

**PLANNING COMMISSION  
MEETING AGENDA  
SPECIAL MEETING**

500 W. Big Beaver  
Troy, MI 48084  
(248) 524-3364  
www.troymi.gov  
planning@troymi.gov

Donald Edmunds, Chair, Philip Sanzica, Vice Chair  
Karen Crusse, Steve Gottlieb, Michael W. Hutson, Tom Krent  
Gordon Schepke, Thomas Strat and John J. Tagle

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**October 1, 2014**

**7:30 P.M.**

**Council Chambers**

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1. ROLL CALL
2. APPROVAL OF AGENDA
3. PUBLIC COMMENT – For Items Not on the Agenda

**PRELIMINARY SITE PLAN REVIEW**

4. PRELIMINARY SITE PLAN REVIEW (File Number SP 997) – Proposed Kresge Foundation Headquarters Expansion, South side of Big Beaver, West of Coolidge (3215 W Big Beaver) Section 30, Currently Zoned BB (Big Beaver) District

**OTHER BUSINESS**

5. PUBLIC COMMENT – Items on Current Agenda
6. PLANNING COMMISSION COMMENT

**ADJOURN**

**NOTICE:** People with disabilities needing accommodations for effective participation in this meeting should contact the City Clerk by e-mail at [clerk@troymi.gov](mailto:clerk@troymi.gov) or by calling (248) 524-3317 at least two working days in advance of the meeting. An attempt will be made to make reasonable accommodations.

DATE: September 29, 2014

TO: Planning Commission

FROM: R. Brent Savidant, Planning Director

SUBJECT: PRELIMINARY SITE PLAN REVIEW (File Number SP 997) – Proposed Kresge Foundation Headquarters Expansion, South side of Big Beaver, West of Coolidge (3215 W Big Beaver) Section 30, Currently Zoned BB (Big Beaver) District

The petitioner LS Brinker submitted the above referenced Preliminary Site Plan application for the proposed addition to the Kresge Foundation Headquarters. The proposed addition will accommodate additional office and meeting space on the west side of the building.

The property is currently zoned BB (Big Beaver) District. The Planning Commission is responsible for granting Preliminary Site Plan approval for this item.

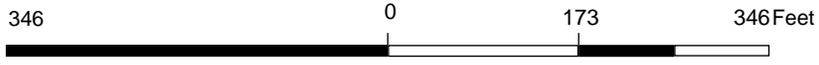
The applicant was inadvertently granted a building permit prior to receiving all necessary approvals including Preliminary Site Plan Approval by the Planning Commission. All work on the construction site has been halted pending Planning Commission approval. A Special Meeting was scheduled to address this issue in a timely manner.

The attached report prepared by Carlisle/Wortman Associates, Inc. (CWA), the City's Planning Consultant, summarizes the project. CWA prepared the report with input from various City departments including Planning, Engineering, Public Works and Fire. City Management supports the findings of fact contained in the report and the recommendations included therein.

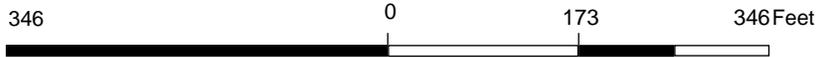
Attachments:

1. Maps
2. Report prepared by Carlisle/Wortman Associates, Inc.

G:\SITE PLANS\SP 997 Kresge Foundations Headquarters Expansion Sec 30\SP-997 PC Memo 10 01 2014.docx



Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.



Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.

**PROPOSED RESOLUTION**

PRELIMINARY SITE PLAN REVIEW (File Number SP 997) – Proposed Kresge Foundation Headquarters Expansion, South side of Big Beaver, West of Coolidge (3215 W Big Beaver) Section 30, Currently Zoned BB (Big Beaver) District

**Resolution # PC-2014-10-**

Moved by:

Seconded by:

**RESOLVED**, The Planning Commission approves relief of off-street parking requirements by supporting the shared parking arrangement with the abutting neighbor, as per Section 13.06.E of the City of Troy Zoning Ordinance.

**BE IT FURTHER RESOLVED**, That Preliminary Site Plan Approval, pursuant to Article 8 of the Zoning Ordinance, as requested for the proposed Kresge Foundation Headquarters addition, located on the south side of Big Beaver, west of Coolidge (3215 W Big Beaver), Section 30, within the BB (Big Beaver) District, be granted, subject to the following:

\_\_\_\_\_ ) or

(denied, for the following reasons: \_\_\_\_\_) or

(postponed, for the following reasons: \_\_\_\_\_)

Yes:

No:

**MOTION CARRIED/FAILED**



CARLISLE

WORTMAN  
associates, inc.

605 S. Main Street, Ste. 1  
Ann Arbor, MI 48104

(734) 662-2200  
(734) 662-1935 Fax

September 29, 2014

## Preliminary Site Plan Review For City of Troy, Michigan

<b>Applicant:</b>	Kresge Foundation
<b>Project Name:</b>	Kresge Foundation Expansion
<b>Plan Date:</b>	June 04, 2014
<b>Location:</b>	Southside of Big Beaver, west of Coolidge
<b>Zoning:</b>	BB, Big Beaver Form-based district
<b>Action Requested:</b>	Preliminary Site Plan Approval

### PROJECT AND SITE DESCRIPTION

The Kresge Foundation proposes to construct a two-level addition, each approximately 8,000 sq/ft (16,000 sq/ft total) to their existing building on Big Beaver. The addition is located to the west of the existing headquarters. The two floor levels of the expansion will correspond to the levels of the existing headquarters. The expansion will have curtain walls and metal panels to match the existing building. Additionally, the blue gray granite stone prominently visible on existing site will also be used for the expansion. The wall on the west of the building will have a stone veneer with the included jet mist stone. The addition is constant with the existing building and advances the Kresge Foundation campus objective of combining historic and modern elements on a "green" site.

Based on the size of the addition, the applicant is required to provide fifty-three (53) spaces; however, based on the Foundation's projected growth, the applicant concludes that they will only need thirty-eight (38) additional spaces. The applicant has signed a leasing agreement with the adjacent property owner to provide the thirty-eight (38) additional spaces. The applicant is seeking a parking relief of fifteen (15) spaces from the Planning Commission.

There are no proposed changes to site access off Big Beaver. The site is located in the Big Beaver Form Based District.

**Figure 1: Subject Site Location**



## LAND USE AND ZONING

Location of Subject Property:  
Southside of Big Beaver, west of Coolidge

Current Zoning:  
The property is currently zoned Big Beaver Form Based Code

**Table 1. – Adjacent Zoning and Land Use**

Direction	Zoning	Use
North	BB, Big Beaver Form Based	Office
South	BB, Big Beaver Form Based	Office
East	BB, Big Beaver Form Based	Office
West	BB, Big Beaver Form Based	Office

**AREA, WIDTH, HEIGHT, SETBACKS**

The 16,000 sq/ft, two-story addition is located along the west side of the existing building. Table 5.03.B4 establishes the dimensional requirements within the Big Beaver Form-base district:

**Table 2. – Big Beaver Form Based Dimensional Requirements**

	<b>Required / Allowed</b>	<b>Provided</b>	<b>Compliance</b>
Front (Big Beaver)	10 foot build-to-line	46 feet	Complies. See description below
Rear	40 foot minimum	+ 40 feet	Complies
Side	0 foot	5 feet	Complies
Open Space	15 percent	>15%	Complies
Building Height	Minimum 14 feet Maximum None	21 feet, 2 stories	Complies
Parking	Big Beaver: Not located in front yard and screening	Not located in front yard and screened	Complies

The existing building is over 50 feet from the front property line. Though the addition does not meet the 10-foot build-to-line, the addition is closer to Big Beaver than the existing building. With the addition, the applicant is making the site less non-conforming and the building location may be approved by the Planning Commission. The elevation from Big Beaver includes a modern glass front, which matches the existing building and is partially screened by a “green” wall.

**Items to be Addressed: None**

**PARKING**

There are 50 existing parking spaces on site. Section 13.06.G of the Zoning Ordinance requires:

**Table 3. – Parking Requirements**

	<b>Required</b>	<b>Provided</b>	<b>Compliance</b>
Addition	1 space per 300 sq/ft = 16,000 sq/ft / 300 = 53 spaces	38 spaces through off-site lease	Applicant is seeking a 15 car parking relief from the Planning Commission

The total site parking provided is 88 spaces. Based on the size of the addition, the applicant is required to provide fifty-three (53) spaces; however, based on the parking study and Foundation’s projected growth, the applicant concludes that they will need only thirty-eight (38) additional spaces.

Based on the parking study and actual data provide by the applicant, at peak parking demand 84% of the employees are parked on the site at one time. Based on the projected growth to 105 employees, eighty-eight (88) spaces should be sufficient (105 employees x 84% = 88 spaces).

The applicant has signed a leasing agreement with the adjacent property owner to provide the thirty-eight (38) additional spaces. Three (3) spaces will be provided on the west side of the building, and thirty-five (35) will be located on the west side of the building.

We find that the proposed leased parking is a good solution. If additional parking is necessary in the future, the applicant is able to amend their parking lease agreement to increase the number of spaces. The applicant is seeking a parking relief of fifteen (15) spaces from the Planning Commission.

**Items to be Addressed:** *Planning Commission to consider the granting of a parking relief.*

## PEDESTRIAN CIRCULATION

The applicant is installing a new gravel path from the existing sidewalk on Big Beaver around the addition. The gravel path provides a full connection around the entire building.

**Items to be Addressed:** *None*

## TRAFFIC, SITE ACCESS AND CIRCULATION

The addition does not alter the existing site access off Big Beaver. The addition does not generate enough additional site traffic to require any traffic improvements.

**Items to be Addressed:** *None*

## FLOOR PLAN AND ELEVATIONS

The applicant has submitted floor plans, elevations and 3-d renderings. The applicants proposed addition blends well with the modern and historical features of the existing site. The expansion will have curtain walls and metal panels to match the existing building. Additionally, the blue gray granite stone prominently visible on existing site will also be used for the expansion. The wall on the west of the building will have a stone veneer with the included jet mist stone

The architecture complies with the Big Beaver Form Based District standards including the use of material changes, projections, ground-floor transparency, and variations in material, pattern, and color, to provide ground story activation.

**Items to be Addressed:** *None*

## LANDSCAPING

The applicant has provided a landscape plan. The plan focuses on naturalized plantings with native seeding, fescue seeding, and naturalized stormwater management, including four (4) areas of bioretention or wetlands. The use of naturalized plantings and naturalized stormwater management continues the “green” theme of the Kresge Foundation site.

**Items to be Addressed:** *None*

## LIGHTING

A Photometric Plan and lighting details have been provided. The applicant proposes nine (9) lights along the “green” wall, three(3) building fixtures along the Big Beaver Elevation, three (3) building fixtures along west elevation, and six (6) lights at the back of the addition. The fixtures are fully shielded.

Photometric light readings comply with Ordinance requirements.

**Items to be Addressed:** None

## UTILITIES

The applicant is adding one (1) roof top unit on the addition. The unit will be screened by a metal panel that matches the rest of the façade.

**Items to be Addressed:** None

## DESIGN STANDARDS

The Big Beaver design standards provide the Planning Commission with direction when reviewing the proposed design features of this development. The Planning Commission shall review the site plan, elevations, and design to confirm that the Big Beaver design standards are met.

### Façade Variation.

The maximum linear length of an uninterrupted building façade facing public streets and/or parks shall be thirty (30) feet.

***Through the use of material changes, projections, and varying colors, the proposed building complies with this standard.***

### Pedestrian Access / Entrance.

- a. ***Primary Entrance:*** The primary building entrance shall be clearly identifiable and useable and located in the front façade parallel to the street.

***The addition includes an entrance facing Big Beaver Road.***

- b. **Pedestrian Connection.** The pedestrian connection shall be fully paved and maintained surface not less than five (5) feet in width.

***The applicant is extending a gravel path around the addition that provides a full pedestrian connection around the entire building.***

- c. **Additional Entrances.** In addition to the primary façade facing front façade and/or the right-of-way, if a parking area is located in the rear or side yard, must also have a direct pedestrian access to the parking area that is of a level of materials quality and design emphasis at least equal to that of the primary entrance.

***Sidewalks/paths are provided throughout the site.***

Ground Story Activation.

*The first floor of any front façade facing a right-of-way shall be no less than fifty (50) percent windows and doors, and the minimum transparency for facades facing a side street, side yard, or parking area shall be no less than 30 percent of the façade. Transparency alternatives are permitted up to 80% of the 50% total along the front of buildings, and up to 100% of the sides of buildings. The minimum transparency requirement shall apply to all sides of a building that abut an open space, including a side yard, or public right-of-way. Transparency requirements shall not apply to sides which abut an alley.*

***The applicant meets the transparency requirement.***

Transitional Features

- a. *Transitional features are architectural elements, site features, or alterations to building massing that are used to provide a transition between higher intensity uses and low- or moderate-density residential areas. These features assist in mitigating potential conflicts between those uses. Transitional features are intended to be used in combination with landscape buffers or large setbacks.*

***Due to proximity of other office uses, the development is less intense than surrounding uses.***

Site Access and Parking

- a. *Required Parking. Off-street parking shall be provided in accordance with the standards set forth in Article 13, Site Design Standards.*

***The applicant is seeking relief of fifteen (15) parking spaces from the Planning Commission.***

- b. *Location.*
  - I. *When parking is located in a side yard (behind the front building line) but fronts on the required building line, no more than fifty (50) percent of the total site's linear feet along the required building line or one hundred (100) feet, whichever is less, shall be occupied by parking.*

***All the parking is located to the side or rear of the building and complies with parking location requirements.***

- II. *For a corner lot, shall be no more than fifty (50) percent of the site's cumulative linear feet along the required building lines or one hundred (100) feet, whichever is less, shall be occupied by parking. The building shall be located in the corner of the lot adjacent to the intersection.*

***Not Applicable.***

- III. For a double frontage lot or a lot that has frontage on three (3) streets, the cumulative total of all frontages occupied by parking shall be no more than sixty-five (65) percent of the total site's linear feet along a required building line or one hundred and twenty-five (125) feet, whichever is less.

**Not Applicable**

- IV. Where off-street parking is visible from a street, it should be screened in accordance with the standards set forth in Section 13.02.C.

**The applicant has screened their parking lot in compliance with section 13.0.2.C.**

**Items to be Addressed:** Provided the applicant obtains a parking relief from the Planning Commission, the all Big Beaver design standards have been met.

## SUMMARY OF FINDINGS

We recommend approval of the preliminary site plan provided that the applicant obtains a parking relief waiver from the Planning Commission.



CARLISLE/WORTMAN ASSOC., INC.

Benjamin R. Carlisle, LEED AP, AICP



August 04, 2014

City of Troy Planning Department  
500 W. Big Beaver Road  
Troy, MI 48084

Dear Sir or Madam:

The following drawings and other supplementary documents are being submitted as for the Site Plan Preliminary Review for the Kresge Foundation Expansion on Big Beaver Road.

For some background of the project, the Kresge Foundation is a \$3 billion private, national foundation that works to expand opportunities in America's cities through grant making and investing in the arts and culture, education, environment, health, human services and community development efforts in Detroit. In 2013, the Board of Trustees approved 316 awards totaling \$122 million; \$144 million was paid out to grantees over the course of the year. Kresge is based at the historic 19-century Brooks Farm in Troy, MI. The headquarters includes the original farmhouse and a barn, which are connected to a LEED platinum certified building, completed in 2006. This facility reflects our dedication to reducing the environmental impact in our operations.

The addition is comprised of two levels of ground up construction, each approximately 8,000sf (16,000 sf total), and will be located to the west of the existing headquarters. The two floor levels of the expansion will correspond to the levels of the existing headquarters.

The following set of drawings includes requested information pertaining to the Kresge Foundation Expansion on Big Beaver Road. The set includes:

1. Site Plan delineating all existing and proposed improvements (See Civil/Arch drawings)
2. Site open space calculation (Civil)
3. Gross square footage of expansion (Arch Cover Sheet)
4. Existing and Future Parking Calculations. The existing site has 50 parking spaces. In order to gauge how many additional parking space would be needed with the building's expansion, we (VDTA) studied the parking and occupancy patterns on the existing site relative to times of day and days of the week See



attached excerpt]. We concluded from the study and with the Foundation's projected growth, we would need to allocate an additional 38 number spaces. In order to provide the additional parking spaces, a leasing agreement was created with the adjacent site owner to provide the additional number of spaces. On the West of the building, 3 parking spaces on the adjacent site have been allocated for use for the kitchen staff in the new expansion. On the East side of the site, 35 parking spaces have been added to the adjacent site (See Arch Site Plan for location of adjacent parking).

5. 10ft build-to line is depicted in both the Civil drawings as well as the Arch Site Plan.
6. Cover Sheet lists all of the submitted drawing files.
7. Renderings on Architectural Cover Sheet depict the material and formal aesthetic of the expansion. Architecturally, the building is sited such that it will further activate Big Beaver Road with a large, double-height convening space.
8. A Photometric Survey, E9-03, diagramming site lighting.
9. Samples of the primary building materials. The expansion will have curtain walls and metal panels to match that of the existing. Additionally, the blue gray granite stone prominently visible on existing site, will also be used for the expansion as formal site elements and as granite beds in some areas at perimeter of building. The wall on the west of the building will have a stone veneer with the included jet mist stone (See elevations).

Best Regards,  
VALERIO DEWALT TRAIN ASSOCIATES

Alan Barker, AIA  
Project Architect  
Valerio Dewalt Train Associates  
500 North Dearborn Street, 9<sup>th</sup> Floor  
Chicago, IL 60654  
312-260-7352 direct  
abarker@buildordie.com

# PARKING TYPICAL WEEK:

NUMBER OF CARS IN EACH LOT PER HOUR

		9AM	10AM	11AM	12PM	1PM	2PM	3PM	4PM	5PM
<b>MONDAY</b>	Kresge Lot	45	48	51	43	44	44	42	36	18
	Parking Nextdoor (to east)	12	13	10	10	12	12	11	8	6
	Total	57	61	61	53	56	56	53	44	24
<b>TUESDAY</b>	Kresge Lot	42	43	51	44	46	45	43	34	21
	Parking Nextdoor (to east)	19	20	16	13	18	21	18	13	7
	Total	61	63	67	57	64	66	61	47	28
<b>WEDNESDAY</b>	Kresge Lot	42	45	42	40	45	44	39	29	19
	Parking Nextdoor (to east)	15	17	14	14	16	17	12	10	8
	Total	57	62	56	54	61	61	51	39	27
<b>THURSDAY</b>	Kresge Lot	43	44	41	41	43	46	37	31	18
	Parking Nextdoor (to east)	19	22	22	18	20	22	18	18	7
	Total	62	66	63	59	63	68	55	49	25
<b>FRIDAY</b>	Kresge Lot	48	49	42	46	42	43	36	29	
	Parking Nextdoor (to east)	12	14	12	9	11	14	12	11	
	Total	60	63	54	55	53	57	48	40	

<b>TYPICAL DAY</b>		9AM	10AM	11AM	12PM	1PM	2PM	3PM	4PM	5PM
	Kresge Lot	44	46	45	43	44	44	39	32	19
Parking Nextdoor (to east)	15	17	15	13	15	17	14	12	7	
Total	59	63	60	56	59	62	54	44	26	

This chart indicates the number of cars in both the Kresge lot and the lot next door over the course of a week by time of day. The maximum numbers of cars observed in each lot are outlined in red.

Average count of cars per hour = 54

On a typical day, the maximum number of total cars observed was 63. This equals 84% of the current Kresge occupancy (75 people).

## PARKING LEASE

THIS PARKING LEASE (this "Lease") is made on July 28, 2014 (the "Effective Date"), by and among (A) **TROY PLACE EQUITIES, LLC** ("TPE"), a Michigan limited liability company, and **NEMER TROY PLACE EQUITIES, LLC** ("NTPE"), a Michigan limited liability company, together doing business as a joint venture under the name "*Troy Place I Associates*" (TPE and NTPE to be referred to collectively herein as "3001 Landlord"), as the landlord, and **THE KRESGE FOUNDATION** ("Tenant"), a Michigan non-profit corporation, as the tenant, with respect to the **3001 Parcel** (as hereinafter defined), and (B) TPE and **NEMER LIMITED, L.L.C.** ("NEMLIM"), a Michigan limited liability company, together doing business as a joint venture named "*Troy Place II Associates*" (TPE and NEMLIM to be referred to collectively herein as "3221 Landlord"), as the landlord, and **TENANT**, as the tenant, with respect to the **3221 Parcel** (as hereinafter defined).

WHEREAS, 3001 Landlord is the owner of the parcel of land containing the building known as 3001 West Big Beaver Road, Troy, Michigan (the "3001 Building" and said parcel of land, the "3001 Parcel"); and

WHEREAS, 3221 Landlord is the owner of the parcel of land containing the building known as 3221 West Big Beaver Road, Troy, Michigan (the "3221 Building" and said parcel of land, the "3221 Parcel"). The term "Landlord" when used herein shall be understood to refer collectively to 3001 Landlord and 3221 Landlord. The term "Parcels" shall be understood to refer collectively to the 3001 Parcel and the 3221 Parcel; and

WHEREAS, Tenant currently owns the parcel of land which is contiguous to the 3001 Parcel and the 3221 Parcel containing the building known as 3215 West Big Beaver Road, Troy, Michigan (the "Tenant's Building" and said parcel of land, the "Tenant's Parcel"); and

WHEREAS, (i) the 3001 Building, (ii) the 3221 Building, and (iii) the buildings known as 2855 Coolidge Highway, 2915 Coolidge Highway, 3155 West Big Beaver Road, 3331 West Big Beaver Road (collectively, the "Troy Place Buildings") together comprise the office complex known as "*Troy Place*". The term "Tenant Party" shall mean an employee, officer, director, agent, visitor, contractor, guest, or invitee of Tenant or of any tenant, subtenant or other occupant of Tenant's Building. The term "Landlord Party" shall mean an employee, officer, director, agent, visitor, contractor, guest, or invitee of Landlord or of any tenant, subtenant or other occupant of the Troy Place Buildings.

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein contained, the parties hereto hereby agree to be bound by, and adhere to, the terms and conditions of this Lease hereinafter set forth.

### 1. Lease of Parking Spaces.

1.1 Kresge 3001 Parking Area. 3001 Landlord hereby agrees to lease to Tenant, and Tenant hereby agrees to lease from 3001 Landlord, upon and subject to the terms and provisions herein set forth, and in common with the Landlord Parties, **thirty-five (35) parking spaces** (the "3001 Spaces") in the area of the 3001 Parcel designated on Exhibit "A" attached hereto (the "Kresge 3001 Parking Area") together with the right to use the 3001 Parcel for ingress to and egress between the Kresge 3001 Parking Area and West Big Beaver Road,

provided that in the event that any parking space within the Kresge 3001 Parking Area cannot be used for parking by a Tenant Party (for reasons other than the fact that it is already occupied by a vehicle belonging a Tenant Party), then Tenant will be permitted to use a parking space located elsewhere on the 3001 Parcel.

1.2 **Kresge 3221 Parking Area.** 3221 Landlord hereby agrees to lease to Tenant, and Tenant hereby agrees to lease from 3221 Landlord, upon and subject to the terms and provisions herein set forth, and in common with the Landlord Parties, **three (3) parking spaces** (the "3221 Spaces") in the area of the 3221 Parcel designated on Exhibit "B" attached hereto (the "Kresge 3221 Parking Area") together with the right to use the 3221 Parcel for ingress to and egress between the Kresge 3221 Parking Area and West Big Beaver Road, provided that in the event that any parking space within the Kresge 3221 Parking Area cannot be used for parking by a Tenant Party (for reasons other than the fact that it is already occupied by a vehicle belonging a Tenant Party), then Tenant will be permitted to use a parking space located elsewhere on the 3221 Parcel. The term "Parking Space" shall be understood to mean any of the 3001 Spaces or the 3221 spaces, and the term "Parking Spaces" shall be understood to refer collectively to the 3001 Spaces and the 3221 Spaces.

1.3 Landlord shall not be required to police or otherwise attempt to prevent persons other than Tenant Parties from using the Parking Spaces.

## 2. **Use.**

2.1 Tenant shall use each Parking Space only for the purpose of parking one (1) automobile or other passenger vehicle belonging to a Tenant Party, and for no other purpose. The Parking Spaces and the Parcels shall not be used (a) for parking large commercial (other than temporary parking of delivery vehicles) or recreational vehicles, (b) for parking of vehicles for the principal purpose of promotional activities or advertising, (c) for performing repairs or maintenance to a vehicle, (d) for parking any vehicle in violation of Section 11.1 hereof, (e) for a picnic, meeting or other group activity, or (f) in any manner which is in violation of the laws of any governmental authority having jurisdiction over the Parcels or which may be a nuisance, disturbance or menace to the Landlord Parties.

2.2 The Parking Spaces shall be used only for transient parking by Tenant Parties, and shall not be used for storage of vehicles or for overnight parking (unless the driver of the vehicle is then in the Tenant Building). Vehicles shall be parked within the striped spaces and remain locked while parked. Vehicles shall not be parked in such a way so as to block traffic lanes or violate any laws or regulations.

2.3 In the event a vehicle belonging to a Tenant Party uses a Parking Space in violation of the terms of this Lease, and such violation is not corrected within twenty-four (24) hours after delivery of written notice to Tenant (or, if the violation involves the use of parking spaces not authorized by Sections 2.1 and 2.2 hereof during business hours, within one (1) hour after delivery of notice of such unauthorized use to Tenant by e-mail), Landlord shall have the right to tow such vehicle, in which event Tenant shall reimburse Landlord for the cost of such towing.

3. **Term.**

3.1 The term of this Lease shall commence on **August 1, 2014** (the "**Commencement Date**") and shall terminate on the last day of the one hundred twentieth (120th) complete calendar month following the Commencement Date, provided that (i) the term of this Lease shall commence as to the 3221 Spaces after Tenant has ceased using the 3221 Parcel for construction staging (the "**3221 Commencement Date**"), and (ii) the term of this Lease shall automatically renew and extend for additional five (5) year periods each, unless either party elects to void such renewal by delivery of written notice to the other party at least sixty (60) days prior to the expiration of the then current term. Landlord acknowledges and agrees that Tenant shall have no obligations or liabilities hereunder until the Commencement Date.

3.2 Notwithstanding anything to the contrary contained herein, Tenant shall have the right to terminate this Lease prior to the expiration of a term by giving Landlord written notice, in which event this Lease shall terminate sixty (60) days after Landlord's receipt of said written notice.

3.3 Notwithstanding anything to the contrary contained herein, **(A)** 3001 Landlord shall have the right to terminate this Lease as to the 3001 Parcel prior to the expiration of a term by giving Tenant written notice, in which event this Lease shall terminate sixty (60) days after Tenant's receipt of said written notice, and **(B)** 3221 Landlord shall have the right to terminate this Lease as to the 3221 Parcel prior to the expiration of a term by giving Tenant written notice in the event (i) Landlord desires to construct a building on the 3221 Parcel, or (ii) the 3221 Spaces are required by Landlord in order to comply with the zoning ordinances then in effect (as modified by any variance then in effect as to the Troy Place complex), in which event this Lease shall terminate sixty (60) days after Tenant's receipt of said written notice.

3.4 Further, without terminating this Lease, Landlord may temporarily suspend Tenant's use of the Parking Spaces, from time to time, in order for Landlord to perform maintenance and repairs to the paving, landscaping, lighting or any other improvements on the Parcels.

4. **Rent.**

4.1 **Rent for 3001 Spaces.** Tenant shall pay to 3001 Landlord, as rent for the 3001 Spaces, a monthly rent equal to **One Thousand Seven Hundred Fifty Dollars (\$1,750.00)** (computed on the basis of \$50.00 per Parking Space for thirty-five (35) parking spaces), such rent to be paid, in advance, on the first day of each calendar month during the term hereof commencing on the Commencement Date.

4.2 **Rent for 3221 Spaces.** Tenant shall pay to 3221 Landlord, as rent for the 3221 Spaces, a monthly rent equal to **One Hundred Fifty Dollars (\$150.00)** (computed on the basis of \$50.00 per Parking Space for three (3) parking spaces), such rent to be paid, in advance, on the first day of each calendar month during the term hereof commencing on the 3221 Commencement Date.

4.3 Rent shall be prorated for any partial calendar month. Rent shall be paid to Landlord without notice or demand and without deduction or offset (except as otherwise permitted herein), in lawful money of the United States of America, at Landlord's address for

notices hereunder or to such other person or at such other place as Landlord may from time to time designate in writing.

5. **Services.**

5.1 **Landlord Services.** Landlord, at no cost to Tenant, shall perform the following services, duties and responsibilities (the "Landlord Services"):

(a) Maintain the Kresge 3001 Parking Area and the Kresge 3221 Parking Area, including the paving, striping and lighting, in good order and condition comparable to other Class A office buildings in the Troy, Michigan market.

(b) Maintain the Kresge 3001 Parking Area and the Kresge 3221 Parking Area in compliance with all applicable laws and ordinances.

(c) Plow snow and apply ice melting chemical as necessary in a manner comparable to other Class A office building in the Troy, Michigan market.

(d) Maintain ingress and egress for Tenant Parties between the Parking Spaces and West Big Beaver Road.

(e) Comply with the terms and conditions of any mortgages, easements, rights-of-way, and other encumbrances recorded against the Kresge 3001 Parking Area and/or the Kresge 3221 Parking Area.

5.2 **Tenant Services.** Tenant, at no cost to Landlord, shall perform the following services, duties and responsibilities (the "Tenant Services"):

(a) Use commercially reasonable efforts to cause all Tenant Parties to comply with the terms of this Lease.

(b) Maintain, repair and replace, as necessary, a gate in the wall separating the Tenant's Parcel and the 3001 Parcel to permit safe pedestrian access between the Tenant's Parcel and the 3001 Parcel.

(c) Repair any damage caused by Tenant Parties to the 3001 Parcel or the 3221 Parcel.

6. **Insurance and Indemnification.**

6.1 Tenant shall indemnify and hold Landlord harmless from any damage to any property or injury to, or death of, any person occurring on the Tenant Parcel during the term of this Lease, except to the extent caused by the negligence or willful act of Landlord or a Landlord Party or Landlord's failure to perform its obligations under this Lease. Landlord shall indemnify and hold Tenant harmless from any damage to any property or injury to, or death of, any person occurring on the Parcels during the term of this Lease, except to the extent caused by the negligence or willful act of Tenant or a Tenant Party or Tenant's failure to perform its obligations under this Lease. The foregoing indemnity obligations of Landlord and Tenant shall include reasonable attorney's fees, investigation costs and all other costs and expenses incurred from the first notice that any claim or demand is to be made or may be made. The

provisions of this Section 6.1 shall survive the termination of this Lease with respect to any damage, injury or death occurring prior to such termination.

6.2 Landlord and Tenant shall each carry commercial liability insurance, on an occurrence basis, with bodily injury and property damage combined single limits of liability of not less than \$2,000,000.00 per occurrence, which insurance shall name as an additional insured the other party. Within fifteen (15) days after receiving a written request from the other party, each party shall deliver to the requesting party a certificate of insurance evidencing such coverage.

7. **Property Condition/Alterations.** Landlord makes no representations or warranties of any kind with respect to the Parcels. Tenant shall not make any alterations, improvements or modifications to the Parcels without Landlord's prior written consent.

8. **Default.**

8.1 Subject to Section 2.3 hereof, the following shall constitute a default hereunder by Tenant: (a) any failure of Tenant to pay any rent or other charges when due hereunder and the continuation of such failure for more than ten (10) days after receipt of written notice from Landlord, or (b) any failure by Tenant to perform or comply with any other of the terms, conditions, obligations, representations or covenants of this Lease to be observed or performed by Tenant and the continuation of such failure for more than fifteen (15) days after receipt of written notice from Landlord, except that if Tenant is unable to complete the cure of such failure within said 15-day period due to reasons outside of Tenant's reasonable control, then the 15-day period shall be extended so long as Tenant has commenced and is diligently pursuing the completion of such cure. In the event of a default hereunder by Tenant, then the Landlord shall have the right to: (i) declare this Lease terminated and the term ended (in which event this Lease and the term hereof shall expire, cease and terminate with the same force and effect as though the date set forth in said notice were the date originally set forth herein and fixed for the expiration of the term and Tenant shall vacate and surrender the Spaces), (ii) bring an action to recover possession from the Tenant by summary proceedings or otherwise, (iii) perform Tenant's obligations hereunder (in which event Tenant shall pay to Landlord, as additional rent, the reasonable and necessary costs incurred Landlord to perform the same), and/or (iv) exercise any other rights and remedies available to Landlord at law or in equity.

8.2 The following shall constitute a default hereunder by Landlord: any failure by Landlord to perform or comply with any of the terms, conditions, obligations, representations or covenants of this Lease to be observed or performed by Landlord and the continuation of such failure for more than fifteen (15) days after receipt of written notice from Tenant, except that if Landlord is unable to complete the cure of such failure within said 15-day period due to reasons outside of Landlord's reasonable control, then the 15-day period shall be extended so long as Landlord has commenced and is diligently pursuing the completion of such cure. In the event of a default hereunder by Landlord, then the Tenant shall have the right to: (i) declare this Lease terminated and the term ended (in which event this Lease and the term hereof shall expire, cease and terminate with the same force and effect as though the date set forth in said notice were the date originally set forth herein and fixed for the expiration of the term), (ii) bring an action for specific performance, and/or (iii) exercise any other rights and remedies available to Tenant at law or in equity. If (a) Landlord fails to observe or perform any covenant, agreement or obligation to be performed by Landlord under this Lease, (b) if such failure shall continue for more than thirty (30) days after written notice thereof from Tenant to Landlord (unless such failure requires work

to be performed, acts to be done, or conditions to be removed which, by their nature, cannot reasonably be performed, done or removed, as the case may be, within such period, in which event, if Landlord shall have commenced curing or correcting the same within such period and shall have diligently prosecuted such cure, or correction, such thirty (30) day period shall be extended by such additional time period as may be required for Landlord to cure or correct such failure), except in emergency situations when only reasonable notice and opportunity to cure will be provided, then if any such default materially and adversely affects the condition of the Parking Spaces or Tenant's use and occupancy of the Parking Spaces, then Tenant shall have the right but not the obligation to cure or correct said default provided (i) Tenant shall give Landlord fifteen (15) days' prior written notice of its intention to cure or correct the Landlord default except in emergencies when only reasonable notice and opportunity will be provided, (ii) Tenant shall use reasonable efforts not to adversely affect other Landlord Parties, and (iii) if Landlord has submitted to Tenant the name of a contractor that is acceptable to Landlord to perform such work, and provided such contractor is able and willing to perform such work on a timely basis and its charges are reasonable, Tenant shall use such contractor to perform such work. If Tenant elects to cure as aforesaid, Landlord shall pay to Tenant, the reasonable and necessary costs incurred by Tenant to perform the same, within fifteen (15) days following Landlord's receipt of Tenant's written request for reimbursement together with reasonable back-up for the amount requested..

