

Federal Environmental Assessment
per the
National Environmental Policy Act (24 CFR Part 58)
and the **National Historic Preservation Act (36 CFR Part 800)**

The Cameron
756 4th Street North, Minneapolis, MN

Responsible Entity: City of Minneapolis

Completed for the City of Minneapolis by the
Minneapolis Grants and Special Projects Office and the
Minneapolis Community Planning and Economic Development Department

March 15, 2013

	<u>Grants and Special Projects</u>	<u>Project Coordinator</u>
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INTRODUCTION

This document is a federal Environmental Assessment (EA) completed by the City of Minneapolis regarding the above named project. Federal regulations require verification that the project will meet the requirements of the National Environmental Policy Act of 1969.

On 14 October 1996, the U.S. Department of Housing and Urban Development (HUD) delegated its responsibilities to complete required EAs to the appropriate local governmental agencies, in this case, the City of Minneapolis. The City has completed the EA in compliance with the National Environmental Policy Act, most specifically 24 CFR Part 58, the National Historic Preservation Act (36 CFR Part 800), and all applicable rules and regulations at both the federal and state levels. Consistent with 36 CFR Part 800.8 (c), it is also intended to meet the requirements of Section 106 of the National Historic Preservation Act.

Consistent with 24 CFR Part 58, this EA is being distributed to the interested groups and individuals, local news media, libraries, and appropriate governmental agencies. A 15-day review period per 24 CFR Part 58.45 will commence beginning on the date of distribution listed above. Responses and comments on the EA and the Finding of No Significant Impact (FONSI) can be submitted within the review period to Mr. Bower at the address listed above.

Attention: If you want help translating this information, call **-Hmong -** Ceeb toom. Yog koj xav tau kev pab txhais cov xov no rau koj dawb, hu 612-673-2800; **Spanish -** Atención. Si desea recibir asistencia gratuita para traducir esta información, llama 612-673-2700; **Somali -** Ogow. Haddii aad dooneyso in lagaa kaalmeeyo tarjamadda macluumaadkani oo lacag la' aan wac 612-673-3500

SUMMARY OF ENVIRONMENTAL CONDITIONS FINDINGS AND CONCLUSIONS

1.0 Project Summary

The applicant proposes to convert a vacant building located at the property of 756 4th Street North into a multifamily residence with 44 dwelling units. The building will be renovated and brought into compliance with life safety code requirements. An accessible entrance on the north side of the building will also be created. An unimproved parking area exists to the north of the building. The proposal includes upgrading the parking area and defining 33 parking spaces.

2.0 Project Evaluation per 24 CFR Part 58, Section 58.40

2.1 Determine existing conditions and describe the character, features, and resources of the project area and its surrounding; identify the trends that are likely to continue in the absence of the project.

Response: The block that the development would be located on is occupied by residential developments, office buildings and surface parking lots. The site itself is occupied by an existing vacant building and an accessory surface parking area. The rehabilitation of the existing building will complement the surrounding area. If the project does not go forward, this site is likely to remain in its current state until some future date. In contrast, rehabilitating the vacant building in to affordable dwelling units would provide additional opportunities for housing within the neighborhood.

2.2 Identify all potential environmental impacts, whether beneficial or adverse, and the conditions that would change as a result of the project.

Response: EA Form 5 and the responses to these six findings address all of the potential environmental effects that would change as a result of this project. There are three primary environmental issues associated with the project:

Noise Abatement: Attachment 6 includes the noise assessment. The noise analysis concludes that the project is located within a "Normally Unacceptable Noise Zone" for HUD-funded projects as defined in federal regulations at 24 CFR Part 51 due to roadway noise (autos, buses, and heavy trucks) on Washington Avenue North and the 3rd Street and 4th Street viaducts. The project will require mitigation per 24 CFR 51.104 (1) and Special Environmental Clearance from the Environmental Clearance Officer. The Sound Transmission Class (STC) for the proposed construction will decrease the combined interior adjusted DNL to where the project will be in the "Acceptable Noise Zone."

