Application Packet for

Tier II Solid Waste Disposal Facility Permit Modification

for

City of Norman

October 8, 2021

Prepared by
Michele Loudenback, RPES, CFM
Environmental and Sustainability Manager
Environmental Services
City of Norman Utilities Department
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APPLICATION TO MODIFY A SOLID WASTE DISPOSAL FACILITY PERMIT

Date: October 4, 2021  County: Cleveland

Send to:
Solid Waste Permitting Unit
Waste Management Division
Dept. of Environmental Quality
707 N. Robinson (PO Box 1677)
Oklahoma City, OK 73101-1677

FOR DEQ USE

DEQ Log No. __________
No. Copies __________
Date Received: __________

City of Norman Utilities Dept. proposes to modify the permit of
(Applicant's Name)
the City of Norman Municipal Solid Waste Transfer Station, located at
(Facility Name)
S/2 SW/4 SE/4 & SW/4 SE/4 SE/4 OF 7-8N-2W
(Exact legal description: metes & bounds, platted lot, or land survey. Append extra sheets if necessary)

in Cleveland County, Oklahoma. We hereby make application for a modification of existing permit number as required by the Oklahoma Solid Waste Management Act and the Rules pursuant thereto.

Remarks and brief description of proposed modification: The City of Norman would like to modify the City's Municipal Solid Waste Transfer Station permit (Permit No. 3514007) to include a self-contained, enclosed permanent Household Hazardous Waste Facility where Norman residents can take their HHW for sorting, packaging, transportation and disposal.

DEQ USE ONLY

Applicant or Authorized Agent: Michele Loudenback
Preparring Engineer: Nathan Madenwald

Address: PO Box 370
City: Norman  State: OK
Date Signed: 07/21/2016
Phone: 405-366-5426

Facility Address (if any): 3901 Chautauqua Ave., Norman, OK 73072

July 2016
DEQ Form #515-020
VERIFICATION

STATE OF OKLAHOMA )
COUNTY OF Cleveland ) ss

I, Michele Loudenback, of lawful age, being first duly sworn, upon oath state that I have read the foregoing APPLICATION TO MODIFY A SOLID WASTE DISPOSAL FACILITY PERMIT, that I am familiar with the matters set forth therein, and that the same are true to the best of my information and belief.

[Signature]
Applicant

Subscribed and sworn to before me this 8th day of October, 2024, by Michele Loudenback (Applicant or legal representative).

[Signature]
Notary Public

My commission expires:

Nov 12, 2024

1 This Verification is required for a Tier III modification application.

July 2016
DEQ Form #515-020
Tier II Permit Modification Application for City of Norman Household Hazardous Waste Facility

Introduction: The City of Norman is submitting this Tier II Permit Modification Application to modify the Norman Municipal Solid Waste Transfer Station permit (#3514007) in order to include a Household Hazardous Waste Facility which will receive and process household-generated hazardous waste for transportation and disposal by a competitively chosen contractor.

Filing of Application / Public Participation and Notice

Item 1: Public Notice: this item shall be met with notice published in the Norman Transcript. A copy of which is in the addenda.

Certification

Item 2: Oath Required: the oath signature page is attached to this permit modification application and is in the addenda.

Item 3: Legal Right to Property: (a) A true and correct copy of legal ownership for the site of the proposed facility, filed in Cleveland County and certification by affidavit that the City of Norman owns the property is included in Appendix B. (b) The City of Norman legally owns the property of the proposed facility, therefore option for right of access use is not applicable in this situation. (c) The legal property owner for the proposed site is listed as the City of Norman, a municipal government; therefore, a temporary easement is not applicable in this situation.

Item 4: Engineer of Record: Mr. Nathan Madenwald, P.E., is the Engineer of Record for the permit. He has affixed his seal to the application page. All required maps and drawings have been sealed to certify that to the best of the engineer’s knowledge, the information is accurate and verifiable.

General Information

Item 5: Owner/Operator Contact Information:

City of Norman
Utilities Department
PO Box 370
Norman, OK 73070
(405) 366-5443

Item 6: Facility Contact Information

City of Norman Household Hazardous Waste Facility
3901 Chautauqua Ave.
Norman, OK 73072
(405) 292-9731

Item 7: Disclosure Statement: A disclosure statement completed in accordance with OAC 252:515-3-31(g) is included in the addenda.
Item 8: (A) Legal Description of permit boundary: S/2 OF THE SW/4 OF THE SE/4 OF SECTION 7, T.8N-R.2W.
(B) All processing and management areas will be located within and around the enclosed permanent facility and are therefore contained completely within the permit boundary.
(C) Soil borrow areas will not be utilized for the facility and legal descriptions of such are not applicable.

Item 9: For the site, latitudes and longitudes of the four (4) corners of the permitted boundary are as follows, using a rectangle as reference figure:

<table>
<thead>
<tr>
<th>NW: 35.176734, -97.450266</th>
<th>NE: 35.176844, -97.445840</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW: 35.175042, -97.450218</td>
<td>SE: 35.174998, -97.445653</td>
</tr>
</tbody>
</table>

Additionally, the entrance to the permitted boundary is located at 35.17568, -97.45081.

Item 10: The site is located within the City of Norman city limits within the permit boundary.
Item 11: A description of all processing, storage, and disposal operations and units can be found in the Facility Operations Plan located in the addenda.

Item 12: A description of anticipated waste streams and amounts received per day has been calculated from historical data from material collected at one-day HHW collection events (2015-2019)

<table>
<thead>
<tr>
<th>Waste Category</th>
<th>Per Day Average HHW Collected from 2015 to 2019 in Pounds Unless Otherwise Stated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerosols</td>
<td>13.2</td>
</tr>
<tr>
<td>Alkaline Batteries</td>
<td>4.2</td>
</tr>
<tr>
<td>Corrosives-acids</td>
<td>4.3</td>
</tr>
<tr>
<td>Corrosives-bases</td>
<td>3.7</td>
</tr>
<tr>
<td>Flammables (s)</td>
<td>20.1</td>
</tr>
<tr>
<td>Flammables (l)</td>
<td>12.9</td>
</tr>
<tr>
<td>Fluor Bulbs (Compact)</td>
<td>1.1</td>
</tr>
<tr>
<td>Fluor Bulbs (straight)</td>
<td>2.7</td>
</tr>
<tr>
<td>HID Bulbs</td>
<td>0.05</td>
</tr>
<tr>
<td>Latex Paint</td>
<td>80.3</td>
</tr>
</tbody>
</table>
### Waste Category

<table>
<thead>
<tr>
<th>Waste Category</th>
<th>Per Day Average HHW Collected from 2015 to 2019 in Pounds Unless Otherwise Stated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium Batteries</td>
<td>0.68</td>
</tr>
<tr>
<td>Mercury</td>
<td>0.11</td>
</tr>
<tr>
<td>Ni-Cad Batteries</td>
<td>0.52</td>
</tr>
<tr>
<td>Oil Base Paint</td>
<td>95.0</td>
</tr>
<tr>
<td>Oil Filters</td>
<td>0.49</td>
</tr>
<tr>
<td>Oxidizers</td>
<td>3.2</td>
</tr>
<tr>
<td>Pesticides (s)</td>
<td>20.0</td>
</tr>
<tr>
<td>Pesticides (l)</td>
<td>41.8</td>
</tr>
<tr>
<td>Propane- Small/Camp*</td>
<td>0.43</td>
</tr>
<tr>
<td>Propane- BBQ</td>
<td>.037</td>
</tr>
<tr>
<td>Reactives</td>
<td>0.17</td>
</tr>
<tr>
<td>Automotive batteries</td>
<td>2.3</td>
</tr>
<tr>
<td>Fire Extinguishers</td>
<td>0.16</td>
</tr>
</tbody>
</table>

Item 13: The service area only includes the City of Norman.

Item 14: The 2020 census lists Norman’s population at 128,026 people.

Item 15: All roads inside facility are constructed of concrete capable of sustaining normal vehicular traffic. During periods of inclement weather roads inside the facility are sanded and salted as needed to ensure roads are passable during hours of operation.

Item 16: Heavy equipment anticipated to be used in the operation of the facility is as follows:

- Forklift
- Paint can crusher
- Fluorescent bulb crusher
- Aerosol disposal system

Item 17: Maps and drawings as required of Part (5) are included in the addenda. Part (7) is not applicable for this site as it is not a disposal facility.

Item 18: Data, plans and specifications:

(A) This modification application does not include an expansion of the permit boundary, and all modifications of the permit requested will occur within the original permit boundary.
(B) An Operational Plan is provided in the addenda which incorporates how the operational requirements of Subchapter 19 will be achieved. Also see Items 44-55 of this application for information regarding the operational requirements of Subchapter 19.
(C) See the addenda for a Stormwater Management Plan addressing the requirements in Subchapter 17 of this chapter.
(D) The facility is a transfer station and this part is not applicable to the permit modification application.
(E) This item is not applicable to this permit modification; however, see item 22 for information on voluntary aesthetic enhancement.

Item 19: Establishment of financial assurance is not applicable to the facility.

Item 20: The City of Norman will provide any additional information to the Department of Environmental Quality (DEQ), revise design specifications, or propose environmental safeguards as necessary to meet DEQ rules for the protection of human health and the environment.

Item 21: The City of Norman proposes to modify the Norman Municipal Solid Waste Transfer Station permit by the addition of a new, permanent Household Hazardous Waste Facility (HHWF) at which Norman residents can have their accumulated household hazardous waste collected, sorted, packaged, and shipped for disposal. This new facility is an enclosed modular building and design plans are included in the addenda.

Item 22: Aesthetic enhancement: This application is not for an expansion of the permit boundary nor is it a new permit application; therefore, this provision of the permit does not apply. Of course, the City of Norman wants to have an aesthetically pleasing facility and plans to install rain water harvesting along the main walk-in entry way of the HHWF. Additionally, a median planter will be placed in the parking area with native plants and curb cuts to allow for stormwater infiltration from the parking area. The building has been designed to provide aesthetic appeal with its colors and outward appearance. The whole site is landscaped with Bermuda grass. These aesthetic items are not required of this existing permit modification but are included because the City of Norman wishes to be a good neighbor to its surrounding property owners.

Maps and Drawings

Item 23: Maps showing the expansion of waste handling services and other modifications are included.

Item 24: Maps are legible

Item 25: Maps are attached in sequence in the addenda.

Item 26: Map scale is 1” = 100’ or approved by DEQ.

Item 27: Maps show a legend, title and North arrow. Permit boundaries and buffer zones are shown. There are no groundwater monitoring well or gas monitoring probes.

Item 28: A general location map is included.

Item 29: A floodplain map is included.
Item 30: Quadrangle map is included.

Item 31: An existing contour map is included.

Item 32: A site map is included.

Item 33: Design Drawings showing the areas of the facility where processing, storage, and removal occur, as well as secondary containment and other features, are included.

**Location Restrictions**

Item 34: This modification is not expanding the facility beyond the permit boundary, and this provision is not applicable.

Item 35: The modification will not expand the facility beyond the permit boundary, and this provision is not applicable.

Item 36: The modification is not expanding the facility beyond the permit boundary, and this provision is not applicable.

Item 37: 100-year flood: No waste management areas are located within the 100-year floodplain.

Item 38: Public Water Supply: The modification is not expanding the facility beyond the permit boundary, and this provision is not applicable.

Item 39: No new waste management areas are located within two miles of a public water supply well. There is no disposal that occurs on site.

Item 40: There are no wetlands located within the permit boundary.

Item 41: Leachate Management: All waste transfer occurs within a building and no putrescible waste is accepted. Therefore, waste does not mix with rain or create leachate. In addition, the waste is stored within a container equipped with secondary containment, so that any resulting leachate would be held within the secondary containment, properly pumped and disposed, if ever needed.

Item 42: Discharges: All activities associated with the process will occur under cover. Additionally, secondary containment is in place inside the facility where the process occurs. Outside of the building, stormwater is routed to a bioswale that is in place throughout the permit boundary. In the event of an accidental outside release, spill procedures will be activated and the spill will be kept on the pavement and out of the stormwater management system.

Item 43: Utility Separation: The proposed facility is not a land disposal site, and this provision is not applicable.
Item 44: Prohibited Waste:
(a) The proposed facility will not be accepting radioactive, regulated PCB waste and will only be accepting hazardous waste generated in individual households, not of a commercial or industrial origin, and only in quantities in which one would find reasonable for disposal from an individual household.
(b) The proposed facility will not be accepting regulated medical waste, except for home-generated medical sharps provided they are in an appropriate leak-proof sealed container.
(c) The proposed facility will not be accepting asbestos waste of any kind.
(d) The proposed facility will not be accepting NHIW of any kind.
(e) The facility is not a disposal facility and will not receive baled waste.

Item 45: Public Access Control: The entire property is fenced and access limited by a fence (6-foot chain link with 3-strand barbed wire) and gate with the gate open during hours of operation and closed otherwise. During operating hours, facility attendant will be on site.

Item 46: Measuring Waste Procedure: All waste accepted for disposal at the facility will be weighed on scales located inside the waste facility where transfer of waste will take place. If the scales are inoperative, then the waste shall be managed on a volume basis where one cubic yard of waste will be estimated to weigh one-third ton. This information will be recorded in the operating record.

Item 47: Litter: All waste transfer activities will occur indoors reducing the opportunity for litter to be dispersed by wind. The site will be policed daily, with litter collection as necessary. Signs are posted about adequately covering loads to preclude blowing litter.

Item 48: Air Quality: All activities of the site meet de minimis classification, and there will be no burning of waste. Additionally, all activities will occur indoors so visible fugitive dust emissions will be precluded.

Item 49: Disease Vector Control: The proposed facility modification will not include acceptance of putrescible waste, therefore on-site disease vectors, if present, will be minimal. All waste will be stored inside so as not to allow standing water for mosquito proliferation. Bird deterrents are present in facility and consist of nesting/roosting barriers. All other disease vectors will be controlled on an as-needed basis using techniques appropriate for the protection of human health and the environment. The current permitted operations will continue to operate as permitted regarding disease vector control.

Item 50: Buffer Zones: All waste handling/management operations will occur at least 50’ from the permit boundary.

Item 51: Salvage and Recycling: No wastes will be salvaged or recycled from the existing transfer station. For the HHW facility, good condition items will be made available in the swap shop for beneficial reuse by residents to decrease the amount of materials for disposal.

Item 52: Recordkeeping and Reporting: An operating record will be maintained at the facility containing all records concerning the planning, construction, operation, closing and post-closure monitoring (if applicable) of the facility. Such records will be maintained until the post-closure monitoring period is terminated and shall include those records required to be maintained and/or submitted by DEQ by Subchapter 29 of Chapter 15. The proposed facility is not a disposal facility, therefore recordkeeping and
reporting requirements of Subchapters 7, 9, 11, 13, 15, and 31 are not applicable to the proposed facility modification.

Item 53: Processing Time for Putrescible Waste: Putrescible waste will not be accepted at the HHW facility. It is processed at the original transfer station within a 24-hour period, as per the current permit.

Item 54: Large or Bulky Items: Large and/or bulky items not suitable for facility operations will not be accepted at the HHW facility.

Item 55: Residue Management: All processed waste and residues produced at the facility will be determined to be hazardous/non-hazardous and will be disposed of in a properly permitted disposal facility.

Closure and Post Closure Care


Item 57: Post-closure Plan: A Post-Closure Plan is not required for this modification application.

Item 58: Plan Amendments: No plan amendments are required at this time, but an amended closure plan will be submitted to DEQ with a modification permit application if the modification will affect closure of the facility.

Item 59: Records Retention: For Final Closure, all copies of all closure documentation will be maintained at the facility. Post-closure monitoring is not a requirement for this facility.

Item 60: If at any time during the closure activities or post-closure monitoring the DEQ requires corrective action to eliminate or mitigate a release of contaminants into the environment, the City of Norman will adhere to such recommendations.

Item 61: Performance Standard: The proposed facility will be closed in accordance with the approved Closure Plan described in the facility operation plan located in the addenda.

Item 62: Contents of Closure Plan: The closure plan with all applicable contents is included in the facility operations plan.