8.3. All amounts payable by Tenant or Landlord to the other party hereunder, if not paid within ten (10) days following the date payment is due, shall bear interest from the due date until paid at a rate equal to five percent (5%) in excess of the then current "prime rate" published from time to time in *The Wall Street Journal*. Any and all money and charges required to be paid by Tenant pursuant to the terms of this Lease shall be paid as additional rental whether or not the same may be designated "additional rental" herein.

8.4 In the event of any sale or transfer of a Parcel (including any transfer by operation of law), the owner of such Parcel (and any subsequent owner of such Parcel making such a transfer) shall be relieved from any and all obligations and liabilities under this Lease except such obligations and liabilities as shall have arisen during such owner's (or such subsequent owner's) respective period of ownership, provided that the transferee assumes in writing all of the obligations of Landlord under this Lease which arise subsequent to the transfer. Tenant shall attorn to such new owner.

8.5 If Landlord shall fail to perform any covenant, term or condition of this Lease upon Landlord's part to be performed, and if as a consequence of such default, Tenant shall recover a money judgment against Landlord, such judgment shall be satisfied only against the right, title and interest of Landlord in the Troy Place Buildings and out of rents or other income from the Buildings receivable by Landlord (including the rent due hereunder or out of the consideration received by Landlord from the sale or other disposition of all or any part of Landlord's right, title and interest in the Buildings, and neither Landlord nor any of the members of the entity comprising the Landlord herein or the members or partners thereof, nor anyone claiming by, through or under Landlord, shall be liable for any deficiency.

9. **Subordination.** This Lease is and shall be subject and subordinate, at all times, to the lien of any mortgage or mortgages which may now or hereafter be placed upon the demised premises, the Buildings or the land, and to all advances made or hereafter to be made upon the security thereof and to the interest thereon, and to any agreements at any time made

modifying, supplementing, extending or replacing any such mortgages. At the option of a purchaser at a foreclosure sale, this Lease shall remain in full force and effect after, and not be extinguished by, the foreclosure of any such mortgage, and Tenant shall attorn to the purchaser at the foreclosure sale under all of the terms, conditions and covenants of this Lease for the balance of the term hereof, provided if this Lease is deemed terminated and extinguished by such a foreclosure, at the option of a purchaser at a foreclosure sale, Tenant shall enter into a new lease with the purchaser at the foreclosure sale upon the same terms and conditions as this Lease, except that the term of the new lease shall be equal to what would have been the balance of the term of this Lease had it not been terminated. Notwithstanding the foregoing, (A) at the request of the holder of any of the aforesaid mortgage or mortgages, this Lease may be made prior and superior to such mortgage or mortgages, and (B) Tenant's obligation to subordinate this Lease to the lien of, or attorn to, any future mortgagee or deed of trust beneficiary shall be conditioned on such mortgagee or deed of trust beneficiary executing a non-disturbance agreement in form and substance reasonably satisfactory to Tenant ("NDA Agreement"). Upon request of Tenant, Landlord shall request that any current lender provide Tenant with an NDA Agreement, at no cost to Landlord; provided, however, Landlord shall not have any liability if the current lender fails to provide Tenant with an acceptable NDA Agreement.

10. **Taxes.** Landlord shall pay all real estate taxes and assessments applicable to the Parcels without charge to Tenant.

11. **Hazardous Substances.**

11.1 Tenant shall not generate, manufacture, refine, treat, store, mix, dispose, transfer, produce or process any Hazardous Substances on the Parcels or park on the Parcels any vehicle containing Hazardous Substances (other than normal amounts of oil, gas and other customary substances contained in the engine of a vehicle or fuel in the vehicle's fuel tank used to operate such vehicle). As used in this paragraph, "Hazardous Substances" shall mean any substances, compounds, mixtures, wastes or materials that are defined to be, that are regulated as, that are listed as or that (because of their toxicity, concentration or quantity) have characteristics that are hazardous or toxic under the Resource Conservation and Recovery Act of 1976, 42 USC 6901 as amended, the Comprehensive Environmental Recovery Compensation and Liability Act of 1980, 42 USC 9601 as amended, or any other federal, state or local environmental laws, regulations or ordinances. Without limiting the generality of the foregoing, Hazardous Substances includes petroleum or petroleum products and any substances, compounds, mixtures, wastes or materials that are otherwise regulated under any of the environmental laws. Tenant shall indemnify, defend and hold Landlord harmless with respect to any claims, losses, liabilities, fees or expenses (including reasonable attorney fees) incurred by Landlord due to Hazardous Substances introduced to the Parcels by Tenant or a Tenant Party or due to any violation by Tenant or a Tenant Party of any of Tenant's obligations under this Section 11.1. The foregoing indemnity and defense obligation shall survive the termination or expiration of this Lease.

11.2 Landlord shall indemnify, defend and hold Tenant harmless with respect to any claims, losses, liabilities, fees or expenses (including reasonable attorney fees) incurred by Tenant due to (a) existing on or under the Parcels as of the Effective Date, and/or (b) Hazardous Substances introduced on the Parcels by Landlord or any Landlord Party. The foregoing indemnity and defense obligation shall survive the termination or expiration of this Lease.

12. **Assignment.** Tenant shall have no right to sell, assign, transfer or encumber this Lease or any interest herein or any rights hereunder, except that Tenant shall be entitled without Landlord consent, to assign this Lease to, and/or allow use of the Parking Spaces by, future owners, tenants, subtenants, users or operators of Tenant's Building.

13. **Theft.** As a material part of the consideration to Landlord, Landlord shall not be responsible for loss or theft of any vehicles parked on the Parcels or of any equipment belonging thereto or of any articles contained therein, or for damage sustained to such vehicles while the same are entering, leaving or within the Parcels.

14. **Inability to Perform.** If, by reason of the occurrence of unavoidable delays due to acts of God, governmental restrictions, strikes, labor disturbances, shortages of materials or supplies or for any other cause or event beyond Landlord's reasonable control, Landlord is unable to furnish or is delayed in furnishing any utility or service required to be furnished by Landlord under the provisions of this Lease or any collateral instrument, or is unable to perform or make, or is delayed in performing or making, any installations, decorations, repairs, alterations, additions or improvements required to be performed or made under this Lease or under any collateral instrument, or is unable to fulfill, or is delayed in fulfilling, any of Landlord's other obligations under this Lease or any collateral instrument, no such inability or delay shall constitute an actual or constructive eviction in whole or in part, or entitle Tenant to any abatement or diminution of rental or other charges due hereunder or relieve Tenant from any of its obligations under this Lease, or impose any liability upon Landlord or its agents by reason of inconvenience or annoyance to Tenant, or injury to or interruption of Tenant's business, or otherwise. If, by reason of the occurrence of unavoidable delays due to acts of God, governmental restrictions, strikes, labor disturbances, shortages of materials or supplies or for any other cause or event beyond Tenant's reasonable control, Tenant is unable to perform its obligations under this Lease (other than Tenant's obligations to pay rent hereunder), Tenant shall be excused from the performance of such obligations for the period of any delay caused by any such event.

15. **Estoppel Certificate.** At any time and from time to time upon fifteen (15) days prior request by Landlord, Tenant will promptly execute, acknowledge and deliver to Landlord, a certificate indicating to the extent the same is true (or modified by Tenant to be true) (a) that this Lease is unmodified and in full force and effect (or, if there have been modifications, that this Lease is in full force and effect, as modified, and stating the date and nature of each modification), (b) the date to which rental has been paid, (d) that neither Landlord nor Tenant is in default under this Lease and Tenant knows of no fact which with the passage of time or giving of notice would constitute such a default by Landlord or Tenant, (e) there are no actions, whether voluntary or otherwise, pending, or to its knowledge threatened, against Tenant under the bankruptcy laws of the United States or any state thereof, and (f) such other matters as may be reasonably requested by Landlord or its mortgagee. Any such certificate may be relied upon by any prospective purchaser, mortgagee or beneficiary under any deed of trust of the Building or any part thereof.

16. **Liens.** Any mechanic's lien filed against the Parcels for work claimed to have been done or materials claimed to have been furnished to Tenant shall be discharged by Tenant within ten (10) days thereafter. For the purposes hereof, the bonding of such lien by a

reputable casualty or insurance company reasonably satisfactory to Landlord shall be deemed the equivalent of a discharge of any such lien.

17. **Entire Agreement.** This Lease constitutes the entire contemplated agreement between the parties hereto with respect to the leasing of the Parking Spaces, and it supersedes all prior oral and written understandings or agreements between the parties.

18. **Waiver; Modifications.** Failure by Landlord or Tenant to insist upon or enforce any of its rights shall not constitute a waiver thereof. Either party hereto may waive the benefit of any provision or condition for its benefit contained in this Lease. No oral modification hereof shall be binding upon the parties, and any modification shall be in writing and signed by the parties.

19. **Applicable Law; Jury Waiver.** This Lease will be governed and interpreted by the laws of Michigan without giving effect to any applicable principles of conflicts of laws. Each party, after consulting (or having had the opportunity to consult) with counsel of their choice, knowingly and voluntarily, and for their mutual benefit, waive any right to a trial by jury in the event of litigation arising out of or related to this Lease. In the event either party institutes legal proceedings against the other for breach of or interpretation of any of the terms, conditions or covenants of this Lease, the party against whom a judgment is entered, shall pay all reasonable costs and expenses relative thereto, including reasonable attorneys' fees of the prevailing party.

20. **Holdover.** It is hereby agreed that in the event of Tenant continuing to use any of the Parking Spaces after the termination or expiration of this Lease, thereafter the tenancy shall be from month to month in the absence of a written agreement to the contrary, and Tenant shall pay to Landlord a monthly occupancy charge equal to one hundred fifty percent (150%) of the monthly rent payable hereunder, such charge to be payable from the expiration or termination of this Lease until the last day of the calendar month in which Tenant shall cease using the Parking Spaces.

21. **No Broker.** Landlord and Tenant each represent to each other that it has dealt with no broker in connection with this Lease which is due a commission, and each further agrees that it shall be solely responsible and liable for any commission or claim for commission, fee or expense arising out of its communication with any other broker.

22. **Notices.** All notices required or permitted to be given under this Lease shall be in writing and shall be sent by registered or certified mail, return receipt requested, or by a reputable national overnight courier service, postage prepaid, or by hand delivery addressed to the parties at their addresses below. Either party may, by notice given as aforesaid, change its address for all subsequent notices. Except where otherwise expressly provided to the contrary, notice shall be deemed given upon delivery.

If to Tenant:

The Kresge Foundation  
3215 W. Big Beaver Road  
Troy, Michigan 48084  
Attn: Chief Financial Officer

If to 3001 Landlord: Troy Place I Associates  
26877 Northwestern Highway, Suite 101  
Southfield, Michigan 48033

If to 3221 Landlord: Troy Place II Associates  
26877 Northwestern Highway, Suite 101  
Southfield, Michigan 48033

23. **Recordation of Lease.** Tenant shall not record or file this Lease in the public records of any county or state. Provided, however, each party has the right to prepare and record a memorandum of this Lease (and the other party agrees to execute such memorandum).

24. **Mutual Representation of Authority.** Landlord and Tenant represent and warrant to each other that (i) they have full right, power and authority to enter into this Lease, (ii) they have obtained the consent or approval of any other entity or person whose consent or approval was required for this Lease, and (iii) they make these representations knowing that the other party will rely thereon. The signatories on behalf of Landlord and Tenant further represent and warrant that they have full right, power and authority to act for and on behalf of Landlord and Tenant in entering into this Lease.

25. **Time.** Time is of the essence for this Lease. Whenever this Lease requires that something be done within a period of days, such period shall (i) not include the day from which such period commences, (ii) include the day upon which such period expires, (iii) expire at 5:00 p.m. on the date by which such thing is to be done, and (iv) be construed to mean calendar days (except as otherwise specifically provided herein); provided that if the final day of such period falls on a Saturday, Sunday or legal holiday where such thing is to be done, such period shall extend to the first business day thereafter.

26. **Quiet Enjoyment.** Subject to the rights of the existing mortgagee (or any successor thereto, but without relieving Landlord of liability to Tenant in the event this Lease is terminated due to the exercise of such rights), so long as Tenant pays all of the rent and performs all of its other obligations hereunder within any applicable grace, notice and/or cure periods, Tenant shall not be disturbed in its possession of the Parking Spaces.

27. **Binding Effect: Counterparts.** This Lease shall be binding upon and inure to the benefit of, the successors and permitted assigns of the parties hereto. This Lease may be signed in one or more counterparts, and each counterpart will be considered an original. All of the counterparts will be considered one document and become a binding agreement when one or more counterparts have been signed by each of the parties and delivered to the other. Delivery via facsimile or PDF transmission of a counterpart of this Lease as executed by the parties making such delivery shall constitute good and valid execution and delivery for all purposes.

-----This Page Ends Here-----

IN WITNESS WHEREOF, the parties hereto have caused this Lease to be executed as of the day and year first above written.

**THE KRESGE FOUNDATION**

By: 

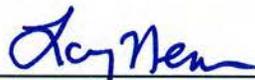
Name: Amy B. Coleman  
Vice President and  
Chief Financial Officer  
Title: The Kresge Foundation

[TENANT]

**TROY PLACE EQUITIES, LLC**

A Michigan limited liability company

By: Nemer Troy Place Realty, LLC  
a Michigan limited liability company  
Its: Manager

By: 

Larry Nemer  
Its: Member

**NEMER TROY PLACE EQUITIES, LLC**

A Michigan limited liability company

By: Nemer Troy Place Realty, LLC  
a Michigan limited liability company  
Its: Manager

By: 

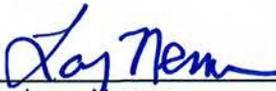
Larry Nemer  
Its: Member

[3001 LANDLORD]

**TROY PLACE EQUITIES, LLC**

A Michigan limited liability company

By: Nemer Troy Place Realty, LLC  
a Michigan limited liability company  
Its: Manager

By:   
Larry Nemer  
Its: Member

**NEMER LIMITED, L.L.C.**

A Michigan limited liability company

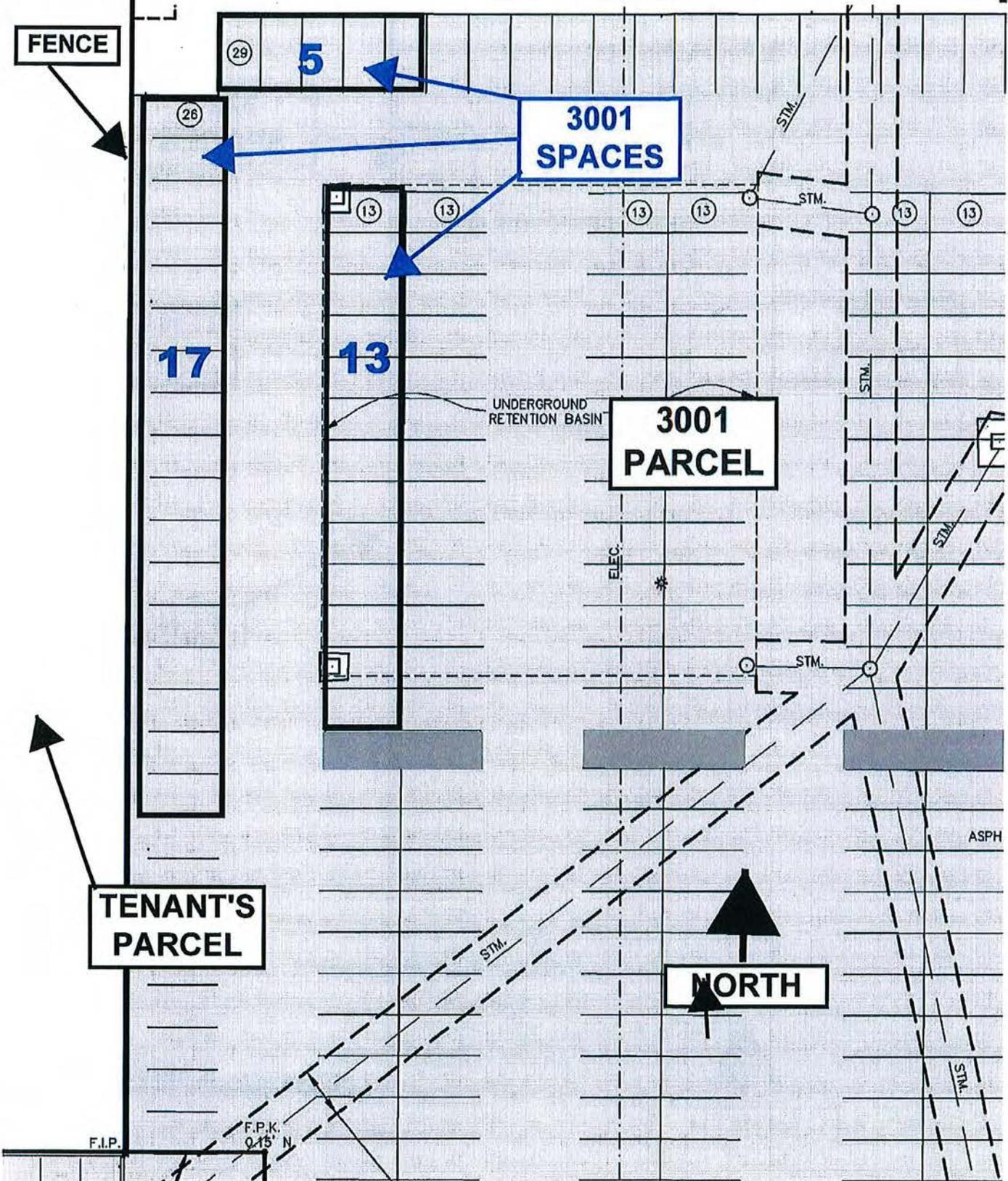
By:   
Milford Nemer  
Its: Manager

**[3221 LANDLORD]**

END OF WALL  
ON PROP. COR.

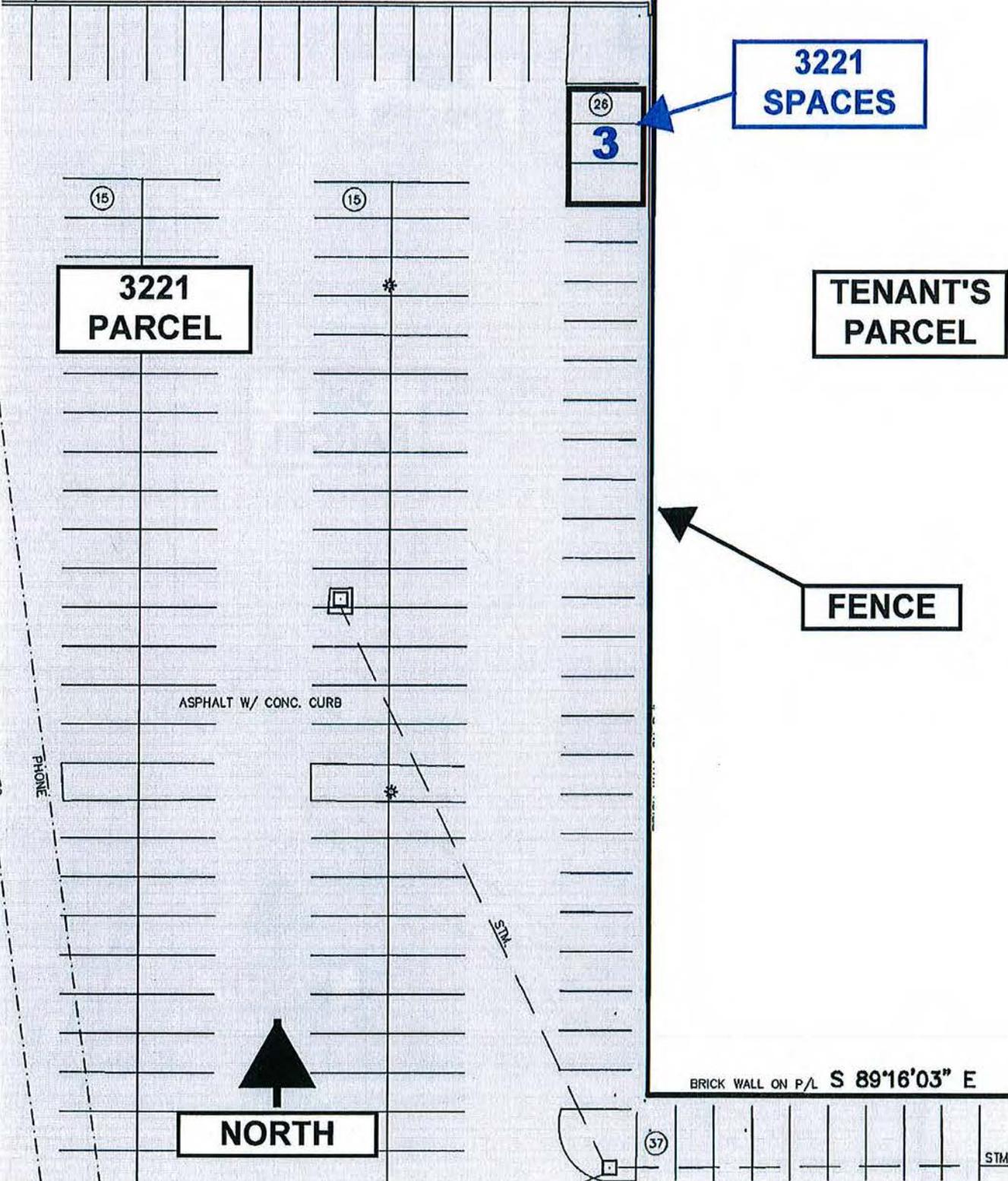
# EXHIBIT "A" 3001 SPACES

CONCRETE WALK



**EXHIBIT "B"**  
**3221 SPACES**

16'03" E . 285.05' CONCRETE WALK POST P.L.P 0.60' E.



**NORTH**

## TEMPORARY PARKING AND ACCESS AGREEMENT

THIS TEMPORARY PARKING AND ACCESS AGREEMENT (this "Agreement") is made on July 28, 2014 (the "Effective Date"), by and among (A) **TROY PLACE EQUITIES, LLC** ("TPE"), a Michigan limited liability company, and **NEMER LIMITED, L.L.C.** ("NEMLIM"), a Michigan limited liability company, together doing business as a joint venture named "*Troy Place II Associates*" and having an address of 26877 Northwestern Highway, Suite 101, Southfield, Michigan 48033 (TPE and NEMLIM to be referred to collectively herein as "Landlord"), as the Landlord, and (B) **THE KRESGE FOUNDATION** ("Tenant"), a Michigan non-profit corporation having an address of 3215 West Big Beaver Road, Troy, Michigan 48084, as the tenant.

WHEREAS, Landlord is the owner of the parcel of land containing the building known as 3221 West Big Beaver Road, Troy, Michigan (the "3221 Building" and said parcel of land, the "3221 Parcel") as shown on the plan attached hereto as Exhibit "A";

WHEREAS, Tenant currently owns the parcel of land which is contiguous to the 3221 Parcel containing the building known as 3215 West Big Beaver Road, Troy, Michigan (the "Tenant's Building" and said parcel of land, the "Tenant's Parcel") as shown on the plan attached hereto as Exhibit "A"; and

WHEREAS, Tenant desires to perform certain construction on the Tenant's Parcel (the "Project") and in connection therewith, desires to use a portion of the 3221 Parcel shown on Exhibit "A" (the "Staging Area") (i) for the storage and staging of construction vehicles, equipment and materials to be used in the Project, (ii) for loading and unloading materials on and from vehicles in connection with the Project, (iii) for the performance of certain work on the Tenant's Parcel in connection with the Project that requires the use of area on the 3221 Parcel, and (iv) for other uses incidental to the Project, but excluding the parking of automobiles or vehicles other than those being used for the uses described in (ii) or (iii) (collectively, the "Permitted Use"); and

WHEREAS, Landlord desires to permit Tenant to use the Staging Area for the Permitted Use upon the terms and conditions hereinafter set forth.

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein contained, the parties hereto hereby agree to be bound by, and adhere to, the terms and conditions of this Agreement hereinafter set forth.

1. **Use of Staging Area and Access Area.**

1.1 Landlord hereby agrees to lease to Tenant, and Tenant hereby agrees to lease from Landlord, upon and subject to the terms and provisions herein set forth, the Staging Area.

1.2 Tenant shall use the Staging Area only for the Permitted Use and for no other purposes without the prior written consent of Landlord. Tenant shall not permit any party to use the Staging Area other than Tenant and its contractors and subcontractors, and the employees and agents of Tenant and its contractors and subcontractors.

1.3 Tenant shall not use the Staging Area in any manner which is in violation of the laws of any governmental authority having jurisdiction over the 3221 Parcel and the Tenant's Parcel.

1.4 Tenant shall not use any other portion of the 3221 Parcel for any use without the prior written consent of Landlord (except as specifically permitted by that certain Lease dated March 8, 2010, as amended, for Suite 105 in the 3221 Building).

1.5 Tenant's sole means of ingress and egress to and from the Staging Area shall be by means of the temporary curb cut and construction road from West Big Beaver Road over the contiguous property owned by the City of Troy as shown on Exhibit "A" (the "Access Area"). In no event shall any construction vehicles enter or drive on any other portion of the 3221 Parcel.

1.6 Tenant's right to use the Staging Area hereunder shall be exclusive during the term of this Agreement.

2. **Fence and Alterations.**

2.1 Prior to Tenant's use of the Staging Area, Tenant, at Tenant's sole cost and expense, shall install a temporary construction fence (the "Fence") around the Staging Area in the locations shown on Exhibit "A," which fence shall not exceed 6'-0" in height and shall be constructed of metal chain link with black slats.

2.2 To the extent reasonable necessary in order for Tenant to construct the Fence and/or use the Staging Area for the Permitted Use, Tenant shall have the right to alter the pavement, landscaping, irrigation and other improvements in the Staging Area and the Access Area.

3. **Term.**

3.1 The term of this Agreement shall commence on the **Effective Date** and terminate on the date which is the first to occur of (i) substantial completion of the Project, and (ii) **April 30, 2015**, provided that Tenant shall have the right to terminate this Agreement at any time upon written notice to Landlord. Landlord acknowledges and agrees that Tenant shall have no obligations or liabilities hereunder until the Effective Date.

3.1 Upon the termination of this Agreement, Tenant shall continue to have access to the Staging Area for the sole purpose of performing the Restoration Work (as hereinafter defined).

4. **Restoration.** Within thirty (30) days following the termination of this Agreement, Tenant, at its sole cost and expense, shall perform the following work (the "Restoration Work") (a) remove the Fence and all stored material, construction debris and construction equipment from the Staging Area and the Access Area, and (b) repair and restore the landscaping, irrigation, fencing, bumper blocks, pavement (other than asphalt pavement which shall be repaired as provided in Paragraph 5 below), utilities, signage and any other improvements located on the Staging Area and the Access Area to the condition of such improvements existing as of the date hereof, except that all replacement materials and improvements shall be

new and shall be installed in a first class manner reasonably acceptable to Landlord. In the event that Tenant is unable to complete the Restoration Work within said 30-day period due to reasons outside of Tenant's reasonable control, then the thirty (30) day period shall be extended for such period of time as reasonably needed to complete the Restoration Work so long as Tenant is diligently pursuing the completion of the Restoration Work. In the event Tenant shall fail to complete the Restoration Work within said 30-day period (as extended by the preceding sentence), Landlord shall have the right, by giving written notice to Tenant, to perform the Restoration Work, in which event Tenant shall pay to Landlord, the reasonable and necessary costs incurred by Landlord to perform the same within ten (10) days after receipt of Landlord's invoice for such costs.

5. **Consideration.** As consideration for the granting of the right to use the Staging Area hereunder, Tenant shall pay to Landlord, within fifteen (15) days following the termination of this Agreement, Tenant's Paving Contribution (as hereinafter defined). The term "Tenant's Paving Contribution" shall mean the lesser of (i) \$110,000.00, and (ii) the Cost (as hereinafter defined) of performing the following work (the "Paving Work") in the portion of the parking area designated "Paving Area" on Exhibit "A" attached hereto (the "Paving Area"): (i) pulverize existing pavement, (ii) remove excess debris as necessary to achieve the grades required to match the contiguous parking area and required drainage, (iii) adjust the height of catch basins as necessary due to the change in the elevation of the pavement, (iii) install 4" of MDOT 1100 L & T asphalt paving, (iv) restripe, and (v) repair any damage caused by the Paving Work. It is understood that for the purposes of determining the amount of Tenant's Paving Contribution, the Paving Work shall not include (a) installation of drainage, (b) repairs to catch basins, (c) undercuts and fills to remove unstable soil and filling, or (d) any other work that Landlord shall decide to perform in the Paving Area. The term "Cost" shall mean the lowest bid received by Landlord for the performance of the Paving Work from at least two (2) paving companies that are (i) reasonably acceptable to Landlord and Tenant, and (ii) able to perform the Paving Work within the time period scheduled for such work. Landlord shall be responsible to close off access to the Paving Area. Tenant shall not be liable to Landlord for, and Landlord shall be responsible for, any costs to relocate cars to another parking area, loss of parking revenue, complaints from tenants or other interruptions in Landlord's or any tenant's business due to the Paving Work.

6. **Insurance and Indemnification.**

6.1 Tenant shall defend, indemnify and save harmless Landlord from all claims, costs, damages, judgments, expenses, fines, liabilities and losses (including reasonable attorneys' fees, paralegal fees, expert witness fees, consultant fees, and other costs of defense) because of injury (including death), to any person, or damage or loss of any kind to any property occurring during the term of this Agreement (i) in the Staging Area or the Access Area, or (ii) caused by or arising from the use of the Staging Area or the Access Area during the term of this Agreement by Tenant or its employees, agents, contractors, subcontractors, persons making deliveries of materials to the Project, or any other party involved in the construction of the Project, except to the extent arising from the negligence or willful misconduct of Landlord or its employees, agents, contractors, or subcontractors. The provisions of this Section 6.1 shall survive the termination of this Agreement with respect to any damage, injury or death occurring prior to such termination.

6.2 Tenant and Tenant's contractor shall each carry commercial liability insurance, on an occurrence basis, with bodily injury and property damage combined single limits of liability of not less than \$2,000,000.00 per occurrence, which insurance shall name Landlord as an additional insured. Within fifteen (15) days after receiving a written request, Tenant shall deliver to Landlord certificates of insurance evidencing such coverage.

7. **Property Condition/Alterations.** Landlord makes no representations or warranties of any kind with respect to the 3221 Parcel, the Staging Area or the Access Area.

8. **Default.**

8.1 Subject to Section 4 hereof, the following shall constitute a default hereunder by Tenant: (a) any failure by Tenant to perform or comply with any other of the terms, conditions, obligations, representations or covenants of this Agreement to be observed or performed by Tenant and the continuation of such failure for more than fifteen (15) days after receipt of written notice from Landlord, except that if Tenant is unable to complete the cure of such failure within said 15-day period due to reasons outside of Tenant's reasonable control, then the 15-day period shall be extended so long as Tenant has commenced and is diligently pursuing the completion of such cure. In the event of a default hereunder by Tenant, then the Landlord shall have the right to: (i) declare this Agreement terminated and the term ended (in which event this Agreement and the term hereof shall expire, cease and terminate with the same force and effect as though the date set forth in said notice were the date originally set forth herein and fixed for the expiration of the term and Tenant shall vacate and surrender the Staging Area), (ii) bring an action to recover possession from the Tenant by summary proceedings or otherwise, (iii) perform Tenant's obligations hereunder (in which event Tenant shall pay to Landlord, as additional rent, the reasonable and necessary costs incurred by Landlord to perform the same), and/or (iv) exercise any other rights and remedies available to Landlord at law or in equity.

8.2 The following shall constitute a default hereunder by Landlord: any failure by Landlord to perform or comply with any of the terms, conditions, obligations, representations or covenants of this Agreement to be observed or performed by Landlord and the continuation of such failure for more than fifteen (15) days after receipt of written notice from Tenant, except that if Landlord is unable to complete the cure of such failure within said 15-day period due to reasons outside of Landlord's reasonable control, then the 15-day period shall be extended so long as Landlord has commenced and is diligently pursuing the completion of such cure. In the event of a default hereunder by Landlord, then the Tenant shall have the right to: (i) declare this Agreement terminated and the term ended (in which event this Agreement and the term hereof shall expire, cease and terminate with the same force and effect as though the date set forth in said notice were the date originally set forth herein and fixed for the expiration of the term), (ii) bring an action for specific performance, (iii) perform Landlord's obligations hereunder (in which event Landlord shall pay to Tenant the reasonable and necessary costs incurred by Tenant to perform the same), and/or (iv) exercise any other rights and remedies available to Tenant at law or in equity.

8.3 All amounts payable by one party to the other hereunder, if not paid within ten (10) days following the date payment is due, shall bear interest from the due date until paid at a rate equal to five percent (5%) in excess of the then current "prime rate" published from time to time in *The Wall Street Journal*. Any and all money and charges required to be paid by Tenant pursuant to the terms of this Agreement shall be paid as additional rental whether or not the same may be designated "additional rental" herein.

8.4 In the event of any sale or transfer of the 3221 Parcel (including any transfer by operation of law), the owner of 3221 Parcel (and any subsequent owner of such Parcel making such a transfer) shall be relieved from any and all obligations and liabilities under this Agreement except such obligations and liabilities as shall have arisen during such owner's (or such subsequent owner's) respective period of ownership, provided that the transferee assumes in writing all of the obligations of Landlord under this Agreement which arise subsequent to the transfer. Tenant shall attorn to such new owner.

8.5 If Landlord shall fail to perform any covenant, term or condition of this Agreement upon Landlord's part to be performed, and if as a consequence of such default, Tenant shall recover a money judgment against Landlord, such judgment shall be satisfied only against the right, title and interest of Landlord in the 3221 Building and 3221 Parcel and out of rents or other income from the 3221 Building and 3221 Parcel receivable by Landlord, or out of the consideration received by Landlord from the sale or other disposition of all or any part of Landlord's right, title and interest in the 3221 Building or 3221 Parcel, and neither Landlord nor any of the members of the entity comprising the Landlord herein or the members or partners thereof, nor anyone claiming by, through or under Landlord, shall be liable for any deficiency.

