KENT COUNTY DEPARTMENT OF PUBLIC WORKS

AGENDA

November 10, 2016

9:45 AM

Recycling and Education Center
977 Wealth Street SW
Grand Rapids, Michigan 49503

2016 BOARD

Theodore J. Vonk
Chair

Shana Shroll
Vice Chair

William Byl
Secretary

Dave Bulkowski

David Groenleer

Dan Koorndyk

Richard Vander Molen

Darwin J. Baas
Director

I. Call to Order

II. Review and Approval of Minutes

III. Director's 2016 Performance Review Packet

IV. Solid Waste Operations

- A. 2017 Earthwork Contract – Action Request
- B. WTE Ash Monofill MSE Wall Bid Package Preparation – Action Request

V. Resource Recovery and Recycling Operations

- A. Recycling Center Exhibits – Action Request
- B. REC Scalehouse Construction – Action Request

VI. Environmental Compliance Management

- A. Analytical Testing Services – Action Request
- B. Kentwood Landfill Methane Migration Update

VII. Approval of Monetary Outlays

VIII. Director's Report

- A. CRT TV Recycling Promotion Final Tally
- B. Retirement Announcement – WTE Manager
- C. MPSC Contested Case – Avoided Cost Hearing

Earl G. Woodworth Building
1500 Scribner Avenue NW
Grand Rapids, MI 49504-3233

Telephone: 616.632.7920
Facsimile: 616.632.7925
kcdpw@kentcountymi.gov

IX. Administration

A. Kent County Waste Reduction Conceptual Plan Presentation

B. Sustainable Business Park Master Plan RFP – Action Request

X. Public Comment & Miscellaneous

XI. Adjournment

KENT COUNTY BOARD OF PUBLIC WORKS

MINUTES

October 6, 2016

8:30 AM

MEMBERS PRESENT: Commissioners Vonk, Koorndyk, Groenleer, Shroll, Bulkowski, VanderMolen, Byl

OTHERS PRESENT: Darwin Baas, Director; Elissa Soto, Office Manager; Nic VanderVinne, Resource Recovery & Recycling Manager; Becky Dyer, Financial Supervisor; Molly Sherwood, Environmental Compliance Manager; Cal Brinks, Kent County Purchasing Division

I. Call to Order

Chair Vonk called the meeting to order at 8:30 a.m.

II. Review and Approval of Minutes

MOTION

It was moved by Commissioner VanderMolen and seconded by Commissioner Byl to approve the September 7, 2016 minutes.

Motion carried unanimously.

III. Consent Agenda

A. Conference/Education Travels – Action Requests

i. NAHMMA Conference

Review and approval for one staff member and any Board members to attend the NAHMMA Conference in Portland, Oregon.

ii. MRF & Recycling Plant Operations Forum

Review and approval for two staff members and any Board members to attend the MRF and Recycling Plant Operations Forum in Chicago, Illinois.

MOTION

It was moved by Commissioner Shroll and seconded by Commissioner Byl to approve the consent agenda.

Motion carried unanimously.

IV. Administration

A. Service Awards

i. Dan Vos – 25 years

ii. Lori Herrington – 15 years

The Board recognized and thanked Dan Vos and Lori Herrington for their years of service.

B. Kent County Waste Reduction Conceptual Plan

Board members received a draft copy of the Waste Reduction Conceptual Plan for review. Staff will provide a final copy of the plan and presentation for an in-depth review at the November 2016 meeting.

V. Solid Waste Operations

A. 2017 SKL, NKTS & REC Disposal Rates

Staff recommended approval of the 2017 Waste Description and Rates schedule for North Kent Transfer Station, South Kent Landfill and the Recycling and Education Center. Staff reported that rates for South Kent Landfill and North Kent Transfer Station have not changed from the 2016 Disposal Rates. The Environmental and Safety Fee, Michigan Surcharge and County Surcharge are included in load rates for the minimum charge customers.

The Recycling and Education Center rates of $35.00 per ton for Kent County, $40.00 per ton for Non Kent County, $45.00 per transfer loads were added to the rate schedule.

MOTION

It was moved by Commissioner VanderMolen and seconded by Commissioner Byl to approve the 2017 Waste Description and Rates schedule for the North Kent Transfer Station, the South Kent Landfill and the Materials Recycling Facility.

Motion carried unanimously.

VI. Waste-to-Energy Facility Operations

A. 2017 WTE Disposal Rates

Staff recommend approval of the Waste to Energy Facility 2017 General Refuse and Special Waste Disposal Rates. The General Refuse disposal fee of $45.00 per ton and the Special Waste Rate consisting of a minimum fee of $90.00 for up to the first 2,000 pounds of material and prorated at $90.00 per ton for additional material is unchanged from the 2016 Rate. No adjustments are necessary.

MOTION

It was moved by Commissioner Shroll and seconded by Commissioner Bulkowski to approve a 2017 Waste to Energy General Refuse Disposal Rate of $45.00 per ton and a minimum Special Waste Disposal Rate of $90.00 per ton effective January 1, 2017.

Motion carried unanimously.

VII. Environmental Compliance Management

A. Kentwood Landfill Methane Gas Migration

Molly Sherwood, Environmental Compliance Manager, gave an update on Kentwood Landfill Methane Gas Migration issue. She reported that to date only three (3) residents have asked for their homes to be tested. No methane was detected in any of these homes. Golder Associates is putting together a plan for methane monitoring expansion. The goal is to have construction completed by the end of the year. Staff plans to have another question answer meeting mid November.

VIII. Approval of Monetary Outlays

MOTION

It was moved by Commissioner Byl and seconded by Commissioner Shroll to approve the monetary outlays for October 2016.

Motion carried unanimously.

IX. Director's Report

A. Mayor's Grand River Cleanup – The DPW worked with WMEAC to provide a roll off box and volunteers to clean up along the river. Over 560 pounds of trash and 160 pounds of recyclables was collected.

B. Electronics Recycling – CRT/TV collection was an overwhelming success; the final tally will be provided in November but presently stands at 1M pounds collected in 10 weeks.

C. WTE Outage Update – the circulation lines and other scheduled repairs during the 10-day scheduled outage are complete and the facility will be generating electricity later today.

X. Public Comment & Miscellaneous

Chair Vonk let Board members know to expect the director's annual review in the November agenda packet.

XI. Adjournment

The meeting adjourned at 9:07 a.m.

MEETING DATE: **November 10, 2016**

AGENDA ITEM#: IV – A

BOARD OF PUBLIC WORKS ACTION REQUEST

SUBJECT: 2017 South Kent Landfill Annual Earthwork Contract

DIVISION: Solid Waste Operations

PREPARED BY: Dan Rose, Solid Waste Operations Manager

ACTION REQUESTED:

Approval of annual earthwork contract for South Kent Landfill.

SUMMARY OF REQUEST:

Staff, through the Purchasing Division, requested bids for the annual earthwork contract at the South Kent Landfill.

This unit price contract involves soil excavation for future cell development and excavation for meeting daily soil usage needs at the facility. In 2017 we anticipate that approximately 89,000 cubic meters of excavation will be required. In addition, the contractor will be responsible for meeting other excavation needs performed on an hourly rate basis. These tasks consist of pond cleaning, ditch cleaning, gas well raising and other general excavation and earthwork needs not covered by the unit price items of the contract.

One qualified bid was received on October 28, 2016. Based on bid evaluation, staff recommends awarding the 2017 earthwork contract to Oetman Excavating of Wayland, MI, the low, responsive bidder, in the amount of $691,240.

SUGGESTED MOTION:

It was moved by_____ and seconded by_____ to award the South Kent Landfill 2017 Annual Earthwork contract to Oetman Excavating LLC in the amount of $691,240.

ATTACHMENTS:

Bid - Oetman Excavating, LLC

GOVERNING/ADVISORY BOARD APPROVAL DATE: November 10, 2016

DEPARTMENT DIRECTOR: _____

BID 1860 Solicitation

Vendor Information

Company Name:	Oetman Excavating LLC
Contact Name:	Dan Rookus
Contact Title:	Est./PM
Address 1:	4122 Division
City:	Wayland
State:	MI
Zip Code:	49348
Email:	danr@oetmanexcavating.com
Phone:	(616) 877-4097

Addenda

X - No addenda was received

Terms

After receipt of a Kent County purchase order, this order will be complete within:
Bid prices are firm for Kent County's acceptance until: **30 days**
Invoice Terms: **NET 30**

References

Company	Name	Title	Phone	Email
Dan Vos construction	Mr. John DeBlay	Pres.	(616) 676-9169	johndb@danvoscc.com
Triangle Assoc.	Mr. Scott Jernberg	PM	(616) 453-3950	Scottj@triangle-inc.com
Pinnacle construction	Mr. Brett Bowen	PM	(616) 451-0500	bb@askourclients.com

Attachments

Oetman Excavating LLC_BID1860_0.pdf

Additional Vendor Comments:

UNITED FIRE & CASUALTY COMPANY 118 Second Avenue SE, PO Box 73909
Cedar Rapids, Iowa 52407-3909 319-399-5700

Bid Bond

CONTRACTOR:
(Name, legal status and address)
Oetman Excavating, Inc.
4122 S. Division
Wayland, MI 49348

SURETY:
(Name, legal status and principal place of business)
United Fire & Casualty Company
118 Second Avenue SE
P.O. Box 73909
Cedar Rapids, Iowa 52407

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

OWNER:
(Name, legal status and address)
Kent County Dept. of Public Works
300 Monroe Ave NW
Grand Rapids, MI 49503

BOND AMOUNT:
5% Five Percent of Amount Bid

PROJECT:
(Name, location or address, and Project number, if any)
South Kent Refuse Disposal System Annual Earthwork Contract

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 28th day of October, 2016

(Witness)

(Witness) James Hayward

Oetman Excavating, Inc.
(Principal) (Seal)
By:
(Title) PRESIDENT

UNITED FIRE & CASUALTY COMPANY
(Surety) (Seal)
By: Valerie Giuliano
(Title) Attorney in Fact
Valerie Giuliano

The language in this document conforms exactly to the language used in AIA Document A310 2010 edition.

UNITED FIRE & CASUALTY COMPANY, CEDAR RAPIDS, IA
UNITED FIRE & INDEMNITY COMPANY, WEBSTER, TX
FINANCIAL PACIFIC INSURANCE COMPANY, ROCKLIN, CA

Inquiries: Surety Department
118 Second Ave SE
Cedar Rapids, IA 52401

CERTIFIED COPY OF POWER OF ATTORNEY
(original on file at Home Office of Company – See Certification)

KNOW ALL PERSONS BY THESE PRESENTS, That UNITED FIRE & CASUALTY COMPANY, a corporation duly organized and existing under the laws of the State of Iowa; UNITED FIRE & INDEMNITY COMPANY, a corporation duly organized and existing under the laws of the State of Texas; and FINANCIAL PACIFIC INSURANCE COMPANY, a corporation duly organized and existing under the laws of the State of California (herein collectively called the Companies), and having their corporate headquarters in Cedar Rapids, State of Iowa, does make, constitute and appoint Valerie Giuliano their true and lawful Attorney-in-Fact with power and authority hereby conferred to sign, seal and execute in its behalf all lawful bonds, undertakings and other obligatory instruments of similar nature provided that no single obligation shall exceed $100,000,000.00

Surety Bond Number: Bid Bond
Principal: Oetman Excavating, Inc.
Obligee: Kent County Dept. of Public Works

and to bind the Companies thereby as fully and to the same extent as if such instruments were signed by the duly authorized officers of the Companies and all of the acts of said Attorney, pursuant to the authority hereby given and hereby ratified and confirmed.

The Authority hereby granted is continuous and shall remain in full force and effect until revoked by UNITED FIRE & CASUALTY COMPANY, UNITED FIRE & INDEMNITY COMPANY, AND FINANCIAL PACIFIC INSURANCE COMPANY.

This Power of Attorney is made and executed pursuant to and by authority of the following bylaw duly adopted on May 15, 2013, by the Boards of Directors of UNITED FIRE & CASUALTY COMPANY, UNITED FIRE & INDEMNITY COMPANY, and FINANCIAL PACIFIC INSURANCE COMPANY.

"Article VI – Surety Bonds and Undertakings"

Section 2, Appointment of Attorney-in-Fact. "The President or any Vice President, or any other officer of the Companies may, from time to time, appoint by written certificates attorneys-in-fact to act in behalf of the Companies in the execution of policies of insurance, bonds, undertakings and other obligatory instruments of like nature. The signature of any officer authorized hereby, and the Corporate seal, may be affixed by facsimile to any power of attorney or special power of attorney or certification of either authorized hereby; such signature and seal, when so used, being adopted by the Companies as the original signature of such officer and the original seal of the Companies, to be valid and binding upon the Companies with the same force and effect as though manually affixed. Such attorneys-in-fact, subject to the limitations set forth in their respective certificates of authority shall have full power to bind the Companies by their signature and execution of any such instruments and to attach the seal of the Companies thereto. The President or any Vice President, the Board of Directors or any other officer of the Companies may at any time revoke all power and authority previously given to any attorney-in-fact.

IN WITNESS WHEREOF, the COMPANIES have each caused these presents to be signed by its vice president and its corporate seal to be hereto affixed this 25th day of June, 2015

UNITED FIRE & CASUALTY COMPANY
UNITED FIRE & INDEMNITY COMPANY
FINANCIAL PACIFIC INSURANCE COMPANY

By: Dennis J Richmann
Vice President

State of Iowa, County of Linn, ss:
On 25th Day of June, 2015, before me personally came Dennis J. Richmann to me known, who being by me duly sworn, did depose and say; that he resides in Cedar Rapids, State of Iowa; that he is a Vice President of UNITED FIRE & CASUALTY COMPANY, a Vice President of UNITED FIRE & INDEMNITY COMPANY, and a Vice President of FINANCIAL PACIFIC INSURANCE COMPANY the corporations described in and which executed the above instrument; that he knows the seal of said corporations; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporations and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporations.

Mary A. Bertsch
Iowa Notarial Seal
Commission number 713273
My Commission Expires 10/26/2016

Mary A Bertsch
Notary Public
My commission expires: 10/26/2016

I, David A. Lange, Secretary of UNITED FIRE & CASUALTY COMPANY and Assistant Secretary of UNITED FIRE & INDEMNITY COMPANY, and Assistant Secretary of FINANCIAL PACIFIC INSURANCE COMPANY, do hereby certify that I have compared the foregoing copy of the Power of Attorney and affidavit, and the copy of the Section of the bylaws and resolutions of said Corporations as set forth in said Power of Attorney, with the ORIGINALS ON FILE IN THE HOME OFFICE OF SAID CORPORATIONS, and that the same are correct transcripts thereof, and of the whole of the said originals, and that the said Power of Attorney has not been revoked and is now in full force and effect.

In testimony whereof I have hereunto subscribed my name and affixed the corporate seal of the said Corporations this 28th day of October 2016.

By: David A. Lange

Secretary, UF&C
Assistant Secretary, UF&I/FPIC

BID FORM
South Kent Landfill Annual Earthwork Contract

BIDDERS NAME Oetman Excavating LLC

Having carefully examined the site of the proposed work, being fully informed on the conditions to be met in the prosecution and completion of the work; having read and examined the Contract Documents applicable to this work; agreeing to be bound accordingly; the Undersigned proposes to furnish all mobilization and demobilization, labor, materials, and equipment to complete the construction described in the specifications for the unit prices listed in this Bid.

Contract Bid Schedule
Kent County Department of Public Works, Refuse Disposal System South Kent Landfill Annual Earthwork Contract (December 1, 2016 through November 30, 2017)

NOTE 1: Submit bid for all items. In case of error in the extension of prices, unit prices govern. In case of error in summation, the total of the corrected bid amount governs.

NOTE 2: The prices given below are based on an awarding of the Contract no later than forty-five (45) days from the date of the Bid Opening.

LINE / DESCRIPTION / EST. QUANTITY		UNIT	UNIT PRICE	AMOUNT OF BID
1.	Excavation / 89,000	C.M.	$ 2.95	$ 262,550.-
2.	Daily Cover / 60,700	C.M.	$ 1.70	$ 103,190.-
3.	Stockpile / 2,000	C.M.	$ 3.50	$ 7,000.-
4.	Intermediate Cover (CIP) / 21,800	C.M.	$ 2.50	$ 54,500.-
5.	Final Cover (CIP) / 4,000	C.M.	$ 2.50	$ 10,000.-
6.	Structural Fill (CIP) / 500	C.M.	$ 8.00	$ 4,000.-
7.	Hourly Work (Allowance)		$ NA	$ 225,000.00
8.	Work performed at other sites (Allowance)	(% Change)	+ 10 %	$ 20,000.00
9.	Silt Fence/ 500	Meters.	$ 10.00	$ 5000.-

TOTAL BID (Items 1 through 9) $ 691,240.-

BIDDERS NAME Oetman Excavating LLC

Above quantities are estimated and will be used to solicit bids, but payment will be made only for actual quantities of work completed.

ABBREVIATIONS:	S.M. - square Meters
C.M. - Cubic Meters	L.M. - Linear Meters
C.I.P. - Compacted in Place	ea. – Each

Bidder acknowledges receipt of the following addendum(s) – circle addendum numbers: 1, 2, 3, 4, 5 N/A

The Undersigned agrees to provide quantities as specified in the Contract on a daily or weekly basis, and to complete all other work in conjunction with the Engineer or Landfill Manager in a workmanlike manner. Weekly work summary forms provided by the Kent County Department of Public Works shall be kept up to date by the Contractor on a daily basis and shall be submitted to the Department of Public Works at the end of each week.

BID FORM
South Kent Landfill Annual Earthwork Contract

BIDDERS NAME Oetman Excavating LLC

In the lines provided below, list each piece of equipment available for work under this contract and the corresponding hourly rental rate. This rate shall be used to charge any miscellaneous work which the Owner may request, and which the Contractor agrees to do. Hourly rates shall include all manpower, maintenance, fuel costs associated with operating machinery. Indicate the combined move-in and move-out charges either in dollars or hours (i.e., at equipment hourly rate). Move-in and move-out charges will not be charged if the equipment is already at the job site at the time the work requested is to begin. The County shall pay mobilization costs one time per piece of equipment delivered to the South Kent Landfill for the use in hourly work charges; additional mobilizations may be pre-approved by Kent County staff.

Bidder may use separate form for equipment rates as given that all requested information is provided

EQUIPMENT	HOURLY RATE	Based on 40 hrs WEEKLY RATE	MOVE-IN/ MOVE OUT CHARGE
Standard Track Bulldozers:			
D6	300.-	12,000.-	1,000.-
650	250.-	10,000.-	500.-
550	240.-	9,600.-	500.-
Wide Track Bulldozers:			
D6	350.-	14,000.-	1,000.-
700	300.-	12,000.-	750.-
650/450	280.-	11,200.-	500.-
Rubber-Tired Loaders:			
70	250.-	10,000.-	500.-
80	300.-	12,000.-	500.-
150	300.-	12,000.-	500.-
Motor Graders:			
672	340.-	13600.-	500.-
Scrapers:			
Tractor/pan	350.-	13,000.-	1,000.-
615	285.-	11,400.-	1,000.-

BID FORM

South Kent Landfill Annual Earthwork Contract

BIDDERS NAME Oetman Excavating LLC

Back Hoes:			
Mini Exc	200.-	8,000.-	500.-
140	250.-	10,000.-	1,000.-
Water Wagon:			
truck	200.-	8000.-	250.-
Hydraulic Excavators:			
450/350	350.-	14,000.-	3000.-
330	335.-	13,400.-	1000.-
200 class	310.-	12,400.-	1,000.-
Track Mounted Trucks:			
-	-	-	-
Off-Road Trucks:			
25T	325.-	13,000.-	500.-
30T	350.-	14,000.-	500.-
Lead Trucks (26 C.Y.):			
MESC	250.-	10,000.-	250.-
Skidsteers:			
track	165.-	6,600.-	250.-
wheel	140.-	5,600.-	250.-
Vibratory Steel Rollers Sheepsfoot and Smooth Drum (with rubber tire rear drive):			
Sheeps foot	200.-	8,000.-	500.-
smooth Drum	200.-	8,000.-	500.-
Vibratory Steel Rollers Sheepsfoot (CAT 815K, 825K or equivalent):			
815K	400.-	16,000.-	1500.-
Other Miscellaneous Equipment:			
-	-	-	-
Personnel:			
Laborer	25.00		

BIDDERS NAME Oetman Excavating LLC

The Undersigned agrees to enter into a contract in that regard within twenty (20) days from the date of your acceptance of this proposal to furnish and complete said work according to the forms of Contract now in use for the doing of such work.

LIST OF SUBCONTRACTORS

The Bidder shall list, in the space provided in this bid form, the name and location of the place of business of each Subcontractor who will perform any portion of the work in an amount in excess of one-half of one percent of the total amount of the bid, and the portions of the work and total value which each is to perform.

Unless approval is granted by the Engineer, Contractor may not select Subcontractors different than those listed below after the bid opening.

Upon completion of the work before final Payment will be made, the Contractor shall submit sworn statements from each Subcontractor waiving their rights to any liens regarding the performance of the above stated work.

Items or Portion of Work to Be Performed	Name and Address of Subcontractor	Total Value
NA	NA	NA

BIDDERS NAME Oetman Excavating LLC

PROOF OF RESPONSIBILITY

If the Owner is not satisfied with the sufficiency of the answers to the questionnaire and financial statement, it may notify the bidder that they are not qualified to bid on this project, or otherwise require additional information.

STATEMENT OF BIDDERS QUALIFICATIONS (If not previously submitted)

1. Name of Bidder: Oetman Excavating LLC – DAN Rookus
2. Bidder's Address: 4122 Division, Wayland, MI 49348
3. When Organized: 1988
4. Where Incorporated: Michigan
5. Number of years engaged in the contracting business under the present firm name: 28
6. Number of years your organization has experience in construction as a:

   Prime Contractor: 28 Subcontractor: 28

7. List all contracts completed or awarded within the past two years or awarded in previous years but not yet completed. The listing shall give the name of the owner (cities, counties, other), location, work classification, dollar value, and whether you were/are the prime contractor or subcontractor. (Attach supplemental sheets if necessary). List only that work performed by your organization.

Name of Owner	Location	Classification	Dollar Value	Prime or Sub
		SEE ATTACHED		

8. What is the general character of work performed by your firm: Earthwork / Site Utilities
9. Have you ever failed to complete any work awarded to you?

   No X Yes ___ (If so, attach statement showing where and why.)

10. Have you ever defaulted on a contract?

    No X Yes ___ (If so, attach statement showing where and why.)

BID FORM
South Kent Landfill Annual Earthwork Contract

BIDDERS NAME Oetman Excavating LLC

11. Attach a list of the most important contracts completed by your firm, including kind of work and approximate cost. SEE ATTACHED
12. Attach a list of your major equipment (provide make, model & year). SEE ATTACHED
13. Attach a statement of your experience in the construction of work similar to this project. SEE ATTACHED
14. Attach statement of background and experience of the principal members of your personnel including the officers and key field personnel. SEE ATTACHED
15. Furnish written evidence of available credit, preferably from banks. Available AT post BID
16. Financial Statement:

TOTAL ASSETS $ _____
TOTAL LIABILITIES $ _____
NET WORTH $ _____
} Available at post BID

Additional information may be submitted if desired.

Dated this 28th day of October, 2016
Name of Organization Oetman Excavating LLC
BY Dan Rookus
TITLE Estimator
STATE OF MT)
)ss
COUNTY OF Allegan)

Dan Rookus says that he is of Oetman Excavating
(Name of person) (Name of organization)

and that the answers to the foregoing questions and all statements contained are true and correct.

Signed _____

Subscribed and sworn to me this 28th day of October 2016
_____, Notary Public

My Commission Expires 3/11/20

Work in Process

as of 10/27/16

Project	Contract Amount	Prime or Sub
1) ABC Pediatrics 4174-56th St. SW Wyoming, MI	$125,927	Sub
2) Adventure CU-Crossings 6672 Crossing Dr. SE Grand Rapids, MI 49508	$92,157	Sub
3) Chick-Fil-A 1545 Edgeknoll Dr. SE Grand Rapids, MI 49508	$198,000	Sub
4) Health Commons 2021 Health Dr. SW Wyoming, MI 49519	$288,582	Sub
5) Hunters Glen Phase 3 Sun Communities 1132 Hunters Glen Blvd. Wayland, MI 49348	$2,036,340	Prime
6) Irwin Seating 3251 Fruit Ridge NW Grand Rapids, MI 49544	$844,000	Sub
7) Kent Co. Jail Kitchen Kent County 703 Ball Ave. NE Grand Rapids, MI 49503	$138,665	Sub

8)	Kerkstra Precast 3373 Busch Dr. Grandville, MI 49418	$347,460	Sub
9)	KPS High School Parking Lot Kentwood Public Schools 5820 Eastern Ave. SE Kentwood, MI 49508	$353,724	Sub
10)	Leighton Township Hall/Fire Station 2 Leighton Township 4475 Kalamazoo Ave. Caledonia, MI 49316	$120,982	Sub
11)	Litehouse Foods 1400 Foreman Rd. Lowell, MI 49331	$173,130	Sub
12)	Metron Healthbridge LLC 2020 Health Dr. Wyoming, MI 49519	$444,710	Sub
13)	Monsma Marketing 2450 Buchanan Ave. SW Grand Rapids, MI 49458	$555,324	Sub
14)	Saints Cyril & Methodius Church 159-131st Ave. Wayland, MI 49348	$55,198	Sub
15)	The Venue 20 Monroe Ave. NW Grand Rapids, MI 49503	$708,559	Sub

Oetman Excavating, LLC

"Residential & Commercial Excavating"

4122 S. Division • Wayland, MI 49348
Ph: (616) 877-4097 • Fax: (616) 877-0210

October 28, 2016

Completed Projects

Here is a list of some recent major projects that we have completed in the past 5 years.

Caledonia Community Schools-Soccer Field Improvements Sitework
Construction Manager: Lakewood Construction
Contract Amount: $318,809.00 Completion Date: 2012

****

CWD Retail Development Phase I & II-Target/Cabellas Grandville Development Sitework
Construction Manager: Triangle Associates
Contract Amount: $3,263,070.00 Completion Date: 2012

****

Perrigo EAO East-New Office Building Sitework
General Contractor: Dan Vos Construction
Contract Amount: $637,738.00 Completion Date: 2012

****

Walgreens #12561 Cascade-New Building Sitwork
General Contractor: GDK Construction Co.
Contract Amount: $321,254.00 Completion Date: 2012

****

Northview Public Schools-West Oakview District Project-Watermain Extension/Sitework
Construction Manager: Barnes Wolgast Corporation
Contract Amount: $443,347.00 Completion Date: 2012

****

Bradford White Phases 1-3-Site & Facilities Expansion
General Contractor: Kent Companies
Contract Amount: $3,083,253.02 Completion Date: 2013

Alliance Beverage Distribution Center
General Contractor: Pioneer Construction
Contract Amount: $1,841,590.00 Completion Date: 2014

****

Bradford White Foam Room/West Bump Out
General Contractor: Kent Companies
Contract Amount: $463,748.00 Completion Date: 2014

****

Weller Jasper-New Building Sitework
General Contractor: Johnson Construction
Contract Amount: $830,589.00 Completion Date: 2015

****

2500 Burton-Retail Development Sitework
General Contractor: Triangle Associates, Inc.
Contract Amount: $1,154,739.00 Completion Date: 2016

****

Indian Trails Camp-New Building Sitework
General Contractor: Triangle Associates, Inc.
Contract Amount: $686,164.00

EQUIPMENT SCHEDULE
CONTRACTORS' EQUIPMENT

EQUIPMENT SCHEDULE

Item No	Description
000001	1999 KOMATSU CRANE 200 S/N C10666
000002	1998 966F II CAT LOADER S/N 1SL02982
000003	1999 CATERPILLAR LOADER 938G S/N 6WS01221
000004	1999 JD GRADER 570A S/N 10990T
000005	1998 INGERSOLL-RAND SD100D PACKER S/N 153215
000006	1997 CASE STEIGER 9370 S/N JEF0036078
000007	2001 REYNOLDS SCRAPER S/N 32756
000008	2002 REYNOLDS SCRAPER S/N 33579
000009	2000 KOMATSU WA380-5H LDR S/N H50334
000010	2003 JD 450H DOZER S/N T0450HX911675
000011	2001 JOHN DEERE 650H DOZER S/N T0650HX897302
000012	2004 KOBELCO EXCAVATOR SK210LC S/N YS06-U0315
000013	KOMATSU EXCAVATOR PC200-7C S/N C50571
000014	2005 KOBELCO EXCAVATOR S/N YT0407503

EQUIPMENT SCHEDULE
CONTRACTORS' EQUIPMENT

EQUIPMENT SCHEDULE Continued

Item No	Description
000015	1998 VOLVO L150 LOADER S/N 3894
000016	2001 BOMAG ROLLER S/N 1036
000017	1987 INGERSOLL RAND ROLLER S/N 50805
000018	2004 KOBELCO EXCAVATOR S/N YC07U0937
000019	2005 KOBELCO EXCAVATOR S/N YT0407503
000020	2006 CAT D6RLGP DOZER S/N ADE01110
000021	2006 JOHN DEERE 650JLGP DOZER S/N T0650JX120518
000022	1996 VOLVO A25C S/N 0855
000023	CAT TRACTOR S/N 01119
000024	2006 KOBELCO SK330 S/N YC06U1232
000025	TAKEUCHI TL140 SKIDSTEER S/N 31403474
000026	JOHN DEERE 650 JLT DOZER S/N T0650JX114199
000027	2001 CAT 962G LOADER S/N 4PW00533
000028	1994 VOLVO A35 OFF ROAD TRUCK S/N A35V2338

BH.BAROV2 (LANDSCAPE TAGS)
31 * 00000002598PBP2485847081O*

EQUIPMENT SCHEDULE
CONTRACTORS' EQUIPMENT

EQUIPMENT SCHEDULE Continued

Item No	Description	Limit
000029	2005 JOHN DEERE 700H LGP DOZER S/N T0700HX943453	
000030	2005 KOMATSU PC35 S/N 7661	
000031	JOHN DEERE MINI EXCAVATOR S/N 5134	
000032	2007 KOBELCO SK210 EXCAVATOR S/N YQ9U349	
000033	KAWASAKI LOADER S/N 70C5-4027	
000034	2013 MCCLOSKY 621 RF TROMMEL SCREENER	
000035	2014 CASE 1650M DOZER S/N NDDC16516	
000036	2007 HITACHI ZX240 LC-3 EXCAVATOR S/N FF01V1Q021176	
000037	JOHN DEERE 650J DOZER S/N 111675	
000038	2000 HITACHI EX450LC-5 EXCAVATOR S/N 16CP008034	
000039	2005 JOHN DEERE 650J DOZER S/N 111675	
000040	2007 CATERPILLAR 725T OFF ROAD TRUCK S/N 0B1L01364	
000041	2015 KAWASAKI 80Z7 LOADER S/N 80C6-5512	
000042	2006 CATERPILLAR D6RXL DOZER S/N CAT00D6RCAAX01481	

EQUIPMENT SCHEDULE
CONTRACTORS' EQUIPMENT

EQUIPMENT SCHEDULE **Continued**

Item No	Description	Limit
000043	2015 SUPERIOR BROOM DT80CT S/N 812434	
000044	2015 CAT D5K2L DOZER S/N 0KY01742	
000045	2011 JOHN DEERE 672G GRADER S/N 1DW672GXPA0630676	
000046	MCCLOSKEY 30" X 125' RADIAL STACKER S/N 11357	
000047	2015 TAKEUCHI TB290CRA EXCAVATOR S/N 185101893	
000048	2008 CATERPILLAR D6TL C DOZER S/N 0LKJ00336	
000049	2012 CASE 821 LOADER S/N JEE0156472	
000050	2015 KOBELCO SK210LC-9 EXCAVATOR S/N YQ13-T2539	

31 * 00000002598PBP24858470810*

Oetman Excavating, LLC

"Residential & Commercial Excavating"

4122 S. Division • Wayland, MI 49348

Ph: (616) 877-4097 • Fax: (616) 877-0210

October 28, 2016

RE: Experience

Oetman Excavating was founded in 1988. We are a fiscally strong organization which specializes in civil construction and under-ground infrastructure. Our primary focus consists of commercial, industrial, education and municipal projects. We previously worked at the South Kent landfill during the years of 2013, 2014, and 215 providing site-work/cell construction as needed.

Sincerely,

Dan Rookus

Oetman Excavating, LLC

"Residential & Commercial Excavating"

4122 S. Division • Wayland, MI 49348

Ph: (616) 877-4097 • Fax: (616) 877-0210

January 28, 2015

Key Employees

Steve Oetman-Owner

Owner of Oetman Excavating since 1988

Duties: Project Supervisor (All projects), Equipment Operator

Curt Potter-Controller

Employed Since: June, 2001

Duties: AR/AP, Payroll, Insurance, Bonds,

Dan Rookus-Estimator

Employed Since: April, 2001

Duties: Head Estimator, Project Coordinator

Ken Sterk: Foreman

Employed Since: April, 2006

Duties: Site Foreman, Equipment Operator, Concrete Installation

Aaron (AJ) Rogers: Foreman

Employed Since: May, 2013

Duties: Site Foreman, Equipment Operator

MEETING DATE: **November 10, 2016**

AGENDA ITEM#: IV – B

BOARD OF PUBLIC WORKS ACTION REQUEST

SUBJECT: South Kent Landfill Ash Monofill MSE Wall Construction and Bidding Documents

DIVISION: Solid Waste Operations

PREPARED BY: Dan Rose, Solid Waste Operations Manager

ACTION REQUESTED:

To approve Golder Associates to prepare Construction and Bidding Documents for the South Kent Landfill WTE Ash Monofill - MSE Wall project.

