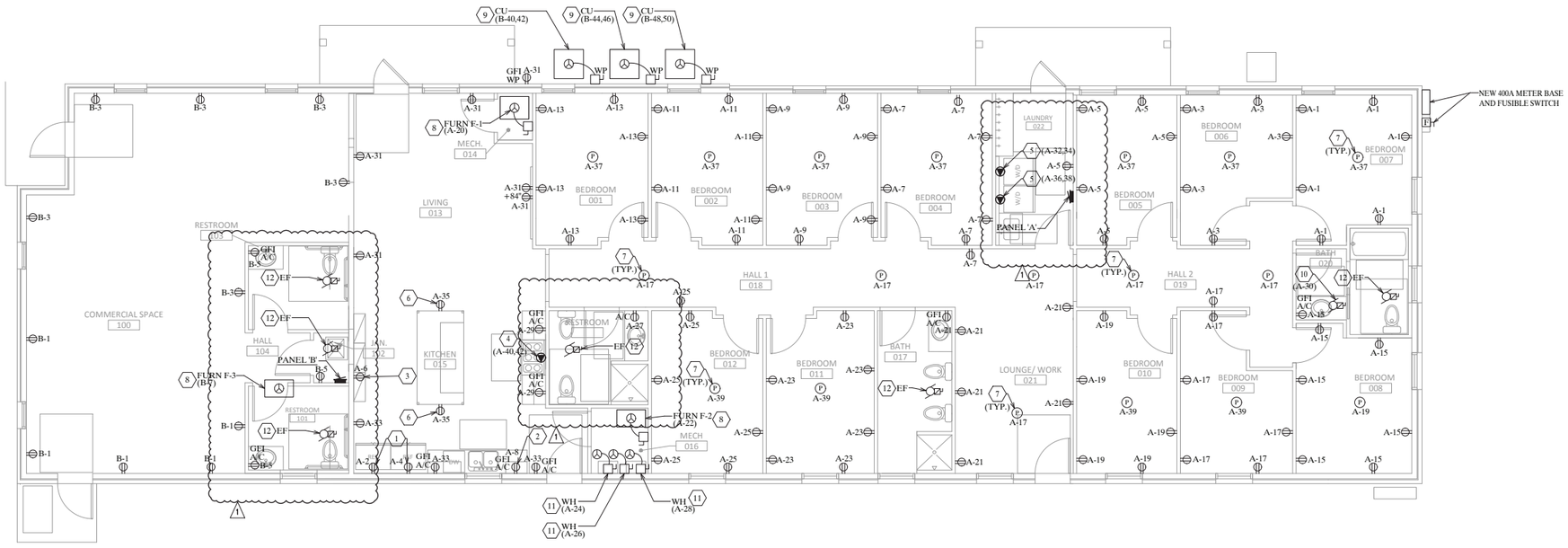
H. INSTALL GROUND WIRE IN ALL FEEDERS AND BRANCH CIRCUITS.

I. MINIMUM CONDUIT SIZE SHALL BE 3/4".

J. ALL DEDICATED RECEPTACLES SHALL BE 20 AMP RATED.

(#) PLAN NOTES:

1. DEDICATED RECEPTACLE FOR REFRIGERATOR.
2. DEDICATED RECEPTACLE FOR MICROWAVE.
3. DEDICATED RECEPTACLE FOR DISHWASHER.
4. 50A, 208V-1Ø OUTLET FOR ELECTRIC RANGE. INSTALL 2-#8, 1-#8 GND IN A 3/4"C.
5. 30A, 208V-1Ø OUTLET FOR COMBO WASHER/DRYER. INSTALL 2-#10, 1-#10 GND IN A 3/4"C.
6. MOUNT DEVICE ON END OF KITCHEN COUNTER CASEWORK.
7. PROVIDE 120V STAND-ALONG SMOKE DETECTOR IN EACH BEDROOM AND IN CORRIDORS.
8. 20A, 120V-1Ø CONNECTION FOR GAS FURNACE.
9. 40A, 208V-1Ø CONNECTION FOR CONDENSING UNIT. INSTALL 2-#8, 1-#8 GND IN A 3/4"C.
10. 20A, 120V-1Ø MOTOR CONNECTION FOR RECIRC PUMP UNDER SINK.
11. 20A, 120V-1Ø CONNECTION FOR GAS WATER HEATER.
12. 20A, 120V-1Ø MOTOR CONNECTION FOR EXHAUST FAN. CONNECT TO LIGHTING CIRCUIT IN THIS ROOM AND CONTROL WITH LIGHTS.



FLOOR PLAN - POWER

SCALE: 3/16"= 1'-0"

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Mechanical, Electrical, & Energy Engineering

certified

WILLIAM J. SNODGRASS REGISTERED No. 17006 STATE OF INDIANA PROFESSIONAL ENGINEER

project title

BLOOMINGTON COOPERATIVE LIVING

BLOOMINGTON, IN

410 W. KIRKWOOD AVE

project information

PROJECT NUMBER:	22100
ISSUE DATE:	09/23/2022
REVISION DATE:	
CBU DETAIL RPZ	11/07/2022
PLAN CHANGES	12/19/2022

sheet title

POWER PLAN

sheet number

E300

PANEL: 'B'
LOCATION: HALL

VOLTS: 120/208
AMPS: 200
CKTS: 42
LUGS: MCB

MTG: RECESSED
PHASE: 1
WIRE: 3
FEED: BOTTOM/TOP

PROVIDE:

REMARKS	<LOAD> ØA	<LOAD> ØB	POLE	CIR. NO.		CIR. NO.	POLE	<LOAD> ØA	<LOAD> ØB	REMARKS
RECEPTS	1.1		20	1		2	20	0.5		LIGHTING
RECEPTS		1.1	20	3		4	20		0.7	LIGHTING
RECEPTS	1.1		20	5		6	20	0.5		EXIT/EM LTG
FURN F-3		1.0	20	7		8	20		0.5	EXTERIOR LTG
SPARE			20	9		10	20			SPARE
SPARE			20	11		12	20			SPARE
SPARE			20	13		14	20			SPARE
SPARE			20	15		16	20			SPARE
SPARE			20	17		18	20			SPARE
SPARE			20	19		20	20			SPARE
SPARE			20	21		22	20			SPARE
SPARE			20	23		24	20			SPARE
SPARE			20	25		26	20			SPARE
SPARE			20	27		28	20			SPARE
SPARE			20	29		30	20			SPARE
SPARE			20	31		32	20			SPARE
SPARE			20	33		34	20			SPARE
SPARE			20	35		36	20			SPARE
SPARE			20	37		38	20			SPARE
SPARE			20	39		40	40		2.5	COND. UNIT
SPARE			20	41		42	2	2.5		
	2.2	2.1						3.5	3.7	11.5 KVA (55A)

PANEL: 'A'
LOCATION: MUD ROOM

VOLTS: 120/208
AMPS: 400
CKTS: 54
LUGS: MCB

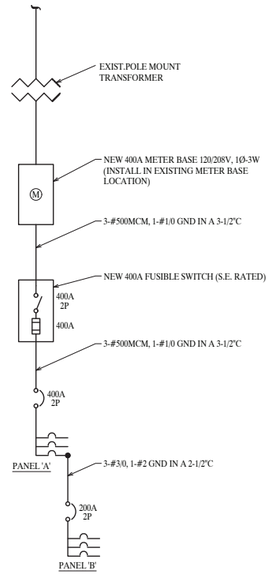
MTG: RECESSED
PHASE: 1
WIRE: 3
FEED: BOTTOM/TOP

PROVIDE:

REMARKS	<LOAD> ØA	<LOAD> ØB	POLE	CIR. NO.		CIR. NO.	POLE	<LOAD> ØA	<LOAD> ØB	REMARKS
RECEPTS	1.1		20	1		2	20	0.5		REFRIG
RECEPTS		1.1	20	3		4	20		0.5	REFRIG
RECEPTS	1.1		20	5		6	20	1.0		DISHWASHER
RECEPTS		1.1	20	7		8	20		1.0	MICROWAVE
RECEPTS	1.1		20	9		10	20	0.7		LIGHTING
RECEPTS		1.1	20	11		12	20		0.7	LIGHTING
RECEPTS	1.1		20	13		14	20	0.7		LIGHTING
RECEPTS		1.1	20	15		16	20		0.7	LIGHTING
RECEPTS	1.1		20	17		18	20	0.5		EXIT/EM LTG
RECEPTS		1.1	20	19		20	20		1.0	FURN F-1
RECEPTS	1.1		20	21		22	20	1.0		FURN F-2
RECEPTS		1.1	20	23		24	20		0.5	WATER HEATER
RECEPTS	1.1		20	25		26	20	0.5		WATER HEATER
RECEPTS		1.1	20	27		28	20		0.5	WATER HEATER
RECEPTS	1.1		20	29		30	20	0.5		CIRCU PUMP
RECEPTS		1.1	20	31		32	30		1.9	WASHER/DRYER COMBO
RECEPTS	1.1		20	33		34	2	1.9		
RECEPTS		1.1	20	35		36	30		1.9	WASHER/DRYER COMBO
SMOKE DET.	0.5		20	37		38	2	1.9		
SMOKE DET.		0.5	20	39		40	50		1.9	ELEC. RANGE
SPARE			20	41		42	2	1.9		
SPARE			20	43		44	40		2.5	COND. UNIT
SPARE			20	45		46	2	2.5		
SPARE			20	47		48	40		2.5	COND. UNIT
SPARE			20	49		50	2	2.5		
SPARE			20	51		52	200		5.8	PANEL 'B'
SPARE			20	53		54	2	5.7		
	10.4	10.4						21.8	21.4	64.0KVA (308A)