9. **Subordination.** This Agreement is and shall be subject and subordinate, at all times, to the lien of any mortgage or mortgages which may now or hereafter be placed upon the Staging Area, and to all advances made or hereafter to be made upon the security thereof and to the interest thereon, and to any agreements at any time made modifying, supplementing, extending or replacing any such mortgages. At the option of a purchaser at a foreclosure sale, this Agreement shall remain in full force and effect after, and not be extinguished by, the foreclosure of any such mortgage, and Tenant shall attorn to the purchaser at the foreclosure sale under all of the terms, conditions and covenants of this Agreement for the balance of the term hereof, provided if this Agreement is deemed terminated and extinguished by such a foreclosure, at the option of a purchaser at a foreclosure sale, Tenant shall enter into a new lease with the purchaser at the foreclosure sale upon the same terms and conditions as this Agreement, except that the term of the new lease shall be equal to what would have been the balance of the term of this Agreement had it not been terminated. Notwithstanding the foregoing, (A) at the request of the holder of any of the aforesaid mortgage or mortgages, this Agreement may be made prior and superior to such mortgage or mortgages, and (B) Tenant's obligation to subordinate this Agreement to the lien of, or attorn to, any future mortgagee or deed of trust beneficiary shall be conditioned on such mortgagee or deed of trust beneficiary executing a non-disturbance agreement in form and substance reasonably satisfactory to Tenant.

10. **Taxes.** Landlord shall pay all real estate taxes and assessments applicable to the 3221 Parcel without charge to Tenant.

11. **Hazardous Substances.**

11.1 Tenant shall not generate, manufacture, refine, treat, store, mix, dispose, transfer, produce or process any Hazardous Substances on the 3221 Parcel or park on the 3221 Parcel any vehicle containing Hazardous Substances (other than normal amounts of oil, gas and other customary substances contained in the engine of a vehicle or fuel in the vehicle's fuel tank used to operate such vehicle). As used in this paragraph, "Hazardous Substances" shall mean any substances, compounds, mixtures, wastes or materials that are defined to be, that are regulated as, that are listed as or that (because of their toxicity, concentration or

quantity) have characteristics that are hazardous or toxic under the Resource Conservation and Recovery Act of 1976, 42 USC 6901 as amended, the Comprehensive Environmental Recovery Compensation and Liability Act of 1980, 42 USC 9601 as amended, or any other federal, state or local environmental laws, regulations or ordinances. Without limiting the generality of the foregoing, Hazardous Substances includes petroleum or petroleum products and any substances, compounds, mixtures, wastes or materials that are otherwise regulated under any of the environmental laws. Tenant shall indemnify, defend and hold Landlord harmless with respect to any claims, losses, liabilities, fees or expenses (including reasonable attorney fees) incurred by Landlord due to Hazardous Substances introduced to the 3221 Parcel by Tenant or Tenant's employees, agents, contractors, subcontractors, persons making deliveries of materials to the Project, or any other party involved in the construction of the Project, or due to any violation by Tenant or any of such parties of any of Tenant's obligations under this Section 11.1. The foregoing indemnity and defense obligation shall survive the termination or expiration of this Agreement.

11.2 Landlord shall indemnify, defend and hold Tenant harmless with respect to any claims, losses, liabilities, fees or expenses (including reasonable attorney fees) incurred by Tenant due to Hazardous Substances (a) existing on or under the 3221 Parcel as of the Effective Date, and/or (b) introduced on the 3221 Parcel by Landlord or Landlord's employees, agents, contractors or subcontractors. The foregoing indemnity and defense obligation shall survive the termination or expiration of this Agreement.

12. **Assignment.** Tenant shall have no right to sell, assign, transfer or encumber this Agreement or any interest herein or any rights hereunder.

13. **Theft.** As a material part of the consideration to Landlord, Landlord shall not be responsible for loss or theft of any vehicles, equipment, or materials while located on the 3221 Parcel or for any damage sustained to such vehicles, equipment or materials while the same are entering, leaving or within the 3221 Parcel.

14. **Inability to Perform.** If, by reason of the occurrence of unavoidable delays due to acts of God, governmental restrictions, strikes, labor disturbances, shortages of materials or supplies or for any other cause or event beyond Landlord's reasonable control, Landlord is unable to furnish or is delayed in furnishing any utility or service required to be furnished by Landlord under the provisions of this Agreement or any collateral instrument, or is unable to perform or make, or is delayed in performing or making, any installations, decorations, repairs, alterations, additions or improvements required to be performed or made under this Agreement or under any collateral instrument, or is unable to fulfill, or is delayed in fulfilling, any of Landlord's other obligations under this Agreement or any collateral instrument, no such inability or delay shall constitute an actual or constructive eviction in whole or in part, or entitle Tenant to any abatement or diminution of rental or other charges due hereunder or relieve Tenant from any of its obligations under this Agreement, or impose any liability upon Landlord or its agents by reason of inconvenience or annoyance to Tenant, or injury to or interruption of Tenant's business, or otherwise. If, by reason of the occurrence of unavoidable delays due to acts of God, governmental restrictions, strikes, labor disturbances, shortages of materials or supplies or for any other cause or event beyond Tenant's reasonable control, Tenant is unable to perform its obligations under this Agreement (other than Tenant's obligations to pay Tenant's Paving Contribution or any other rent hereunder), Tenant shall be excused from the performance of such obligations for the period of any delay caused by any such event.

15. **Liens.** Any mechanic's lien filed against the 3221 Parcel for work claimed to have been done or materials claimed to have been furnished to Tenant shall be discharged by Tenant within ten (10) days thereafter. For the purposes hereof, the bonding of such lien by a reputable casualty or insurance company reasonably satisfactory to Landlord shall be deemed the equivalent of a discharge of any such lien.

17. **Entire Agreement.** This Agreement constitutes the entire contemplated agreement between the parties hereto with respect to the use of the Staging Area, and it supersedes all prior oral and written understandings or agreements between the parties.

18. **Waiver; Modifications.** Failure by Landlord or Tenant to insist upon or enforce any of its rights shall not constitute a waiver thereof. Either party hereto may waive the benefit of any provision or condition for its benefit contained in this Agreement. No oral modification hereof shall be binding upon the parties, and any modification shall be in writing and signed by the parties.

19. **Applicable Law; Jury Waiver.** This Agreement will be governed and interpreted by the laws of Michigan without giving effect to any applicable principles of conflicts of laws. Each party, after consulting (or having had the opportunity to consult) with counsel of their choice, knowingly and voluntarily, and for their mutual benefit, waive any right to a trial by jury in the event of litigation arising out of or related to this Agreement. In the event either party institutes legal proceedings against the other for breach of or interpretation of any of the terms, conditions or covenants of this Agreement, the party against whom a judgment is entered, shall pay all reasonable costs and expenses relative thereto, including reasonable attorneys' fees of the prevailing party.

20. **Holdover.** It is hereby agreed that in the event of Tenant continuing to use the Staging Area after the termination or expiration of this Agreement, thereafter the tenancy shall be from month to month in the absence of a written agreement to the contrary, and Tenant shall pay to Landlord a monthly occupancy charge equal to \$10,000.00, such charge to be payable from the expiration or termination of this Agreement until the last day of the calendar month in which Tenant shall cease using the Staging Area.

21. **No Broker.** Landlord and Tenant each represent to each other that it has dealt with no broker in connection with this Agreement which is due a commission, and each further agrees that it shall be solely responsible and liable for any commission or claim for commission, fee or expense arising out of its communication with any other broker.

22. **Notices.** All notices required or permitted to be given under this Agreement shall be in writing and shall be sent by registered or certified mail, return receipt requested, or by a reputable national overnight courier service, postage prepaid, or by hand delivery addressed to the parties at their addresses below. Either party may, by notice given as aforesaid, change its address for all subsequent notices. Except where otherwise expressly provided to the contrary, notice shall be deemed given upon delivery.

If to Tenant:

The Kresge Foundation  
3215 W. Big Beaver Road  
Troy, Michigan 48064

Attn: Chief Financial Officer

If to 3221 Landlord:

Troy Place II Associates  
26877 Northwestern Highway, Suite 101  
Southfield, Michigan 48033

23. **Recordation of Lease.** Tenant shall not record or file this Agreement in the public records of any county or state.

24. **Mutual Representation of Authority.** Landlord and Tenant represent and warrant to each other that (i) they have full right, power and authority to enter into this Agreement, (ii) they have obtained the consent or approval of any other entity or person whose consent or approval was required for this Agreement, and (iii) they make these representations knowing that the other party will rely thereon. The signatories on behalf of Landlord and Tenant further represent and warrant that they have full right, power and authority to act for and on behalf of Landlord and Tenant in entering into this Agreement.

25. **Time.** Time is of the essence for this Agreement. Whenever this Agreement requires that something be done within a period of days, such period shall (i) not include the day from which such period commences, (ii) include the day upon which such period expires, (iii) expire at 5:00 p.m. on the date by which such thing is to be done, and (iv) be construed to mean calendar days (except as otherwise specifically provided herein); provided that if the final day of such period falls on a Saturday, Sunday or legal holiday where such thing is to be done, such period shall extend to the first business day thereafter.

26. **Quiet Enjoyment.** Subject to the rights of the existing mortgagee (or any successor thereto), so long as Tenant pays all of the rent and performs all of its other obligations hereunder within any applicable grace, notice and/or cure periods, Tenant shall not be disturbed in its possession of the Staging Area.

-----This Page Ends Here-----

27. **Binding Effect; Counterparts.** This Agreement shall be binding upon and inure to the benefit of, the successors and permitted assigns of the parties hereto. This Agreement may be signed in one or more counterparts, and each counterpart will be considered an original. All of the counterparts will be considered one document and become a binding agreement when one or more counterparts have been signed by each of the parties and delivered to the other. Delivery via facsimile or PDF transmission of a counterpart of this Agreement as executed by the parties making such delivery shall constitute good and valid execution and delivery for all purposes.

**IN WITNESS WHEREOF**, the parties hereto have caused this Agreement to be executed as of the day and year first above written.

**THE KRESGE FOUNDATION**

By:   
Name: Amy B. Coleman  
Vice President and  
Chief Financial Officer  
Title: The Kresge Foundation

[TENANT]

**TROY PLACE EQUITIES, LLC**

A Michigan limited liability company

By: Nemer Troy Place Realty, LLC  
a Michigan limited liability company  
Its: Manager

By:   
Larry Nemer  
Its: Member

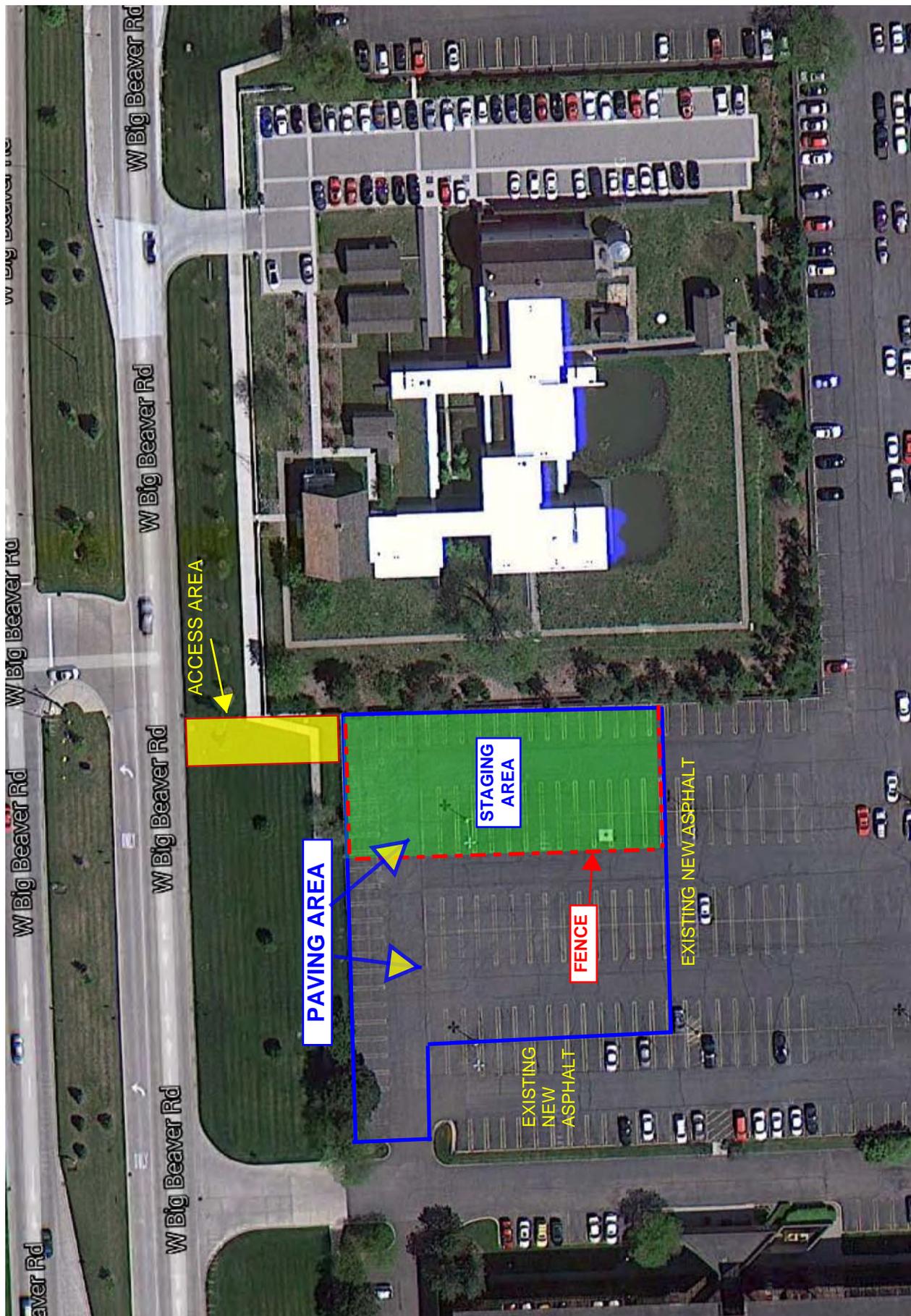
**NEMER LIMITED, L.L.C.**

A Michigan limited liability company

By:   
Milford Nemer  
Its: Manager

[3221 LANDLORD]

EXHIBIT "A"



# THE KRESGE FOUNDATION - EXPANSION

**PROJECT NAME**  
**THE KRESGE FOUNDATION EXPANSION**

**PROJECT ADDRESS**  
**3215 W. BIG BEAVER RD**  
**TROY, MI 48064**

**OWNERS REPRESENTATIVE**  
 JONES LANG LASALLE  
 500 GRISHOLD, SUITE 2435  
 DETROIT, MI 48226  
 248.833.3538 / 312.470.4560  
 ANDREA BURG

**ARCHITECT**  
 VALERIO DEWALT TRAIN ASSOCIATES, INC.  
 500 N. DEARBORN STREET, SUITE 900  
 CHICAGO, ILLINOIS 60654  
 312.260.7300  
 ALAN BARKER

**CIVIL ENGINEER/LANDSCAPE ARCHITECT**  
 CONSERVATION DESIGN FORUM  
 220 SOUTH MAIN STREET  
 ANN ARBOR, MI 48104  
 734.693.3751  
 PATRICK JIDD

**STRUCTURAL ENGINEER**  
 ROBERT DARVAS ASSOCIATES  
 440 SOUTH MAIN STREET  
 ANN ARBOR, MI 48104  
 734.761.8713  
 ERIC MAUCHER

**MEFPF ENGINEER**  
**LIGHTING DESIGNER**  
**ACOUSTIC ENGINEER**  
 ARUP  
 35 EAST WACKER DRIVE, SUITE 1800  
 CHICAGO, IL 60601  
 312.349.5610  
 ROBERT TAZELAR

**ARCHITECT**  
 VALERIO DEWALT TRAIN ASSOC.  
 500 N. DEARBORN, 9TH FLOOR  
 CHICAGO, ILLINOIS 60654  
 www.bulldor.ie.com

**PROJECT TEAM**      **ARCHITECT STAMP**

JOE VALERIO  
 L.S. BRANKER  
 HEATHER SALISBURY  
 ALAN BARKER  
 DON VENTICINQUE  
 SUZANNE STEELMAN  
 JASON COFER

**GENERAL CONTRACTOR**  
 JOSEPH M. VALERIO  
 ARCHITECT  
 No. 40878  
 (Seal of the State of Michigan)

**VDTA PROJECT NUMBER**  
 13021.00

**CONSULTANT**

**CONSULTANT PROJECT NUMBER**

**ARCHITECT STAMP**

JOSEPH M. VALERIO  
 ARCHITECT  
 No. 40878  
 (Seal of the State of Michigan)

**CONSULTANT PROJECT NUMBER**

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C3-01	SITE LAYOUT PLAN	09.26.2014
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AERIAL VIEW LOOKING TOWARDS BIG BEAVER ROAD



NORTHWEST CORNER OF EXPANSION FROM BIG BEAVER ROAD

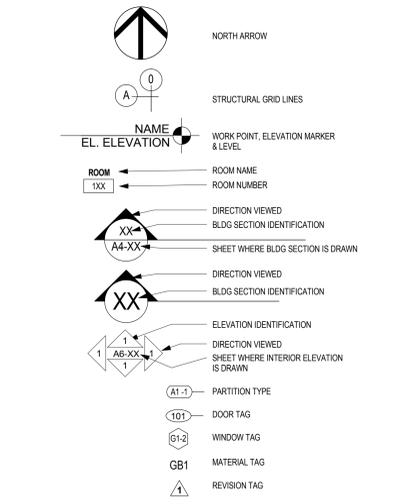


NORTHWEST CORNER OF EXPANSION FROM BIG BEAVER ROAD

**GENERAL NOTES**

- ALL WORK SHALL CONFORM TO APPLICABLE CODES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY BEARING ON THE PERFORMANCE OF THE WORK.
- THE CONTRACTOR SHALL SECURE AND PAY FOR REQUIRED PERMITS, FEES, LICENSES, AND INSPECTIONS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK.
- ALL EXISTING CONDITIONS AND DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR, WHO SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES, COMMISSIONS, OR CONFLICTS BEFORE PROCEEDING WITH THE WORK. NO EXTRA COSTS WILL BE AUTHORIZED FOR WORK WHICH IS REQUIRED TO COMPLETE THE PROJECT SCOPE AND INTENT DUE TO CONDITIONS WHICH ARE READILY OBSERVABLE AT THE PROJECT SITE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY CLEANING AND REMOVAL OF ALL DEBRIS, DUST, AND EQUIPMENT RELATED TO THE DEMOLITION AND THROUGH CLEAN-UP UPON COMPLETION OF THE PROJECT.
- THE CONTRACTOR SHALL VISIT THE PROJECT SITE AND BE KNOWLEDGEABLE OF CONDITIONS THEREON. CONTRACTOR SHALL INVESTIGATE, VERIFY, AND BE RESPONSIBLE FOR ALL CONDITIONS OF THE PROJECT AND SHALL NOTIFY THE OWNER OF ANY CONDITIONS REQUIRING MODIFICATION BEFORE PROCEEDING WITH THE WORK.
- THE DRAWINGS ISSUED HERewith ARE SCOPE DOCUMENTS, AND AS SUCH SHOW THE GENERAL EXTENT OF THE PROJECT AND DO NOT NECESSARILY INDICATE OR DESCRIBE ALL WORK REQUIRED FOR FULL PERFORMANCE AND COMPLETION OF THE WORK, NOR DO THEY SHOW ALL OF THE CONDITIONS WHICH MAY BE ENCOUNTERED TO PROPERLY EXECUTE THE WORK.
- DO NOT SCALE DRAWINGS - DIMENSIONS GOVERN. LARGE SCALE DETAILS GOVERN OVER SMALL.
- WHERE DISCREPANCIES OCCUR BETWEEN THE VARIOUS DISCIPLINES/TRADES, CONSULT THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
- FINISH FLOOR ELEVATIONS ARE TO TOP OF CONCRETE, UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL FURNISH AND INSTALL ALL STIFFENERS, BRACINGS, BACKING PLATES, AND SUPPORTING BRACKETS REQUIRED FOR THE PROPER INSTALLATION OF ALL CASEWORK, TOILET ROOM ACCESSORIES, TOILET PARTITIONS, INCLUDING WALL-MOUNTED AND/OR SUSPENDED MECHANICAL, ELECTRICAL, AND MISCELLANEOUS EQUIPMENT WHETHER SHOWN IN THE DRAWINGS OR NOT. THIS SHALL ALSO APPLY TO OWNER FURNISHED CONTRACTOR INSTALLED EQUIPMENT.
- PROVIDE FIRE RETARDANT BLOCKING AT ALL ITEMS WALL-MOUNTED TO STEEL STUD AND GYPSUM BOARD PARTITIONS.
- THE CONTRACTOR SHALL COORDINATE PLACEMENT OF ALL CEILING ELEMENTS WITH MECHANICAL, ELECTRICAL, AND INSTALLER. WHERE DISCREPANCIES EXIST BETWEEN DRAWINGS AND INSTALLATION, CONSULT THE ARCHITECT BEFORE PROCEEDING WITH WORK.
- PROVIDE APPROPRIATE SIGNAGE FOR ALL TOILET ROOMS TO MATCH EXISTING AND SUBMIT FOR OWNER APPROVAL PRIOR TO INSTALLATION.
- ALL EXPOSED FASTENERS IN PUBLIC AREAS TO BE TAMPER-PROOF WHEREVER POSSIBLE.
- PAINT ALL EXPOSED, BARE, AND COVERED PIPES, DUCTS, HANGERS, STEEL, ELECTRICAL BOXES AND CONDUIT TO MATCH ADJACENT SURFACES OR AS SPECIFIED BY DRAWINGS OR FINISH SCHEDULE.
- ALL EXTERIOR GUARDRAILS, HANDRAILS, AND OTHER EXTERIOR EXPOSED METAL SHALL BE GALVANIZED AND PAINTED, UNLESS NOTED OTHERWISE.
- ALL EXTERIOR JOINTS AROUND WINDOW AND DOOR FRAMES, BETWEEN WALLS AND FOUNDATION, BETWEEN WALLS AND ROOF, BETWEEN WALL PANELS, AND AT PENETRATIONS OF UTILITIES, ETC. THROUGH THE EXTERIOR ENVELOPE SHALL BE SEALED, CALLED, OR WEATHER STRIPPED TO PREVENT AIR AND WATER INFILTRATION.
- ALL HANDICAPPED DOOR HARDWARE SHALL BE PROVIDED IN COMPLIANCE WITH 2009 INTERNATIONAL BUILDING CODE & ANSI A117.1-2009
- ALL DOORS REQUIRED FOR HANDICAPPED ACCESS SHALL HAVE MANEUVERING CLEARANCES PROVIDED PER CHAPTER 11, 2009 INTERNATIONAL BUILDING CODE AND ANSI ICC A117.1-2009.
- SAFETY GLAZING SHALL BE PROVIDED AT ALL LOCATIONS AS OUTLINED IN 2009 INTERNATIONAL BUILDING CODE AND ANSI A117.1-2009. GLAZING MATERIALS USED IN BUILDINGS AND SAFETY PERFORMANCE SPECIFICATIONS AND METHODS OF TEST.

**SYMBOLS LEGEND**



**LOCATION MAP**



**ABBREVIATIONS**

ACOUS	ACUSTICAL	DIAG	DIAGONAL	GR	GRADE	N	NORTH	S.D	SOAP DISPENSER
A.C.T	ACUSTICAL CEILING TILE	DIFF	DIFFUSER	G.T	GREASE TRAP	N.I.C	NOT IN CONTRACT	SECT.	SECTION
ADH	ADHESIVE	DIM	DIMENSION	G.W.B	GYPSUM WALL BOARD	NO	NUMBER	SECUR.	SECURITY
ADJ	ADJUSTIBLE	DISP	DISPENSER	H.C	HOLLOW CORE	NOM	NOMINAL	S.F	SQUARE FOOT (FEET)
A.F.F	ABOVE FINISHED FLOOR	DIV	DIVISION	H.B	HOSE BIB	N.T.S	NOT TO SCALE	S.G.T	STRUCTURAL GLAZED TILE
ALUM	ALUMINUM	D/O	DOWN	H.W.D	HARDWOOD	O.A	OVERALL	SHR	SHOWER
ALT	ALTERNATE	D.O	DOOR OPENING	H.W	HARDWARE	O.C	ON CENTER	SHT	SHEET
AND	AND/ODD	D.P	DAMP/PROOFING	H.M	HOLLOW METAL	O.D	OUTSIDE DIAMETER	S.M	SIMILAR
ANCH	ANCHOR	D.R	DOWN	H.O	HOLD OPEN	O.F.D	OVERFLOW DRAIN	S.P	STANDARD
ANNUNC	ANNUNCIATOR	D.S	DOWNSPOUT	H.O	HOLD OPEN	OFF	OFFICE	SPEC	SPECIFICATION
A.P	ACCESS PANEL	D.T	DETAIL	H.P	HIGH POINT	OFI	OWNER FURNISHED CONTRACTOR	SPKR	SPEAKER
APPROX	APPROXIMATE	D.W	DISTILLED WATER	HR	HOUR	OP	OWNER FURNISHED CONTRACTOR	SPRINK	SPRINKLER
ARCH	ARCHITECTURAL	DWG	DRAWING	HT	HEIGHT	OPG	OPENING	SQ	SQUARE
ASPH	ASPHALT	E	EAST	HTG	HEATING	O.H	OVERHEAD	S.SK	SERVICE SINK
ASST	ASSISTANT	E.A	EACH	H.V.A.C	HEATING, VENTILATING, AND AIR CONDITIONING	OPNG	OPENING	S.S.T	STAINLESS STEEL
ASSY	ASSEMBLY	EL	ELEVATION	H.W	HOT WATER	OPP	OPPOSITE	STA	STATION
AUTO	AUTOMATIC	ELAS	ELASTOMERIC	H.W	HOT WATER	OPP.H	OPPOSITE HAND	S.T.D	STANDARD
B	BOTTOM	ELEC	ELECTRICAL	I.D	INSIDE DIAMETER	P.A	PUBLIC ACCESS	STL	STEEL
BB	BASEBOARD	ELEV	ELEVATOR	IN	INCHES	P.AV	PAVING	STOR	STORAGE
BD	BOARD	EMER	EMERGENCY	INCL	INCLUDE	P.C	PRIE-CAST	STRUC	STRUCTURAL
BITUM	BITUMINOUS	ENCL	ENCLOSURE	INCLD	INCLUDE	P.F	PANEL FABRIC	SUSP	SUSPENDED
BLD	BUILDING	ENGR	ENGINEER	INSUL	INSULATION	PL	PLATE	SWBD	SWITCHBOARD
BLK	BLOCK	ENT	ENTRANCE	INT	INTERIOR	P.LAM	PLASTIC LAMINATE	SYM	SYMMETRICAL
BLKG	BLOCKING	E.J	EXPANSION JOINT	INTERM	INTERMEDIATE	PLAS	PLASTER	T	TREAD
BM	BEAM	E.O	ELECTRICAL OUTLET	INT.ELEV	INTERIOR ELEVATION	PLBS	PLYWOOD	TI	TOP OF
B.M	BENCHMARK	E.PNL	ELECTRICAL PANEL	JAN	JANITOR	PLD	PLYWOOD	T&B	TOP & BOTTOM
BTM	BOTTOM	E.Q	EQUIPMENT	J.C	JANITORS CLOSET	PNT	PANT	T&G	TONGUE & GROOVE
BR	BRICK	J.C	JANITORS CLOSET	JT	JOINT	PNL	PANEL	TEL	TELEPHONE
BRG	BEARING	E.W.C	ELECTRIC WATER COOLER	K.D	KNOCK DOWN	PR	PAIR	TER	TERAZZO
B.SMT	BASEMENT	EXC	EXCAVATION	K.O	KNOCK OUT	PROP	PROPERTY	T.F.T	TERRAZZO FLOOR TILE
B.T.B	BACK TO BACK	EXH	EXHAUST	KIT	KITCHEN	P.S.F	POUNDS PER SQUARE FOOT	THK	THICK
B.U.R	BUILT-UP ROOFING	EXIST	EXISTING	K.S	KNEE SPACE	P.S.I	POUNDS PER SQUARE INCH	TILT	TILE
CAB	CABINET	EXP	EXPOSED	LAM	LAMINATED	P.T	PAINTED	TRD	TRYPH
C.B	CATCH BASIN	EXT	EXTERIOR	LAV	LAVATORY	P.T.S	PAINTED PARTITION	T.V	TELEVISION
C.CM	CEMENT	F	FABRIC	L.F	LEFT FOOT	PT	POINT	UNEXC	UNEXCAVATED
C.CM	CORNER GUARD	F.A	FACE OF	L.F	LEFT FOOT	Q.T	QUARRY TILE	UNF	UNFINISHED
CIRC	CIRCULATION	F.BR	FACE BRICK	L.H	LEFT HAND	QT	QUARRY TILE	UR	URINAL
C.L	CENTERLINE	F.C	FACE CONTROL	L.L	LEFT LEG	QTY	QUANTITY	V.C.T	VINYL COMPOSITION TILE
CLR	CLEAR	F.F	FACE TO FACE	L.P	LOW POINT	R	RISER	VENT	VENTILATION
CLO	CLOSET	F.F.F	FACE TO FACE TO FACE	L.P	LOW POINT	REC	RECEPTION	VERT	VERTICAL
C.M	CENTIMETER	F.F.H.M.S	FACE TO FACE HEAD MACHINE SCREW	F.H.C	FIRE HOSE CABINET	RENF	REINFORCING	VEST	VESTIBULE
CM	CONCRETE MASONRY UNIT	F.H.R	FIRE HOSE RACK	M	METER	RFW	RIGHT-OF-WAY	V.F.F	VERTICAL FIELD
CLO	CLOSET	FIN	FINISH	MACH	MACHINE	RAD	RADIUS	VOL	VOLUME
CM	CONCRETE MASONRY UNIT	FL	FLOOR	MAINT	MAINTENANCE	R.B	RUBBER BASE	V.V	VINYL TILE
CM	CONCRETE MASONRY UNIT	FLX	FLEXIBLE	MAS	MASONRY	R.C.P	REFLECTED CEILING PLAN	W.C.C	WALL COVERING
CM	CONCRETE MASONRY UNIT	FLOR	FLOURESCENT	MATL	MATERIAL	R.P	REFLECTED CEILING PLAN	W	WEST
CM	CONCRETE MASONRY UNIT	FRF	FIREPROOF	M.C.B	METAL CORNER BEAD	R.H	RIGHT HAND	W	WITH
CM	CONCRETE MASONRY UNIT	FT	FOOT(FEET)	MECH	MECHANICAL	REC7	RECESSED	WO	WOOD
C.C	CLEAR	F.T.F	FACE TO FACE	MEMB	MEMBRANE	REF	REFERENCE	W.C	WATER CLOSET
C.C	CLEAR	FT	FOOT(FEET)	MEZ	MEZZANINE	REFR	REFRIGERATOR	WO	WOOD
C.C	CLEAR	F.T.R	FACE TO FACE TUBE RADIATION	MFR	MANUFACTURER	REQD	REQUIRED	W.F	WATER FLANGE
C.C	CLEAR	F.T.R	FACE TO FACE TUBE RADIATION	M.H	MANHOLE	RESL	RESILIENT	W.H	WATER HEATER
C.C	CLEAR	FIG	FIGURE	MIN	MINIMUM	REV	REVISION	W.I	WROUGHT IRON
C.C	CLEAR	FIR	FIRE	MISC	MISCELLANEOUS	RFG	ROOFING	WIN	WINDOW
C.C	CLEAR	FUR	FURNISHING	M.O	MASONRY OPENING	RM	ROOM	WM	WIRE MESH
C.C	CLEAR	FUT	FUTURE	M.TD	MOUNTED	R.O	ROUGH OPENING	WPFC	WATERPROOFING
C.C	CLEAR	GA	GUAGE	M.TG	MOUNTING	S	SOUTH	WSPCOT	WATERSTOP
C.C	CLEAR	GALV	GALVANIZED	M.TG	MOUNTING	SAN	SANITARY	WT	WEIGHT
C.C	CLEAR	GEN	GENERAL	MUL	MULLION	S.C	SOLID CORE	W.W.F	WELDED WIRE FABRIC
C.C	CLEAR	GL	GLASS	G.P.L	GYPSUM PLASTER	SCHED	SCHEDULE	YD	YARD

**PROJECT DESCRIPTION**

TWO-STORY OFFICE BUILDING ADDITION TO EXISTING TWO-STORY OFFICE BUILDING. SCOPE OF WORK INCLUDES OFFICE SPACE, CONFERENCE ROOMS, SUPPORTING MEP ROOMS, OUTDOOR PATIOS, AND NEW SERVICE ENTRY. SCOPE OF WORK FOR EXISTING INCLUDES MODIFICATIONS TO SITE TO ACCOMMODATE ADDITION, SELECT DEMOLITION OF EXISTING STRUCTURE AT CONNECTION TO ADDITION, AND MINOR INTERIOR MODIFICATIONS OF THE EXISTING BUILDING TO ACCOMMODATE NEW LAYOUT.