SUMMARY OF REQUEST:

The Ash Monofill MSE Wall is proposed to begin construction in early summer of 2017. A final bidding and construction document package is needed for bidding purposes and to fulfill the requirements of the PA 451 Part 115 Solid Waste Management Act Administrative Rules. Golder Associates is currently preparing the Construction Permit application packet for the proposed landfill expansion.

Attached is Golder's proposal dated November 3, 2016. The proposal describes and outlines the scope of work necessary to complete above referenced project. Golder Associates is familiar with the site conditions and is currently working on the associated construction permit and a proven engineering service provider on past DPW projects.

Staff recommends that Golder Associates prepare the final construction and bidding documents for the South Kent Landfill WTE Ash Monofill- MSE Wall Construction project.

SUGGESTED MOTION:

It was moved by_____ and seconded by_____ to approve Golder Associates for preparation of the Construction and Bidding Documents for the South Kent Landfill WTE Ash Monofill in the amount of $39,458.

ATTACHMENTS:

Construction and Bid Proposal

GOVERNING/ADVISORY BOARD APPROVAL DATE: November 10, 2016

DEPARTMENT DIRECTOR: _____

PROPOSAL

SOUTH KENT LANDFILL ASH MONOFILL MSE WALL CONSTRUCTION AND BIDDING DOCUMENTS PROPOSAL

Byron Township, Kent County, Michigan

Submitted To: Mr. Dan Rose, P.E.
Kent County Department of Public Works
Engineering Services
1500 Scribner, NW
Grand Rapids, MI 49504 USA

Submitted By: Golder Associates Inc.
15851 South US 27, Suite 50
Lansing, MI 48906 USA

Distribution:
1 Copy – Kent County Department of Public Works
1 Copy – Golder Associates Inc.

November 3, 2016 **P1668076**

A world of capabilities delivered locally

Golder Associates

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Attachment B Golder's Terms and Conditions
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1.0 INTRODUCTION

Golder Associates Inc. (Golder) understands that Kent County Department of Public Works (KCDPW) intends to vertically expand the municipal solid waste incinerator ash Type III landfill using a Mechanically Stabilized Earth (MSE) wall. Golder understands that the MSE wall has already been designed by Soil and Materials Engineers, Inc. (SME) in the document titled "MUNICIPAL SOLID WASTE ASH LANDFILL, VERTICAL EXPANSION, SOUTH KENT LANDFILL, KENT COUNTY, SME Project No. 068500.00", dated January 29, 2014 (hereafter referred to as the Design Documents). Golder has prepared this proposal to provide engineering services for the preparation of the MSE wall construction and bidding documents for the southern and eastern portions of the designed MSE wall.

2.0 PROJECT UNDERSTANDING

Golder understands that the KCDPW intends to be prepared to install the MSE wall in the early summer of 2017. Golder will prepare a construction drawing and bidding document set that will be ready for submittal to bidders by February 2017. The construction and bidding document package will fulfill the requirements of the Solid Waste Management Act Administrative Rules promulgated pursuant to Part 115 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 115 Rules), the Design Documents, and the landfill's construction permit application (presently being prepared). Golder understands that this project is highly important to the KCDPW and that receiving timely bids from constractors coordinating with the expected timing of permit issuance is a major factor to success.

3.0 SCOPE OF WORK AND SCHEDULE

Golder proposes that the following there main tasks be completed for this project:

Task 1 - Field Investigation

Task 2 – Slope Stability

Task 3 - Construction Documents

4.0 TASK 1 – FIELD GEOTECHNICAL INVESTIGATION

Golder will work with KCDPW personnel to coordinate a field geotechnical investigation and the installation of borings using a driller to collect information needed for the MSE wall foundation and delineation of soft soils that were encountered during the design phase of the MSE wall design. This task also includes field observation and documentation of the boring stratigraphy and in-situ strength testing using a pocket penetrometer.

Golder will perform the following tasks within this Phase:

- Prepare a boring location map and discuss the locations with KCDPW personnel;
- Perform observation and documentation of the boring stratigraphy and in-situ strength testing using a pocket penetrometer.

The goal of the field investigation is to delineate and quantify the amount of soft soils that are present within the MSE wall footprint. This information will be used to develop the excavation quantities and prepare a stability assessment of the basal conditions proximate to the landfill during excavation.

Golder will also determine the appropriate geotechnical parameters for soft soils designations from field testing (pocket penetrometer testing for unconfined compressive strength) and share and discuss results with KCDPW personnel.

4.1 Task 2 – Slope Stability

Golder will perform a slope stability evaluation adjacent to the existing landfill to evaluate a short term scenario just after excavation of the foundation for the MSE wall. Given the proximity of the MSE wall design to the exiting landfill, and the excavation of soft soils required for the foundation, this potential short term stability case should be analyzed. This case was not included in the design package prepared by SME, and will be required to determine the factor of safety of the existing landfill foundations during excavation.

4.2 Task 3 - Prepare Construction and Bidding Documents

Golder will prepare a bid package including construction drawings, project specifications and quantities for the construction of the MSE wall.

Golder proposes to complete the following tasks for this phase:

1. Construction Documents for the MSE wall footprint
2. Schedule of Estimated Quantities
3. Construction-Level Drawings
4. Technical Specifications
5. Attend Pre-Bid Meeting
6. Prepare Addendums, if needed

This work is described in the following paragraphs.

Construction Contract Documents

Golder will prepare the project specifications to allow the selected contractors to price the project. The contract/bid documents will be comprised of standard forms and will include the following:

1. Instructions (to be prepared by Golder)
2. Construction Agreement (to be provided by KCDPW)
3. Standard General Conditions (to be provided by KCDPW)
4. Supplementary Conditions (to be provided by KCDPW)
5. Measurement and Payment (to be prepared by Golder)

Schedule of Values

A schedule of values will be developed for each planned component of the work. The quantities will be consistent with the construction drawings developed. Bid items will be selected to maximize efficiency and value for the facility and minimize confusion by the contractor(s).

Construction Drawings

Detailed construction-level drawings will be prepared for the southern and eastern portions of the MSE Wall to be constructed in 2017. The construction drawings will be sufficiently detailed to allow for contractors to prepare responsive bids for the work and to layout and construct the various components of the work. Construction drawings will clearly show, where applicable, the pay limits for pay items described in the schedule of values. The drawings will also include benchmarks for survey control used at the site.

Technical Specifications

Technical Specifications for the work will address related work items and may include the following:

DIVISION 1 - GENERAL
Section 01100 – Summary of Work
Section 01200 – Measurement and Payment
Section 01300 – Project Meetings and Administration
Section 01310 – Submittals
Section 01320 – Construction Work Plan and Schedules
Section 01400 – Project Surveying
Section 01500 – Construction Facilities and Temporary Controls
Section 01505 – Watering and Dust Control

DIVISION 2 – SITE WORK
Section 02060 – Aggregates
Section 02071 – Geotextiles
Section 02073 – Geocomposite Drainage Layer
Section 02075 – Geomembrane
Section 02200 – Site Clearing
Section 02300 – General Earthwork
Section 02370 – Erosion Protection and Sediment Control
Section 02380 – Riprap
Section 02610 – High Density Polyethylene (HDPE) Pipe and Fittings
Section 02920 – Re-vegetation
Section 03000 – Geogrid
Section 03001 – Welded Wire Forms
Section 03002 – MSE Wall Construction

Golder will also include a specification or technical provisions for the temporary termination of the MSE wall. Golder will attend one pre-bid meeting for this effort. Golder will also prepare addendums, if needed, on a time and materials basis.

5.0 DELIVERABLES

Golder will provide the following deliverables:

- One electronic copy of the geotechnical investigation summary technical memorandum, with a figure delineating the identified materials proposed for removal from within the MSE wall footprint and slope stability calculations.
- One electronic 60% draft Construction Drawings and Bid Documents Package submitted to KCDPW.
- Six hard copies (and electronic) 100% Construction Drawings and Bid Documents Package submitted to KCDPW and bidders.
- One electronic copy of the Construction Documents for submittal to contractors.

6.0 ASSUMPTIONS

Golder assumes that the following information will be transmitted to us electronically as soon as possible:

- AutoCAD electronic files of the most current topography in the MSE wall area for quantities.

Golder also assumes:

- Surveying will be completed by others.
- The drilling contractor will be paid directly by Golder.
- Golder has assumed 60 hours of field time to observe and document the drilling activity.

- Golder has assumed 2 in person progress meetings in our costs; the meetings will be attended by the Project Manager (Tiffany Johnson) and the Project Director (Dave List).
- Golder has assumed 1 pre-bid meeting to be attended by the Project Manager or Project Director.
- Addendums, if required, due to the sole error of Golder will not result in an increase in Golder's project cost; other addendums, if requested by bidders and/or KCDPW, will be invoiced on a time and materials basis.

7.0 COMPENSATION

Golder will provide the engineering services described in this proposal on a time-and-material not-to-exceed basis. Following the initial kick off meeting, the scope of work will be discussed verbally with KCDPW. If the scope of work does not change from that included herein, we estimate the cost to complete the scope of work is **$39,458**; this cost does include assumed subcontractor (driller) costs. This cost does not include other addendums requested by the bidders or KCDPW. A breakdown of this estimate is provided in the attached summary table (Attachment A).

8.0 CONTRACT TERMS

Golder proposes to perform this work in accordance with Golder's Agreement for Consulting Services, a copy of which is included as Attachment B to this proposal. To authorize Golder to proceed with the proposed scope of work, please issue a Purchase Order (PO) referencing Golder's proposal number P1668076.

9.0 CLOSING

Golder understands that this project for the KCDPW is an urgent and important issue; we are prepared and appreciate this opportunity to assist KCDPW with this project. Please contact either of the undersigned if you need additional information.

Sincerely,

GOLDER ASSOCIATES INC.

Tiffany D. Johnson, P.E.
Senior Engineer

David M. List, P.E.
Principal

ATTACHMENT A
COST ESTIMATE SUMMARY TABLE

COST ESTIMATE
SOUTH KENT ASH LANDFILL
MSE WALL CONSTRUCTION DRAWINGS AND BID DOCUMENTS

PROFESSIONAL SERVICES

PROFESSIONAL CATEGORY	Project Director/Technical Reviewer		Senior Engineer		Project Engineer	Field Geologist	CAD Design	Staff Engineer		Administrative		**TOTAL PER ACTIVITY**	
HOURLY RATE	193 $		152 $		110 $	87 $	87 $	92 $		67 $			
ACTIVITY	*Hr*	*$*	*Hr*	*$*				*Hr*	*$*	*Hr*	*$*	*Hr*	*$*
Task 1 - Soft Soils Investigation													
Hours	12.0		16.0		8.0	66.0	6.0	0.0		0.0			
Task 1 Total		$ 2,316		$ 2,432	$ 880	$ 5,742	$ 522		$ -		$ -		$ 11,892
Task 2 - Slope Stability													
Hours	2.0		4.0		16.0	0.0	4.0	20.0		1.0			
Task 2 Total		$ 386		$ 608	$ 1,760	$ -	$ 348		$ 1,840		$ 67		$ 5,009
Task 3 - MSE Wall Construction Documents													
Hours	8.0		16.0		35.0	0.0	35.0	50.0		8.0			
Task 3 Total		$ 1,544		$ 2,432	$ 3,850	$ -	$ 3,045		$ 4,600		$ 536		$ 16,007
Total Labor Hours	22.0		36.0		59.0	66.0	45.0	70.0		9.0			
Total Labor Costs		$ 4,246		$ 5,472	$ 6,490	$ 5,742	$ 3,915		$ 6,440		$ 603		**$ 32,908**

Expenses	Unit Cost	Unit Cost	Total Cost
Vehicle and Per Diem for Site Visits ($250/day)	$ 250	5	$ 1,250
Driller (Stearns)	$ 5,000	1	$ 5,000
Supplies (Report Copies)	$ 50	6	$ 300
	TOTAL EXPENSES		**$ 6,550**

COSTS SUMMARY	TOTAL
PROFESSIONAL SERVICES	**$ 32,908**
EXPENSES	**$ 6,550**
TOTAL	**$ 39,458**

ATTACHMENT B
GOLDER'S TERMS AND CONDITIONS

1. STANDARD OF CARE

Services performed by GOLDER will be conducted in a manner consistent with that level of care and skill ordinarily exercised by other professionals currently practicing under similar conditions in the same locality, subject to the time limits and financial, physical or other constraints applicable to the Services. No warranty, express or implied is made.

2. INVOICES AND PAYMENT TERMS

Unless otherwise specified in any proposal, GOLDER will submit monthly invoices to CLIENT and a final bill upon completion of Services. CLIENT shall notify GOLDER within ten (10) days of receiving an invoice of any dispute with the invoice and the parties shall promptly resolve any disputed items. Full payment is due prior to delivery of GOLDER's final deliverable. Payment on undisputed invoice amounts is due upon receipt of invoice by CLIENT and is past due thirty (30) days from the date of the invoice. CLIENT agrees to pay a finance charge of one and one-half percent (1-1/2%) per month (18% per annum), or the maximum rate allowed by law, on past due accounts. If payment remains past due sixty (60) days from the date of the invoice, then GOLDER shall have the right to suspend or terminate all Services under this Agreement, without prejudice or penalty. CLIENT will pay all reasonable demobilization and other suspension or termination costs. CLIENT agrees to pay attorneys' fees, legal costs and all other collection costs incurred by GOLDER in pursuit of past due payments.

Where the cost estimate for the Services is "not to exceed" a specified sum, GOLDER shall notify CLIENT before each limit is exceeded, and shall not continue to provide Services beyond such limit unless CLIENT authorizes an increase in the amount of the limitation. If a "not to exceed" limitation is broken down into budgets for specific tasks, the task budget may be exceeded without CLIENT authorization as long as the total limitation is not exceeded.

3. CHANGES

CLIENT and GOLDER recognize that it may be necessary to modify the scope of Services, schedule, and/or cost estimate proposed in this Agreement. Such changes shall change the Services, schedule, and/or the cost, as may be equitable under the circumstances. GOLDER shall notify CLIENT in a timely manner when it has reason to believe a change to the Agreement is warranted. GOLDER shall prepare a change order request outlining the changes to the scope, schedule, and/or cost of the project. CLIENT has a duty to promptly consider the change order request and advise GOLDER in a timely manner in writing on how to proceed. If after a good faith effort by GOLDER to negotiate modifications to the scope of Services, schedule, and/or cost estimate, an agreement has not been reached with the CLIENT, then GOLDER shall have the right to terminate this Agreement, without prejudice or penalty, upon written notice to the CLIENT.

4. DELAYS AND FORCE MAJEURE

A. If site or other conditions prevent or inhibit performance of Services or if unrevealed hazardous materials or conditions are encountered, Services under this Agreement may be delayed. CLIENT shall not hold GOLDER responsible for damages or delays in performance caused by acts or omissions of CLIENT, its subcontractors, governmental authorities, regulatory agencies, civil or labor unrest, acts of God, nature, or terror, disruptions of the Internet, GOLDER's electronic telecommunications or hosting services or any other events that are beyond the reasonable control of GOLDER. In the event of any such delays, the contract completion date shall be extended accordingly and CLIENT shall pay GOLDER for Services performed to the delay commencement date plus reasonable delay charges. Delay charges shall include personnel and equipment rescheduling and/or reassignment adjustments and all other related costs incurred including but not limited to, labor and material escalation, and extended overhead costs, attributable to such delays.

B. Delays in excess of thirty (30) days within the scope of this Article shall, at the option of either party, make this Agreement subject to termination or to renegotiation.

5. INDEPENDENT JUDGMENTS OF CLIENT

If the Services include the collection of samples and data, then GOLDER's obligation to perform those Services is subject to CLIENT's assumption of all Subsurface Risks (such risks being more fully described in Article 12, Subsurface Risks). GOLDER will not be responsible for the independent conclusions, interpretations, interpolations or decisions of CLIENT, or others, relating to the Services. Under no circumstances do GOLDER's Services include making any recommendation, or giving any advice as to whether CLIENT should or should not proceed with any transaction regarding any site related to the Services. CLIENT assumes all responsibility and risk associated with decisions it makes based on the Services.

6. INDEMNIFICATION

A. GOLDER agrees to indemnify, but not defend, CLIENT and its officers, directors, and employees from and against all claims, damages, losses or expenses arising from personal injury, death, or damage to third-party property, and for reimbursement of defense costs, to the extent that all such claims, damages, losses, expenses, or costs are finally determined to result directly from GOLDER's negligence. Such indemnification, as limited by Article 7, Limitation of Liability, shall be CLIENT's sole and exclusive remedy against GOLDER.

B. CLIENT shall, at all times, defend, indemnify and save harmless GOLDER and its subcontractors, consultants, agents, officers, directors and employees from and against all claims, damages, losses and expenses (including but not limited to reasonable attorneys' fees, and court and arbitration costs), arising out of or resulting from the Services of GOLDER, including but not limited to claims made by third parties, or any claims against GOLDER arising from the acts, errors or omissions of CLIENT, its employees, agents, contractors and subcontractors or others. To the fullest extent permitted by law, such indemnification shall apply regardless of breach of contract or strict liability of GOLDER. Such indemnification shall not apply to the extent that such claims, damages, losses or expenses are finally determined to result directly from GOLDER's negligence.

7. LIMITATION OF LIABILITY

A. CLIENT shall immediately notify GOLDER in writing of any deficiencies or suspected deficiencies arising directly or indirectly from GOLDER's negligent acts, errors or omissions. Failure by CLIENT to notify GOLDER shall relieve GOLDER of any further responsibility and liability for such deficiencies. To the extent permitted by law, CLIENT and GOLDER agree that all liability arising directly or indirectly from this Agreement or the Services of GOLDER shall expire no later than one (1) year from the date of GOLDER's acts, errors, or omissions or prior to the last date allowed in the applicable statute of limitation, whichever occurs first in time.

B. CLIENT agrees to limit the liability of GOLDER, its affiliates, and their respective employees, officers, directors, agents, consultants and subcontractors ("GOLDER Group") to CLIENT, its employees, officers, directors, agents, consultants and subcontractors, whether in contract, tort, or otherwise, which arises from GOLDER's acts, negligence, errors or omissions, such that the total aggregate liability of the GOLDER Group to all those named shall not exceed Fifty Thousand Dollars ($50,000) or GOLDER's total fee for the Services rendered under this Agreement, whichever is greater.

C. Neither party shall be responsible to the other for lost revenues, lost profits, cost of capital, claims of customers, loss of data or any other special, indirect, consequential or punitive damages.

8. INSURANCE

A. GOLDER maintains insurance coverage with the following limits:

(i) Workers' Compensation in compliance with statutory limits

(ii) Automobile Liability
Combined Single Limit $1,000,000

(iii) Commercial General Liability:
Each Occurrence $1,000,000
General Aggregate $2,000,000

(iv) Professional Liability Insurance
Any One Claim $1,000,000
Policy Aggregate $3,000,000

B. CLIENT shall not require GOLDER to sign any document or perform any Service which in the judgment of GOLDER would risk the availability or increase the cost of its Professional or Commercial General Liability insurance.

9. PROFESSIONAL WORK PRODUCT

A. The Services provided by GOLDER are intended for one time use only. All documents, including but not limited to, reports, plans, designs, boring logs, field data, field notes, laboratory test data, calculations, and estimates and all electronic media prepared by GOLDER are considered its professional work product (the “Documents”). GOLDER retains all rights to the Documents.

B. CLIENT understands and acknowledges that the Documents are not intended or represented by GOLDER to be suitable for reuse by any party, including, but not limited to, the CLIENT, its employees, agents, subcontractors or subsequent owners on any extension of a specific project not covered by this Agreement or on any other project, whether CLIENT’s or otherwise, without GOLDER’s prior written permission. CLIENT agrees that any reuse unauthorized by GOLDER will be at CLIENT’s sole risk and that CLIENT will defend, indemnify and hold GOLDER harmless from any loss or liability resulting from the reuse, misuse or negligent use of the Documents.

10. DATA AND INFORMATION

CLIENT shall provide to GOLDER all reports, data, studies, plans, specifications, documents and other information (“Project Information”) which are relevant to the Services. GOLDER shall be entitled to rely upon the Project Information provided by CLIENT or others and GOLDER assumes no responsibility or liability for the accuracy or completeness of such. CLIENT waives any claim against GOLDER, and agrees to defend, indemnify and hold GOLDER harmless from any claim or liability for injury or loss allegedly arising from errors, omissions, or inaccuracies in the Project Information. GOLDER will not be responsible for any interpretations or recommendations generated or made by others, which are based, whole or in part, on GOLDER’s data, interpretations or recommendations.

11. RIGHT OF ENTRY

CLIENT will provide for the right of entry for GOLDER, its subcontractors, and all necessary equipment in order to complete the Services under this Agreement. If CLIENT does not own the site, CLIENT shall obtain permission and execute any required documents for GOLDER to enter the site and perform Services. It is understood by CLIENT that in the normal course of work some surface damage may occur, the restoration of which is not part of this Agreement.

12. SUBSURFACE RISKS

A. Special risks occur whenever engineering or related disciplines are applied to identify subsurface conditions. Even a comprehensive sampling and testing program implemented in accordance with a professional Standard of Care may fail to detect certain conditions. The environmental, geological, geotechnical, geochemical, hydrogeological and other conditions that GOLDER interprets to exist between sampling points may differ from those that actually exist. Furthermore, CLIENT recognizes that, passage of time, natural occurrences, direct or indirect human intervention at or near the site may substantially alter discovered conditions.

B. Subsurface sampling may result in damage or injury to underground structures or utilities and unavoidable contamination of certain subsurface areas not known to be previously contaminated such as, but not limited to, a geologic formation, the groundwater, or other hydrous body. GOLDER will adhere to the standard of care during the conduct of any subsurface investigation. When the Services include subsurface sampling, CLIENT waives any claim against GOLDER, and agrees to defend, indemnify and hold GOLDER harmless from any claim or liability for injury, loss, or expense (including but not limited to legal fees) which may arise as a result of alleged or actual cross-contamination caused by any subsurface investigation or any damage or injury to underground structure, formation, body, or utilities.

13. DISPOSAL OF SAMPLES, MATERIALS AND CONTAMINATED EQUIPMENT

A. All samples obtained pursuant to this Agreement remain the property and responsibility of CLIENT. Uncontaminated soil and rock samples or other specimens maybe disposed of thirty (30) days after submission of the work product due pursuant to the Proposal. Upon written request, GOLDER will store uncontaminated samples for longer periods of time or transmit the samples to CLIENT for a mutually acceptable charge.

B. All contaminated samples and materials (containing or potentially containing hazardous constituents), including, but not limited to soil cuttings, contaminated purge water, and/or other environmental wastes obtained pursuant to this Agreement remain the property and responsibility of CLIENT and shall be returned to CLIENT for proper disposal. All laboratory and field equipment that cannot readily and adequately be cleansed of its hazardous contaminants shall become the property and responsibility of CLIENT. All such equipment shall be charged and turned over to CLIENT for proper disposal. Alternate arrangements to assist CLIENT with proper disposal of such equipment, materials and samples may be made at CLIENT's direction and expense. In such event, CLIENT agrees to have a representative available to sign all certifications, manifests, and other documents reasonably required by GOLDER and associated with the transportation, treatment and disposal, or handling of hazardous substances, waste or materials from the project property site, and derived from GOLDER's performance of the Services, including investigation derived wastes. If such CLIENT representative is unavailable and GOLDER is required to execute any such documents on CLIENT's behalf, CLIENT acknowledges that GOLDER shall be acting only as offeror or agent on behalf of CLIENT. It is understood and agreed that GOLDER is not, and has no responsibility as, a handler, generator, operator, treater, storer, arranger, transporter, or disposer of hazardous substances, waste or materials found or identified at or around the project site property. CLIENT agrees to waive any claim against GOLDER and to defend, indemnify and hold GOLDER harmless from and against any claims, losses, damages, expenses (including, but not limited to, legal fees), and liabilities of any type arising out of the discovery and disposal of any alleged or actual hazardous substances, wastes or materials found or identified at or around the project site property.

14. CONTROL OF WORK AND JOB-SITE SAFETY

A. GOLDER shall be responsible only for its activities and that of its employees and subcontractors. GOLDER's Services under this Agreement are performed for the sole benefit of the CLIENT and no other entity shall have any claim against GOLDER because of this Agreement or the performance or nonperformance of Services hereunder. GOLDER will not direct, supervise or

control the work of other consultants and contractors or their subcontractors. GOLDER does not guarantee the performance of, and shall have no responsibility for, the acts or omissions of any other contractor, subcontractor, supplier or other entities furnishing materials or performing any work on the project.

B. Insofar as job site safety is concerned, GOLDER is responsible only for the health and safety of its employees and subcontractors. Nothing herein shall be construed to relieve CLIENT or any other consultants or contractors from their responsibilities for maintaining a safe job site. GOLDER shall not advise on, issue directions regarding, or assume control over safety conditions and programs for others at the job site. Neither the professional activities of GOLDER, nor the presence of GOLDER or its employees and subcontractors, shall be construed to imply that GOLDER controls the operations of others or has any responsibility for job site safety.

15. PUBLIC RESPONSIBILITY

CLIENT has a duty to comply with applicable codes, standards, regulations and ordinances, with regard to public health and safety. While GOLDER performs the Services it will endeavor to alert CLIENT to any matter of which GOLDER becomes aware and believes requires CLIENT's immediate attention to help protect public health and safety, or which GOLDER believes requires CLIENT to issue a notice or report to certain public officials, or to otherwise comply with applicable codes, standards, regulations or ordinances. If CLIENT decides to disregard GOLDER's recommendations in these respects, (i) GOLDER shall determine in its sole judgment if it has a duty to notify public officials, and (ii) GOLDER has the right immediately to terminate this Agreement upon written notice to the CLIENT and without penalty.

16. NOTIFICATION AND DISCOVERY OF HAZARDOUS MATERIALS

A. Prior to commencing the Services and as part of Project Information defined in Article 10, Data and Information, CLIENT shall furnish to GOLDER all documents and information known to CLIENT that relate to past or existing conditions of the site and surrounding area, including the identity, location, quantity, nature or characteristics of any hazardous materials or suspected hazardous materials or subterranean utilities. GOLDER may rely on such information and documents. CLIENT hereby warrants that, if it knows or has any reason to assume or suspect that hazardous materials may exist at the project site, it has so informed GOLDER.

B. CLIENT acknowledges that if unanticipated hazardous materials or suspected hazardous materials are discovered on the project site property or on properties surrounding or adjacent to such site, it is CLIENT's responsibility, and not GOLDER's, to inform the owner of any affected property not owned by CLIENT of such discovery. CLIENT also recognizes that any such discovery may result in a significant reduction of the property's value. CLIENT waives any claim against GOLDER and agrees to defend, indemnify and hold harmless GOLDER from any claim or liability for injury or loss of any type arising from the discovery of hazardous materials or suspected hazardous materials on the project property site or on surrounding property, whether or not owned by CLIENT. CLIENT agrees that discovery of unanticipated hazardous materials shall constitute a changed condition for which GOLDER shall be fairly compensated.

17. TERMINATION

Either party may terminate this Agreement as a result of a material breach of the other party if the other party does not commence and continue to cure the breach within thirty (30) days of receipt of written notice of the breach from the non-breaching party. In the event of termination, GOLDER shall be paid for Services performed to the termination notice date, reasonable termination expenses, and a portion of its anticipated profits not less than the percentage of the contract services performed as of the termination notice date. GOLDER may complete such analyses and records as are necessary to complete its files and may also complete a report on the Services performed to the date of notice of

termination or suspension. The expenses of termination or suspension shall include all direct costs of GOLDER in completing such analyses, records and reports.

18. DISPUTES

A. All disputes, claims, and causes one party makes against the other, at law or otherwise, including third party or "pass-through" claims for indemnification and/or contribution, which amount to a claim of more than $50,000 shall be initiated, determined, and resolved by arbitration in accordance with the American Arbitration Association and judgment upon the award rendered by the Arbitrator(s) may be entered in any court having jurisdiction thereof. Notwithstanding the foregoing, any claims by GOLDER against CLIENT involving failure to make payment pursuant to Article 2, Invoices and Payment Terms, as well as an alleged misappropriation or misuse of GOLDER's Intellectual Property pursuant to article 19, or confidential information may be resolved through any legal or equitable means or any form of alternative dispute resolution.

B. In the event that one party makes a claim against the other, at law or otherwise, and then fails to prove such claim, then the prevailing party shall be entitled to all costs, including attorneys' fees incurred in defending against the claim.

19. INTELLECTUAL PROPERTY

A. If the Services require GOLDER to provide CLIENT with the right to use or access proprietary GOLDER software, programs, information management solutions, hosting services, technology, designs, information or data ("GOLDER Products"), GOLDER grants CLIENT during the term of the project a non-exclusive, non-transferable, non-assignable license to use the GOLDER Products for CLIENT's internal purposes, solely in connection with the Services. Except for this limited license, GOLDER expressly reserves all other rights in and to the GOLDER Products.

B. GOLDER's Right to Use CLIENT Materials - If the Services require CLIENT to provide GOLDER with the right to use or access proprietary CLIENT software, programs, technology, information or data ("CLIENT Products"), CLIENT grants GOLDER a perpetual, non-exclusive, non-transferable, non-assignable, royalty free world-wide license to use and access the CLIENT Product as necessary to provide CLIENT with Services.

C. Intellectual Property General - GOLDER shall own all Intellectual Property (as hereinafter defined) associated with the Services and the GOLDER Products, together with any modifications, updates or enhancements to said Intellectual Property. GOLDER grants no right or license to such Intellectual Property to CLIENT except as expressly provided in this Agreement. CLIENT conveys to GOLDER any interest in any such Intellectual Property rights that, notwithstanding the foregoing, would otherwise be deemed by law to vest in CLIENT. "Intellectual Property" includes patents, patent applications, trademarks, trademark applications, copyrights, moral rights or other rights of authorship and applications to protect or register the same, trade secrets, industrial rights, know-how, privacy rights and any other similar proprietary rights under the laws of any jurisdiction in the world. GOLDER may use and publish the CLIENT's name and give a general description of the Services rendered by GOLDER for the purpose of informing other clients and potential clients of GOLDER's experience and qualifications.

D. GOLDER shall use reasonable efforts to provide the Services without infringing on any valid patent or copyright and without the use of any confidential information that is the property of others; provided, however, reasonable efforts of GOLDER shall not include a duty to conduct or prepare a patent or copyright search and/or opinion. If GOLDER performs its Services in a manner consistent with the above, then to the fullest extent permitted by law, CLIENT shall indemnify, defend and hold harmless GOLDER and its officers, directors, agents and employees against all liability, cost, expense, attorneys' fees, claims, loss or damage arising from any alleged or actual patent or copyright infringement resulting from the Services under this Agreement.

20. INFORMATION MANAGEMENT

A. CLIENT acknowledges that electronic media is susceptible to unauthorized modification, deterioration, and incompatibility and therefore CLIENT cannot rely upon the electronic media versions of the Documents. In the event of any discrepancy, GOLDER's hardcopy shall prevail.

B. Some GOLDER Products may be offered to CLIENT via the Internet and some GOLDER Products may utilize wireless radio communications. Atmospheric, meteorological, topographical and other conditions can affect the performance of any wireless device, software or technology (including, but not limited to information management solutions, hosting services, ftp and extranet services), just as application size, traffic, bottlenecks and other conditions can affect Internet access and upload and download speeds. CLIENT acknowledges that these types of conditions and other similar conditions are beyond the reasonable control of GOLDER and that GOLDER makes no representations or guarantees that CLIENT will be able to access any particular GOLDER Product at any given time without any error or interruption.

21. MISCELLANEOUS

A. This Agreement supersedes all other agreements, oral or written, and contains the entire agreement of the parties. No cancellation, modification, amendment, deletion, addition, waiver or other change in this Agreement shall have effect unless specifically set forth in writing signed by the party to be bound thereby. Titles in this Agreement are for convenience only.

B. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns provided that it may not be assigned by either party without consent of the other. It is expressly intended and agreed that no third party beneficiaries are created by this Agreement, and that the rights and remedies provided herein shall inure only to the benefit of the parties to this Agreement.

C. CLIENT acknowledges and agrees that GOLDER can retain subconsultants, who may be affiliated with GOLDER, to provide Services for the benefit of GOLDER. GOLDER will be responsible to CLIENT for the Services and work done by all of its subconsultants and subcontractors, collectively to the maximum amount stated in Article 7 Limitation of Liability. CLIENT agrees that it will only assert claims against and seek to recover losses, damages or other liabilities from GOLDER and not GOLDER's affiliated companies. To the maximum extent allowed by law, CLIENT acknowledges and agrees it will not have any legal recourse, and waives any expense, loss, claim, demand, or cause of action, against GOLDER's affiliated companies, and their employees, agents, officers and directors.