LIGHT FIXTURE SCHEDULE

TYPE	MOUNTING	LAMPS	WATTS	NOMINAL DIMENSION	MFGR & CAT NO. OR ACCEPTABLE EQUIVALENT	REMARKS
A	SURF	LED	15	7" ROUND	JUNO #JSF-7IN-10LM-30K-90CRI-MVOLT-ZT-WH-M6	7" ROUND SURFACE MOUNTED DISK
B	WALL	LED	18	2'	LITHONIA #WL2-18L-EZ1-LP835	2' LED OVER-MIRROR LIGHT
C	SUSP	LED	66	8'	LITHONIA #LLS-8000LM-80CRI-35K-EPD-MINIO-EZT-MVOLT-WH	8' LED PENDANT LINEAR
D	WALL	LED	24	-	LITHONIA #WPXO-LED-ALO-SWWZ-MVOLT-PE-DDBXD-M2 (850 LUMENS)	LED EXTERIOR WALL PACK WITH BUILT-IN PHOTOCELL
DX	WALL	LED	24	-	LITHONIA #WPXO-LED-ALO-SWWZ-MVOLT-PE-DDBXD-M2 (850 LUMENS)	LED EXTERIOR WALL PACK WITH BUILT-IN PHOTOCELL
EM	WALL	LED	-	-	LITHONIA #ELM6	LED EMERGENCY WALL PACK
EM1	WALL	LED	-	-	LITHONIA #ERE	LED EMERGENCY WALL PACK
F	RECESS	LED	6	6" ROUND	LITHONIA #LDN6-35-05-LO6-AR-LSS-MVOLT-GZ10	6" ROUND LED DOWNLIGHT
FX	RECESS	LED	6	6" ROUND	LITHONIA #LDN6-35-05-LO6-AR-LSS-MVOLT-GZ10-EL	6" ROUND LED DOWNLIGHT WITH EMERGENCY BATTERY PACK
X	UNIV	LED	-	-	LITHONIA #LQM-S-W-3-R-120/277-M6	LED EXIT LIGHT WITH EMERGENCY BATTERY PACK
X1	UNIV	LED	-	-	LITHONIA #LQM-LED-R-M6	LED EXIT/EMERGENCY COMBO UNIT



ONE-LINE DIAGRAM
NO SCALE

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WILLIAM J. SNODGRASS REGISTERED No. 17006 STATE OF INDIANA PROFESSIONAL ENGINEER

project title

BLOOMINGTON COOPERATIVE LIVING
410 W. KIRKWOOD AVE
BLOOMINGTON, IN

project information

PROJECT NUMBER: 22100
ISSUE DATE: 09/23/2022
REVISION DATE:
CBU DETAIL RPZ 11/07/2022
PLAN CHANGES 12/19/2022

sheet title

PANEL SCHEDULES

sheet number

E400

ELECTRICAL SPECIFICATIONS:

1.0 GENERAL

1.1 All materials shall be as specified and approved by Underwriters Laboratories.

1.2 Provide a complete electrical system conduit system as indicated herein and/or on the drawings. The latest edition of The National Electric Code shall be the Minimum requirement for all work.

1.3 Any substitutions to manufacturers of equipment listed in these specifications must be approved in writing by the Owner's Engineer.

1.4 E.C. shall submit shop drawings of electrical switchgear to Architect/Engineer for review.

1.5 Shop drawings shall include:
A. Single line riser diagram of electrical system.
B. Completed schedules for all electric panels.

1.6 Drawings and Specifications: It shall be the Contractor's duty to examine and have thorough knowledge of the architectural, structural, electrical, mechanical and site work Drawings and Specifications.

1.6.1 The commencement of work under this Section indicated that the Contractor has examined and has knowledge of the architectural, structural, electrical, mechanical and site work Drawings and Specifications. The failure of the Contractor to acquaint himself with all available information shall not relieve him of any responsibility for performing his work properly.

1.6.2 No additional compensation shall be allowed because of conditions that occur due to the Contractor's failure to become thoroughly familiar with all of the Contract Documents for this project, as described above, and with the job site.

1.6.3 It shall be the Contractor's duty to notify the Architect and/or Engineer, in a timely manner, of any discrepancies, errors, omissions, ambiguities, or conflicts which were known or discovered during the course of the preparation of the bid or the conduct of work.

1.6.4 Unless expressly stipulated, no additional allowance will be made in the Contractor's and/or manufacturer's favor by virtue of errors, ambiguities and/or omissions which were known to or which should have been known or discovered during the preparation of the bid estimate and directed to the Architect and \ or Engineer's attention in a timely manner.

1.6.5 The Drawings and Specifications are intended to supplement one another. Any materials or labor called for in one but not the other shall be furnished as if both were mentioned in the Specifications and shown on the Drawings. Labor and/or materials neither shown nor specified, but necessary for the completion and proper functioning of the systems, shall be furnished and installed by this Contractor.

1.6.6 The Drawings are diagrammatic and are intended to depict the approximate locations of equipment, piping and apparatus. Dimensions given on the Drawings, in figures, shall take precedence over scaled dimensions. All dimensions, whether in figures or scaled, shall be verified in the field.

1.6.7 The plans show the arrangement of all fixtures, equipment and material and are not intended to show all details. Each and every accessory intended for the purpose of execution of the work is understood to be part of the work.

1.6.8 The location of equipment and pipe, as shown on the Drawings, is diagrammatic and schematic and it is the responsibility of the Contractor to make his own fabrication and installation drawings and layouts to eliminate all structural and other physical interferences without detriment to the structural, mechanical and architectural components of the building. The Contractor must organize the physical arrangement of the systems of material in the confines of the space in order for them to function and perform in accordance with the intent of the design. The Contractor is not responsible for the design performance; he is responsible for the development of installation and fabrication drawings for the installation of his equipment and material within the available spaces.

1.6.9 The Contractor shall carefully verify all measurements at the site, determine the exact location of all chases, openings, plenums and ceiling cavities required by his work and shall furnish and set all sleeves,inserts and hangers as required for the work herein. The Contractor shall verify actual job dimensions before fabrication of any materials, purchasing or installation of equipment.

1.7 Space Conditions:It shall be the Contractor's responsibility to verify that all apparatus, gear, fixtures, conduit, etc, shall fit into that available spaces in the building and must be introduced into the building at such times and in such manner as not to cause damage to the structure.

1.7.1 Where minor deviations from plans are required in order to conform to space limitations, such changes shall be made by the Contractor at no additional cost to the Owner and shall be subject to the approval of the Architect and/or Engineer.

1.7.2 All equipment normally requiring service shall be easily accessible.

1.8 Coordination and Conflicts: The Contractor shall coordinate his work so that it does not interfere with the work of other trades. It shall be the Contractor's responsibility to see that his work is installed in a timely manner.

1.8.1 In the event that there is a discrepancy or conflict in the plans or Specifications it shall be the Contractor's responsibility to notify the Architect and/or Engineer of this conflict or discrepancy prior to his acceptance of the project. Unless expressly stipulated, no additional allowance will be made in the Contractor's and/or Manufacturer's favor by virtue of errors, ambiguities and/or omissions which were known to or which should have been known or discovered during the presentation of the bid estimate and directed to the Architect's and/or Engineer's attention in a timely manner.

1.9 Guarantee: All equipment shall be started, tested, adjusted and placed in satisfactory operating condition by the Contractor. All equipment shall be covered for the duration of the Manufacturer's guarantee or warranty and the Contractor shall furnish the Owner with all Manufacturer's guarantee warranties.

1.9.1 Guarantee all work, materials and equipment for a period of one (1) year from date of acceptance by the Owner's Engineer. The Guarantee shall include full service adjustments, repairs and replacement parts at no expense to Owner, and to the complete satisfaction of the Owner's Engineer.

1.9.2 The Contractor shall furnish a letter addressed to the owner outlining the year's guarantees and advising that the completed systems have been installed in accordance with Plans and Specifications and that they are in proper operating condition.

1.10 Inspection Authority Certificate of Approval shall be furnished the Owner's Engineer before final acceptance will be given.

1.10.1 Provide any inspections and certificates required by local jurisdictional authorities to obtain acceptance of the specified equipment and the installation.

1.11 Submittals: Contractor agrees that Shop Drawing Submittals processed by the Engineer are not Change Orders; that the purpose of Shop Drawing Submittals by the Contractor is to demonstrate to the Engineer that the Contractor understands the design concept, that he demonstrates his understanding by indicating which equipment and materials he intends to furnish and install and by detailing the fabrication and installation methods he intends to use.

1.11.1 The Contractor further agrees that if deviations, discrepancies or conflicts between Shop Drawings and Specification are discovered either prior to or after Shop Drawing Submittals are processed by the Engineer, the design Drawings and Specifications shall control and shall be followed.

1.11.2 Where shop drawings are reviewed, said review does not in any way relieve the Contractor from the responsibility nor the necessity of furnishing material or performing work required by the Contract Drawings and Specifications.

1.11.3 Submittal review is considered as general acceptance of the basic applicability of the equipment. Contractor is responsible for the installation of any substituted equipment within a given space. When the Contractor desires to use substituted equipment, he shall be responsible for producing his own coordinated working drawings which depict the substituted equipment accommodated in the space. Where the substituted equipment creates the need for alterations in any portion of the work depicted in the contract documents, it shall be the Contractor's responsibility to notify all of the affected parties and coordinate these items with all other trades. Further, it shall be the Contractor's responsibility to assume any additional cost to the Contract created by the substituted equipment.