**PROJECT TEAM**

**OWNER**  
 THE KRESGE FOUNDATION  
 3215 WEST BIG BEAVER ROAD  
 TROY, MI 48064  
 248.643.9630

**OWNERS REPRESENTATIVE**  
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 ANDREA BURG

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 CONSERVATION DESIGN FORUM  
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 PATRICK JIDD

**STRUCTURAL ENGINEER**  
 ROBERT DARVAS ASSOCIATES  
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 734.761.8713  
 ERIC MAUCHER

**MEFPF ENGINEER**  
**LIGHTING DESIGNER**  
**ACOUSTIC ENGINEER**  
 ARUP  
 35 EAST WACKER DRIVE, SUITE 1800  
 CHICAGO, IL 60601  
 312.349.5610  
 ROBERT TAZELAR

**GENERAL CONTRACTOR**  
 JOSEPH M. VALERIO  
 ARCHITECT  
 No. 40878  
 (Seal of the State of Michigan)

**BUILDING INFORMATION**

**GROSS BUILDING AREAS:**

EXISTING COURTYARD LEVEL	27,848 SF
FARMHOUSE LEVEL	8,000 SF
FARMHOUSE LEVEL	7,800 SF
<b>TOTAL</b>	<b>43,448 SF</b>

**APPLICABLE CODES**

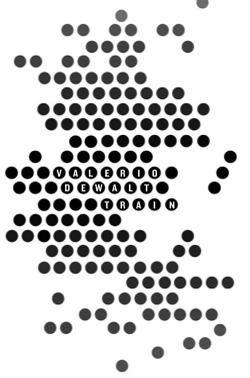
- 2009 MICHIGAN BUILDING CODE
- 2009 MICHIGAN PLUMBING CODE
- 2009 MICHIGAN MECHANICAL CODE
- 2009 MICHIGAN ELECTRICAL CODE (2008 NEC) W/ PART 8 STATE AMENDMENTS
- P.A. 1 OF 1968 AS AMENDED, CHAPTER 11 OF MICHIGAN BUILDING CODE, 100(ANSI) A117.1 - 2003 STANDARD AS REFERENCED FROM CHAPTER 11
- ASHRAE 90.1 2007 PART 10 A MICHIGAN UNIFORM ENERGY
- 2009 INTERNATIONAL FIRE CODE WITH CITY AMENDMENTS CHAPTER 93 CITY CODE OF ORDINANCE

No.	Issue Issued for	Date
1	PRELIMINARY SITE PLAN REVIEW	09.26.2014

**SHEET TITLE**  
**COVER SHEET**

**SHEET NUMBER**  
**GO-01**





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 SUZANNE STEELMAN  
 JASON COFER

VDTA PROJECT NUMBER  
 13021.00

CONSULTANT

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Issue		
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SHEET TITLE  
**FLOOR PLAN AREA 'A' -  
 COURTYARD LEVEL**

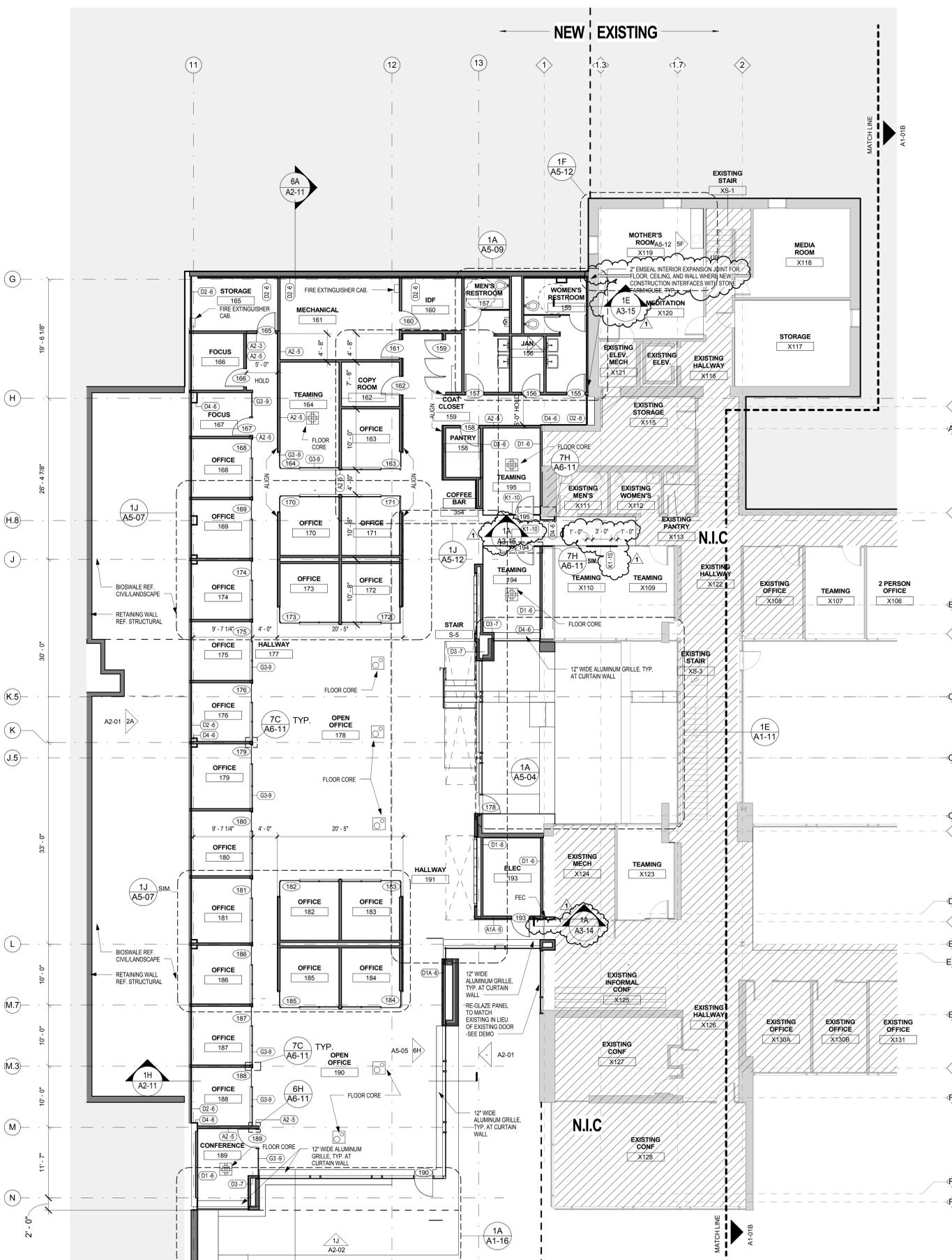


SHEET NUMBER  
**A1-01A**

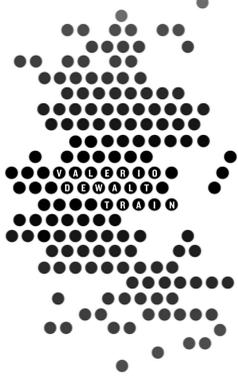
GENERAL SHEET NOTES

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- ALL EXISTING CONDITIONS AND DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR, WHO SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES, OMISSIONS, OR CONFLICTS BEFORE PROCEEDING WITH THE WORK. NO EXTRA COSTS WILL BE AUTHORIZED FOR WORK WHICH IS REQUIRED TO COMPLETE THE PROJECT SCOPE AND INTENT DUE TO CONDITIONS WHICH ARE READILY OBSERVABLE AT THE PROJECT SITE.
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- THE DRAWINGS ISSUED HERewith ARE SCOPE DOCUMENTS, AND AS SUCH SHOW THE GENERAL EXTENT OF THE PROJECT AND DO NOT NECESSARILY INDICATE OR DESCRIBE ALL WORK REQUIRED FOR FULL PERFORMANCE AND COMPLETION OF THE WORK, NOR DO THEY SHOW ALL OF THE CONDITIONS WHICH MAY BE ENCOUNTERED TO PROPERLY EXECUTE THE WORK.
- DO NOT SCALE DRAWINGS - DIMENSIONS GOVERN. LARGE SCALE DETAILS GOVERN OVER SMALL.
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- PROVIDE FIRE RETARDANT BLOCKING AT ALL ITEMS WALL-MOUNTED TO STEEL STUD AND GYPSUM BOARD PARTITIONS.
- THE CONTRACTOR SHALL COORDINATE PLACEMENT OF ALL CEILING ELEMENTS WITH MECHANICAL, ELECTRICAL, AND INSTALLER. WHERE DISCREPANCIES EXIST BETWEEN DRAWINGS AND INSTALLATION, CONSULT THE ARCHITECT BEFORE PROCEEDING WITH WORK.
- PROVIDE APPROPRIATE SEX DESIGNATION SIGNAGE FOR ALL TOILET ROOMS AND SUBMIT FOR OWNER APPROVAL PRIOR TO INSTALLATION.
- PAINT ALL EXPOSED BARE AND COVERED PIPES, DUCTS, HANGERS, STEEL, ELECTRICAL BOXES AND CONDUIT TO MATCH ADJACENT SURFACES OR AS SPECIFIED BY DRAWINGS OR FINISH SCHEDULE.
- ALL EXTERIOR GUARDRAILS, HANDRAILS, AND OTHER EXTERIOR EXPOSED METAL SHALL BE GALVANIZED AND PAINTED, UNLESS NOTED OTHERWISE.
- ALL EXTERIOR JOINTS AROUND WINDOW AND DOOR FRAMES, BETWEEN WALLS AND FOUNDATION, BETWEEN WALLS AND ROOF, BETWEEN WALL PANELS, AND AT PENETRATIONS OF UTILITIES, ETC. THROUGH THE EXTERIOR ENVELOPE SHALL BE SEALED, CAULKED, OR WEATHER-STRIPPED TO PREVENT AIR AND WATER INFILTRATION.
- ALL WALLS TO BE A-1 TYP. UNLESS NOTED OTHERWISE.
- SEE ELEVATIONS FOR DIMENSIONS OF WD-1 WALL PANELS. FOR TYPICAL DETAILS, SEE SHEET A6-1.
- REFER TO SHEETS A6-01 AND A6-02 FOR PARTITION TYPES.
- REFER TO THE A3 SERIES FOR BOTH FURNITURE AND FINISH PLANS.
- REFER TO THE A7 SERIES FOR ROPS.
- SEE A6-31 FOR TYPICAL TRANSITION DETAILS.

- NOT IN CONTRACT
- FLOOR CORE TO RECEIVE FLOOR BOX (POWER & DATA) - SEE ELECTRICAL
- FLOOR CORE TO RECEIVE POWER & DATA WHIP - SEE ELECTRICAL



**1A FLOOR PLAN AREA 'A' - COURTYARD LEVEL**  
 SCALE: 1/8" = 1'-0"



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 SUZANNE STEELMAN  
 JASON COFER



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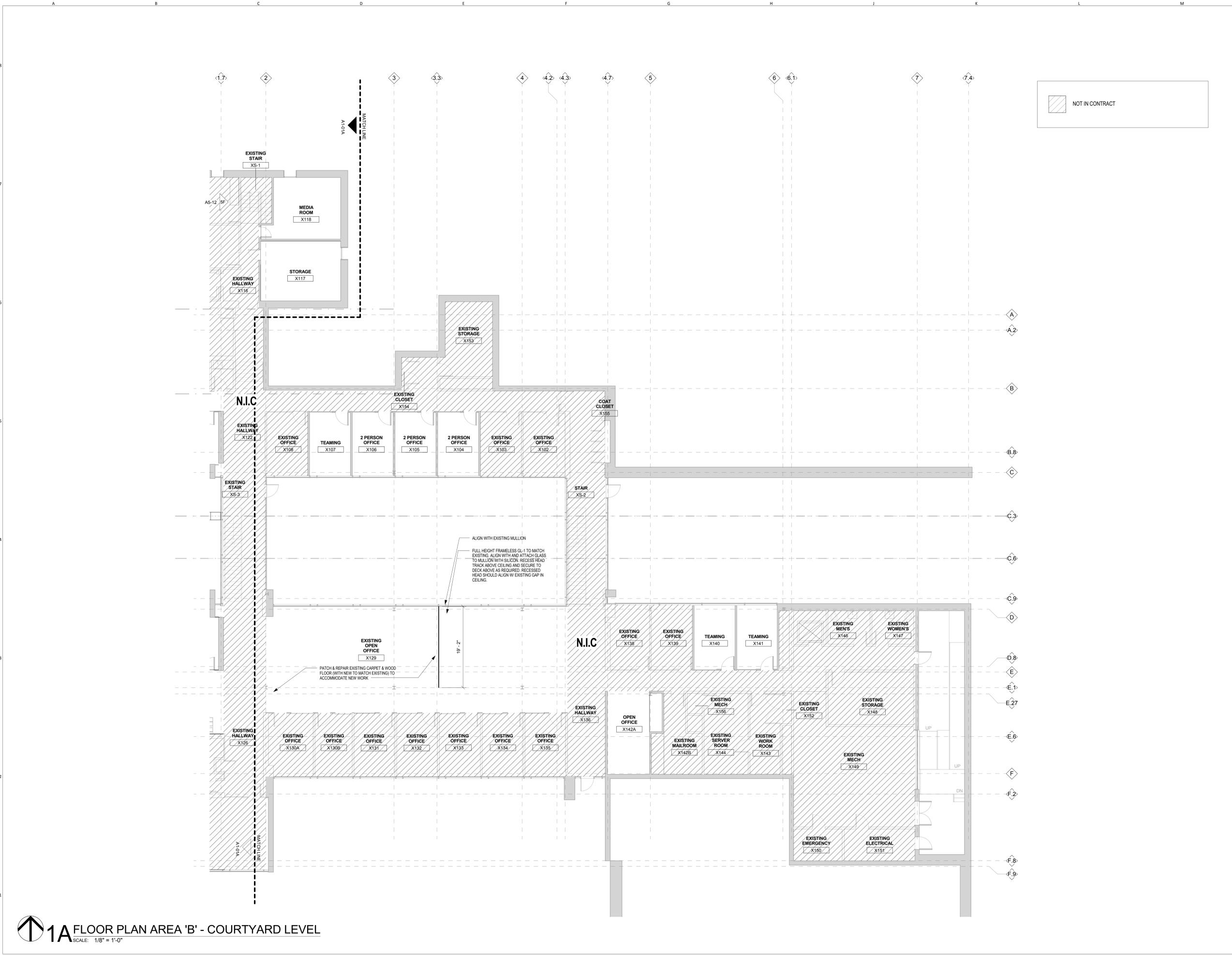
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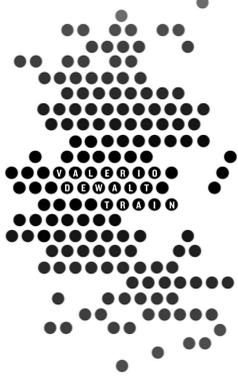
SHEET TITLE  
**FLOOR PLAN AREA 'B' -  
 COURTYARD LEVEL**



SHEET NUMBER  
**A1-01B**



**1A** FLOOR PLAN AREA 'B' - COURTYARD LEVEL  
 SCALE: 1/8" = 1'-0"



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SHEET TITLE  
**FLOOR PLAN AREA 'A' -  
 FARMHOUSE LEVEL**

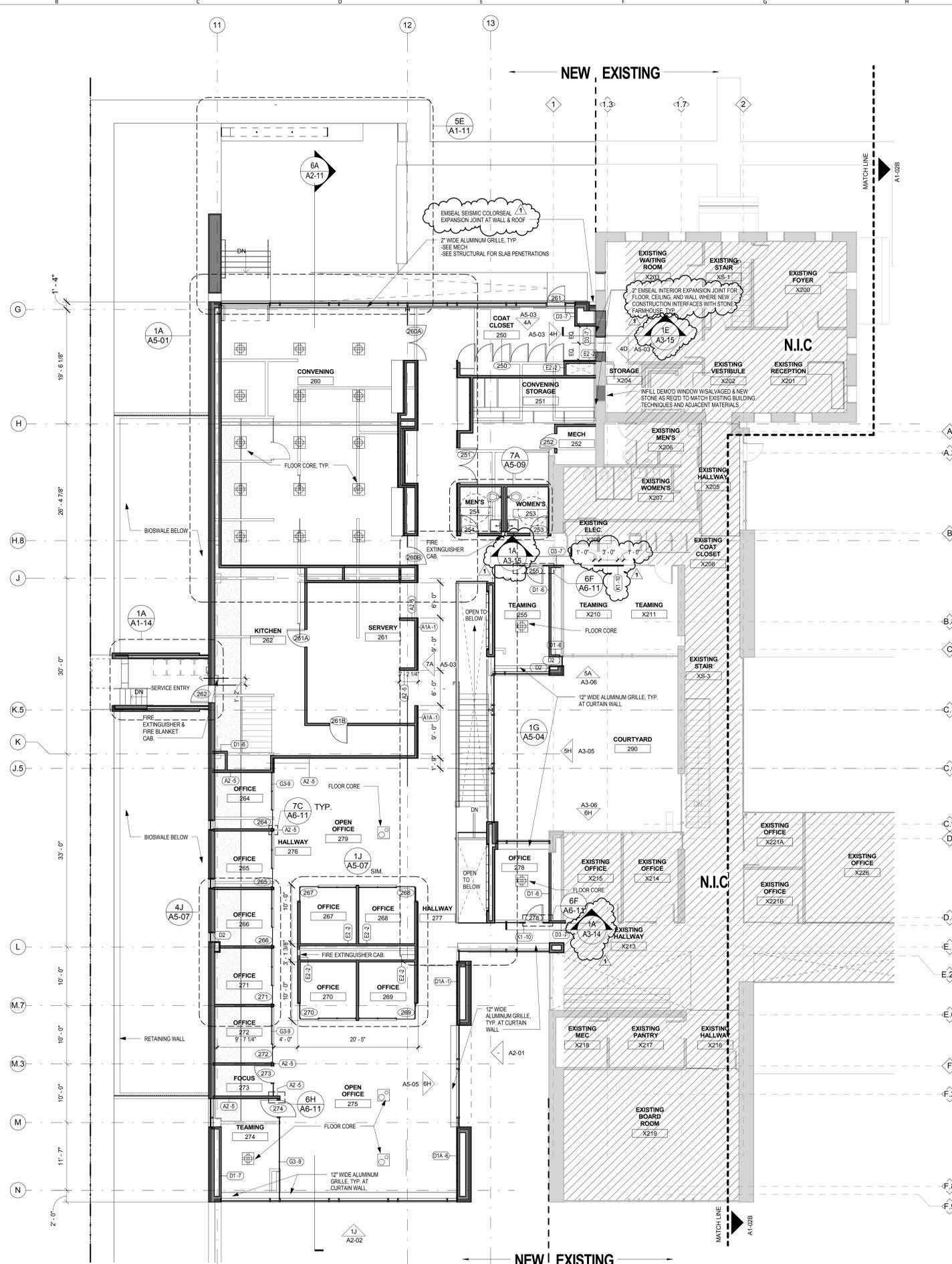


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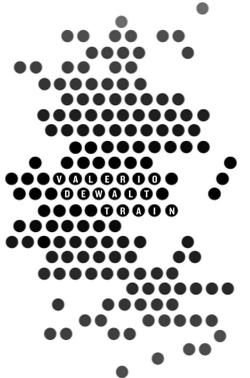
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- ALL EXISTING CONDITIONS AND DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR WHO SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES, OMISSIONS, OR CONFLICTS BEFORE PROCEEDING WITH THE WORK. NO EXTRA COSTS WILL BE AUTHORIZED FOR WORK WHICH IS REQUIRED TO COMPLETE THE PROJECT SCOPE AND INTENT DUE TO CONDITIONS WHICH ARE READILY OBSERVABLE AT THE PROJECT SITE.
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- WHERE DISCREPANCIES OCCUR BETWEEN THE VARIOUS DISCIPLINES/TRADES, CONSULT THE ARCHITECT BEFORE PROCEEDING WITH THE WORK. FINISH FLOOR ELEVATIONS ARE TO TOP OF CONCRETE, UNLESS NOTED OTHERWISE.
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- PROVIDE APPROPRIATE SEX DESIGNATION SIGNAGE FOR ALL TOILET ROOMS AND SUBMIT FOR OWNER APPROVAL PRIOR TO INSTALLATION.
- ALL EXPOSED FASTENERS IN PUBLIC AREAS TO BE TAMPER-PROOF WHEREVER POSSIBLE.
- PAINT ALL EXPOSED, BARE, AND COVERED PIPES, DUCTS, HANGERS, STEEL, ELECTRICAL BOXES AND CONDUIT TO MATCH ADJACENT SURFACES OR AS SPECIFIED BY DRAWINGS OR FINISH SCHEDULE.
- ALL EXTERIOR GUARDRAILS, HANDRAILS, AND OTHER EXTERIOR EXPOSED METAL SHALL BE GALVANIZED AND PAINTED, UNLESS NOTED OTHERWISE.
- ALL EXTERIOR JOINTS AROUND WINDOW AND DOOR FRAMES, BETWEEN WALLS AND FOUNDATION, BETWEEN WALLS AND ROOF, BETWEEN WALL PANELS, AND AT PENETRATIONS OF UTILITIES, ETC. THROUGH THE EXTERIOR ENVELOPE, SHALL BE SEALED, CALKED, OR WEATHER-STRIPPED TO PREVENT AIR AND WATER INFILTRATION.
- ALL WALLS TO BE A1.1 TYP. UNLESS NOTED OTHERWISE.
- SEE ELEVATIONS FOR DIMENSIONS OF WD-1 WALL PANELS. FOR TYPICAL DETAILS, SEE SHEET A6-41.
- REFER TO SHEETS A6-01 AND A6-02 FOR PARTITION TYPES.
- REFER TO THE A7 SERIES FOR BOTH FURNITURE AND FINISH PLANS.
- REFER TO THE A8 SERIES FOR RCP'S.
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**1A FLOOR PLAN AREA 'A' - FARMHOUSE LEVEL**  
 SCALE: 1/8" = 1'-0"



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SHEET TITLE  
**FLOOR PLAN AREA 'B' -  
 FARMHOUSE LEVEL**



NOT IN CONTRACT

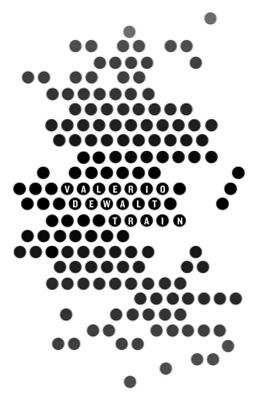
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- ALL WORK SHALL CONFORM TO APPLICABLE CODES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY BEARING ON THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL SECURE AND PAY FOR THE DEMOLITION PERMIT AND ALL OTHER PERMITS, FEES, LICENSES, AND INSPECTIONS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK.
- ALL EXISTING CONDITIONS AND DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR, WHO SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES, OMISSIONS, OR CONFLICTS BEFORE PROCEEDING WITH THE WORK. NO EXTRA COSTS WILL BE AUTHORIZED FOR WORK WHICH IS REQUIRED TO COMPLETE THE PROJECT SCOPE AND INTENT DUE TO CONDITIONS WHICH ARE READILY OBSERVABLE AT THE PROJECT SITE.
- ALL EXISTING CONDITIONS AND DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR, WHO SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES, OMISSIONS, OR CONFLICTS BEFORE PROCEEDING WITH THE WORK. NO EXTRA COSTS WILL BE AUTHORIZED FOR WORK WHICH IS REQUIRED TO COMPLETE THE PROJECT SCOPE AND INTENT DUE TO CONDITIONS WHICH ARE READILY OBSERVABLE AT THE PROJECT SITE.
- THE CONTRACTOR SHALL VISIT THE PROJECT SITE AND BE KNOWLEDGEABLE OF CONDITIONS THEREON. CONTRACTOR SHALL INVESTIGATE, VERIFY, AND BE RESPONSIBLE FOR ALL CONDITIONS OF THE PROJECT AND SHALL NOTIFY THE OWNER OF ANY CONDITIONS REQUIRING MODIFICATION BEFORE PROCEEDING WITH THE WORK.
- THE DRAWINGS ISSUED HEREWITH ARE SCOPE DOCUMENTS, AND AS SUCH SHOW THE GENERAL EXTENT OF THE PROJECT AND DO NOT NECESSARILY INDICATE OR DESCRIBE ALL WORK REQUIRED FOR FULL PERFORMANCE AND COMPLETION OF THE WORK. NOR DO THEY SHOW ALL OF THE CONDITIONS WHICH MAY BE ENCOUNTERED TO PROPERLY EXECUTE THE WORK.
- DO NOT SCALE DRAWINGS - DIMENSIONS GOVERN. LARGE SCALE DETAILS GOVERN OVER SMALL.
- WHERE DISCREPANCIES OCCUR BETWEEN THE VARIOUS DISCIPLINES/TRADES, CONSULT THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
- THE CONTRACTOR SHALL FURNISH AND INSTALL ALL STIFFENERS, BRACINGS, BACKING PLATES, AND SUPPORTING BRACKETS REQUIRED FOR THE PROPER INSTALLATION OF ALL CASEWORK, TOILET ROOM ACCESSORIES, TOILET PARTITIONS, INCLUDING WALL MOUNTED AND/OR SUSPENDED MECHANICAL, ELECTRICAL, AND MISCELLANEOUS EQUIPMENT WHETHER SHOWN IN THE DRAWINGS OR NOT. THIS SHALL ALSO APPLY TO OWNER FURNISHED/ CONTRACTOR INSTALLED EQUIPMENT.
- PROVIDE FIRE RETARDANT BLOCKING AT ALL ITEMS WALL-MOUNTED TO STEEL STUD AND GYPSUM BOARD PARTITIONS.
- THE CONTRACTOR SHALL COORDINATE PLACEMENT OF ALL CEILING ELEMENTS WITH MECHANICAL, ELECTRICAL, AND INSTALLER. WHERE DISCREPANCIES EXIST BETWEEN DRAWINGS AND INSTALLATION, CONSULT THE ARCHITECT BEFORE PROCEEDING WITH WORK.
- PROVIDE APPROPRIATE SEX DESIGNATION SIGNAGE FOR ALL TOILET ROOMS AND SLOTTED FOR OWNER APPROVAL PRIOR TO INSTALLATION.
- ALL EXPOSED FASTENERS IN PUBLIC AREAS TO BE TAMPER-PROOF WHEREVER POSSIBLE.
- PAINT ALL EXPOSED, BARE, AND COVERED PIPES, DUCTS, HANGERS, STEEL, ELECTRICAL BOXES AND CONDUIT TO MATCH ADJACENT SURFACES OR AS SPECIFIED BY DRAWINGS OR FINISH SCHEDULE.
- ALL EXTERIOR GUARDRAILS, HANDRAILS, AND OTHER EXTERIOR EXPOSED METAL SHALL BE GALVANIZED AND PAINTED, UNLESS NOTED OTHERWISE.
- ALL EXTERIOR JOINTS AROUND WINDOW AND DOOR FRAMES, BETWEEN WALLS AND FOUNDATION, BETWEEN WALLS AND ROOF, BETWEEN WALL PANELS, AND AT PENETRATIONS OF UTILITIES, ETC. THROUGH THE EXTERIOR ENVELOPE SHALL BE SEALED, CALKED, OR WEATHER-STRIPPED TO PREVENT AIR AND WATER INFILTRATION.
- ALL WALLS TO BE A-1 TYP. UNLESS NOTED OTHERWISE.
- SEE ELEVATIONS FOR DIMENSIONS OF WD-1 WALL PANELS. FOR TYPICAL DETAILS, SEE SHEET A6-41.
- REFER TO SHEETS A6-61 AND A6-62 FOR PARTITION TYPES.
- REFER TO THE A6 SERIES FOR RCP'S.
- SEE A6-51 FOR TYPICAL TRANSITION DETAILS.

- NOT IN CONTRACT
- FLOOR CORE TO RECEIVE FLOOR BOX (POWER & DATA) - SEE ELECTRICAL
- FLOOR CORE TO RECEIVE POWER & DATA WHIP - SEE ELECTRICAL

PROJECT NAME  
**THE KRESGE FOUNDATION EXPANSION**

PROJECT ADDRESS  
**3215 W. BIG BEAVER RD  
 TROY, MI 48064**



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PROJECT TEAM

ARCHITECT STAMP  

 JOSEPH M. VALERIO  
 ARCHITECT  
 No. 40878

VDTA PROJECT NUMBER  
 13021.00

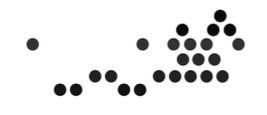
CONSULTANT

CONSULTANT PROJECT NUMBER

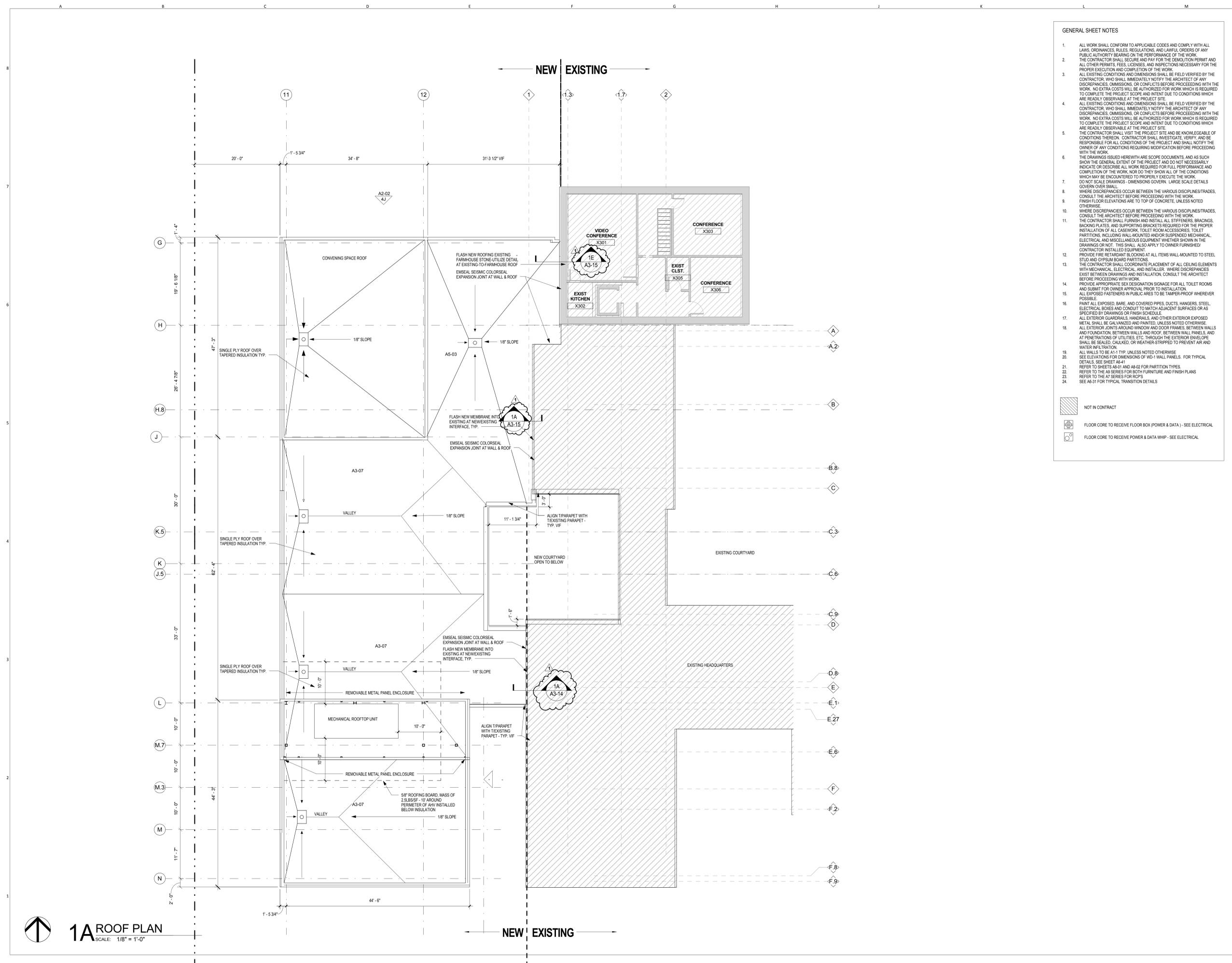
Issue		
No.	Issued for	Date
1	PRELIMINARY SITE PLAN REVIEW	09.26.2014

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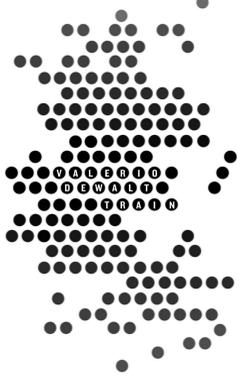
SHEET TITLE  
**ROOF PLAN**



SHEET NUMBER  
**A1-03A**



**1A ROOF PLAN**  
 SCALE: 1/8" = 1'-0"



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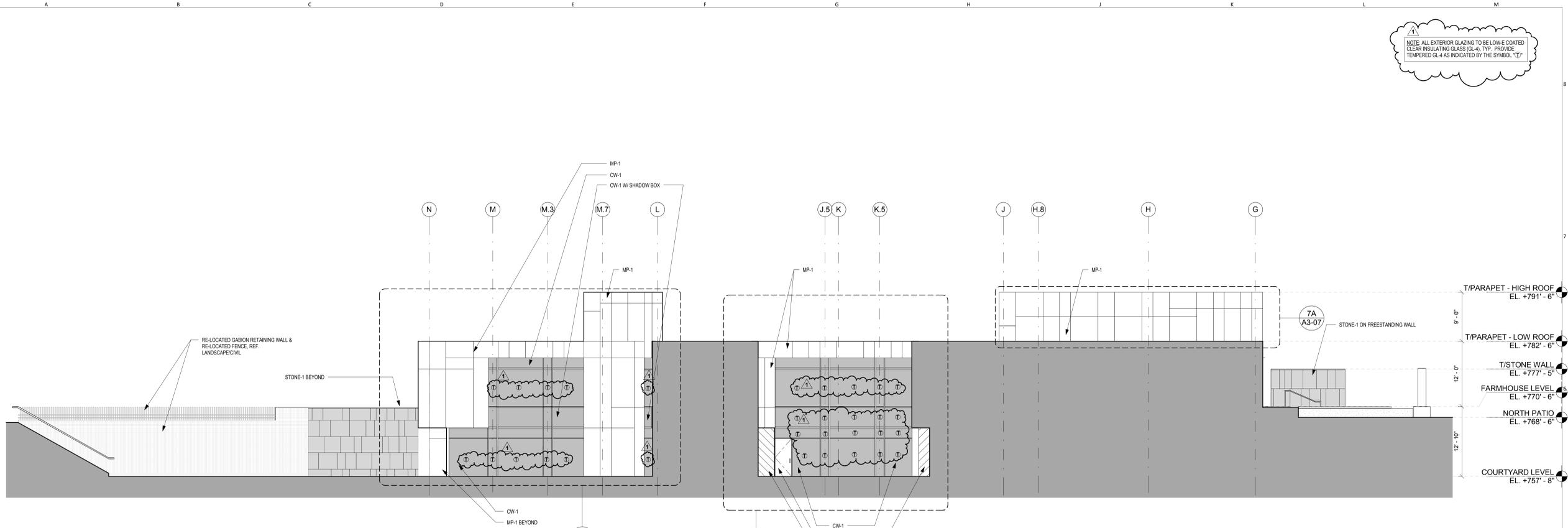
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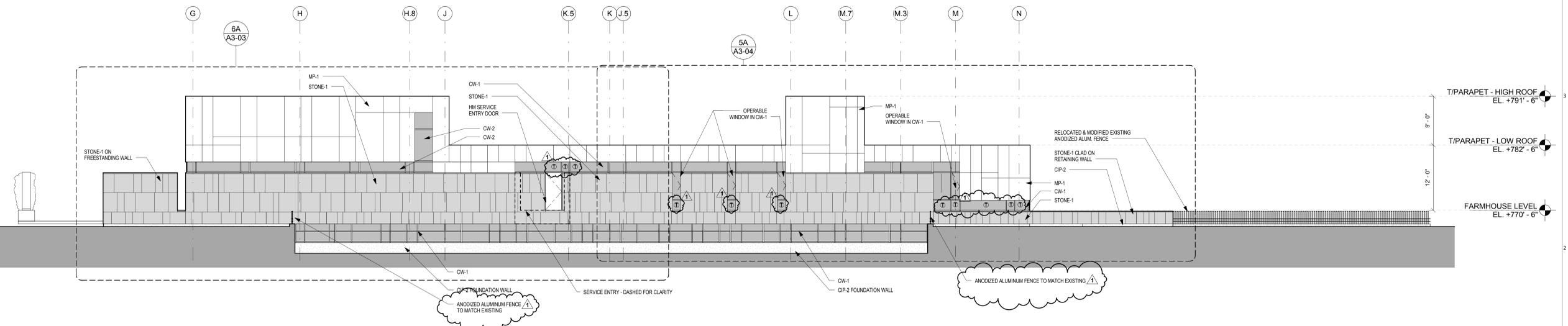
SHEET TITLE  
**BUILDING ELEVATIONS**



NOTE: ALL EXTERIOR GLAZING TO BE LOW-E COATED CLEAR INSULATING GLASS (GL-4). TYP. PROVIDE TEMPERED GL-4 AS INDICATED BY THE SYMBOL "T".