D. No waiver of any right or remedy in respect of any occurrence on one occasion shall be deemed a waiver of such right or remedy in respect of such occurrence on any other occasion.

E. All representations and obligations (including without limitation the obligation of CLIENT to indemnify GOLDER in Article 6 and the Limitation of Liability in Article 7) shall survive indefinitely the termination of the Agreement. CLIENT acknowledges that it may not use GOLDER's name or any reference to the Services in any press release or public document without the express, written consent of GOLDER.

F. Any provision, to the extent found to be unlawful or unenforceable, shall be stricken without affecting any other provision of the Agreement, so that the Agreement will be deemed to be a valid and binding agreement enforceable in accordance with its terms.

G. All questions concerning the validity and operation of this Agreement and the performance of the obligations imposed upon the parties hereunder shall be governed by the laws of Georgia unless the law of another jurisdiction must apply for this Agreement to be enforceable.

H. All notices required or permitted to be given hereunder, shall be deemed to be properly given if delivered in writing via facsimile machine, e-mail, regular mail, hand delivery or express courier addressed to CLIENT or GOLDER, as the case may be, at the addressee set forth in the Proposal Acceptance Form in regard to the CLIENT, and as listed on the Proposal in regard to GOLDER, with postage thereon fully prepaid if sent by mail or express courier.

I. CLIENT represents and warrants that the individual signing the Proposal Acceptance Form is an authorized representative of CLIENT and has authority to bind the CLIENT.

J. CLIENT represents and warrants that the individual signing the Proposal Acceptance Form is an authorized representative of CLIENT and has authority to bind the CLIENT. CLIENT also represents that any “purchase order” type document which CLIENT may issue subsequent to executing this Agreement, shall be for administrative or accounting purposes only, and that this Agreement shall supersede any such terms or conditions attached thereto in governing the performance of the Services

ATTACHMENT C
PROPOSAL ACCEPTANCE FORM

GOLDER ASSOCIATES INC.
PROPOSAL ACCEPTANCE FORM
(Terms and Conditions)

PROPOSAL NUMBER: P1668076

RE: South Kent Landfill MSE Wall Construction Documents

SUBMITTED this 3 day of November, 20 16.

BY: David List, for Golder Associates Inc.

The Proposal dated November 3, 2016, attached hereto and the Golder Associates Inc. Terms and Conditions (GAIUS F34 RL2, dated 11/2009), comprise the entire Agreement between Golder Associates Inc. and Client.

ACCEPTED this _____ day of _____, 20____.

BY: _____
(Authorized Representative's Signature on Behalf of **Client**)

NAME: (Print or Type) _____

TITLE: (Print or Type) _____

FOR: Client Name and Address (Print or Type)

_____

_____

_____

Phone: _____ Fax: _____

Please address invoices to:	**Please address deliverables and notices to: Same as invoices: Yes / No, address to:**
ATTN:	ATTN:

BY: _____
(Authorized Representative's Signature on Behalf of Golder Associates Inc.)

NAME: (Print or Type) _____

TITLE: (Print or Type) _____

At Golder Associates we strive to be the most respected global group of companies specializing in ground engineering and environmental services. Employee owned since our formation in 1960, we have created a unique culture with pride in ownership, resulting in long-term organizational stability. Golder professionals take the time to build an understanding of client needs and of the specific environments in which they operate. We continue to expand our technical capabilities and have experienced steady growth with employees now operating from offices located throughout Africa, Asia, Australasia, Europe, North America and South America.

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North America	+ 1 800 275 3281
South America	+ 55 21 3095 9500

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Fax: (517) 482-2460

Golder Associates

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MEETING DATE: **November 10, 2016**

AGENDA ITEM#: V – A

BOARD OF PUBLIC WORKS ACTION REQUEST

SUBJECT: Recycling Center Exhibits

DIVISION: Administration

PREPARED BY: Darwin J. Baas, Director

ACTION REQUESTED:

Review and approval to award Xibitz, Inc. the contract for exhibit design, fabrication and installation at the Kent County Recycling & Education Center.

SUMMARY OF REQUEST:

DPW resource recovery education staff is developing an interactive learning environment for visitors to learn about the life cycle of products and the impact personal decision making has on waste materials. At DPW's request the Purchasing Department issued Request for Proposal #1815 for exhibit design services for the Recycling & Education Center.

Six companies submitted proposals as indicated on the attached Bid Tabulation sheet. The responding companies were evaluated with three selected for interviews including Xibits, Good Design Group and Conservation by Design. The interview team determined that Xibits would best meet the DPW's budgetary and design needs.

Community stakeholders will be invited to participate in developing exhibit master plan concepts and several community partners have expressed interest in sponsoring exhibits.

This interactive learning environment project will be phased over a 3-year timeframe with an anticipated budget of $300,000. Specific design features will be brought back to the Board of Public Works for approval.

SUGGESTED MOTION:

It was moved by_____ and seconded by_____ to award Xibitz, Inc. the contract for the exhibit design, fabrication and installation at the Kent County Recycling & Education Center.

ATTACHMENTS:

1815 Bid Tabulation Sheet
Xibitz, Inc. proposal
Conservation by Design proposal
Good Design Group proposal

GOVERNING/ADVISORY BOARD APPROVAL DATE: November 10, 2016

DEPARTMENT DIRECTOR: _____

Kent County Purchasing Division

RFP: 1815 Tabulation Sheet

Description: Recycling and Education Center Exhibits

Date: 8/26/2016

Respondent Name*
Agio Imaging
Conservation By Design, Inc.
GMB Architecture + Engineering
Good Design Group
Rocket Science Creative
Xibitz Inc

***Note: This document shall not be construed as a comment on the responsiveness and is subject to change. This information is not an indicator of award.**

KENT COUNTY PURCHASING DIVISION

RFP 1815 Solicitation Form

Vendor Information

Company Name:	Xibitz Inc
Contact Name:	David Prinsen
Contact Title:	Producer
Address 1:	5809 Cross Roads Parkway Sw
Address 2:	
City:	Grand Rapids
State/Other:	MI
Zip Code:	49519
Email:	dprinsen@xibitz.com
Phone:	616-644-4944

Terms

Bid prices are firm for Kent County's acceptance until 60 days. (Allow a minimum of 30 days.) Invoice Terms: Bill monthly schedule of values, negotiable..

Bid Information

Addenda: Bidder acknowledges receipt of the following addenda:

X No addenda was received

___ The following Addendum were received (Please check all that apply):

___ Addendum #1

___ Addendum #2

___ Addendum #3

Attachment: 1472234288932RFP1815_Xibitz_RecyclingCenterRFP.pdf

By submitting the solicitation form electronically, the Seller certifies that he/she has read and understands the solicitations and is authorized on behalf of their firm. All submissions are subject to Kent County Standard Terms and Conditions. All Kent County specifications shall become part of any contract award unless otherwise negotiated and agreed. The latest

responsive submission shall supersede any and all prior submissions.

Seller may upload solicitation supporting documents. Sales and marketing material beyond the scope of this request will not be used to determine award. If, and to the extent, the attachment conflicts with the Solicitation, the Solicitation Specifications shall apply.

Upon clicking submit, the Seller has read and understands the solicitation and agrees to provide the products and/or services in accordance to the submission. Failure to perform the products and/or services for the submitted amount may exclude the Seller from future opportunities for one year in addition to any other remedy available to Kent County. A confirmation will be sent by email to the Seller after successfully submitting a solicitation response.

Close

Kent County Department of Public Works

RFP

August 26, 2016

David Prinsen
Producer
616.247.3500 office
616.644.4944 cell
dprinsen@xibitz.com

Ben Metzger
Principal
616.247.3500 office
847.951.1028 cell
bmetzger@xibitz.com

5809 Cross Roads Pkwy. SW
Grand Rapids, MI 49519

xibitz
Experiential Spaces for Work and Life

COVER LETTER

August 26, 2016

Kristen Wieland
Community Relations Coordinator
Kent County Department of Public Works
1500 Scribner Ave NW
Grand Rapids, MI 49504

Dear Mrs. Wieland,

Thank you for the opportunity to submit our proposal for the Kent County Recycling and Education Center. We are excited to work on such an important project in our own community. This project will certainly effect the way we all approach our waste habits, in the future, as a county. Education plays such an integral role in forming our culture and habits, and Xibitz always finds its energy in the midst of designing and building environments that can have a vital impact on local communities.

We look forward to the opportunity to transform the next generation of environmentally conscious citizens.

Please feel free to contact me with any questions.

In kind regards,

David Prinsen
Producer
616.247.3500 office
616.644.4944 cell
dprinsen@xibitz.com

Xibitz Inc.
5809 Cross Roads Parkway SW
Grand Rapids, MI 49519

www.xibitz.com

XIBITZ OVERVIEW

Xibitz specializes in the execution of one-of-a-kind experiential spaces for corporations, collegiate athletic, health care facilities, and museums by serving our clients as strategic partners; providing the smartest possible resources utilizing innovation, creativity and outstanding value to help them successfully achieve their goals.

Xibitz was founded in 1988 and maintains an 80,000 square foot facility in Grand Rapids, Michigan for approximately 45 employees. We are a company of creative and skilled artisans offering a great depth of talent. Throughout the years, we have gained experience and understanding of how to successfully complete complex and unique brand-focused projects. Our people have extensive knowledge and skills in many diverse fabrication techniques and material choices as well as planning and project management. Employing an informative and collaborative process, we work hand in hand with our clients and partners to discover, develop and implement strategic and creative solutions.
Note: Xibitz Inc. is a S-Corp company and is authorized to work in Michigan.

Financial

Project funding assessment and financial modeling to establish goal alignment and budget certainty.

Project Funding Assessment | Financial Modeling | Financial Management
ROM Budgets | Budget Estimating | Cost Estimating

Planning

Detailed schedules and team development to chart *a shared path to timely completion.*

Project Planning | Project Team Development | Focus Sessions
Interpretive Planning | Research Matrix | Artifact & Image Matrix
Content Development | Text Writing

Management

Tested management strategies and processes to efficiently marshal people, materials and time.

Contract Management | Design Management | Project Management
Scheduling Management | Contractor Coordination
Sub-Consultant Coordination | Facility Interface Coordination

Design

Collaboration with outstanding designers to deliver innovative and creative solutions.

Conceptual Design | Detail Design | Graphic Design |Graphic Production Files
Lighting Design |Renderings | Design Solutions | Design Sketches

Preproduction & Production

80,000-square-foot facility to turn out first-quality fabrication and graphics using a wide variety of materials.

Prototypes | Mockups | Material Samples | Lighting Integration
AV/Multimedia Integration | Electrical Integration | Construction Drawings
Graphic Production Files | Artifact Mounting | Production | Fabrication

Installation

Detail-focused installation by a trained team to deliver a perfect ending – smiles all around.

Installation | On-Site Training | Maintenance Manuals | Warranty Service

STATEMENT OF NEED / PROJECT PROCESS

Creating an experience that maximizes the retention of critical ideas, while inspiring new views and actions, is the imperative of good design. The directive set out by the Recycling and Education Center to reform our waste habits is an important cause. It is therefore critical that it is has an effective impact on the public that experiences it.

Effectiveness is often a balance of visually and physically engaging exhibits, that have carefully managed content that target memory, rather than being a comprehensive information resource. Clearly, a balance needs to be found to serve an age target from K-12. Our design team has the experience to do it.

We will need your help. The Xibitz experience is collaborative. While our designers can spend weeks researching a subject, they won't become experts. To design this education center to its utmost, your staff's contribution will be integral. We know how to fold our clients into the process. It's part of what makes the Xibitz experience great.

Below is a rough outline of how we have designed and built successful projects in the past.
–Dave Prinsen

Discovery

Identify, research and understand environment, perceptions and objectives

- Listen
- Understand Brand Essence
- Understand Audiences and Stakeholders
- Discover Storylines
- Research Competition & Like Industries
- Evaluate Space

Define

Create the user experience: strategic and creative concepts

- Envision Possibilities & Potential
- Create Experience Strategy & Vision
- Develop Creative Brief with High-level Concepts
- Explore Physical Materials
- Create Budget & Schedule
- Write Story Outline with Key Messaging
- Create Budget Alignment and Funding Assessment

Design

Expand concepts to specific solutions and space

- Refine Experience
- Develop Bubble Diagrams
- Create Visual Design
- Refine Material Selection
- Develop Story & Messaging
- Integrate Brand
- Define Costs at Budget Level to Ensure Budget Alignment

Develop

Finalize all content, art, and production drawings

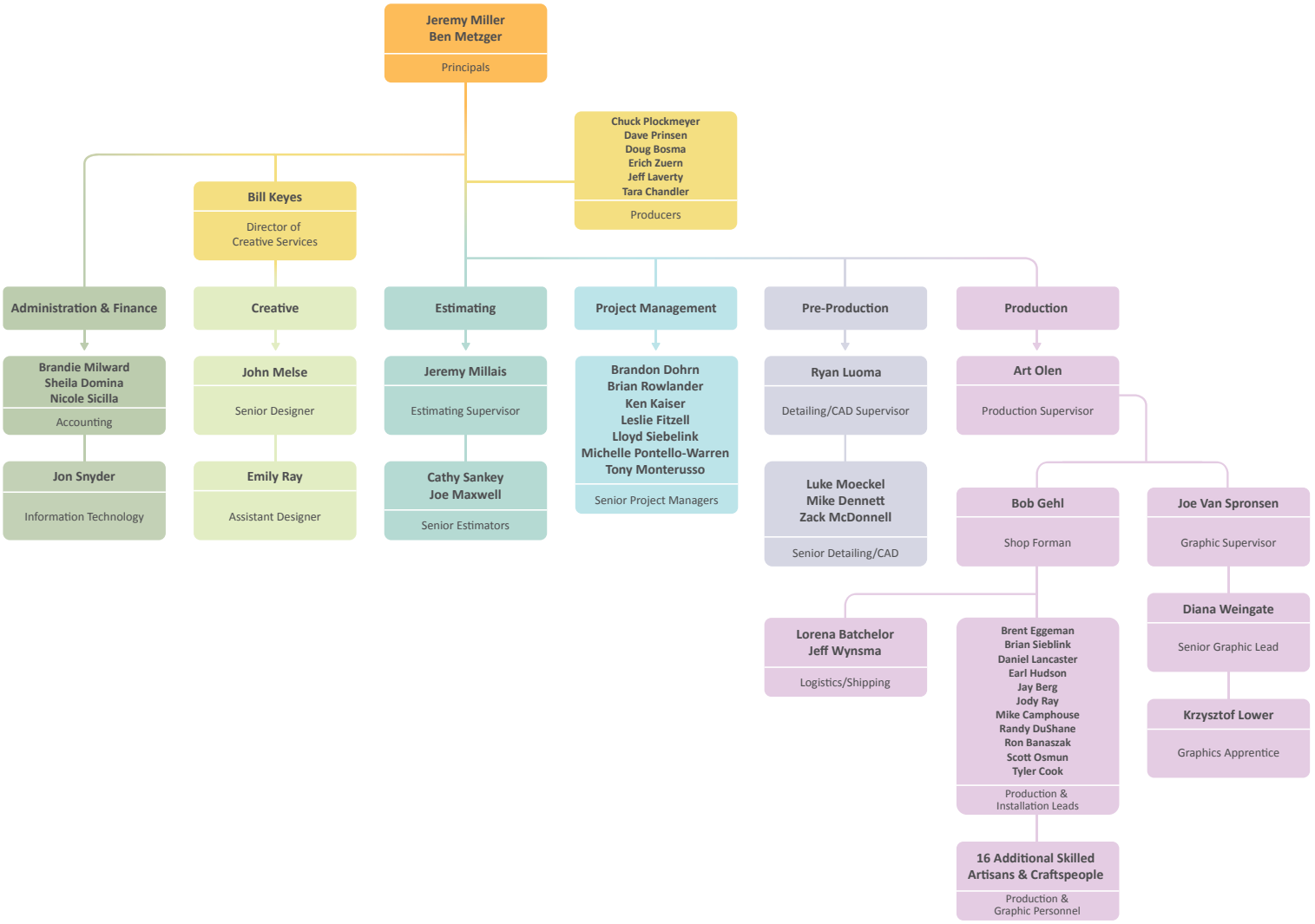
- Expand and Finalize Content
- Pre-production Mock-ups and Samples
- Develop Protocols
- Test
- Complete Final Cost Proposal

Deliver

Fabricate and Install all components

- Build Designs
- Install
- Assess User Experience, Reaction, and Results
- Plan Ongoing Improvements, Updates & Additions

XIBITZ TEAM


Jeremy Miller
Ben Metzger
Principals
Chuck Plockmeyer
Dave Prinsen
Doug Bosma
Erich Zuern
Jeff Laverty
Tara Chandler
Producers
Bill Keyes
Director of Creative Services
Administration & Finance
Creative
Estimating
Project Management
Pre-Production
Production
Brandie Milward
Sheila Domina
Nicole Sicilla
Accounting
John Melse
Senior Designer
Jeremy Millais
Estimating Supervisor
Brandon Dohrn
Brian Rowlander
Ken Kaiser
Leslie Fitzell
Lloyd Siebelink
Michelle Pontello-Warren
Tony Monterusso
Senior Project Managers
Ryan Luoma
Detailing/CAD Supervisor
Art Olen
Production Supervisor
Jon Snyder
Information Technology
Emily Ray
Assistant Designer
Cathy Sankey
Joe Maxwell
Senior Estimators
Luke Moeckel
Mike Dennett
Zack McDonnell
Senior Detailing/CAD
Bob Gehl
Shop Forman
Joe Van Spronsen
Graphic Supervisor
Lorena Batchelor
Jeff Wynsma
Logistics/Shipping
Brent Eggeman
Brian Sieblink
Daniel Lancaster
Earl Hudson
Jay Berg
Jody Ray
Mike Camphouse
Randy DuShane
Ron Banaszak
Scott Osmun
Tyler Cook
Production & Installation Leads
Diana Weingate
Senior Graphic Lead
Krzysztof Lower
Graphics Apprentice
16 Additional Skilled Artisans & Craftspeople
Production & Graphic Personnel

PROJECT TEAM

Dave Prinsen
Xibitz Producer / Project Director
Project Role: Team Lead,
Project Strategy, Communications,
and Overall Project Success

Ben Metzger
Xibitz Principal
Project Role: Team Building,
Contract & Financial Management,
and Overall Project Success

Bill Keyes
Xibitz Director of Creative Services
Project Role: Successful Creative Design

Jeremy Millais
Xibitz Estimating Supervisor
Project Role: Successful Financial Alignment

John Melse
Xibitz Senior Designer
Project Role: Design Solutioning
and Detail Design

Emily Ray
Xibitz Graphic Designer
Project Role: Two-Dimensional Graphic Design

Ryan Luoma
Xibitz Detailing Supervisor
Project Role: CAD Detailing

Art Olen
Xibitz Production Manager
Project Role: Production Oversight

Bethany Fleming
Museum & Exhibition Planning and
Development Professional
Project Role: Planning and Development

Leslie Fitzell
Xibitz Project Manager
Project Role: Project Management Oversight

Jody Ray
Xibitz Lead Fabricator / Field Supervisor
Project Role: Lead Fabrication Development
and Supervise Installation

Randy DuShane
Xibitz Lead Fabricator / Field Supervisor
Project Role: Lead Fabrication Process
and Supervise Installation

CAPABILITIES AND EXPERIENCE

Xibitz is very proud of the collaborative work style we employ to deliver an end product that is regarded as the highest quality in the marketplace. The rich history of our projects, renowned design partners and clients have enriched our culture and have helped define our approach to work.

Why do distinguished clients choose to work with Xibitz?

- We are known for our ability to execute complex projects.
- We provide a high quality products.
- We expand resources to form knowledgeable project teams.
- We have the ability to provide all services under one roof.
- We have a culture formed around collaboration.
- We are focused on providing an exceptional customer experience.

Specializing in planning and design solutions allows us to be a dynamic partner; providing innovative resources and creative and financial solutions that allow our clients and partners to make more informed decisions.

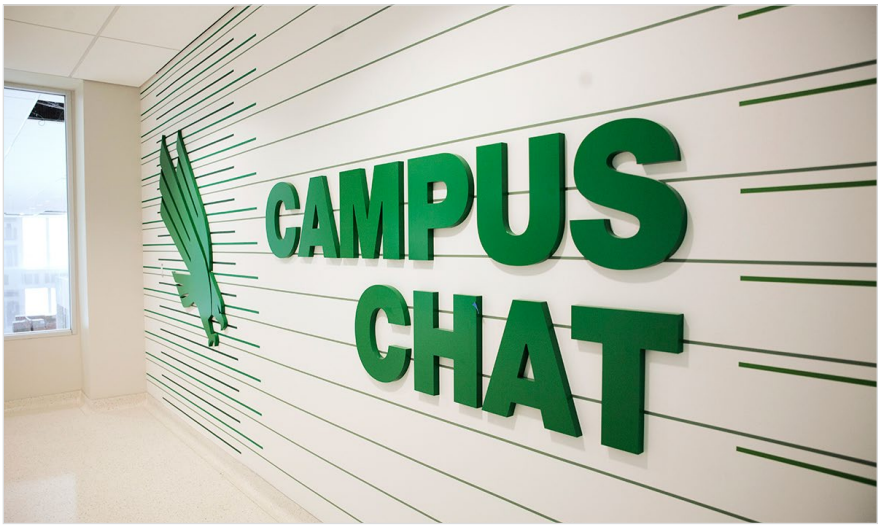
In addition to design solutions, Xibitz excels at value engineering. This practice is an every day occurrence at Xibitz as we strive to discover new techniques that achieve the design intent in the most cost effective way possible. Most of the projects we are awarded move straight into a development phase at which point we scrutinize the design and proposed production techniques to determine if the intent can be achieved in a more innovative or cost effective way. It is our goal to make the design the best it can be.

University of North Texas

Project: University Union

Xibitz collaborated with design firm Perkins+Will on the renovation of the University Union building of UNT. Brand elements were designed, produced, and installed over 3 floors with the showcase of the project is the 20' long, 6' deep, 14' high cascading letter sculpture, consisting of 12,000 acrylic letters suspended from the ceiling on stainless steel cables.

- **Location:** Denton, Texas
- **Xibitz Role:** Project Management; Facility Interface Coordination; Design Solutions; Mockups, Prototypes; Construction Drawings; and Production/Installation
- **Budget:** $880,000 *(Does not include design)*
- **Completed:** February 2016
- **Materials & Production Elements:** Direct printed custom-wallpaper; cut vinyl; 3d graphic boxes; 3d text; direct printed stainless steel; cascading acrylic letter sculpture; and world map display formed with hundreds of brand colored pegs



Empire State Building

Project: Sustainability Exhibit

To present the landmark's energy retrofit program, design firm Hornall Anderson translated the technicalities into a compelling experience in the Visitors' Center. Hornall Anderson enlisted Xibitz as its partner to combine digital and sculptural elements to produce interactive exhibits including several subsequent experience upgrades.

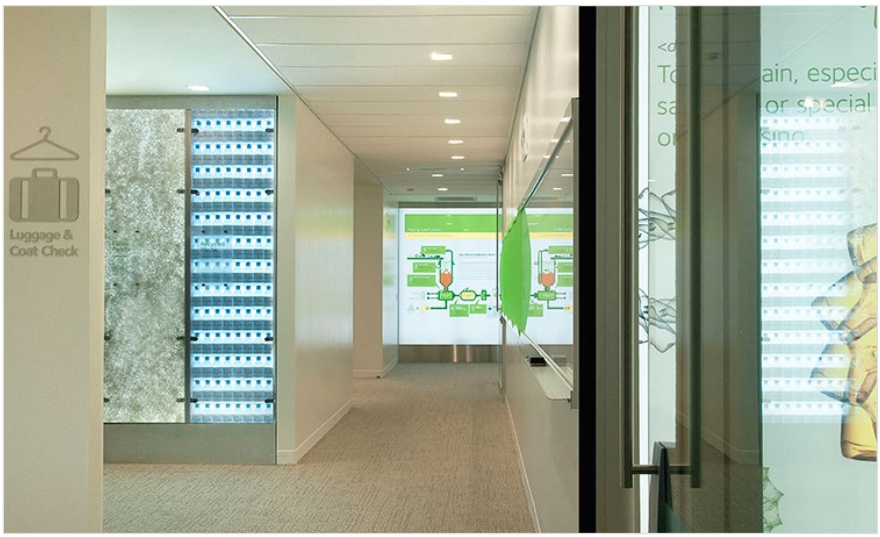
- **Location:** New York, New York
- **Xibitz Role:** Project Management; Facility Interface Coordination; Design Solutions; Mockups; Media Coordination; Construction Drawings; and Production/Installation
- **Budget:** $352,000 *(Does not include design or AV)*
- **Completed:** October 2010
- **Materials & Production Elements:** Highly finished and custom-matched granite; glass; vinyl graphics; video; color; dynamic LED lighting synced with digital displays; and AV coordination

Waste Management

Project: Sustainability Center

Environmental graphics include lit fabric and printed eco substrates found throughout the space that further describe sustainable processes. Predictably, the Sustainability Center – LEED® Gold certified in 2012 – features nontoxic and highly recycled and recyclable construction.

- **Location:** Rogers, Arkansas
- **Xibitz Role:** Project Management; Design Solutions; Mockups; Construction Drawings; and Production/Installation
- **Budget:** $210,000
- **Completed:** June 2011
- **Materials & Production Elements:** Custom LED light box displaying recycled materials; printed vinyl; lumisty film on glass; acrylic lasered icons; i-zone graphics; direct-printed aluminum graphics; lambda prints mounted to glass; stainless steel; and a custom-welded sculpture made of patina metal branches and 3-form

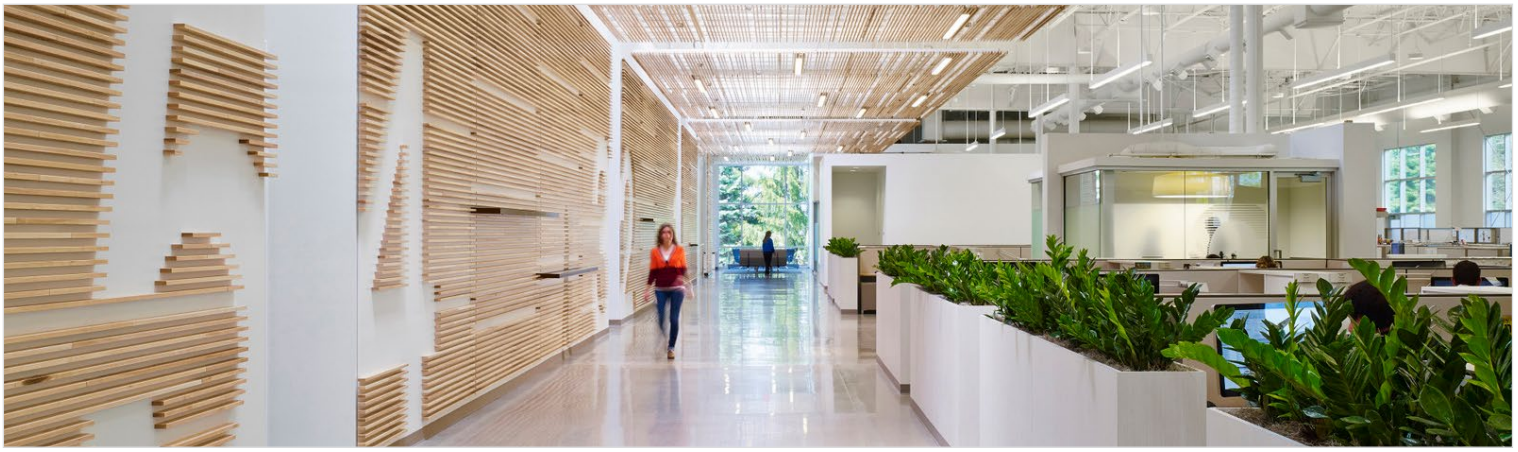


Newell Rubbermaid

Project: Design Center

In addition to providing design assist and implementation services, Xibitz organized and administered the project – taking on financial, project and schedule management responsibilities, and allowing Perkins+Will and Newell Rubbermaid to focus on what they do best: design.

- **Location:** Kalamazoo, Michigan
- **Xibitz Role:** Project Management; Design Solutions; Prototypes/Mockups; Construction Drawings; Production/Installation; and Maintenance Manuals
- **Budget:** $425,000 *(Does not include design)*
- **Completed:** April 2015
- **Materials & Production Elements:** Over seven miles of Ash wood slats; custom-built wood block wall with over 25,000 pieces; and vinyl graphics



Founders Brewing Co.

Project: Brewery Tour

Xibitz collaborated with Founders in-house graphic designer, Brett Haberkorn on this custom history wall recognizing Founders tremendous growth since their founding in 1997. The idea was loosely based on the styling of vintage billboards. The finial result heavily utilized recycled beer related materials reminiscent of Founders.

- **Location:** Grand Rapids, Michigan
- **Xibitz Role:** Project Management; Facility Interface Coordination; Design Solutions; Mockups; Prototypes; Media Coordination; Construction Drawings; and Production/Installation
- **Budget:** $113,000 *(Does not include preliminary design)*
- **Completed:** September 2015
- **Materials & Production Elements:** Recycled KBS, bourbon barrel stays with sandblasted text; printed DuraClear graphics set in Recycled KBS, bourbon barrel rings; custom-shadow boxes filled with bottle caps; direct printed rough sawn cedar planks; LED lighting; and painted 3d acrylic lettering

Cost Management

All of our projects have been completed on budget. We will typically contract with you on a fixed-fee basis. In all phases of the project, it is our responsibility to keep to the budget. You will not see a Change Order from us unless you materially change our Scope of Work, or there is something that you wish to add to the project that can not be otherwise accommodated within the existing budget. In either instance, a Change Order is a mutually agreed-upon document, not something that we surprise you with.

As your project progresses, we will define the budget for the upcoming phases in an increasing level of detail. Specifically, there are three formal budgeting steps, Budget Allocation, Estimate, and Final Quote. Each of these steps takes place as the design progresses to allow more specific identification and definition of exhibit components.

- **Budget Allocation:** Provided with the Interpretive Plan, the Budget Allocation assigns the available fabrication dollars across the categories and exhibits identified in the Plan. This allocation is based upon written descriptions in the Plan and on our experience with other projects. This Allocation is reviewed with you to assure that resources are being applied in proportions consistent with project goals and is adjusted as necessary after that review.

  The Budget Allocation assigns a budget number to each exhibit and serves as a guide for design to assist in keeping the project on budget.

- **Estimate:** Provided with the Concept Design, the Estimate refines the Budget Allocation using the information known at this stage, including overall look and feel, materials and interpretive techniques. Like the Allocation, this remains a fairly high-level estimate, but does provide estimated costs for each exhibit component, providing the opportunity for any needed course-correction. This Estimate is reviewed with you to assure that resources are being applied consistent with project goals, and is adjusted as necessary to remain within budget and on target.

- **Final Quote:** Provided with the Final Design, the Final Quote is a detailed cost determination providing specific costs for every exhibit component prior to beginning Fabrication. Any needed adjustments will be discussed with you prior to putting them into action. This Final Quote is reviewed with you and adjusted to your satisfaction prior to beginning Fabrication.

  The Final Quote will also include confirmation of costs for Exhibit Installation.

REFERENCES

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InterbrandDesignForum

Creating and managing brand value™

Interbrand Design Forum
7575 Paragon Road
Dayton, Ohio 45459
USA

T 937.439.4400
F 937.439-4340

www.interbranddesignforum.com

January 15, 2015

To Whom It May Concern:

Interbrand Design Forum and Xibitz worked closely together on a project for a mutual client, which spanned over the course of about a year and a half. Their dedication and collaborative spirit was present from the very beginning stages of the project.

Xibitz offers a quality product and across the board, we were pleased with their work. Since my earliest involvement with the Xibitz team, I have found their company to be top-notch in many ways. Their representation of our clients brand standards and attention to the original design intent was respectful, fair and professional.

Xibitz partnership is exemplary of the model to which we would like all to aspire.

Sincerely,

Diane Borton
Executive Director, Client Operations

January 14, 2015

I would highly recommend Xibitz for a future project.

Xibitz has proven to be a trusted partner in our latest endeavor, the Nutrilite Center for Optimal Health in Buena Park, California. Their attention to detail and quest to deliver high quality products is unrivaled. One area of expertise that helped move us forward, was Xibitz's ability to look for ways to reduce the overall cost while maintaining the desired look, feel and overall design that we desired. Xibitz was a huge asset when working across functions, time zones, and levels of experience. Xibitz took the lead on understanding the project, scoping the work and delivering to our schedule. Xibitz worked collaboratively with our design and digital partners to overcome obstacles to meet those deadlines – it was no easy task. It was the perspective, input and expertise of the Xibitz team that made this experience a reality for our guests. We created over 1300 assets for this project and launched an entirely new facility including a rooftop garden in less than 18 months. I firmly believe the power of a team is so much stronger than the strength of an individual, and I was honored to have Xibitz part of this team!!