1.11.3.1. Substituted equipment is any equipment which deviates from the equipment specified herein, as the first named manufacturer or the equipment scheduled on the plans.

2.0 Service Entrance

2.1 Characteristics - Service shall be as indicated on drawings. See One-Line diagram on Drawings for additional information.

2.2 Provide auxiliary services for exit lights and emergency lighting.

2.3 Grounding - System grounding conductor shall be sized as required by applicable code and run in conduit where exposed in building to the point of water service to building and connected to water service piping.

2.4 Conductors shall be copper with Type THWN insulation.

2.5 Bus duct, when used for service entrance conductors, shall be plated aluminum, complete with suitable vapor barrier and weatherhead.

4.0 Panelboards.

4.1 Panels dead front type with cabinets surface mounted (unless otherwise specified) of code thickness with hinged door and trim. Door hinged with concealed hinges and provided with trim clamps and trim angle supports and with flush type combination latches and locks with locks keyed alike. Door shall include a directory frame on face of front panel interior and directory card faced with transparent plastic. All circuits clearly and permanently identified on directory. Boxes fabricated of galvanized steel. No crinkle finishes permitted on trim. Panel back adjustable. Panels factory assembled. Each panel shall contain a minimum of 10% spare circuit breakers. If not otherwise indicated spare circuit breakers shall be 20 amp. single pole.

4.2 Multiple pole breakers must be of common trip type. No tie handles permitted with single pole breakers

5.0 Lighting Controller

5.1 Occupancy sensors as shown on plans.

5.2 Contactors shall be electrically held of proper capacity. Contactors shall be wired with a relay furnished by the electrical contractor to properly engage and release the contactor based on one channel switching.

5.3 All outside and work area lighting and circuits shall include time clock and photocell control 'OTC' as shown, with manual spring wound override switch.

6.0 Method of Wiring

6.1 Conduit raceways or M.C. cable shall be used for installation of all wiring where indicated on drawings.

6.1.1 Exposed conduit subject to mechanical injury shall be either full weight rigid steel (heavy-wall) type or intermediate metal conduit (I.M.C.) - Any conduits run in the mechanical room or electrical room not concealed in partitions, above finished ceilings or under the floor slab are considered exposed to mechanical injury. Either type shall have galvanized or equal finish. Conduit run exposed and not subject to mechanical injury, concealed above ceiling or in furred spaces may be electrical metallic tubing (E.M.T.) or M.C, cable with galvanized or equal finish Aluminum conduit shall not be used in concrete or masonry, but is permitted for use where exposed and not subject to mechanical injury or where concealed above ceiling or in furred spaces. Conduit joints shall be made with standard conduit couplings, (no running-threads) cadmium plated. Schedule 40 PVC conduit is also permitted for use in masonry or concrete. Any feeder conduits which are PVC must be buried beneath the floor slab - not in the concrete. Any exposed conduit projections out of concrete slab must be changed to rigid steel or I.M.C. at the surface of the slab. Rigid steel or I.M.C. conduit is required in concrete or masonry Construction.

6.1.2 Conduit shall not be smaller than 3/4" nominal trade size, except for switch legs or where expressly noted.

6.1.3 Install all conduits as near bottom chord of joists as practical. All conduits must be securely fastened and adequately supported. Perforated straps will not be permitted. All suspended conduits must be supported on a trapeze using "Unistrut" and bolted hanger construction. Conduits supported using suspended ceiling system (either tee bars or hanger wires) will not be permitted.

6.1.4 All conduit sizing for branch circuits shall be based on the use of Type THW code grade insulation. This method of sizing shall be used regardless of insulation type used in the conduit.

6.1.5 All conduits shall be concealed.

6.1.6 Pull boxes and junction boxes shall be installed where indicated on the drawings or where required to facilitate wire installation.

6.1.7 Cutting of structural concrete or steel to facilitate wiring installation will not be permitted without written approval of the Owner's Engineer.

6.1.8 All exposed conduit shall be run rectilinear with building construction using concentric bends.

6.1.9 Control circuit conduits (w/pull wires) under floor and in ceiling shall be as shown on drawings or as required.

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WILLIAM J. SNODGRASS REGISTERED No. 17006 STATE OF INDIANA PROFESSIONAL ENGINEER

project title

BLOOMINGTON COOPERATIVE LIVING
410 W. KIRKWOOD AVE BLOOMINGTON, IN

project information

PROJECT NUMBER:	22100
ISSUE DATE:	09/23/2022
REVISION DATE:	
CBU DETAIL RPZ	11/07/2022
PLAN CHANGES	12/19/2022

sheet title

ELECTRICAL SPECIFICATIONS

sheet number

E500

September 7, 2023

Drew Myers
Senior Planner
Monroe County Historic Preservation Board of Review
501 N Morton St.
Bloomington, IN 47404

Re: 1020 N Monroe St., Bloomington, Monroe County, Indiana – CDBG Physical Improvement Grant

Dear Mr. Myers,

The City of Bloomington, Indiana is considering funding the project listed above with federal funds from the U.S. Department of Housing and Urban Development (HUD). Under HUD regulation 24 CFR 58.4, the City of Bloomington has assumed HUD's environmental review responsibilities for the project, including consulting with interested parties related to historic properties. Historic properties include archeological sites and structures.

City of Bloomington will conduct a review of this project to comply with Section 106 of the National Historic Preservation Act and its implementing regulations 36 CFR Part 800. We would like to invite you to be a consulting party in this review to help identify historic properties in the project area that may have local historical significance and to help assess how the project might affect them. If the project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

To meet project timeframes, if you would like to be a consulting party on this project, can you please let us know of your interest within 30 days? If you have any initial concerns with impacts of the project on religious or cultural properties, can you please note them in your response?

The subrecipient is applying for CDBG funds to assist in the construction of its Early Learning Center. The two-story building will be built at the northeast corner of 14th St. and Monroe St. at 1020 N. Monroe St. The first floor will consist of three early childcare classrooms and a walled playground to the east. The second floor will consist of three, bedroom, affordable apartments accessed by an exterior staircase from the parking lot to the south of the building. SHCDC is applying for CDBG funds to purchase and install the playground, playground wall and fencing.

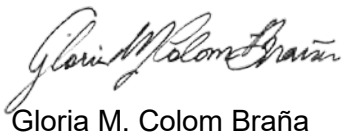
The entire site is proposed for ground disturbance at different levels. A new two story building is proposed for the site along with a playground, parking,

landscaping, and fencing. The site used to have a large water container which has since been removed.

More information on the Section 106 review process is available at http://www.onecpd.info/environmental-review/historic-preservation/.

If you do not wish to consult on this project, no reply to this letter is needed. Thank you very much. We value your assistance and look forward to consulting further if there are historic properties that may be affected by this project.

Sincerely,



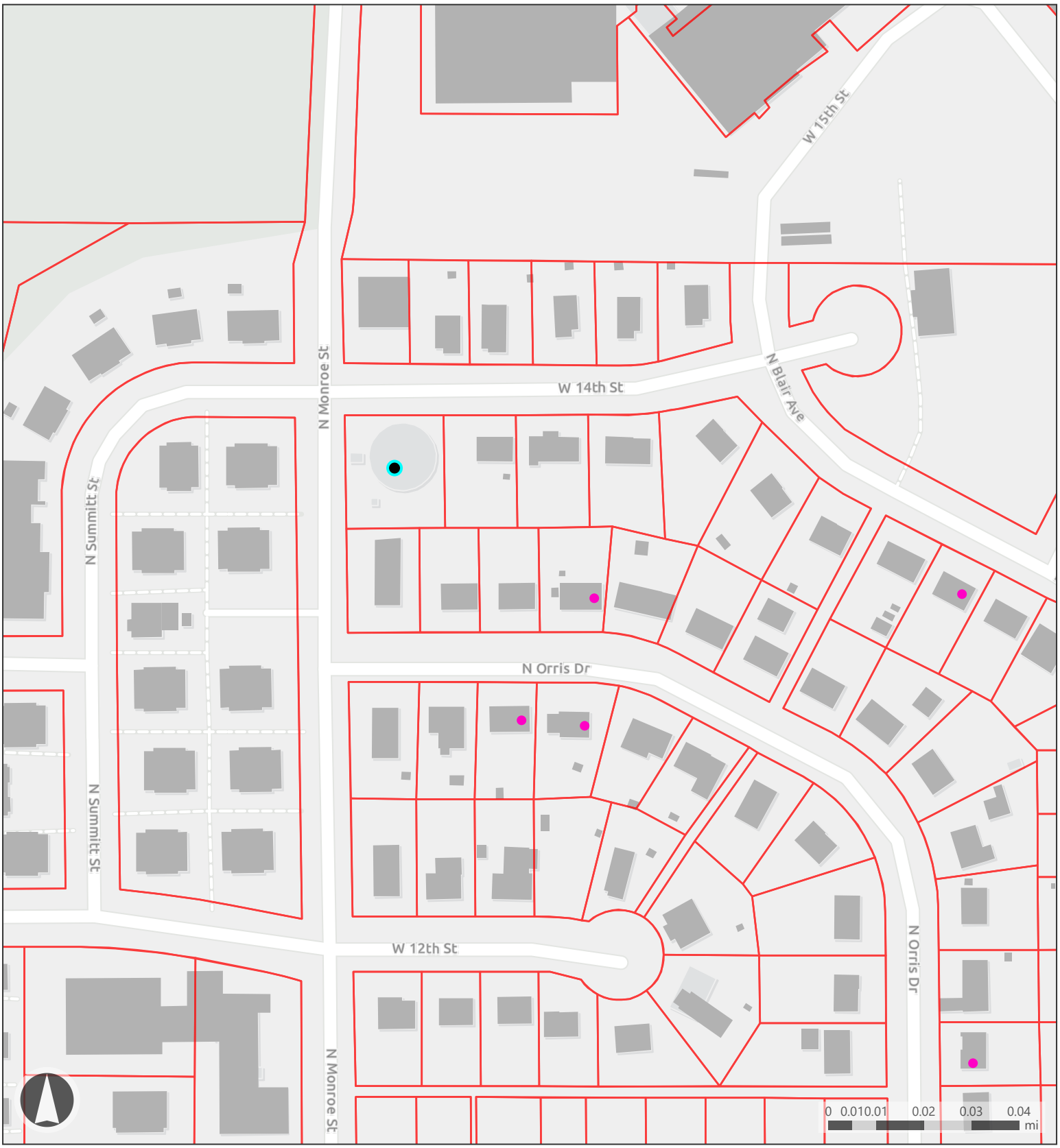
Gloria M. Colom Braña
Historic Preservation Program Manager
City of Bloomington, Indiana

Cc: Department of Historic Preservation and Archeology, Department of Natural Resources, Indiana

Attachments

City of Bloomington

1020 N Monroe St - Location



Map Legend

- Contributing
- Monroe County Parcels
- Building Areas

Created: 9/5/2023 *Map By:*

For use as map information only, information is NOT warranted.