**5A EAST ELEVATION**  
 SCALE: 1/8" = 1'-0"

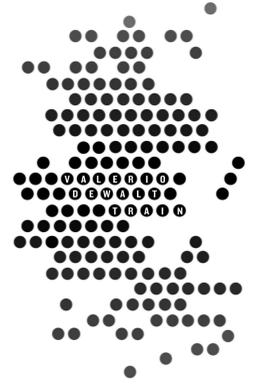


**2A WEST ELEVATION**  
 SCALE: 1/8" = 1'-0"

NOTE: ALL EXTERIOR GLAZING TO BE LOW-E COATED CLEAR INSULATING GLASS (GL-4). TYP. PROVIDE TEMPERED GL-4 AS INDICATED BY THE SYMBOL "T".

PROJECT NAME  
**THE KRESGE  
 FOUNDATION  
 EXPANSION**

PROJECT ADDRESS  
**3215 W. BIG BEAVER RD  
 TROY, MI 48084**



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 JASON COFER



VDTA PROJECT NUMBER  
 13021.00

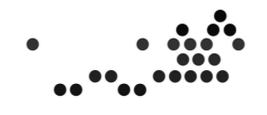
CONSULTANT

CONSULTANT PROJECT NUMBER

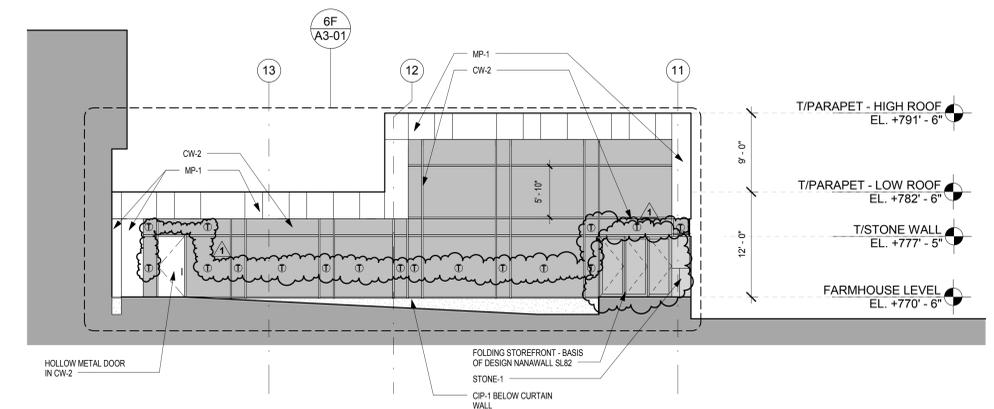
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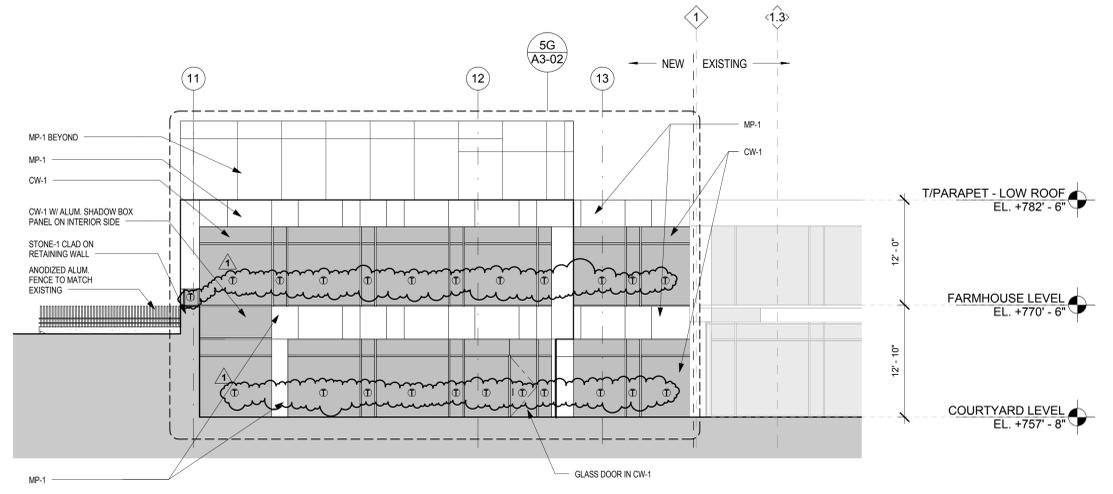
SHEET TITLE  
**BUILDING ELEVATIONS**



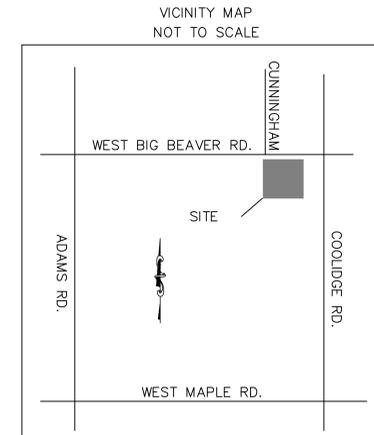
SHEET NUMBER  
**A2-02**



**4J NORTH ELEVATION**  
 SCALE: 1/8" = 1'-0"



**1J SOUTH ELEVATION**  
 SCALE: 1/8" = 1'-0"



PARCEL #20-30-202-005

LEGAL DESCRIPTION AS PROVIDED:

PART OF THE NORTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 30, TOWN 2 NORTH, RANGE 11 EAST, CITY OF TROY, OAKLAND COUNTY, MICHIGAN, BEGINNING AT A POINT DISTANT WEST 980.66 FEET FROM THE NORTHEAST SECTION CORNER, THENCE WEST 349 FEET, THENCE SOUTH 00 DEGREES 05 MINUTES 10 SECONDS WEST 378.78 FEET, THENCE EAST 349 FEET, THENCE NORTH 00 DEGREES 05 MINUTES 10 SECONDS EAST 378.78 FEET TO THE BEGINNING. (LIBER 8233, PAGE 714)

ALSO SUBJECT TO THE RIGHTS OF THE PUBLIC OR ANY GOVERNMENTAL UNIT IN ANY PART OF CAPTIONED LAND TAKEN, USED, DEDICATED OR DEEDED FOR ROAD PURPOSES.

CONTAINING 120,677.08 SQUARE FEET OR 2.77 ACRES OF LAND, MORE OR LESS. THIS AREA DOES NOT INCLUDE THE NORTH 33 FEET OF THE ABOVE DESCRIBED PARCEL.

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PROJECT TEAM ARCHITECT STAMP



VDTA PROJECT NUMBER

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CONSULTANT PROJECT NUMBER

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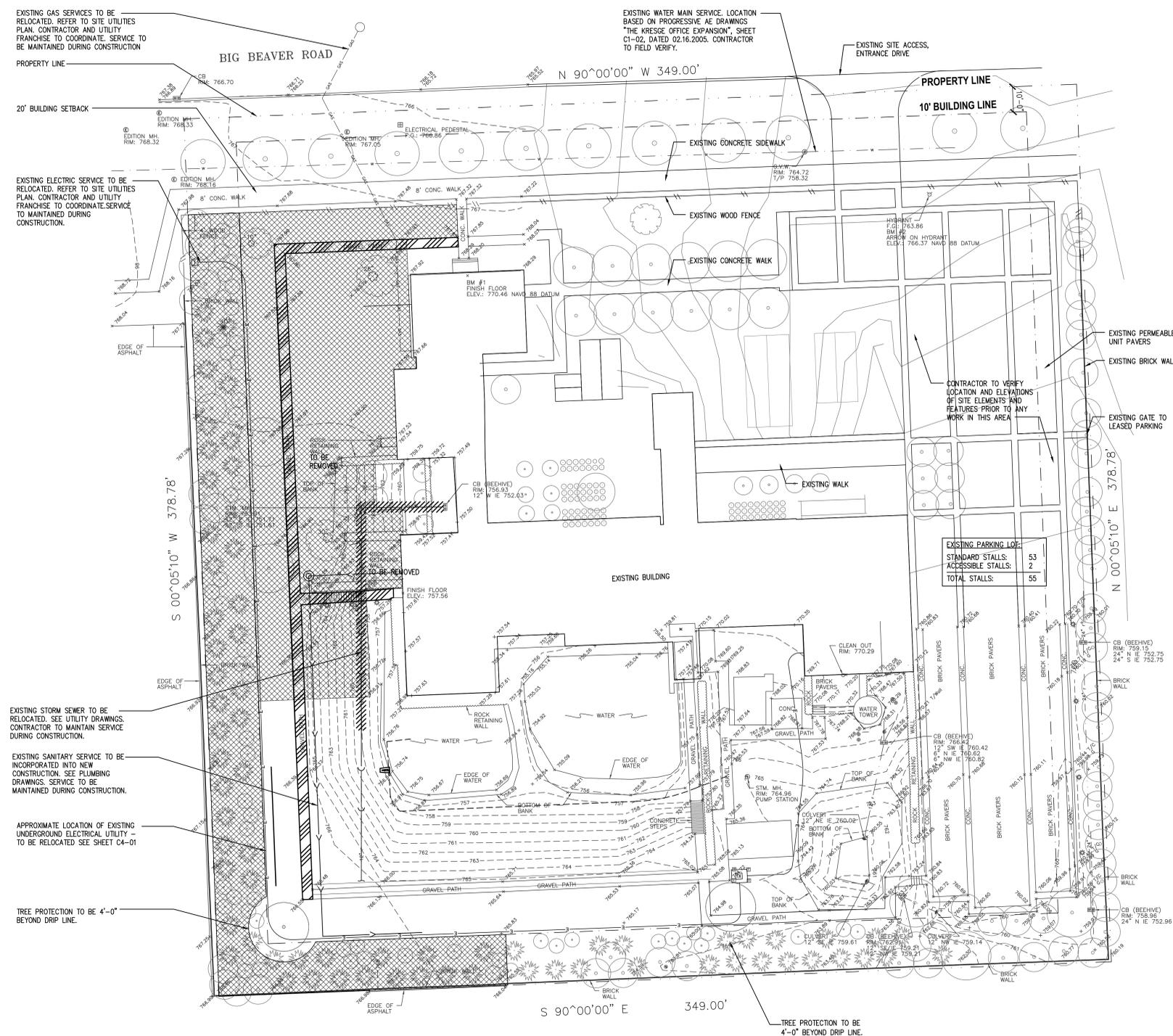
SHEET TITLE

**EXISTING CONDITIONS AND DEMOLITION PLAN**



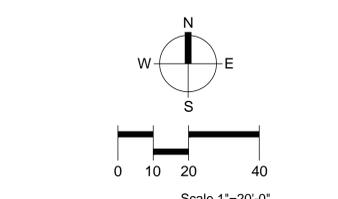
SHEET NUMBER

**C1-01**



- LEGEND
- 05 --- EXISTING CONTOUR (PER TOPOGRAPHIC SURVEY)
  - 06 --- EXISTING CONTOUR (PER ORIGINAL DESIGN PLAN)
  - PP --- EXISTING PERFORATE PIPE (APPROXIMATE LOCATION PER ORIGINAL DESIGN)
  - 07 --- EXISTING SANITARY SEWER (PER TOPOGRAPHIC SURVEY)
  - 08 --- EXISTING STORM SEWER (PER TOPOGRAPHIC SURVEY)
  - 09 --- EXISTING 4" POND RECHARGE PIPING FROM CISTERN
  - 10 --- UTILITY REMOVAL
  - 11 --- EXISTING VEGETATION CLEARING AND GRUBBING
  - 12 --- SIDEWALK/PATH REMOVAL
  - 13 --- TREE PROTECTION FENCE

- NOTES
1. TOPOGRAPHIC SURVEY FOR BUILDING ADDITION IMPROVEMENTS PREPARED BY GLA SURVEYORS DATED OCTOBER 23, 2013.
  2. OVERALL SITE BOUNDARY INFORMATION, EAST HALF OF BUILDING, GRADING OUTSIDE OF ADDITION AREA, AND EXISTING VEGETATION ARE SHOWN PER THE ORIGINAL BUILDING DESIGN DRAWINGS DATED... ALL DEMOLISHED MATERIALS SHALL BE DISPOSED OF OFF SITE UNLESS OTHERWISE INDICATED.
  3. PRIOR TO DEMOLITION ALL NECESSARY EROSION CONTROL MEASURES SHALL BE INSTALLED.
  4. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION AND CONTACT ENGINEER OF ANY DISCREPANCIES. DAMAGE TO ALL EXISTING CONDITIONS (EXCEPT FOR ITEMS NOTED ON THIS PLAN TO BE REMOVED OR RELOCATED) WILL BE REPLACED AT THE CONTRACTORS EXPENSE.



EXISTING GAS SERVICES TO BE RELOCATED. REFER TO SITE UTILITIES PLAN. CONTRACTOR AND UTILITY FRANCHISE TO COORDINATE. SERVICE TO BE MAINTAINED DURING CONSTRUCTION.

EXISTING WATER MAIN SERVICE. LOCATION BASED ON PROGRESSIVE AE DRAWINGS "THE KRESGE OFFICE EXPANSION", SHEET C1-02, DATED 02.16.2005. CONTRACTOR TO FIELD VERIFY.

EXISTING SITE ACCESS, ENTRANCE DRIVE.

PROPERTY LINE

20' BUILDING SETBACK

10' BUILDING LINE

EXISTING CONCRETE SIDEWALK

EXISTING WOOD FENCE

EXISTING CONCRETE WALK

EXISTING PERMEABLE UNIT PAVERS

EXISTING BRICK WALL

EXISTING GATE TO LEASED PARKING

CONTRACTOR TO VERIFY LOCATION AND ELEVATIONS OF SITE ELEMENTS AND FEATURES PRIOR TO ANY WORK IN THIS AREA.

EXISTING PARKING LOT:  
 STANDARD STALLS: 53  
 ACCESSIBLE STALLS: 2  
 TOTAL STALLS: 55

EXISTING BUILDING

EXISTING WALK

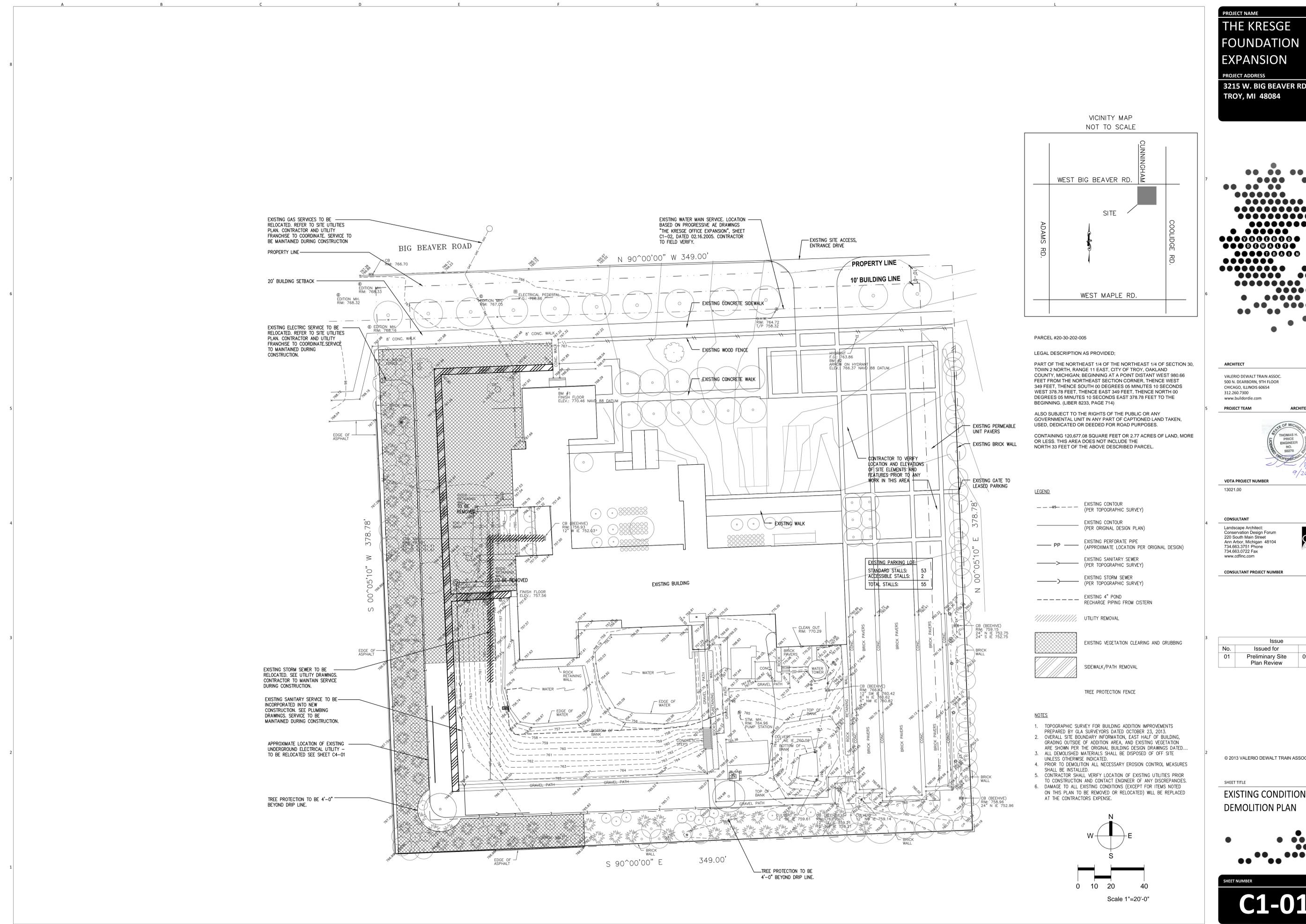
EXISTING STORM SEWER TO BE RELOCATED. SEE UTILITY DRAWINGS. CONTRACTOR TO MAINTAIN SERVICE DURING CONSTRUCTION.

EXISTING SANITARY SERVICE TO BE INCORPORATED INTO NEW CONSTRUCTION. SEE PLUMBING DRAWINGS. SERVICE TO BE MAINTAINED DURING CONSTRUCTION.

APPROXIMATE LOCATION OF EXISTING UNDERGROUND ELECTRICAL UTILITY - TO BE RELOCATED SEE SHEET C4-01

TREE PROTECTION TO BE 4'-0" BEYOND DRIP LINE.

TREE PROTECTION TO BE 4'-0" BEYOND DRIP LINE.



PROJECT NAME

# THE KRESGE FOUNDATION EXPANSION

PROJECT ADDRESS

3215 W. BIG BEAVER RD  
TROY, MI 48084

ARCHITECT

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PROJECT TEAM

ARCHITECT STAMP



*THP*  
9/26/2014

VDTA PROJECT NUMBER

13021.00

CONSULTANT

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CONSULTANT PROJECT NUMBER

Issue

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01	Preliminary Site Plan Review	09/26/2014

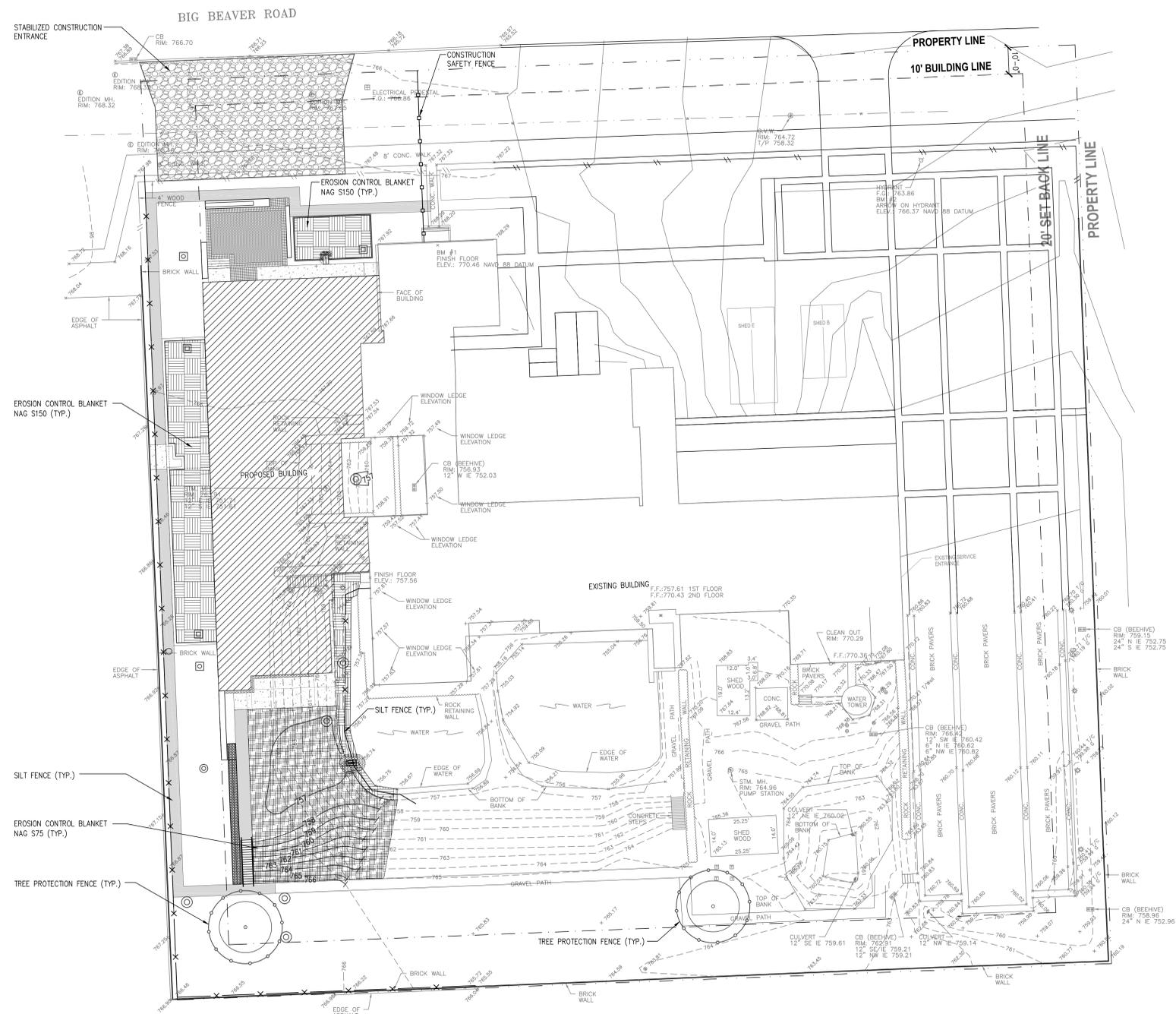
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SHEET TITLE

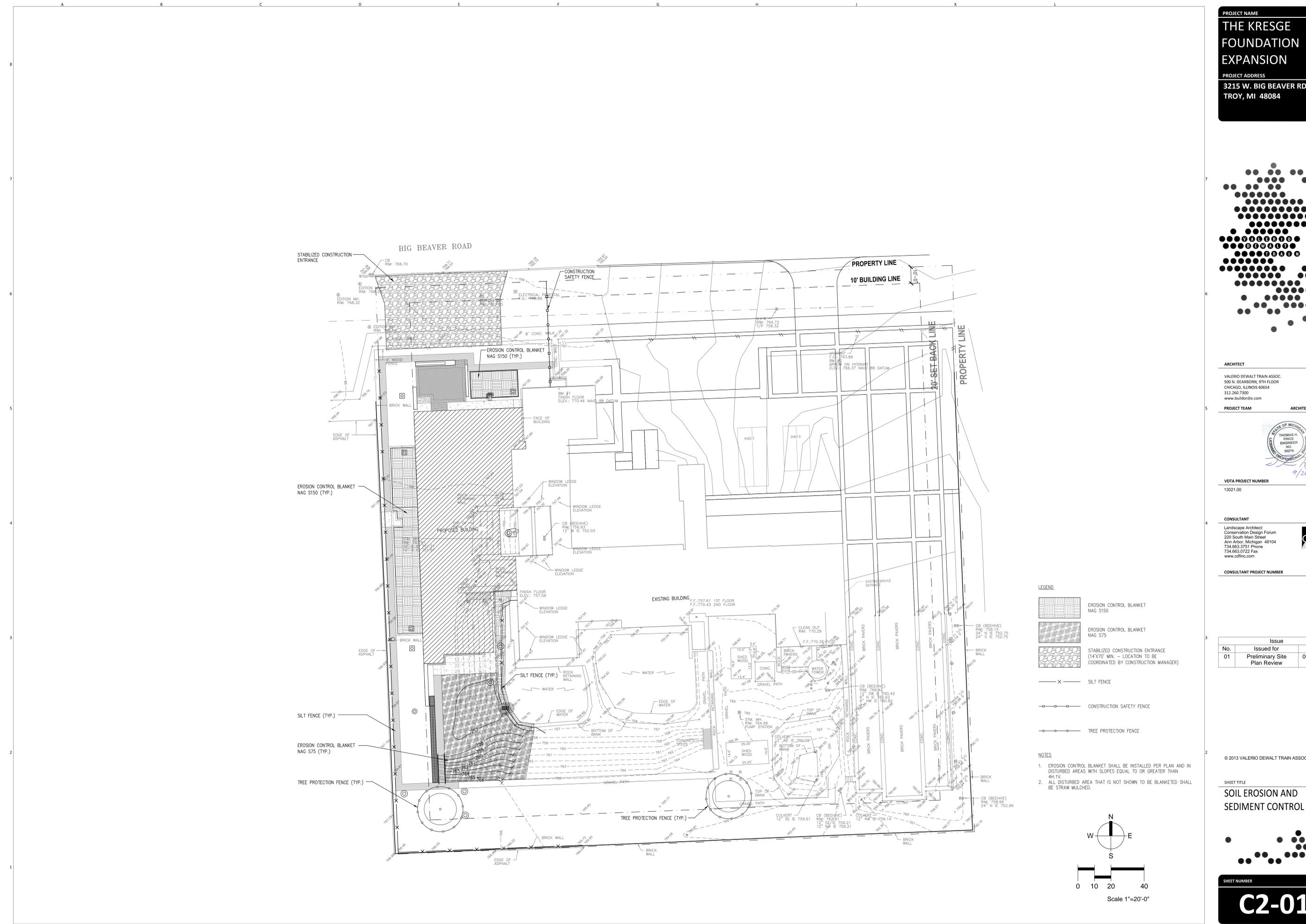
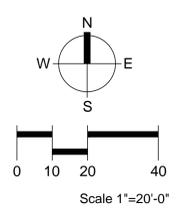
## SOIL EROSION AND SEDIMENT CONTROL PLAN

SHEET NUMBER

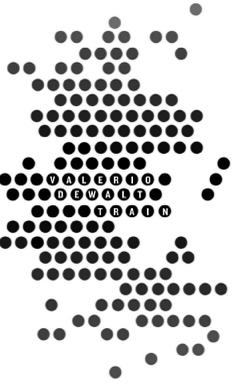
# C2-01



- LEGEND**
- EROSION CONTROL BLANKET NAG S150
  - EROSION CONTROL BLANKET NAG S75
  - STABILIZED CONSTRUCTION ENTRANCE (14'X70' MIN. - LOCATION TO BE COORDINATED BY CONSTRUCTION MANAGER)
  - SILT FENCE
  - CONSTRUCTION SAFETY FENCE
  - TREE PROTECTION FENCE
- NOTES**
1. EROSION CONTROL BLANKET SHALL BE INSTALLED PER PLAN AND IN DISTURBED AREAS WITH SLOPES EQUAL TO OR GREATER THAN 4H:1V.
  2. ALL DISTURBED AREA THAT IS NOT SHOWN TO BE BLANKETED SHALL BE STRAW MULCHED.







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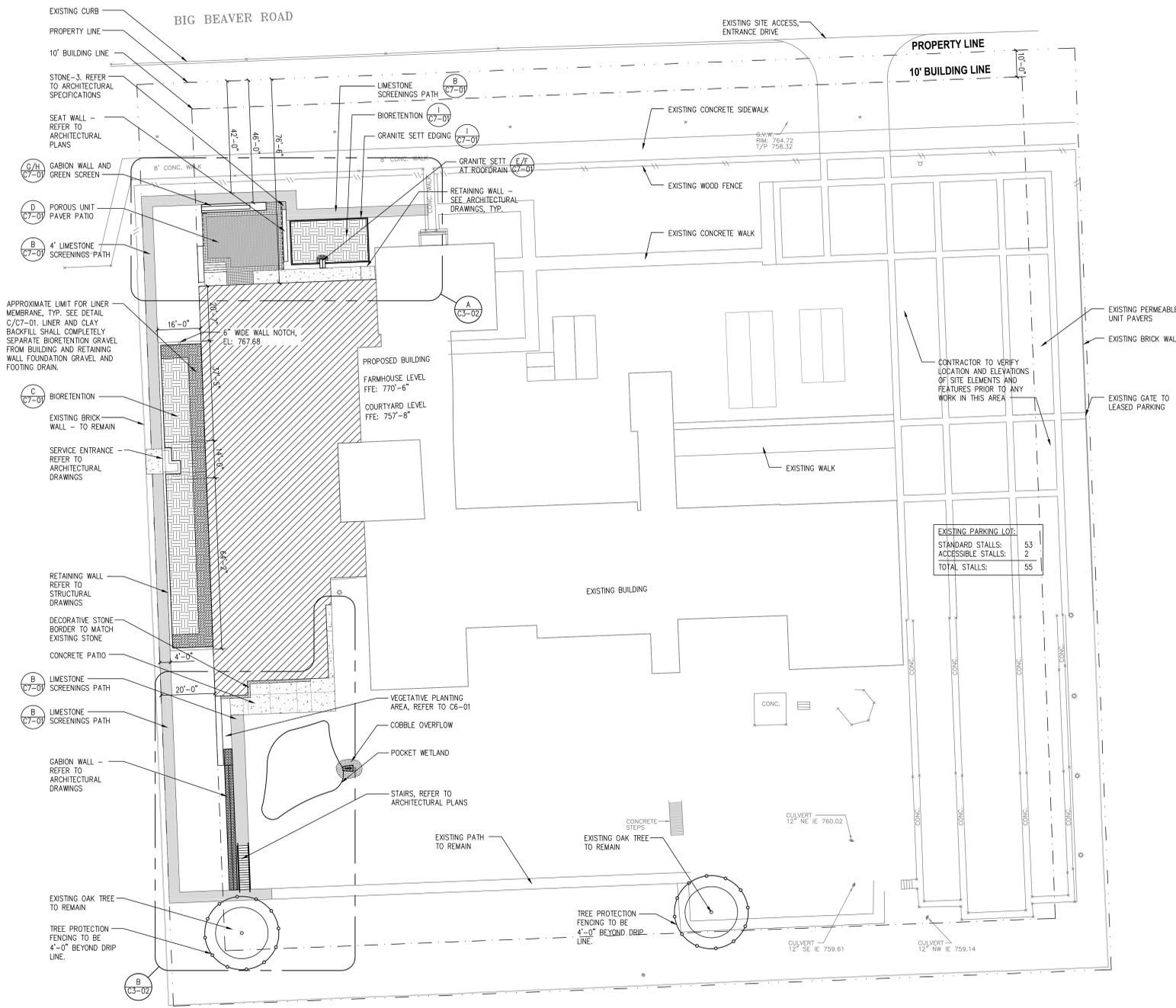
Issue		
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SHEET TITLE  
**SITE LAYOUT PLAN**



SHEET NUMBER  
**C3-01**



EXISTING PARKING LOT:

STANDARD STALLS:	53
ACCESSIBLE STALLS:	2
TOTAL STALLS:	55

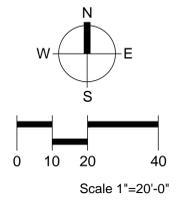
OPEN SPACE CALCULATION

	AREA	SITE %
SITE VEHICULAR USE	19,348 SF	16%
SITE BUILDING AREA	24,919 SF	21%
SITE OPEN SPACE	76,261 SF	63%
SITE AREA	120,528 SF	100%

LEGEND

- POROUS UNIT PAVING - PATIO SEE DETAIL C7-01/D
- PORTLAND CEMENT CONCRETE PAVING SEE DETAIL C7-01/A
- LIMESTONE SCREENING PATH 3" LIMESTONE SCREENINGS ON 6" COMPACTED AGGREGATE BASE
- BIORETENTION AREA SEE DETAIL C7-01/C&I

NOTES  
 1. CONTRACTOR SHALL BE PROVIDED WITH AUTOCAD FILES TO ASSIST WITH LAYOUT.