Kathy Huyge

Project Management Destination Experiences
P. 616.787.6677 C. 616.540.0556

PERKINS+WILL

January 15, 2015

Re: Perkins+Will Xibitz Letter of Recommendation

To the Populous Team,

Xibitz has been an esteemed contractor, service provider, advisor, collaborator and partner to Perkins+Will and its Branded Environments discipline for many years. Our firms have successfully delivered over 30 projects together, as well as teamed on many other new business pursuits.

This long, deep relationship has jointly implemented projects across North America within many different market sectors. These include Sports/Athletics, Museums/Exhibits, Tradeshows/Experiences, Academic Institutions, Science+Technology Facilities, and Corporate Headquarters/Offices.

The services provided by Xibitz have been diverse, including preliminary budget estimates, build feasibility, technical development, prototyping & mock ups, displays/exhibits, interactive elements, environmental graphics, architectural components, signage, media/technology, production files preparation, shipping coordination and events management.

Our working structure with Xibitz has been flexible and varied as needed to serve the best interests of our clients, our companies and the project at hand. This has included traditional design/bid/build contractor as well as technical advisor, cost estimator, and specialty consultant. We have also delivered a number of projects via design/build partnership.

I have worked on a number of these projects and can personally recommend Xibitz with the highest regard to the Populous team. The entire company is professional, collaborative, willing and capable, consistently delivering quality projects on time and within established budget parameters.

My respect and confidence in Xibitz can be defined through the following attributes:

Collaborative
Xibitz is a team player, always focused on the best interests of the project, client and group rather than having an "every man for himself" approach like many fabricators/installers.

Proactive & Fully Engaged
The Xibitz team doesn't sit back and wait to be asked (or told) to take action. They fully participate in a project, always thinking about and anticipating the key issues that need to be addressed. This often results in better ideas, increased creativity and solid solutions.

Nimble & Innovative
Deep and wide experience allows Xibitz to act nimbly when a project needs an alternative approach to problem-solving. Their team is flexible and leverages their many project types and experiences to create new solutions that help enhance project results.

330 North Wabash Avenue, Suite 3600, Chicago, IL 60611 t 312.755.0770 perkinswill.com

PERKINS+WILL

Capable

Xibitz has the intellectual capacity, facilities, equipment and manpower to meet most any project's needs, regardless of size, complexity or timing. During the occasional instance where it's not literally provided in-house, they can leverage an established network of experts and sub-consultants to fill in any gaps as necessary.

Reliable & Dedicated

Some contractors and consultants fluctuate between great, average and bad based on the specific employee(s) that you work with from project to project. After numerous projects with the Xibitz team, it is clear that their staff is comprehensively reliable and committed to delivering a quality project while maintaining its budget and schedule.

Fun

Throughout many complex project situations and tough circumstances, the Xibitz team has always remained positive, respectful and (dare I say it) fun to work with. It never hurts to be able to share those experiences with a group that maintains good humor and friendship when you find yourselves in that project "foxhole".

From one designer to another, I can't think of a better group than Xibitz to develop an athletic branding project with, especially if via a collaborative design/build process with a defined project budget and fast-track schedule. I highly recommend that you seriously consider them for your University of Colorado project.

Feel free to contact me at any time if you have any questions or wish to discuss my experience with the Xibitz team in greater detail.

Respectfully,

J.D. McKibben AIA, AMA, LEED AP
Associate Principal
Perkins+Will
330 N. Wabash Avenue, Suite 3600
Chicago, Illinois 60611
jd.mckibben@perkinswill.com
(312) 755-4776 Direct

Thank You.

We appreciate your consideration and the opportunity to earn your partnership and trust.

—The Xibitz Team

MEETING DATE: **November 5, 2015**

AGENDA ITEM#: V – B

BOARD OF PUBLIC WORKS ACTION REQUEST

SUBJECT: Recycling and Education Center Scale house

DIVISION: Resource Recovery and Recycling

PREPARED BY: Nic VanderVinne, Resource Recovery and Recycling Manager

ACTION REQUESTED:

Review and approval to award Bultsma Construction the contract to construct the permanent scale house at the Recycling and Education Center.

SUMMARY OF REQUEST:

Since opening in 2010, the Recycling and Education Center (REC) utilized a self-serve kiosk at the scale for inbound recycling trucks with varying success due to misplaced access cards, forgotten entry codes and drivers going around the scale. The implementation of service fees for recycling loads in January 2016 required accurate accounting of inbound materials for billing purposes. During recent scale software upgrades staff evaluated changes at the self-serve kiosk to help reduce mistakes and were unable to find a system that would not require monitoring to prevent misuse.

In March 2016 the Board approved scalehouse attendant position for the REC that monitors 60 inbound loads daily and assists the facility supervisor with driver paperwork for 40 outbound commodity loads leaving the facility weekly. A temporary construction office trailer was placed at the Recycling Center while scalehouse design plans were completed.

The Purchasing Department issued Request for Proposal #1854 for the construction of a permanent scale house at the Recycling and Education Center. Four bids were submitted and staff recommends the low bid of $129,400 by Bultsma Construction to build the new scale house. Bultsma Construction has completed quality work for other Kent County building projects and comes with recommendation by other County Departments.

SUGGESTED MOTION:

It was moved by_____ and seconded by_____ to award Bultsma Construction the contract to construct the permanent scale house at the Recycling and Education Center at a cost of $129,400.

ATTACHMENTS:

Bid Tabulation
Site Plans

GOVERNING/ADVISORY BOARD APPROVAL DATE: November 10, 2016

DEPARTMENT DIRECTOR: _____

Kent County Purchasing Division

BID 1854 - General Contracting Services - Recycling Center Scale House

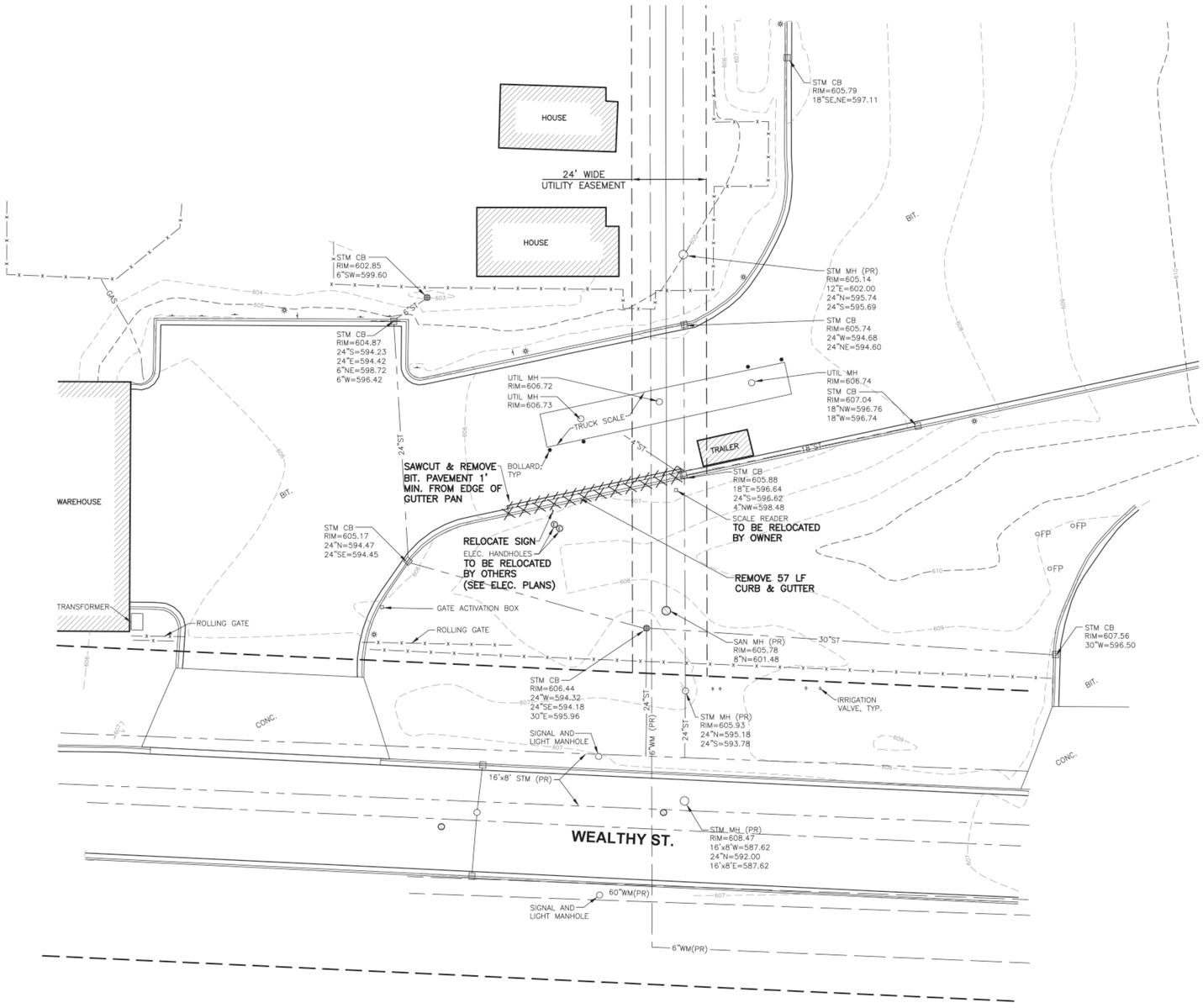
Due: 10/14/2016 at 2 p.m.

Line	Description	Name	BID
1	Total Project Cost	Bultsma Construction Co	$ 129,400.00
1	Total Project Cost	JWK Construction Inc.	$ 186,000.00
1	Total Project Cost	McGraw Construction	$ 199,122.00
1	Total Project Cost	TERHORST & RINZEMA CONSTRUCTION CO.	$ 169,950.00

Note: This document shall not be construed as a comment on the responsiveness and is subject to change during the review process. This information is not an indicator of award.

Kent County Scale House

Kent County Recycling & Education Center
977 Wealthy St. SW, Grand Rapids, Michigan



VICINITY MAP
NOT TO SCALE

SHEET INDEX

C1	TOPOGRAPHIC SURVEY & REMOVALS
C2	SITE PLAN
C3	UTILITY PLAN
A1.1	FOUNDATION, FLOOR, & ROOF PLANS DOOR SCHEDULE, & NOTES
A2.1	EXTERIOR AND INTERIOR ELEVATIONS
A3.1	WALL SECTIONS AND DETAILS.
SP1	SPECIFICATIONS
SP2	STRUCTURAL NOTES & SCHEDULES
ME0.0	MECHANICAL, PLUMBING & ELECTRICAL SYMBOLS LEGENDS & ABBREVIATIONS
EP0.1	ELECTRICAL SITE PLAN
E1.1	ELECTRICAL LIGHTING PLAN, SCHEDULE & SPECS
M1.1	MECHANICAL & PLUMBING PLANS & SPECS

NOTES

1. CONTRACTOR TO FIELD VERIFY HORIZONTAL & VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND MUST NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
2. LANDSCAPING TO BE RELOCATED OR REMOVED AS NECESSARY FOR CONSTRUCTION. COORDINATE WITH OWNER.

REMOVAL LEGEND

- BITUMINOUS PAVEMENT REMOVAL
- SAW CUT
- XXXX REMOVAL

LEGEND

- MONUMENT
- FOUND IRON STAKE
- SET IRON STAKE
- SIGN
- POST
- SB# X – SOIL BORING
- WELL
- GUY ANCHOR
- UTILITY POLE
- LIGHT POLE
- ELECTRIC METER
- ELECTRIC MANHOLE
- U.G. UTILITY MARKER
- MAILBOX
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- GAS METER
- TELEPHONE RISER
- CATCH BASIN
- ROUND CATCH BASIN
- UTILITY MANHOLE
- STORM MANHOLE
- SANITARY MANHOLE
- TELEPHONE MANHOLE
- SHRUB
- DECIDUOUS TREE
- CONIFEROUS TREE
- WATER UTILITY LINE
- TELEPHONE UTILITY LINE
- ELECTRIC UTILITY LINE
- GAS UTILITY LINE
- STORM UTILITY LINE
- SANITARY UTILITY LINE
- FIBER OPTIC UTILITY LINE
- OVERHEAD UTILITY LINE
- CABLE

NORTH

0 20 40
Horizontal Scale in Feet

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ALL UTILITIES AS SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS AND AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THE AREA.

TOPOGRAPHIC SURVEY & REMOVALS

post associates
architects
40 pearl st. suite 900
grand rapids | michigan
616.451.3041
postassociates.com

Kent County Recycling Center
New Scalehouse
Wealthy Street
Grand Rapids, Michigan

date	issued for
06.06.16	PRELIMINARY
07.19.16	OWNER REVIEW

file no. 16-10

sheet no. C1

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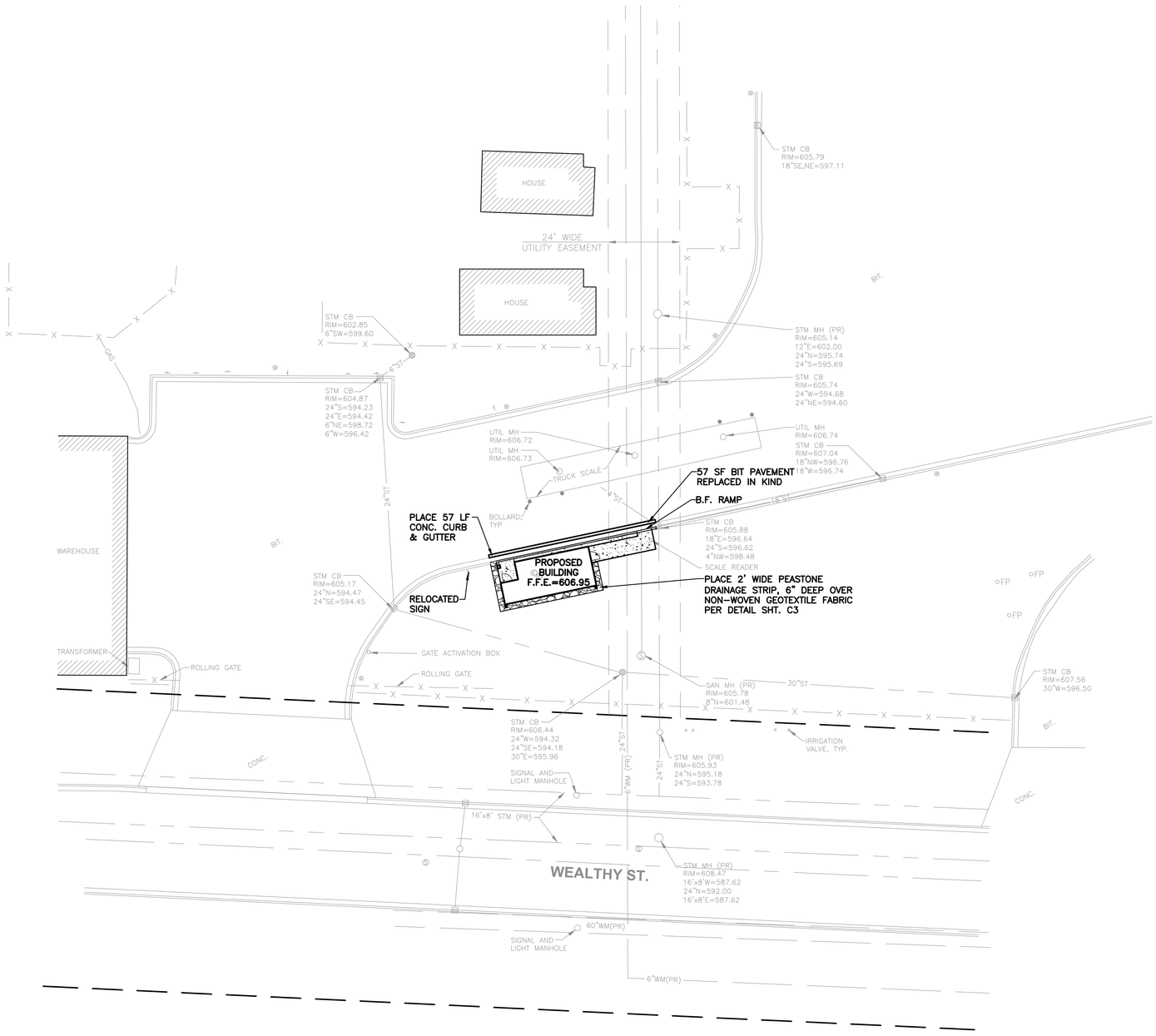
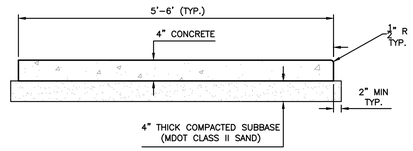
By:LINDSEY

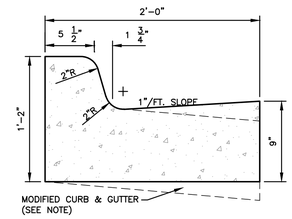




STANDARD SIDEWALK
NOT TO SCALE

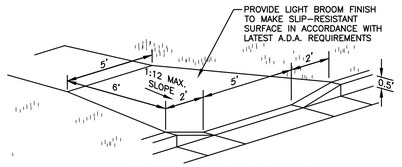
CONTRACTION & EXPANSION JOINT NOTES:

1. PLACE 1" FIBER JOINT FILLER AT 400' MAXIMUM INTERVALS
2. PLACE 1" FIBER JOINT FILLER AT SPRING POINTS OF CURB RETURNS (& INTERSECTING STREETS)
3. PLACE 1" FIBER JOINT FILLER IN ADJACENT CONTRACTION JOINTS EACH SIDE OF CATCH BASINS.
4. PLACE CONTRACTION JOINTS AT 40' MAXIMUM INTERVALS (NO SAW JOINTS ALLOWED)



NOTE:
MODIFIED CURB & GUTTER SHALL BE THE SAME DETAIL BUT THE GUTTER SHALL SLOPE AWAY FROM THE CURB FACE @ 1"/FT.

STANDARD CONCRETE CURB & GUTTER
NOT TO SCALE



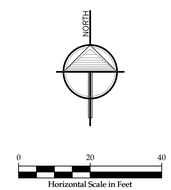
BARRIER FREE RAMP
NOT TO SCALE

NOTES

1. CONTRACTOR TO FIELD VERIFY HORIZONTAL & VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND MUST NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

LEGEND

- PROPOSED CONCRETE WALKS & SURFACES
- PROPOSED STANDARD PAVEMENT SECTION
- PEASTONE DRAINAGE STRIP
- STANDARD CURB & GUTTER



3 WORKING DAYS
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SITE PLAN

post
associates
architects

40 pearl st. suite 900
grand rapids | michigan
616.451.3041
postassociates.com

Kent County Recycling Center
New Scalehouse
Wealthy Street
Grand Rapids, Michigan

date	issued for
06.06.16	PRELIMINARY
07.19.16	OWNER REVIEW

file no.
16-10

sheet no.
C2

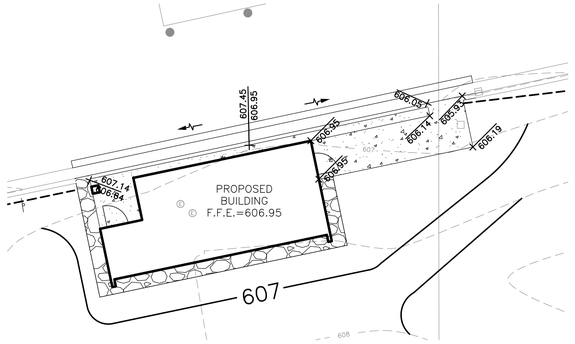
Jul 19, 2016 - 12:02pm H:\Projects\16-055 Kent County Scale House\LD\02-Layout.dwg, XREFs: [cpa] [cpl] [brdr
By:LINDSEY

MICHIGAN DEPARTMENT OF MANAGEMENT AND BUDGET
S-E-S-C KEYING SYSTEM

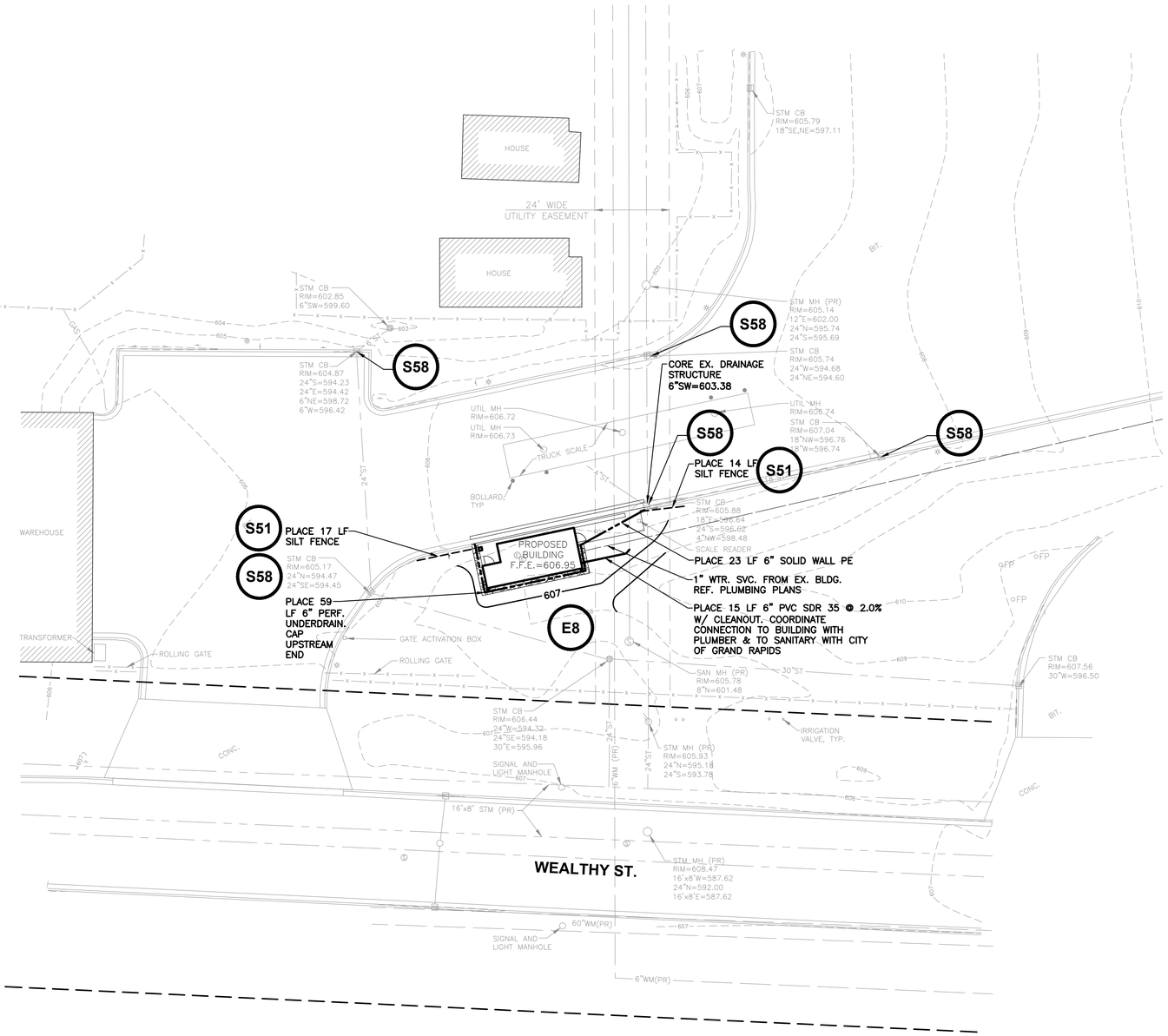
EROSION CONTROLS			
E8	PERMANENT SEEDING		Sta□ili□ation □ethod utili□ed on sites where earth □han□e has □een □o□□leted (final □radin□ attained).
SEDIMENT CONTROLS			
S51	SILT FENCE		Use ad□a□ent to □riti□al areas, to □revent sedi□ent laden sheet flow fro□ enterin□ these areas.
S58	INLET PROTECTION FABRIC DROP		Use at stor□ water inlets, es□e□all□ at □onstru□tion sites.

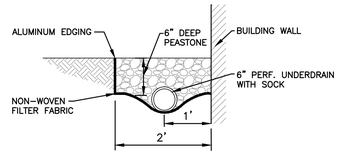
EROSION & SEDIMENTATION CONTROL SCHEDULE

1. INSTALL SILT FENCE AS SHOWN. MAINTAIN SILT FENCE BY REMOVING SEDIMENT WHEN IT HAS REACHED 1/3 TO 1/2 OF THE HEIGHT OF THE FENCE.
2. CLEAR & GRUB SITE AS NECESSARY AND REMOVE ALL RESULTING MATERIALS FROM THE SITE.
3. REMOVE & STOCKPILE TOPSOIL. INSTALL SILT FENCE AT THE TOE OF THE SLOPE ON THE DOWNSTREAM SIDE AND ADD TEMPORARY SEED MIX TO ESTABLISH VEGETATION.
4. NO SOIL WILL BE ALLOWED TO ACCUMULATE OFF SITE. ANY SOIL TRACKED OFF SITE WILL BE IMMEDIATELY REMOVED.
5. PERMANENT CONTROL MEASURES MUST BE COMPLETED 15 CALENDAR DAYS AFTER THE FINAL EARTH CHANGE IS COMPLETED FOR EACH AREA DISTURBED. THIS INCLUDES BLANKETS, SEEDING, MULCHING & HYDROMULCHING.
6. FOR ALL AREAS TO BE SEEDED, THE MULCH MUST BE APPLIED IMMEDIATELY AFTER SEED APPLICATION.
7. REMOVE TEMPORARY CONTROLS SUCH AS SILT FENCE, INLET PROTECTION AND NETTING ONCE VEGETATION IS ESTABLISHED AND THE SITE HAS BEEN STABILIZED.

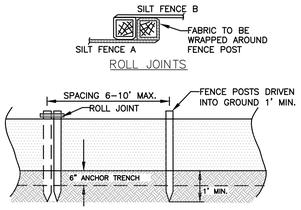


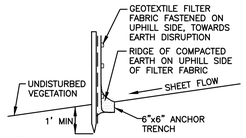
ENLARGEMENT
SCALE 1"=10'



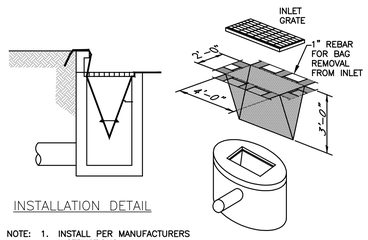


DRAINAGE STRIP DETAIL
NOT TO SCALE





S51 SILT FENCE DETAIL
NOT TO SCALE



NOTE: 1. INSTALL PER MANUFACTURERS INSTRUCTIONS.

S58 INLET PROTECTION - FABRIC DROP
NOT TO SCALE

E8 PERMANENT SEEDING NOTE:

ALL PROPOSED LAWN AREAS AND ALL AREAS DISTURBED BY CONSTRUCTION SHALL RECEIVE A MINIMUM OF 4" OF TOPSOIL AND LAWN SEED MIX AS INDICATED ON PLANS AND AS FOLLOWS:

PROPORTION	CLASS "A" SEED TYPE
10%	CANNON KENTUCKY BLUEGRASS
10%	GOLDRUSH KENTUCKY BLUEGRASS
20%	RONDE KENTUCKY BLUEGRASS
20%	SR5100 CHEWINGS FESCUE
20%	SR5200 CREEPING RED FESCUE
10%	SR4400 PERENNIAL RYEGRASS
10%	SR4500 PERENNIAL RYEGRASS

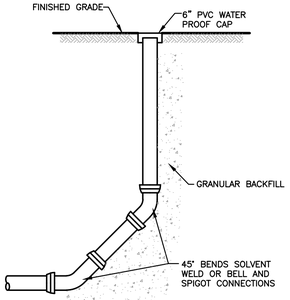
SEEDING RATE SHALL BE 4 TO 6 lbs. PER 1000 SQ. FEET.

NOTES

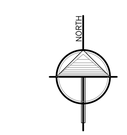
1. CONTRACTOR TO FIELD VERIFY HORIZONTAL & VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND MUST NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
2. REPAIR AND RE-WORK EXISTING IRRIGATION LINES AFTER COMPLETION OF CONSTRUCTION.

LEGEND

- PROPOSED STORM SEWER
- PROPOSED WATERMAIN
- PROPOSED GATE VALVE
- PROPOSED SANITARY SEWER
- (ELEV) PROPOSED CONTOURS
- (ELEV) EXISTING CONTOURS
- SILT FENCE
- XXX.XX TOP OF CURB ELEVATION
- XXX.XX GUTTER/SPOT ELEVATION
- DIRECTION OF DRAINAGE FLOW



SANITARY SEWER CLEANOUT
NOT TO SCALE



3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171

ALL UTILITIES AS SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS AND AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THE AREA.

GRADING, SESC & UTILITY PLAN

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Kent County Recycling Center
New Scalehouse
Wealthy Street
Grand Rapids, Michigan

issued for	date
PRELIMINARY	06.06.16
OWNER REVIEW	07.19.16

file no. 16-10

sheet no. C3

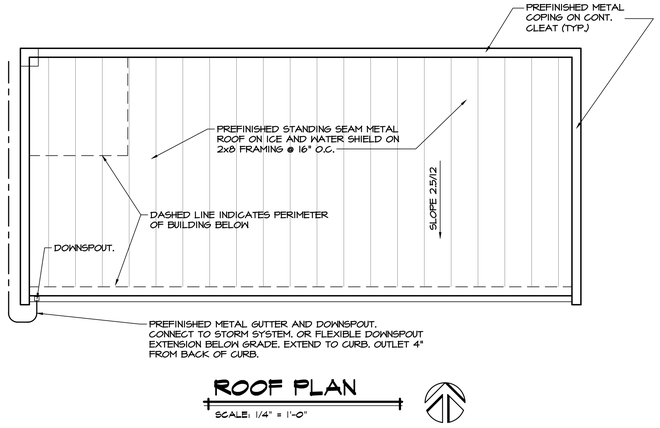
Jul 19, 2016 - 12:04pm H:\Projects\16-055 Kent County Scale House\LD\04-Utilities.dwg, XREFs: [cpa] [cp] [brd] [cpv
By:LINDSEY

PROJECT INFORMATION

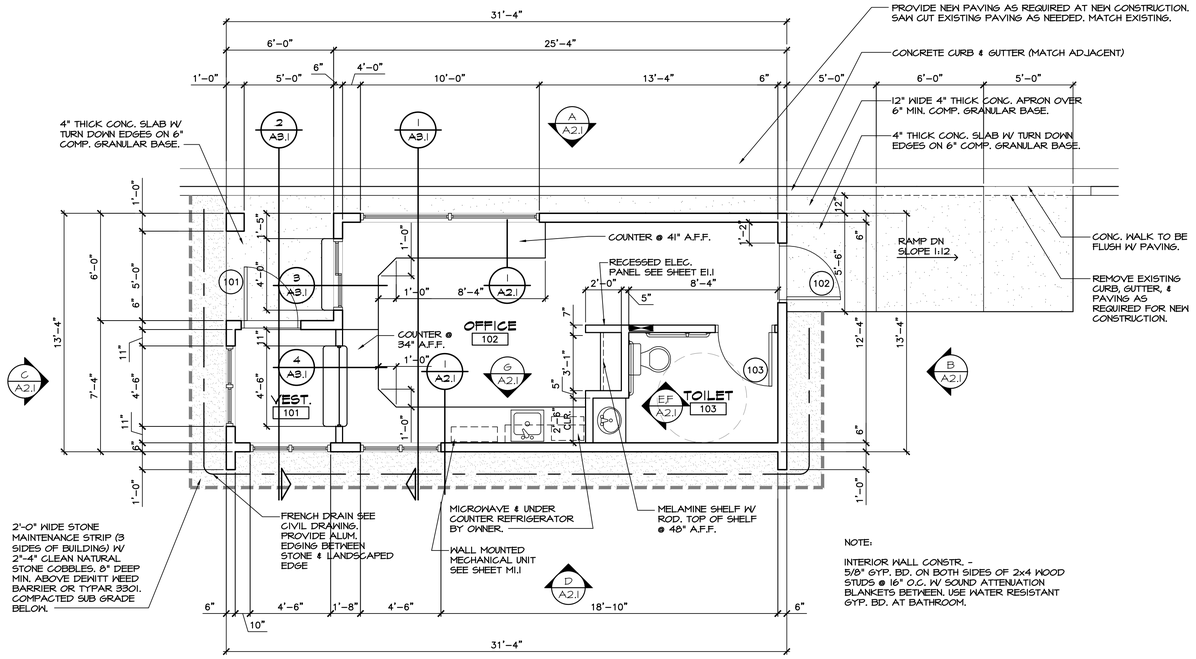
1. APPLICABLE CODES
   2012 MICHIGAN BUILDING CODE
   2012 MICHIGAN PLUMBING CODE
   2012 MICHIGAN MECHANICAL CODE
   2012 MICHIGAN ELECTRICAL CODE
   PART 8
   2006 MICHIGAN BARRIER FREE CODE
2. BUILDING TYPE B BUSINESS
3. CONSTRUCTION TYPE 5B
4. ALLOWABLE BUILDING AREA: (MBC 503)
   B , 9,000 S.F., 2 STORIES
5. ACTUAL BUILDING AREA
   SINGLE STORY
   MAIN LEVEL: 382 S.F.
6. BUILDING SHALL NOT BE SPRINKLED
7. BUILDING SHALL BE EQUIPPED WITH SMOKE DETECTION SYSTEM.
8. DRAFTSTOPPING IS NOT REQUIRED IN ATTIC. (MBC 718.4.3)
9. TEMPORARY FIRE EXTINGUISHERS SHALL BE PROVIDED PER THE INTERNATIONAL FIRE CODE DURING CONSTRUCTION.