1020 N Monroe St, Bloomington, IN SHAARD Map

9/5/2023, 2:59:58 PM

1:2,257

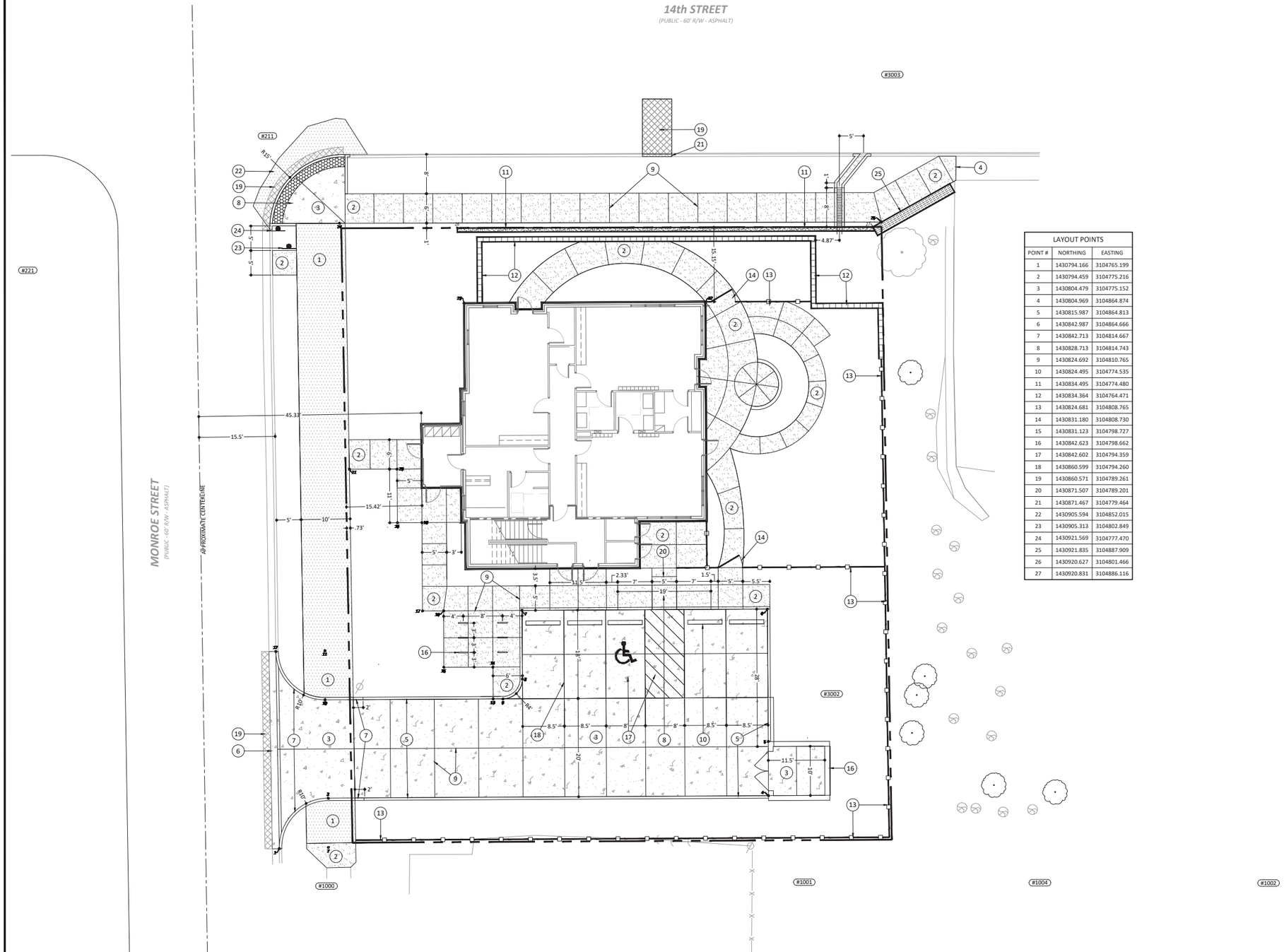
0 0.0175 0.035 0.07 mi

0 0.03 0.06 0.12 km

County Survey Sites

- Contributing

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



LAYOUT POINTS		
POINT #	NORTHING	EASTING
1	1430794.166	3104765.199
2	1430794.459	3104775.216
3	1430804.479	3104775.152
4	1430804.969	3104864.874
5	1430815.987	3104864.813
6	1430842.987	3104864.666
7	1430842.713	3104814.667
8	1430828.713	3104814.743
9	1430824.692	3104810.765
10	1430824.495	3104774.535
11	1430834.495	3104774.480
12	1430834.364	3104764.471
13	1430824.681	3104808.765
14	1430831.180	3104808.730
15	1430831.123	3104798.727
16	1430842.623	3104798.662
17	1430842.602	3104794.359
18	1430860.599	3104794.260
19	1430860.571	3104789.261
20	1430871.507	3104789.201
21	1430871.467	3104779.464
22	1430905.594	3104852.015
23	1430905.313	3104802.849
24	1430921.569	3104777.470
25	1430921.835	3104887.909
26	1430920.627	3104801.466
27	1430920.831	3104886.116

GENERAL NOTES

A. ALL DIMENSIONS ARE TO FACE OF CURB, POINT OF TANGENCY, EDGE OF PAVEMENT, EDGE OF WALK, FACE OF BUILDING OR FENCELINE, UNLESS OTHERWISE NOTED. CURB RETURN RADII ARE TO FACE OF CURB. COORDINATE DIMENSIONS WITH ARCHITECTURAL. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK.

B. CONTRACTOR IS REQUIRED TO VERIFY FIELD CONDITIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK.

C. ALL DISTURBED AREAS SHALL RECEIVE 6" OF TOP SOIL, SEED AND MULCH OR BE IMPROVED AS NOTED OTHERWISE.

D. SIGNAGE AND PAVEMENT MARKINGS SHALL COMPLY WITH THE INDIANA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, ADA, AND CITY UDO.

E. ALL STREET CUTS FOR UTILITIES AND OTHER IMPROVEMENTS SHALL BE REPAIRED TO MATCH EXISTING PAVEMENT SECTION OR BETTER.

PLAN NOTES (1)

1. ASPHALT PAVEMENT – MULTI-PURPOSE PATH - REFER TO DETAIL 7/C701
2. CONCRETE PAVEMENT, STANDARD DUTY - REFER TO DETAIL 2/C701
3. CONCRETE PAVEMENT, HEAVY DUTY - REFER TO DETAIL 1/C701
4. EXISTING CONCRETE TO NEW CONCRETE – REFER TO DETAIL 3/C701
5. STANDING CONCRETE CURB - REFER TO DETAIL 5/C701
6. MOUNTABLE CURB AND GUTTER - REFER TO DETAIL 6/C701
7. CONCRETE CURB TRANSITION – REFER TO DETAIL 8/C701
8. INDOT STANDARD ADA COMPLIANT SIDEWALK RAMP. CAST IRON DETECTABLE WARNING PLATES BY EAST JORDAN IRON WORKS OR NEENAH FOUNDRY PER CITY ENGINEERING'S DETECTABLE WARNING SURFACES APPROVED MATERIAL LIST ARE REQUIRED ON THE RAMP AT THE INTERSECTION OF 14TH AND MONROE AS INDICATED - REFER TO DETAIL 14/C701
9. EXPANSION AND/OR SCORE JOINT (TYPICAL) - REFER TO DETAIL 2/C701
10. CONCRETE WHEEL STOP - REFER TO DETAIL 4/C701
11. CONCRETE RETAINING WALL – REFER TO STRUCTURAL PLANS
12. FREE STANDING MASONRY WALL – REFER TO ARHITECTURAL PLANS
13. FENCE – REFER TO ARHITECTURAL PLANS
14. 5' GATE – REFER TO ARHITECTURAL PLANS
15. DUMPSTER ENCLOSURE – REFER TO ARHITECTURAL PLANS
16. BICYCLE PARKING TO MEET CITY OF BLOOMINGTON REQUIREMENTS – 6 RACKS, 12 SPACES
17. ADA COMPLIANT VAN PARKING SPACE: INCLUDES PAVEMENT MARKING, 4" WIDE, BLUE, PAINTED WHEELCHAIR SYMBOL, CONCRETE WHEEL STOP AND VAN ACCESSIBLE SUPPLEMENTAL SIGN – REFER TO DETAILS 4/C701 AND 10/C701
18. PAVEMENT MARKING, 4"WIDE WHITE PAINT – AUTO PARKING
19. PAVEMENT PATCH – REFER TO DETAIL 12/C701
20. CONCRETE STEP WITH 6" RISER – REFER TO DETAIL 16/C701
21. CONCRETE CURB OR CURB AND GUTTER TO MATCH EXISTING
22. MILL AND WEDGE ASPHALT
23. RELOCATED EXISTING BUS STOP SIGN
24. RELOCATED EXISTING STOP SIGN
25. SEGMENTAL BLOCK RETAINING WALL, GRAVITY TYPE ONLY.