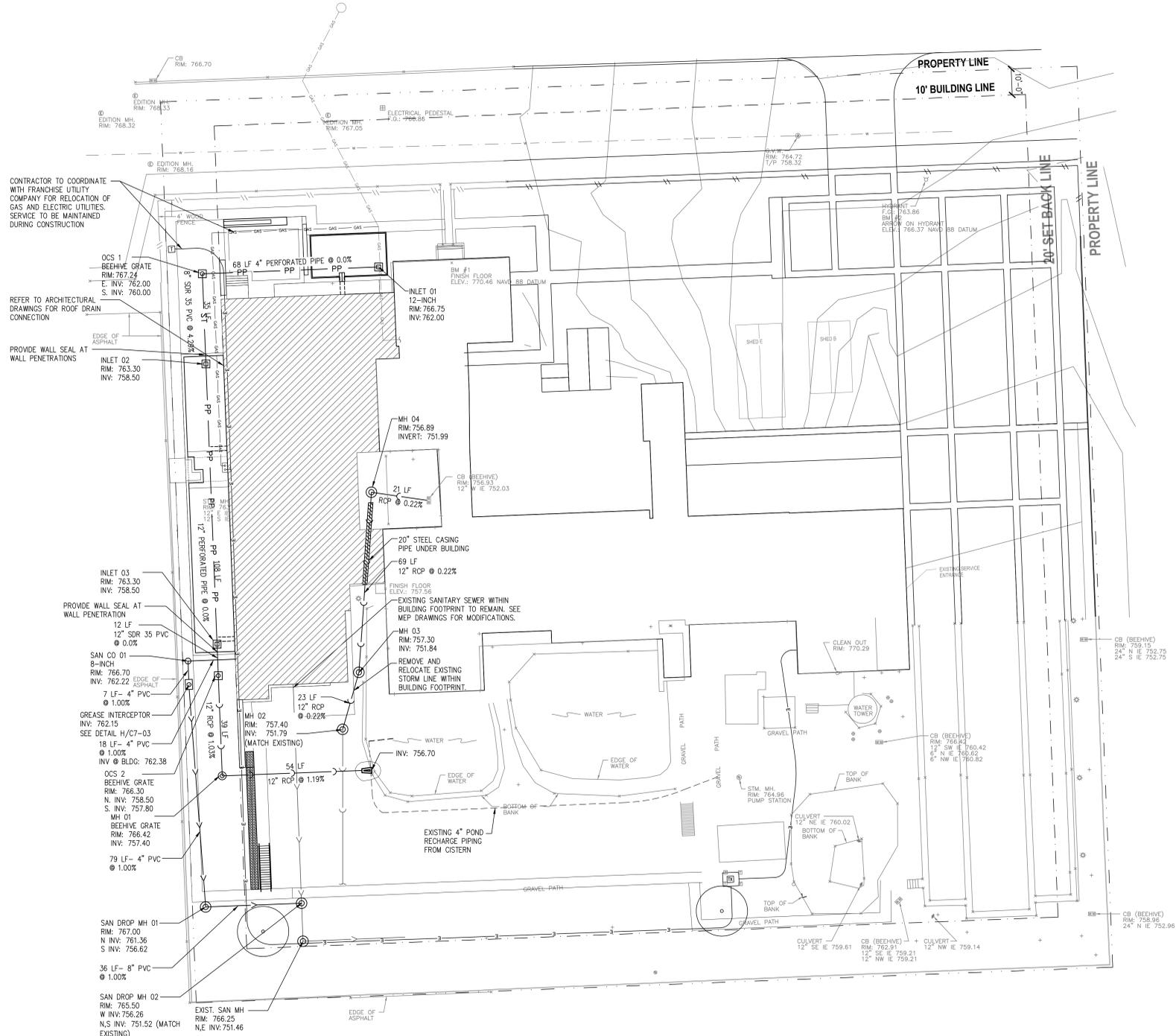






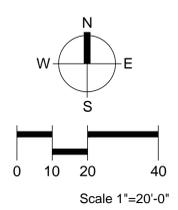
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9/26/2014

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- LEGEND**
- SANITARY SEWER CLEANOUT
  - ⊙ STORM SEWER / SANITARY SEWER MANHOLE (48" CONCRETE), SEE SHEET C7-04 AND C7-05
  - ⊞ STORM SEWER PVC INLET (24" ADS DRAIN BASIN WITH BEEHIVE GRATE EXCEPT AS NOTED)
  - ⊞ OUTLET CONTROL STRUCTURE (48" CATCH BASIN WITH ORIFICE OUTLET WITH BEEHIVE GRATE), SEE SHEET C7-04
  - ⊞ STORM SEWER FLARED END SECTION
  - ▨ TRENCH DRAIN AT ROOF DRAIN OUTLET WITH COBBLE SPLASH PAD
  - SANITARY SEWER (PVC)
  - STORM SEWER (RCP)
  - ST STORM SEWER (SOLID HDPE, ADS N-12)
  - PP STORM SEWER (PERFORATED HDPE, ADS N-12)
  - EXISTING SANITARY SEWER (PER TOPOGRAPHIC SURVEY)
  - EXISTING STORM SEWER (PER TOPOGRAPHIC SURVEY)
  - EXISTING ELECTRICAL LINE TO BE RELOCATED BY UTILITY PROVIDER
  - EXISTING 4" POND RECHARGE PIPING FROM CISTERN

- NOTES**
- ELECTRIC SERVICE RELOCATION AND INSTALLATION SHALL BE COORDINATED BY THE CONTRACTOR. COST OF DRY UTILITY SERVICE CONSTRUCTION IS THE RESPONSIBILITY OF THE OWNER.
  - CONTRACTOR TO UNCOVER AND VERIFY EXISTING PIPE SIZES AND INVERTS.



CONTRACTOR TO COORDINATE WITH FRANCHISE UTILITY COMPANY FOR RELOCATION OF GAS AND ELECTRIC UTILITIES. SERVICE TO BE MAINTAINED DURING CONSTRUCTION

REFER TO ARCHITECTURAL DRAWINGS FOR ROOF DRAIN CONNECTION

PROVIDE WALL SEAL AT WALL PENETRATIONS

PROVIDE WALL SEAL AT WALL PENETRATIONS

EXIST. SAN MH RIM: 765.25 N.S. INV: 751.52 (MATCH EXISTING) N.E. INV: 751.46

PROJECT NAME

# THE KRESGE FOUNDATION EXPANSION

PROJECT ADDRESS

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9/26/2014

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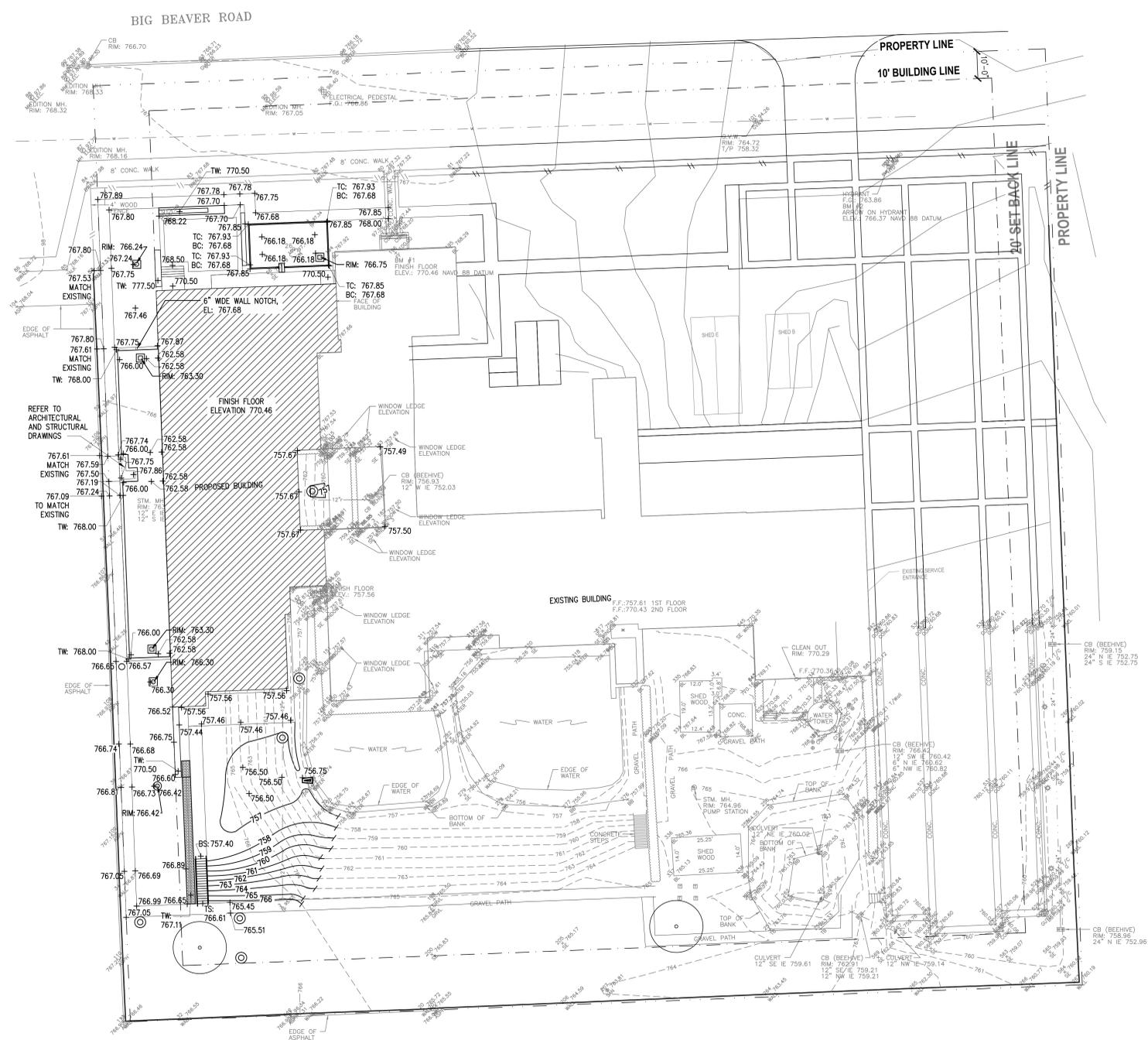
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SHEET TITLE

GRADING PLAN

SHEET NUMBER

# C5-01

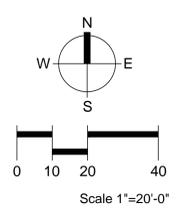


### LEGEND

- 804 — PROPOSED CONTOUR
- x 759.25 PROPOSED SPOT ELEVATION

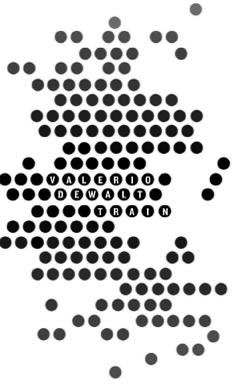
### NOTES

- ALL LANDSCAPED AREAS SHALL RECEIVE 6" (MIN.) OF TOPSOIL UNLESS OTHERWISE INDICATED.









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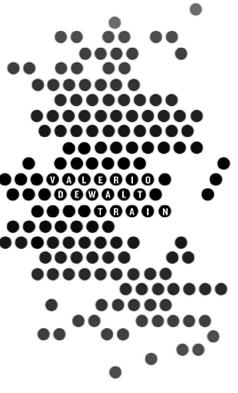
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**SHEET TITLE**  
**CONSTRUCTION DETAILS**



<p><b>J</b> NOT USED</p>	<p><b>G</b> NOT USED</p>	<p><b>D</b> <b>GROUNDCOVER AND PERENNIAL PLANTING</b>      1"=1'-0"                  © 2013 by Conservation Design Forum, Inc      C7-01 Details</p>	<p><b>A</b> <b>DECIDUOUS TREE PLANTING</b>      1/2"=1'-0"                  © 2013 by Conservation Design Forum, Inc      C7-01 Details</p> <p><b>GENERAL NOTES:</b>                  -EXCAVATION FOR TREE PITS SHALL BE 2.5 TIMES DIAMETER OF ROOT BALL. SET ON UNDISTURBED SUBGRADE.                  -REMOVE ALL RIBBONS AND/OR TREE TAGS AFTER APPROVAL BY LANDSCAPE ARCHITECT.                  -TREES SHALL BE ALIGNED AND PLUMB AFTER WATERING AND SETTLING.                  -PRUNE TREES AS REQUIRED, AND AS DIRECTED BY LANDSCAPE ARCHITECT.                  -STAKING AND GUYING TO BE AT THE DISCRETION OF THE CONTRACTOR. TREES SHALL NOT SWAY EXCESSIVELY.</p>
<p><b>K</b> NOT USED</p>	<p><b>H</b> NOT USED</p>	<p><b>E</b> <b>GROUNDCOVER AND BULB SPACING</b>      NTS                  © 2013 by Conservation Design Forum, Inc      C7-01 Details</p>	<p><b>B</b> <b>SHRUB PLANTING</b>      1/2"=1'-0"                  © 2013 by Conservation Design Forum, Inc      C7-01 Details</p> <p><b>NOTES:</b>                  1. SHRUBS SHALL BE MULCHED AS PER SPECIFICATIONS.</p>
<p><b>L</b> NOT USED</p>	<p><b>I</b> NOT USED</p>	<p><b>F</b> NOT USED</p>	<p><b>C</b> <b>VINE PLANTING DETAIL</b>      1 1/2"= 1'-0"                  © 2013 by Conservation Design Forum, Inc      C7-01 Details</p>



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PROJECT TEAM ARCHITECT STAMP  
  
 VDTA PROJECT NUMBER  
 13021.00

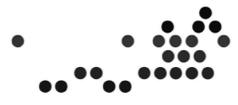
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No.	Issue	Issued for	Date
01	Preliminary Site Plan Review		09/26/2014

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SHEET TITLE  
**CONSTRUCTION DETAILS**



SHEET NUMBER

**C7-03**

### NYLOPLAST 12" DRAIN BASIN: 2812AG\_X

ALL DIMENSIONS IN INCHES UNLESS NOTED OTHERWISE  
 QUALITY MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-5  
 PAINT CASTINGS ARE FURNISHED WITH A BLACK PAINT  
 LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-110-251

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DATE	BY	DESCRIPTION
3/4/06	NYLOPLAST	NYLOPLAST 12" ADS DOME GRATE ASSEMBLY - TYPE B

### 12" ADS DRAIN BASIN

ALL DIMENSIONS IN INCHES UNLESS NOTED OTHERWISE  
 QUALITY MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-5  
 PAINT CASTINGS ARE FURNISHED WITH A BLACK PAINT  
 LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-110-229

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DATE	BY	DESCRIPTION
3/4/06	NYLOPLAST	12" ADS DRAIN BASIN QUICK INSTALLATION DETAIL

### NYLOPLAST 24" DRAIN BASIN: 2824AG\_X

ALL DIMENSIONS IN INCHES UNLESS NOTED OTHERWISE  
 QUALITY MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-5  
 PAINT CASTINGS ARE FURNISHED WITH A BLACK PAINT  
 LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-110-229

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DATE	BY	DESCRIPTION
4/5/08	NYLOPLAST	24" ADS DRAIN BASIN QUICK INSTALLATION DETAIL

### 2499CGD

APPROX. DRAIN AREA = 288.19 SQ IN  
 APPROX. WEIGHT WITH FRAME = 128.00 LBS

ALL DIMENSIONS IN INCHES UNLESS NOTED OTHERWISE  
 QUALITY MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-5  
 PAINT CASTINGS ARE FURNISHED WITH A BLACK PAINT  
 LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-110-251

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DATE	BY	DESCRIPTION
3/4/06	NYLOPLAST	24" ADS DOME GRATE ASSEMBLY - TYPE B

### 2499CGC

APPROX. WEIGHT WITH FRAME = 138.00 LBS

ALL DIMENSIONS IN INCHES UNLESS NOTED OTHERWISE  
 QUALITY MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-5  
 PAINT CASTINGS ARE FURNISHED WITH A BLACK PAINT  
 LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-110-225

THIS PRINT DISCLOSES SUBJECT MATTER IN WHICH NYLOPLAST HAS PROPRIETARY RIGHTS. THE RECEIPT OR POSSESSION OF THIS PRINT DOES NOT CONSTITUTE A LICENSE TO REPRODUCE OR TRANSMIT IN ANY MANNER OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF NYLOPLAST.

DATE	BY	DESCRIPTION
3/4/06	NYLOPLAST	24" ADS SOLID COVER ASSEMBLY - TYPE B

### N-12 HP STORM TRENCH INSTALLATION DETAIL (ALTERNATE)

TABLE 1. RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN TRENCH WIDTH
12" (300mm)	30" (750mm)
15" (375mm)	34" (860mm)
18" (450mm)	38" (960mm)
24" (600mm)	48" (1200mm)
30" (750mm)	60" (1500mm)
36" (900mm)	64" (1620mm)
48" (1200mm)	80" (2030mm)
60" (1500mm)	96" (2440mm)

TABLE 2. MAXIMUM COVER FOR ADS N-12 PIPE, ALTERNATE INSTALLATION, 1' (n=120)

PIPE DIAM.	CLASS II	CLASS III	CLASS IV
12" (300mm)	17 (5.2m)	14 (4.3m)	11 (3.4m)
15" (375mm)	17 (5.2m)	14 (4.3m)	10 (3.0m)
18" (450mm)	16 (4.9m)	13 (4.0m)	10 (3.0m)
24" (600mm)	14 (4.3m)	12 (3.7m)	9 (2.7m)
30" (750mm)	13 (4.0m)	12 (3.7m)	8 (2.4m)
36" (900mm)	11 (3.4m)	12 (3.7m)	7 (2.1m)
48" (1200mm)	11 (3.4m)	10 (3.0m)	6 (1.8m)
60" (1500mm)	11 (3.4m)	10 (3.0m)	6 (1.8m)

NOTES:  
 1. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.  
 2. SOIL CLASSIFICATIONS ARE PER THE LATEST VERSION OF ASTM D2922. CLASS IV-B MATERIALS (M, CH, AS) DEFINED IN PREVIOUS VERSIONS OF ASTM D2922 ARE NOT APPROPRIATE BACKFILL MATERIALS.  
 3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTECHNICAL MATERIAL.  
 4. BEDDINGS: SUITABLE MATERIAL SHALL BE CLASS I. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER, UNLESS OTHERWISE NOTED BY THE ENGINEER. MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4" x 3/4" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).  
 5. BACKFILL: FOR PIPES OUTSIDE OF PAVEMENT CLASS I MATERIAL TO BE USED FOR BACKFILL UP TO THE SPRINGLINE OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER, UNLESS OTHERWISE NOTED BY THE ENGINEER. CLASS I MATERIAL MUST BE COMPACTED IN 6" (200mm) LIFTS TO 95% STANDARD PROCTOR DENSITY.  
 6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" (300mm) FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOUTATION.  
 7. SELECT NATIVE CLEAN BACKFILL SHALL BE WELL PLACED, MODERATELY COMPACTED (85% SPD) CLASS IV OR BETTER PER ASTM D2922 WITH NO FOREIGN DEBRIS INCLUDING ROCKS, LARGE CLUMPS ORGANIC MATERIAL, OR FROZEN MATERIAL.  
 8. N-12 HP ALTERNATE STORM TRENCH DETAIL MUST BE APPROVED BY DESIGN ENGINEER. DETAIL DOES NOT SUPERSEDE ADS STANDARD DETAIL STD-109.

### 2499CGD

APPROX. DRAIN AREA = 288.19 SQ IN  
 APPROX. WEIGHT WITH FRAME = 128.00 LBS

ALL DIMENSIONS IN INCHES UNLESS NOTED OTHERWISE  
 QUALITY MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-5  
 PAINT CASTINGS ARE FURNISHED WITH A BLACK PAINT  
 LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-110-251

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DATE	BY	DESCRIPTION
3/4/06	NYLOPLAST	24" ADS DOME GRATE ASSEMBLY - TYPE B

### OUTLET CONTROL STRUCTURE

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ALL DIMENSIONS IN INCHES UNLESS NOTED OTHERWISE  
 QUALITY MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-5  
 PAINT CASTINGS ARE FURNISHED WITH A BLACK PAINT  
 LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-110-251

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DATE	BY	DESCRIPTION
3/4/06	NYLOPLAST	24" ADS DOME GRATE ASSEMBLY - TYPE B

### GREASE INTERCEPTOR

ALL DIMENSIONS IN INCHES UNLESS NOTED OTHERWISE  
 QUALITY MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-5  
 PAINT CASTINGS ARE FURNISHED WITH A BLACK PAINT  
 LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-110-225

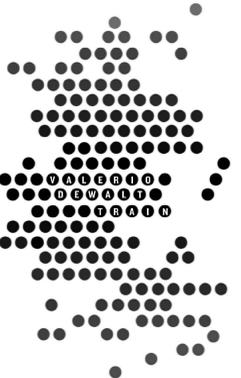
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DATE	BY	DESCRIPTION
3/4/06	NYLOPLAST	24" ADS SOLID COVER ASSEMBLY - TYPE B

**I SANITARY SEWER CLEAN OUT (CO)**

**F HDPE STORM SEWER- LANDSCAPE APPLICATION**

**C 24" ADS DRAIN BASIN**



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VDTA PROJECT NUMBER

13021.00

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SHEET TITLE

**CONSTRUCTION DETAILS**



SHEET NUMBER

**C7-04**

### STORM SEWER MANHOLE A

MANHOLE TEES MAY BE USED WHEN PIPE DIA. HORIZONTAL MEASURE IS 48" OR GREATER

INTEGRALLY CAST MANHOLE TEE CIRCULAR PIPE - A.S.T.M. SPEC. C76 CLASS 4 MIN. ELLIPTICAL PIPE - A.S.T.M. SPEC. C 507 HE CLASS 4 MIN.

SEWER PIPE SIZE (I.D.)	BOTTOM DIA. (IF NOT ON PLANS)
36" OR LESS	48"
42" & 48"	60"
54" & 60"	72"

DIAMETER OF MANHOLE SHALL BE INCREASED AS SHOWN ON THE PLANS DEPENDING ON THE ANGLE OF THE SEWER

PRECAST BASE-2500 P.S.I. AT 28 DAYS ( ON 2" MIN. SAND SUBBASE )

NO. 4 BARS AT 12" EACH WAY

### 4 FT. DIAMETER CATCH BASIN

NOTE: FOR OUTLET CONTROL STRUCTURES, ECCENTRIC CONE SHALL BE USED.

REINFORCING STEEL REQUIREMENTS IN TABLE BELOW

TOP SLAB X-SECTION

FRAME & COVER (SEE NOTE 15)

PLACE FRAME IN FULL BED OF MORTAR

MIN. 6" - MAX. 12" ADJUSTMENT

STEPS, 16" O.C. ( STEPS MUST BE M.A. INDUSTRIES P.S.I. POLYPROPYLENE OR APPROVED EQUAL )

1/2" MORTAR CEMENT PLASTER COAT ON BLOCK STRUCTURE

CONCRETE BLOCK OR PRECAST MANHOLE

POURED CONCRETE FILLET

CONCRETE BLOCK WALL SECTION

NO. 4 BARS AT 12" EACH WAY

PLAN

PRECAST OR POURED CONCRETE BASE - 2500 P.S.I. AT 28 DAYS ( IF PRECAST IS USED, PLACE 2" MIN. SAND SUBBASE )

\* DIAMETER OF MANHOLE SHALL BE INCREASED AS SHOWN ON THE PLANS DEPENDING ON THE ANGLE OF THE SEWERS

OUTLET "D" I.D.	M.H. TOP SLAB "S"	WALL "T"	REINFORCING STEEL
36" OR LESS	4"	9"	12" 3/4" @ 9" EA. WAY
42"	5"	10"	12" 3/4" @ 9" EA. WAY
48" - 54"	6"	11"	12" 7/8" @ 9" EA. WAY
7"	12"	12"	1" @ 9" EA. WAY
8"	12"	12"	1" @ 9" EA. WAY

### STORM SEWER MANHOLE A WITH FLAT SLAB

### GENERAL NOTES

- PRIOR TO CONSTRUCTION, THE CONTRACTOR MUST HAVE IN HIS POSSESSION A COPY OF A VALID PERMIT TO CONSTRUCT A CONNECTION TO, OR AN EXTENSION OF, THE STORM WATER DRAINAGE SYSTEM.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING, AT A TIME AND PLACE AS ARRANGED BY THE ENGINEER DEPT., AT WHICH VARIOUS UTILITY COMPANIES AND GOVERNMENTAL AGENCY REPRESENTATIVES WILL BE PRESENT. THE OWNERS ENGINEER SHALL SUBMIT APPROVED PLANS TO ALL UTILITY COMPANIES AND GOVERNMENTAL AGENCIES 10 DAYS PRIOR TO THE PRE-CONSTRUCTION MEETING. CONSTRUCTION SHALL START WITHIN 3 WEEKS OF MEETING.
- AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL GIVE NOTIFICATION OF HIS INTENTION TO BEGIN CONSTRUCTION TO THE CITY OF TROY FIELD ENGINEERING DEPARTMENT, 524-3409, TO THE CITY OF DEPARTMENT OF PUBLIC WORKS 524-3392, THE COUNTY PUBLIC WORKS COMMISSIONERS OFFICE (858-0958) AND THE COUNTY ROAD COMMISSION (858-4835) IF APPLICABLE.
- THE CONTRACTOR SHALL SECURE PERMITS FROM THE COUNTY PUBLIC WORKS COMMISSION FOR ALL TAPS AND CROSSINGS OF COUNTY DRAINS AND SHALL PAY THE COST OF SAID PERMITS AND THE COST OF ANY INSPECTION CHARGES BY THAT AGENCY FOR WORK DONE UNDER THE PERMITS.
- 72 HOURS PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL TELEPHONE MISS DIG (1-800-482-7171) FOR THE LOCATION OF UNDERGROUND FACILITIES, AND SHALL ALSO NOTIFY REPRESENTATIVES OF ANY OTHER FACILITIES LOCATED IN THE VICINITY OF THE WORK, WHICH MAY NOT BE HANDLED BY MISS DIG.
- ALL STORM WATER DRAINAGE SYSTEM CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF TROY, COUNTY ROAD COMMISSION, AND/OR COUNTY DRAIN COMMISSION AS APPLICABLE.
- STORM SEWER PIPE SHALL BE REINFORCED CONCRETE, ASTM C-76 CLASS III OR HIGHER UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER. THE FOLLOWING STORM SEWER PIPE MATERIALS MAY BE USED ONLY WITH APPROVAL OF THE CITY ENGINEER. (FSDLS PH & RESISTIVITY TESTS DEMONSTRATE A PH OF 5.0 TO 9.0 AND AN ELECTRICAL RESISTANCE OF 2000 OHM/CM/FT OR HIGHER, THEN HELICALLY CORRUGATED, FULL WELDED SEAM, AASHTO M-218 STEEL PIPE, GAUGE AS SHOWN, MANUFACTURED ACCORDING TO AASHTO M-36 WITH 2.2/3" X 1/2" OR 125MM X 25MM CORRUGATIONS, ALUMINIZED AT 1.00 OZ PER SQ. FT. PER AASHTO M-274 MAY BE USED. THE C.S.P. DIAMETER MUST HAVE THE SAME HYDRAULIC CAPACITY AS THE CONCRETE PIPE. WHEN THE PIPE IS NOT SUBJECT TO CRUSHING FROM CONSTRUCTION OPERATIONS AND PROPERTY MAINTENANCE AND A MIN. 3" OF COVER CAN BE MAINTAINED ABS COMPOSITE (TRUSS) PIPE AND PVC PIPE MAY BE USED OUTSIDE PUBLIC ROAD R.O.W. WITH APPROVAL OF THE CITY ENGINEER.
- REINFORCED CONCRETE PIPE JOINTS SHALL BE MODIFIED TONGUE & GROOVE WITH RUBBER "O" RING GASKET. CORRUGATED STEEL PIPE SHALL HAVE TWO CIRCUMFERENTIAL CORRUGATIONS ROLLED ON EACH END OF EACH SECTION. STEEL COUPLING BANDS OF THE SAME MATERIAL AS THE PIPE, FITTING THE PIPE CONFIGURATION WITH TWO "O" RING RUBBER GASKETS SHALL PRODUCE A WATER TIGHT JOINT ("HUGGER BANDS"). "PVC & TRUSS" PIPE JOINTS SHALL BE CHEMICALLY FUSED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.
- UNLESS OTHERWISE INDICATED ON THE PLANS, ALL STORM SEWER BEDDING SHALL BE STANDARD BEDDING. CRUSHED STONE BEDDING SHALL BE PLACED, IF THE INSPECTOR DEEMS THAT THE INSTALLATION WARRANTS IT.
- THE CONTRACTOR SHALL PROVIDE A 3 YEAR MAINTENANCE AND GUARANTEE BOND TO THE CITY, DATED FROM THE TIME OF FINAL ACCEPTANCE BY THE CITY. THE BOND AMOUNT SHALL BE 35% OF CONSTRUCTION COSTS.
- BEFORE FINAL ACCEPTANCE, A FINAL INSPECTION MUST BE MADE BY ALL NECESSARY CITY DEPARTMENTS, AND AS-BUILT SEPIA MYLARS SUBMITTED TO THE ENGINEERING DEPARTMENT.
- ALL STORM SEWER PIPE 30" AND LARGER SHALL HAVE POINTED JOINTS.
- ONLY NEW UNDAMAGED STORM SEWER PIPE SHALL BE USED. THE CITY INSPECTOR SHALL HAVE THE RIGHT TO REJECT ANY OR ALL PIPE.

### UNDERDRAIN DETAIL FOR CATCH BASIN IN CURB FOR PAVEMENT WITHIN THE CITY R.O.W.

6" MIN. SMOOTH PLASTIC PIPE MEETING ASTM SPECIFICATIONS D 3033 OR D 3034 WITH NOT LESS THAN 30 P.S.I. AT 5% DEFLECTION. "CONTECH" A-2000 PERFORATED PIPE OR APPROVED EQUAL.

PROP. SURFACING AS PER PLAN

M.D.O.T. 34R OPEN-GRADED AGGREGATE

6" MIN. BELOW AGG. BASE IN PAVED AREAS 12" MIN. BELOW NON-PAVED AREAS

GEOTEXTILE PIPE WRAP (M.D.O.T. SPEC. 8.09.02)

### REAR YARD UNDERDRAIN CROSS SECTION

1/2" HOLES (+ or - 1/8") 4 ROWS PER LENGTH OF PIPE

### GENERAL PIPE BEDDING & TRENCH NOTES

- THE CONTRACTOR SHALL INSTALL THE PIPE IN ACCORDANCE WITH THE BEDDING DETAIL REQUIRED FOR THE PIPE DEPTH ( MEASURED FROM THE TOP OF THE PIPE ), AND TRENCH WIDTH ( MEASURED ACROSS THE TRENCH AT THE TOP OF THE PIPE ) CONSTRUCTED. A CONTRACTOR MAY ALWAYS USE A HIGHER QUALITY BEDDING CLASS THAN REQUIRED. ANY OTHER VARIATIONS MUST BE APPROVED IN WRITING BY THE ENGINEER.
- CRUSHED STONE BEDDING SHALL BE UTILIZED FOR ALL DEWATERED GROUND TRENCHES AND SHALL UTILIZE A TRENCH WIDTH OF 30" ( MINIMUM ).
- BEDDING & BACKFILL MATERIAL SHALL BE AS FOLLOWS:  
 CRUSHED STONE BEDDING: SHALL CONSIST OF WELL GRADED CRUSHED STONE. THE STONE SHALL CONFORM TO ASTM D 448, #67, ASTM D 2487 CLASS 1, OR ALTERNATIVE APPROVED BY THE ENGINEER. ANY MATERIAL INCORPORATED SHALL PROVIDE A MINIMUM OF 90% CRUSHED MATERIAL. MDT COURSE AGGREGATES 6A, 6A+, 9A, 17A & 25 SERIES ARE ALSO APPROVED FOR USE IF THEY ARE MANUFACTURED WITH SUFFICIENT CRUSHED MATERIAL AND NO STONE IS LARGER THAN 1-1/4 INCH IN DIAMETER. SPACING THE HAUNCH AREA IS REQUIRED. FOR DENSITY.  
 STANDARD BEDDING: SHALL CONSIST OF WELL GRADED COURSE SANDS AND GRAVEL ( 1-1/4 INCH MAXIMUM DIAMETER ) CONTAINING A SMALL PERCENTAGE OF FINES. THE MATERIAL SHALL CONFORM TO ASTM D 2487 CLASS 1 AND SHALL INCLUDE PEA PEBBLE AND MDT AGGREGATES 20 SERIES, 22 SERIES, 23A, 26A, 28 SERIES & 31 SERIES. 90% MINIMUM DENSITY REQUIRED.

### UNDERDRAIN DETAIL

DEPTH AS CALLED FOR ON PLANS

TOP OF MASONRY OR BOTTOM OF CASTING

3" MIN.

8" 2'-0" 8"

5"

48" DIA.

1/2" MORTAR CEMENT PLASTER COAT

0' TO 15'

MORTAR BEVEL 45°

15' & OVER

12"

CONCRETE FOOTING

4"

4"

### STANDARD BEDDING TRENCH DETAIL 'A'

EXISTING GROUND

BACK OF CURB OR EDGE OF SHOULDER

PAVEMENT

SUBBASE (AS CALLED FOR ON PLANS)

SUBGRADE

GRANULAR BACKFILL CLASS 1 (SAND) COMPACTED TO 95% MAX. DENSITY

SEWER AS CALLED FOR ON THE PLANS

STANDARD BEDDING TO SPRINGLINE

4" MIN. UNDERCUT

MAXIMUM TRENCH WIDTH = "W" O.D. + 12" FOR 18" - 36" I.D. O.D. + 24" FOR 42" I.D. & LARGER

2 LAYERS OF CAREFULLY COMPACTED SAND

O.D. OF PIPE SPECIFIED

COMPACTED, WELL ROUNDED PE PEBBLES PASSING #2" SIEVE

4" MIN.

4" MIN.

30" MIN.

2 LAYERS CAREFULLY COMPACTED

NOTE: APPROVAL MAY BE GIVEN TO ALTERNATE MATERIALS AND METHODS TO ACHIEVE STANDARD BEDDING.

NOTE: FOR ALL TRENCHES GREATER THAN 30" IN WIDTH, DEWATERED TRENCHES AND ALL TRENCHES GREATER THAN 20' IN DEPTH.

## CITY OF TROY

OAKLAND COUNTY, MICHIGAN

### STANDARD STORM SEWER DETAILS

ENGINEERING DEPARTMENT

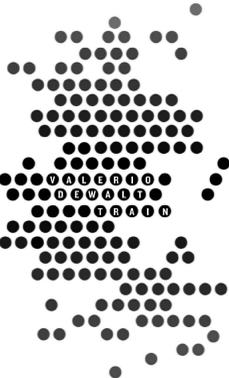
APPROVED BY: STEVEN J. VANDETTE, CITY ENGINEER DATE: JANUARY 8, 2001

DATE	REMARKS	PROJECT NO.	SHEET NO.

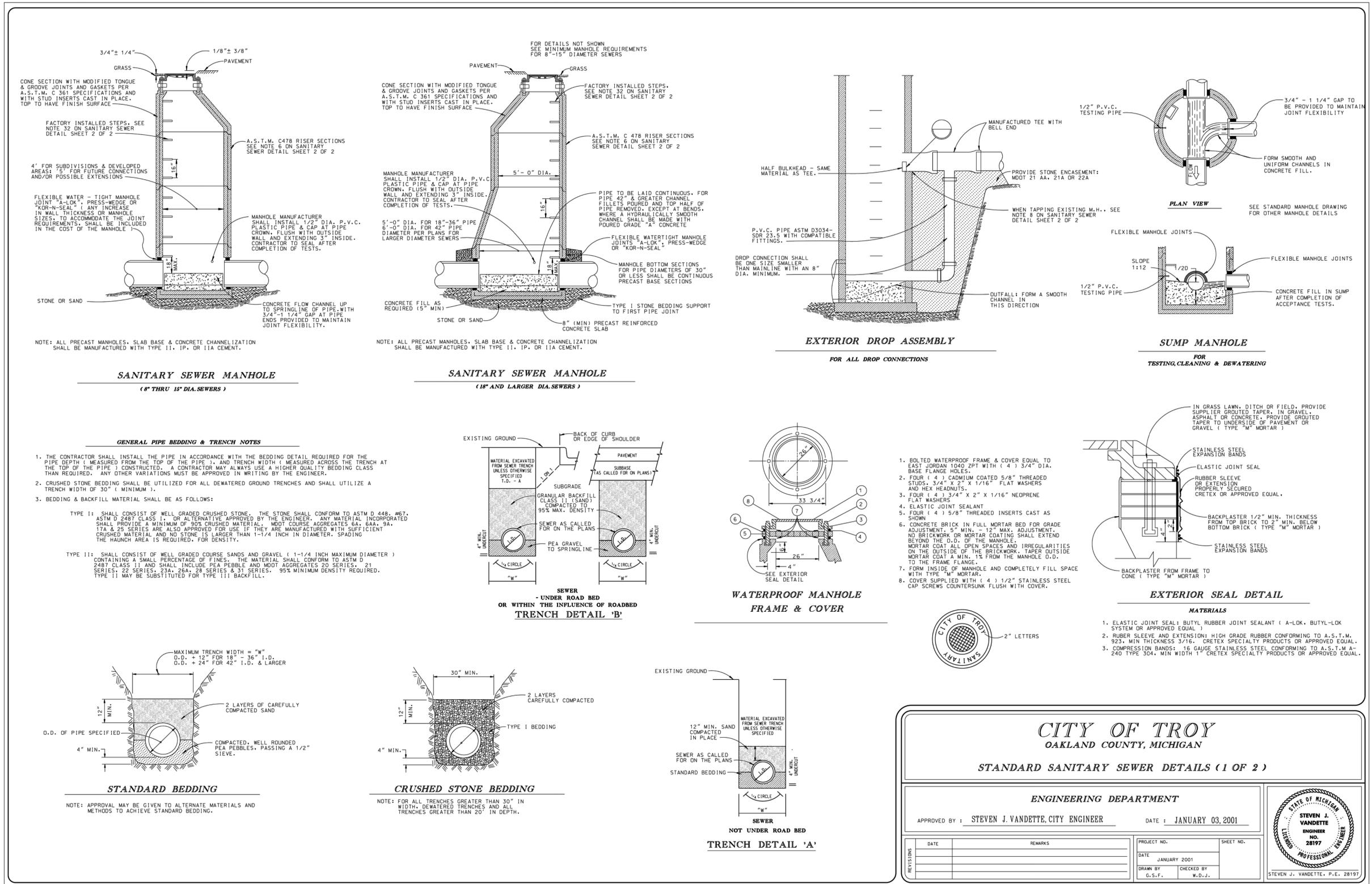
DRAWN BY: G.S.F. CHECKED BY: R.D.J.