PLAN NOTES:

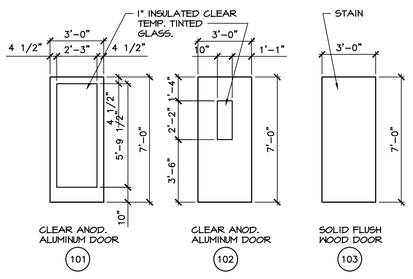
1. ALL EXTERIOR DIMENSIONS ARE TO THE OUTSIDE FACE OF THE EXTERIOR WALL, UNLESS NOTED OTHERWISE. ALL INTERIOR DIMENSIONS ARE TO THE OUTSIDE FACE OF THE WALL, UNLESS NOTED OTHERWISE. SEE WALL TYPES FOR ACTUAL DIMENSIONS / NOMINAL DIMENSIONS.
2. THE ARCHITECT HAS MADE EVERY EFFORT TO ACCURATELY REPRESENT WHAT CURRENTLY EXISTS AND WHAT IS PROPOSED. IF ANY DISCREPANCIES OCCUR, NOTIFY THE ARCHITECT IMMEDIATELY.
3. ALL NEW WALLS SHALL EXTEND TIGHT TO THE BOTTOM OF ROOF TRUSSES, UNLESS NOTED OTHERWISE.
4. ABBREVIATIONS:
   CJ = CONTROL JOINT
   FE = FIRE EXTINGUISHER
   FEC = FIRE EXTINGUISHER CABINET WITH FIRE EXTINGUISHER
   EP = ELECTRICAL PANEL
5. ALL EXPOSED INTERIOR WOOD TRIM SHALL BE STAIN GRADE POPLAR WITH EASED EDGES, UNLESS NOTED OTHERWISE. SHARP EDGES WILL NOT BE PERMITTED.
6. ALL PENETRATIONS THROUGH RATED ASSEMBLIES SHALL BE SLEEVED AND FIRE CAULKED ACCORDING TO RATING ASSEMBLY REQUIREMENTS.
7. ALL CONCRETE SLABS SHALL BE PLACED ON COMPACTED, GRANULAR BASE. SEE STRUCTURAL NOTES FOR INTERIOR SLABS. SEE CIVIL NOTES FOR EXTERIOR WALLS AND SLABS, UNLESS NOTED OTHERWISE.
8. GENERAL CONTRACTOR SHALL PROVIDE BLOCKING IN NEW WALLS AS REQUIRED OR OWNER PROVIDED SIGNAGE, WALL-MOUNTED EQUIPMENT (DISPENSERS, GRAB BARS, ETC.). COORDINATE LOCATIONS WITH OWNER. BLOCKING FOR CABINETS AND EQUIPMENT SHALL BE PROVIDED AS SHOWN ON DRAWINGS.
9. ALL NEW STUD WALL CONSTRUCTION SHALL HAVE 3" MINIMUM SOUND BATT INSULATION.
10. PROVIDE BLOCKING AS REQUIRED FOR ALL WALL-HUNG SINKS FOR SINK CARRIERS.
11. PROVIDE TACTILE SIGNAGE AT ALL EXTERIOR EXIT DOORS THAT STATES "EXIT". COMPLY WITH BARRIER-FREE REQUIREMENTS FOR TYPE FACE, TYPE HEIGHT, MOUNTING HEIGHT, ETC.
12. ALL NEW OPERABLE PARTS SHALL BE IN COMPLIANCE WITH BARRIER-FREE STANDARDS AND REQUIREMENTS FOR HEIGHTS ABOVE FINISH FLOOR AND CLEAR FLOOR ACCESS. THIS SHALL INCLUDE SECURITY SYSTEMS, EMERGENCY SYSTEMS, TASK LIGHTING, HVAC CONTROLS, ETC.
13. ALL NEW OPERABLE WINDOWS SHALL MEET ACCESSIBILITY REQUIREMENTS, INCLUDING MOUNTING HEIGHT FOR HARDWARE (48" MAXIMUM HEIGHT) AND GRASPABILITY (ONE-HAND OPERATION, NO TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST.) FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS MAXIMUM.

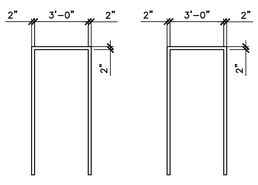


ROOF PLAN
SCALE: 1/4" = 1'-0"



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





DOOR 101 - WITH CLEAR ANOD. ALUM. FRAME
PROVIDE THE FOLLOWING HARDWARE

- B.F. ALUMINUM THRESHOLD
- PUSH BAR
- PULL HANDLE
- CLOSER
- CONTINUOUS HINGE
- KEYED CYLINDER (KEY BOTH SIDES)

DOOR 102 - WITH CLEAR ANOD. ALUM. FRAME
PROVIDE THE FOLLOWING HARDWARE

- B.F. ALUMINUM THRESHOLD
- ADA APPROVED LEVER HANDLE
- CLOSER
- CONTINUOUS HINGE
- KEYED ENTRY LOCKSET

DOOR 103 - WITH H.M. FRAME PAINTED
PROVIDE THE FOLLOWING HARDWARE

- ADA APPROVED LEVER HANDLE
- CLOSER
- (3) HINGES
- PRIVACY LOCKSET

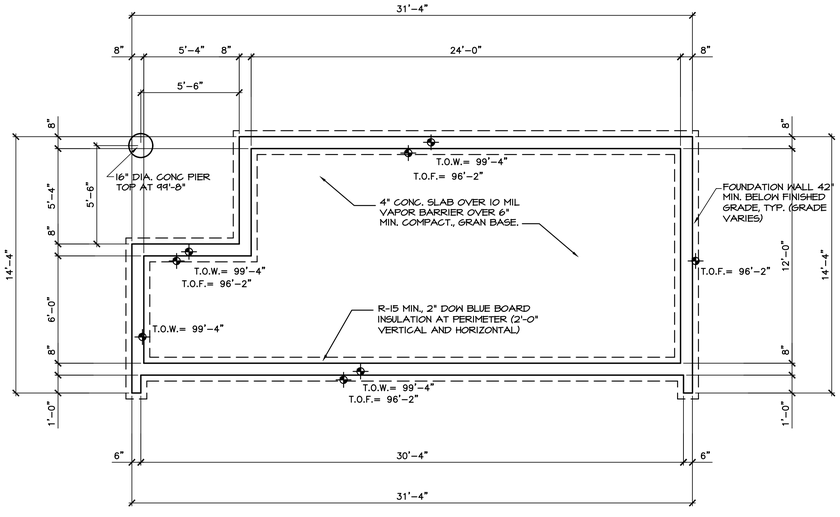
ROOM FINISHES:

VESTIBULE 101-
FLOOR: 8x8 QUARRY TILE
BASE: VINYL BASE
WALLS: PRIME AND PAINT W/ 2 COATS
CEILING: 2x2 ACOUSTICAL TILE

OFFICE 102-
FLOOR: CARPET TILE
BASE: VINYL BASE
WALLS: PRIME AND PAINT W/ 2 COATS
CEILING: 2x2 ACOUSTICAL TILE

TOILET 103-
FLOOR: V.C.T.
BASE: VINYL BASE
WALLS: PRIME AND PAINT W/ 2 COATS
CEILING: 2x2 ACOUSTICAL TILE

ALL 1x WINDOW & DOOR TRIM TO BE PRIMED AND PAINTED W/ 2 COATS.



FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

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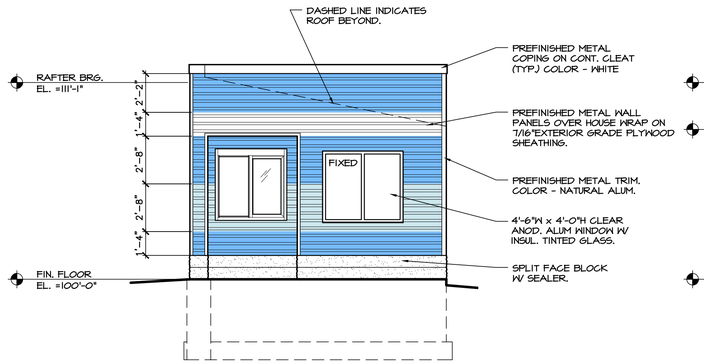
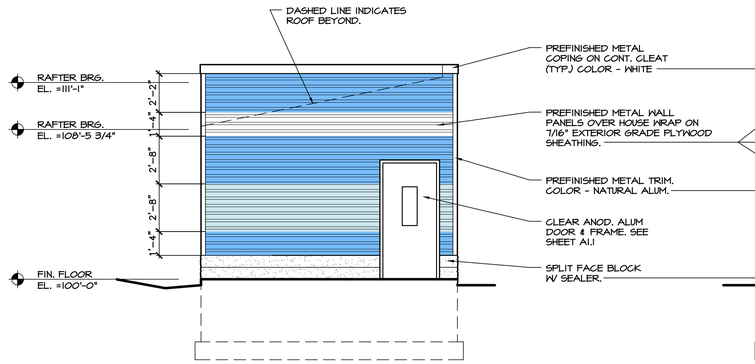


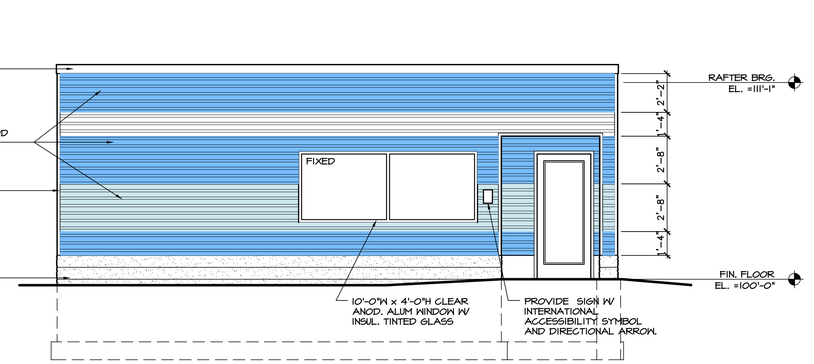
C A2.1 **EAST ELEVATION**

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



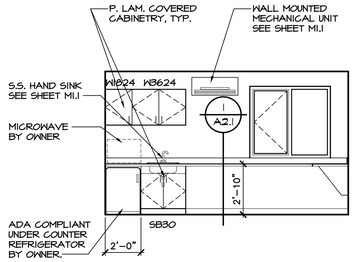
B A2.1 **WEST ELEVATION**

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



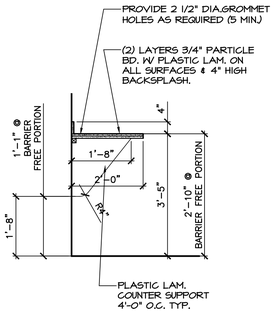
A A2.1 **NORTH ELEVATION**

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



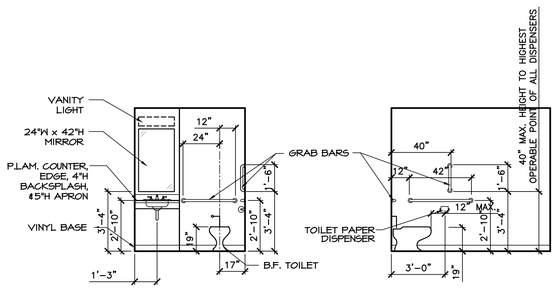
ELEVATION @ OFFICE #102

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



SECTION @ TYP. COUNTER

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

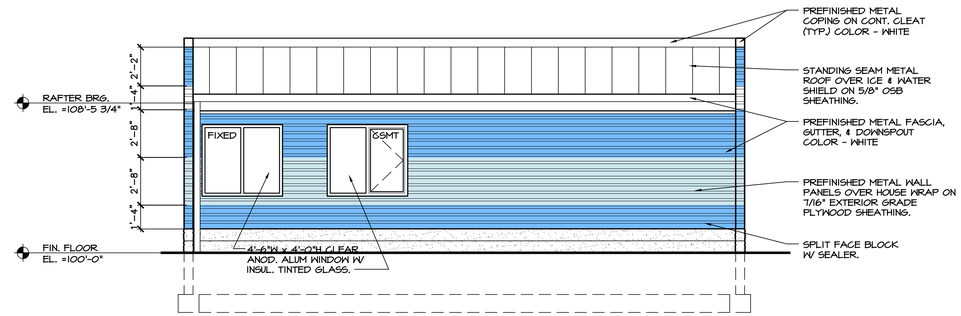


ELEVATION @ TOILET #103

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

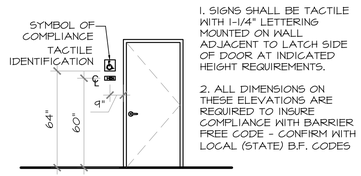
ELEVATION @ TOILET #103

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



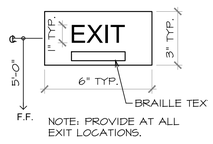
D A2.1 **SOUTH ELEVATION**

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



1. SIGNS SHALL BE TACTILE WITH 1-1/4" LETTERING MOUNTED ON WALL ADJACENT TO LATCH SIDE OF DOOR AT INDICATED HEIGHT REQUIREMENTS.

2. ALL DIMENSIONS ON THESE ELEVATIONS ARE REQUIRED TO INSURE COMPLIANCE WITH BARRIER FREE CODE - CONFIRM WITH LOCAL (STATE) B.F. CODES



NOTE: PROVIDE AT ALL EXIT LOCATIONS.

BARRIER FREE SIGNAGE

SCALE: NONE

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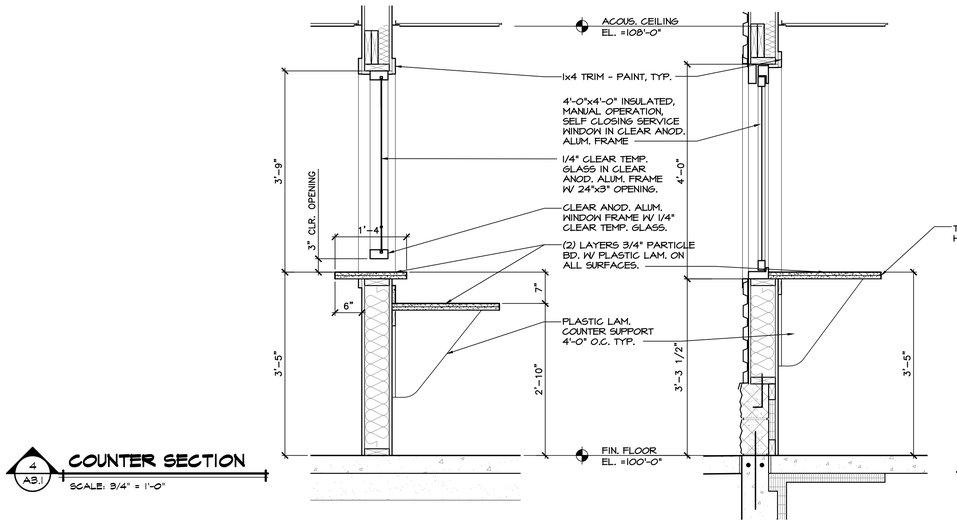
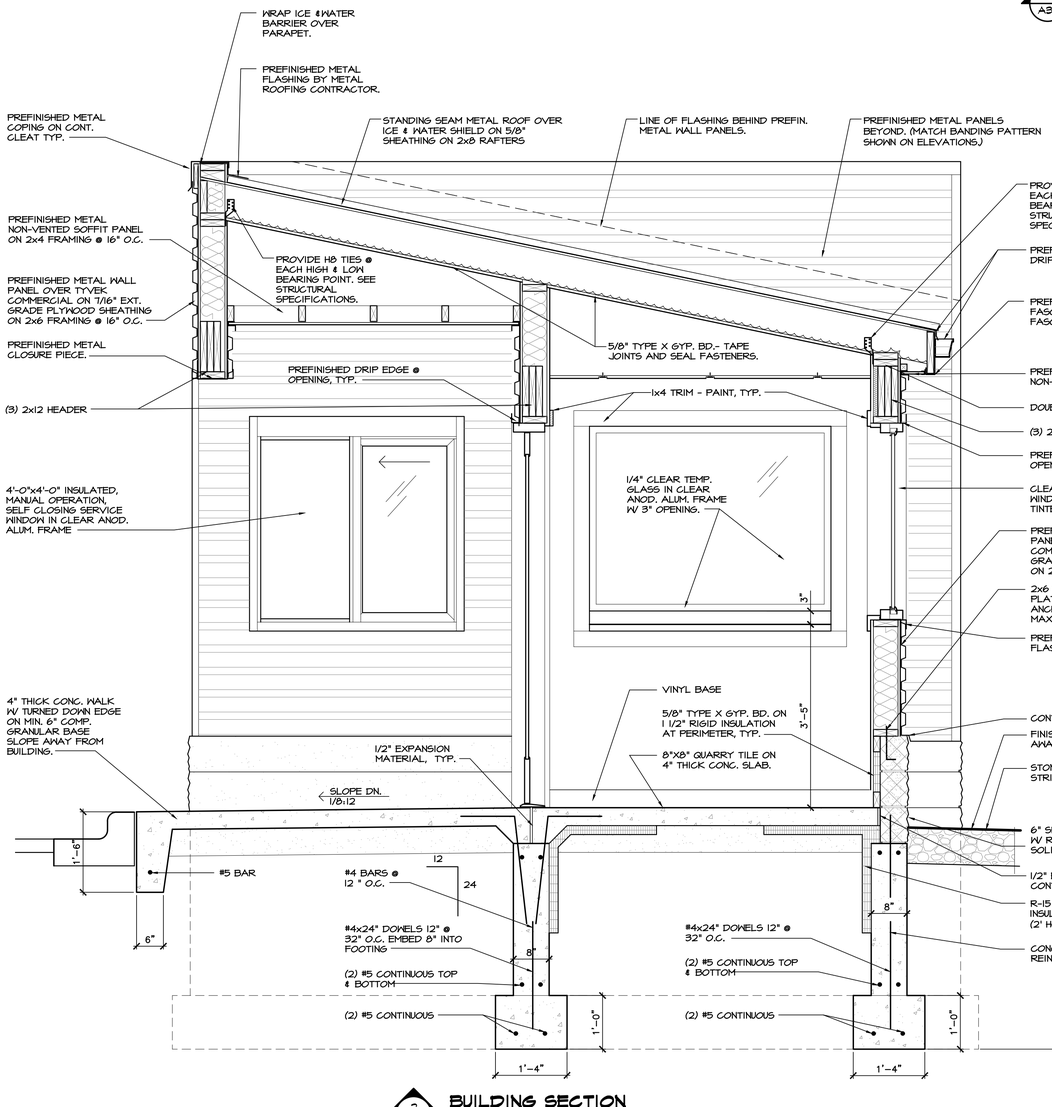


4 / A3.1 COUNTER SECTION
SCALE: 3/4" = 1'-0"

3 / A3.1 COUNTER SECTION
SCALE: 3/4" = 1'-0"



2 / A3.1 BUILDING SECTION
SCALE: 3/4" = 1'-0"

1 / A3.1 BUILDING SECTION
SCALE: 3/4" = 1'-0"

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GENERAL CONDITIONS:

THE AIA A201 GENERAL CONDITION 1997 SHALL BE PART OF THE CONSTRUCTION DOCUMENTS.

THE GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION (AIA DOCUMENT A-201, JUNE 1997 EDITION OF THE AMERICAN INSTITUTE OF ARCHITECTS), ARTICLE 1 THROUGH 14 ADDED TO, AND AS HEREIN ADDED TO AND AMENDED ARE PART OF THE CONTRACT DOCUMENTS, AND SHALL APPLY TO ALL CONTRACTORS, SEPARATE CONTRACTOR AND□OR SUBCONTRACTORS. WHERE A PORTION OF THE GENERAL CONDITIONS ARE MODIFIED OR DELETED BY THESE SUPPLEMENTARY CONDITIONS, THE UNALTERED PORTION OF THE GENERAL CONDITIONS SHALL REMAIN IN EFFECT. COPIES OF THE SAID GENERAL CONDITIONS ARE ON FILE AT THE ARCHITECT□S OFFICE OR MAY BE OBTAINED FROM THE AMERICAN INSTITUTE OF ARCHITECTS, 1735 NEW YORK AVENUE NW, WASHINGTON D.C., 20006. GENERAL CONDITIONS ARE HEREBY ADDED TO, AND AMENDED IN CERTAIN PARTICULARS AS FOLLOWS:

ADD TO ARTICLE 1, CONTRACT DOCUMENTS: AMEND ARTICLE 1.2.3 AS FOLLOWS:
1.1.1 THE INTENT OF THE CONTRACT DOCUMENTS ARE TO INCLUDE ALL ITEMS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK, AND TO MAKE ALL WORKING PARTS OPERATIONAL."
1.1.1: THE FORM OF AGREEMENT SHALL BE EITHER THE STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONSTRUCTION MANAGER AS CONSTRUCTOR (A121□CMC AIA) - 1991 EDITION, OR THE STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR, (AIA DOCUMENT A101 - 1997 EDITION).
1.2.3: FIGURES GIVEN ON DRAWINGS GOVERN "SCALED" MEASUREMENTS, AND LARGE SCALE GOVERNS SMALL SCALE, DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR INTERPRETATION, AND THE ARCHITECT□S DECISION SHALL GOVERN, GENERAL CONTRACTOR, SUBCONTRACTOR, AND□OR OTHER CONTRACTORS SHALL PROVIDE ALL ITEMS OF WORK COMPLETE, UNLESS DEFINITELY INDICATED ON DRAWINGS OR HEREIN SPECIFIED TO CONTRARY. IF DRAWINGS AND SPECIFICATIONS DISAGREE IN THEMSELVES OR WITH EACH OTHERS, ESTIMATE ON AND FURNISH GREATER QUANTITY OR BETTER QUALITY, UNLESS OTHERWISE INSTRUCTED BY ARCHITECT.
1.2.6: IF THERE ARE ANY AREAS WHERE THERE IS A QUESTION AS TO INTENT, CONTRACTOR SHALL OBTAIN A CLARIFICATION FROM ARCHITECT BEFORE PROCEEDING WITH WORK, ANY WORK DONE BY CONTRACTOR WITHOUT SUCH CLARIFICATION OF CONTRACT DOCUMENTS WILL BE PERFORMED AT CONTRACTOR□S RISK. REMOVAL AND REPLACEMENT OF "SUCH" WORK WILL BE THE DECISION OF THE ARCHITECT AND THE OWNER.

AMEND OR ADD TO ARTICLE 3, CONTRACTOR, AS FOLLOWS:
3.7.1: GENERAL CONTRACTOR SHALL SUBMIT PLANS AND SPECIFICATIONS TO BUILDING INSPECTOR, AND□OR ANY OTHER DEPARTMENT HAVING JURISDICTION OVER WORK, AND SHALL OBTAIN AND PAY FOR EXAMINATION FEES, GENERAL BUILDING PERMITS, AND ANY OTHER FEES REQUIRED BY SAID DEPARTMENT. SIMILARLY, EACH CONTRACTOR SHALL PROCURE ALL NECESSARY PERMITS AND CERTIFICATES, PAY ALL FEES, AND ARRANGE FOR ALL INSPECTIONS REQUIRED BY STATE, COUNTY, OR CITY AUTHORITIES, AND PAY ALL EXPENSES FOR REPAIRING STREETS OCCASIONED BY EXECUTION OF HIS WORK. ANY WORK DONE ON THE PROJECT WITHOUT SECURING APPLICABLE PERMITS FOR THAT WORK WILL BE CONE AT THE CONTRACTOR□S RISK. THE OWNER WILL EMPLOY A QUALIFIED TESTING AGENCY TO CONDUCT AND INTERPRET TEST REQUIRED FOR SOIL ENGINEERING AND SPECIAL INSPECTIONS PER MICHIGAN BUILDING CODE, 2003 SECTION 1704. IT WILL BE THE GENERAL CONTRACTOR□S RESPONSIBILITY TO COORDINATE, NOTIFY, AND SCHEDULE WITH THE SPECIAL INSPECTION AGENCY. IF REQUIRED TESTING IS NOT PERFORMED DUE TO GENERAL CONTRACTOR□S LACK OF COORDINATION, NOTIFICATION, SCHEDULING, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF UNIQUE AND ADDITIONAL TESTING REQUIRED TO MEET SPECIAL INSPECTION REQUIREMENTS.
3.15.3: REMOVE ALL MARKS, STAINS, FINGERPRINTS AND OTHER SOIL OR DIRT FROM ALL PAINTED, ENAMELED OR VARNISHED WORK, AND ALL OTHER EXPOSED FINISHED SURFACES.
3.15.4: GENERAL CONTRACTOR AND OTHER CONTRACTORS ARE RESPONSIBLE FOR EXPEDITING CLEANING, WASHING, WAXING, AND POLISHING REQUIRED WITHIN TECHNICAL SECTIONS OF SPECIFICATIONS GOVERNING WORK UNDER THEIR CONTRACT. IN ADDITION, GENERAL CONTRACTOR SHALL PERFORM FINAL CLEANING TO REMOVE ALL FOREIGN MATTER, SPOTS, SOIL, AND CONSTRUCTION DUST, SO AS TO PUT PROJECT IN A COMPLETE AND FINISHED CONDITION READY FOR ACCEPTANCE, AND USE INTENDED.
3.15.5: CONTRACTORS SHALL PERFORM A WEEKLY THOROUGH CLEANING TO MAINTAIN THE PREMISES AND EQUIPMENT IN A NEAT, ORDERLY, CONDITION. CONTRACTORS FAILING TO REMOVE THEIR DEBRIS (WEEKLY) FROM THE PREMISE SHALL BE CHARGED WITH THE ACTUAL COST OF CLEAN UP.

ADD TO ARTICLE 11.1.2 AS FOLLOWS:
- CONTRACTOR SHALL, PRIOR TO EXECUTION OF CONTRACT DOCUMENTS, FILE WITH OWNER, CERTIFICATES OF INSURANCE ISSUED BY AN INSURANCE COMPANY ACCEPTABLE TO OWNER CERTIFYING THAT THE CONTRACTOR HAS OBTAINED REQUIRED WORKMEN□S COMPENSATION, COMPREHENSIVE GENERAL LIABILITY, COMPREHENSIVE AUTOMOBILE LIABILITY INSURANCE, AND OTHER SUCH INSURANCE AS DEEMED APPROPRIATE AND NECESSARY BY THE CONTRACTOR.
- CONTRACTOR SHALL IN NO EVENT BE LIABLE TO OWNER, AND IN NO EVENT SHALL THE OWNER BE LIABLE TO CONTRACTOR, SEPARATE CONTRACTORS OR SUBCONTRACTOR FOR ANY EXTENDED COVERAGE PERILS IN CONNECTION WITH THIS CONTRACT WHETHER DURING OR AFTER COMPLETION OF THIS CONTRACT. CONTRACTOR SHALL INCLUDE IN CONTRACTS WITH HIS SEPARATE CONTRACTORS OR SUBCONTRACTORS A SIMILAR WAIVER OF RECOVERY RIGHTS BY THE SEPARATE CONTRACTORS AND□OR SUBCONTRACTORS AGAINST OWNER AND CONTRACTOR.
- CONTRACTOR SHALL PROVIDE AND MAINTAIN THROUGHOUT THE LIFE OF THE CONTRACT, GENERAL COMPREHENSIVE LIABILITY INSURANCE NAMING THE ARCHITECT, THE OWNER, AND CONSULTING ENGINEER AS ADDITIONAL INSURED. SUBMIT ORIGINAL INSURANCE CERTIFICATE TO THE ARCHITECT.
ADD TO ARTICLE 11.3.1 AS FOLLOWS:
- OWNER SHALL EFFECT AND MAINTAIN FILE EXTENDED COVERAGE, VANDALISM, AND MALICIOUS MISCHIEF INSURANCE SUBJECT TO ALL-RISK COMPLETE VALUE FORM UPON ENTIRE STRUCTURE ON WHICH WORK OF CONTRACT IS TO BE DONE TO 100□ OF INSURABLE VALUE THEREOF.

ALL-RISK INSURANCE SHALL BE EFFECTIVE DATE OF THIS CONTRACT, COPY OF SAID POLICY SHALL BE PRESENTED TO GENERAL CONTRACTOR, COPY OF ANY SUBSEQUENT ENDORSEMENT THERETO SHALL BE FURNISHED TO GENERAL CONTRACTOR.

ADD TO ARTICLE 11.4.2 AS FOLLOWS:
IT IS THE MUTUAL AND INDIVIDUAL RESPONSIBILITY, AND LIABILITY OF BOTH THE OWNER AND CONTRACTORS TO PROVIDE INSURANCE AS REQUIRED BY STATE STATURE, AND AS DEEMED IN THEIR BEST INTEREST, THRU CONSULTATION AND ADVICE AS PROVIDED BY THEIR RESPECTIVE INSURANCE ADVISOR. THE INSURANCE VALUES HERE ARE FOR GENERAL GUIDANCE ONLY.

THE GENERAL CONTRACTOR MAY PROVIDE JOB SIGN ON THE SITE AT THE OWNER□S DISCRETION. LOCATION TO BE DETERMINED BY OWNER.

IT SHALL BE THE FULL RESPONSIBILITY OF THE GENERAL CONTRACTOR TO COORDINATE AND EXPEDITE ALL PHASES OF ARCHITECTURAL, STRUCTURAL, MECHANICAL, INCLUDING PLUMBING, HEATING, VENTILATION, AND ELECTRICAL WORK. VERIFY EXACT LOCATION, AND INVERTS OF ALL EXISTING SITE UTILITIES AND STAKE SAME. THE GENERAL CONTRACTOR SHALL VERIFY EXISTING GRADE, AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK. THE GENERAL CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES, AND BE RESPONSIBLE FOR DAMAGE TO SAME.

ALL CONTRACTORS SHALL GUARANTEE ALL OF THEIR WORK FOR THIS BUILDING TO BE FREE FROM DEFECTS OF FAULTY LABOR AND□OR MATERIALS FOR A PERIOD OF ONE (1) YEAR FROM DATE SUBSTANTIAL COMPLETION OR CERTIFICATE OF OCCUPANCY, EXCEPT WHEN LONGER PERIODS ARE SPECIFIED. THE WARRANTY SHALL NOT DEPRIVE THE OWNER OF OTHER RIGHTS OR REMEDIES THAT THE OWNER MAY HAVE UNDER OTHER PROVISIONS OF THE CONTRACT DOCUMENTS, AND, IN ADDITION TO, AND RUNS CONCURRENT WITH, OTHER WARRANTIES MADE BY THE CONTRACTOR, AND□OR SUPPLIERS AND MANUFACTURERS.

CONTRACTORS FOR ALL TRADES SHALL COMPLY WITH ALL CURRENT BUILDING CODES SUCH AS MBC, NEC,OSHA, ADA, ETC., INCLUDING THE LATEST AMENDMENTS, AND□OR REVISIONS AND ALL OTHER APPLICABLE CODES.

USE ONLY SPECIFIED EQUIPMENT AND MATERIALS FOR THE BASE BID. ANY SUBSTITUTIONS MUST BE BID AS AN ALTERNATE.

SHOP DRAWINGS:
PROVIDE SHOP DRAWINGS FOR ALL CONSTRUCTION MATERIAL, AND AS-BUILT DRAWINGS AT COMPLETION OF THE WORK. DELIVERY SCHEDULES SHALL INCLUDE A MINIMUM OF (2) TWO WEEKS FOR SHOP DRAWING REVIEW BY ARCHITECT□ENGINEER.

SITE WORK:
PAVED AREAS AND EXTERIOR CONCRETE EQUIPMENT PADS, AND CONCRETE APRONS AND WALKS SHALL BE PART OF THIS CONTRACT. SITE CONTRACTOR SHALL PROVIDE FILL AS REQUIRED FOR BUILDING STABILITY AND ROUGH GRADING OF ADJACENT SITE WORK.