SITE CHARACTERISTICS

TOTAL AREA: 0.316 ACRES
PERVIOUS AREA: 0.143 ACRES, 45 %
IMPERVIOUS AREA: 0.173 ACRES, 55 %

LEGEND

- LIMITS OF NEW ASPHALT PAVEMENT
- LIMITS OF NEW STANDARD DUTY CONCRETE PAVEMENT
- LIMITS OF NEW HEAVY DUTY CONCRETE PAVEMENT
- PAVEMENT STRIPING 2' O.C.

10 0 10
SCALE: 1" = 10'

NORTH

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BRCJ PROJECT NUMBER: 10389

certified

WILLIAM STUART DIGHERT REGISTERED NO. 870231 STATE OF INDIANA PROFESSIONAL ENGINEER
4.13.23

project title

BHA
CHILDCARE CENTER
& APARTMENTS
WEST 14TH STREET
BLOOMINGTON, IN

project information

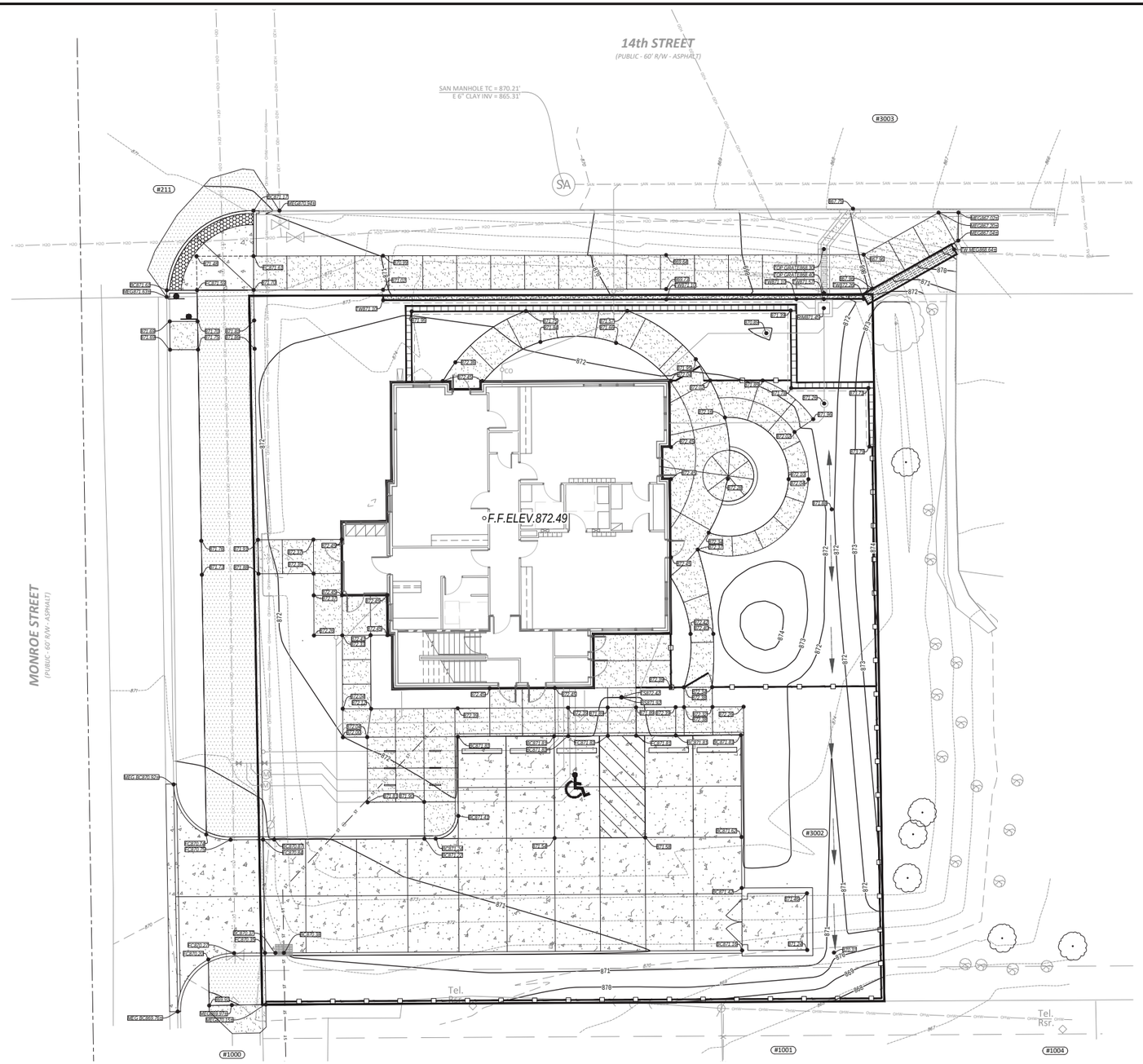
PROJECT NUMBER: 20–01
ISSUE DATE: 4.13.23
REVISION DATE: 4.04.23

sheet title

SITE IMPROVEMENT PLAN

sheet number

C401



SCALE: 1" = 10'

NORTH

GENERAL NOTES

A. GRADE ALL AREAS TO THE FINISH GRADES SHOWN.

B. CONTRACTOR TO VERIFY FIELD CONDITIONS WITH RESPECT TO THE PROPOSED GRADING PLANS AND NOTIFY ENGINEER OF ANY AND ALL DISCREPANCIES PRIOR TO BEGINNING WORK.

C. INSTALL AND MAINTAIN EROSION CONTROL DEVICES AS REQUIRED AND WHERE NECESSARY TO CONTROL SEDIMENT.

D. CONTRACTOR SHALL PREVENT SURFACE WATER AND GROUND WATER FROM ENTERING EXCAVATIONS, FROM PONDING ON PREPARED SUBGRADES AND FROM FLOODING PROJECT SITE AND SURROUNDING AREAS. PROTECT SUBGRADES FROM SOFTENING, UNDERMINING, WASHOUT AND DAMAGE BY RAIN OR WATER ACCUMULATION. THIS WILL REQUIRE SUPPLEMENTAL GRADING ABOVE AND BEYOND THAT SHOWN.

E. CONTRACTOR SHALL ADJUST ALL CASTINGS TO FINISHED GRADE.

F. CONTRACTOR SHALL ESTABLISH FINISH GRADES TO ENSURE POSITIVE DRAINAGE WITH NO PONDING.

G. LONGITUDINAL SIDEWALK SLOPE SHALL NOT EXCEED 5%, UNLESS NOTED OTHERWISE. TRANSVERSE SIDEWALK SLOPE SHALL NOT EXCEED 1.5% UNLESS NOTED OTHERWISE.

H. SPOT GRADES GIVEN AT THE FACE OF CURB INDICATE PAVEMENT EDGE/CURB INTERFACE (FLOW LINE) ELEVATION, UNLESS NOTED OTHERWISE. BOTTOM OF WALL ELEVATIONS INDICATE WHERE FINISH GRADE AND WALL MEET.

I. ALL SLOPES 3:1 OR GREATER TO BE COVERED WITH NORTH AMERICAN GREEN S8150N EROSION CONTROL BLANKET OR APPROVED EQUAL. INSTALL PER MANUFACTURER'S INSTRUCTIONS.

LEGEND

- PROPOSED CONTOURS
- EXISTING CONTOURS
- 923.20 SPOT ELEVATION
- MEG MATCH EXISTING GRADE
- TW TOP OF WALL
- BW BOTTOM OF WALL AT FINISH GRADE ELEVATION
- TS TOP OF STAIR - ELEVATION IS EQUAL ACROSS WIDTH
- BS BOTTOM OF STAIR - ELEVATION IS EQUAL ACROSS WIDTH
- BC BOTTOM OF CURB WHERE IT MEETS PAVEMENT. FOR STANDING AND CHAIR BACK CURBS, TOP OF CURB IS 6" ABOVE THIS ELEVATION UNLESS NOTED OTHERWISE. FOR ROLL CURBS, TOP OF CURB IS 3.5" ABOVE THIS ELEVATION, UNLESS NOTED OTHERWISE
- FL FLOW LINE
- FC FLUSH CURB - CURB IS IN FULLY DEPRESSED CONDITION
- TC TOP OF CURB - PROVIDED ONLY WHEN CURB IS IN A NONSTANDARD HEIGHT CONDITION.
- TB TOP OF BANK
- LIMITS OF NEW ASPHALT PAVEMENT
- LIMITS OF NEW STANDARD DUTY CONCRETE PAVEMENT
- LIMITS OF NEW HEAVY DUTY CONCRETE PAVEMENT
- PAVEMENT STRIPING 2' O.C.