Toxic or hazardous substances and radioactive materials: A Phase I and Phase II Environmental Site Assessment were prepared for the site. Previous use of the

parking lot portion of the site included a junkyard. Phase II testing detected the presence of polynuclear aromatic hydrocarbons (PAH's), arsenic, cadmium and lead. Groundwater did not appear to be impacted. The site was enrolled in the MPCA VIC Program in March 2001 and a No Association Determination was granted for the identified release to soil in March 2011. Because the redevelopment includes shallow excavation activities a Response Action Plan and Construction Contingency Plan has been developed.

Slope, erosion and soil suitability: There are no steep slopes on the site. During demolition and construction, best management practices for control of erosion and sedimentation will be implemented as required by the Minneapolis Code of Ordinances, Chapter 52, Erosion and Sediment Control for Land Disturbance Activities. The City will also conduct on-site inspections during construction. A Phase I and Phase II Environmental Site Assessment were prepared for the site. Previous use of the parking lot portion of the site included a junkyard. Phase II testing detected the presence of polynuclear aromatic hydrocarbons (PAH's), arsenic, cadmium and lead. Groundwater did not appear to be impacted. The site was enrolled in the MPCA VIC Program in March 2001 and a No Association Determination was granted for the identified release to soil in March 2011. Because the redevelopment includes shallow excavation activities a Response Action Plan and Construction Contingency Plan has been developed.

2.3 Identify, analyze, and evaluate all impacts to determine the significance of their effects on the human environment and whether the project will require further compliance under related laws and authorities cited in Sec. 58.5 and Sec. 58.6.

Response: Sections 58.5 and 58.6 state that the Responsible Agency must consider the criteria, standards, polices, and regulations of several laws and agencies that are listed in these sections of the law. EA Form 5 and the responses to these six findings address all of these laws and agencies.

2.4 Examine and recommend feasible ways in which the project or external factors related to the project could be modified in order to eliminate or minimize adverse environmental impacts.

Response: As described in this Environmental Assessment, no other substantial adverse environmental effects are likely to result from the project. The project will be the subject of multiple City reviews that will further ensure this to be true and to ensure the project is consistent with all applicable policies, plans, laws, and regulations.

2.5 Examine alternatives to the project itself, if appropriate, including the alternative of no action.

Response: The no action alternative is addressed above in the response to Finding number 1.

2.6 Complete all environmental review requirements necessary for the project's compliance with applicable authorities cited in Sections 58.5 and 58.6.

Response: Sections 58.5 and 58.6 state that the Responsible Agency must consider the criteria, standards, polices, and regulations of several laws and agencies that are listed in these sections of the law. Form 5 and the responses to these six findings address all of these laws and agencies.

3.0 Conclusion and Finding of No Significant Impact

After the City has addressed all concerns raised during the review period, the City will have complied with all applicable federal, state and local regulations. When signed below, the City makes a "Finding of No Significant Impact."

The undersigned does hereby certify that the information furnished in this Environmental Assessment is true and accurate to the best of their knowledge, and that the project is not an action that will result in a significant impact on the quality of the human environment:

Matthew Bower, City Planner, Minneapolis Grants and Special Projects Office

ENVIRONMENTAL REVIEW RECORD

National Environmental Policy Act
 Approved for the City of Minneapolis by the Minneapolis Office, Federal Housing and Urban Development Department
 Consistent with 24 CFR Part 58 -- Environmental Review Procedures of Entities Assuming HUD Environmental Responsibilities and 36 CFR Part 800 -- Protection of Historic Properties

Project Information

The applicant proposes to convert a vacant building located at the property of 756 4th Street North into a multifamily residence with 44 dwelling units. The building will be renovated and brought into compliance with life safety code requirements. An accessible entrance on the north side of the building will also be created. An unimproved parking area exists to the north of the building. The proposal includes upgrading the parking area and defining 33 parking spaces (Attachment 1).