Item 63: DEQ Notification: DEQ will be notified in writing prior to the beginning of final closure of the facility.

Item 64: Beginning Closure Activities: Beginning closure activities will begin no later than 90 days after final receipt of wastes at the facility.

Item 65: Completing Closure Activities: Closure activities will be completed within 180 days after closure activities are initiated. If it appears closure activities will take longer than 180 days to complete, The City of Norman will request an extension from DEQ by providing all necessary information.
Item 66: Certification of Final Closure: A Certification of Final Closure will be submitted to the DEQ after completion of final closure. The Certification will include any and all information required by DEQ at the time of closure. Additionally, the Certification of Final Closure will be prepared by an independent professional engineer licensed in the State of Oklahoma.

Item 67: Final Closure and Extension Periods: The City of Norman will receive approval of final closure from DEQ before post closure period (if applicable) will begin. The facility is not subject to post-closure requirements.

Item 69: Extension of Post Closure Period: The facility is not subject to Post-Closure requirements.

Item 70: Contents of Post Closure Plan: Transfer stations are not subject to post-closure requirements; therefore, this item is not applicable to the proposed facility.

Item 71: Transfer stations are not subject to post-closure requirements; therefore, this item is not applicable to the proposed facility.

Item 72: Transfer stations are not subject to post-closure requirements; therefore, this item is not applicable to the proposed facility.

Item 73: Transfer stations are not subject to post-closure requirements; therefore, this item is not applicable to the proposed facility.

Financial Assurance

Items 74 - 81: Effective Date of Financial Assurance: Per the requirements of 252:515-27-1(a)(1) transfer stations, processing facilities, or composting facilities that principally manage municipal solid waste; are not subject to financial assurance requirements of Subchapter 27.

Waste Exclusion Plan

Item 82: A Waste Exclusion Plan (WEP) is included in the addenda.

Item 83: Procedures for inspections can be found in the WEP.

Item 84: Provisions for maintaining records of inspections are included in the WEP.

Item 85: All operators shall receive an initial 8 hours of basic training in waste exclusion and radioactivity, as related to the WEP.

Item 86: Trained personnel will be on site during all hours the facility is open to accept wastes.

Item 87: Any patron that has waste that has been rejected will have their personal information recorded and maintained at the site. Details of procedure can be found in the WEP.
Item 88: Procedures for safe handling and storage of prohibited waste until proper disposal can take place is found in the WEP.

Item 89: Procedures to ensure prohibited wastes are disposed of properly are included in the WEP.

Item 90: Procedures for the verification of proper disposal of prohibited wastes are included in the WEP.

Item 91: Appropriate records shall be maintained in the operating record to demonstrate compliance with the WEP.
Appendix A

Property Deed
QUIT CLAIM DEED

THIS INDENTURE, made this 12th day of September, A.D. 1995, between USA Waste Services, Inc., a corporation, Grantor, and The City of Norman, Cleveland County, State of Oklahoma, a Municipal Corporation, Grantee.

Witnesseth, that said Grantor in consideration of the sum of Ten-Dollars ($10.00) and other good and valuable consideration in hand paid, the receipt of which is hereby acknowledged, does hereby quitclaim, grant, bargain, sell and convey unto Grantee all Grantor's right, title, interest, estate, and every claim and demand both at law and in equity, in and to all of the following described property situated in Cleveland County, State of Oklahoma, to-wit:

The South Half of the Southwest Quarter of the Southeast Quarter of the Southwest Quarter of the Southeast Quarter, of Section Seven, Township Eight North, Range Two West, of the Indian Meridian, City of Norman, Cleveland County, Oklahoma,

Also known as the USA Waste Transfer Station located at 3901 South Chautauqua Avenue, Norman, Oklahoma,

... together with all and singular the hereditament and appurtenances therunto belonging.

To have and to hold the above described premises unto said City of Norman, Cleveland County, Oklahoma, a Municipal Corporation, its successors and assigns forever so that neither it, the said USA Waste Services, Inc., nor any person in its name and behalf, shall or will hereafter claim or demand any right or title to said premises or any part thereof; but they and everyone of them shall by these presents be excluded and forever barred.

In Witness Whereof, the party of the first part set its hand and seal the day and year first above written.

[Signature]

STATE OF OKLAHOMA

COUNTY OF CLEVELAND

Filed 7/13/95 PM 9:55
CLERK

COUNTY CLERK

AGT. COUNCIL

CLERK
Appendix B

Public Notice Form
OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
NOTICE - APPLICATION FILED

Application filed. A solid waste Tier II application has been filed with the Department of Environmental Quality (DEQ).

Applicant: The applicant is The City of Norman, Utilities Department

Type of final permit or permit action being sought: The applicant seeks a permit modification to the existing solid waste transfer station permit (solid waste permit Number 3514007.)

Facility location: The City of Norman Household Hazardous Waste Facility is located at 3901 Chautauqua Ave. Norman, OK, 73072. See legal description below.*

Activities to be regulated if the application is approved: The indoor addition to the transfer station property will accept household generated hazardous waste at no cost to Norman residents.

Statutes and Rules: The DEQ will review the application for compliance with the Environmental Quality Code, including the Solid Waste Management Act, Title 27A of Oklahoma Statutes, Section 2-10-101, et seq., and the rules of the DEQ, Oklahoma Administrative Code, Title 252, Chapters 4 and 515.

Permitting procedures explained: Opportunities for public comment on this application will begin when notice is given that DEQ has completed its review of the application and has prepared either a draft permit or a draft denial. At that time, written comments may be sent and a public meeting for oral comments may be requested. The application may be reviewed at the locations listed below and may be revised by the applicant as the DEQ review progresses.

Locations where application may be reviewed:
1. Locally at the Water Reclamation Facility – Environmental Services Division – 3500 S. Jenkins, Norman, OK 73072.
2. The DEQ’s Central Records Section, located on the 2nd floor of the DEQ building at 707 N. Robinson, Oklahoma City, Oklahoma and on DEQ’s website at https://www.deq.ok.gov/land-protection-division/permit-public-participation-process/

For more information, contact:
1. For applicant: Michele Loudenback, Environmental and Sustainability Manager, City of Norman Utilities Department, Environmental Services Division, 3500 S. Jenkins., Norman, OK 73072; (405) 292-9731 Fax (405) 292-9793.
2. For DEQ: Hillary Young, P.E., DEQ, Land Protection Division, P. O. Box 1677, Oklahoma City, OK 73101-1677; (405) 702-5100; Fax No. (405) 702-5101

Appendix C

Disclosure Statement Form
DISCLOSURE STATEMENT FORM

INFORMATION AND INSTRUCTIONS: The Solid Waste Management Act requires applicants to provide the Department of Environmental Quality with information about themselves, any officer, director or partner, any person employed by the applicant as general or key manager who directs the operations of the site which is the subject of the application, and any person owning or controlling more than five percent (5%) of the applicant’s debt or equity. By law, the “Disclosure Statement” must be completed by all applicants for the issuance or transfer of any solid waste permit.

If the applicant is a publicly held company, it does not need to submit a disclosure statement, but only need submit the most recent annual (SEC Form 10-K) and quarterly reports (SEC Form 10-Q) required by the Securities and Exchange Commission (SEC), which provide information regarding legal proceedings in which the applicant has been involved. However, the applicant must submit such other information as the Department may require that relates to the competency, reliability, or responsibility of the applicant, officers, directors, or other persons as set out above.

PLEASE PROVIDE THE FOLLOWING INFORMATION: (If additional space is required to answer any of the following questions, please make attachments as needed.)

(1) Name of facility: City of Norman Household Hazardous Waste Facility

(2) Applicant’s full name and social security number: Michele Loudenback, Environmental and Sustainability Manager, City of Norman, Utilities Department-the Municipality is the Applicant

(3) Applicant’s business address: 201 W. Gray, Norman, OK 73069

(4) Applicant’s business telephone number: 405-366-5443

(5) Applicant’s form of business:
   _____ publicly-held corporation;
   _____ privately-held corporation;
   _____ partnership or sole proprietorship;
   X municipality or public agency;
   _____ other: ________________________________

(6) Is Applicant a publicly-held company required to file annual reports with the Securities and Exchange Commission, or a wholly-owned subsidiary of such a company?
   _____ yes  X  no

(7) If Applicant answered "yes" to question (6) above, Applicant is required to submit copies of the most recent annual and quarterly reports required by the SEC that provide information regarding legal proceedings in which Applicant has been involved. In addition, list below, the name and business address of any person employed by the Applicant as a general or key manager who directs the operations of the site or facility which is the subject of the application.

(NOTE: If Applicant is required to submit SEC reports under this section, no further reporting is required under the disclosure statement requirement, and Applicant should skip to the “Certification and Oath” section on the last page of this form. Applicant should submit copies of any SEC reports as an attachment to this form to be submitted as part of the permit application. If Applicant answered "no" to question (6) above, Applicant is required to complete all remaining sections of this Form.)
(8) Full name, business address and social security number of all affiliated persons:

(NOTE: "Affiliated person" means:
(a) any officer, director, or partner of the applicant;
(b) any person employed by the applicant as a general or key manager who directs the operations of the site or facility which is the subject of the application; and
(c) any person (including corporations, partnerships, etc.) owning or controlling more than five percent of the Applicant’s debt or equity.):

Michele Loudenback
Environmental and Sustainability Manager
City of Norman Utilities Department
PO Box 370
Norman, OK 73070

(9) Full name and address of any legal entity in which the Applicant holds a debt or equity interest of at least 5 percent, or which is a parent company or subsidiary of the Applicant, and a description of the ongoing organizational relationships as they may impact operations within the State:

N/A

(10) Description of the experience and credentials of the Applicant and any “affiliated person”, including any past or present permits, licenses, certifications, or operational authorizations relating to environmental facility regulation:

City of Norman Utilities Department is the applicant. Michele Loudenback is the affiliated person. Michele has the following licenses, certifications and operational authorizations: OSHA 40-hour HAZWOPER Operations Certification; ODEQ Class A Wastewater Works Operator; ODEQ Class C Water Works Operator; Certified Floodplain Administrator certification from Oklahoma Floodplain Managers Association; Registered Professional Environmental Specialist; Registered Professional Sanitarian. Michele has over 20-years’ experience with environmental regulations having worked in ECLS and WQD at ODEQ (from 1999-2017) and at City of Norman in Stormwater and Environmental Services Divisions.

(11) Listing and explanation of any administrative, civil or criminal legal actions against the Applicant or any affiliated person which resulted in a final agency order or final judgment by a court of record
including any final order or judgment on appeal in the ten (10) years immediately preceding the filing of the application relating to solid or hazardous waste. Such action shall include, without limitations, any permit denial or any sanction imposed by a state regulatory authority or the U.S. Environmental Protection Agency:

The City of Norman Utilities Department has had no administrative, civil, or legal actions taken for solid or hazardous waste.

(12) Listing of any federal environmental agency and any state environmental agency that has or has had regulatory responsibility over Applicant:

Oklahoma Department of Environmental Quality
Environmental Protection Agency, Region 6

CERTIFICATION AND OATH

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Michele Loudenback
(Printed or Typed) Name of Applicant or Agent

Signature of Applicant or Agent

Environmental and Sustainability Manager
Title

10/8/21
(Date)

ACKNOWLEDGMENT

State of Oklahoma )
) ss.

County )

Before me, the undersigned, in and for said county and state, on this 8 day of October, 2021, personally appeared Michele Loudenback, to me known to be the identical person who executed the within and foregoing instrument, and acknowledged to me that she executed the same as a free and voluntary act and deed for the uses and purposes therein set forth.

Deborah Tindell
Notary Public

My commission expires:

Nov. 12, 2024

Deborah Tindell, Notary Public

DEBORAH TINDELL
PUBLIC NOTARY
OKLAHOMA

No. 2020-0729
Exp. November 12, 2024
Appendix D

Facility Operations Plan
CITY OF NORMAN HOUSEHOLD HAZARDOUS WASTE FACILITY OPERATIONS PLAN

September 30, 2021

Prepared by Michele Loudenback
Environmental and Sustainability Manager
I. Introduction

The City of Norman has developed this operation plan for the proposed Household Hazardous Waste (HHW) Facility located at 3901 Chautauqua Avenue, Norman, OK 73072. The HHW Facility will be collocated within the permitted boundary of the existing City of Norman Solid Waste Transfer Station.

The HHW Facility is a material processing facility operated by the City of Norman Utilities Department that will provide a convenient option for residents to dispose residential, household wastes that are not suitable for disposal using standard solid waste disposal options.

The HHW Facility will include an administrative office, break room, material receiving and storage areas, free store (swap shop), and outside material storage lockers.

This plan outlines the policies and procedures for the management and operation of the HHW Facility.

II. Facility Description

The HHW facility consists of a single building, two metal storage containers, and ancillary site improvements. The building is a 3500 square foot (SF) prefabricated steel structure. The overall site is enclosed and secured during non-working hours and fenced with a 6-foot chain link fence with 3-strand barb wire. The HHW Facility is located near the front of the site (western area) and north of the main drive entrance to allow for the public accessing this facility to be somewhat segregated from heavy truck use for the Transfer Station Facility.

The facility is configured to allow patrons to pull into the building. There, staff offload and weigh on scales acceptable waste from vehicles while patrons remain in the vehicles. All offloading of waste from patrons, sorting/categorizing, and packaging for removal occurs indoors, under cover. Wheeled carts are used to transport waste from vehicles to areas for identification, segregation, packaging and storage. The exit of the drive through is covered by a canopy the further help minimize stormwater exposure. Additionally, chemical resistant epoxy coated sumps are placed in the materials handling areas, the flammable storage area, and at the exit of the drive-through.

Storage of aggregated wastes is accomplished in three areas: two outdoor metal hazmat stormwater containers and one flammable pollutant storage area. Additionally, a roll-off container for storage of empty and dry paint cans are located in the NW quadrant of the building. The flammable pollutant storage area is located in the west-northwest part of the building and flammable packaged waste will be stored here before removal and transportation to an appropriate and permitted facility. It has an area of 62 square feet and contains a sump and barrels are stored on containment pallets to ensure adequate capacity is available in the event of spills or leaks. The outdoor storage containers are located east of the building and hold nonflammable packaged waste waiting for removal and transportation by the contractor. These three areas will allow for proper segregation of stored wastes before their final removal and disposition.

In addition to the materials management and storage areas, the facility boasts a free swap shop, an office, a breakroom, a full bathroom, an eye-wash/safety shower area, and a mezzanine for supply storage. The swap shop is a 263 square foot area where residents can take home products that are in large enough quantity and good enough condition that they are still usable. Typical products in this category include gardening products including pesticides and fertilizers, cleaners, and automobile
products. Staff will determine if received wastes fit the required conditions and will place them in the shop for residents to take. The office (167 square feet) and breakroom (190 square feet) are for use by employees at the facility. The office will include record storage. Finally, the mezzanine provides 459 square feet of storage for supplies and other items. No hazardous materials will be stored in the mezzanine.