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BLOOMINGTON, IN

project information

PROJECT NUMBER:	20–01
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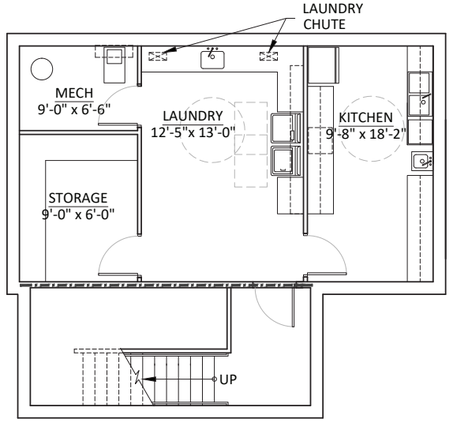
sheet title

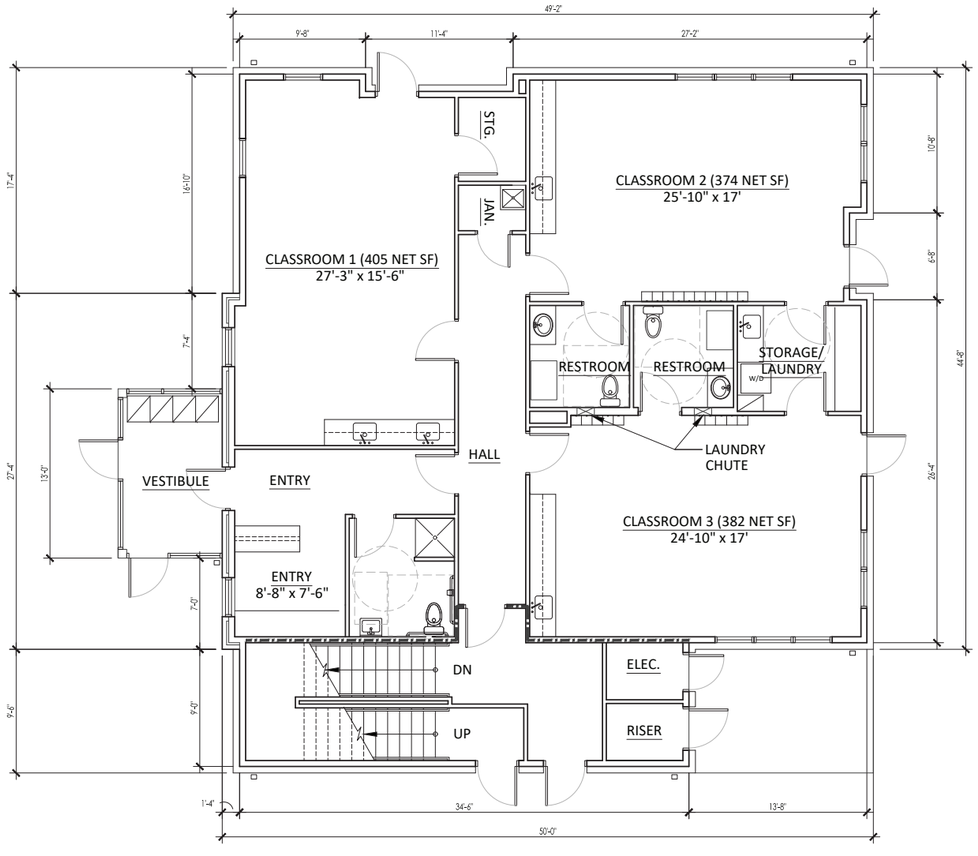
SITE GRADING PLAN

sheet number

C501



B BASEMENT FLOOR PLAN
SCALE: 3/16" = 1'-0"



A MAIN FLOOR PLAN
SCALE: 3/16" = 1'-0"

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project title

BHA CHILDCARE CENTER & APARTMENTS

WEST 14TH STREET

BLOOMINGTON, IN

project information

PROJECT NUMBER:	22-56
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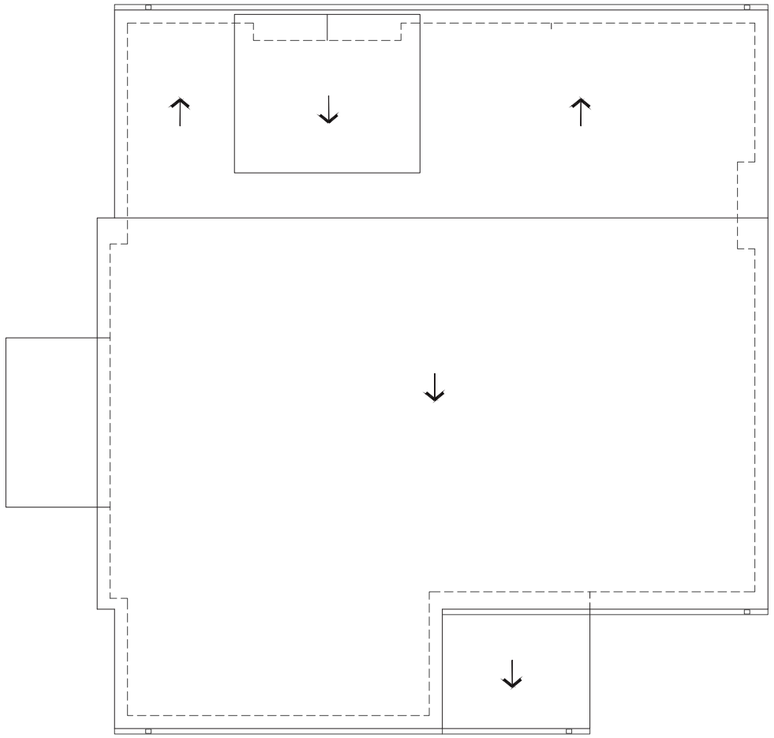
sheet title

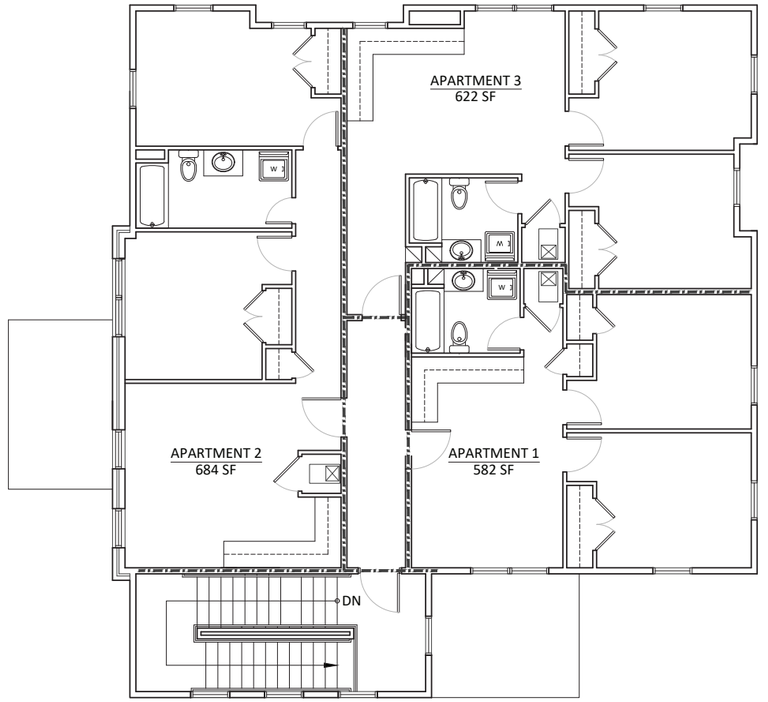
BASEMENT & MAIN FLOOR PLANS

sheet number

A101



B ROOF PLAN
SCALE: 3/16" = 1'-0"



A UPPER FLOOR PLAN
SCALE: 3/16" = 1'-0"

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BHA CHILDCARE CENTER
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PROJECT NUMBER:	22-56
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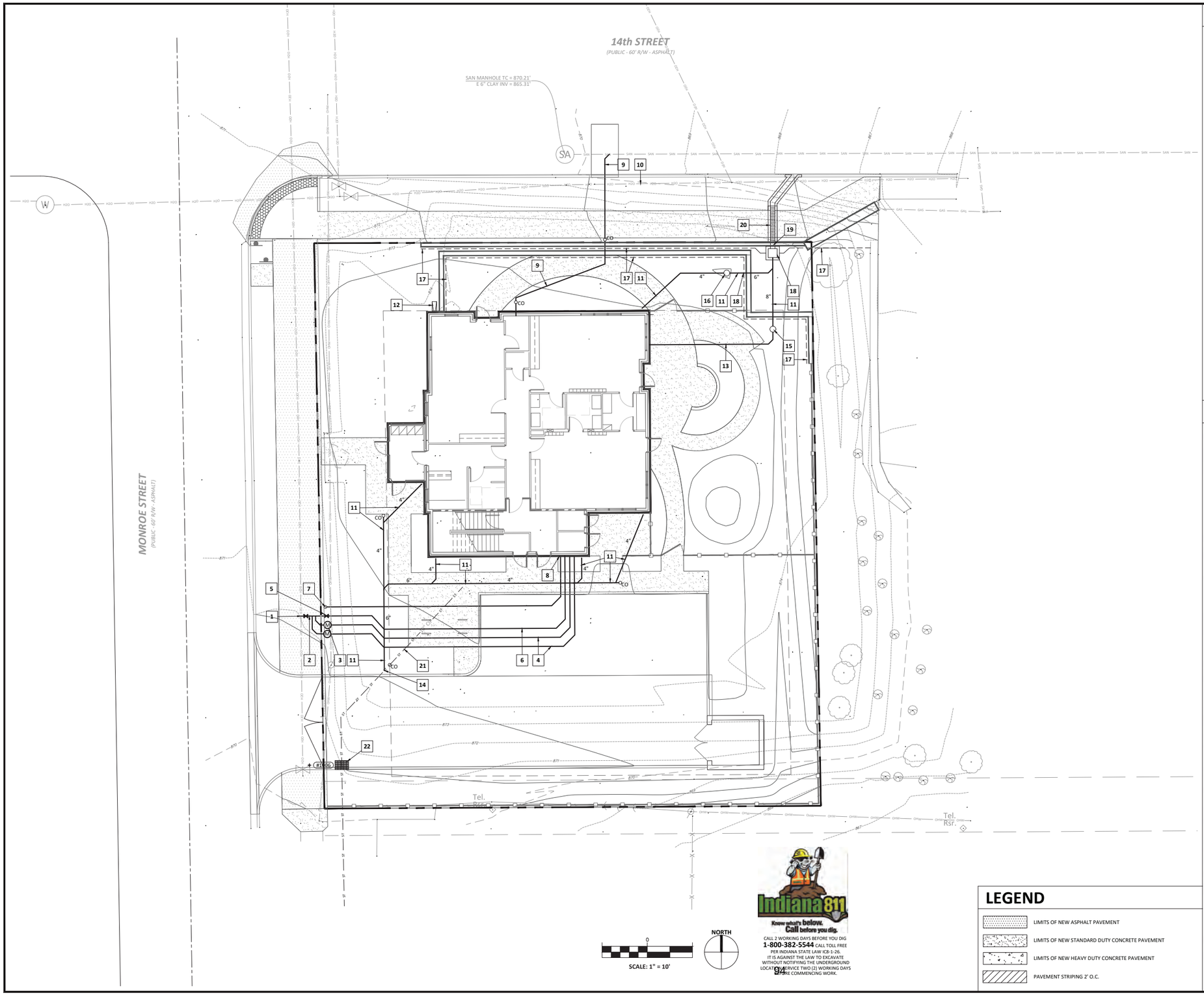
UPPER
FLOOR & ROOF
PLANS