STEVEN J. VANDETTE, P.E. 28197

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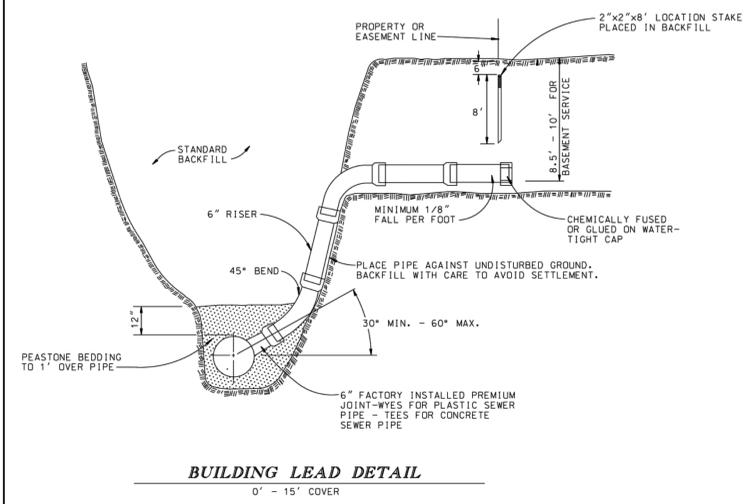


No.	Issued for	Date
01	Preliminary Site Plan Review	09/26/2014



**SANITARY SEWER CONSTRUCTION NOTES**

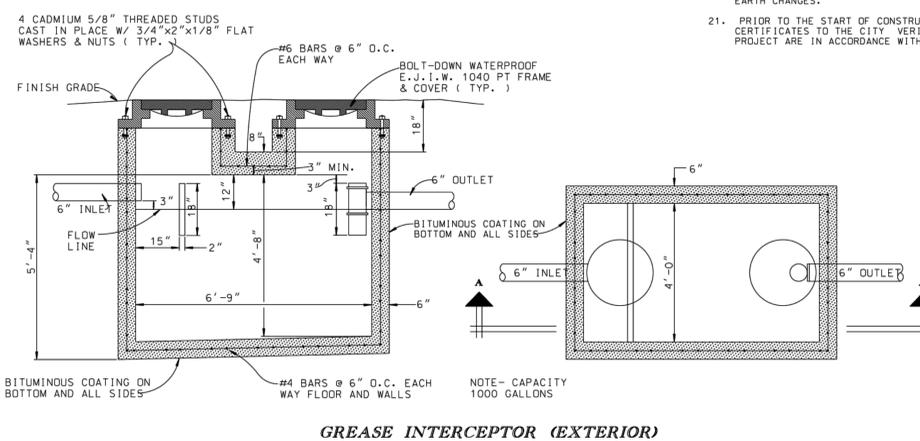
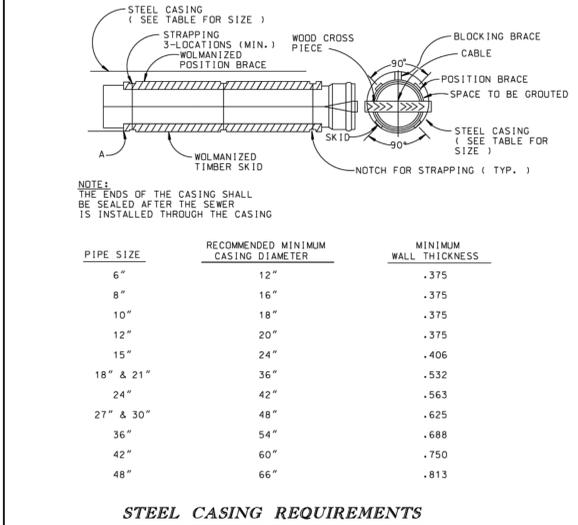
- ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF TROY DEVELOPMENT STANDARDS. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL ATTEND A PRECONSTRUCTION MEETING AT A TIME AND PLACE ARRANGED BY THE CITY ENGINEER, IN WHICH VARIOUS UTILITY COMPANIES AND GOVERNMENTAL AGENCY REPRESENTATIVES WILL BE PRESENT. THE OWNER'S ENGINEER SHALL SUBMIT APPROVED PLANS TO ALL UTILITY COMPANIES AND GOVERNMENTAL AGENCIES TO DAYS PRIOR TO PRECONSTRUCTION MEETING. CONSTRUCTION SHALL START WITHIN 3 WEEKS OF MEETING. THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER 72 HOURS PRIOR TO STARTING ANY WORK.
- AT ALL CONNECTIONS TO THE EVERGREEN SANITARY SEWERS OR TO EXTENSIONS THEREOF, AND BEFORE START OF CONSTRUCTION, THE CONTRACTOR MUST REQUEST AND HAVE IN HIS POSSESSION AN APPROVED CONNECTIONS PERMIT ISSUED BY THE OAKLAND COUNTY DRAIN COMMISSIONERS OFFICE.
- NO SEWER INSTALLATION SHALL HAVE AN INFILTRATION EXCEEDING 100 GALLONS PER INCH OF DIAMETER PER MILE OF PIPE PER 24 HOUR PERIOD. EXFILTRATION TESTING SHALL BE CONDUCTED WHERE GROUND WATER IS INSUFFICIENT. ALL INSTALLATIONS SHALL ALSO PASS LOW PRESSURE AIR TEST AS SPECIFIED IN THE CITY STANDARDS.  
 ABS COMPOSITE PIPE AND ANY APPROVED PLASTIC PIPE SHALL BE SUBJECT TO DEFLECTION TEST 30 DAYS AFTER CONSTRUCTION WITH A NINE SIDED MANDREL. THE CONTRACTOR MUST SUPPLY THE MANDREL AND PERFORM THE TEST. THE OWNER WILL WITNESS THE TEST. DEFLECTION SHALL NOT EXCEED 5%. THE OWNER RESERVES THE RIGHT TO TEST THE SEWER FOR DEFLECTION NOT TO EXCEED 7% DURING THE PERIOD OF THE MAINTENANCE BOND. ANY SEWER FOUND EXCEEDING THESE LIMITS SHALL BE REPLACED BY AND AT THE CONTRACTOR'S EXPENSE.  
 AS PART OF THE FINAL INSPECTION, THE CONTRACTOR SHALL PROVIDE FOR TELEVISION INSPECTION OF THE SANITARY SEWER LINES INSTALLED UNDER THIS CONTRACT. THE CONTRACTOR SHALL ARRANGE FOR, ENGAGE AND PAY ALL EXPENSES INVOLVED FOR THE SERVICES OF A COMPETENT COMPANY TO PERFORM THIS TELEVISION INSPECTION. THE INSPECTION SHALL BE CARRIED OUT UNDER THE DIRECT SUPERVISION OF THE INSPECTOR WITH ALL TELEVISION INSPECTION BEING OBSERVED BY REPRESENTATIVES OF THE CITY AND THE CONTRACTOR. ANY TELEVISION VIEWING PERFORMED IN THE ABSENCE OF THE CITY OR A REPRESENTATIVE OF THE CITY SHALL NOT BE CONSIDERED A PART OF THE FINAL INSPECTION. ALL TELEVISION INSPECTION SHALL BE RECORDED ON VIDEO TAPE AND TURNED OVER TO THE CITY FOR READY REFERENCE AT A LATER DATE. THE VIDEO RECORDING SHALL DISPLAY CONTINUOUSLY THE DATE, TIME AND ENGINEERING STATIONS AND SHALL PERIODICALLY DISPLAY THE NAME OF THE PROJECT, NAME OF THE AREA COVERED AND DIRECTION OF TRAVEL. THE TAPE MUST BE 1/2 INCH VHS FORMAT.
- INFILTRATION TESTING WHEN REQUIRED BY THE CITY ENGINEER SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE CITY. TEST SECTIONS SHALL GENERALLY BE LIMITED TO A MAXIMUM LENGTH OF ONE HALF MILE. THE ENGINEER RESERVES THE RIGHT TO TEST SHORTER PIPE LENGTH SEGMENTS IF HE DEEMS IT NECESSARY TO ASSURE THAT NO SEGMENT EXCEEDS THE INFILTRATION LIMITS.
- BUILDING LEAD PIPE, WYES AND CAPS SHALL BE SOLID WALL PLASTIC PIPE, 6" DIA., SDR 23.5 WITH JOINTS AS SPECIFIED IN NOTE #14. THE JOINT BETWEEN TWO DISSIMILAR SIZES OR TYPES OF BUILDING LEAD PIPE SHALL BE MADE WITH A PROPER PROPER FITTING ACCEPTABLE TO THE CITY ENGINEER.
- ALL NEW MANHOLES SHALL HAVE APPROVED FLEXIBLE, WATER-TIGHT SEALS WHERE PIPES PASS THROUGH WALLS. MANHOLES SHALL BE PRECAST REINFORCED CONCRETE IN ACCORDANCE WITH ASTM C478 CURRENT SPECIFICATIONS. PRECAST MANHOLE JOINTS AND GASKETS SHALL BE MODIFIED TONGUE AND GROOVE IN ACCORDANCE WITH ASTM C361 CURRENT SPECIFICATIONS. PRECAST MANHOLE CONE SECTIONS SHALL BE CITY OF TROY MODIFIED ECCENTRIC CONE TYPE. ALL MANHOLES SHALL BE PROVIDED WITH BOLTED, WATER-TIGHT COVERS. MANHOLE STEPS SHALL NORMALLY BE PROVIDED ON A BACK WALL OF THE MANHOLE FURTHEST FROM TRAFFIC.
- AT THE CONNECTIONS TO MANHOLES, SEWERS OR EXTENSIONS THEREOF, DROP CONNECTIONS WILL BE REQUIRED WHEN THE DIFFERENCE IN INVERT ELEVATIONS EXCEEDS 18 INCHES. ALL DROP CONNECTIONS ARE TO BE EXTERIOR. INTERNAL DROP CONNECTIONS ARE NOT ACCEPTABLE.
- EXISTING MANHOLES SHALL BE TAPPED WITH THE "KOR-N-SEAL" METHOD, WITH A WATER-TIGHT RUBBER BOOT FOR SEWERS 6" THRU 15" IN DIAMETER. MANHOLE TAPS FOR 18" DIAMETER SEWERS AND LARGER SHALL HAVE HOLES DRILLED AT 4 INCHES CENTER TO CENTER AROUND THE PERIPHERY OF THE OPENING TO CREATE A PLANE OF WEAKNESS. BEFORE BREAKING OUT THE SECTION, NON-SHRINK GROUT SHALL BE USED TO SEAL THE OPENING AND A CONCRETE COLLAR SHALL BE POURED 12 INCHES AROUND THE PIPE AND EXTEND 12 INCHES BEYOND THE OPENING.
- NEW MANHOLES CONSTRUCTED IN THE CITY OF TROY SHALL HAVE COVERS READING "CITY OF TROY" IN RAISED LETTERS. BOLT DOWN FRAMES AND COVERS ARE REQUIRED.
- NO GROUND WATER, STORM WATER, CONSTRUCTION WATER, DOWNSPOUT DRAINAGE OR WEEP TILE DRAINAGE SHALL BE ALLOWED TO ENTER ANY SANITARY SEWER INSTALLATION.
- PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL TELEPHONE MISS DIG (1-800-482-7171) FOR THE LOCATION OF UNDERGROUND GAS AND CABLE FACILITIES AND SHALL ALSO NOTIFY REPRESENTATIVES OF OTHER UTILITIES LOCATED IN THE VICINITY OF THE WORK.  
 THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION. ALL COSTS FOR LOCATING, REMOVING AND REPLACING OR RELOCATING THESE UTILITIES SHALL BE INCLUDED IN THE COST OF CONSTRUCTING THE SANITARY SEWER. ALL UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED WITH LIKE MATERIAL. THE CONTRACTOR SHALL VERIFY THE DEPTH AND HORIZONTAL LOCATION OF ALL EXISTING UTILITIES BEFORE ANY WORK IS STARTED. THE EXACT LOCATION OF EXISTING UTILITIES SHALL BE DETERMINED BY HAND DIGGING.
- THE CONTRACTOR SHALL MAINTAIN ALL EXISTING SANITARY SEWER, WATER OR STORM SEWER SERVICE CONNECTIONS DURING CONSTRUCTION. ANY ADJUSTMENTS OR REPAIRS TO THESE SERVICES SHALL BE MADE BY THE CONTRACTOR AND THE COST SHALL BE INCLUDED IN THE COST OF CONSTRUCTING THE SANITARY SEWER, UNLESS OTHERWISE PROVIDED IN THE CONTRACT.
- THE CONTRACTOR IS REQUIRED TO CONTACT THE INSPECTION SECTION OF DETROIT WATER AND SEWERAGE DEPARTMENT AT 833-4682, THREE WORKING DAYS PRIOR TO START OF ANY SANITARY SEWER CONSTRUCTION.
- SEWER PIPE MATERIAL:  
 8" THROUGH 15" PIPE SHALL BE A.B.S. (ACRYLONITRILE-BUTADIENE-STYRENE) OR P.V.C. (POLY VINYL CHLORIDE) COMPOSITE SEWER PIPE CONFORMING TO THE CURRENT ASTM D2680 SPECIFICATIONS WITH TYPE SC JOINTS FOR ABS AND ELASTOMERIC RUBBER GASKETED JOINTS FOR PVC.  
 18" AND LARGER PIPE SHALL BE REINFORCED CONCRETE CIRCULAR SEWER PIPE CONFORMING TO THE CURRENT ASTM SPECIFICATION C-76 (WALL C) WITH SIZE AND CLASS AS INDICATED ON THE PLANS. ALL REINFORCED CONCRETE SEWER PIPE SHALL BE CAST WITH REINFORCING STEEL EXTENDING INTO THE SPIGOTS. ALL JOINTS AND GASKETS SHALL BE MODIFIED TONGUE AND GROOVE, CONFORMING WITH THE REQUIREMENTS OF ASTM C 361.  
 EXTRA STRENGTH VITRIFIED CLAY PIPE CONFORMING TO THE CURRENT ASTM SPECIFICATION C - 700. FOR USE IN INDUSTRIAL AREAS ONLY.
- IN INDUSTRIAL AREAS, OR ANY OTHER AREAS WHERE DEEMED NECESSARY BY THE CITY ENGINEER, PRIVATE SERVICE CONNECTIONS MADE TO THE SEWER LEAD MUST HAVE AN ACCESSIBLE SAMPLING AND MONITORING MANHOLE. THE MANHOLE SHALL BE LOCATED ON PRIVATE PROPERTY AT A LOCATION APPROVED BY THE CITY ENGINEER.
- BUILDING LEAD CONNECTIONS SHALL BE MADE WITH 6" WYES FOR A.B.S. OR P.V.C. AND 6" TEES FOR CONCRETE PIPE. WYES FOR ABS OR PVC AND PIPE SHALL BE FACTORY FABRICATED (NOT EXTRUDED) AND SHALL BE CHECKED FOR IRREGULARITIES WHICH COULD AFFECT THE DEFLECTION TEST PRIOR TO INSTALLATION.
- A CITY, OAKLAND COUNTY ROAD COMMISSION, AND/OR MICHIGAN DEPARTMENT OF TRANSPORTATION PERMIT IS REQUIRED FOR ALL CONSTRUCTION WITHIN THEIR ROAD RIGHT-OF-WAYS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SECURE ALL PERMITS AND BONDS PRIOR TO CONSTRUCTION, OR INSURE THAT ALL REQUIRED PERMITS AND BONDS HAVE BEEN OBTAINED PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL ABIDE BY ALL THE REQUIREMENTS OF THE ROAD RIGHT-OF-WAY OWNER REGARDING CONSTRUCTION OF WATER AND SEWER MAINS, MAINTAINING TRAFFIC, BARRICADE, BORING, BACKFILL AND RESTORATION. THERE WILL BE NO ADDITIONAL COMPENSATION DUE THE CONTRACTOR FOR COMPLYING WITH THESE REQUIREMENTS.
- NO WASTE EXCAVATION MATERIAL SHALL BE DISPOSED OF BY PLACING IT IN ANY FLOODPLAIN OR WETLAND OF THE STATE UNLESS APPROPRIATE PERMITS HAVE BEEN ISSUED. THE CONTRACTOR OR PROPERTY OWNER MUST OBTAIN LOCAL FILL PERMITS FOR ANY MATERIALS DEPOSITED UPON LANDS WITHIN ANY CITY, VILLAGE OR TOWNSHIP.
- THE CONTRACTOR SHALL APPLY TO THE CITY OF TROY ENGINEERING DEPARTMENT AND OBTAIN A SOIL EROSION CONTROL PERMIT UNDER THE ACT 347 PRIOR TO MAKING ANY EARTH CHANGES.
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL FURNISH MATERIAL CERTIFICATES TO THE CITY, VERIFYING THAT ALL THE MATERIALS USED ON THE PROJECT ARE IN ACCORDANCE WITH THE SPECIFICATIONS.
- COMPACTED SAND BACKFILL IS TO BE USED EXCLUSIVELY AT ALL ROAD CROSSINGS, DRIVEWAYS AND SIDEWALKS THROUGHOUT THE COURSE OF THE PROJECT. IN ROADWAYS AND DRIVEWAYS, THE TOP 12 INCHES OF THE EXCAVATION SHALL BE FILLED WITH 21AA LIMESTONE, EXCEPT AS PROVIDED IN THE SPECIFICATIONS, THERE WILL BE NO ADDITIONAL COMPENSATION FOR COMPLYING WITH THIS REQUIREMENT.
- IF AN EXISTING GRAVEL ROAD IS DISTURBED BY CONSTRUCTION EQUIPMENT OR BY STOCKPILING OF MATERIALS OUTSIDE THE EXCAVATION AREA, A MINIMUM OF 230 POUNDS PER SQ. YD. OF 21AA LIMESTONE OR APPROVED EQUAL SHALL BE USED TO REPLACE THE DISTURBED AREA.
- ALL CONSTRUCTION CHANGES MUST HAVE WRITTEN APPROVAL OF THE PROJECT ENGINEER.
- THE CONTRACTOR SHALL BE REQUIRED TO COMPLETE ALL WORK IN AN EXPEDITIOUS MANNER AND SHALL NOT STOP CONSTRUCTION EXCEPT FOR REASONS BEYOND HIS CONTROL SUCH AS, BUT NOT LIMITED TO STRIKES, WEATHER AND UNAVAILABILITY OF MATERIALS.
- THE CONTRACTOR SHALL PROVIDE A 3 YEAR MAINTENANCE AND GUARANTEE BOND TO THE CITY, DATED FROM THE TIME OF FINAL ACCEPTANCE BY THE CITY ENGINEER. A PERFORMANCE BOND SHALL ALSO BE PROVIDED. ALL BONDS SHALL BE FOR 100% OF CONSTRUCTION COST.
- ALL PRECAST MANHOLES, SLAB BASES, CONCRETE PIPE AND CONCRETE CHANNELIZATION SHALL BE MANUFACTURED WITH TYPE 11, 1P OR 11A CEMENT.
- TRENCH DETAIL "A" (T.D.-A) - BACKFILL TO A POINT 12" ABOVE THE PIPE SHALL BE AS SPECIFIED ON THE PLANS. THE REMAINDER OF THE BACKFILL SHALL BE MADE WITH SUITABLE EXCAVATED MATERIAL (EXCLUDING BLUE CLAY) PLACED IN ONE-FOOT LAYERS WITH EACH LAYER BEING THOROUGHLY COMPACTED BY APPROVED MECHANICAL METHODS OR OTHER EFFECTIVE MEANS HAVING THE APPROVAL OF THE ENGINEER, TO A DENSITY EQUIVALENT TO THE UNDISTURBED ADJACENT SOIL OR 90% OF MAX. UNIT WEIGHT, WHICHEVER IS GREATER. SPECIAL BACKFILL WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF CONSTRUCTING THE SANITARY SEWER. WHEN TRENCH DETAIL "A" IS SPECIFIED, THERE WILL BE NO ADDITIONAL COMPENSATION FOR SAND BACKFILL (T.D.-B) OF GRAVEL (SPECIAL MATERIAL, MOOT SURFACED PRIVATE DRIVEWAYS, PARKING LOTS OR SIDEWALKS, WHICH SHALL BE INCLUDED IN THE COST OF CONSTRUCTING THE SANITARY SEWER (SEE NOTE 23)). ALL AREAS OF SUCH TRENCH DETAIL "A" SHALL BE SURFACED WITH GRAVEL, STONE, PAVEMENT OR TOPSOIL IN ACCORDANCE WITH THE REQUIREMENTS OF RESTORATION (SEE NOTE 24).
- TRENCH DETAIL "B" (T.D.-B) - BACKFILL TO A POINT 12" ABOVE THE PIPE SHALL BE AS SPECIFIED ON THE PLANS. THE REMAINDER OF ALL TRENCHES UNDER PUBLIC ROADWAYS AND WITHIN THAT AREA BELOW A LINE PROJECTED AT A 1 ON 1 SLOPE DOWN AND AWAY FROM A POINT 3 FEET OUTSIDE OF THE BACK OF CURB, EDGE OF PAVEMENT OR EDGE OF SHOULDER AREA, OR AS SPECIFIED ON THE PLANS, SHALL BE BACKFILLED WITH BANKRUN SAND MEETING THE REQUIREMENTS OF POROUS MATERIAL, MOOT SURFACED PRIVATE DRIVEWAYS, PARKING LOTS OR SIDEWALKS, WHICH SHALL BE INCLUDED IN THE COST OF CONSTRUCTING THE SANITARY SEWER (SEE NOTE 23)). ALL OTHER AREAS OF TRENCH DETAIL "B" SHALL BE SURFACED WITH GRAVEL, STONE OR PAVEMENT IN ACCORDANCE WITH THE REQUIREMENTS OF RESTORATION (SEE NOTE 24).
- GREASE, OIL AND SAND INTERCEPTORS SHALL BE INSTALLED BY THE USER WHEN THE CITY ENGINEER DETERMINES THEY ARE NECESSARY FOR THE PROPER HANDLING OF LIQUID WASTES, TO REMOVE GREASE IN EXCESSIVE AMOUNTS, TO REMOVE ANY FLAMMABLE WASTES, SAND AND OTHER HARMFUL INGREDIENTS. ALL INTERCEPTORS SHALL BE OF A TYPE AND CAPACITY APPROVED BY THE MUNICIPALITY, SHALL BE LOCATED SO AS TO BE RAPIDLY AND EASILY ACCESSIBLE FOR CLEANING AND INSPECTION, AND SHALL BE CONTINUOUSLY MAINTAINED BY THE USER IN AN OPERATING CONDITION TO ACCOMPLISH THE REQUIRED RESULT. ALL RESTAURANTS OR ESTABLISHMENTS INVOLVED IN THE PREPARATION OF FOOD SHALL INSTALL A GREASE INTERCEPTOR. ALL GREASE INTERCEPTORS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAIL AND SHALL HAVE A MINIMUM CAPACITY OF 1000 GALLONS. THE DETAIL SHOWN BELOW IS NOT DESIGNED TO WITHSTAND TRAFFIC LOADS.
- THE VERTICAL TOLERANCE FOR SANITARY MANHOLE RIM GRADES ARE AS FOLLOWS:  
 A) IN RIGHT OF WAY 0.00 FEET TO +0.25 FEET  
 B) NOT IN RIGHT OF WAY 0.00 FEET TO +0.25 FEET
- MANHOLE STEPS SHALL BE FACTORY INSTALLED AT 16 INCHES CENTER TO CENTER SPACING. STEPS SHALL BE M.A. INDUSTRIES P.S.I. POLYPROPYLENE MSU #360 ALU POLY (OR APPROVED EQUAL).
- THE CONTRACTOR IS REQUIRED TO CONTACT THE OFFICE OF THE OAKLAND COUNTY PUBLIC WORKS COMMISSIONER AT 858-1075, 72 HRS. BEFORE CONSTRUCTION.
- ALL SANITARY SEWER LEADS SHALL BE MARKED WITH A 2"x2"x8" LOCATION STAKE BURIED TO 6" BELOW FINISH GRADE
- BEFORE FINAL ACCEPTANCE AS-BUILT SEPIA MYLARS AND 3 SETS OF BLUE LINE PRINTS MUST BE SUBMITTED TO THE CITY ENGINEER
- SANITARY LEADS SHALL BE EXTENDED UNDER PROPOSED BUILDING FOOTINGS OR BASEMENT FOOTINGS PRIOR TO CONSTRUCTION OF SAID FOOTINGS. A RISER SHALL BE INSTALLED 3' MINIMUM ABOVE PROPOSED FLOOR AND CAPPED UNTIL INTERNAL PLUMBING IS CONNECTED.
- INDIVIDUAL SANITARY SERVICE LEADS SHALL BE REQUIRED FOR EACH SEPARATE UNIT WITHIN A PROPOSED COMMERCIAL, INDUSTRIAL AND/OR MULTIPLE FAMILY RESIDENTIAL BUILDINGS.
- THE ENTIRE PROJECT AREA OF PUBLICLY FUNDED PROJECTS, AND ALL AREAS NOT UNDER THE OWNERSHIP OF ANY PRIVATE DEVELOPER FOR PRIVATELY FUNDED PROJECTS, SHALL BE VIDEO TAPED IN COLOR PRIOR TO THE START OF CONSTRUCTION. THE TAPE SHALL BE UTILIZED BY THE TOWNSHIP TO DETERMINE CONSTRUCTION RELATED DAMAGE AND TO ASSURE ADEQUATE RESTORATION. THE TAPE SHALL BE STANDARD 1/2" VHS FORMAT.



AIR TEST TABLE  
 MINIMUM HOLDING TIME IN SECONDS REQUIRED FOR PRESSURE TO DROP FROM 4 TO 3 PSI

LENGTH OF LINE IN FEET	PIPE DIAMETER												
	4"	6"	8"	10"	12"	15"	18"	21"	24"	27"	30"	33"	36"
25	4	10	18	28	40	62	89	121	158	200	248	299	356
50	9	20	35	55	78	124	178	243	317	401	495	599	713
75	10	30	53	83	119	186	267	364	475	601	743	898	1070
100	18	40	70	110	158	248	356	485	634	765	915	1080	1270
125	22	50	88	138	198	309	446	595	780	945	1135	1340	1560
150	26	59	106	165	238	371	510	680	895	1095	1315	1545	1795
175	31	69	123	193	277	425	580	770	1005	1235	1485	1755	2045
200	35	79	141	220	317	480	655	870	1135	1405	1705	2035	2395
225	40	89	158	248	340	510	700	935	1225	1535	1885	2265	2675
250	44	99	176	275	375	555	760	1015	1335	1685	2085	2505	2955
275	48	109	194	293	395	585	805	1075	1425	1815	2245	2695	3175
300	53	119	211	315	420	615	845	1135	1515	1945	2415	2905	3415
350	62	139	227	335	445	645	885	1195	1605	2075	2585	3115	3665
400	70	158											
450	79	170											
500	88												
550	97												
600	106												
650	113	170	227	283	340	425	510	595	680	765	851	935	1020

NOTE: TO BE USED WHEN TESTING ONE DIAMETER ONLY



**CITY OF TROY**  
 OAKLAND COUNTY, MICHIGAN

**STANDARD SANITARY SEWER DETAILS (2 OF 2)**

ENGINEERING DEPARTMENT

APPROVED BY: STEVEN J. VANDETTE, CITY ENGINEER DATE: JANUARY 03, 2001

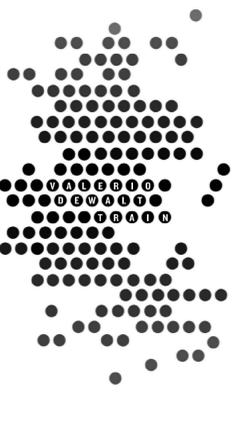
DATE	REMARKS

PROJECT NO. \_\_\_\_\_ SHEET NO. \_\_\_\_\_

DATE: JANUARY 2001

DRAWN BY: G.S.F. CHECKED BY: M.D.J.

STEVEN J. VANDETTE, P.E. 28197



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PROJECT TEAM ARCHITECT STAMP

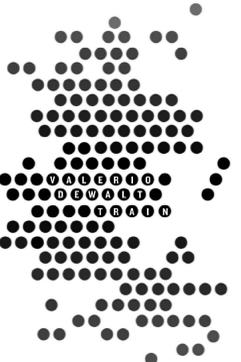
9/26/2014

VDTA PROJECT NUMBER  
 13021.00

CONSULTANT

Landscape Architect:  
 Conservation Design Forum  
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 734.963.3751 Phone  
 734.963.0722 Fax  
 www.cdfnc.com

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CONSULTANT PROJECT NUMBER

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IN ADDITION TO THE NOTES ON THIS SHEET, THE CONTRACTOR'S ATTENTION SHALL BE DIRECTED TO THE NOTES ON THE ATTACHED "STANDARD DETAIL" SHEETS AS WELL AS ADDITIONAL CONSTRUCTION REQUIREMENTS.

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SHEET TITLE

**CONSTRUCTION DETAILS**



SHEET NUMBER

**C7-07**

**GENERAL SOIL EROSION AND SEDIMENTATION CONTROL NOTES**

- THE FOLLOWING ITEMS ARE INTENDED TO BE A GUIDE TO THE CONTRACTOR IN EVALUATING SOIL EROSION PREVENTION REQUIREMENTS FOR THE PROJECT. SPECIFIC SOIL EROSION PREVENTION DEVICES AND LOCATIONS ARE DETAILED ON THE PLANS. THE CONTRACTOR SHOULD ALSO NOTE THAT SOIL EROSION AND SEDIMENTATION CONTROLS ARE INCIDENTAL TO THE PROJECT UNLESS SPECIFIED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS.
- ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO THE PERMIT REQUIREMENTS AND THE STANDARDS AND SPECIFICATIONS OF THE CITY OF TROY.
  - DAILY INSPECTIONS SHALL BE MADE BY THE CONTRACTOR FOR EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES AND ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.
  - EROSION AND ANY SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.
  - CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES WHEN REQUIRED AND AS DIRECTED ON THESE PLANS. CONTRACTOR SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES, AND OTHER EARTH CHANGES HAS BEEN ACCOMPLISHED.
  - STAGING THE WORK WILL BE DONE BY THE CONTRACTOR AS INDICATED ON THE SOIL EROSION PLANS AND AS REQUIRED TO ENSURE PROGRESSIVE STABILIZATION OF DISTURBED EARTH.
  - THE CONTRACTOR WILL ESTABLISH SOIL EROSION PREVENTION PRACTICES IN THE EARLY STAGES OF CONSTRUCTION. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PRE-EMPTIVE DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE SITE.
  - ENGINEER AND OWNER CERTIFICATION MUST BE INCLUDED ON THE PLANS.
  - SEPARATE SHEETS SHOWING EROSION PREVENTION AND SEDIMENTATION CONTROL PLANS MUST BE PROVIDED.