III. Operations

The facility accepts a wide variety of household hazardous wastes delivered by residents, on an appointment basis. Wastes commonly received at the facility are listed in the table below, along with their average, per day, quantities expected at the facility, calculated from historical data collected at one-day HHW collection events held from 2015 to 2019:

<table>
<thead>
<tr>
<th>Waste Category</th>
<th>Per Day Average HHW Collected from 2015 to 2019 in Pounds Unless Otherwise Stated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerosols</td>
<td>13.2</td>
</tr>
<tr>
<td>Alkaline Batteries</td>
<td>4.2</td>
</tr>
<tr>
<td>Corrosives-acids</td>
<td>4.3</td>
</tr>
<tr>
<td>Corrosives-bases</td>
<td>3.7</td>
</tr>
<tr>
<td>Flammables (s)</td>
<td>20.1</td>
</tr>
<tr>
<td>Flammables (l)</td>
<td>12.9</td>
</tr>
<tr>
<td>Fluor Bulbs (Compact)</td>
<td>1.1</td>
</tr>
<tr>
<td>Fluor Bulbs (straight)</td>
<td>2.7</td>
</tr>
<tr>
<td>HID Bulbs</td>
<td>0.05</td>
</tr>
<tr>
<td>Latex Paint</td>
<td>80.3</td>
</tr>
<tr>
<td>Lithium Batteries</td>
<td>0.68</td>
</tr>
<tr>
<td>Mercury</td>
<td>0.11</td>
</tr>
<tr>
<td>Ni-Cad Batteries</td>
<td>0.52</td>
</tr>
<tr>
<td>Oil Base Paint</td>
<td>95.0</td>
</tr>
<tr>
<td>Oil Filters</td>
<td>0.49</td>
</tr>
<tr>
<td>Oxidizers</td>
<td>3.2</td>
</tr>
<tr>
<td>Pesticides (s)</td>
<td>20.0</td>
</tr>
<tr>
<td>Pesticides (l)</td>
<td>41.8</td>
</tr>
<tr>
<td>Propane- Small/Camp*</td>
<td>0.43</td>
</tr>
<tr>
<td>Propane- BBQ</td>
<td>0.037</td>
</tr>
<tr>
<td>Reactives</td>
<td>0.17</td>
</tr>
<tr>
<td>Waste Category</td>
<td>Per Day Average HHW Collected from 2015 to 2019 in Pounds Unless Otherwise Stated</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Automotive batteries</td>
<td>2.3</td>
</tr>
<tr>
<td>Fire Extinguishers</td>
<td>0.16</td>
</tr>
</tbody>
</table>

Additionally, home-generated medical sharps that are labelled and placed in leak-proof sealed containers are accepted. Sharps received at the HHW facility are removed by staff for disposal. Also, while explosives are not generally accepted at the facility, innocuous materials may be accepted, such as small arms ammunition and their components and fireworks. These will be temporarily stored at the facility until they can be removed, at the earliest opportunity, to a designated storage area at the facility equipment shop.

Prohibited wastes are as follows:

- Hazardous (other than HHW), radioactive or regulated PCB waste
- Regulated medical waste with the exception of home generated sharps that are in approved sealed containers
- Asbestos
- Industrial or commercially generated waste (including NHIW)
- Putrescible waste
- Biomedical waste
- Radioactive material
- Bulky and/or non-hazardous waste
- Ammunition/explosives with the exception of small arms ammunition and fireworks
- Electronics
- Tires
- Unknowns

Residents who bring in non-hazardous waste, including dried latex paint, are directed to the City of Norman Sanitation Division for proper disposal guidance. This waste includes household smoke detectors which are exempt from regulation. Residents are with those devices are directed to return the detector to the manufacturer.

The facility is open to accept Monday through Friday from 9 AM to 3 PM two weeks of the month and Tuesday through Saturday from 9 AM to 3 PM for two weeks of the month. The schedule allows for biweekly Saturday appointments. The facility will operate on an appointment-only basis, with appointments set at thirty minute intervals. At the appointed time, the resident will drive into the facility. Staff will interview the resident and obtain basic information about the resident and the wastes being delivered, inspect wastes to ensure they are acceptable, transfer wastes from the vehicle to wheeled carts. When the resident leaves, staff will weigh waste removed, identify and sort it appropriately and package it according to its category.

Staff will visually inspect the load for prohibited materials and leaking, bulging or contaminated containers. If prohibited wastes are noted, staff informs the resident which wastes are acceptable and offers recommendations for alternate disposal. If apparently mislabeled or unlabeled containers are
noted, staff asks the resident for as much information as possible about the contents. The information supplied by the resident is noted and the containers are labeled with this information. Leaking or unsound containers will be immediately overpacked into leak proof containers or sealed in plastic bags. Staff will use caution when unloading materials to avoid damaging the resident’s vehicle through contact with equipment, waste or contaminated Personal Protective Equipment (PPE).

Sorting and segregating of materials is performed by qualified and trained staff. The sorting area consists of tables and bins for temporary holding of items received. Containers are sorted by inspection of their labels and/or markings, unless the appearance or other characteristic of the waste seems to indicate that the labeling is inaccurate. In this case, the container would be considered an unknown substance and is set aside for testing, along with unlabeled containers. Staff performs simple pH testing with field strips as necessary to help identify unknowns. Contractor is responsible for further testing and identification. Customer waste packaging and any empty containers are placed in a designated bin for eventual recycling or disposal.

In general, wastes are initially sorted and segregated by the following waste or hazard classes:

- Latex Paint and Oil-based Paint
- Aerosols
- Flammables
- Pesticides/Poisons
- Bases
- Acids
- Reactives
- Oxidizers
- Miscellaneous Known
- Miscellaneous Unknown

Sorted waste is packaged in various ways, including lab-packing, loose-packing and bulk packaging, which are described below. All shipping containers include appropriate labeling. Information necessary for the appropriate transportation and disposition of wastes is provided to the contractor.

Lab-Packing: Lab-packing refers to the packaging of smaller containers into DOT approved drums along with an appropriate absorbent. Each lab-packed drum must contain enough absorbent to fully absorb the liquid contents of the shipping container. The absorbent is also used to insulate the containers so that none are touching each other or the drum wall. Absorbent material must be added to fill the drum to the top. Contents of each lab pack drum are recorded on an inventory sheet which remains with drum for transportation and management. A copy of the packing slip is retained by staff.

Loose-Packing: Loose-packing refers to placing containers into a shipping container without absorbent. Some loose-packed drums may contain about 6" of absorbent in the bottom to absorb small leaks or spills from broken containers. Specific listing of the contents of a loosepack drum is not required. Typical wastes that are loose packed include, but are not limited to dry-cell batteries, aerosol cans and granular fertilizers/poisons.
Bulking: Bulking refers to opening of individual waste containers and pouring of the waste into a drum for consolidation. Typical bulked wastes include flammable liquids (fuels and solvents), combustible liquids (lubricants and oils) and antifreeze. All metal containers of flammable materials and drums for bulking of flammable materials will be connected to a grounding strip or post by a grounding wire while pouring. When emptied containers are determined to be empty per RCRA standard (40 CFR 261.7 (b) (ii), they are disposed of as non-hazardous waste.

At the end of each working day, all waste accepted into the facility is sorted and placed in the appropriate storage area. A general description of major waste types and storage criteria is as follows:

- All acid liquids and solids, as well as any materials that are chemically compatible with common acids will be stored in their designated area.
- All base liquids and solids, as well as any materials that are chemically compatible with bases are stored in their designated area.
- All oxidizers, including organic peroxides, certain flammable solids and other compatible reactives are stored in appropriate containers in their designated area.
- All drums of flammable and combustible wastes, and materials that are chemically compatible withflammables such as poisons are stored in their designated area.
- All poisons, all pesticides that are not corrosive or oxidizers, and any materials chemically compatible with pesticides, poisons and flammables will be stored in their designated area.
- Aerosols are loose packed and stored in their designated area.
- Fluorescent lamps and other wastes which would not ordinarily pose a hazard may be stored in boxes, drums or other containers wherever they are most appropriate.
- Other miscellaneous, small quantity waste types are only stored with chemically compatible wastes.

General requirements for container handling and storage include the following practices:

- No materials, supplies, equipment or waste containers shall be stored in areas that would impede access to or exit from any area of the facility. Exits shall be unobstructed at all times.
- Drums are kept closed at all times except during waste packaging activities.
- All waste containing drums will be marked with the proper DOT hazard class and any other appropriate labels.
- Storage area inventories must be completed at the end of each operating day.
- Sealed, partially full lab-pack and loose-pack drums may be stored in the sorting area overnight and when the facility is unattended. Bulking drums may be stored in the bulking area, as long as they are properly sealed at the end of the working day.
- All drums will be stored in single or double rows with at least 36" of aisle space between rows and at least one side shall be accessible to facilitate inspection of drum condition and drum markings and labels.
- Full shipping containers stored in the outdoor metal storage containers may be stacked up to two high provided stacked drums contain compatible wastes.
- Drums will be moved using a drum dolly or forklift. Gaylord boxes and other large boxes will be moved using a forklift.
Before leaving the facility at the end of the day, HHW facility staff ensures that all waste is secured in sealed, sound containers and stored in the appropriate storage area. Although standard procedure is that all waste is to be contained in sealed shipping containers, Gaylord boxes, tub skids, pails, or other temporary storage containers may be acceptable as a short-term measure, providing that the usual precautions are taken (no storing/mixing of incompatible wastes, no uncontained leaking containers etc.). These materials will be processed the next day.

The City will contract with one or more qualified company(ies) to provide several services for the HHW facility, including the furnishing of all labor, materials and equipment necessary for the analysis, lab-packing, transportation, disposal and recycling of aggregated wastes, as well as for training of City staff on collection and packing procedures. The contractor will provide an addendum to this plan which will include all pertinent information regarding the contractor(s)'s permits, insurance, credentials and abilities to manage the City of Norman waste. The contractor will be chosen in a competitive selection process prior to the opening of the facility and thereafter on five-year intervals, at a minimum. Each time a new contractor is chosen or their process changes, the addendum will be updated to reflect actual processes. The contractor will train City staff on the identification, sorting and packaging processes required.

All waste management activities will take place inside; therefore, the dispersal of litter from the site will not be conducive to wind dispersal. This includes loading and unloading of waste items. The site will be policed on a daily basis, collecting any litter as needed. Signs will be posted to advise customers to adequately cover/secure their loads to prevent litter from leaving the site.

Operations at the facility will be conducted in a manner to maintain compliance with the Oklahoma Clean Air Act, rules of the Air Quality Division of DEQ and any requirements of an approved State Implementation Plan. Open burning of solid waste is strictly prohibited at the facility. It is unexpected that activities at the facility would increase the amount of fugitive dust from the property. However, if ever shown to be the case, operations at the facility will be modified in a manner to prevent any visible fugitive dust emissions beyond the property boundary, at which time the DEQ will be notified. Asbestos of any kind will not be accepted at the facility. However, if unavoidable delivery of asbestos/friable asbestos occurs the material will be handled in accordance with OAC 252:100-40-5.

The proposed facility will not be accepting putrescible waste, therefore on site disease vectors, if present, will be minimal. All waste will be stored inside, so as not to allow standing water for mosquito proliferation. Bird deterrents are present in facility and consist of nesting/roosting barriers. All other disease vectors will be controlled on an as-needed basis using techniques appropriate for the protection of human health and the environment.

All waste storage, processing and management activities will take place inside the facility or inside enclosed metal Hazmat containers until transportation can take place. Adequate indoor storage area is available should delivery of unexpected volumes occur. Therefore, no waste will be exposed to waters of the state or waters that communicate with waters from the state either inside the permit boundary, buffer zone or outside the permit boundary.

An operating record will be maintained at the facility containing all records concerning the planning, construction, operation, closing and post-closure monitoring of the facility as applicable. Such records will be maintained until the post-closure monitoring period is terminated and shall include those records
required to be maintained and/or submitted to DEQ by Subchapter 29 of Chapter 15 (OAC 252:515-29-4) as well as those records required to be maintained and/or submitted to DEQ by Subchapters 3, 5, 17, 19, 25 and 27 (OAC 252:515-19-40). Information to be maintained as part of the operating record at the facility includes but is not limited to:

- An entire copy of the Tier II Transfer Station Permit under which the facility operates, including any and all associated documents required by the DEQ for permit approval
- Verification of Location Restrictions as required by Subchapter 5 of OAC 252:515
- A copy of the approved Stormwater Management Plan as required by Subchapter 17 of OAC 252:515
- A copy of the approved Operational Plan as required by Subchapter 19 of OAC 252:515
- A copy of the approved Closure Plan as required by Subchapter 25 of OAC 252:515
- A copy of the approved Closure Plan as required by Subchapter 29 (OAC 252:515-29-4)
  - All waste accepted for disposal at the facility will be weighed, recorded and maintained in the operating record
  - Any employee training including training to demonstration compliance with the Waste Exclusion Plan as required by Subchapter 29 of OAC 252:515
  - Waste Inspection Forms for every drop-off transaction
  - Any waste identified and rejected including personal information on participant maintaining ownership of rejected waste
  - Waste Management Facility Evaluation for any contractor or sub-contractor utilized for disposal of waste
- Waste Hauler Manifests for each load transported out of the facility which includes type and weight of waste transported

All processed waste and residues produced at the facility will be determined to be hazardous/non-hazardous and will be disposed of in a properly permitted disposal facility. Hazardous waste will be disposed of by the contracted treatment, storage and waste disposal company. Non-hazardous waste will be disposed of through the Transfer Station part of the site. Only household generated waste (whether hazardous or non-hazardous) will be disposed of through the services of the facility, and any additional trash generated by other operations occurring within the permit boundary will be kept separate accordingly. Site Inspection Forms will be completed at the end of each day of operation. The purpose of these inspections is to ensure that no spill, leak or material has unexpectedly occurred and that all material is stored properly and securely at the end of operations. A copy of the Site Inspection form is included at the end of this plan.

IV. Closure

The City of Norman does not have an estimated year of closure for the HHW Facility. The HHW Facility is intended to meet and provide for long-term solid waste management for The City of Norman into the foreseeable future. However, in the event that closure for an extended or indefinite period is necessary and planned, the City of Norman shall notify DEQ at least 180 days in writing in advance of the closure. If the closure is necessitated by an emergency or natural disaster, DEQ will be notified as soon as possible. Closure activities shall begin no later than 90 days after final receipt of wastes at the facility and will be completed according to this plan within 180 days after closure activities are initiated. This facility is exempt from calculation of cost estimate requirements.
Notification to the DEQ will include an inventory of all hazardous waste currently stored at the facility, and provisions for its proper disposal, as well as an estimation of the maximum inventory of waste ever on-site. Contracted hazardous waste service providers will package and transport all hazardous wastes stored at the facility at the time of closure to licensed TSDFs for appropriate management.

If a permanent closure is planned, the notification will also include plans and schedules for assessment and, if determined necessary by the assessment, a remediation plan for complete decontamination of the facility and/or disposal of all buildings, equipment, surfaces and associated cleanup wastes. The assessment will include sampling and analysis of all hard surfaces (concrete, pavement, building components, etc.) and surrounding unpaved areas (bioswales, etc.).

All costs associated with the closure of the HHW Facility will be funded by The City of Norman.
# Household Hazardous Waste Facility
## Site Inspection Checklist

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

1.) Is the area free of debris and other materials?
2.) Is the ground clean and dry?
3.) Are container tops free of spillage?
4.) Is the area free of spills or leaks?
5.) Are all of the containers in good condition? *(free of dents and corrosion, not bulging or otherwise deteriorating?)*
6.) Are all containers properly closed?
7.) Is there any indication of leaks outside storage container?
8.) Is ventilation fan operational/ductwork free of obstructions?

If "NO", please describe: _____________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

Corrective action(s) required: ________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

*Inspections must be conducted at the end of each day of operation*
Appendix E

Stormwater Management Plan
Stormwater Management Plan

In accordance with OAC 252:515-3-36(a)(14) the City of Norman presents the following plan to comply with Stormwater Management at:

City of Norman
Household Hazardous Waste Facility
3901 Chautauqua Ave.
Norman, OK 73072

Applicability

Subchapter 17 of OAC 252:515 provides requirements for Stormwater Management at all solid waste disposal facilities. The proposed facility is subject to the requirements of this section.

Run-on/Run-off Control Systems

The proposed facility is not a land disposal facility and therefore the requirements for run-on/run-off control for land disposal facilities are not applicable. In addition, the facility will not store, handle, transfer or process waste outside, therefore minimizing the potential for contaminated run-off. However, the site is graded to minimize stormwater run-on.

Discharges

All Disposal Facilities

(1) No discharge is expected to result from waste handling or storage since the entire operation occurs indoors. Two stormwater outfalls are located at the permit boundary and are protected by bioswales and receive sheet flow of uncontaminated stormwater. They can be easily plugged in the event of a large accidental release outdoors. Also, a spill kit will be located in an easily accessible area of the materials storage area for swift reaction to accidental spills or leaks outside of the building or outside metal Hazmat containers.