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 City of Minneapolis
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Statutory Checklist

Area of Statutory or Regulatory Compliance	Not applicable to this project	Consultation required	Review required*	Permits required	Determination of consistency of approvals; permits obtained*	Conditions and/or mitigation actions required
FACTORS						
Historic [58.5 (a)]		X				The existing building is historically known as the Cameron Transfer and Storage Company Building, and more recently, as the Dial Building. This building is not locally designated; however, it is a potential historic resource based on its association with internationally renowned Minneapolis engineer Claude Allen Porter "C.A.P." Turner. Its significance lies in how the building is constructed with a reinforced concrete structural system that is comprised of mushroom cap columns that Turner designed and patented in 1906. The applicant is intending to utilize preservation tax credits. Those applications go through the State Historic Preservation office (SHPO), but do not require Minneapolis Heritage Preservation Commission review. In order to qualify for the credits, the developer will have to comply with the Secretary of Interior's Standards for the Treatment of Historic Properties for the rehabilitation of the building. If the tax credits are not pursued, staff will work with the applicant to ensure that the work on the building will still meet the Secretary's Standards (Attachment 2).
Floodplain management [58.5 (b)]	X					The City's GIS mapping system incorporates the floodplain zones mapped by the Federal Emergency Management Agency (FEMA). The attached map indicates that the project site is not located within a 100-year flood plain, a floodway, or flood hazard area. The site is located within the jurisdiction of the Middle Mississippi Watershed Management Organization (Attachment 3).
Wetland protection [58.5 (b)]	X					The site is located within the jurisdiction of the Middle Mississippi Watershed Management Organization. Per the National Wetlands Inventory, no wetlands have been identified on this urban site or nearby urban surroundings (Attachment 4).
Coastal barrier management [58.5 (c)]	X					There are no coastal zones in or near the City of Minneapolis.
Sole source aquifers [58.5 (d)]	X					The project will have no impact on sole source aquifers. The site is served by the Minneapolis Water Works which draws its water supply from the Mississippi River under MN DNR appropriation permit #786216-1. Potable supplies are adequate to meet the needs of the project without modification to the existing system.