GRADING:
SHALL INCLUDE ALL WORK INVOLVED IN CLEARING AND GRUBBING, REMOVAL OF EXCESS SOIL, EXCAVATION AND PLACING OF COMPACTED FILLS (9" LIFTS, MAX.), OBTAINING ADDITIONAL ENGINEERED FILL MATERIAL AS REQUIRED, AND PERFORMING SUCH WORK AS MAY BE NECESSARY TO CONTROL EROSION AND SEDIMENTATION. GRADING SHALL CONFORM TO THE ELEVATIONS SHOWN ON THE PLANS. CLEARING SHALL BE PERFORMED BY THE CONTRACTOR AS REQUIRED TO REMOVE ALL DELETERIOUS MATERIAL FROM WITHIN THE LIMITS OF GRADING AND DISPOSED OF OFF-SITE. ALL PLANNED FILLS SHALL BE COMPACTED TO 95 PERCENT DENSITY IN ACCORDANCE WITH AASHO TEST-T180, KNOWN AS THE MODIFIED PROCTOR TEST□WALL BACKFILL SHALL COMPACT TO 90 PERCENT. SATISFACTORY FILL MATERIAL SHALL BE MDOT CLASS II GRANULAR MATERIAL, AND SOIL WITH GROUP SYMBOLS OF SW, SPM SW-SM OR SP-SM. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER AS TO MINIMI□E EROSION, AND PROVIDE SEDIMENTATIONS BASINS, AND OTHER REQUIRED STATUTES, AS NECESSARY. THE CONTRACTOR SHALL REMOVE SEDIMENT IN STORM SEWERS, WHICH OCCURS DURING CONSTRUCTION.

TREE REMOVAL:
BY LICENSED PROFESSIONAL TREE REMOVAL COMPANY. STUMPS SHALL ALSO BE COMPLETELY REMOVED. ALL DEBRIS SHALL BE REMOVED FROM SITE.

UNDERGROUND SLEEVES:
SITE CONTRACTOR SHALL PROVIDE (2) 2" UNDERGROUND SLEEVES BELOW SIDEWALKS AND□OR PAVING AREAS. COORDINATE LOCATIONS WITH OWNER□S REPRESENTATIVE.

IRRIGATION:
NOT PART OF THIS CONTRACT.

LANDSCAPING:
HYDROSEEDING OVER 4" SCREENED TOPSOIL. TOPSOIL SHALL BE LEVELED AND RAKED OVER DISTURBED AREAS. CONTRACTOR SHALL KEEP LAWN AREA HYDRATED UNTIL LAWN HAS BEEN ESTABLISHED.

TERMITE CONTROL:
ENGAGE A PROFESSIONAL PEST CONTROL OPERATOR WHO IS LICENSED ACCORDING TO REGULATIONS OF GOVERNING AUTHORITIES TO APPLY SOIL TREATMENT. APPLY TREATMENT ALONG TOPS AND SIDES OF FOOTINGS AND PIERS, ON TOP OF COMPACTED GRADE UNDER CONCRETE FLOOR SLABS OF THE BUILDING, AND ON THE TOP OF COMPACTED FILL UNDER ALL ENTRANCE CONCRETE SLABS OF PATIOS, ETC. DO NOT APPLY SOLID TREATMENT SOLUTION UNTIL EXCAVATING, FILLING, AND GRADING OPERATIONS ARE COMPLETED, EXCEPT AS OTHERWISE REQUIRED IN CONSTRUCTION OPERATIONS.
DO NOT APPLY SOIL TREATMENT TO FRO□EN OR EXCESSIVELY WET SOILS OR DURING INCLEMENT WEATHER. COMPLY WITH HANDLING AND APPLICATION INSTRUCTIONS OF THE SOIL TOXICANT MANUFACTURER.
USE AN EMULSIBLE, CONCENTRATED TERMITICIDE THAT DILUTES WITH WATER, SPECIFICALLY FORMULATED TO PREVENT TERMITE INFESTATION. FUEL OIL WITH NOT BE PERMITTED AS A DILUTENT. PROVIDE A SOLUTION CONSISTING OF ONE OF THE FOLLOWING CHEMICAL ELEMENTS:
CHOLOROPYRIFOS: DURSBAN TC, DOW CHEMICAL COMPANY
PERMATHRIN: DRAGNET FT, FMC CORPORATION
TORPEDO, ICI AMERIGAS, INC.
CYPEMETHRINE: PREVAIL FT, FMC CORPORATION
DEMON, ICI AMERGAS, INC.
FURNISH A FIVE (5) YEAR WARRANTY EXECUTED BY APPLICATOR AND CONTRACTOR FROM THE DATE OF SUBSTANTIAL COMPLETION, CERTIFYING THAT APPLIED SOIL TERMITICIDE TREATMENT WILL PREVENT INFESTATION OF SUB-TERRANEAN TERMITES. IF SUB-TERRANEAN TERMITE DAMAGE IS DISCOVERED DURING WARRANTY PERIOD, CONTRACTOR WILL RE-TREAT SOIL AND REPAIR OR REPLACE DAMAGE CAUSED BY TERMITE INFESTATION.

CONCRETE:
REFER TO DRAWINGS □ SHEET SP2 FOR CONCRETE REQUIREMENTS.

EXTERIOR JOINTS:
CAULK WITH EXTERIOR SEALANT AS MANUFACTURED FOR EACH APPLICATION. COMPLY WITH THE JOINT SEALANT MANUFACTURER□S PRINTED INSTALLATION INSTRUCTIONS. COLOR TO BE SELECTED FROM MANUFACTURER□S FULL RANGE OF COLORS. MANUFACTURER: TREMCO OR APPROVED EQUAL.

SEALER:
FURNISH AND INSTALL "LIFETIME WATER SEALANT" OR "PROFESSIONAL WATER SEALANT" ON ALL EXTERIOR BLOCK WALLS AS THE FINAL MATERIAL. APPLICATION OF "LIFETIME WATER SEALANT" OR "PROFESSIONAL WATER SEALANT" AS DISTRIBUTED BY PRO-COATS INC. 1-800-616-7767 AT A RATE OF APPROXIMATELY 100 S.F.□GAL.
-CONTRACTOR IS TO PROTECT WINDOWS AND SHRUBBERY. PROVIDE 20 YR. MATERIAL WARRANTY.
- CONTRACTOR MEET ALL THE "LIFETIME WATER SEALANT" OR "PROFESSIONAL WATER SEALANT" SPECIFICATIONS.

PERIMETER INSULATION:
PROVIDE RIGID, EXTRUDED, POLYSTYRENE BOARD AS MANUFACTURED BY DOW CHEMICAL COMPANY OR APPROVED. COMPREHENSIVE STRENGTH OF 25 PSI "STYROFOAM BLUE" OR EQUAL - THICKNESS SHOWN ON DRAWINGS.

ARCHITECTURAL MASONRY UNITS:
- MANUFACTURER: GRAND BLANC OR CONSUMER CONCRETE PRODUCTS.
- PROVIDE INTEGRAL COLOR SPLIT FACE.
- PROVIDE HORI□ONTAL REINFORCING AT 16" O.C. VERTICAL.
- PROVIDE COLORED MORTAR.
- PROVIDE CONTROL JOINTS AS RECOMMENDED BY MASONRY INSTITUTE.
- PROVIDE END BLOCKS AT CORNERS AND AT WALL OPENINGS (DOORS, WINDOWS, ETC.).
- SEE STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.

WALL CAVITY AND ATTIC INSULATION:
- AT EXTERIOR BLOCK WALLS. FILL ALL BLOCK CORES SOLID.
- AT EXTERIOR STUD WALL CAVITY, PROVIDE 5½", R-21 MIN. CLOSED CEILL FOAM OR CELLULOSE BLOWN-IN BETWEEN STUD FRAMING. INSULATION SHALL EXTEND THE FULL-HEIGHT OF THE WALL. TYPICAL OF ALL EXTERIOR PARTITIONS.
-AT ROOF. R-38 CLOSED CELL FOAM INSULATION.

EXTERIOR METAL SIDING:
- DESCRIPTION: FURNISH ALL NECESSARY MATERIALS, LABOR, AND EQUIPMENT FOR THE COMPLETE INSTALLATION OF PREFINISHED METAL SIDING AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN.
- MATERIALS: DRAWINGS AND SPECIFICATIONS ARE BASED UPON THE HR-16 PREFINISHED FORMED METAL WALL PANEL SYSTEM AS MANUFACTURED BY BERRIDGE MANUFACTURING COMPANY OR APPROVED EQUAL.
NOTE: BERRIDGE MANUFACTURING COMPANY□S SPECIFICATIONS SHALL BECOME PART OF THESE SPECIFICATIONS.
- FINISH: ALL EXPOSED SURFACES SHALL BE FREE OF SCRATCHES AND OTHER SERIOUS BLEMISHES
- INSTALLATION: PANELS SHALL BE INSTALLED AND ADJUSTED BY EXPERIENCED WORKMEN IN ACCORDANCE WITH THE MANUFACTURER□S INSTALLATION INSTRUCTIONS AND APPROVED SHOP DRAWINGS.
- SHOP DRAWINGS: BEFORE EXECUTING ANY WORK, SUBMIT SHOP DRAWINGS AT LARGE SCALE TO THE ARCHITECT FOR APPROVAL, SHOWING IN DETAIL ALL WORK TO BE FURNISHED.
- (3) COLOR VARIATIONS TO MATCH EXISTING RECYCLING CENTER.

WEATHER BARRIER WALL MEMBRANE:
PROVIDE TYVEK COMMERCIAL WRAP WATER RESISTANT BUILDING PAPER ON EXTERIOR WALL SHEATHING. SEE DRAWINGS FOR LOCATIONS. APPLY BUILDING PAPER HORI□ONTALLY WITH 6 INCH OVERLAP AND 6 INCH END LAP, FASTEN TO SHEATHING WITH GALVANI□ED STAPLES OR ROOFING NAILS. COVER UPSTANDING FLASHING WITH 6 INCH OVERLAP. SEAL SEAMS, EDGES, AND PENETRATIONS WITH TYVEK TAPE, EXTEND INTO JAMBS OF OPENINGS AND SEAL CORNERS WITH TAPE. COMPLY WITH MANUFACTURER□S WRITTEN INSTRUCTIONS FOR INSTALLATION, ESPECIALLY AT WINDOWS AND DOORS.

STANDING SEAM METAL ROOFING:
- PROVIDE PREFINISHED STANDING SEAM METAL ROOFING WITH CONCEALED FASTENERS.
- PANELS SHALL BE ONE-PIECE, 12" WIDE, 22 GA. WITH FACTORY-APPLIED KYNAR FINISH.
- STANDING RIBS 2" HIGH SHALL HAVE A CONTINUOUS GROOVE CAPILLARY BREAK.
- RIBS SHALL BE SECURELY LOCKED OVER ANCHOR CLIPS WITH A FIELD OPERATED ROLL-FORMING TOOL.
- FLASHING SHALL BE SAME MATERIAL TYPE AND FINISH AS THE ROOF PANEL, BUT THE TEMPER MAY BE REDUCED TO FACILITATE FORMING.
- FURNISH 20 YEAR WARRANTY ON FINISH.
- INSTALL PER MANUFACTURER□S SPECIFICATIONS AND RECOMMENDATIONS.
- PROVIDE ALL REQUIRED ACCESSORIES AND COMPONENTS FOR A COMPLETE INSTALLATION.
- ACCEPTABLE MANUFACTURERS: PAC-CLAD OR APPROVED EQUAL.
- COLOR: COLOR SIM. TO NATURAL CLEAR ALUMINUM.
VERIFY SELECTION WITH OWNER PRIOR TO ORDERING.
- PROVIDE ICE AND WATER BARRIER BELOW ALL STANDING SEAM METAL ROOFING.

SOFFIT PANELS:
PREFINISHED ALUMINUM NON-VENTED SOFFIT PANELS. COLOR TO BE SELECTED BY ARCHITECT FROM STANDARD COLORS.

DOWNSPOUTS AND GUTTERS:
PROVIDE PREFINISHED DOWNSPOUTS AND GUTTERS ON ALL EAVES. GUTTERS SHALL BE ONE CONTINUOUS PIECE ON A SINGLE RUN. DOWNSPOUTS SHALL CONNECT TO STORM SYSTEM OR FLEXIBLE DOWNSPOUT EXTENSION BELOW GRADE AT EACH LOCATION. ENSURE THAT WATER RUN-OFF IS DIRECTED AWAY FROM THE BUILDING AND ANY BUILDING OPENING (SERVICE DOORS, ETC.)

GYPSUM BOARD:
- FURNISH AND INSTALL ALL MATERIALS, LABOR, AND EQUIPMENT TO FINISH INTERIOR SIDE OF WALLS WITH GYPSUM WALL BOARD IN ACCORDANCE WITH THE SPECIFICATIONS, SCHEDULES, AND DRAWINGS.
- ACCEPTABLE MANUFACTURERS: UNITED STATES GYPSUM COMPANY, NATIONAL GYPSUM, GEORGIA PACIFIC, CELOTEX, OR APPROVED EQUAL.
- WALLBOARD SHALL BE A MINIMUM OF ⅝" THICK, TAPERED EDGE SHEETROCK IN LENGTHS DETERMINED TO MINIMI□E JOINTS.
- CEILINGS SHALL HAVE ⅝" TYPE □X□WALLBOARD INSTALLED ON BOTTOM SIDE OF JOISTS.
- USE ⅝" WATER RESISTANT WALLBOARD AT TOILET ROOM.

HOLLOW METAL FRAME:
- FRAMES SHALL BE 16 GAUGE BUCK AND TRIM TYPE. FRAMES SHALL BE WELDED AND SHALL HAVE (3) ANCHORS PER JAMB.
- MANUFACTURER□S:CURRIES, REPUBLIC, STEELCRAFT, AND SUPERIOR.
- ALL H.M. FRAMES SHALL BE PAINTED.

WOOD DOORS:
- DOOR 103 SHALL BE 1 -3□4" THICK SOLID CORE, STAIN GRADE RED OAK VENEER, PLAIN SLICED WITH PC-7 CONSTRUCTION WITH MATCHING HARDWOOD EDGES. (MATCH EXIST. ADJACENT BUILDING) USE OAK VENEER FOR BIDDING PURPOSES.
- ACCEPTABLE MANUFACTURERS: WEYERHAUSER, ALBOMA, OR APPROVED EQUAL.

HARDWARE:
PROVIDE A FINISH HARDWARE PRICE FOR HARDWARE LISTED ON DRAWINGS. ALL HARDWARE SHALL HAVE SATIN NICKEL OR SATIN CHROME FINISH. HARDWARE SHALL COMPLY WITH ALL A.D.A.□MICHIGAN BARRIER FREE REQUIREMENTS.
DOOR HANDLE MANUFACTURER: SARGENT "10 LINE" OR APPROVED EQUAL.
4½"X4½" HINGES: MCKINNEY OR APPROVED EQUAL.
CLOSER: SARGENT "351 SERIES" AND□OR "1431 SERIES" OR APPROVED EQUAL.
WALL BUMPER: ROCKWOOD "409" OR APPROVED EQUAL.
SILENCER: ROCKWOOD "608" OR APPROVED EQUAL.
CONCEALED OVERHEAD STOP: SARGENT "1538S" OR APPROVED EQUAL.
EXTERIOR DOORS SHALL HAVE SWEEP AT BOTTOM AND WEATHERSTRIPPING AROUND JAMB, AND ADA COMPLIANT ALUM. THRESHOLD.
ALL DOORS SHALL BE KEYED LOCK. KEYING SHALL BE COORDINATED WITH GRPD REPRESENTATIVE.

ALUMINUM ENTRY DOORS AND FRAMES:
- DOOR 101 SHALL HAVE MEDIUM STILE WITH 10" HIGH ADA-COMPLIANT BOTTOM RAIL.
- DOOR 102 SHALL HAVE VIEW PANEL AS SHOWN ON DRAWINGS.
- 4-1□2" DEEP, 1-3□4" THICK THERMALLY BROKEN ALUMINUM FRAME.
- ANODI□ED ALUMINUM. FINISH: CLEAR
- GLASS SHALL BE 1" THICK TINTED, TEMPERED GLA□ING
- MANUFACTURER: KAWNEER, TUBELITE OR APPROVED EQUAL.
- HARDWARE: CONTINUOUS HINGE, EXIT DEVICE, OFFSET PULL, KEY CYLINDER, CLOSER ADA COMPLIANT ALUM. THRESHOLD, SWEEP, AND WEATHERSTRIPPING (3 SIDES)

ALUMINUM WINDOW FRAMES :
- DESCRIPTION: FURNISH ALL NECESSARY MATERIALS, LABOR, AND EQUIPMENT FOR THE COMPLETE INSTALLATION OF ALUMINUM FRAMING AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN.
- MATERIALS: DRAWINGS AND SPECIFICATIONS ARE BASED UPON THE ENCORE WINDOW SYSTEM AS MANUFACTURED BY THE KAWNEER COMPANY, INC. NOTE: KAWNEER□S SPECIFICATIONS SHALL BECOME PART OF THESE SPECIFICATIONS.
- GLASS SHALL BE 1" THICK, TINTED GLASS. TEMPERED WHERE REQUIRED BY CODE.
- FINISH: ALL EXPOSED SURFACES SHALL BE FREE OF SCRATCHES AND OTHER SERIOUS BLEMISHES AND SHALL HAVE A CLEAR ANODI□ED FINISH CONFORMING WITH ALUMINUM ASSOCIATION STANDARDS.
- INSTALLATION: FRAMING SHALL BE INSTALLED, GLA□ED, AND ADJUSTED BY EXPERIENCED WORKMEN IN ACCORDANCE WITH THE MANUFACTURER□S INSTALLATION INSTRUCTIONS AND APPROVED SHOP DRAWINGS.
- SHOP DRAWINGS: BEFORE EXECUTING ANY WORK, SUBMIT SHOP DRAWINGS AT LARGE SCALE TO THE ARCHITECT FOR APPROVAL, SHOWING IN DETAIL ALL WORK TO BE FURNISHED.

CABINETRY:
- CABINETS MUST MEET BARRIER FREE HEIGHT REQUIREMENTS (34" TO TOP OF COUNTER).
- SI□ES SHALL BE AS INDICATED ON DRAWINGS.
- WORK MATERIAL, WORKMANSHIP, AND INSTALLATION FOR WOOD CABINET WORK SHALL CONFORM TO QUALITY STANDARDS OF THE ARCHITECTURAL WOODWORK INSTITUTE, CUSTOM GRADE.
- ALL INTERIOR MILLWORK AND TRIM SHALL BE FINISHED SMOOTH AND FREE FROM MACHINE OR TOOL MARKS THAT WILL SHOW THROUGH THE FINISH. ALL NAIL HEADS SHALL BE SET PRIMED TO CONCEAL SHRINKAGE. SHOP MITERS FOUR INCHES OR MORE FROM HEEL TO POINT SHALL BE GLUED AND LOCKED. MAKE DOWELS AND TENONS TO A DRIVING FIT. MAKE SHOP JOINTS OF INTERIOR WOOD AND CLASS II GLUE. MAKE OUTSIDE JOINTS TO EXCLUDE WATER AND SET IN WATER RESISTANT GLUE. ON VERTICAL SURFACES WHERE LAMINATED PLASTIC FINISH IS INDICATED, APPLY 0.030 INCH THICK LAMINATE USING SEMI-GLOSS LOW GLARE FINISH. ON ALL TOPS AND BACKSPLASHES WHERE LAMINATED PLASTIC FINISH IS INDICATED, APPLY 0.060 INCH THICK LAMINATE.
- JOINTS SHALL BE HAIRLINE, PRACTICALLY INVISIBLE. PROVIDE BACKER SHEETS FOR LAMINATED PLASTIC WORK.
- TOPS UP TO 10 FEET LONG SHALL BE ONE PIECE. TOPS OVER 10 FEET LONG SHALL HAVE SPLICED JOINTS IN BACKING, AND JOINT IN PLASTIC LAMINATE SHALL BE AT LEAST 12 INCHES FROM JOINT IN BACKING.
- JOINTS IN BACKING SHALL BE REINFORCED TO PREVENT SEPARATION. EXPOSED EDGES SHALL BE FINISHED WITH LAMINATED PLASTIC.
-THE ARCHITECT□INTERIOR DESIGNER WILL SELECT FROM MANUFACTURER□S STANDARD COLORS AND PATTERNS.
-ACCEPTABLE MANUFACTURERS: WILSONART, FORMICA, NEVAMAR, PIONITE.
-PROVIDE 4" WIRE PULLS ON ALL DOORS AND□OR DRAWERS. MATCH EXISTING FINISH.
-PROVIDE HEAVY DUTY, CONCEALED TYPE HINGE BY BLUM OR APPROVED EQUAL. ONE PAIR PER DOOR TO 48" HEIGHT. ONE AND A HALF PAIR OVER 48" IN HEIGHT. HINGE TO ACCOMMODATE 13/16" THICK LAMINATED DOOR, ALLOW 170 DEGREE SWING.
-PROVIDE PVC EDGES IN COLOR TO COMPLEMENT P.LAM. SELECTION.

INTERIOR WOOD TRIM:
WHERE INDICATED ON DRAWINGS, PROVIDE PAINT GRADE WOOD TRIM, CASING, DOOR STOPS, ETC. CASING SHALL BE ½"X2¼" MIN. WITH SQUARE EDGE PROFILE. DOOR STOPS SHALL BE ⅜"X 1¼" MIN. WITH SQUARE EDGE PROFILE. TRIM SHALL BE SI□E INDICATED. ALL EXPOSED EDGES SHALL BE EASED. ALL NAIL HOLES SHALL BE RECESSED AND FILLED WITH PAINTABLE NON-SHRINK FILLER.

COUNTERS:
PLASTIC LAMINATE BY WILSONART, FORMICA, PIONITE, OR APPROVED EQUAL. COUNTER SHALL HAVE PRE-FORMED EDGE AND BACKSPLASH. PROVIDE END EDGE PIECES AS REQUIRED. COLOR AND PATTERN TO BE SELECTED BY ARCHITECT.

PAINTING:
PAINT EXPOSED SURFACES UNLESS A SURFACE OR MATERIAL IS SPECIFICALLY INDICATED NOT TO BE PAINTED. PAINTING INCLUDE FIELD-PAINTING EXPOSED BARE AND COVERED PIPES AND DUCTS, HANGERS, EXPOSED STEEL AND IRON WORK, AND PRIMED METAL SURFACES OF MECHANICAL AND ELECTRICAL EQUIPMENT (INCLUDING PANELBOARD COVERS). DO NOT PAINT PREFINISHED ITEMS, FINISHED METAL SURFACES, CONCEALED SURFACES, OPERATING PARTS AND LABELS. ACCEPTABLE MANUFACTURERS: DEVOE AND RAYNOLDS CO. (DEVOE), BENJAMIN MOORE AND CO. (MOORE), PPG INDUSTRIES, PITTSBURGH PAINTS, THE SHERWIN WILLIAMS COMPANY (S-W).

EXTERIOR PAINT SCHEDULE:
□INC COATED METAL:
HIGH-GLOSS ALKYD ENAMEL: TWO FINISH COATS OVER PRIMER.
PRIMER: GALVANI□ED METAL PRIMER, S-W□INDUSTRIAL ENAMEL B-54 SERIES (OR EQUAL).

INTERIOR PAINT SCHEDULE:
GYPSUM DRYWALL SYSTEMS:
LOW-LUSTER, ACRYLIC-ENAMEL FINISHES: TWO FINISH COATS OVER A PRIMER.
PRIMER: WHITE INTERIOR, LATEX BASED. MOORE: REGAL FIRST COAT INTERIOR LATEX PRIMER AND UNDERBODY □216 (OR EQUAL).
FIRST AND SECOND COATS (BY OWNER): LOW-LUSTER (EGGSHELL OR SATIN), ACRYLIC-LATEX, INTERIOR ENAMEL.

ODORLESS SEMI-GLOSS ALKYD ENAMEL FINISH: THREE COATS
UNDERCOAT: INTERIOR ENAMEL UNDERCOAT. S-W PRO-MAR 200 ALKYD ENAMEL UNDERCOATER B49W200 (OR EQUAL).
FIRST AND SECOND COATS: INTERIOR, SEMI-GLOSS, ODORLESS, ALKYD ENAMEL. S-W CLASSIC 00 SEMI-GLOSS ENAMEL A40 SERIES (OR EQUAL).

WOODWORK AND HARDBOARD:
LOW-LUSTER, ACRYLIC-ENAMEL FINISH: TWO FINISH COATS OVER A PRIMER.
PRIMER: ALKALI- OR ACRYLIC-LATEX-BASED, INTERIOR WOOD PRIMER, AS RECOMMENDED BY THE MANUFACTURER FOR THIS SUBSTRATE. MOORE: MOORE□S ALKYD ENAMEL UNDERBODY □217 (OR EQUAL).
FIRST AND SECOND COATS: LOW-LUSTER (EGGSHELL OR SATIN), ACRYLIC-LATEX, INTERIOR ENAMEL. MOORE: MOORE□S AQUAVELVET □319 (OR EQUAL).

SEMI-GLOSS ENAMEL FINISH: THREE COATS
UNDERCOAT: INTERIOR ENAMEL UNDERCOAT, S-W: PRO-MAR 200 ALKYD ENAMEL UNDERCOATER B49W200 (OR EQUAL).
FIRST AND SECOND COATS: INTERIOR, SEMI-GLOSS, ODORLESS, ALKYD ENAMEL, S-W: CLASSIC 99 SEMI-GLOSS ENAMEL A40 SERIES (OR EQUAL).

SEMI-GLOSS ALKYDD ENAMEL FINISH:
TWO COATS OVERFILLED SURFACE WITH TOTAL DRY FILM THICKNESS NOT LESS THAN 3.5 MILS, EXCLUDING FILLER COAT.
BLOCK FILLER: HIGH PERFORMANCE LATEX BLOCK FILLER. S-W: HEAVY DUTY BLOCK FILLER (B42W46 OR EQUAL).
UNDERCOAT: INTERIOR ENAMEL UNDERCOAT: S-W PRO-MAR 200 LATEX WALL PRIMER, B28W200 (OR EQUAL).
FINISH COAT: INTERIOR, SEMI-GLOSS, ODORLESS, ALKYD ENAMEL S-W: SLASSIC 99 SEMI-GLOSS ENAMEL A40 SERIES (OR EQUAL).

ACOUSTICAL CEILING SYSTEM:
- ARMSTRONG CIRRUS ANGLED TEGULAR □584, 24"□24" LAY-IN CEILING AND STANDARD 15□16" WHITE METAL GRID.

FIRE EXTINGUISHER:
- PROVIDE TEMPORARY FIRE EXTINGUISHER DURING CONSTRUCTION.
- LARSENS OR EQUAL WITH 2A-10B, C FIRE EXTINGUISHER. WALL MOUNTED UNITS.
- PROVIDE (1) FIRE EXTINGUISHER AND WALL MOUNTED BRACKET WHERE SHOWN IN DRAWINGS.
- COORDINATE LOCATIONS WITH OWNER□S REPRESENTATIVE PRIOR TO INSTALLATION.

KNOX BOX:
PROVIDE AND INSTALL CITY OF GRAND RAPIDS FIRE DEPT. APPROVED RAPID ENTRY SYSTEM KNOX BOX. COORDINATE LOCATION WITH CITY OF GRAND RAPIDS FIRE DEPT. AND OWNER□S REPRESENTATIVE.

VINYL BASE: MANUFACTURER: JOHNSONITE, ROPPE OR APPROVED EQUAL, 4" HIGH VINYL COVE BASE.

CARPET:
- ALLOWANCE OF □21 PER S.Y. EXCLUDING ACCESSORIES, ADHESIVES LABOR, FREIGHT, TAX, INSTALLATION, SHIPPING AND HANDLING.
- ACCEPTABLE MANUFACTURERS: MANNINGTON COMMERCIAL, MOHAWK COMMERCIAL, SHAW COMMERCIAL.
- INSTALL PER MANUFACTURER□S SPECIFICATIONS AND RECOMMENDATIONS. PREP FLOOR AS REQUIRED FOR PROPER INSTALLATION.

TOILET ACCESSORIES:
ALL ACCESSORIES SHALL BE MOUNTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS.
- 1-1□2" DIA. GRAB BARS: 42" LONG, 36" LONG AND 18" HIGH. MOUNT IN BARRIER FREE TOILET STALLS AS SHOWN ON DRAWINGS.
- PAPER TOWEL DISPENSER (BY OWNER): 1 PER RESTROOM. BRADLEY, MODEL 250-15. STAINLESS STEEL FINISH, C-FOLD TOWELS.
- TOILET PAPER DISPENSER (BY OWNER): 1 AT EACH TOILET STALL. BRADLEY, MODEL 523. POLISHED CHROME FINISH, DOUBLE ROLL, SURFACE MOUNTED.
- SOAP DISPENSER: BY OWNER.
- MANUFACTURERS: BRADLEY, BOBRICK, AMERICAN SPECIALTIES, OR APPROVED EQUAL.

FRAMELESS MIRROR:
FURNISH AND INSTALL ¼" THICK, PLATE GLASS MIRROR IN LOCATION INDICATED ON DRAWINGS.
- HEIGHT SHALL BE 36" MIN.
- MOUNT 40" ABOVE FINISH FLOOR (A.F.F.) AT RESTROOM SINK LOCATIONS.
- MOUNTING SHALL BE NICKEL PLATED "C" CLIPS, SIMILAR TO C.R. LAURENCE NICKEL PLATED "DALLAS MIRROR CLIPS."

COAT RACK AND ROD:
- PROVIDE 1-1□4" DIA CHROME PLATED CLOTHES ROD AND ¾" MELAMINE FACED SHELF ABOVE.

WINDOW SHADES:
- PROVIDE HUNTER DOUGLAS CONTRACT "RB 500 MANUAL ROLLER SHADES", DRAPER SOLAR CONTROL SHADING "KOOLBLACK E SCREEN" OR EQUAL SOLAR ROLLER SHADES WITH FASCIA□VALANCE AND WITH RETURNS.
- FIELD VERIFY MOUNTING (BETWEEN THE JAMB MOUNTING IS PREFERRED).
- CLUTCH OPERATED WITH HEAVY DUTY CHAIN DRIVE PULLEY OPERATING SYSTEM. SEALED HEM BOTTOM BAR. PROVIDE ALL REQUIRED ACCESSORIES NEEDED FOR COMPLETE INSTALLATION.
- 5□ OPEN.
- COLOR: BLACK.
- PROVIDE AT ALL WINDOW LOCATIONS IN OFFICE 102. (4) THUS.

SIGNAGE:
- PROVIDE ACCESSIBILITY SIGNAGE AS REQUIRED BY CODE. SIGNAGE SHALL COMPLY WITH ICC□ANSI A117.1 SECTION 703 AND THE MICHIGAN BARRIER FREE REQUIREMENTS.
- A TACTILE SIGN STATING "EXIT" AND COMPLYING WITH ICC A117.1 SHALL BE PROVIDED ADJACENT TO EACH NEW EXTERIOR DOOR.
- A TACTILE SIGN WITH INTERNATIONAL BARRIER FREE SYMBOL SHALL BE PROVIDED AT EACH NEW RESTROOM DOOR.
- PROVIDE SIGN NEAR SELF CLOSING WINDOW LOCATION (SEE SHEET A2.1) W□ INTERNATIONAL ACCESSIBILITY SYMBOL AND DIRECTIONAL ARROW.
- PROVIDE INTERNATIONAL ACCESSIBILITY SYMBOL ON DOOR 102.

ALUMINUM SLIDING SERVICE WINDOW:
- DESCRIPTION: FURNISH ALL NECESSARY MATERIALS, LABOR, AND EQUIPMENT FOR THE COMPLETE INSTALLATION OF (1) SELF CLOSING ALUMINUM SLIDING SERVICE WINDOW AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN.
- MATERIALS: DRAWINGS AND SPECIFICATIONS ARE BASED UPON THE MODEL IFSC-4040 SERVICE AND TELLER WINDOW UNIT SYSTEM AS MANUFACTURED BY QUIKSERV CORP. OR APPROVED EQUAL.
NOTE: QUIKSERV CORPORATION□S SPECIFICATIONS SHALL BECOME PART OF THESE SPECIFICATIONS.
- FINISH: ALL EXPOSED SURFACES SHALL BE FREE OF SCRATCHES AND OTHER SERIOUS BLEMISHES AND SHALL HAVE A CLEAR ANODI□ED FINISH CONFORMING WITH ALUMINUM ASSOCIATION STANDARDS.
- INSTALLATION: FRAMING SHALL BE INSTALLED, GLA□ED, AND ADJUSTED BY EXPERIENCED WORKMEN IN ACCORDANCE WITH THE MANUFACTURER□S INSTALLATION INSTRUCTIONS AND APPROVED SHOP DRAWINGS.
- SHOP DRAWINGS: BEFORE EXECUTING ANY WORK, SUBMIT SHOP DRAWINGS AT LARGE SCALE TO THE ARCHITECT FOR APPROVAL, SHOWING IN DETAIL ALL WORK TO BE FURNISHED.

PLUMBING:
ALL PLUMBING RELATED WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ALL THE PLUMBING WORK, INCLUDING BUT NOT LIMITED TO ROOF DRAINS AND CONDUCTORS. ALL WORK SHALL COMPLY WITH APPLICABLE CODES INCLUDING THE 2012 MICHIGAN PLUMBING CODE, 2012 MICHIGAN BUILDING CODE, 2006 MICHIGAN BARRIER FREE CODE, AND ALL OTHER CODES AND ORDINANCES HAVING JURISDICTION.