(2) Due to the operational controls stated in (1) the proposed facility will not be contributing to pollutants discharged into waters of the United States, including wetlands, which do not exist near the permit boundary or within it, nor will the operations at the facility violate any requirements of the Clean Water Act. The operations at the facility do not require the proposed facility to obtain an Oklahoma Pollutant Discharge Elimination System (OPDES) permit; rather the facility will operate under the City of Norman’s MS4 permit for municipal discharges (Permit #OKR040015).

(3) The operational controls stated in (1) will prevent the occurrence of contaminated run-off from the site so as not to cause a violation of the City of Norman’s approved Stormwater Management Plan.

(4) The proposed facility will operate under the City of Norman’s MS4 permit for municipal discharges. Operations at the site have been designed so as to comply with the requirements of this permit.

Land Disposal Facilities

The proposed facility is not a land disposal facility and therefore not subject to the OPDES requirements for Land Disposal Facilities.
Appendix F

Waste Exclusion Plan
Waste Exclusion Plan

In accordance with OAC 252:515-29-2 the City of Norman presents the following Waste Exclusion Plan (WEP) detailing the operations activities at:

City of Norman
Household Hazardous Waste Facility
3901 Chautauqua
Norman, OK 73072

This Waste Exclusion Plan (WEP) provides detailed procedures for the City of Norman Household Hazardous Waste Facility. This WEP describes methods, precautions and controls to determine, record and monitor incoming materials in order to detect and prevent entry of prohibited materials. This WEP is written in order to define criteria for the rejection and removal of any unpermitted material or regulated hazardous waste determined unacceptable by the facility’s permit.

Acceptable Waste

• Automobile fluids (oil, antifreeze, brake fluid, etc.)
• Paints (oil based, aerosol, stains, etc.)
• Pesticides, herbicides and fertilizers
• Cleaning products
• Gardening products
• Flammable liquids (gasoline, paint thinner, kerosene, etc.)
• Fluorescent light bulbs
• Oxidizers
• Batteries (household and automobile)

Prohibited Waste

• Hazardous (other than HHW), Radioactive or regulated PCB Waste
• Regulated medical waste with the exception of home-generated sharps that are in approved sealed containers.
• Asbestos
• Industrial or Commercially-generated Waste (including NHIW waste)
• Putrescible waste
• Biomedical Waste
• Radioactive material
• Bulky and/or non-hazardous waste
• Unknowns
• Ammunition/explosives with the exception of small arms ammunition and fireworks
• Electronics
• Tires
Random Inspections

Random inspections will not be performed at the facility, rather every vehicle coming into the facility to dispose of household hazardous waste will be screened for prohibited waste, including radiation. Material will be delivered on site by individuals that have an appointment for drop off of materials. During scheduling of appointments, customers will be notified of accepted/prohibited wastes and will be prescreened to determine if they have the potential to bring prohibited waste to the site. Once scheduled, the customer will arrive on site at the processing facility where trained personnel will screen the load for prohibited waste as they remove waste from the vehicle.

Inspection Records

A Waste Inspection Form will be completed for every drop-off. This will include customer information and type of waste being dropped off for processing. As waste is removed from vehicle waste will be sorted and weighed; this information will be recorded on the Waste Inspection Form and maintained in the operating record. A copy of the form can be found at the end of this plan.

Training

Trained personnel will be on site during all hours of operation. Employee training will occur annually to address identification, handling and safety associated with hazardous materials. Employees will receive an initial 8 hours of training, and they will receive at least 4 hour of refresher training annually. Documentation of the training will be maintained in the operating record to demonstrate compliance with the WEP. Listed below are additional training courses for Household Hazardous Waste Facility staff:

- Waste Characterization, Identification and Segregation
- OSHA Training
- ODOT Training
- General Safety Rules
- PPE Programs
- Powered Industrial Trucks
- Hazard Communication
- Fire Extinguishers
- First Aid
- Bloodborne Pathogens
- Chemical Safety
- Chemical Labpacking Management
- Transporting Hazardous Materials
- Hazardous Emergency Response

Notification of Rejected Waste

Any waste identified and rejected during inspection in the processing area as well as any rejected waste illegally dumped at the facility will be recorded in the facility’s Operating Record. Such information will describe the reason for rejection and include the driver’s license, tag number, address, telephone and
contact person. When waste is rejected, information on alternative disposal options will be provided to customer.

**Safe Storage of Prohibited Waste**

If unavoidable delivery of prohibited waste occurs at the site, experienced personnel will be allowed to handle prohibited waste. A special prohibited waste interim storage area will be designated on site. Prohibited waste will be stored here until transportation can occur. SDS guidelines for storage of prohibited waste will be followed if available. If contents of prohibited waste are unknown, every effort will be made to identify the unknown material. If material is identifiable, SDS precautions will be followed at that time. If material is not identifiable the material will be properly stored in the prohibited waste storage area until proper disposal can take place. Unpermitted prohibited waste will be removed from the facility and transported to a disposal facility specially licensed and permitted to dispose of such waste. This transportation will take place as soon as possible, but no later than 90 days after acquiring the special waste.

**Ensuring Proper Disposal of Prohibited Wastes**

A competitive selection process for a waste management contractor will be completed, which includes contractor disposal of prohibited waste on an as-needed basis. Information about the contractor and its disposal sites, including permit numbers, will be maintained in the operating record. Also verification of the credentials and insurance of the selected company will be maintained.

**Verification of Disposal**

Contractor(s) utilized to dispose of the waste will be required to complete waste hauler manifests for each load transported out of the facility. This includes transportation and disposal of prohibited waste. Copies of waste hauler manifests will be kept as part of the operating record and site inspections will be made for each contractor to verify processing and final disposal of waste.
Household Hazardous Waste Facility
Waste Inspection Form

DATE/TIME: ___________________ DL: ___________________

TECHNICIAN: ___________________ VEHICLE TAG #: ___________________

1. PARTICIPANT: _______________________________________________________

2. ADDRESS: _______________________________________________________

CITY: ___________________ ZIP: _______________________

3. HOW DID YOU HEAR ABOUT THIS PROGRAM?

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

4. TYPE OF WASTE: 5. AMOUNT OF WASTE (LBS): __________

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

6. ANY WASTE REJECTED?

Yes______________ NO______________

7. COMMENTS:

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
We make every effort to provide and maintain accurate, complete, usable, and timely information. However, some data and information on this map may be preliminary or out of date and is provided with the understanding that it is not guaranteed to be correct or complete. Conclusions drawn from, or actions undertaken on the basis of, such data and information are the sole responsibility of the user.
General Location Map - City of Norman Transfer Station / Prop. Household Hazardous Waste Facility

Map Produced by the City of Norman Geographic Information System. The City of Norman assumes no responsibility for errors or omissions in the information presented.

September 30, 2021
USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed August, 2021.

Map Produced by the City of Norman Geographic Information System. The City of Norman assumes no responsibility for errors or omissions in the information presented.

September 30, 2021

USGS Norman OK Quadrangle - City of Norman Transfer Station / Prop. Household Hazardous Waste Facility
1. Permit Boundary - S2, SW4, SE4, Section 7, T8N, R2W
2. Processing and storage areas are within their respective buildings.
October 30th, 2020

CONSTRUCTION DOCUMENTS

CITY OF NORMAN
Household Hazardous Waste Facility
3901 Chautauqua Ave, Norman, OK 73072

DESIGN ALTERNATES
Alternate #2 - Modify the contract construction time for the Household Hazardous Waste Facility from 240 calendar days to 180 calendar days.
3. FIRST FLOOR CODE PLAN

- ASSEMBLY - STANDING SPACE UNCONCENTRATED (TABLES AND CHAIRS)
- BUSINESS AREAS
- INDUSTRIAL AREAS
- MERCANTILE
- WAREHOUSES

4. MEZZANINE CODE PLAN

- ACC. STORAGE AREAS, MECH., EQUIP.

5. FACILITY OPERATIONS PLAN

- HAZMAT STORAGE

Occupant Type Legend

- S-1 Occupancy = 1 per 1,000
- Secondary members = 0
- Floor Construction = 0
- Primary Structural Frame = 0
- Sprinkler will be provided throughout the building

BUILDING CODE REQUIREMENTS

- 2014 National Electrical Code (NFPA 70) including State and Local Amendments
- 2015 International Mechanical Code including State and Local Amendments
- 2015 International Plumbing Code including State and Local Amendments
- 2006 International Energy Conservation Code
- 2015 International Existing Building Code including State and Local Amendment

ALLOWABLE MEZZANINE AREA = 833 SF

ALLOWABLE BUILDING HEIGHT= 55'

Actual Mezzanine Area = 502 SF

Actual Floors= 1 + Mezzanine

Actual Building Area= 3,600 SF

Actual Building Height= 24'-4"
16. **SITE DEMOLITION NOTES:**

- Scope of work shall include removal of all existing structures, tunneled conduits, electrical conduits, sewers, slabs, and sidewalks.
- All work shall be performed in accordance with the specifications and contract documents and in accordance with the requirements of the Oklahoma City Building Department and all applicable codes.

17. **SITE CONSTRUCTION NOTES:**

- All work shall be performed in accordance with the specifications and contract documents and in accordance with the requirements of the Oklahoma City Building Department and all applicable codes.
- All work shall be performed in accordance with the specifications and contract documents and in accordance with the requirements of the Oklahoma City Building Department and all applicable codes.

18. **SITE GRADE NOTES:**

- Proposed grading plans and elevations shall be submitted to the City of Norman for approval before any grading work is performed.
- All grading work shall be performed in accordance with the approved grading plans and elevations.
- All grading work shall be performed in accordance with the approved grading plans and elevations.

19. **SITE UTILITIES NOTES:**

- All work shall be performed in accordance with the specifications and contract documents and in accordance with the requirements of the Oklahoma City Building Department and all applicable codes.
- All work shall be performed in accordance with the specifications and contract documents and in accordance with the requirements of the Oklahoma City Building Department and all applicable codes.

20. **SITE DETAILS NOTES:**

- All work shall be performed in accordance with the specifications and contract documents and in accordance with the requirements of the Oklahoma City Building Department and all applicable codes.
- All work shall be performed in accordance with the specifications and contract documents and in accordance with the requirements of the Oklahoma City Building Department and all applicable codes.

21. **NOTES & LEGEND:**

- Legend details for all notes and figures shown on the plan sheets and drawings are provided in the notes and legends section of the plan sheets and drawings.
- Legend details for all notes and figures shown on the plan sheets and drawings are provided in the notes and legends section of the plan sheets and drawings.

22. **CONSTRUCTION NOTICES:**

- The contractor shall be responsible for notification of all utility companies and governmental agencies involved in the construction of the project.
- The contractor shall be responsible for notification of all utility companies and governmental agencies involved in the construction of the project.

23. **CONSTRUCTION REQUIREMENTS:**

- All work shall be performed in accordance with the specifications and contract documents and in accordance with the requirements of the Oklahoma City Building Department and all applicable codes.
- All work shall be performed in accordance with the specifications and contract documents and in accordance with the requirements of the Oklahoma City Building Department and all applicable codes.

24. **CONSTRUCTION ACCEPTANCE:**

- All work shall be performed in accordance with the specifications and contract documents and in accordance with the requirements of the Oklahoma City Building Department and all applicable codes.
- All work shall be performed in accordance with the specifications and contract documents and in accordance with the requirements of the Oklahoma City Building Department and all applicable codes.
NOTES:
1. CLEAN AND SEAL ALL JOINTS IN CONCRETE PAVEMENT TO REMOVE.
2. ENTRY ROAD & GATE DEMOLITION SHALL BE COORDINATED WITH OWNER AND PHASED WITH NEW CONSTRUCTION SO THAT DRIVE ACCESS TO EXISTING FACILITY IS MAINTAINED THROUGHOUT CONSTRUCTION. NOT FOR PROVIDING TEMPORARY ASPHALT PAVEMENT OF ADEQUATE THICKNESS FOR OWNER'S REQUIREMENTS TO SUPPORT TRUCK TRAFFIC TO EXISTING FACILITY.
1. PAVEMENT DEMOLITION SHALL BE COORDINATED WITH OWNER AND PHASED WITH NEW CONSTRUCTION SO THAT DRIVEeway Shall NOT BE DAMAGED AT ALL TIMES. CONTRACTOR RESPONSIBLE FOR PROVIDING TEMPORARY PAVEMENT AS NEEDED.

2. REFER TO MAP FOR ALL UTILITY ENTRY LOCATION(SIZES).

3. IN ACCORDANCE WITH ODEQ REGULATIONS, THE CITY PROVIDES WATER AT A MINIMUM PRESSURE OF 25 PSI. THE DEVELOPER WILL BE RESPONSIBLE FOR TESTING AND DISINFECTION AS CALLED FOR IN CITY OF NORMAN STANDARD SPECIFICATIONS.

4. ALL 6" WATER LINES, UNLESS OTHERWISE NOTED, SHALL BE CONSTRUCTED WITH DUCTILE IRON FITTINGS CONFORMING TO THE PROVISIONS OF AWWA C-110 AND AS SUPPLEMENTED BY AWWA C-100a.

5. NO CASE SHALL THE WATER BE FLUSHED INTO THE PAVING SUBGRADE. THE CONTRACTOR SHALL DISPOSE OF WATER FLUSHED FROM THE LINES TO A SUITABLE LOCATION WHICH REQUIRE WATER PRESSURE IN EXCESS OF 25 PSI.

6. ALL DUCTILE IRON FITTINGS SHALL BE EPOXY COATED (INTERIOR & EXTERIOR) IN ACCORDANCE WITH AWWA C-114-99 OR THE LATEST REVISION.

7. ALL FITTINGS SHALL BE DUCTILE IRON FITTINGS CONFORMING TO THE PROVISIONS OF AWWA C-110 AND WITH A MINIMUM DIMENSION RATIO OF EIGHTEEN (DR-18).

8. ALL FITTINGS REQUIRE EITHER CONCRETE THRUST BLOCK OR APPROVED MECHANICALLY RESTRAINED JOINTS PER CITY OF NORMAN STANDARDS.

9. TRACER WIRE (CONDUCTOR) - INSTALL ONE (1) STRAND OF NUMBER TWELVE (12) GAUGE COPPER TRACER WIRE ALONG TOP OF ALL PVC PIPING, BRING TO TOP OF GROUND AND PROVIDE WEATHERHEAD AT ALL FIRE HYDRANTS.

10. ALL DUCTILE IRON FITTINGS SHALL BE EPOXY COATED (INTERIOR & EXTERIOR) IN ACCORDANCE WITH AWWA C-110 AND AS SUPPLEMENTED BY AWWA C-114-99.

11. CONTRACTOR SHALL DISPOSE OF WATER FLUSHED FROM THE LINES TO A SUITABLE LOCATION WHICH REQUIRE WATER PRESSURE IN EXCESS OF 25 PSI.

12. ALL DUCTILE IRON FITTINGS SHALL BE EPOXY COATED (INTERIOR & EXTERIOR) IN ACCORDANCE WITH AWWA C-114-99 OR THE LATEST REVISION.
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NOTES:
1. PROVIDE DURAGATE DGT-BR GALVANIZED STEEL, BARRIER GATE ROUND KIT INCLUDING GATE, Pivot Post, Lock Post, and Lock Assembly. PROVIDE OPEN POSITION LOCK POST (DURAGATE DGT BL). SET EACH POST IN 18" DIA. x 48" DEEP FOOTING (ODOT CLASS A CONCRETE). PROVIDE LOCKABLE DOUBLE SWING GATE WHERE SHOWN. PROVIDE AND MOUNT STOP SIGN ON EACH GATE.