sheet number

A102



GENERAL NOTES

A. CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND PATCHING AS REQUIRED TO COMPLETELY INSTALL THE WORK INDICATED.

B. CONTRACTOR SHALL COORDINATE EXACT UTILITY LOCATIONS WITH THE OWNER AND LOCAL UTILITY COMPANIES PRIOR TO COMMENCING ANY WORK. CONTACT INDIANA 811 AT 1-800-382-5544 AND OTHER UTILITIES PRIOR TO ANY EXCAVATION ON THE SITE.

C. ALL WORK ASSOCIATED WITH WATER AND SEWER SYSTEMS SHALL COMPLY WITH THE STANDARDS & REQUIREMENTS OF THE INDIANA DEPT. OF ENVIRONMENTAL MANAGEMENT (IDEM), THE INDIANA STATE DEPARTMENT OF HEALTH (ISDH), THE AMERICAN WATER WORKS ASSOCIATION (AWWA), THE GREAT LAKES-UPPER MISSISSIPPI BOARD OF STATE PUBLIC HEALTH AND ENVIRONMENTAL MANAGERS (GLUMRB), THE INDIANA PLUMBING CODE AND THE CITY OF BLOOMINGTON UTILITIES CONSTRUCTION SPECIFICATIONS.

D. CONTRACTOR IS REQUIRED TO VERIFY FIELD CONDITIONS AND NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK.

E. CONTRACTOR SHALL SET ALL EXISTING AND PROPOSED CASTINGS AND CLEANOUT COVERS TO FINAL FINISHED GRADE.

F. A MINIMUM OF 18 INCHES VERTICAL SEPARATION SHALL BE MAINTAINED BETWEEN WATER AND SANITARY/STORM SEWER UNLESS OTHERWISE INDICATED, OR UNLESS WRITTEN PERMISSION IS GIVEN BY THE ENGINEER. SEWERS CROSSING WATER MAINS SHALL BE LAID TO MAINTAIN A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND OUTSIDE OF THE SEWER MAIN. THIS SHALL BE THE CASE WHETHER THE WATER MAIN IS ABOVE OR BELOW THE SEWER. THE CROSSING SHALL BE ARRANGED SO THAT THE JOINTS IN THE SEWER MAIN WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE JOINTS IN THE WATER MAIN. THE CROSSING MUST BE AT A MINIMUM ANGLE OF 45° MEASURED FROM THE CENTERLINE OF THE SEWER AND WATER MAINS. WHERE A WATER MAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO MAINTAIN LINE AND GRADE.

G. A MINIMUM OF 10 FEET HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN WATER AND SANITARY/STORM SEWER UNLESS OTHERWISE INDICATED, OR UNLESS WRITTEN PERMISSION IS GIVEN BY THE ENGINEER.

H. ALL STORM AND SANITARY MANHOLES AND STORM INLET STRUCTURES SHALL HAVE A MINIMUM SEPARATION OF 8' FROM WATER MAINS.

I. ALL SANITARY LATERALS SHALL HAVE A MINIMUM COVER OF 30"- UNLESS NOTED OTHERWISE.

J. ALL STORM LATERALS SHALL HAVE A MINIMUM COVER OF 24"- UNLESS NOTED OTHERWISE.

K. ALL SANITARY AND STORM LATERALS SHALL HAVE A MINIMUM SLOPE OF 1/8" PER FOOT UNLESS NOTED OTHERWISE.

L. ALL WATER LINES SHALL HAVE A MINIMUM COVER OF 48". INSTALL LINES WITH NO ISOLATED HIGH POINTS.

M. WHERE DISSIMILAR PIPING MATERIALS ARE JOINED TOGETHER ALONG GRAVITY SANITARY AND STORM LATERALS, THE CONTRACTOR SHALL USE A NON-SHEAR COUPLING EQUAL TO FERNCO.

N. PRE-CONSTRUCTION MEETING: EFFECTIVE MARCH 1, 2010, ALL PROJECTS WILL REQUIRE A PRE-CONSTRUCTION MEETING WITH THE CITY OF BLOOMINGTON UTILITIES (CBU) PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR AND/OR DEVELOPER MUST CONTACT THE UTILITIES TECHNICIAN AT (812)349-3676 TO SCHEDULE THE MEETING.

O. UTILITIES INSPECTION: CONTRACTOR SHALL NOTIFY THE CITY OF BLOOMINGTON UTILITIES ENGINEERING DEPARTMENT ONE (1) WORKING DAY PRIOR TO CONSTRUCTION OF ANY WATER, STORM OR SANITARY SEWER UTILITY WORK. A CBU INSPECTOR MUST HAVE NOTICE SO WORK CAN BE INSPECTED, DOCUMENTED, AND A PROPER AS-BUILT MADE. WHEN A CONTRACTOR WORKS ON WEEKENDS, A CBU DESIGNATED HOLIDAY, OR BEYOND NORMAL CBU WORK HOURS, THE CONTRACTOR WILL PAY FOR THE INSPECTOR'S OVERTIME. FOR CBU WORK HOURS AND HOLIDAY INFORMATION, PLEASE CONTACT THE CITY OF BLOOMINGTON UTILITIES DEPARTMENT AT (812)349-3660

P. ALL DUCTILE IRON PIPR AND FITTINGS SHALL BE PRESSURE CLASS 350 INSTALLED WITH MECHANICAL JOINT RESTRAINTS AND POLYETHYLENE ENCASEMENT.

Q. PROVIDE AND INSTALL INSULATED #12 AWG COPPER CLAD STEEL LOCATE WIRE ON ALL PVC OR POLYETHYLENE WATER, SANITARY AND STORM LINES.