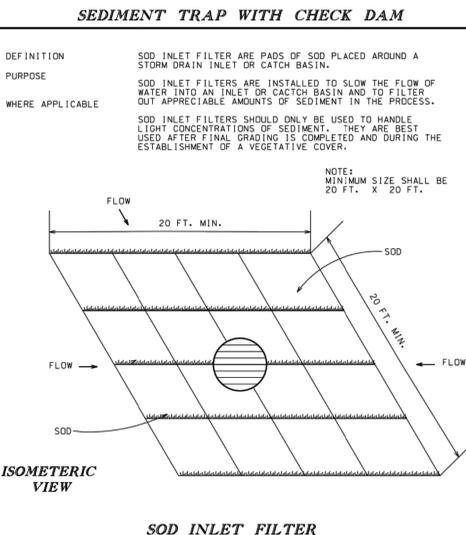
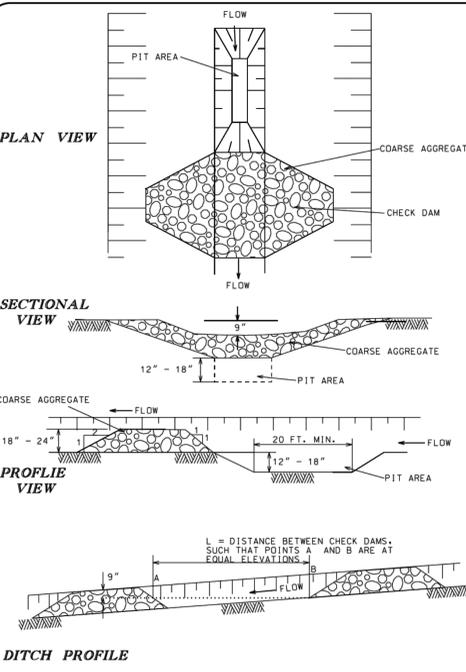
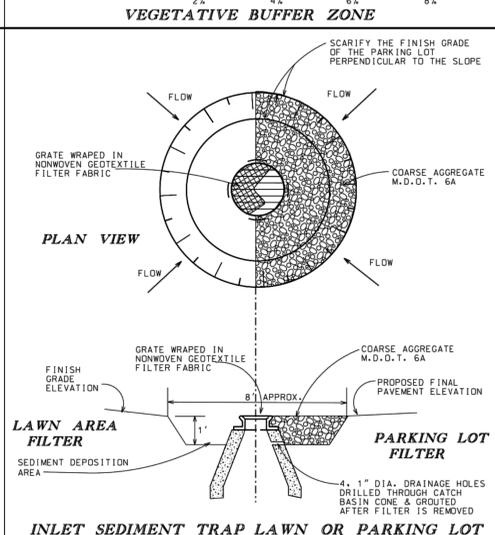
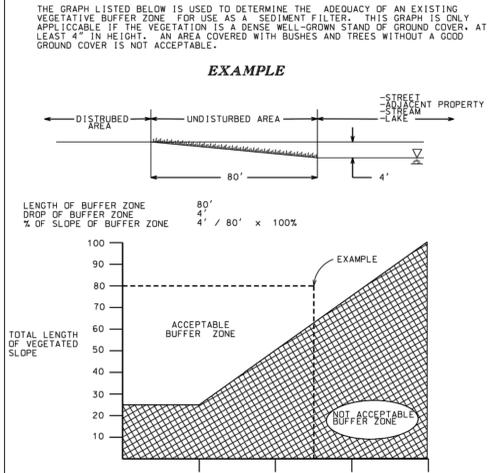
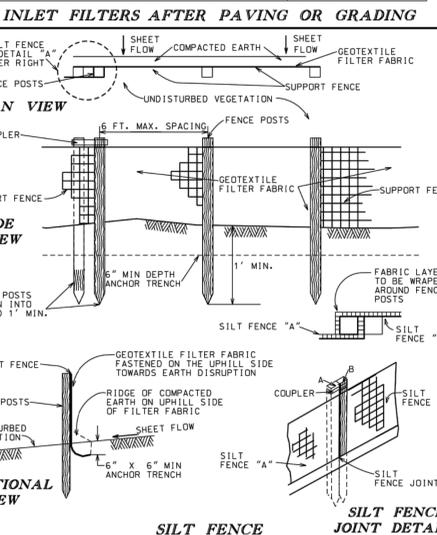
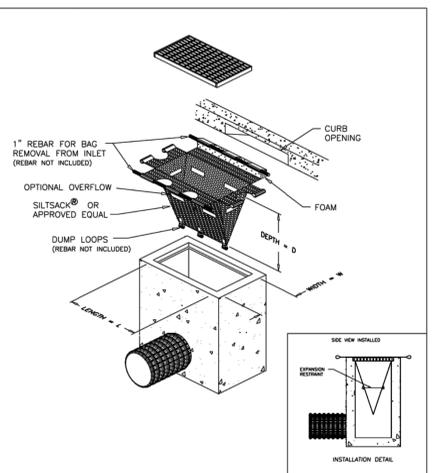
- CHECK DAMS**
  - STONE SIZE MUST BE INCREASED WITH INCREASED SLOPE AND VELOCITY.
  - SIDE SLOPE OF THE DAM SHOULD BE 2:1 OR FLATTER.
  - STRAW BALES ARE NOT TO BE USED FOR CHECK DAMS.
  - ROCK STONES AS NEEDED TO MAINTAIN DESIGN HEIGHT AND CROSS SECTION.
  - ANY ACCUMULATION OF SEDIMENT SHALL BE REMOVED AND STOCKPILED IN A STABILIZED AREA TO PREVENT THE MATERIAL FROM ERODING BACK INTO THE DRAINAGE COURSE.
- VEGETATIVE BUFFER ZONES**
  - VEGETATION MUST BE MAINTAINED IN A VIGOROUS CONDITION.
  - RESHAPE AND RESEED AREAS WHERE CONCENTRATED FLOW OCCURS OR VEGETATION FAILS.
  - TO BE USED FOR SHEET FLOWS ONLY.
  - NOT TO BE USED AS A ROADWAY.
- SILT FENCE**
  - MUST BE INSTALLED ALONG THE CONTOUR LINE.
  - IS NOT TO BE USED IN AREAS OF CONCENTRATED FLOW.
  - MUST BE TRENCHED AT LEAST 6 INCHES AND BACKFILLED.
  - MULTIPLE ROWS ARE TO BE USED UP A SLOPE.
  - ACCUMULATED SEDIMENT MUST BE PERIODICALLY REMOVED.
  - WHERE NECESSARY, A SUPPORT FENCE SHALL BE USED TO SUPPORT THE GEOTEXTILE FILTER FABRIC.
  - TO BE REMOVED AFTER SITE IS PERMANENTLY STABILIZED.
- INLET SEDIMENT TRAP**
  - THE SEDIMENT DEPOSITION AREA AND NONWOVEN GEOTEXTILE FILTER FABRIC SHOULD BE CLEANED OF ALL ACCUMULATED SEDIMENT AFTER ALL CONTRIBUTING AREAS ARE STABILIZED. THE FILTER FABRIC SHOULD BE REMOVED. SEDIMENT DEPOSITION AREA FILLED, AND A SOD INLET FILTER PLACED OVER THE DISTURBED LAWN AREA.
  - IF FILTER MATERIAL USED TO BACKFILL PARKING LOT DRAINAGE HOLES WILL BE PERMANENT, THE SIDE EXCAVATION FOR THE LACEMENT OF THIS MATERIAL WILL NOT BE DEEPER THAN THE INVERT OF THE DRAINAGE HOLES.
- INLET FILTERS AFTER PAVING OR GRADING**
  - INLET FILTERS WILL REMAIN IN PLACE UNTIL ALL DENuded AREAS CONTRIBUTING TO THEM ARE STABILIZED WITH VEGETATION.
  - PERIODIC INSPECTION AND MAINTENANCE WILL BE PROVIDED TO INSURE THAT FILTERS ARE FUNCTIONING PROPERLY.

- SOD INLET FILTER**
  - SOD INLET FILTERS WILL ONLY BE USED TO HANDLE LIGHT CONCENTRATIONS OF SEDIMENT.
  - RECOMMENDED FOR USE AFTER FINAL GRADING IS COMPLETE AND DURING THE ESTABLISHMENT OF A VEGETATIVE COVER.
  - CATCH BASIN INLET COVERS MAY BE WRAPPED IN A NON-WOVEN GEOTEXTILE FILTER FABRIC FOR ADDITIONAL FILTRATION.
  - PERIODIC INSPECTION AND MAINTENANCE MUST BE PROVIDED TO INSURE EFFICIENT OPERATION.

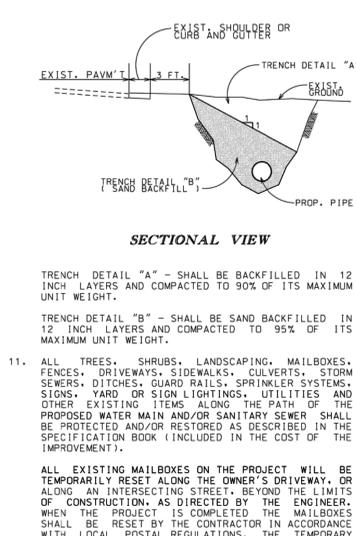
**GENERAL CONSTRUCTION NOTES**

- THE FOLLOWING ITEMS OF WORK RELATED TO THE PROPOSED CONSTRUCTION ARE INTENDED TO ACT AS A GUIDE TO THE CONTRACTOR IN EVALUATING THE REQUIREMENTS FOR THE PROJECT. HOWEVER, THE CONTRACTOR IS RESPONSIBLE TO INSPECT THE PROJECT IN THE FIELD AND MAKE A DETERMINATION OF THE ITEMS OF WORK NECESSARY TO COMPLETE THE PROJECT. THE CONTRACTOR SHALL SPECIFICALLY DIRECT HIS ATTENTION TO THE EXTENT OF INCIDENTAL CONTRACT ITEMS OR WORK IDENTIFIED AS BEING INCLUDED IN OTHER ESTABLISHED PAY ITEMS AND INCLUDE THIS WORK IN HIS BID PRICE.
- THE CONTRACTOR SHALL NOTIFY THE CITY OF TROY AT (248) 524-3409 THREE (3) WORKING DAYS PRIOR TO CONSTRUCTION.
  - ALL WATER MAIN AND SANITARY SEWER CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND CITY OF TROY SPECIFICATIONS AND THE DETROIT WATER AND SEWERAGE DEPARTMENTS.
  - ROAD COMMISSION FOR OAKLAND COUNTY (RCOC) PERMITS:
    - ALL ROAD CROSSINGS AND RELATED WORK IN THE COUNTRY RIGHT-OF-WAYS SHALL BE PERFORMED UNDER THE SUPERVISION AND INSPECTION OF THE RCOC. ALL PERMITS SHALL BE OBTAINED BY THE CONTRACTOR AND ALL PERMIT AND INSPECTION FEES SHALL BE PAID FOR BY THE CONTRACTOR (INCLUDED IN THE COST OF THE IMPROVEMENT). ROAD PATROL SHALL BE AS SPECIFIED BY THE RCOC, AND ALL REMOVALS SHALL BE SAWCUT FULL DEPTH. TRAFFIC FOR ALL LOCAL RESIDENTS AND EMERGENCY VEHICLES MUST BE MAINTAINED AT ALL TIMES.
  - OAKLAND COUNTY DEPT. OF PUBLIC WORKS (OCDPW) PERMITS:
    - ALL DRAIN CROSSINGS AND RELATED WORK IN THE COUNTRY DRAIN RIGHT-OF-WAY AND/OR ITS EASEMENTS SHALL BE PERFORMED UNDER THE SUPERVISION AND INSPECTION OF THE OCDPW. ALL PERMITS SHALL BE OBTAINED BY THE CONTRACTOR AND ALL PERMIT AND INSPECTION FEES SHALL BE PAID FOR BY THE CONTRACTOR (INCLUDED IN THE COST OF THE IMPROVEMENT).

- THE CONTRACTOR SHALL PAY FOR ALL INSPECTION OVER EIGHT (8) HOURS PER DAY AND ALL INSPECTION ON SATURDAY AT THE CURRENT HOURLY RATE. PER MAN HOUR. THE CONTRACTOR WILL NOT BE CHARGED FOR OVERTIME ON SATURDAY IF HE HAS FIVE (5) MEN OR LESS PERFORMING CLEAN-UP WORK AND LANDSCAPE ITEMS. IN ADDITION, IF HOLIDAY OR SUNDAY WORK IS PERMITTED BY THE CITY, THE CONTRACTOR SHALL PAY FOR ALL INSPECTION AT THE CURRENT HOLIDAY RATE PER HOUR, PER MAN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE RESTORATION OF THIS PROJECT TO CONDITIONS THAT ARE ACCEPTABLE TO THE JURISDICTIONAL AUTHORITY, ENGINEER AND/OR OWNER.
- DRIVEWAYS SHALL BE RESTORED IN KIND WITH THE FOLLOWING MINIMUM MATERIAL THICKNESS, SIX (6) INCHES CONCRETE, FOUR (4) INCHES ASPHALT ON SIX (6) INCHES AGGREGATE OR EIGHT (8) INCHES OF AGGREGATE. (ALL DRIVEWAY CUT REMOVALS SHALL BE SAWCUT).
- ALL DISTURBED LAWN AREAS SHALL BE SODDED WITH CLASS "A" SOD ON FOUR (4) INCHES OF TOPSOIL. ALL OTHER NON-RESIDENTIAL FIELD AREAS SHALL BE SEDED, FERTILIZED AND MULCHED ON THREE (3) INCHES OF TOPSOIL (SEE SPECIFICATIONS).
- THE TRENCH BACKFILL FOR WATER MAINS SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS AS SHOWN ON THE ATTACHED "STANDARD WATER DETAIL" SHEET. (ALL TRENCH BACKFILL FOR PROPOSED WATER MAINS SHALL BE INCLUDED IN THE COST OF THE WATER MAIN).
- THE TRENCH BACKFILL FOR SANITARY SEWERS AND STORM SEWERS SHALL BE AS SHOWN BELOW.



- THE CONTRACTOR SHALL CONTACT THE OFFICE OF THE OCDPW 48 HOURS PRIOR TO CONSTRUCTION.
- PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL TELEPHONE MISS DIG (1-800-892-7171) FOR THE LOCATION OF ALL UNDERGROUND GAS, CABLE AND OTHER UTILITIES. AND SHALL ALSO NOTIFY REPRESENTATIVES OF ALL OVERHEAD AND UNDERGROUND UTILITIES LOCATED IN THE VICINITY OF THE WORK.
- THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE EXISTING DEPTHS AND HORIZONTAL LOCATIONS OF ALL EXISTING UTILITIES BY PRE-EXCAVATING ALL CONFLICTS BEFORE ANY WORK IS STARTED. THE EXACT LOCATION OF EXISTING UTILITIES SHALL BE DETERMINED BY HAND-SIGING. ALL UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED WITH MATERIAL ACCEPTABLE TO THE UTILITY OWNER. ALL COST FOR LOCATING, PRE-EXCAVATING, REMOVING, AND REPLACING OR RELOCATING THESE UTILITIES SHALL BE INCLUDED IN THE COST OF THE IMPROVEMENT.
- NO ADDITIONAL COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR ANY DELAY OR INCONVENIENCE DUE TO MATERIAL SHORTAGES OR REASONABLE DELAYS DUE TO THE OPERATIONS OF OTHER CONTRACTORS, UTILITY COMPANIES, OR ANY PUBLIC AUTHORITY DOING THE WORK INDICATED OR SHOWN ON THE PLANS OR IN THE PROPOSAL, OR FOR ANY REASONABLE DELAY OF CONSTRUCTION DUE TO THE ENCOUNTERING EXISTING UTILITIES THAT MAY OR MAY NOT BE SHOWN ON THE PLANS.
- THE CONTRACTOR SHALL HAVE AVAILABLE AT ALL TIMES A COMPETENT SUPERINTENDENT OR FOREMAN AUTHORIZED TO ACT FOR THE CONTRACTOR AS HIS AGENT ON THE WORK. WHO THOROUGHLY UNDERSTANDS THE PLANS AND SPECIFICATIONS AND WHO SHALL RECEIVE INSTRUCTIONS FROM THE ENGINEER. THE SUPERINTENDENT OR FOREMAN SHALL BE DESIGNATED BY NAME PRIOR TO COMMENCEMENT OF THE WORK AND SHALL BE AVAILABLE AS REQUIRED FOR PROPERTY MANAGEMENT OF THE PROJECT FOR THE DURATION OF THE CONTRACT. PLANS AND SPECIFICATIONS SHALL BE AVAILABLE ON THE PROJECT AT ALL TIMES.
- WHEN THE ENGINEER REQUIRES THE CITY OF TROY TO PERFORM EMERGENCY WORK, WITH OR WITHOUT NOTIFICATIONS TO THE CONTRACTOR OR SURETY, THE CONTRACTOR WILL BE CHARGED EQUIPMENT RENTAL RATES AS LISTED IN THE CURRENT EDITION OF "RENTAL RATES FOR CONSTRUCTION EQUIPMENT" PREPARED BY ASSOCIATED EQUIPMENT DISTRIBUTOR, AND LABOR AT THE CURRENT HOURLY RATE PER MAN HOUR. THE TIME CHARGED TO THE CONTRACTOR SHALL BE FROM THE TIME THE MAN AND EQUIPMENT LEAVE THE CITY OF TROY YARD TO THE TIME THAT IT RETURNS TO THE CITY OF TROY YARD.



**CITY OF TROY**  
 OAKLAND COUNTY, MICHIGAN

**STANDARD SOIL EROSION & GENERAL CONSTRUCTION (1 OF 1)**

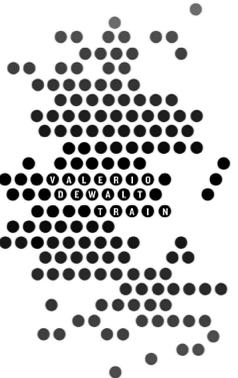
**ENGINEERING DEPARTMENT**

APPROVED BY: STEVEN J. VANDETTE, CITY ENGINEER DATE: \_\_\_\_\_

DATE	REMARKS	PROJECT NO.	SHEET NO.
JUNE 2007			

DRAWN BY: G.S.F./M.P.B. CHECKED BY: J.E.L.

STEVEN J. VANDETTE, P.E. 28191



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**PROJECT TEAM** ARCHITECT STAMP  
 VDOT PROJECT NUMBER  
 13021.00

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 Conservation Design Forum  
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 Ann Arbor, Michigan 48104  
 734.963.3751 Phone  
 734.963.0722 Fax  
 www.cdfinc.com

**CONSULTANT PROJECT NUMBER**

No.	Issue	Date
01	Preliminary Site Plan Review	09/26/2014

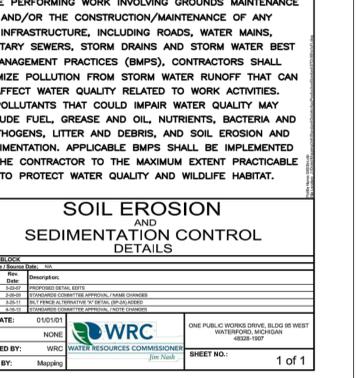
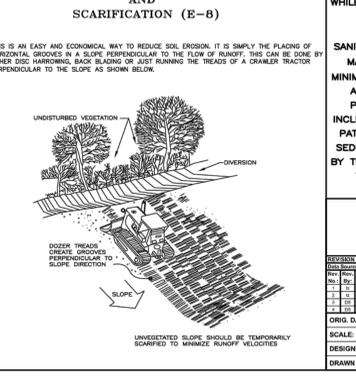
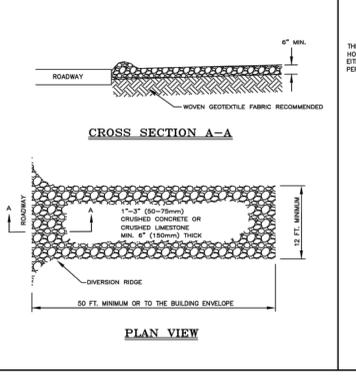
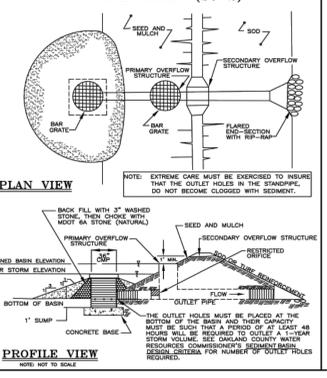
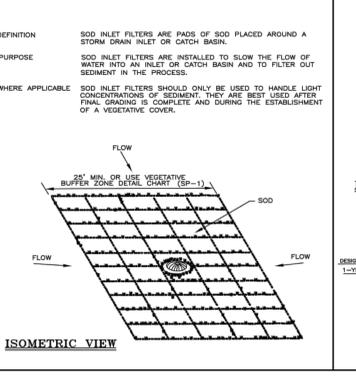
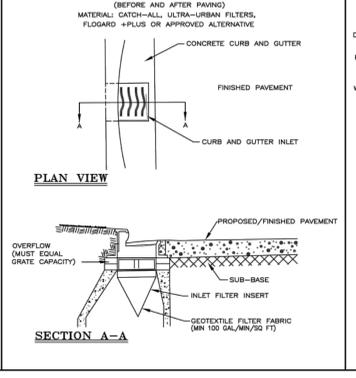
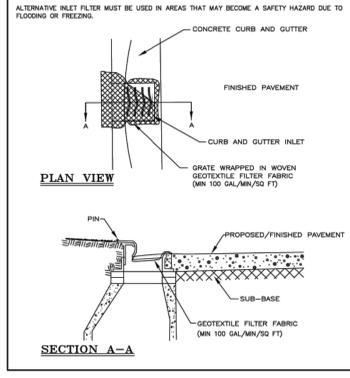
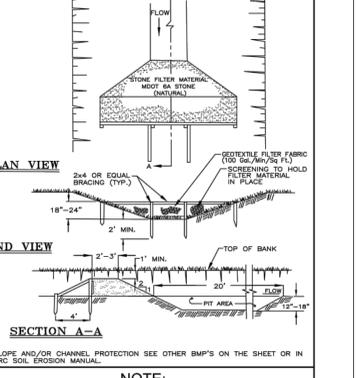
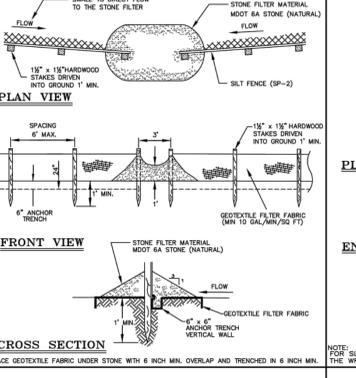
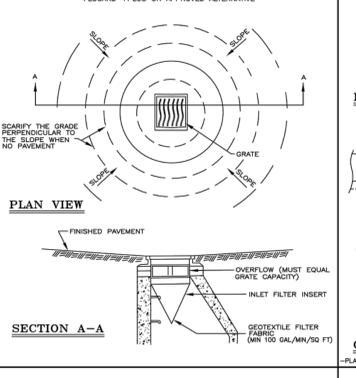
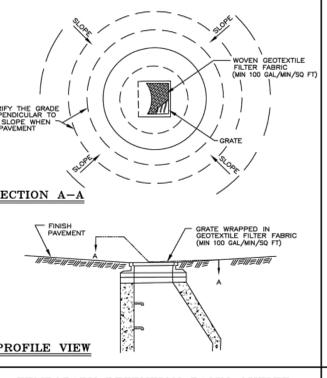
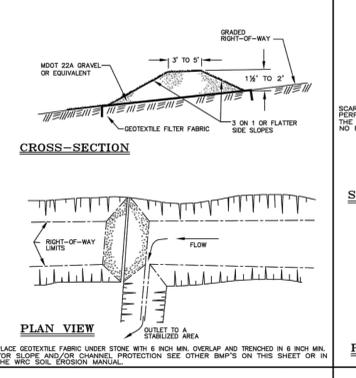
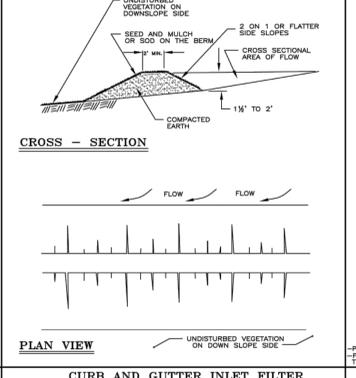
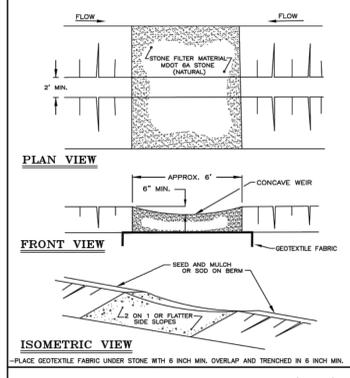
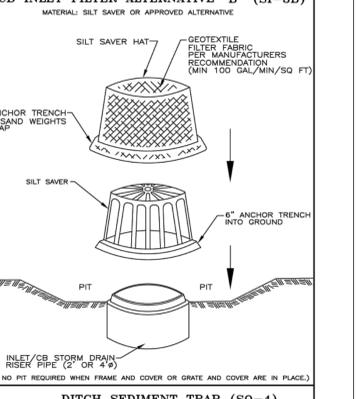
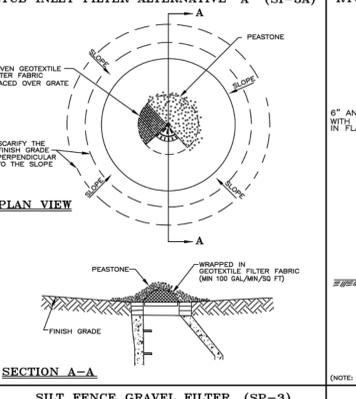
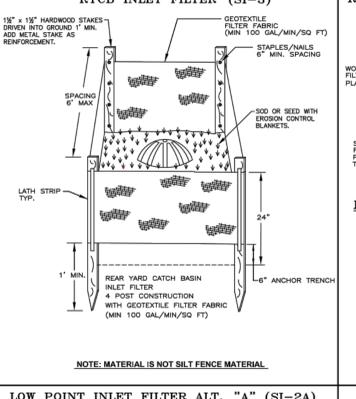
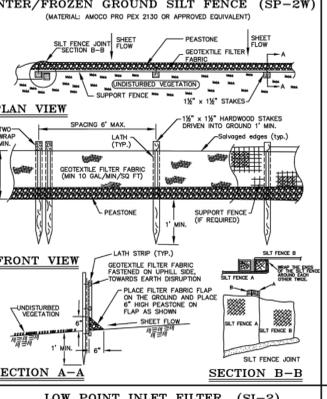
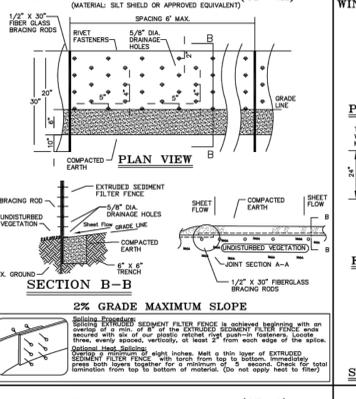
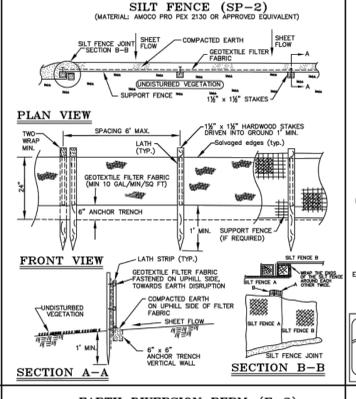
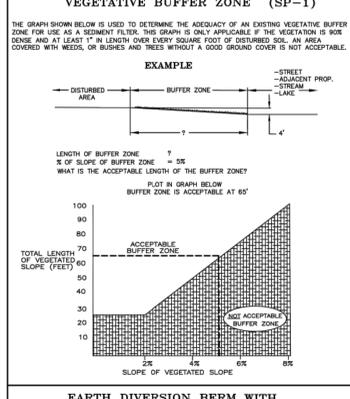
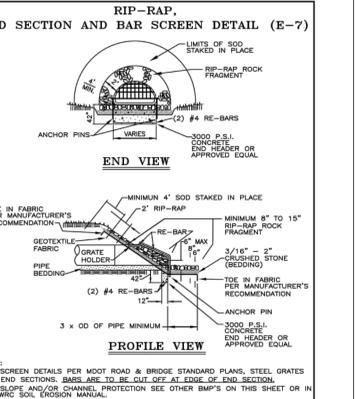
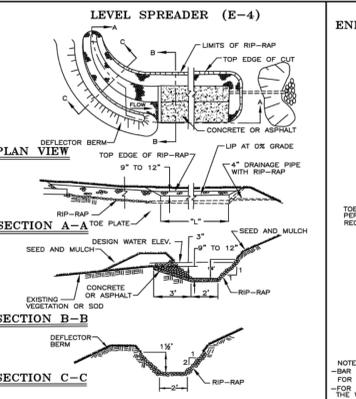
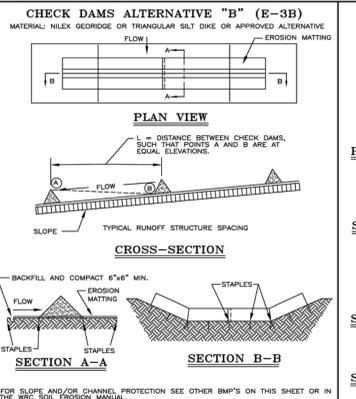
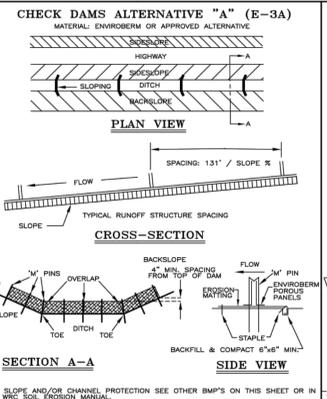
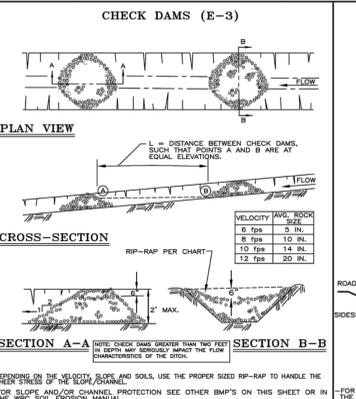
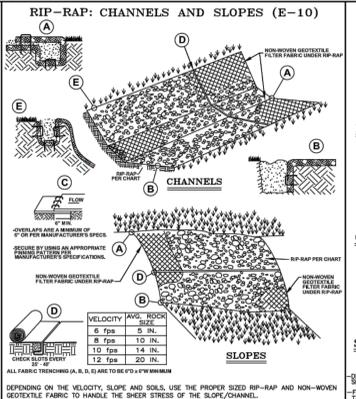
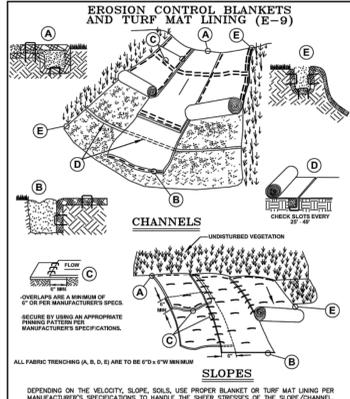
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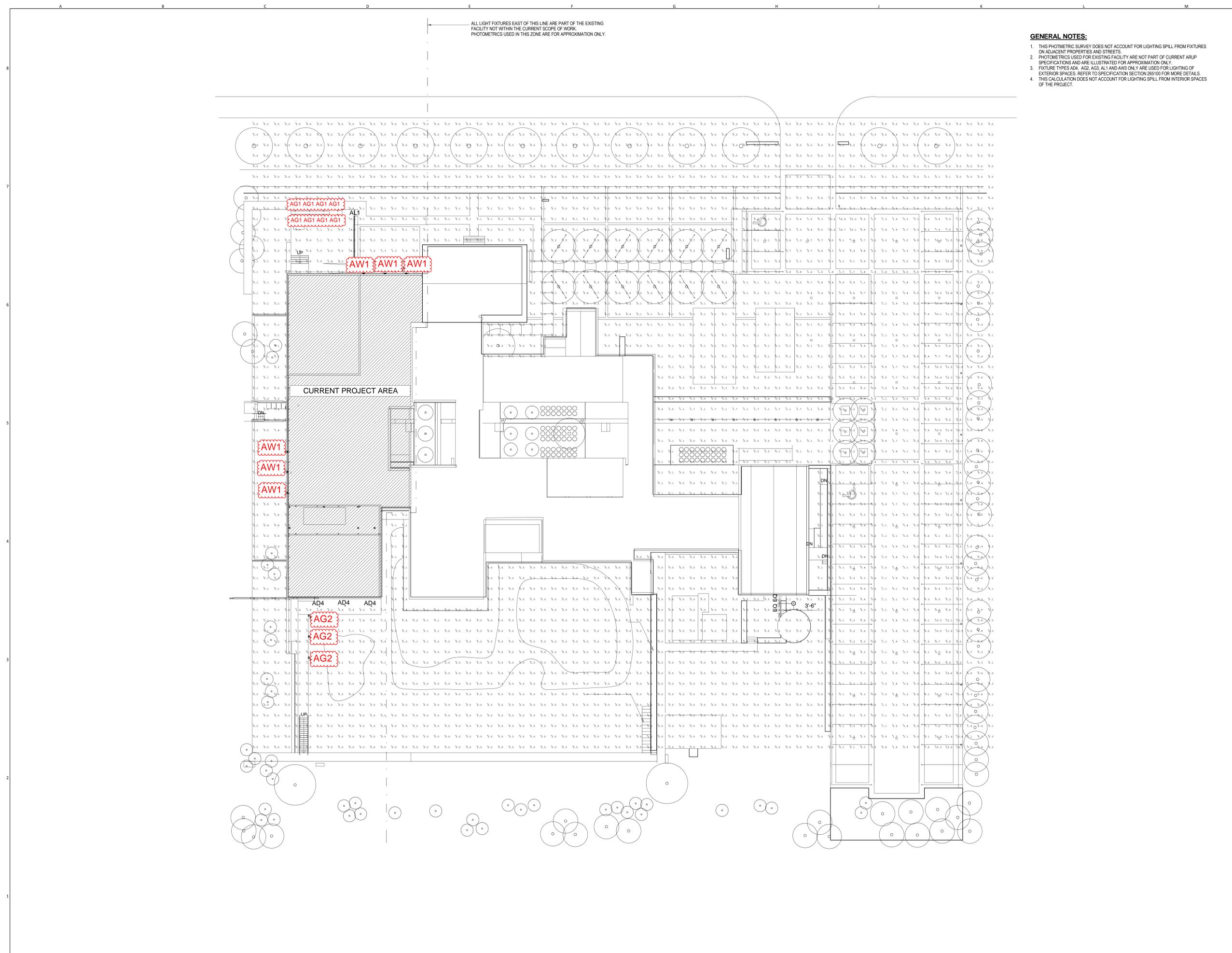
**SHEET TITLE**  
**CONSTRUCTION DETAILS**



**SHEET NUMBER**

**C7-08**

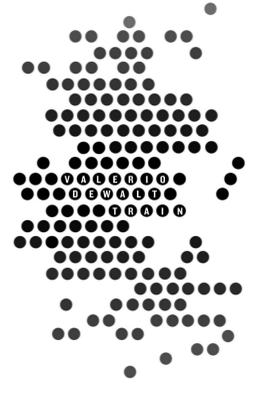




- GENERAL NOTES:**
1. THIS PHOTOMETRIC SURVEY DOES NOT ACCOUNT FOR LIGHTING SPILL FROM FIXTURES ON ADJACENT PROPERTIES AND STREETS
  2. PHOTOMETRICS USED FOR EXISTING FACILITY ARE NOT PART OF CURRENT ARUP SPECIFICATIONS AND ARE ILLUSTRATED FOR APPROXIMATION ONLY.
  3. FIXTURE TYPES AG1, AG2, AL1 AND AW3 ONLY ARE USED FOR LIGHTING OF EXTERIOR SPACES. REFER TO SPECIFICATION SECTION 285100 FOR MORE DETAILS.
  4. THIS CALCULATION DOES NOT ACCOUNT FOR LIGHTING SPILL FROM INTERIOR SPACES OF THE PROJECT.

**PROJECT NAME**  
**THE KRESGE FOUNDATION EXPANSION**

**PROJECT ADDRESS**  
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**PROJECT TEAM**      **ARCHITECT STAMP**

**VDTA PROJECT NUMBER**  
 Project Number

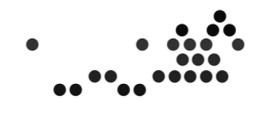
**CONSULTANT**  
**ARUP**  
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 CHICAGO, ILLINOIS 60601  
 312.849.5610  
 www.arup.com

**CONSULTANT PROJECT NUMBER**  
 232051-00

Issue		
No.	Issued For	Date
1	ISSUE FOR SITE PLAN REVIEW	09.26.2014

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**SHEET TITLE**  
 SITE LIGHTING  
 PHOTOMETRIC SURVEY



**SHEET NUMBER**  
**E9-03**