PROPOSED LIGHTPOLE (SEE ELECTRICAL) (3' MIN. FROM PAVEMENT)
PROPOSED LIGHTPOLE (SEE ELECTRICAL) (3' MIN. FROM PAVEMENT)

METE AND MATCH EXISTING PAVEMENT
RE-GRADE EXISTING
DITCH (SHEET) AT 3.40% MIN SLOPE
FL=1091.05

MATCH EXISTING
FL=1091.05

DRAINAGE STRUCTURE
24"X36"X101.18' RCP

PROPOSED GRADING LIMITS
(TIP)

NOTES:
1. SITE IS WITHIN FEMA FLOODPLAIN ZONE AE
(SNRP #2517250690). MAX FLOODPLAIN
ELEVATION IS 1096'. PROPOSED EARTHWORK AT & BELOW THIS FLOODPLAIN
ELEVATION IS AS FOLLOWS:
FILL = 1,317 CY
NET = 638 CY (EXCESS CUT)
CUT = 1,955 CY
2. ADDED EXISTING AND PROPOSED
CONTOUR LABELS.
3. CONTOUR LABELS
ADDED EXISTING AND PROPOSED
NET = 638 CY (EXCESS CUT)

STATE OF OK CERTIFICATE OF AUTHORIZATION

City of Norman
3001 Chisholm Ave
Norman, OK 73069-7302
WWW.CONNECTCEC.COM
P: 405.753.4200

Household Hazardous Waste

City of Norman
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NOTES:
1. PROVIDE SOLID SLAB SOD ON ALL DISTURBED AREAS.
CONSTRUCTION ENTRANCE DETAIL

1. The entrance shall be maintained in a condition that will prevent tracking or flowing of sediment onto public right-of-way. This may require top dressing, repair and/or cleanup of any measures used to prevent sediment.

2. When necessary, silt bags shall be cleaned prior to entrance onto public right-of-way.

3. When washing is required, it shall be done on an area stabilized with crushed stone that drains into an approved sediment trap on sediment basin.

4. Rock bags or sandbags shall be placed such that no gaps are evident.

SILT FENCE DETAIL

1. Silt fence shall be placed on slope contours to minimize pounding efficiency.

2. Add paint and repair fence after each storm event and remove sediment when necessary. If maximum recommended storage height.

3. Required sediment shall be deposited to an area that will not contribute to sediment off site and can be permanently stabilized.

SILT DIKE DETAIL

1. Staple shall be placed where the units overlap and in the centers of the 7’ unit as shown in details.

2. Point W must be higher than Point B to ensure that the water flows over the dike and not around the ends.

NOTES:

- Supply water to wash wheels if necessary
- Use rock bags to channelize runoff to basin as required. See notes.
- Rock bags must be placed such that no gaps are evident.
1.  1/2" x 4" premoulded expansion material around structures in walk.

2.  Expansion Joints maximum distance = 100', use 1/2" x 4" premoulded expansion material.

3.  Minimum joint spacing shall not exceed 100', use 1/2" x 4" premoulded expansion material.

4.  Saw cut joints within 24 hours.

5.  Use 1/2" x 4" premoulded expansion joint at curb.

6.  "W" = 60" MINIMUM-SEE PLAN

7.  Concrete (ODOT CLASS "A") footing (16"x18"")

8.  "W" = 60" MINIMUM-SEE PLAN

9.  No Parking

10.  ADA GORE STRIPING DETAIL

11.  Fire Lane

12.  ADA SIGN POST DETAIL

Notes:

- Joint Layout Notes:
  1. Contractor shall submit joint layout and joint spacing for approval.
  2. Maximum joint spacing shall not exceed 100'.
  3. Minimum joint spacing shall be 2' (no single points).
  4. Panel dimensions ratio shall be less than 1.25:1. All O.C.D. shaped panel shall have reinforcing as shown in fillet detail (this sheet).

- Expansion Joints 20' O.C. for walks extending more than 30' from building.

- Joint Layout Notes:
  1. Contractor shall submit joint layout and joint spacing for approval.
  2. Maximum joint spacing shall not exceed 100'.
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  4. Panel dimensions ratio shall be less than 1.25:1. All O.C.D. shaped panel shall have reinforcing as shown in fillet detail (this sheet).

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  3. Minimum joint spacing shall be 2' (no single points).
  4. Panel dimensions ratio shall be less than 1.25:1. All O.C.D. shaped panel shall have reinforcing as shown in fillet detail (this sheet).
1. PIPE SIZE LEADING TO FDC SHALL BE DETERMINED BY FIRE PROTECTION ENGINEER, BUT SHALL BE A MINIMUM OF 4 IN.
2. NO TREES, BUSHES OR WALLS WITHIN 5' RADIUS OF FIRE DEPARTMENT CONNECTION.
3. 3' MIN. TO BACK OF CURB, 10' MAX. TO BACK OF CURB (DO NOT INSTALL FDC WITHIN SIDEWALK).
4. ALL EXPOSED PIPING SHALL BE GALVANIZED STEEL.
5. FDC MODEL & LOCATION TO BE CONFIRMED WITH CITY OF NORMAN FIRE DEPARTMENT.
6. PROVIDE PERMANENTLY ATTACHED CAP FOR FDC.
7. PROVIDE BRASS AUTO-SPRINKLER PLATE (IF REQUIRED BY AHJ).

1. ALL CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL BE IN ACCORDANCE WITH THE CITY OF NORMAN.
2. ALL CULVERT PIPE WILL BE CUT ON SLOPE INDICATED IN GRADING PLAN.
3. GALVANIZED STEEL, 3/4" CRUSHED STONE, 4'-0" MIN. WIDTH = PIPE O.D. + 12".
4. SAND BACKFILL 1 1/2" CRUSHER RUN AGGREGATE COMPACTED TO 95% STANDARD PROCTOR DENSITY.

GENERAL NOTES

1. REFER TO ENGINEER OF RECORD FOR CONTINUATION.
2. FIRE DEPT CONNECTION NST TO FACE STREET/ROADWAY SURFACE.
3. REFER TO PLAN FOR PROPOSED OUTLET PIPES SIZE VARIANCE.
4. TRACER WIRE FOR NON-METALLIC PIPE.
5. TOP 4" TO BE TOPSOIL.
6. SAND BACKFILL 6" MIN. THICK CONCRETE (ODOT CLASS A) PROPOSED PIPE SIZE VARIOUS REFER TO PLAN.
7. SAND BACKFILL 4" AGGREGATE BASE.
FENCING DETAILS

PLOT DATE: 3/26/2020 3:57:45 PM

1. SECTION A-A
   - TERMINAL SECTION
   - LINE SECTION

2. POST CAP DETAIL
   - TERMINAL POST CAP DETAIL
   - LINE POST CAP DETAIL

3. EXTENSION ARM DETAIL
   - TERMINAL ARM DETAIL
   - LINE ARM DETAIL

4. TIE WIRE DETAIL
   - TERMINAL TIE WIRE DETAIL
   - LINE TIE WIRE DETAIL

5. ANGULAR CLIMB BARRIER FOR LINE POSTS
   - TERMINAL CLIMB BARRIER
   - LINE CLIMB BARRIER

6. SLIDING GATE TRACK DETAIL
   - TERMINAL GATE TRACK DETAIL
   - LINE GATE TRACK DETAIL

7. TYPICAL CHAINLINK FENCE - ELEVATION VIEW
   - TERMINAL FRAME
   - LINE FRAME

8. TYPICAL CHAINLINK SLIDING GATE DETAIL
   - TERMINAL GATE
   - LINE GATE

FENCE SPECIFICATIONS

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</tr>
<tr>
<td>6'-0&quot;</td>
<td>MAX.</td>
<td>2&quot; x 5/8&quot;</td>
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</tbody>
</table>

NOTES:
1. PROVIDE TENSION WIRES, BARS, & BANDS AS NEEDED TO ALLOW FOR FUTURE ADDITION OF MOTORIZED OPENER.
GENERAL NOTES

1. The construction documents consist of these drawings and a separate set of specifications. The drawings are intended to represent a specific design at the time of their preparation, whereas the specifications are intended to represent the general requirements of the Design Bldg. which are to be met by the Contractor and the Structural Engineer of Record in the Design Bldg. The Contractor is responsible for the performance of the construction work in accordance with the drawings and specifications.

2. This drawing set supersedes any previous drawings and specifications. This set conforms to the latest edition of the drawings and specifications, and the information is interpreted and executed in accordance with the latest edition. The Contractor acknowledges receipt of these drawings and specifications and agrees to perform the work in accordance with their requirements.

3. The Contractor shall retain this set of drawings for the duration of the construction period and for at least five (5) years after completion, and shall make all necessary copies for use during construction.

4. The Contractor shall be responsible for the maintenance and security of this set of drawings and specifications during the construction period.

5. The Contractor shall ensure that all changes and modifications to the drawings and specifications are recorded and reflected in the contract documents.

6. The Contractor shall be responsible for any changes or modifications to the drawings and specifications that are necessary to correct errors or omissions.

7. The Contractor shall be responsible for any changes or modifications to the drawings and specifications that are necessary to comply with changes in the laws or regulations.

8. The Contractor shall be responsible for any changes or modifications to the drawings and specifications that are necessary to comply with the requirements of the building code.

9. All changes and modifications to the drawings and specifications shall be made in accordance with this set.

10. The Contractor shall be responsible for the performance of the construction work in accordance with the drawings and specifications.

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GENERAL NOTES (CONT.)

DESIGN CRITERIA

1. APPROVAL OF BUILDING CODES

ACI 318, ASCE 7, IBC, 2015

2. SLENDERNESS LIMITS

ACI 318-17, 26.10.1(B), 26.9.2.3

3. DEAD LOAD

SELF-WEIGHT OF STRUCTURE
CORNER, TERRACE, AND SADDLE LOAD

4. LIVE LOAD

WEIGHT OF MATERIALS
20 PSI (NON-REMOVABLE)
20 PSI (NON-REMOVABLE)

5. REINFORCEMENT

BASE CURVE: E.W.
BASE CURVE: E.W.
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BASE CURVE: E.W.
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MEZZANINE FLOOR:
5" TOTAL DEPTH CONCRETE SLAB
OVER 1.5" TYPE "C" 20 GA. GALV.
CONFORM DECK W/ 4x4 - W2.9xW2.9
WWR DRAPED OVER SUPPORTS,
OVER MB FLOOR FRAMING.
FIN. FLR. ELEV. = 112'-0"

MEZZANINE FLOOR FRAMING
MAX. DEPTH = 12"
MAX. SPACING = 5'-0" - 6"

ENTRY PORTAL FRAMING & CONNX TO
CMU WALL BY STAIR DESIGNER

FLAMMABLE STAGING AREA LID:
6" CONCRETE SLAB W/ #4 @ 12" O.C.
EA. WAY AT MID DEPTH OF SLAB.
TOP OF SLAB ELEV. = 114'-8"

MB LEAN TO FRAME W/ DIAGONAL COLUMN
(BY MB MANUF.)

STAIRS & LANDING
FRAME W/ DIAGONAL COLUMN
(BY MB MANUF.)

OVERHEAD DOOR
APPLY SPRAY-IN INSULATION IN NON-GROUTED CELLS, REFER ARCH'L FOR ADD'L INFORMATION

HHW FACILITY MEZZANINE PLAN

MEZZANINE PLAN NOTES:
1. FOR GENERAL NOTES, REFER SHEETS S0.0 & S0.1
2. REFER "METAL BUILDING NOTES" ON SHEET S0.1 FOR ADDITIONAL INFORMATION
3. REFER SHEET S1.0 FOR COLUMN CALLOUT INFORMATION

HHW FACILITY MEZZANINE PLAN
S1.1
CONSTRUCTION JOINT (C-D)

TYPICAL FOUNDATION DETAIL AT RE-ENTRANT CORNER REINFORCING

TYPICAL FOUNDATION DETAIL AT SLAB-ON-GRADE JOINTS

TYPICAL FOUNDATION PLAN DETAIL AT CORNER REINFORCING

TYPICAL FOUNDATION DETAIL AT THICKENED SLAB AT STAIRS

TYPICAL FOUNDATION PLAN DETAIL AT SLAB-ON-GRADE JOINTS NOTES:

1. MATCH REINFORCING AT SLAB LOCATION AS A CONSTRUCTION JOINT AS NECESSARY TO AID IN SAWING JOINTS.
2.anguage of ACI 306R when sawing joints.
3. PLACE BARS TO MATCH SIZE & SPACING AT THE BOTTOM OF SLAB.
4. PROVIDE DETAIL AS SHOWN AT ALL LOCATIONS.
5. PROVIDE DETAIL AS SHOWN AT ALL LOCATIONS.

NOTE: REFER DETAILS SHOWN IN DESIGNER DRAWINGS. REFER TO STAIR INFORMATION SHOWN IN SHEET S2.0.
FOUNDATION DETAIL AT MANDOOR ALONG GRID 1

TYP. 6" CMU WALL

LOCATION + CONT. FOOTING PASTER CAST- IN PLACE CONCRETE CMU AND FOOTING

LOCATION + CONT. FOOTING PASTER CMU CAST- IN PLACE + LOT + SUB- GRADE

TYP. 6" CMU WALL

LOCATION + CONT. FOOTING PASTER CMU CAST- IN PLACE + LOT + SUB- GRADE

#5 DOWEL FOR 8" CMU WALLS:

AT G.C. OPTION, CMU DOWELS MAY BE POST-
INSTALLED INTO SLAB - ON-
GRADE IN LIEU OF CAST-
IN-
PLACE DOWELS.  POST-
INSTALLED
DOWELS SHALL BE INSTALLED WITH HILTI RE 500
EPOXY ADHESIVE WITH MIN. 6" EMBEDMENT FOR
8" CMU.  EXTEND DOWELS INTO WALL TO LAP
WITH REINF. AS INDICATED.  CARE SHALL BE
TAKEN TO NOT DAMAGE SLAB REINFORCEMENT
BY DRILLING PROCESSES.  ANY COSTS
INCURRED DUE TO INCORRECT PLACEMENT OF
DOWELS SHALL BE BORNE BY THE G.C.
FOUNDATION DETAIL AT FLAMMABLE STAGING AREA

TYP. 8" CMU WALL

SECONDARY CONTAINMENT GRATING, REFER DETAIL 1/4"x2"x1 3/4" x CONT. BENT PL (GALV.) AROUND PERIMETER OF OPENING W/ 3/8" DIA. x 3" HEADED STUDS @ 24" O.C.

2'-6" LAP
1/4" GAP
3'-0"
1/4" GAP

METAL PANEL ATTACHED TO STEEL ANGLES

#4 @ 16" O.C.

TYP. SLAB REINF., REFER PLAN

FLORAL DEFLAGRATION PANEL:
4' - 0" TALL x 6' - 0" WIDE OPENING W/ L4x4x1/4 FRAMING ATTACHED TO CMU WALL AROUND PERIMETER W/ 3/8" DIA. THREADED RODS W/ STD NUT & WASHER, ANCHOR W/ HILTI HIT-70 EPOXY ADHESIVE (MIN. EMBED = 5") INTO GROUT FILLED CMU WALL

CMU LINTEL, REFER

CMU WALL BEYOND

METAL STUD FRAMING TO BACK UP VENEER, REFER ARCH'L MEZZANINE SLAB

MB RIGID FRAME COLUMN

8" STEEL BEAM, BY MB MANUF.

8" STEEL CHANNEL CONT., BY MB MANUF.

4" STEEL CHANNEL

4" STEEL CHANNEL, BY MB MANUF.

METAL STUD FRAMING TO BACK UP VENEER, REFER ARCH'L MEZZANINE SLAB

4" STEEL CHANNEL

4" STEEL CHANNEL, BY MB MANUF.

METAL STUD FRAMING TO BACK UP VENEER, REFER ARCH'L MEZZANINE SLAB

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4" STEEL CHANNEL, BY MB MANUF.

METAL STUD FRAMING TO BACK UP VENEER, REFER ARCH'L MEZZANINE SLAB

4" STEEL CHANNEL

4" STEEL CHANNEL, BY MB MANUF.
1. CMU Lintel Detail
2. CMU Reinforcement at CMU Control Joint
3. CMU Control Joint Detail
4. CMU Linetl and Jamb Reinforcement at Openings in CMU Wall
5. Typical Reinforcement at CMU Control Joint
6. 8" CMU Lintel Schedule
7. Typical 8" CMU End, Intersection, & Corner Detail

**CMU Control Joint Detail**

**8" CMU Lintel Schedule**

**Typical CMU Wall Diagram**
28" CMU WALL, PROVIDE BOND BEAMS FOR TOP (2) COURSES

MEZZANINE SLAB
1/4" x 1'-0" x CONT. BENT PL W/ #4 x 2'-0"

HORIZ. D.B.A. @ 16" O.C. & 3/4" DIA. x 6" HEADED STUDS INTO CMU WALL @ 24" O.C.