PLAN NOTES 1

1. 6" WATER SERVICE CONNECTION. CONTRACTOR TO COORDINATE WITH CITY OF BLOOMINGTON UTILITIES (CBU) AND APPLY FOR TAP AT LEAST 48 HOURS IN ADVANCE. CONTACTOR TO EXPOSE WATER MAIN, INSTALL TAPPING SLEEVE AND VALVE AND ALLOW CBU TO TAP THE MAIN. CONTRACTOR TO PLACE VALVE BOX, BACKFILL, AND REPAIR EXISTING CONDITIONS. CONTRACTOR RESPONSIBLE FOR ALL EXPENSES ASSOCIATED WITH TAPPING THE MAIN – REFER TO DETAIL 2/C702
2. 6" PRIVATE COMBINED WATER SERVICE LINE. AWWA C900 DR 14 PVC PIPE WITH DUCTILE IRON FITTINGS AND MECHANICAL JOINT RESTRAINTS. ALL JOINTS TO BE RESTRAINED.
3. METER PIT FOR 2" PRIVATE DOMESTIC METER AND YOKE. COORDINATE WITH CBU. CONTRACTOR RESPONSIBLE FOR SERVICE SADDLE, CORPORATION STOP, CURB STOP, AND ASSOCIATED MATERIALS REQUIRED BY CBU. CBU TO INSTALL METER SETTER AND METER. REFER TO DETAIL 5/C702. CONTRACTOR RESPONSIBLE FOR ALL EXPENSES ASSOCIATED WITH INSTALLING THE DOMENSTIC SERVICE AND METER.
4. 2" PRIVATE DOMESTIC WATER SERVICE LINE. ASTM B88 TYPE K COPPER OR BLUE POLYETHYLENE AWWA 901 PE 4710 ASTM D2737, CTS SDR 9 PC 250 PIPE.
5. SUPERVISED POST INDICATOR VALVE (PIV) – REFER TO DETAIL 9/C702. CONFIRM LOCATION WITH BLOOMINGTON FIRE CHIEF. REFER TO E AND/OR FP SERIES DRAWINGS FOR ASSOCIATED WIRING TO THE TAMPERPROOF SWITCH.
6. 6" PRIVATE FIRE PROTECTION WATER SERVICE LINE. PRESSURE CLASS 350 DUCTILE IRON PIPE AND FITTINGS WITH MECHANICAL JOINT RESTRAINTS AND POLYWRAP. ALL JOINTS TO BE RESTRAINED.
7. FIRE DEPARTMENT CONNECTION (FDC) AND 4" PRIVATE FIRE PROTECTION WATER SERVICE LINE. PRESSURE CLASS 350 DUCTILE IRON PIPE AND FITTINGS WITH MECHANICAL JOINT RESTRAINTS AND POLYETHYLENE ENCASEMENT. FDC SERVICE LINE TO SLOPE DOWNWARD FROM BUILDING TO FDC. ALL JOINTS TO BE RESTRAINED. STORZ TYPE FDC WITH 30 DEGREE BEND. INCLUDE WATER CHECK VALVE AND DRAIN DOWN AT FDC STAND PIPE. REFER TO DETAIL 8/C702. CONFRM LOCATION WITH BLOOMINGTON FIRE CHIEF.
8. DETECTOR METER RADIO HEAD TOUCH PAD AND CONDUIT TO FIRE PROTECTION RISER. REFER TO CBU STANDARD DETAIL 34 AND E-SERIES DRAWINGS FOR ADDIONTAL INFORMATION. COORDINATE WITH CBU
9. PRIVATE SANITARY WASTE LINE. 6" ASTM SDR 35 PVC. GASKETED SLIP JOINT PIPE AND FITTINGS TO BE INSTALLED WITH A MINIMUM OF 30" OF COVER. TRANSITION TO AWWA C900 DR 14 PVC PIPE AND FITTINGS AT THE CLEANOUT ALONG THE PROPERTY LINE TO CROSS THE WATER MAIN. CONNECT TO EXISTING 8" SANITARY SEWER MAIN. COORDINATE WITH CBU. CONTRACTOR IS RESPONSIBLE FOR EXCAVATION AND EXPOSURE OF THE SEWER MAIN TO ALLOW CBU TO CUT IN A WYE, ALL BACKFILL, ASSOCIATED PAVEMENT RESTORATION AND ALL CBU EXPENSES.
10. VACUUM EXCAVATE TO VERIFY DEPTH OF EXISTING 8" PUBLIC WATER MAIN. REFER TO GENERAL NOTE F, IF VERTICAL CLEARANCE WILL BE LESS THAN 18" BETWEEN MAIN AND SEWER LATERAL.
11. DOWNSPOUT COLLECTION AND DRAINAGE PIPE - ASTM D 3034 SDR 35 PVC, GASKETED SLIP JOINT PIPE AND FITTINGS. CONFIRM LOCATION OF DOWNSPOUT WITH ARCHITECTURAL DRAWINGS. SIZE AS INDICATED. AT EACH DOWNSPOUT, INCLUDE A STAINLESS STEEL ADAPTER TO CONNECT TO THE COLLECTION PIPE BY PIEDMONT OR APPROVED EQUAL.
12. CONCRETE SPLASH BLOCK, REFER TO DETAIL 1/C702.
13. FOUNDATION DRAIN COLLECTION PIPE - ASTM D 3034 SDR 35 PVC, GASKETED SLIP JOINT PIPE AND FITTINGS. REFER TO ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS FOR FOUNDATION DRAIN. MATCH SIZE OF PIPE.
14. CONTRACTOR TO FIELD VERIFY LOCATION OF THE EXISTING 10" CAST IRON PIPE (CIP) AND CONNECT DOWNSPOUT COLLECTION PIPING, INCLUDING CLEANOUT.
15. INLINE DRAIN BY NYLOPLAST OR APPROVED EQUAL WITH 6" SDR 35 PVC RISER AND 8" CAST IRON STANDARD GRATE. SET TOP OF CAST AT ELEVATION 871.26.
16. INLINE DRAIN BY NYLOPLAST OR APPROVED EQUAL WITH 6" SDR 35 PVC RISER AND 8" CAST IRON STANDARD GRATE. SET TOP OF CAST AT ELEVATION 870.89.
17. RETAINING WALL FOOTING DRAIN – REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS.
18. INLET - TYPE A BOX WITH EJ 6500 DITCH GRATE. REFER TO DETAIL 11/C701. PROVIDE 3"x10" RECTANGULAR OPENING AT INVERT FOR CONNECTION THRU WALL TO SIDEWALK TRENCH DRAIN. CONNECT 8" SDR 35 PVC DRAINAGE PIPE AND RETAINING WALL FOOTER DRAINS PER DETAIL 10/C702.
19. 3"x10" RECTANGULAR PENETRATION THRU RETAINING WALL. REFER TO DETAIL 10/C702 AND SECTION A/L201.
20. SIDEWALK TRENCH DRAIN, EJIW V7383-20W WITH V7320 BOLTED RAILS. 10" WIDE CONCRETE COLLAR AND TRENCH AS INDICATED. CONTINUE 10" WIDE x 5" DEEP CONCRETE TRENCH TO 14TH STREET. MODIFY EXISTING CURB TO ACCEPT TRENCH – REFER TO DETAIL 4/C702.
21. REMOVE UNUSED PORTION OF THE EXISTING 10" CIP OR ABANDON IN PLACE, FILL WITH FLOWABLE CEMENTIOUS FILL, AND CAP BOTH ENDS.
22. INLET - TYPE J BOX WITH EJ 7030 CATCH BASIN CURB INLET, TYPE T1 BACK, AND M4 VANE GRATE. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING 10" CIP FOR FINAL POSITION OF INLET. CUT AND REMOVE SECTION OF PIPE TO ACCEPT INLET. SEAL ANNULAR OPENINGS WATER TIGHT WITH NON-SHRINK GROUT. SET TOP OF CASINT ALONG CURB LINE AT ELEVATION 870.38 – REFER TO DETAIL 11/C701

LEGEND

- LIMITS OF NEW ASPHALT PAVEMENT
- LIMITS OF NEW STANDARD DUTY CONCRETE PAVEMENT
- LIMITS OF NEW HEAVY DUTY CONCRETE PAVEMENT
- PAVEMENT STRIPING 2' O.C.

Indiana 811 Know what's below. Call before you dig.
CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-382-5544 CALL TOLL FREE
PER INDIANA STATE LAW IC8-1-26.
IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.

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4.13.23

project title

BHA
CHILDCARE CENTER
& APARTMENTS
WEST 14TH STREET
BLOOMINGTON, IN

project information

PROJECT NUMBER:	20–01
ISSUE DATE:	4.13.23
REVISION DATE:	4.13.23

sheet title

SITE UTILITIES PLAN

sheet number

C601

D EAST ELEVATION
SCALE: 1/8" = 1'-0"

B SOUTH ELEVATION
SCALE: 1/8" = 1'-0"

C NORTH ELEVATION
SCALE: 1/8" = 1'-0"

A WEST ELEVATION
SCALE: 1/8" = 1'-0"

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project title

BHA CHILDCARE CENTER & APARTMENTS

WEST 14TH STREET

BLOOMINGTON, IN

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sheet title

ELEVATIONS

sheet number

A201

2023 Work Plan—Revised 09/12/2023
Monroe County Historic Preservation Board

Project Priorities: Outreach and Preservation, Ongoing Board Initiatives

1) **Limestone Heritage Project**
    a. Update website with new information as it is available
    b. Connect with Partners on information to link to

Sub-committee members: Debby, Susan, Polly

2) **Drystone Walls**
    a. Create list of action steps needed to prep for launch of survey
    b. Launch and conduct survey
    c. Discuss/pursue local designations and/or in-depth documentation of some walls
    d. Explore possibility for a hands-on workshop

Sub-committee members: Duncan, Don, Donn, Susan

3) **Community and Site Signage**
    a. Pursue community signage as long as funding is provided
    b. Pursue interpretive signate for new historic covered bridge

Sub-committee members: Devin, Don, Donn

4) **Public Historic Preservation Education**
    a. Develop a social media scavenger hunt of architectural types, styles, etc.
    b. Update current driving tour brochures as needed, consider completion of partially completed brochures, and examine new options for distribution of information to the public
    ~~c. Participate in the Limestone Month Festival – June 17, 2023~~
    ~~d. Host Limestone Heritage Teacher's Workshop – June 21-23, 2023~~

Sub-committee members: Devin, Polly, Susan, Doug

5) **Annual Property Owner Notice**
    ~~a. Send previous year's letter to full board for review (January-February) and update if needed~~
    b. ~~Confer with staff on sending letter to property owners (February-March)~~

Sub-committee members: Don, Debby, Polly

6) **Demolition Delay and Staffing Committee**
    a. Review demolition delay examples and develop a draft document for Monroe County
    b. Review County Development Ordinance for proposed revisions per the proposed timeline
    c. Engage in discussions with the Plan Commission Executive Committee in creating plans and procedures for demolition delay, public notification, staffing needs, etc.

Sub-committee members: Duncan, Donn, Susan

Project Priorities: Procedure, Time Sensitive Initiatives—All Board

1) Actively engage in County Development Ordinance revisions

Board Education Priorities, Ongoing Options—All Board and staff

1) Attend the Preserving Historic Places Conference (September 19-22, 2023)
2) ~~Attend CAMP held just prior to the preservation conference (September 13, 2023 - virtual)~~
3) Attend, either in-person or online, lectures on topics of historical and preservation interest locally or elsewhere
4) Read books and other literature approved by DHPA's CLG coordinator and refer to the lit of other options provided by DHPA
5) Hold our own educational sessions/workshops presented by a board member or other qualified individual