MECHANICAL:
REFER TO MECHANICAL DRAWINGS.
ALL MECHANICAL RELATED WORK SHALL BE PERFORMED BY A LICENSED MECHANICAL CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ALL OF THE MECHANICAL WORK, INCLUDING BUT NOT LIMITED TO MECHANICAL AIR HANDLING UNITS, RETURN DUCTWORK, SUPPLY DUCTWORK, ETC. WORK SHALL BE COORDINATED WITH OTHER TRADES.
ALL WORK SHALL COMPLY WITH APPLICABLE CODES INCLUDING THE 2012 MICHIGAN MECHANICAL CODE, 2012 MICHIGAN BUILDING CODE, 2006 MICHIGAN BARRIER FREE CODE, AND ALL OTHER CODES AND ORDINANCES HAVING JURISDICTION.

ELECTRICAL:
REFER TO ELECTRICAL DRAWINGS.
ALL ELECTRICAL RELATED WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ALL OF THE ELECTRICAL WORK, INCLUDING BUT NOT LIMITED TO EVALUATING THE EXISTING ELECTRICAL SERVICE, NEW POWER RECEPTACLES, NEW LIGHTING, EMERGENCY LIGHTING, EXIT SIGNS, BRANCH PANELS AS REQUIRED, LIGHTING CONTROLS, ETC. WORK SHALL BE COORDINATED WITH OTHER TRADES, INCLUDING THE MECHANICAL UNIT HOOK-UPS. ALL WORK SHALL COMPLY WITH APPLICABLE CODES INCLUDING THE 2011 MICHIGAN ELECTRICAL CODE PART 8, 2012 MICHIGAN BUILDING CODE, 2006 MICHIGAN BARRIER FREE CODE, AND ALL OTHER CODES AND ORDINANCES HAVING JURISDICTION. CONTRACTOR SHALL PROVIDE AN EMERGENCY LIGHTING PHOTOMETRIC PLAN IF REQUIRED BY THE MUNICIPALITY.

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SP1

STRUCTURAL SPECIAL INSPECTION SCHEDULE
(2012 MBC – Chapter 17)

ITEM	CONT.[2]	PERIODIC[2]	REFERENCE STANDARD	NOTES
PRE–FABRICATED CONSTRUCTION (1704.2.5)				3 & 4
CONCRETE CONSTRUCTION (1705.3)				9
Reinforcing Steel Placement		X	ACI 318: 3.5, 7.1–7.7, MBC 1910.4	
Welding of Reinforcing Steel			AWS D1.4/ACI 318 – 3.5.2, MBC 1705.2.2	8
Embedded Bolts & Plates		X	ACI 318: 8.1.3, 21.2.8, MBC 1908.5, 1909.1	
Verify Required Mix Design		X	ACI 318: Ch 4, 5.2–5.4, MBC 1904.2, 1910.2, 1910.3	
Concrete Sampling	X		ASTM C 172/ASTM C 31/ACI 318: 5.6, 5.8 MBC 1910.10	
Concrete / Shotcrete Placement	X		ACI 318: 5.9, 5.10, MBC 1910.6–8	
Curing Temperature & Techniques		X	ACI 318: 5.11–5.13, MBC 1910.9	
Application of Prestressing Forces	X		ACI 318: 18.20	
Grouting Bonded Prestressing Tendons	X		ACI 318: 18.18.4	
Erection of Precast Members		X	ACI 318: Ch 16	
Verify In–Situ Strength		X	ACI 318: 6.2	10
Formwork Shape, Location & Dimensions		X	ACI 318: 6.1.1	
Post–Installed Anchor Placement	X		ACI 318: 3.8.6, 8.1.3, 21.2.8	11
WOOD CONSTRUCTION (1705.5) (1704.2.5 FOR PREFABRICATED CONSTRUCTION)				
High load diaphragms as specified on drawings: Sheathing grade and thickness, size of framing members at panel edges, fastener diameter and length, number of fastener lines, and spacing of fasteners in each line.		X		
At trusses greater than 60ft clear span, verify that the temporary restaint/bracing are installed in accordance w/approved truss submittal package & BCSI 1–13.		X	BCSI 1–13 (BY WTCA & TPI)	
At all trusses, verify that permanent truss bracing is in accordance with approved building plans & BCSI 1–13.		X	BCSI 1–13 (BY WTCA & TPI)	
SOILS (1705.6)				12
Verify materials below shallow foundations are adequate to achieve the deign bearing capacity		X		
Verify excavations are extended to proper depth and have reach proper material		X		
Perform classification and testing of compacted fill materials		X		
Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill	X			
Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly		X		

NOTES:

1. Items marked with an 'X' shall be inspected in accordance with chapter 17 of the building code by a certified special inspector from an established testing agency. For material sampling and testing requirements, refer to the project specifications and the specific general notes sections. The testing agency shall send copies of all structural testing and inspection reports directly to the architect, engineer, contractor, and building official. Any items which fail to comply with the approved construction documents shall immediately be brought to the attention of the contractor for correction. If discrepancies are not corrected, they shall be brought to the attention of the building official, architect, and engineer prior to completion of that phase of the work. Special inspection testing requirements apply equally to all bidder designed components.
2. Continuous special inspection means the full–time observation of work requiring special inspection by an approved special inspector who is present in the area where the work is being performed. Periodic special inspection means the part–time or intermittent observation of work requiring special inspection by an approved special inspector who is present in the area where the work has been or is being performed and at the completion of the work. (sect 1702)
3. Special inspection is not required for work performed by an approved fabricator per section 1704.2.5.2.
4. Inspection for pre–fabricated construction shall be the same as if the material used in the construction took place on site. Continuous inspection will not be required during pre–fabrication if the approved agency certifies the construction and furnishes evidence of compliance.
5. Slip–critical connections may have periodic special inspection provided that direct tension indicators, twist–off bolts, or turn–of–the–nut method with match marking techniques are used.
6. All welds shall be visibly inspected.
7. All complete penetration welds shall be tested ultrasonically or by using another approved method.
8. Periodic special inspection is allowed for verification of the weldability of reinforcing steel other than ASTM A 706 in accordance with building code section 1705.2.2. Continuous special inspection is required for reinforcing steel resisting flexural and axial forces in intermediate and special moment frames, boundary elements of special reinforced concrete shear walls, and shear reinforcement. Periodic special inspection is allowed for welding of other ASTM A 706 reinforcing steel not included in the continuous special inspection requirements noted above.
9. Special inspection is not required for isolated spread footings (≤ 3 stories), non–structural slabs, foundation walls, patios, driveways and sidewalks provided the requirements of section 1705.3 are met.
10. Periodic special inspection is required for verification of in–situ concrete strength for post–tensioned concrete prior to tensioning tendons and for beams and structural slabs before removing shoring or forms.
11. Post–installed anchors into masonry or concrete may be used only when approved by architect and/or engineer using an approved product with current published ICBO research report numbers.
12. Special inspection of soils shall reference the approved soils report to determine compliance.
13. Special inspection for structural steel shall be per AISC 303, Section 8 or the project contract documents, whichever is more stringent.
14. Any construction or material that has failed inspection shall be subject to removal and replacement.
15. UNO, reference masonry standards are TMS 402/ACI 530/ASCE 5 and TMS 602/ACI 530.1/ASCE 6.
16. This table and notes represent code requirements for structural portions of the project and is not a complete representation of what may be required by chapter 17 of the building code. See chapter 17 and project specifications for additional requirements.

STRUCTURAL ABBREVIATION INDEX

AB	Anchor Bolt/Column Anchor Rod	IF	Inside Face
ACIP	Augered Cast In Place	INT	Interior
A/E	Architect/Engineer	JB	Joist Bearing Elevation
AESS	Architecturally Exposed Structural Steel	L	Lintel
		LAT	Lateral
AFF	Above Finished Floor	LD	Load
ALT	Alternate	LF	Linear Foot
AP	Anchor Plate	LG	Long
ARCH	Architectural	LLH	Long Leg Horizontal
B.O.	Bottom of	LLV	Long Leg Vertical
BB	Bond Beam	LOC'N	Location
BFF	Below Finished Floor	LP	Low Point
BL	Brick Ledge	LT	Light
BM	Beam	LW	Long Way
BP	Bearing Plate	MAX	Maximum
BRG	Bearing	MECH	Mechanical
BT	Bent	MCJ	Masonry Control Joint
℄	Centerline	MIN	Minimum
CANT	Cantilever	NS	Near Side
C/C	Center–to–Center	NTS	Not To Scale
CBP	Column Base Plate	O/O	Out–to–Out
CJP	Complete Joint Penetration Weld	OC	On–Center
CJ	Construction Joint	OD	Outside Diameter
CJ	Contraction Joint	OF	Outside Face
CJ	Control Joint	OFD	Overflow Drain
CLR	Clear	OH	Opposite Hand
CMU	Concrete Masonry Unit	P	Pier
COL	Column	PEMB	Pre–Engineered Metal Building
CONC	Concrete		
CONN	Connection, Connect	PERP	Perpendicular
CONT	Continuous	℗	Plate
COORD	Coordinate	PT	Pressure Treated
DBE	Deck Bearing Elevation	R, RAD	Radius
DA	Deck Angle	RD	Roof Drain
DB	Deck Bar	Reference, Refer to	
DIA, Ø	Diameter	REINF	Reinforce
DP	Deck Plate	REQ'D	Required
DWG	Drawing(s)	RMW	Reinforced Masonry Wall
EA	Each	RTU	Roof Top Unit
EF	Each Face	RXN	Reaction
EL	Elevation	SC	Slip Critical
EQ	Equal	SF	Step Footing
ES	Each Side	SIM	Similar
EW	Each Way	SOG	Slab On Grade
EX	Existing	SPCS	Spaces
EXP	Expansion	SS	Stainless Steel
EXT	Exterior	STL	Steel
FD	Floor Drain	SW	Short Way
FF	Finished Floor	T&B	Top and Bottom
FFE	Finished Floor Elevation	TC	Torque Controlled
FDN	Foundation	TCX	Top Chord Extension
FP	Foundation Pier	T.O.	Top of
FS	Far Side	TOB	Top of Beam
FTG, F	Footing	TOF	Top of Footing
FV	Field Verify	TOL	Top of Ledge
GA	Gauge	TOM	Top of Masonry
GALV	Galvanized	TOS	Top of Steel
GB	Grade Beam	TOW	Top of Wall
GS	Grout Solid	TYP	Typical
GT	Girder Truss	UNO	Unless Noted Otherwise
HD	Hold Down Anchor	VERT	Vertical
HORZ	Horizontal	w/	With
HP	High Point	w/o	Without
HS	Headed Stud	WF	Wall Footing
HT	Height	WP	Working Point
ID	Inside Diameter	WWF	Welded Wire Fabric

GENERAL STRUCTURAL NOTES

1. All work shall be performed in accordance with the contract documents. In case of a conflict within the contract documents, the more stringent condition shall govern, unless directed otherwise by the engineer of record. Prior to implementation, any discrepancies shall be reported to the architect for clarification.
2. In the event that certain details of construction are not indicated or noted in the drawings, details for similar conditions that are indicated or noted shall be utilized, subject to the structural engineer's approval.
3. Openings and penetrations through structural elements, and items embedded in structural elements that are not indicated in the structural drawings shall be reviewed by the structural engineer prior to fabrication, erection and/or construction.
4. Materials or equipment shall not be placed on unfinished floors or roofs in excess of 20 psf nor on finished floors in excess of the design live loads which are indicated in the structural drawings. Impact loading shall be avoided.
5. The structure has been designed for the in–service loads only. The methods, procedures and sequences of construction are the responsibility of the contractor. Contractor shall take all necessary precautions to maintain and ensure the integrity of the structure at all stages of construction. Contractor shall immediately notify the structural engineer of any condition which, in his opinion, might endanger the stability of the structure or cause distress in the structure.
6. All existing conditions and all related dimensions indicated in the contract documents shall be field verified prior to fabrication, erection and/or construction. Any condition that differs from that indicated in the contract documents shall be submitted to the architect for review prior to fabrication, erection and/or construction.
7. The structure has been designed to meet or exceed serviceability requirements of section 1604.3 of the Michigan Building Code. All non–structural components & their connections that are anchored to the structure shall be designed to allow for the movement of the structure caused by wind, snow, live, thermal, and earthquake loads. Non–structural components include items such as non–load bearing walls, MEP components, bulkheads, etc.
8. Provide special inspection in accordance with chapter 17 of the Michigan Building Code and with project specifications.
9. Post installed anchors shall be the specific product indicated. Where product substitutions are desired, they shall be submitted to engineer for review & approval a minimum of 2 weeks prior to planned installation. Adhesive anchors shall be installed using products that are approved by the supplier for all temperature considerations. Installation shall be in accordance with suppliers published installation instructions.

ENGINEERING DATA

Design soil bearing pressure: 2000 psf (assumed)

Design stresses

Concrete	
Footings and Foundations	f'c = 3500 psi
Elevated slabs	f'c = 3500 psi
Grade slabs	f'c = 3500 psi
Exterior concrete (6% air)	f'c = 4000 psi
Reinforcing steel	Fy = 60000 psi
Lumber	
Dimension lumber (SPF #2 or better)	Fb = 850 psi Fv = 135 psi
Engineered lumber (LVL)	Fb = 2600 psi Fv = 285 psi E = 1900 ksi
Engineered lumber (LSL)	Fb = 2325 psi Fv = 310 psi E = 1550 ksi
Engineered lumber (PSL)	Fb = 2900 psi Fv = 290 psi E = 2000 ksi

Structural design requirements

Floor live load (LL reductions used where permitted by code)	
Residential	40 psf
Roof live load	20 psf
Risk Category	II
Roof snow load	
Ground snow load (Pg)	30 psf
Flat roof snow load (Pf)	27 psf + Drift
Snow exposure (Ce)	1.0
Snow load importance factor (Is)	1.0
Thermal factor (Ct)	1.1
Wind Load	
Ultimate design wind speed (3 sec)	115 mph
Nominal design wind speed (3 sec)	90 mph
Wind exposure category	B
Internal Pressure coeff (GCpi)	0.18
Components & cladding (varies)	
Wall stud design pressure	varies – per ASCE7
Earthquake	
Seismic importance factor, Ie	1.0/1.25/1.50
Spectral response	Ss = 0.07 S1 = 0.043 SDs = 0.075 SD1 = 0.069
Site class	D
Seismic design category	B
Basic seismic force resisting system:	
Ordinary reinforced masonry shear walls	
Design base shear	11k
Seismic response coefficient Cs	0.011
Response Modification Factor R	6.5
Analysis Procedure	"Equivalent lateral force"

Specific Design Loads

Floor dead loads	
Wood floor trusses	5
¾" Sheathing	3
1½" Gypcrete	14
Partition walls	12
Ceiling	2
Floor finish	1
M/E/P	3
Fire protection	1
Misc	4
	45 psf Total
Roof dead loads	
Shingles (2 layers)	4
Insulation	2
Trusses	3
Roof sheathing	3
Ceiling	3
M/E/P	3
Misc	2
	20 psf Total
Roof truss design loads	
Bottom chord dead load	10 psf
Top chord dead load	10 psf
Top chord snow load:	
Balanced	27 psf balanced
Unbalanced (see Fig 7–5 of ASCE 7–10)	
Windward	7 psf
Leeward	21 psf from eave to 9' from ridge
Leeward ridge	47 psf for 9' of width measured from ridge

Design codes

General building code	Michigan Buildng Code 2012
Concrete	ACI 318
Wood	NDS

WOOD PANELIZED WALL NOTES

1. A general sample of wall panels were reviewed to make sure contract document design intent was followed. It is the contractor's responsibility to coordinate and incorporate comments here, and from their own quality review to make sure walls are constructed in accordance with contract documents.
2. All non–engineered wood shall be equal to or better than the species called out on the general note sheet in the engineering data.
3. All top and bottom wall plates shall be LVL or LSL members.
4. Contractor to make sure all wood posts or jambs from floors above transfer down through the floor and walls to the foundation. If the post or jamb studs do not align with a post or jamb below provide additional studs in wall below to match post or jamb studs above. The load shall transfer all the way to the foundation.
5. Provide squash blocking (vertical studs) in the joist floor space to transfer post/jamb loads above to the wall below.
6. All studs and joists above must align with studs below floor framing. Contractor to make sure framing aligns.
7. It is important that at all shear walls the sheathing overlaps the adjacent wall panel so things get locked together. If this is not possible then provide vertical strap plates equal to the shear load to transfer the load from one panel to the adjacent.
8. Provide a continuous 2x6 above and below all headers as shown in detail x/xxxx. Stop bottom 2x6 at face of bearing studs.
9. All studs are designed for final conditions which assumes at a minimum sheathing on one side of the stud. If the walls are to be unsheathed provide stability blocking as needed to prevent stud buckling.

NAILING SCHEDULE

ELEMENT	NAIL SIZE	NUMBER & LOCATION
STUD TO SOLE PLATE	16d	4 TOE NAIL OR 2 DIRECT NAIL
STUD TO CAP PLATE	16d	2 TOE NAIL OR 2 DIRECT NAIL
DOUBLE STUDS	10d	12" OC DIRECT
CORNER STUDS	16d	24" OC DIRECT
DOUBLE CAP PLATE	10d	16" OC DIRECT
HEADER TO TRIMMERS	16d	3 EACH END
TRUSS TO PLATE		
TYPICAL EXTERIOR SUPPORT	H8, UNO	1 EACH TRUSS BRG POINT
TYPICAL INTERIOR SUPPORT	H2.5A, UNO	1 EACH TRUSS BRG POINT
GIRDER TRUSS	H2.5A, UNO	2 EACH TRUSS BRG POINT
ROOF SHEATHING	8d	6" OC DIRECT EDGES AND 12" OC INTERMEDIATE
WALL SHEATHING	8d	6" OC ALL EDGES AND 12" OC INTERMEDIATE
FLOOR SHEATHING	8d	6" OC ALL EDGES AND 12" OC INTERMEDIATE

This schedule is a minimum nailing requirement.
See specifications, drawings, and IBC Table 2304.9.1 for possible higher requirements.

WOOD NOTES

1. Comply with National Design Specification (NDS), American Forest Products Association (AFPA), and American Institute of Wood Construction (AITC).
2. Bolt wall plates with 1/2" dia. anchor bolts at 32" o.c., unless otherwise noted. Bolt beam plates with 1/2" diameter bolts at 24" o.c., staggered.
3. When treated lumber is in contact with steel (bolts, nails, fasteners, hangers, etc.), steel shall be G–185 galvanized or stainless. Dimensional lumber bolted to steel beams and columns shall be untreated, or protective coatings equivalent to G–185 shall be applied to the steel.
4. Unless noted, align studs above and below with joists. Provide squash blocking to transfer loads at joists or trusses.
5. At multiple ply framing members, provide at least one supporting stud per ply. Provide squash blocking to transfer loads as required.
6. Provide minimum of two bearing studs at all beams and girder trusses, UNO.
7. All Material used in load bearing stud walls shall be #2 or better. Refer to "Engineering Data" for minimum wood strength requirements, UNO.
8. Unless noted otherwise, do not countersink bolts or fasteners into wood. Provide washers with bolts that are a minimum of 2 times the diameter of the bolt.
9. Unless noted otherwise, refer to International Building Code Table 2304.9.1 for minimum nailing requirements. All nails shall be common wire nails.
10. Comply with I–joist suppliers' construction requirements and details, unless more stringent requirements are shown in construction documents.

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PLUMBING □RISER SYMBOL LEGEND

WHA — WATER HAMMER ARRESTOR

VTR — VENT THRU ROOF (FOR USE ON RISER DWG'S.)

VENT THRU ROOF (FOR USE ON PLAN DWG'S.)

SINK, LAV, URINAL (FOR USE ON RISER DWG'S.)

CO — CLEAN-OUT

FD — FLOOR DRAIN (FOR USE ON RISER DWG'S.)

ROOF DRAIN

FD — FLOOR DRAIN (FOR USE ON PLAN DWG'S.)

DRINKING FOUNTAIN (FOR USE ON RISER DWG'S.)

FULL-DIAMETER BALL VALVE

FULL-DIAMETER GATE VALVE

OUTSIDE SCREW YOKE VALVE

FLOW DETECTOR

BALANCE VALVE

PIPE UNION

HOSE BIB

WATER CLOSET (FOR USE ON RISER DWG'S.)

BACK-FLOW PREVENTER

PRV

GAS VALVE

LINETYPES

LPG	LP GAS
G	NATURAL GAS
ST	STORM
SN	SANITARY
PS	PRE-SANITARY
V	VENT
HW	HOT WATER
HWR	HOT WATER RETURN
CW	COLD WATER
CWW	COLD WELL WATER
A	AIR LINE
	(DASHED LINE INDICATES PIPE RUN UNDER FLOOR)
	PIPE GOING DOWN
	PIPE RISING
	WALL HYDRANT

FIRE PROTECTION

FP W/XX — WATER SPRINKLER HEAD/TYPE

FP HAL — HALON SYSTEM HEAD

MECHANICAL SYMBOL LEGEND

DUCT BALANCING DAMPER

FIRE DAMPER(VERTICAL)

FIRE DAMPER(HORIZONTAL)

WALL RETURN GRILLE

SUPPLY AIR GRILLE

DOOR/WALL LOUVER

LINEAR DIFFUSER (LENGTH TO SCALE)

SUPPLY DUCT (DRAWN TO SCALE)

RETURN DUCT (DRAWN TO SCALE)

EXHAUST DUCT (DRAWN TO SCALE)

8" — FLEXIBLE DUCT (SIZE AS SHOWN)

SUPPLY AIR DIFFUSER (SAD) (DRAWN TO SCALE: 1'x4', 2'x2'...etc.)

RETURN AIR GRILLE (RAG) (DRAWN TO SCALE: 1'x4', 2'x2'...etc.)

EXHAUST GRILLE (DRAWN TO SCALE: 1'x4', 2'x2'...etc.)

EXHAUST FAN

MOTOR OPERATED DAMPER

SD — DUCT SMOKE DETECTOR

T +48" — THERMOSTAT MOUNTED AT 48" ABOVE FLOOR.

H +48" — HUMIDSTAT MOUNTED AT 48" ABOVE FLOOR.

S — REMOTE SENSOR

AIR FLOW DIRECTION

UNIT HEATER

18"x12" — DUCT MEASURING 18" HORIZONTAL, 12" VERTICAL, INSIDE DIMENSIONS

12"ø — DUCT MEASURING 12" IN DIAMETER, INSIDE DIMENSION.

CA — COMBUSTION AIR

MECHANICAL ABBREVIATIONS

ACCU	AIR CONDITIONING CONDENSING UNIT
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AP	ACCESS PANEL
ASR	AUTOMATIC SPRINKLER RISER
BTU	BRITISH THERMAL UNIT
CC	COOLING COIL
CF	CENTRIFUGAL FAN
CFM	CUBIC FEET PER MINUTE
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
CI	CAST IRON
CO	CLEAN OUT
COND	CONDENSATE
CONT.	CONTINUATION
CUH	CABINET UNIT HEATER
CW	COLD WATER
Db	DRY BULB TEMPERATURE, °F
dB	DECIBELS
DDC	DIRECT DIGITAL CONTROL
DET	DETAIL
DIA	DIAMETER
DN.	DOWN
DS	DOWNSPOUT
DWG.	DRAWING
EA	EXHAUST AIR
ECUH	ELECTRIC CABINET UNIT HEATER
EF	EXHAUST FAN
ELEV.	ELEVATION
ESP	EXTERNAL STATIC PRESSURE
EUH	ELECTRIC UNIT HEATER
EWC	ELECTRIC WATER COOLER
EX.	EXISTING
EXH	EXHAUST
EXIST	EXISTING
F	FAHRENHEIT
FEC	FIRE EXTINGUISHER CABINET
FD	FLOOR DRAIN
FLR.	FLOOR
FPM	FEET PER MINUTE
FR	FIRE RISER
FS	FLOW SWITCH
FT.	FEET
FGCO	FINISHED GROUND CLEAN OUT
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HO	HUB OUTLET
HP	HORSEPOWER
HW	HOT WATER (POTABLE)
IN	INCHES
INL	INLET
INV	INVERT
LAT	LEAVING AIR TEMPERATURE
LAV	LAVATORY
LBS/HR	POUNDS PER HOUR
LWT	LEAVING WATER TEMPERATURE
MAX.	MAXIMUM
MBH	1000 BTU/HR
MECH	MECHANICAL
MIN.	MINIMUM
MISC	MISCELLANEOUS
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NOM.	NOMINAL
OA	OUTSIDE AIR
P	PUMP
PD	PRESSURE DROP (FEET OF WATER)
PSI	POUNDS PER SQUARE INCH
PRV	PRESSURE REDUCING VALVE
RA	RETURN AIR
RD/SP	ROOF DRAIN/STAND PIPE
BAL.	BALANCE
RET	RETURN
RF	RETURN FAN
RH	REHEAT COIL
Rh	RELATIVE HUMIDITY
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SAN	SANITARY WASTE
SD	SMOKE DETECTOR
SF	SUPPLY FAN
SG	SPECIFIC GRAVITY
SP	STATIC PRESSURE (INCHES OF WATER)
SP	STAND PIPE
SPR	SPRINKLER
SPR/STP	SPRINKLER STANDPIPE
SPS	STATIC PRESSURE SENSOR
STK	STACK
TP	TOTAL PRESSURE
TYP	TYPICAL
TDC	TRENCH DRAIN CONNECTION
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
V	VENT
VA	VALVE
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VE	VOLUME EXTRACTOR
VTR	VENT THRU ROOF
W	WASTE
WG	WATER GAUGE
WH	WALL HYDRANT

ELECTRICAL ABBREVIATIONS

A or AMP	AMPERE
AC	ALTERNATING CURRENT
ACT	ABOVE COUNTER TOP
ADJ	ADJACENT
AF	AMPERE FUSES
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISH GRADE
AIC	AMPERE INTERRUPTION CAPACITY
AL	ALUMINUM
ALT	ALTERNATE
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AWG	AMERICAN WIRE GAUGE
BFG	BELOW FINISHED GRADE
C	CONDUIT
C.B. or CKT BRKR	CIRCUIT BREAKER
C.T.	CABLE TRAY
CKT	CIRCUIT
CLG	CEILING
CMSDS	COMBINATION MOTOR STARTER/ FUSIBLE DISCONNECT SWITCH
CONT	CONTACTOR
CP	CEILING PROJECTOR
CT	CURRENT TRANSFORMER
CU	COPPER
D	DATA
DC	DIRECT CURRENT
DIA	DIAMETER
DISC	DISCONNECT
DIST	DISTRUBITION
DP	DISTRIBUTION PANEL
DPM	DIGITAL POWER MONITOR
EA	EACH
EC	ELECTRICAL CONTRACTOR
ELEC	ELECTRIC OR ELECTRICAL
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EP	ELECTRICAL PANEL
EPO	EMERGENCY POWER OFF
ETBR	EXISTING TO BE REPLACED
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EX	EXISTING
EXP	EXPOSED
EXT	EXTERIOR
F	FUSE
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FC	FOOT CANDLE
FDS	FUSIBLE DISCONNECT SWITCH
FLUOR	FLUORESCENT
FT	FOOT or FEET
GALV	GALVANIZED
GF, GFI or GFCI	GROUND FAULT CIRCUIT INTERRUPTOR
GFP	GROUND FAULT PROTECTION
GND	GROUND
GRC	GALVANIZED RIGID CONDUIT
HD	HAND DRYER
HP	HORSE POWER
HPS	HIGH PRESSURE SODIUM
HZ	HERTZ
IC	INTERCOM
IES	ILLUMINATING ENGINEERING SOCIETY
IMC	INTERMEDIATE METAL CONDUIT
INCAND	INCANDESCENT
INV	INVERTER
JB	JUNCTION BOX
KCMIL or MCM	THOUSAND CIRCULAR MILS
KO	KNOCKOUT
KV	KILOVOLTS
KVA	KILOVOLT AMPERES
KW	KILOWATT
KWH	KILOWATT HOURS
LC	LIGHTING CONTACTOR
LCP	LIGHTING CONTROL PANEL
LED	LIGHT EMITTING DIODE
LP	LIGHTING PANEL
LT	LIGHT
LTG	LIGHTING
M	MONITOR
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCOP	MAXIMUM CIRCUIT OVERPROTECTION
MDP	MAIN DISTRIBUTION PANEL
MG	MOTOR GENERATOR
MGB	MASTER GROUND BAR
MH	METAL HALIDE
MIN	MINIMUM
MLB	MAIN LUGS ONLY
MLO	MAIN LUG ONLY
MS	MOTOR STARTER
MSWBD	MAIN SWITCHBOARD
MW	MICROWAVE
NAC	NOTIFICATION APPLIANCE CIRCUIT
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NEC	NATIONAL ELECTRICAL CODE
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NTS	NOT TO SCALE
OC	ON CENTER
P	POLE
PA	PUBLIC ADDRESS
PBS	PUSH BUTTON STATION
PE	PHOTOELECTRIC CONTROL
PH or ø	PHASE
PNL	PANEL OR PANELBOARD
PVC	POLYVINYL CHLORIDE CONDUIT
RECPT	RECEPTACLE
REL	RELOCATE
RGC	RIGID GALVANIZED CONDUIT
RLA	RUNNING LOAD AMPERES
RMC	RIGID METAL CONDUIT
SCH	SCHEDULE
SPD	SURGE PROTECTION DEVICE
SPKR	SPEAKER
SSJB	SOUND SYSTEM JUNCTION BOX
SW	SWITCH
TC	TIME CLOCK
TCL	TOTAL CONNECTED LOAD
TFA	TO FLOOR ABOVE
TFB	TO FLOOR BELOW
TV	TELEVISION
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
V	VOLT
VC	VOLUME CONTROL
VFD	VARIABLE FREQUENCY DRIVE
VIF	VERIFY IN FIELD
W	WATTS
WG	WIRE GUARD
WHM	WATTHOUR METER
WP	WEATHER PROOF
XFMR	TRANSFORMER

ELECTRICAL SYMBOL LEGEND

SWITCHES

SINGLE POLE TOGGLE SWITCH
THREE-WAY TOGGLE SWITCH
FOUR-WAY TOGGLE SWITCH
SINGLE OCCUPANCY/VACANCY SENSOR SWITCH
DUAL OCCUPANCY/VACANCY SENSOR SWITCH
KEYED WALL SWITCH
KEYED WALL SWITCH-THREE-WAY
KEYED WALL SWITCH-4-WAY
WALL TOGGLE SWITCH W/RED PILOT LIGHT
SINGLE POLE SWITCH W/WEATHER PROOF COVER PLATE
INCANDESCENT DIMMER
LED DIMMER SWITCH
MANUAL MOTOR STARTER SWITCH
MANUAL MOTOR STARTER SWITCH WITH PILOT LIGHT
LOW VOLTAGE SWITCH
TIMER SWITCH
EXPLOSION PROOF SWITCH
PROJECTION SCREEN SWITCH
COMBINATION DUPLEX RECEPTACLE AND TOGGLE SWITCH
PUSHBUTTON STATION
EMERGENCY POWER OFF PUSHBUTTON WITH KEY RESET

RECEPTACLES

20A DUPLEX RECEPTACLE
20A QUADPLEX RECEPTACLE
20A DUPLEX RECEPTACLE ON EMERGENCY POWER
20A EXPLOSION PROOF DUPLEX RECEPTACLE
20A DUPLEX RECEPTACLE W/BUILT-IN GROUND FAULT INTERUPTER CIRCUIT (GFI)
SAME AS GFCI W/WEATHER PROOF ENCLOSURE
20A CEILING MOUNTED DUPLEX RECEPTACLE
20A GFI DUPLEX RECEPTACLE, MOUNT BEHIND WATER COOLER
COMBINATION 20A DUPLEX RECEPTACLE WITH 2-PORT USB CHARGERS
20A DUST & MOISTURE RESISTANT DUPLEX RECEPTACLE
20A ISOLATED GROUND DUPLEX RECEPTACLE
20A FLOOR MOUNTED DUPLEX RECEPTACLE
20A SINGLE RECEPTACLE
30A SINGLE RECEPTACLE
20A SINGLE RECEPTACLE RECEPTACLE TO MATCH EQUIPMENT
20A DUPLEX RECEPTACLE MOUNTED AT 6" ABOVE COUNTER TOP TO BOTTOM OF DEVICE
WALL MOUNTED SPECIAL PURPOSE CONNECTION
FLOOR MOUNTED SPECIAL PURPOSE CONNECTION
CEILING MOUNTED SPECIAL PURPOSE CONNECTION
CEILING MOUNTED DUPLEX RECEPTACLE, 20A, 277V.
PLUG STRIP
COMBINATION POWER/COMMUNICATIONS FLOOR BOX
POWER POLE
DUAL COMPARTMENT POWER/COMMUNICATIONS POLE
VERTICAL RISER FOR DUAL COMPARTMENT SURFACE RACEWAY
DUAL COMPARTMENT SURFACE RACEWAY WITH WIRING DEVICES AS INDICATED ON PLANS

RECEPTACLES (CONT'D.)