1 1/2" DIA. STD. STEEL PIPE HANDRAIL POST TO FIT INTO STEEL SLEEVE. REFER ARCH'L FOR POST LOCATIONS. COORDINATE W/ ARCH'L FOR POSTS THAT ARE TO BE REMOVABLE. IF REMOVABLE, DO NOT WELD POST TO SLEEVE; OTHERWISE, WELD POST TO SLEEVE ALL AROUND.

1/4" CONT. TOE KICK PLATE WELDED TO BOTTOM RAIL

8" STEEL BEAM, BY MB MANUF.

2 1/2" DIA. x 0'-5 3/4" STD. STEEL PIPE SLEEVE WELDED ALL-AROUND TO BENT PL

1 1/2" DIA. STD. STEEL PIPE SLEEVE SUPPORTED BY STEEL FRAME ABOVE

8" STEEL BEAM, REFER PLAN AND DETAILS

STEEL BEAM ON CMU WALL

RACING DETAILS

CEC CORPORATION
4555 W. MEMORIAL ROAD
OKLAHOMA CITY, OKLAHOMA 73142
P: 405.753.4200
WWW.CONNECTCEC.COM

STATE OF OK CERTIFICATE OF AUTHORIZATION
CA#: 32  EXPIRES: -06-30
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Date
Project Number
Sheet Title
Revision

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WWW.STUDIOARC.COM

CITY OF NORMAN
Household Hazardous Waste
3901 Chautauqua Ave. Norman, OK 73072

October 30, 2020

SCALE : 1" = 1'-0"

FRAMING DETAIL AT MEZZANINE HANDRAIL

FRAMING DETAIL AT ENTRY PORTAL CANOPY

STEEL BEAM ON CMU WALL

10.29.2020
10.29.2020
10.29.2020
10.29.2020
A0.1

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Abbreviations - General

Abbreviations - Finishes

General Notes - Cover

A0.1

Household Hazardous Waste Facility
CITY OF NORMAN

ADA Door Clearance Requirements

Standard Details - Transfer Type Shower

ADA Mounting Height Requirements

Voice: 405.605.1044
General Notes - Interior Partition(s)

1. All partitions shall be Type 1A3 unless otherwise specified in the finish schedule or noted otherwise (UNO).

2. All floor plans for partitions shown with a number line symbol denote fire-rated partitions. Observe the UL fire-rated construction instructions.

3. Stud and furring strip spacing of 16” O.C. shall be provided for partitions not extending to structure.

4. Metal shelving shall be provided to the ceiling height for partitions not extending to structure, for the full height of each partition.

5. Partition top must be considered a fire-rated assembly. Refer to SHEET A10.4 for details.

6. Metal shelving shall be provided to the ceiling height for partitions not extending to structure, for the full height of each partition.

7. Partition types shall be as shown with the appropriate NOMINAL CORE THICKNESS.

8. All partitions with sound-attenuation blankets are considered acoustical partitions. Seal top and bottom and seal all penetrations to include ductwork, piping, and conduit.

9. For partitions that are not shown to extend to structure and are not fire rated, extend only if noted.

10. All partitions shall extend to structure with sound-attenuation blanket, unless noted otherwise (UNO).

11. Refer to finish schedule and interior elevations for extents of finishes.

PARTITION TYPE

1. STUD WALL
2. SHAFT WALL-UL 415
3. FURRING WALL
4. CMU WALL
5. REFER TO A10.1.1

MODIFICATIONS

PARTITION EXTENDS TO STRUCTURE

A. 5/8” GWB EACH SIDE
B. 3/4” FIRE-RATED MDF SINGLE SIDE
C. 5/8” GWB SINGLE SIDE
D. EXPOSED STRUCTURE
E. 5/8” CEMENTITIOUS BACKER BOARD BOTH SIDES
F. 5/8” GWB ONE SIDE, 5/8” CEMENTITIOUS BACKER BOARD ON THE OTHER SIDE
G. OTHER REFER TO A10.1.1

PARTITION EXTENDS 6” ABOVE CEILING

WITH SOUND-ATTENUATION BLANKET

NOMINAL CORE THICKNESS

A. 5/8” GWB EACH SIDE
B. 3/4” FIRE-RATED MDF SINGLE SIDE
C. 5/8” GWB SINGLE SIDE
D. EXPOSED STRUCTURE
E. 5/8” CEMENTITIOUS BACKER BOARD BOTH SIDES
F. 5/8” GWB ONE SIDE, 5/8” CEMENTITIOUS BACKER BOARD ON THE OTHER SIDE
G. OTHER REFER TO A10.1.1

MEZZANINE FLOOR PLAN

1" = 1'-0"
A. REFER TO INTERIOR FINISH PLAN(S) AND ELEVATION(S) FOR LOCATION OF WALL TILE, PAINT, AND BASE.

B. REFER TO INTERIOR FINISH PLAN(S) FOR FLOORING LOCATIONS, PATTERNS, AND DIRECTION OF FLOORING.

C. REFER TO EXTERIOR BUILDING ELEVATION(S) FOR EXTERIOR MATERIAL LOCATIONS AND NOTES.

D. REFER TO REFLECTED CEILING PLAN(S) FOR DESIGN AND LAYOUT OF CEILINGS AND CEILING MOUNTED EQUIPMENT.

E. IF EQUIPMENT NOT SHOWN FOR ANY REASON, G.C. TO CONTACT ARCHITECT FOR FURTHER INSTRUCTION.

F. CONTRACTOR SHALL PROVIDE TRANSITION STRIPS AT ALL FLOORING MATERIAL CHANGES AS INDICATED ON FINISH PLAN(S).

G. ALL GYPSUM WALL BOARD CEILINGS ARE TO PAINT PT2, UNLESS NOTED OTHERWISE.

H. ALL UNFINISHED AND EXPOSED STEEL TO BE PAINTED PT1, UNLESS NOTED OTHERWISE.

I. ALL HOLLOW METAL INTERIOR FRAMES TO BE PAINTED TO MATCH RUBBER BASE.

J. CONTRACTOR TO PROVIDE APPROPRIATELY SIZED TRANSITION STRIPS BASED UPON MATERIAL AND SETTING THICKNESSES.

K. PROVIDE T1 AT ALL PORCELAIN WALL TILE EXTERIOR CORNERS AND EXPOSED TILE EDGES.

L. PROVIDE T2 AT ALL PORCELAIN WALL TILE AND FLOOR TRANSITIONS.

M. PAINT EXPOSED CMU BLOCK PT1 UNLESS NOTED OTHERWISE.

GENERAL MATERIAL SCHEDULE NOTES:

1. REFER TO INTERIOR FINISH PLAN(S) AND ELEVATION(S) FOR LOCATION OF WALL TILE, PAINT, AND BASE.

2. REFER TO INTERIOR FINISH PLAN(S) FOR FLOORING LOCATIONS, PATTERNS, AND DIRECTION OF FLOORING.

3. REFER TO EXTERIOR BUILDING ELEVATION(S) FOR EXTERIOR MATERIAL LOCATIONS AND NOTES.

4. REFER TO REFLECTED CEILING PLAN(S) FOR DESIGN AND LAYOUT OF CEILINGS AND CEILING MOUNTED EQUIPMENT.

5. CONTRACTOR TO PROVIDE TRANSITION STRIPS AT ALL FLOORING MATERIAL CHANGES AS INDICATED ON FINISH PLAN(S).

6. CONTRACTOR TO PROVIDE APPROPRIATELY SIZED TRANSITION STRIPS BASED UPON MATERIAL AND SETTING THICKNESSES.

7. PROVIDE T1 AT ALL PORCELAIN WALL TILE EXTERIOR CORNERS AND EXPOSED TILE EDGES.

8. PROVIDE T2 AT ALL PORCELAIN WALL TILE AND FLOOR TRANSITIONS.

9. PAINT EXPOSED CMU BLOCK PT1 UNLESS NOTED OTHERWISE.
## Door Schedule

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### Legend - Door Types

- **3" = 1'-0"**
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- **1 1/2" = 1'-0"**
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### Legend - Frame Types

- **3" = 1'-0"**
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### Notes

- **1 JAMB DETAIL**
- **2 JAMB DETAIL (LOW)**
- **3 HEAD DETAIL**
- **4 HM JAMB DETAIL (HEAD SIM)**
- **5 HEAD DETAIL**
- **6 HEAD DETAIL**
- **7 HEAD DETAIL**
- **8 JAMB DETAIL**
- **9 JAMB DETAIL**
- **10 DETAIL**

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**Door Schedule & Details**

- **CITY OF NORMAN**
- **Household Hazardous Waste Facility**
- **3921 Chautauqua Ave, Norman, OK 73072**
- **October 30th, 2020**

- **Date: 10/30/2020 9:44:37 AM**
- **Project Number: 19 037**
- **Sheet Title: Door Schedule & Details**
- **Revision: A11.1**

- **VOICE: 405.605.1044**
- **OKLAHOMA CITY, OK. 73102**
- **816 NORTH WALKER, SUITE 100**
- **WWW.STUDIOARC.COM**

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GENERAL MECHANICAL REQUIREMENTS:

1. MECHANICAL, ELECTRICAL, AND PLUMBING WORK SHALL BE PERFORMED IN COMPLIANCE WITH THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE, International Plumbing Code, and International Mechanical and Electrical Codes, and with applicable local codes and standards. All work shall be performed in a workmanlike and professional manner, and shall be in accordance with the latest edition of the American National Standards Institute (ANSI) Z243.1 and NFPA 90A. All work shall be performed in accordance with the latest edition of the American National Standards Institute (ANSI) Z243.1 and NFPA 90A, and the work shall be in accordance with the latest edition of the American National Standards Institute (ANSI) Z243.1 and NFPA 90A.

2. All connections and interfaces shall be of the capacity required by the Building Code for the pressure and temperature of the service, and shall be in accordance with the latest edition of the American National Standards Institute (ANSI) Z243.1 and NFPA 90A. All work shall be in accordance with the latest edition of the American National Standards Institute (ANSI) Z243.1 and NFPA 90A. All work shall be in accordance with the latest edition of the American National Standards Institute (ANSI) Z243.1 and NFPA 90A.

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A 50 INSTALL LEVEL ON CONCRETE.

EXHAUST RISE TO FLOOR ABOVE. REFER TO M-102 FOR DUCT CONTINUATIONS.

INSTALL BALANCING DAMPERS IN AN ACCESSIBLE LOCATION. -TYPICAL

INSTALL ABOVE PAINT CRUSHER, ENSURE AIRFLOW IS UNOBSTRUCTED.

PROVIDE EXPLOSION PREVENTION SYSTEM SENSOR PER NFPA 69 TO SOUND ALARM WHEN GAS LEVELS ARE REACHED PER AHJ STANDARDS.

REFER TO SHEET M-201 AND M-401 FOR TYPICAL DUCTING LAYOUT. ALL EXHAUST DUCTING PRIOR TO EXHAUST FANS TO BE SINGLE WALL DUCTWORK WITH NO INSULATION. AFTER EXHAUST FAN PROVIDE DOUBLE WALL DUCTWORK WITH 1" LINER. COORDINATE FINISH WITH ARCHITECT.

PROVIDE MANUAL SHUTOFF CONTROL FOR EF-3 ADJACENT TO DOOR OR IN AN AHJ APPROVED LOCATION. THE SWITCH SHALL BE BREAK GLASS OR OTHER AHJ APPROVED TYPE AND SHALL BE LABELED "VENTILATION SYSTEM EMERGENCY SHUTOFF".

ALL DUCT CONSTRUCTION IN THIS ROOM SHALL CONFORM WITH IMC 510.9, BE CONSTRUCTED OF G90 GALVANIZED SHEET STEEL WITH GAUGE 20 MINIMUM THICKNESS. PRIOR TO PURCHASE AND INSTALLATION, COORDINATE WITH OWNER ON FINAL CHEMICAL USES TO DETERMINE IF PRODUCTS ARE DETRIMENTAL TO DUCT MATERIAL AND PROVIDE APPROVED MATERIAL. DUCT JOINTS SHALL CONFORM WITH IMC 510.9.1 WITH 1" MINIMUM LAP JOINT. SUPPORTS SHALL BE OF NONCOMBUSTIBLE MATERIAL AND NOT EXCEED 10 FT.

PROVIDE EF-3 WITH AN AIRFLOW SWITCH THAT IS INTERLOCKED TO SOUND ALARM UPON FAILURE OF FAN PER NFPA 30 18.6.
MECHANICAL ROOM

MEZZANINE

EXHAUST RISE UP TO ROOF.

TURN OUTDOOR LINE 22" INLET 8" EXHAUST INTAKE OPENING WITHIN 12" OF ROOF PEAK.

PROVIDE MECHANICAL CLOTH FOR DUCT OPENING.

CONTINUE EXHAUST DUCT UP THROUGH ROOF.

INSTALL BOTTOM OF LOUVER 1 FT ABOVE FINISHED MEZZANINE FLOOR.

PROVIDE WITH STAINLESS STEEL FIRE DAMPER THAT MEETS OR EXCEEDS WALL RATING AND ALL COMPONENTS MEET RATING OF FLAMMABLE STORAGE AREA PER AHJ.

ALL EXHAUST DUCTING PRIOR TO EXHAUST FANS TO BE SINGLE WALL DUCTWORK WITH NO INSULATION. AFTER EXHAUST FAN PROVIDE DOUBLE WALL DUCTWORK WITH 1" LINER.

COORDINATE FINISH WITH ARCHITECT.

PROVIDE OUTDOOR INTAKE WITH 1" LINER. DUCTWORK AFTER FIRE DAMPER REFER TO M-101 FOR REQUIREMENTS.

REMOVED EXHAUST FAN
MATERIAL STORAGE - EAST VIEW

1. MATERIAL STORAGE - EAST VIEW

2. MATERIAL STORAGE - NORTH VIEW

3. FLAMMABLE STAGING AREA - NORTH VIEW

4. FLAMMABLE STAGING AREA - WEST VIEW

PROVIDE OPENING OF THE DIMENSIONS SHOWN TO PROVIDE EXHAUST TO SWEEP FLOOR. BOTTOM OF OPENING TO BE 3" AFF. COORDINATE OPENING WITH ANY DUCT PROTECTIONS OR GUARDS.

MOUNT ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE FINAL LOCATIONS AND HEIGHTS WITH LIGHTING AND OTHER EQUIPMENT, CONFIRM WITH ARCHITECT AND OWNER.

DISCHARGE EXHAUST DUCT 6 FT ABOVE ROOF SLOPE. SUPPORT AND SECURE TO ROOF. TYPICAL OF ALL ON EAST WALL.