Source Documentation

Form 5: Environmental Assessment

Statutory Checklist

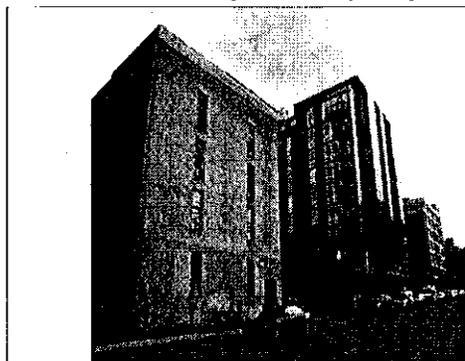
Source Documentation

Area of Statutory or Regulatory Compliance	Not applicable to this project	Consultation required	Review required*	Permits required	Determination of consistency of approvals; permits obtained*	Conditions and/or mitigation actions required
Endangered species [58.5 (e)]	X					For over a century, the area of the site is characterized as a fully developed industrial district. Vegetation is limited to the individual yards in the adjacent residential areas, very limited on-street boulevards, and nearby city parks. This results in limited habitat to support any significant wildlife resources. A request (ERDB 20080588) to the Minnesota DNR Natural Heritage and Non-game Research program indicated that the project will not negatively affect any threatened or endangered species in the project area (Attachment 5)
Wild & scenic rivers [58.5 (f)]	X					There are no wild and scenic rivers in or near the City of Minneapolis.
Air quality [58.5 (g)]	X					The project will have to comply with all pertinent federal requirements. The City of Minneapolis will be responsible for the issuance of building permits. The City processes include on-site inspections to ensure conformance with all applicable local regulations. City policies encourage building practices that maximize energy efficiency and alternative transportation, and that minimize off-site air quality impacts.
Farmland protection [58.5 (h)]	X					Not applicable.
Environmental justice [58.5 (j)]	X					The dwelling units within the building will be marketed as affordable workforce housing units. No sensitive populations will be adversely effected by the project.
HUD ENVIRONMENTAL STANDARDS						
Noise abatement and control [per 24 CFR 51 B]					X	The noise analysis (Attachment 6) concludes that the project is located within a "Normally Unacceptable Noise Zone" for HUD-funded projects as defined in federal regulations at 24 CFR Part 51 due to roadway noise (autos, buses, and heavy trucks) on Washington Avenue North and the 3rd Street and 4th Street viaducts. The project will require mitigation per 24 CFR 51.104 (1) and Special Environmental Clearance from the Environmental Clearance Officer. The Sound Transmission Class (STC) for the proposed construction will decrease the combined interior adjusted DNL to where the project will be in the "Acceptable Noise Zone."
Toxic or hazardous substances and radioactive materials [per HUD Notice 79-83]					X	A Phase I and Phase II Environmental Site Assessment were prepared for the site. Previous use of the parking lot portion of the site included a junkyard. Phase II testing detected the presence of polynuclear aromatic hydrocarbons (PAHs), arsenic, cadmium and lead. Groundwater did not appear to be impacted. The site was enrolled in the MPCA VIC Program in March 2001 and a No Association Determination was granted for the identified release to soil in March 2011. Because the redevelopment includes shallow excavation activities a Response Action Plan and Construction Contingency Plan has been developed (Attachment 7).
Siting of HUD-assisted projects near hazardous operations [per 24 CFR 51 C]	X					The project will not be sited near any hazardous operations.
Airport Clear Zones and Accident Potential Zones [per 24 CFR 51 D]	X					The site is not located within an Airport Safety Zone.
LAND DEVELOPMENT						
Conformance with comprehensive plans and zoning					X	The goals and objectives of <i>The Minneapolis Plan for Sustainable Growth</i> and the <i>North Loop Small Area Plan</i> are consistent with the Project. The development supports the City's policies for increased housing density. The site is zoned B4S-1 Downtown Service District. The B4S-1 zoning district supports the proposed density of the project.
Slope, erosion and soil suitability					X	There are no steep slopes on the site. During demolition and construction, best management practices for control of erosion and sedimentation will be implemented as required by the Minneapolis Code of Ordinances, Chapter 52, Erosion and Sediment Control for Land Disturbance Activities. The City will also conduct on-site inspections during construction. A Phase I and Phase II Environmental Site Assessment were prepared for the site. Previous use of the parking lot portion of the site included a junkyard. Phase II testing detected the presence of polynuclear aromatic hydrocarbons (PAHs), arsenic, cadmium and lead. Groundwater did not appear to be impacted. The site was enrolled in the MPCA VIC Program in March 2001 and a No Association Determination was granted for the identified release to soil in March 2011. Because the redevelopment includes shallow excavation activities a Response Action Plan and Construction Contingency Plan has been developed (Attachment 7).
Hazards, nuisances, site safety, public safety	X					There are no known hazards or public nuisances on site. The project will bring new development that will add pedestrian activity which usually translates into increased site safety and public safety.
Energy efficiency	X					The project will comply with the City's policies that call for the maximization of energy efficiency.