CLOCK ROUGH-IN
CLOCK RECEPTACLE (WALL)
CLOCK RECEPTACLE (CEILING)
SINGLE FACE CLOCK
DUAL FACE CLOCK
MASTER CLOCK PANEL

COMMUNICATIONS

WALL MOUNTED COMMUNICATIONS BOX
PEDESTAL MOUNTED COMMUNICATIONS BOX
FLOOR MOUNTED COMMUNICATIONS BOX

JUNCTION BOXES

WALL MOUNTED JUNCTION BOX
FLOOR MOUNTED JUNCTION BOX
CEILING MOUNTED JUNCTION BOX

FIXTURES

SURFACE MOUNT
PENDANT MOUNT
RECESSED
DIRECTIONAL SURFACE MOUNT
DIRECTIONAL RECESSED MOUNT
TRACK WITH HEADS
EXIT SIGN-SINGLE FACE
EXIT SIGN-DUAL FACE
EMERGENCY LIGHT
EMERGENCY LIGHT W/REMOTE HEAD

LIGHTING CONTROLS

OSD — OCCUPANCY SENSOR-DUAL TECHNOLOGY
OSP — OCCUPANCY SENSOR-PASSIVE INFRARED
OSU — OCCUPANCY SENSOR-ULTRASONIC
PP — POWER PACK

CONDUITS

CONCEALED CONDUIT-CURVED LINE
EXPOSED CONDUIT-DRAWN STRAIGHT
3" CONDUIT STUB WITH NYLON BUSHINGS ABOVE CEILING-U.N.O.

EQUIPMENT

TRANSFORMER
CONTACTOR
TIME CLOCK
TVSS — TRANSIENT VOLTAGE SURGE SUPPRESSOR
PHOTO-ELECTRIC EYE
MOTOR SINGLE OR THREE PHASE MOTOR
THERMOSTAT
HUMIDSTAT
ELECTRIC METER
BUSWAY
DISCONNECT SWITCH
FUSED DISCONNECT SWITCH
FUSED DISCONNECT SWITCH/ MOTOR STARTER
MOTOR STARTER
CIRCUIT BREAKER
FUSIBLE SWITCH
PANEL-SURFACE MOUNT
PANEL-RECESSED MOUNT
SWITCHBOARD
GROUND BUS BAR

SPECIAL SYSTEMS SYMBOLS

BELL SYSTEM

BELL BUTTON
BELL CHIME (3 TONE)
PROGRAM BELL

PUBLIC ADDRESS SYSTEM

PAGING HORN
PAGING SPEAKER
INTERCOM STATION
SPEAKER WITH VOLUME CONTROL

SOUND RE-INFORCEMENT

S — SPEAKER
M — MICROPHONE OUTLET-WALL
MC — MICROPHONE OUTLET-CEILING
V — SPEAKER VOLUME CONTROL

SPECIAL SYSTEMS SYMBOLS (contd.)

SECURITY SYSTEM

SY — SECURITY SYSTEM CONTROL PANEL
SDR — DOOR CONTACTOR
SMC — MAGNETIC CONTACTOR
SVMP — VISUAL STROBE(WEATHER PROOF)
SM — MOTION DETECTOR
SMI — MOTION DETECTOR (INFRARED)
SKP — KEY PAD
SAV — AUDIO/VISUAL ALERT
SV — VISUAL ALERT
SFL — FLOOD
SMD — MOTION DETECTOR, MICROWAVE & INFRARED
ST — 40° TEMPERATURE SENSOR
SREX — REQUEST TO EXIT MOTION DETECTOR
SERB — EMERGENCY RELEASE BUTTON (MUSHROOM)
SCR — CARD READER
SMDA — MAGNETIC DOOR-AJAR DETECTOR
SEDS — ELECTRIC DOOR STRIKE
SML — MAGNETIC DOOR LOCK
SABS — AUTO-BOND SENSOR

FIRE ALARM SYSTEM

F — FIRE ALARM CONTROL PANEL
FPV — PHOTOELECTRIC SMOKE DETECTOR /SUB-FLOOR
FPE — PHOTOELECTRIC SMOKE DETECTOR
FH — HEAT DETECTOR
FY — PULL STATION
FSV — VISUAL STROBE
FAV — FIRE AUDIO/VISUAL ALERT
FWF — WATER FLOW SWITCH
FTS — TAMPER SWITCH
FVMP — FIRE STROBE (WEATHER PROOF) (VISUAL)
FA — FIRE ALARM HORN
FA — FIRE ALARM BELL
FD — DUCT SMOKE DETECTOR
FCO — CARBON MONOXIDE DETECTOR
FCOV — CARBON MONOXIDE ALERT VISUAL SIGNAL
FANN — REMOTE ANNUNCIATOR

GENERAL NOTES:

EXISTING SYMBOLS — THIN LINE
NEW SYMBOLS — THICK LINE
DEMO — DASHED LINE
WALL MOUNT

DRAWING INDEX

SHEET	DESCRIPTION
M0.0	SYMBOL LEGENDS, ABBREVIATIONS □ DRAWING INDEX
EP0.1	ELECTRICAL□PLUMBING SITE PLAN
E1.1	ELECTRICAL□LIGHTING PLAN, SCHEDULES □ SPECS
M1.1	MECHANICAL PLAN AND PLUMBING PLAN, SCHEDULE □ SPECS

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GENERAL SITE NOTES:

1. LOCATE EXISTING UNDERGROUND UTILITIES BEFORE DIGGING.
2. CORE BORE UNDER EXISTING SIDEWALKS AND DRIVEWAYS AS REQUIRED.
3. REPAIR DISTURBED FINISHED GRADE AS REQUIRED TO MATCH EXISTING.
4. BURY ELECTRICAL CONDUITS AT 24" BELOW FINISHED GRADE (BFG) AND PROVIDE WITH ELECTRICAL MARKER TAPE AT 12" BFG, UNO.

□ KEYED ELECTRICAL SITE NOTES:

1. RELOCATE EXISTING JUNCTION BOX AND EXTEND CONDUIT TO PNL-A IN NEW BUILDING. REVISE EXISTING FEEDER AS INDICATED IN ELECTRICAL ONE-LINE DIAGRAM.
2. RELOCATE EXISTING JUNCTION BOX AND EXTEND EXISTING SPARE CONDUIT TO ACCESSIBLE CEILING SPACE IN NEW BUILDING.
3. EXISTING POLE MOUNTED SCALE DISPLAY – PROVIDE WITH IN-GROUND JUNCTION WITH 1¼" CONDUIT TO EXISTING CONDUIT LOCATED ON POLE, AND 1¼" CONDUIT TO TERMINATE AT DESK AREA OF COMPUTER SCALE. COORDINATE LOCATION WITH OWNER.

○ KEYED PLUMBING SITE NOTES:

1. INSTALL NEW 1" INSULATED COLD WATER PIPE FROM JANITOR CLOSET A203 TO SW CORNER OF BUILDING.
2. INSTALL NEW BURIED 1" COLD WATER PIPE, AT 5' BFG, FROM SW CORNER OF BUILDING TO NEW BUILDING. BURY AT 5' MINIMUM BELOW GRADE.
3. INSTALL NEW 4" SCHEDULE 40 PVC SANITARY DRAIN FROM NEW BUILDING TO EXISTING 10" SANITARY DRAIN. PROVIDE CLEAN-OUTS AS REQUIRED.

ELECTRICAL/PLUMBING SITE PLAN

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

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ELECTRICAL SPECIFICATIONS

1. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR ATTEMPT TO CONNECT NEW ELECTRICAL DEVICES OR CIRCUITS TO AN EXISTING ENERGIZED POWER DISTRIBUTION SWITCHGEAR OR PANELBOARD. MAKE ARRANGEMENTS WITH OWNER FOR A METHOD OF PROCEDURE MEETING TO ESTABLISH THE CRITERIA FOR THE NECESSARY POWER SHUT DOWN. THIS MEETING SHALL BE HELD A MINIMUM OF TWO (2) WEEKS IN ADVANCE OF PERFORMING THE ACTUAL WORK.

2. ANY INTERRUPTION OF SERVICE SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY OWNER SO AS NOT TO INTERFERE WITH PRESENT BUILDING OPERATION.

3. ELECTRICAL WORK SHALL CONFORM TO THE APPLICABLE NATIONAL ELECTRIC CODE, STATE AND LOCAL CODES. ELECTRICAL MATERIALS SHALL BE UL LISTED AND APPROVED FOR THE PURPOSE. ELECTRICAL CONTRACTORS SHALL OBTAIN AND PAY FOR REQUIRED PERMITS AND CERTIFICATES OF INSPECTION FOR THE WORK INDICATED IN THE CONSTRUCTION DOCUMENTS AND SPECIFIED HEREIN.

4. WORK SHALL BE PERFORMED BY LICENSED ELECTRICIANS.

5. BIDDERS SHALL VISIT SITE BEFORE SUBMITTING PROPOSALS, AND FULLY INFORM THEMSELVES AS TO JOB AND SITE CONDITIONS.

6. ALL WIRING SHALL BE COPPER, RATED AT 600V OR AS INDICATED IN THE CONSTRUCTION DOCUMENTS, AS SUITED FOR THE APPLICATION TYPE THW, THHN, OR THWN. WIRING SIZE SHALL BE AS INDICATED HEREIN AS NOTED IN THE CONSTRUCTION DOCUMENTS.

7. 20A CIRCUITS SHALL BE #12 AWG MINIMUM, TYPE THW, THHN, OR THWN. FOR RUNS OVER 100 FEET, USE #10 AWG IN LIEU OF #12. WIRING SHALL BE INSTALLED IN METALLIC CONDUITS, EITHER IMC, RGC OR EMT.

8. CONDUIT PENETRATIONS, THROUGH WALLS, CEILINGS AND FLOORS, SHALL BE INSTALLED IN SLEEVES OF SUFFICIENT DIAMETER TO ALLOW PROPER SPACE FOR FIRE RETARDANT SEALING. PROVIDE WITH APPROVED FIRE RETARDANTS AS MANUFACTURED BY 3M FIRE BARRIER CAULK CP25 AND PUTTY 303.

9. FURSES SHALL BE DUAL ELEMENT CLASS RK-5 CURRENT LIMITING TYPE AS MANUFACTURED BY BUSMAN CATALOG NO. FRS-R (600 VOLTS) AS APPLICABLE OR EQUAL BY GOULD-SHAWNUT. MEDIUM VOLTAGE FUSES SHALL BE AS INDICATED IN THE CONSTRUCTION DOCUMENTS.

10. DISCONNECT SWITCHES SHALL BE HEAVY DUTY, QUICK-NAME, QUICK-BREAK MECHANISM WITH PADLOCKING PROVISION IN "OFF" POSITION, DUAL COVER INTERLOCK, EQUIPPED WITH A GROUND BAR IN NEMA 3R ENCLOSURE. FUSED DISCONNECT SWITCHES SHALL HAVE CLASS "R" FUSES AND REJECTION FEATURE TO REJECT FUSES EXCEPT CLASS "R". NEW SWITCHES SHALL BE MANUFACTURED BY SQUARE "D", SIEMENS, GENERAL ELECTRIC OR EATON.

11. FOR NEW ELECTRICAL DEVICES SUCH AS CIRCUIT BREAKERS AND DISCONNECT SWITCHES, PROVIDE BLACK LAMINATED PLASTIC NAMEPLATE WITH WHITE LETTERS, INDICATING POWER SOURCE AND LOAD SERVED. ATTACH NAMEPLATE TO THE DEVICE WITH SHEET METAL SCREWS.

12. TERMINATE CONDUIT RUNS TO VIBRATING EQUIPMENT WITH LIQUID TIGHT FLEXIBLE METAL CONDUIT. LENGTH SHALL NOT EXCEED SIX FEET.

13. LIGHT FIXTURE LENSES SHALL COMPLY WITH STATE OF MICHIGAN DEPARTMENT OF STATE POLICE, STATE FIRE AND SAFETY BOARD RULES 129 AND 131.

14. REPLACE ANY CEILING TILES WHICH ARE DAMAGED AS RESULT OF ELECTRICAL INSTALLATION.

15. PROVIDE TYPEWRITTEN DIRECTORIES FOR PANEL INCLUDING THOSE EXISTING WITH CIRCUIT CHANGES.

16. ELECTRICAL CONTRACTOR SHALL LEAVE ENTIRE ELECTRICAL SYSTEM IN PROPER WORKING ORDER, AND SHALL EXTEND TO OWNER ANY GUARANTEE EXTENDED BY MANUFACTURER OR EQUIPMENT AND DEVICES INSTALLED AND FURNISHED BY CONTRACTOR. GUARANTEE PERIOD SHALL BE EXTENDED BY CONTRACTOR FOR ONE YEAR AS OF THE DATE OF SUBSTANTIAL COMPLETION. GUARANTEE SHALL COVER LABOR AND MATERIALS NECESSARY TO CORRECT DEFECTS IN MATERIALS OR WORKMANSHIP DURING GUARANTEE PERIOD.

17. SUBMIT SHOP DRAWINGS, BEFORE COMMENCING INSTALLATION WORK, FOR REVIEW OF THE FOLLOWING ITEMS:
    a. CIRCUIT BREAKERS
    b. PANELBOARDS
    c. LIGHTING FIXTURES
    d. SAFETY DISCONNECT SWITCHES

18. REMOVE CONSTRUCTION DEBRIS ON A DAILY BASIS.

19. ON COMPLETION OF WORK, PROVIDE TWO SETS OF "AS BUILT" DRAWINGS TO THE OWNER.

PANEL COMPUTATION/RECORD SHEET

PROJECT NAME: xxx — PROJECT #: xxx
1-PHASE — xxx — PANEL ID: PNL-A

CKT #	LOAD - VOLT AMPERES LTG	MTR	RCPT	OTHER	DESCRIPTION	CKT P	T	P	CKT T	DESCRIPTION	LOAD - VOLT AMPERES LTG	MTR	RCPT	OTHER	CKT #
1	350				INTERIOR LIGHTING	1	20	A	1	20	RECEPTACLES			400		2
3	100				EXTERIOR LIGTHTING	1	20	B	1	20	RECEPTACLES			600		4
5			1500		MICROWAVE	1	20	A	1	20	RECEPTACLES			600		6
7			1500		WATER HEATER	1	20	B	1	20	BB HEATER-RESTROOM				500	8
9				20	SMOKE DETECTORS	1	20*	A	1	20	BB HEATER-VESTIBULE				500	10
11					SPARE	1	20	B	2	20	HVAC		1560			12
13					SPARE	1	20	A	_	_	X		1560			14
15						1	20	B	1	20						16
17						1	20	A	1	20						18
19						1	20	B	1	20						20
21						1	20	A	1	20						22
23						1	20	B	1	20						24
	450	0	3000	20	SUBTOTALS						0	3120	1600	1000	

	CONNECTED	MULT	DIVERSIFIED (VA)
LTG	450	1	450
LMTR	1560	1.25	1950
MTR	1560	1	1560
RCPT	4600		4600
OTHER	1020	1	1020
TOTAL	9190		9580

VOLTAGE:	240
MIN AMP:	40
MOUNTING:	FLUSH
MAIN LUG:	
MAIN CKT BKR:	100A
CKT CAPACITY:	30

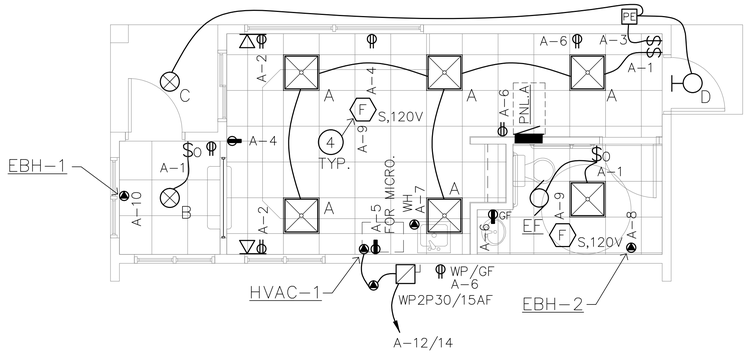
NOTES:
SQUARE-D LOAD CENTER
* PROVIDE WITH LOCKING TAB

PNL LOC: XXX
PANEL ID: PNL-A

LIGHTING FIXTURE SCHEDULE

MARK	DESCRIPTION	MANUFACTURER & CAT. NO.	LAMPS	REMARKS
A	2'X2' RECESSED LED TROFFER	METALUX #22EN-LD1-34-UNV-L840-CD1-U	LED'S	1
B	RECESSED LED DOWNLIGHT	LITHONIA #LDN6-40/15-L06-AR-LD-120-SF-TRW	LED'S	2
C	RECESSED LED DOWNLIGHT, EXTERIOR	KIRLIN #LRR-06018-41K-13-45-46-FS	LED'S	2
D	EXTERIOR LED FIXTURE	LITHONIA #WST LED-2-10A700/40K-SR3-MVOLT-DDBXD	LED'S	3

GENERAL NOTES (APPLIES TO ALL FIXTURES):
EQUAL LIGHTING FIXTURES SHALL MATCH REQUIREMENTS OF SPECIFIED LIGHTING FIXTURES.
REMARKS:
1. OR ENGINEER APPROVED EQUAL BY LITHONOA, OR COLUMBIA.
2. OR ENGINEER APPROVED EQUAL BY PRESCOLITE, GOTHAM, OR PORTFOLIO.
3. OR ENGINEER APPROVED EQUAL BY HUBBELL, OR IN-VUE.

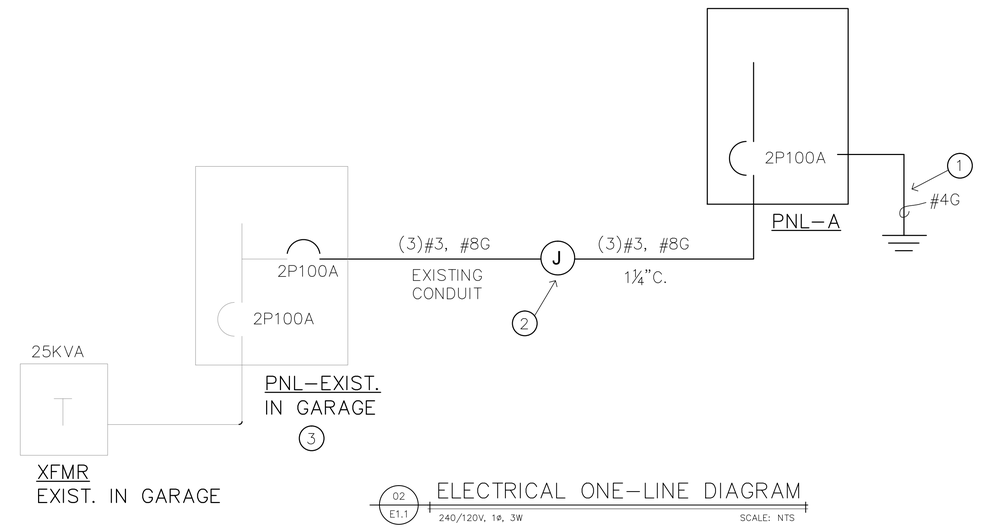


01 E1.1 ELECTRICAL/LIGHTING PLAN
SCALE: 1/4" = 1'-0"

KEYED ELECTRICAL NOTES:

1. PROVIDE WITH ⅝"x10' GROUND ROD & BOND TO FOUNDATIONS STEEL RE-BARS AND TO WATER PIPE.
2. RELOCATED JUNCTION BOX. EXTEND EXISTING CONDUIT TO NEW BUILDING. PROVIDE WITH NEW FEEDER AS INDICATED.
3. EXISTING PANEL DOES NOT HAVE ANY LOADS AND IT IS BEING SERVED SOLELY BY THE INDICATED TRANSFORMER.
4. FIRE ALARM SMOKE DETECTOR: BRK #7010BSL. INTERCONNECT TO ACTIVATE AT SAME TIME.

DENOTES EXISTING
DENOTES NEW



02 E1.1 ELECTRICAL ONE-LINE DIAGRAM
240/120V, 1ø, 3W — SCALE: NTS

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MECHANICAL SPECIFICATIONS

1. MECHANICAL WORK SHALL CONFORM TO THE APPLICABLE NATIONAL, STATE, AND LOCAL CODES. MATERIALS SHALL BE NEW AND APPROVED FOR THE PURPOSE. THE MECHANICAL CONTRACTOR SHALL OBTAIN AND PAY FOR REQUIRED PERMITS AND CERTIFICATES OF INSPECTION FOR THE WORK INDICATED IN THE CONSTRUCTION DOCUMENTS AND SPECIFIED HEREIN.

2. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. EQUIPMENT SHALL BE INSTALLED SO THAT REQUIRED MAINTENANCE CAN BE ACCOMPLISHED, AND SO THAT IT CAN BE REMOVED FOR SERVICE WITHOUT DISTURBING THE BALANCE OF THE SYSTEM.

3. BIDDERS SHALL VISIT THE SITE BEFORE SUBMITTING PROPOSALS, AND FULLY INFORM THEMSELVES AS TO JOB AND SITE CONDITIONS.

4. WORK SHALL BE INSTALLED BY WORKMEN SKILLED IN THEIR TRADE, AND SHALL BE TESTED FOR PROPER OPERATION.

5. THE MECHANICAL INSTALLATION SHALL BE COMPLETE AND READY FOR OPERATION.

6. THE MECHANICAL CONTRACTOR SHALL GUARANTEE THE PROJECT FOR A PERIOD OF ONE YEAR AFTER SUBSTANTIAL COMPLETION, AND SHALL EXTEND TO THE OWNER ANY GUARANTEE EXTENDED BY THE MANUFACTURER. THE GUARANTEE SHALL COVER LABOR AND MATERIALS NECESSARY TO CORRECT DEFECTS IN MATERIALS OR WORKMANSHIP DURING THE GUARANTEE PERIOD.

7. SUBMIT SHOP DRAWINGS, BEFORE COMMENCING INSTALLATION WORK, FOR REVIEW OF THE FOLLOWING ITEMS:

   a. HVAC SYSTEM
   b. ELECTRIC BASEBOARD HEATER
   c. EXHAUST FAN
   d. FLOOR DRAIN
   e. LAV
   f. WATER CLOSET
   g. WATER HEATER

8. REMOVE CONSTRUCTION DEBRIS ON A DAILY BASIS.

9. ON COMPLETION OF WORK, PROVIDE TWO SETS OF "AS BUILT" DRAWINGS AND TWO SETS OF OPERATING AND MAINTENANCE MANUALS TO THE OWNER.

10. MISCELLANEOUS HANGERS, BRACKETS, SUPPORTS, ETC. SHALL BE PROVIDED AND INSTALLED BY THE MECHANICAL CONTRACTOR.

11. VALVES SHALL BE INSTALLED AT LOCATIONS NECESSARY TO PROVIDE PROPER SERVICE ISOLATION.

12. WATER PIPING BELOW GRADE SHALL BE TYPE K SOFT COPPER. INSTALL SO THAT THERE ARE NO JOINTS BELOW THE BUILDING FLOOR. BACK FILL WITH SAND TO PREVENT MECHANICAL DAMAGE TO THE PIPING.

13. WATER PIPING INSIDE THE BUILDING SHALL BE TYPE L COPPER AND SHALL BE RUN PARALLEL TO BUILDING WALLS IN THE HORIZONTAL, AND PLUMB IN THE VERTICAL. INSULATE HOT AND COLD WATER PIPING TO THE EXISTING PIPING.

14. PROVIDE WATER HAMMER ARRESTORS AS REQUIRED.

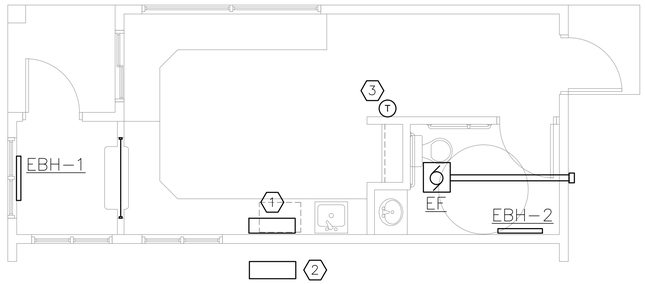
15. SANITARY WASTE PIPING SHALL BE SCHEDULE 40 PVC. CONTINUOUSLY GRADE IN THE DIRECTION OF FLOW. PROVIDE CLEAN OUTS AS INDICATED ON THE PLANS OR AS REQUIRED BY CODE.

16. VENT PIPING SHALL BE SCHEDULE 40 PVC. PROVIDE VENTS AS REQUIRED BY CODE. FLASH VENT PIPES PASSING THROUGH THE ROOF.

17. PROVIDE CHROME PLATED ESCUTCHEONS AT PIPING PENETRATIONS THROUGH FINISHED WALL.

18. CHALK AT PLUMBING FIXTURES BETWEEN THE FIXTURE AND THE WALL OR COUNTER TOP.

19. CLEAN FIXTURES AND TRIM BEFORE TURNING OVER TO THE OWNER.



MECHANICAL PLAN

SCALE: 1/4" = 1'–0"

KEYED MECHANICAL NOTES:

1. HVAC INDOOR UNIT. MOUNT AT TOP OF UNIT 4" BELOW CEILING.
2. HVAC OUTDOOR UNIT
3. HVAC REMOTE CONTROLLER

MECHANICAL SCHEDULE

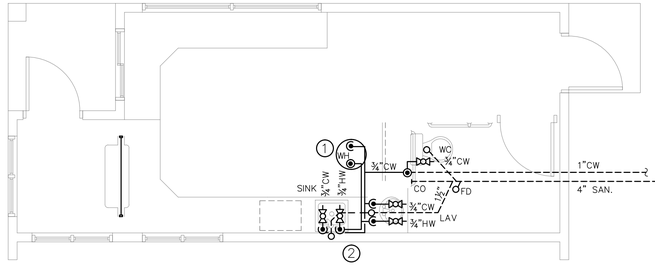
EBH–1: 500 WATT ELECTRIC BASEBOARD HEATER UNIT
MOUNTED THERMOSTAT
GRAINGER 3UG76 WITH 3UG91

EBH–2: 500 WATT ELECTRIC BASEBOARD HEATER UNIT
MOUNTED THERMOSTAT
GRAINGER 3UG76 WITH 3UG91

EF: 80 CFM VENTILATION FAN WITH 4" EXHAUST DUCT, VENT CAP, AND DAMPER

HVAC SYSTEM SHALL BE 9000 BTU/HR SPLIT SYSTEM HEAT PUMP, WITH A WIRELESS WALL MOUNTED REMOTE CONTROLLER.

INDOOR UNIT: MITSUIBISHI MSZ–FE09NA–8
OUTDOOR UNIT: MITSUIBISHI FE09NA–1
THERMOSTAT: MITSUIBISHI MHK1



CONTINUED ON SHEET S0.1

PLUMBING PLAN

SCALE: 1/4" = 1'–0"

KEYED PLUMBING NOTES:

1. INSTALL WATER HEATER UNDER COUNTER BY SINK.
2. DO NOT INSTALL WATER PIPING IN EXTERIOR WALL.

PLUMBING SCHEDULE

LAV ADA COMPLIANT WHITE VITREOUS CHINA COUNTERTOP SINK
WITH FAUCET, POP–UP DRAIN AND MIXING VALVE.

LAV: AMERICAN STANDARD RONDALYN COUNTERTOP SINK
FAUCET: AMERICAN STANDARD 520–MPU
MIXING VALVE: APOLLO 34D302B1

SINK ADA COMPLIANT STAINLESS STEEL SINK WITH DRAIN AND GOOSENECK FAUCET
WITH WRIST BLADES

SINK: AMERICAN STANDARD 24SB.151511290
FAUCET: AMERICAN STANDARD MONTERRY 6530170
MIXING VALVE: APOLLO 34D302B1

WH 2.5 GALLON ELECTRIC WATER HEATER

LOCHINVAR JRC002CS

WC ADA COMPLIANT WHITE VITREOUS CHINA, LOW CONSUMPTION, ELONGATED TOILET.

TOILET: AMERICAN STANDARD CHAMPION 4
SEAT: AMERICAN STANDARD #5280.016

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date	issued for
04.13.16	REVIEW

file no.
16-10

sheet no.
M1.1

MEETING DATE: **November 10, 2016**

AGENDA ITEM#: VI – A

BOARD OF PUBLIC WORKS ACTION REQUEST

SUBJECT: Laboratory Services Contract 2017-2021

DIVISION: Solid Waste - Environmental Compliance

PREPARED BY: Molly Sherwood, Environmental Compliance Manager

ACTION REQUESTED:

Approval of the Laboratory Services Contract extension with Pace Analytical (formerly Trimatrix Laboratories) through 2021.

SUMMARY OF REQUEST:

The Laboratory Services contract with Pace Anaytical (Pace), formerly Trimatrix Laboratories in Grand Rapids, expires at the end of 2016. Pace is the contract laboratory performing water, soil, and leachate testing at our landfills.

To preserve the continuity of DPW monitoring programs with an EPA certified lab, an addendum has been prepared to extend current laboratory services through December 31, 2021. Pace provided updated pricing for their services (attached) that reflect minimal pricing increases over the next five years.

Due to the need for detailed, sensitive testing protocol, continuity and integrity of our monitoring programs, DPW staff recommends approval of the Pace Analytical Laboratory Services contract. Pricing and terms have been reviewed by Purchasing. Corporation Counsel will complete the necessary contract amendments.

SUGGESTED MOTION:

It was moved by_____ and seconded by_____ to approve the Laboratory Services Contract extension with Pace Analytical through December 31, 2021.

ATTACHMENTS:

Laboratory Pricing Summary

GOVERNING/ADVISORY BOARD APPROVAL DATE: November 10, 2016

DEPARTMENT DIRECTOR: _____

PROPOSAL FOR LABORATORY SERVICES
KENT COUNTY DEPARTMENT OF PUBLIC WORKS

SOUTH KENT, NORTH KENT, KENTWOOD, AND SPARTA LANDFILLS

ANNUAL TOTALS FOR:

		2017	2018	2019	2020	2021
(1)	SOUTH KENT LANDFILL	$39,961.65	$40,138.24	$40,319.24	$40,504.77	$40,694.94
(2)	NORTH KENT LANDFILL	$41,360.78	$43,316.35	$42,210.49	$44,195.31	$43,111.42
(3)	SPARTA LANDFILL	$48,076.60	$46,695.52	$48,398.23	$47,025.20	$48,736.15
(4)	KENTWOOD LANDFILL	$50,927.12	$51,215.15	$51,510.37	$51,812.97	$52,123.14
(5)	CONTINGENCIES	$5,000.00	$5,000.00	$5,000.00	$5,000.00	$5,000.00
(6)	**CONTRACT ANNUAL TOTALS (Sum Items 1-5)**	**$185,326.16**	**$186,365.26**	**$187,438.34**	**$188,538.25**	**$189,665.65**

GRAND TOTAL LABORATORY CONTRACT 07-01
(Sum line 9. Annual totals) **$937,333.65**

In the Lines provided below, list hourly rates for labor and equipment; This rate shall be used to charge any miscellaneous work which the Owner may request, and which the Contractor agrees to do. start and stop time for hourly rates shall be based on when the personnel or equipment arrive onsite and leave site. If additional cost are to be added for transport time please indicate this cost separately.

DESCRIPTION	HOURLY RATE	WEEKLY RATE	MOVE IN AND MOVE OUT CHARGES
Labor	$60.00/hour		
QAPP Writing	$82.00/hour		

In the lines provided below, please indicate multipliers to be used when 24-hour or 48-hour turn around is requested and successfully completed. Note- sample results must be delivered to the DPW within the 24-hour or 48-hour deadline in order for these rates to be used.

24-HOUR TURN AROUND	2.0 X
48-HOUR TURN AROUND	1.75 X

MEETING DATE: **November 10, 2016**

AGENDA ITEM#: IX – B

BOARD OF PUBLIC WORKS ACTION REQUEST

SUBJECT: Waste Reduction Plan and Sustainable Business Park Master Plan Request for Proposal

DIVISION: Administration

PREPARED BY: Darwin J. Baas, Director

ACTION REQUESTED:

Adoption of the Kent County Waste Reduction Conceptual Plan and to authorize the Director to issue a Resource Recovery/Eco-Industrial Business Park master plan Request for Proposal and develop strategies to attract public/private investment in infrastructure and implement sustainable materials management strategies in Kent County.

SUMMARY OF REQUEST:

The Department of Public Works has provided waste disposal and recovery services since the late 1960's. Presently, Public Works provides waste and recycling management services with a fleet of facilities in an integrated solid waste management system.

In 2015, Kent County disposed 1.8 million cubic yards of municipal solid waste and nearly 75 percent still went for landfill disposal.

The Kent County Waste Reduction Conceptual Plan provides a roadmap and to develop a business plan, public/private collaboration and funding to construct infrastructure necessary to implement sustainable materials management strategies that can include recycling, energy and fuel conversion, manufacturing composting, and anaerobic digestion to divert 20 percent of municipal solid waste by 2020 and 90 percent by 2030.

SUGGESTED MOTION:

It was moved by_____ and seconded by_____ to adopt the Kent County Waste Reduction Conceptual Plan and to authorize the Director to issue a Resource Recovery/Eco-Industrial Business Park master plan request for proposal and develop strategies to attract public/private investment in infrastructure and implement sustainable materials management strategies for Kent County.

ATTACHMENTS:

Kent County Waste Reduction Conceptual Plan

GOVERNING/ADVISORY BOARD APPROVAL DATE: November 10, 2016

DEPARTMENT DIRECTOR: _____