FLAMMABLE STAGING AREA

5. REFERENCE TO M-101 FOR DUCTING REQUIREMENTS IN THIS ROOM.
AIR DEVICE SCHEDULE

UNIT HEATER SCHEDULE

LOUVER SCHEDULE

VRF HEAT PUMP UNIT SCHEDULE

VRF INDOOR UNIT SCHEDULE

VENTILATION EQUIPMENT SCHEDULE

NOTES:

1. PROVIDE WITH INSECT SCREEN.
2. PROVIDE WITH WASHABLE FILTERS. WASH FILTERS WHEN BUILDING IS TURNED OVER TO OWNER. PROVIDE DUCTED UNITS WITH FILTER BOX AND FILTER. DO NOT RUN EQUIPMENT WITHOUT FILTERS.
3. PROVIDE SECONDARY CONDENSATE DRAIN KILL SWITCH ON OVERFLOW THAT WILL DISABLE THE UNIT UPON CONDENSATE DETECTION.
4. PROVIDE WITH REMOTE ADJUSTABLE THERMOSTAT. COORDINATE LOCATION WITH OWNER/ARCHITECT.
5. REFRIGERANT PIPING SIZED BY AWARDED MFR.
6. PROVIDE WITH DISCONNECT SWITCH. PROVIDE WITH REFTEK REFRIGERANT BALL VALVES, INSULATION JACKETS, AND REFRIGERANT ISOLATION VALVES TO EACH UNIT TO PREVENT LOSS OF FUNCTIONALITY TO ENTIRE SYSTEM IN THE EVENT OF REFRIGERANT LEAK OR REPAIR IN ONE ZONE.
7. VENTILATION EQUIPMENT SCHEDULE
8. FAN SHALL BE CLASS 1 DIV 2, CORROSION RESISTANT, SPARK RESISTANT CONSTRUCTION WITH MOTOR AND BEARINGS OUTSIDE THE DUCT AND ALL PARTS SHALL BE GROUNDED. PROVIDE WITH MOTOR AND BEARINGS OUTSIDE THE DUCT AND ALL PARTS SHALL BE GROUNDED.
9. FAN SHALL BE CLASS 1 DIV 1, CORROSION RESISTANT, EXPLOSION PROOF WITH SPARK B CONSTRUCTION WITH MOTOR AND BEARINGS OUTSIDE THE DUCT AND ALL PARTS SHALL BE GROUNDED. PROVIDE WITH MOTOR AND BEARINGS OUTSIDE THE DUCT AND ALL PARTS SHALL BE GROUNDED.
10. ELECTRIC HEATERS SHALL BE INSTALLED ACCORDING TO MANUFACTURERS INSTALLATION STANDARDS
11. PROVIDE WITH MANUAL ON/OFF WALL SWITCH WITH LABEL.
12. PROVIDE WITH INTEGRAL THERMOSTAT ADJUSTMENT AND DISCONNECT.
13. PROVIDE WITH INTEGRAL BALANCING DAMPERS. REFER TO ARCHITECTURAL FOR CEILING TYPES AND LOCATIONS.
14. PROVIDE WITH FACTORY HARDWIRED WALL MOUNTED THERMOSTATS.
15. PROVIDE WITH INTEGRAL BALANCING DAMPERS. REFER TO ARCHITECTURAL FOR CEILING TYPES AND LOCATIONS.
16. PROVIDE WITH INTEGRAL BALANCING DAMPERS. REFER TO ARCHITECTURAL FOR CEILING TYPES AND LOCATIONS.
17. ELECTRIC HEATERS SHALL BE INSTALLED ACCORDING TO MANUFACTURERS INSTALLATION STANDARDS
18. TERMINATE EXHAUST DUCT THROUGH ROOF WITH STAINLESS STEEL ROOF CAP CONSTRUCTION TO KEEP EXHAUST DUCTING MATERIAL AND TERMINATION CONTINUOUS MATERIAL IN PLACE.
### GENERAL PLUMBING REQUIREMENTS:

1. **Mechanical, Electrical, and Plumbing Work**: Shall be performed in compliance with the **American National Standards Institute (ANSI)** and the **International Plumbing Code (IPC)**, as well as applicable fire protection codes, electrical codes, and plumbing codes. Failure to follow the design specifications shall result in a penalty to the contractor. All work shall be done in accordance with the specifications and the plans, and the contractor shall be responsible for the quality of their work. If any discrepancies occur between these drawings and the project manual, the latter shall follow. All work shall be conducted in a safe manner with adequate protection for the public and employees. New work, existing work, etc., shall be brought to the owner's attention for resolution prior to commencing work.

2. **Existing Utilities**: Damaged by contractor during new work shall be repaired by the contractor. Conditions may exist or occur throughout construction, concealed or not concealed. The contractor shall coordinate all work with electrical wiring and conduit, and all necessary permits, licenses, certificates, tests, etc., shall be obtained by the contractor. The contractor shall verify with the owner prior to removing salvaged materials from the existing property. The contractor shall provide a minimum one-year warranty on all materials and equipment furnished by others.

3. **Contractor’s Responsibility**: Shall coordinate all work with electrical wiring and conduit, and all necessary permits, licenses, certificates, tests, etc., shall be obtained by the contractor. The contractor shall verify with the owner prior to removing salvaged materials from the existing property. The contractor shall provide a minimum one-year warranty on all materials and equipment furnished by others.

4. **Equipment and Equipment Furnished by Others**: Shall be of first quality and free from defects. All materials and equipment shall be new and shall meet current industry standards. Applicable equipment shall be installed in accordance with manufacturers’ recommendations and minimum clearances as indicated on the drawings or required by the installation of new systems.

5. **No Noise Criteria**: Shall be maintained at all times. All operations shall be conducted in compliance with the Occupational Safety and Health Administration (OSHA) Noise Criteria.

6. **Contractor’s Responsibility**: Shall coordinate all work with electrical wiring and conduit, and all necessary permits, licenses, certificates, tests, etc., shall be obtained by the contractor. The contractor shall verify with the owner prior to removing salvaged materials from the existing property. The contractor shall provide a minimum one-year warranty on all materials and equipment furnished by others.

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26. **Test All Water Piping Hydraulically At 100 PSI for 2 Hours. Repair All Leaks.**

27. **Insulation**: Shall be of the type specified in the plans and specifications. Insulation materials shall be installed in accordance with the manufacturer's recommendations. Insulation materials shall be installed in a manner that will provide adequate thermal and acoustic performance. Insulation materials shall be installed in accordance with the manufacturer's recommendations. Insulation materials shall be installed in a manner that will provide adequate thermal and acoustic performance.

28. **Mechanical, Electrical, and Plumbing Equipment Installations**: Shall be in full accordance with the manufacturer’s recommendations and minimum clearances as indicated on the drawings or required by the installation of new systems.

29. **Pressure Relief Valves**: Shall be installed in accordance with the manufacturer’s recommendations. Pressure relief valves shall be installed in a manner that will provide adequate thermal and acoustic performance. Pressure relief valves shall be installed in accordance with the manufacturer’s recommendations. Pressure relief valves shall be installed in a manner that will provide adequate thermal and acoustic performance.

30. **Contractor’s Responsibility**: Shall coordinate all work with electrical wiring and conduit, and all necessary permits, licenses, certificates, tests, etc., shall be obtained by the contractor. The contractor shall verify with the owner prior to removing salvaged materials from the existing property. The contractor shall provide a minimum one-year warranty on all materials and equipment furnished by others.

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1ST FLOOR WASTE-VENT PLAN.
MEZZANINE WASTE-VENT PLAN

City of Norman
Household Hazardous Waste Facility
3914 Chautauqua Ave,
Norman, OK 73072

October 29, 2020

1/4" = 1'-0"
MEZZANINE DOMESTIC WATER & GAS PLAN

1 1/2" CW DROP TO FIRST FLOOR CEILING BELOW.

3/4" CW DROP TO FPWH BELOW. REFER TO P-201 FOR CONTINUATION.

INSTALL SHUT OFF VALVES IN AN ACCESSIBLE LOCATION.

- TYPICAL

1/4" = 1'-0"

MECHANICAL ROOM

CONTRACTOR SHALL BE AWARE OF HAZARDOUS CHEMICAL LOCATIONS IN DETERMINING FINAL PIPE ROUTING AND SYSTEM TYPE.

KEEP PIPING AWAY FROM ELECTRICAL EQUIPMENT IN ROOM.

KEEP PIPING AS HIGH AS POSSIBLE IN ROOM.

3/4"ø CW
### PLUMBING FIXTURE SCHEDULE

<table>
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<tr>
<th>NAME</th>
<th>MARK</th>
<th>TYPE</th>
<th>MOUNTING</th>
<th>WASTE</th>
<th>VENT</th>
<th>CW HW</th>
<th>MFG</th>
<th>MODEL</th>
<th>DESCRIPTION</th>
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<tr>
<td>WC-1 WATERCLOSET ADA</td>
<td>MADERA</td>
<td>FLOOR</td>
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<td>4&quot;</td>
<td>2&quot;</td>
<td>1-1/4&quot;</td>
<td>AMERICAN</td>
<td>3461.001</td>
<td>1.1-1.6 GPF FLOOR MOUNTED ADA FLUSHOMETER, 1-1/2&quot; TOP SPUD, WHITE VITREOUS CHINA, ELONGATED BOWL, INCLUDE ELONGATED OPEN SEAT. PROVIDE SLOAN REGAL 111-1.28 MANUAL FLUSH VALVE. INSTALL ACCORDING TO ADA STANDARDS. INCLUDE ALL REQUIRED HARDWARE.</td>
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<tr>
<td>L-1 LAVATORY UNDERMOUNT</td>
<td>OVALYN</td>
<td>2&quot;</td>
<td>1 1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>AMERICAN</td>
<td>0495.221</td>
<td>UNDERMOUNT ADA LAVATORY, WHITE VITREOUS CHINA, WITH AMERICAN STANDARD 5502.175 4&quot; CENTERSET 0.5 GPM MANUAL WRISTBLADE FAUCET WITH MATCHING GRID DRAIN. PROVIDE AHJ APPROVED MIXING VALVES, QUARTER TURN WATER SUPPLY SHUT-OFF VALVES, MOUNTING ACCESSORIES, AND TRUEBRO LAVGUARD2 ADA PIPE COVERS.</td>
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<td>S-1 SINK UNDERMOUNT</td>
<td>ELKAY</td>
<td>2&quot;</td>
<td>1 1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>AMERICAN</td>
<td>ELUHAD141855PD</td>
<td>16.5&quot; X 20.5&quot; X 5.375&quot; ADA STAINLESS STEEL UNDERMOUNT SINK WITH CENTER REAR &quot;PERFECT&quot; DRAIN. INCLUDE AMERICAN STANDARD GOOSENECK 4&quot; CENTERSET MANUAL WRISTBLADE HANDLES 1.5 GPM WITH MATCHING GRID DRAIN. PROVIDE AHJ APPROVED MIXING VALVES, QUARTER TURN WATER SUPPLY SHUT-OFF VALVES, MOUNTING ACCESSORIES, AND TRUEBRO LAVGUARD2 ADA PIPE COVERS.</td>
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<tr>
<td>S-2 SERVICE/LAUNDRY SINK</td>
<td>FIAT</td>
<td>FLOOR</td>
<td></td>
<td>2&quot;</td>
<td>1 1/2&quot;</td>
<td>3/4&quot;</td>
<td>3/4&quot;</td>
<td>FIAT P-1</td>
<td>24&quot; X 24&quot; X 15.75&quot; FLOOR MOUNTED POLY TUB SINK, BAKED ENAMEL ANGLE LEGS WITH LEVELING DEVICE. INCLUDE ZURN Z843M6-XL 8&quot; WALL MOUNT FAUCET WITH VACUUM BREAKER, COLOR CODED WRISTBLADE HANDLES, 3/4&quot; HOSE THREADED OUTLET, PAIL HOOK, AND ADJUSTABLE WALL BRACE. PROVIDE AHJ APPROVED MIXING VALVES, QUARTER TURN WATER SUPPLY SHUT-OFF VALVES, MOUNTING ACCESSORIES, AND TRUEBRO LAVGUARD2 ADA PIPE COVERS.</td>
</tr>
<tr>
<td>SH-1 SHOWER FLOOR/WALL</td>
<td>INPROCORP</td>
<td>2&quot;</td>
<td>1 1/2&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>AMERICAN</td>
<td>DSTRSHR36</td>
<td>ADA LOW THRESHHOLD, NON SKID SOLID SURFACE SHOWER, 36&quot; X 36&quot;, INTEGRAL WATER BARRIER, WITH CENTER ROUND DRAIN EN-TR-DRN. INCLUDE POWERS P910 SINGLE LEVER ANTI SCALD FAUCET/VALVE, POWERS 141-600B DIVERTER, 59&quot; METAL HOSE, 30&quot; SLIDE BAR, BRICOR B100MAX 1.0 GPM SHOWER HEAD, AND BRICOR B110CH SHOWER HEAD. REFER TO ARCHITECT FOR MORE INFORMATION AND OTHER ADA ACCESSORIES. INSTALL ACCORDING TO MFR.</td>
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<tr>
<td>EMW EMERGENCY SHOWER</td>
<td>BRADLEY</td>
<td>FLOOR</td>
<td></td>
<td>2&quot;</td>
<td>1-1/2&quot;</td>
<td>1-1/2&quot;</td>
<td>1-1/2&quot;</td>
<td>S19314BFPB</td>
<td>EMERGENCY SHOWER, EYE AND FACE WASH. SHOWER ACTIVATED PULL ROD, HAND ACTIVATED EYEWASH PADDLE, EYE/FACE WASH DUST COVERS, BARRIER FREE, WITH INTEGRAL STRAINER. 22 GPM SHOWER. 5.1 GPM EYE/FACE WASH. INCLUDE EMERGENCY THERMOSTATIC MIXING VALVE, WATER SUPPLY SHUT OFFS, MOUNTING ACCESSORIES.</td>
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<tr>
<td>FD FLOOR DRAIN</td>
<td>WADE</td>
<td>FLOOR</td>
<td></td>
<td>3&quot;</td>
<td>2&quot;</td>
<td>-</td>
<td>-</td>
<td>1100-A-TSD</td>
<td>FLOOR DRAIN WITH 6&quot; STANDARD STRAINER AND PROVENT TRAP GUARD SEALING DEVICE.</td>
</tr>
<tr>
<td>FCO FLOOR CLEANOUT</td>
<td>ZURN</td>
<td>FLOOR</td>
<td></td>
<td>4&quot;</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>ZN-1400-VP-BP</td>
<td>PROVIDE ABS TAPERED THREAD PLUG &amp; VANDAL PROOF CLOSURES AND INSTALL IN THICKENED SLAB IN INTERIOR LOCATIONS.</td>
</tr>
<tr>
<td>YCO YARD CLEANOUT</td>
<td>ZURN</td>
<td>FINISH GRADE</td>
<td></td>
<td>4&quot;</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>ZN-1400-VP-BP</td>
<td>PROVIDE ABS TAPERED THREAD PLUG &amp; VANDAL PROOF CLOSURES. PROVIDE MIN. 18X18X6 IN DEEP CONC. PAD/BLOCK FOR 2 WAY EXTERIOR LOCATIONS, BRONZE PLUG FOR EXTERIOR LOCATIONS.</td>
</tr>
<tr>
<td>FPWH FREEZE PROOF WALL HYDRANT</td>
<td>WOODFORD</td>
<td>WALL</td>
<td></td>
<td>-</td>
<td>3/4&quot;</td>
<td>-</td>
<td>-</td>
<td>B64</td>
<td>FREEZE PROOF WALL HYDRANT WITH LOCKABLE BOX AND KEY.</td>
</tr>
<tr>
<td>SP WASTE SAMPLING PORT</td>
<td>SCHIER</td>
<td>GRADE</td>
<td></td>
<td>4&quot;</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>SV10</td>
<td>WASTE WATER SAMPLING PORT, PROVIDE RISERS /EXTENSIONS AS REQUIRED, COORDINATE WITH CIVIL FOR DEPTH. PROVIDE WITH H-20 LOAD TRAFFIC COVERS.</td>
</tr>
</tbody>
</table>

### WATER HEATER SCHEDULE

<table>
<thead>
<tr>
<th>NAME</th>
<th>MARK</th>
<th>RECOVERY</th>
<th>STORAGE (GAL.)</th>
<th>STOR TEMP (F)</th>
<th>DEL TEMP (F)</th>
<th>INPUTS</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EWH-1</td>
<td>BRADFORD WHITE</td>
<td>55</td>
<td>90</td>
<td>119</td>
<td>140</td>
<td>120</td>
<td>ELEC 208/3 12</td>
</tr>
</tbody>
</table>
### ELECTRICAL SYMBOLS AND ABBREVIATIONS