Statutory Checklist		Source Documentation					
Area of Statutory or Regulatory Compliance	Not applicable to this project	Consultation required	Review required*	Permits required	Determination of consistency of approvals; permits obtained*	Conditions and/or mitigation actions required	Source Documentation
Project's contribution to community noise levels	X						Construction noise of the project will be regulated by Minneapolis Code of Ordinances, Chapter 389, Section 389.70, Noise. This section of the Code specifies strict limits for both the hours of operation of construction equipment and the allowable noise levels of that equipment. The City Inspectors from the City's Environmental Management Division of the Regulatory Services Department are responsible for enforcing the regulations. Increased noise during construction will be temporary.
Visual quality, coherence, diversity, compatible use and scale					X		On October 3, 2011, the Minneapolis City Planning Commission approved the required land use applications for the project (Attachment 8). The review of these applications evaluated the potential visual, scale and massing impacts of the project as well as the compatibility of the development with the rest of the neighborhood.
Demographic character changes, displacement, employment, and income patterns	X						The dwelling units within the building will be marketed as affordable workforce housing units. This project will have positive effects on the surrounding area, help to densify the City in an area appropriate for high-density housing, increase the property's value, and the construction of the project will add jobs.
Educational, commercial, health care and social service facilities	X						Not applicable.
Solid waste	X						Private haulers under contract with the property owner will provide municipal solid waste (MSW) collection and recycling program services. The City and the County maintain award-winning recycling programs that recover over 30% of the waste stream. The County also recovers much of the embedded energy in the MSW through its garbage incinerator.
Water supply and waste water	X						The project will be served by the City's water system and the sanitary and sewer systems. City sewers flow into the Metropolitan Council Environmental Services sanitary sewer interceptor for treatment at the Metropolitan Waste Water Treatment Plant with ultimate discharge to the Mississippi River. No pretreatment or special treatment methods for this wastewater are required and adequate capacity exists in these systems for the project.
Stormwater	X						The Mississippi River is the receiving body for stormwater from this site. During demolition and construction, best management practices for control of erosion and sedimentation will be implemented as required by the Minneapolis Code of Ordinances, Chapter 52, Erosion and Sediment Control for Land Disturbance Activities. The City will also conduct on-site inspections during construction. The project features a series of rain gardens to accommodate stormwater runoff.
Open space, recreation, cultural facilities.	X						Not applicable.
Transportation	X						No parking is required for residential uses in the downtown districts. Thirty-three spaces are proposed. Of the spaces provided, at least one must be accessible. One accessible space would be provided. All other spaces would be standard sized except for one compact space.
Certification	The undersigned does hereby certify that the information furnished in this Environmental Assessment is true and accurate to the best of their knowledge.						
Signature of City official/Date	 Hilary Dvorak, Principal City Planner				3/13/2013 Date		
* Attach evidence that required actions have been taken.							

ATTACHMENT 1

Project Data Worksheet, location map, aerial photo and development plans



Project Status
 Proposed: 7/1/2012
 Approved:
 Closed:
 Complete:

Impaction
 Non-Impacted
 Impacted

Occupancy
 Rental
 Ownership

Project Name: The Cameron
 Main Address: 756 N 4th St
 Project Aliases:
 Additional Addresses:

Ward: 5 Neighborhood: North Loop

Housing Production and Affordability

UNIT COMPOSITION	UNIT	QTY	UNIT AFFORDABILITY				
			<30%	<50%	<60%	<80%	MKT
0BR	0BR	23	0	17	6	0	0
1BR	1BR	17	0	0	17	0	0
2BR	2BR	4	0	0	4	0	0
3BR	3BR	0	0	0	0	0	0
4+BR	4+BR	0	0	0	0	0	0
TOT	TOT	44	0	17	27	0	0

Shelter Units: + Conversion Units: 44
 Section 8:

Project Activity
 New Construction
 Rehabilitation
 Stabilization
 Preservation
 Year Built: 1910

Development
 Apartment/Condo
 Townhome
 Coop
 Shelter
 Transitional
 Scattered Site/Other

Household
 General
 Family w/Children
 Senior
 Single
 Special Needs
 Homeless

GENERAL INFORMATION

Originally built between 1909 and 1910, the building was previously used primarily for cold storage and has been known as the Cameron Transfer and Storage Company Building, and more recently, as the Dial Building. The City Planning Commission have approved the development plans (BZZ - 5279 & MS - 213) for a 44 unit positive conversion affordable workforce housing project financed primarily with private bond and tax credit equity. The scope of work calls for a complete renovation with a new roof, new windows, new interior spaces, and tuckpointing. The proposed property amenities include a fitness center, a bike storage room, extra storage for residents, an outdoor patio and grilling area, common laundry facilities, and surface parking.