<table>
<thead>
<tr>
<th>MARK</th>
<th>ITEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>DISCONNECT SWITCH</td>
</tr>
<tr>
<td>DF</td>
<td>DISTRIBUTED FEED</td>
</tr>
<tr>
<td>E</td>
<td>ELECTRICALLY OPERATED</td>
</tr>
<tr>
<td>E-1</td>
<td>ONE-WAY Switch</td>
</tr>
<tr>
<td>E-2</td>
<td>TWO-WAY Switch</td>
</tr>
<tr>
<td>E-3</td>
<td>WALL SWITCH</td>
</tr>
<tr>
<td>E-4</td>
<td>RECEPTACLE</td>
</tr>
<tr>
<td>E-5</td>
<td>FUSE</td>
</tr>
<tr>
<td>E-6</td>
<td>DUAL FUSE</td>
</tr>
<tr>
<td>E-7</td>
<td>GROUND-FAULT CIRCUIT INTERRUPTER</td>
</tr>
<tr>
<td>E-8</td>
<td>GROUND-Fault PROTECTION</td>
</tr>
<tr>
<td>E-9</td>
<td>COUPLER</td>
</tr>
<tr>
<td>E-10</td>
<td>GRID</td>
</tr>
<tr>
<td>E-11</td>
<td>CIRCUIT BREAKER</td>
</tr>
<tr>
<td>E-12</td>
<td>ELECTRIC PANEL</td>
</tr>
<tr>
<td>E-13</td>
<td>POWER SUPPLY</td>
</tr>
<tr>
<td>E-14</td>
<td>LIGHTING</td>
</tr>
<tr>
<td>E-15</td>
<td>VOLTAGE TRANSFORMER</td>
</tr>
<tr>
<td>E-16</td>
<td>TRANSFORMER</td>
</tr>
<tr>
<td>E-17</td>
<td>DISCONNECT</td>
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<tr>
<td>E-18</td>
<td>VAULT</td>
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<tr>
<td>E-19</td>
<td>GROUND</td>
</tr>
<tr>
<td>E-20</td>
<td>kWh</td>
</tr>
<tr>
<td>E-21</td>
<td>STABILIZED</td>
</tr>
<tr>
<td>E-22</td>
<td>LOAD CENTER</td>
</tr>
<tr>
<td>E-23</td>
<td>OVERHEAD</td>
</tr>
<tr>
<td>E-24</td>
<td>CORRUGATED</td>
</tr>
<tr>
<td>E-25</td>
<td>GROUND</td>
</tr>
<tr>
<td>E-26</td>
<td>ENCLOSURE</td>
</tr>
<tr>
<td>E-27</td>
<td>FIRE ALARM</td>
</tr>
<tr>
<td>E-28</td>
<td>ACCESS CONTROL</td>
</tr>
<tr>
<td>E-29</td>
<td>VOLUME CONTROL</td>
</tr>
<tr>
<td>E-30</td>
<td>LIGHTING CONTROL</td>
</tr>
<tr>
<td>E-31</td>
<td>NIGHT LIGHT</td>
</tr>
<tr>
<td>E-32</td>
<td>PUSH BUTTON</td>
</tr>
<tr>
<td>E-33</td>
<td>OCCUPANCY SENSOR</td>
</tr>
<tr>
<td>E-34</td>
<td>PUSH TO TALK</td>
</tr>
<tr>
<td>E-35</td>
<td>CALL BELL</td>
</tr>
<tr>
<td>E-36</td>
<td>HANDHELD</td>
</tr>
<tr>
<td>E-37</td>
<td>TELEPHONE</td>
</tr>
<tr>
<td>E-38</td>
<td>纖維光線傳輸器</td>
</tr>
<tr>
<td>E-39</td>
<td>PHOTOELECTRIC CELL</td>
</tr>
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<td>E-40</td>
<td>DAYLIGHT SENSOR</td>
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<td>E-41</td>
<td>INTERCOM</td>
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<td>E-42</td>
<td>PLUMB</td>
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<td>E-43</td>
<td>HARDWIRE</td>
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<td>E-44</td>
<td>FAN</td>
</tr>
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<td>E-45</td>
<td>FAN-CLUSTER</td>
</tr>
<tr>
<td>E-46</td>
<td>ELECTRIC FURNACE</td>
</tr>
<tr>
<td>E-47</td>
<td>MOTOR</td>
</tr>
</tbody>
</table>

### ELECTRICAL GENERAL REQUIREMENTS:

1. **Circuit Numbers**: All electrical circuits shall be labeled with circuit numbers in accordance with the NFPA 70 and the project requirements. The circuit numbers shall be visible and accessible throughout the building.

2. **Lighting**: ALL LIGHTING fixtures shall be installed in accordance with the NFPA 70 and the project requirements. The lighting fixtures shall be marked with their wattage and type of bulb.

3. **Electrical Panels**: ALL ELECTRICAL panels shall be labeled with the panel number and the circuit numbers. The panels shall be marked with a clearly visible label indicating the size of the panel and the type of equipment it contains.

4. **Grounding**: ALL ELECTRICAL equipment shall be grounded in accordance with the NFPA 70 and the project requirements. The grounding conductors shall be marked with the letter "G".

5. **Overhead Wiring**: ALL OVERHEAD wiring shall be supported by dedicated J-hooks and shall be marked with the type of wire and the circuit number.

6. **Underground Wiring**: ALL UNDERGROUND wiring shall be supported by dedicated J-hooks and shall be marked with the type of wire and the circuit number.

### FIRE ALARM SYSTEM

1. **Fire Alarm Systems**: ALL FIRE ALARM systems shall comply with the NFPA 72 and the project requirements. The fire alarm systems shall be marked with the type of system and the manufacturer.

2. **Smoke Detectors**: ALL SMOKE DETECTORS shall be installed in accordance with the NFPA 72 and the project requirements. The smoke detectors shall be marked with the type of detector and the manufacturer.

3. **Heat Detectors**: ALL HEAT DETECTORS shall be installed in accordance with the NFPA 72 and the project requirements. The heat detectors shall be marked with the type of detector and the manufacturer.

### LOW VOLTAGE SYSTEM

1. **Low Voltage Systems**: ALL LOW VOLTAGE systems shall comply with the NFPA 70 and the project requirements. The low voltage systems shall be marked with the type of system and the manufacturer.

2. **Network Systems**: ALL NETWORK systems shall be installed in accordance with the NFPA 70 and the project requirements. The network systems shall be marked with the type of network and the manufacturer.

3. **Access Control Systems**: ALL ACCESS CONTROL systems shall be installed in accordance with the NFPA 70 and the project requirements. The access control systems shall be marked with the type of system and the manufacturer.

### PROJECT REQUIREMENTS

1. **Fire Protection Systems**: ALL FIRE PROTECTION systems shall comply with the NFPA 13 and the project requirements. The fire protection systems shall be marked with the type of system and the manufacturer.

2. **Sprinkler Systems**: ALL SMOKE DETECTORS and SPRINKLER systems shall be installed in accordance with the NFPA 13 and the project requirements. The sprinkler systems shall be marked with the type of system and the manufacturer.

3. **Emergency Lighting**: ALL EMERGENCY LIGHTING systems shall comply with the NFPA 70 and the project requirements. The emergency lighting systems shall be marked with the type of system and the manufacturer.

4. **Lighting Controls**: ALL LIGHTING CONTROL systems shall be installed in accordance with the NFPA 70 and the project requirements. The lighting controls shall be marked with the type of control and the manufacturer.

### ELECTRICAL CONTRACTOR

The ELECTRICAL CONTRACTOR shall be responsible for the design and installation of the electrical systems in accordance with the project requirements. The ELECTRICAL CONTRACTOR shall be responsible for all electrical work, including the installation of electrical panels, wiring, and electrical devices.

### ACCESS CONTROL

The ACCESS CONTROL systems shall be installed in accordance with the project requirements. The ACCESS CONTROL systems shall be marked with the type of system and the manufacturer.

### UPLOADS SUMMARY OF CONTACTS

1. **Architect/Engineer**: Studio Architecture, P.C.
2. **Electrical Contractor**: E.C.
3. **General Contractor**: A-1, 3, 5
4. **Furniture Supplier**: A-1, 3, 5
5. **Plumbing Contractor**: A-1, 3, 5

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<table>
<thead>
<tr>
<th>CALL-OUT</th>
<th>TYPE</th>
<th>DESCRIPTION</th>
<th>MANUFACTURER</th>
<th>CATALOG NUMBER</th>
<th>GENERAL NOTES</th>
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</thead>
<tbody>
<tr>
<td>10106</td>
<td>D</td>
<td>LED DOWNLIGHT</td>
<td>LITHONIA</td>
<td>LDN4 35/10 LO4 WR L SS MVOLT GZ10 TRW</td>
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</tr>
<tr>
<td>10107</td>
<td>D</td>
<td>LED DOWNLIGHT</td>
<td>LITHONIA</td>
<td>LDN4 35/10 LO4 WR LSS MVOLT GZ10 TRW</td>
<td>EGRESS</td>
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<td>10108</td>
<td>F</td>
<td>LED FLAT PANEL</td>
<td>LITHONIA</td>
<td>CPX 2X2 3200LM 35K M4</td>
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<tr>
<td>10109</td>
<td>F</td>
<td>LED FLAT PANEL</td>
<td>LITHONIA</td>
<td>CPX 2X2 3200LM 35K M4</td>
<td>EGRESS</td>
</tr>
<tr>
<td>10110</td>
<td>H</td>
<td>LED HIGHBAY</td>
<td>LITHONIA</td>
<td>IBL 12L WD SD125 LP 835 SUSPEND AT 18'-0&quot;</td>
<td></td>
</tr>
<tr>
<td>10111</td>
<td>H</td>
<td>LED HIGHBAY</td>
<td>LITHONIA</td>
<td>IBL 12L WD SD125 LP 835 I2412 SUSPEND AT 18'-0&quot;</td>
<td>EGRESS</td>
</tr>
<tr>
<td>10112</td>
<td>HZ</td>
<td>LED CLASS 1 DIV 1</td>
<td>HOLOPHANE</td>
<td>HXPL 5L 4 2T AS SUSPEND AT 9'-0&quot;</td>
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<td>10113</td>
<td>M</td>
<td>LED UTILITY LIGHT</td>
<td>LITHONIA</td>
<td>ZL1N L48 5000LM FST MVOLT 35K 80CRI</td>
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<tr>
<td>10114</td>
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<td>LED UTILITY LIGHT</td>
<td>LITHONIA</td>
<td>ZL1N L48 3000LM M FST MVOLT 35K 80CRI</td>
<td>E10WLCP</td>
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<td>10115</td>
<td>W</td>
<td>LED WALLPACK</td>
<td>LITHONIA</td>
<td>DSXW1 LED 20C 1000 40K T4M 120 DDBXD</td>
<td>MOUNT AT 17'-0&quot; A.F.F.</td>
</tr>
<tr>
<td>10116</td>
<td>WE</td>
<td>LED WALLPACK</td>
<td>LITHONIA</td>
<td>DSXW1 LED 1000 40K T4M 120 ELCW DDBXD</td>
<td>MOUNT AT 17'-0&quot; A.F.F.</td>
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<tr>
<td>10117</td>
<td>X1</td>
<td>EXIT SIGN</td>
<td>LITHONIA</td>
<td>EXR LED EL M6</td>
<td></td>
</tr>
</tbody>
</table>
ENTRY / STORE

OFFICE / RECEPTION

BREAK AREA

RESTROOM

ENTRY / STORE

OFFICE / RECEPTION

BREAK AREA

RESTROOM

1. ALL RECEPTACLES WILL BE MOUNTED AT 48" ABOVE FINISHED FLOOR WITH THE EXCEPTION OF BREAK ROOM AND OFFICE.

2. SEE SHEET E002 FOR MECHANICAL EQUIPMENT CONNECTION SCHEDULE.

COORDINATE FINAL OVERHEAD DOOR POWER, SENSORS, AND CONTROL WITH SUBMITTED EQUIPMENT. (TYP. OF 3)

OVERHEAD DOOR CONTROL BUTTON STATION. (TYP. OF 3)


UH-1, UH-2, UH-3

F-1, F-2, F-3

HP-1

CR

COORDINATE CAMERA LOCATIONS WITH OWNER (TYP)
35 GROUNDING BAR DETAIL (MGB + TGB)

ELECTRICAL CODE.

NEC REFERENCES ARE FROM 2014 NATIONAL

DAMAGE.

GROUND CONDUCTORS SHALL BE STRANDED

CONFIGURATION WILL BE ACCEPTABLE.

INTERCONNECTION OF THE GROUNDING

BOND SIZE SHALL MATCH CONDUCTORS SHOW ON

SIZE PER TABLE 250-102(C)(1)

MAIN DEVICE RATING IS EQUAL TO FEEDER SIZE.

KEYED NOTES-GROUNDING DETAIL:

1. STEEL EXPANSION

ANCHOR

PROJECT. REFER TO PLAN FOR LOCATIONS.

VERIFY EXACT MOUNTING HEIGHTS WITH PROJECT

SCALE : NOT TO SCALE

4/0 

- 2/0

TELECOM GROUND BAR TO BE 4" X 12" MINIMUM.

1.0 INCH CONDUIT STUBBED

- 

- 2/0

- 2,4,6"

- ADHESIVE (LABEL MAKER) LABELS LISTED FOR THE ENVIRONMENT

- 4"

- FED FROM: "MDP

- 46 INCHES

- #6AWG COPPER

- SERVICE DISCONNECT

- GROUND BAR AT

- NEC 250-104(B)

- BONDING PER

- HANDLE

- STATION

- CALL LANTERN

- WALL MOUNTED LIGHT FIXTURE

- 120/208V 3

- EXTERIOR LIGHTING CIRCUITS

- FED FROM: "LB

- 3 FOOT

- NEUTRAL BUS AT

- HVAC SUPPLY

- UNIT

- 3/0

- 4/0

- 6 INCHES

- 9 STANDARD DEVICE MOUNTING

- FEET ABOVE DOOR

- MINIMUM

- 6 ELECTRICAL EQUIPMENT LABELING

- VISUAL ONLY

- AUDIBLE/VISUAL

- PANEL "LA" - SIGNATURE/Application

- 20 AWG BUSS

- RED FROM TABLE 295-1

- 2 BOLT/SCREW

- TIES AT 12"

- #3 TIES AT 12"

- RECEPTACLES OR LOW VOLTAGE DEVICES.

- INSTALLATION SHALL BE MODIFIED AS REQUIRED FOR CMU WALLS OR OTHER

- WALL OR CEILING TYPES ENCOUNTERED.

- ADHESIVE BACK (TYP.)

- ENGINEERED 0.0625 INCH

- ENGRAVED

- THICK

- 1/0

- 2/0

- 2/0

- 2/0

- 3/0

- 3/0

- 4/0

- 6

- 6 INCHES

- 90 INCHES

- CHAMFERED EDGE

- ARCHITECTURAL MILLWORK, ETC. REFER

- WITH BATTERIES.

- TELEDATA FACEPLATE WITH JACKS

- LAY IN CEILING

- METAL STUD

- 4X4 J

- LUMINAIRE MOUNTING - LAY-IN CEILING

- 3 LUMINAIRE MOUNTING - LAY-IN CEILING

- DATA CABLING AND CONNECTORS

- TELEDATA FACEPLATE WITH JACKS

- LAY IN CEILING

- SUSPENSION WIRES

- (TYP)

- 3 TWIST MINIMUM

- WIRE TIE OR SCREW

- ARCHITECTURAL CEILING HANGER

- RECEPTACLE TERMINATION NUMBER WITH CLEAR

- FACEPLATE

- ACCESSIBLE CEILING. PROVIDE

- CONDUIT TO ABOVE NEAREST

- LUMINAIRE HANGER

- ARCHITECTURAL SUSPENSION WIRES

- ARCHITECTURAL CEILING HANGER

- LIGHTING POLE BASE DETAIL.

- BOLT/SCREW

- TIES AT 12"

- #3 TIES AT 12"

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- #3 TIES AT 12"

- ACCESSIBLE CEILING. PROVIDE

- CONDUIT TO ABOVE NEAREST

- PANEL "LA" - SIGNATURE/Application

- 20 AWG BUSS

- RED FROM TABLE 295-1

- 2 BOLT/SCREW

- TIES AT 12"

- #3 TIES AT 12"

- ACCESSIBLE CEILING. PROVIDE

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- PANEL "LA" - SIGNATURE/Application

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