Since SHPO and NPS have approved the Part I historical analysis, the property is in the process of being placed on the National Register of Historic Places based mostly on its association with internationally renowned Minneapolis engineer Claude Allen Porter "C.A.P." Turner who patented in 1906 the mushroom cap reinforced concrete structural system.

Partnership: Creamette Building, LLC

Contact Information:

Developer Contact:

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 Fax:
 mmichalski@sr-re.com

Owner Contact:

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Consultant:

Contractor:

To Be Determined
 Phone: ext-
 Fax:

Architect:

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 Fax: (612) 673-5259

CPED Rehab:

Jim Edin
 Phone: (612) 673-5275 ext-
 Fax: (612) 673-5207

MPLS Affirmative Action



Project Status
 Proposed: 7/1/2012
 Approved:
 Closed:
 Complete:

Project Name: The Cameron
 Main Address: 756 N 4th St
 Project Aliases:
 Additional Addresses:

Impaction
 Non-Impacted
 Impacted

Ward: 5 Neighborhood: North Loop

Occupancy
 Rental
 Ownership

Housing Production and Affordability

UNIT COMPOSITION	UNIT	QTY	UNIT AFFORDABILITY	UNIT	<30%	<50%	<60%	<80%	MKT
	0BR	23		0BR	0	17	6	0	0
1BR	17	1BR	0	0	17	0	0	0	
2BR	4	2BR	0	0	4	0	0	0	
3BR	0	3BR	0	0	0	0	0	0	
4+BR	0	4+BR	0	0	0	0	0	0	
TOT	44	TOT	0	17	27	0	0	0	

Project Activity	Development	Household
<input checked="" type="checkbox"/> New Construction	<input checked="" type="radio"/> Apartment/Condo	<input checked="" type="checkbox"/> General
<input type="checkbox"/> Rehabilitation	<input type="radio"/> Townhome	<input type="checkbox"/> Family w/Children
<input type="checkbox"/> Stabilization	<input type="radio"/> Coop	<input type="checkbox"/> Senior
<input type="checkbox"/> Preservation	<input type="radio"/> Shelter	<input type="checkbox"/> Single
Year Built: 1910	<input type="radio"/> Transitional	<input type="checkbox"/> Special Needs
	<input type="radio"/> Scattered Site/Other	<input type="checkbox"/> Homeless

Shelter Units: + Conversion Units: 44
 Section 8:

USES AND PERMANENT SOURCES

Project Uses:

Land: \$520,000.00
 Construction: \$5,361,300.00
 Construction Contingency: \$425,700.00
 Construction Interest: \$677,063.00
 Relocation: \$0.00
 Developer Fee: \$1,341,593.00
 Legal Fees: \$65,000.00
 Architect Fees: \$228,600.00
 Other Costs: \$1,106,501.00
 Reserves: \$559,790.00
 Non-Housing: \$0.00
 TDC: \$10,285,547.00
 TDC/Unit: \$233,762.00

Project Permanent Sources:

Source / Program	Amount	%	Term	Committed
CPED	\$430,000.00			
AHTF (2012)				
Hennepin County AHIF	\$430,000.00			
MHFA EDHC	\$417,000.00			
Met Council TBRA	\$14,000.00			6/1/2011
Hennepine County ERF	\$218,000.00			6/1/2012
Developer Land Note	\$290,047.00			
Historic Tax Credits	\$2,742,000.00			
Syndication Proceeds	\$3,548,700.00			
City of Minneapolis HRB	\$1,525,000.00			
Deferred Dev Fee	\$670,800.00			
TDC:	\$10,285,547.00			

Financing Notes:

SHPO & NPS has approved the Part I historic study making this property eligible for both state & historic tax credits.



**Cameron Transfer Building
756 N 4th Street
Minneapolis MN
Physical Needs Assessment**

Property Overview

Cameron Transfer building is a historic building once used for storage, both cold and dry, since the turn of the century. The four-story storage building was built with 2 distinct structural systems. The front portion is a wood post and bam system with T&G wood flooring. The rear portion of the building is a poured in place concrete slab and column system, using the "CAP" column design. The exterior wall is brick with a limestone foundation and portion of limestone wall infill. Exterior windows are a variety of type, including double hung, and are both metal and wood. The roof of the building is a sloped membrane roof which drains to the rear of the building. The property is currently overgrown with dirt areas where vehicles drive or park.

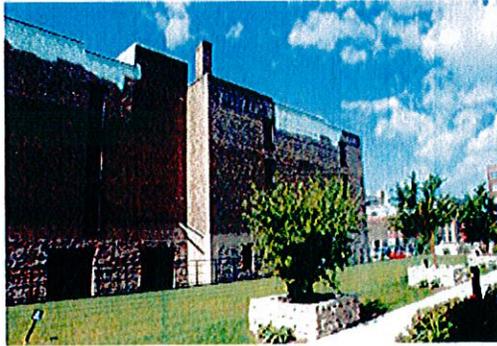
Currently there are no active utilities in the building. The result is that there is the expected amount of graffiti, debris and animal remains that can be found inside the building.

The proposed new use of this building is rental housing and associated amenities. Given the current condition of the existing site and building structure, a significant amount of work will be required. These efforts are also complicated by the fact that the building is in the process of being added to the National Register of Historic Properties. This will require an additional level of sensitivity and care in rehabilitating this property.

Please refer to the attached as-built, existing condition documents that demonstrates the current condition of the property.

1. Site

- a. **Landscape** - Currently the site is overgrown. The site grading needs to be modified to slope away from the building foundation. There is no storm water management and the roof of the building drains of the North side of the building and spills out on grade.
- b. **Hardscape** - Is very minimal and in poor condition. There is a stoop along 4th Street North and a large concrete loading dock mid-building on the East side. There is a dirt and gravel area to the West of the building that is used for truck traffic to leave the alley off the North side of the property. There is currently no accessible route to enter the building from the public right-of-way.



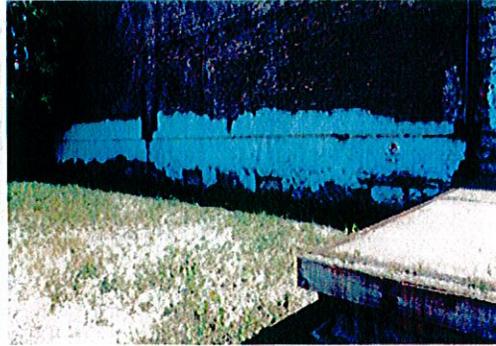
2. Building Envelope

- a. **Roof** - Existing roof slopes from South to North to a long (building wide) gutter with 2 down spouts on either side. The existing roof membrane appears to be light colored EPDM that appears that it was direct glued to the substrate and run up the parapet to a continuous keeper bar. The membrane has pulled away and bubbled up in many areas. There is also a fairly large (4' in diameter) area of ponding. Finally there is a roof leak at the center of the building where the wood structure beneath is being damaged. The roof system does not comply with current energy code. Our recommendation is that it needs to be completely replaced and the damaged substrate and structure repaired.
- b. **Exterior Walls** - All walls are solid brick that narrow as the wall goes up. They are bearing in the wood portion of the structure and non-bearing in the concrete portion of the building. For the most part the brick is in good condition. Areas at the roof downspouts are showing some degradation and will need to be rebuilt. In addition there should be general cleaning of the brick and mortar on both inside and outside faces since there is a large amount of graffiti. Based on visual inspection there will be approximately 12%-18% of the brick walls which will need tuck pointing.

c. **Windows/Doors/Openings** - Windows and doors fall into three basic categories.

- i. Blocked up openings - These are typically infilled with brick, plywood or limestone.
- ii. Windows and that need to be replace - These are less than 50% of the total number of windows and doors.
- iii. Windows and doors that can be repaired - If this was not a historic building, then all the windows and doors would be replace given the compromised nature and cost to repair.

d. **Foundation** - In general the foundation which appears to be limestone at the exterior and concrete pad footings at interior columns based on initial investigations. There is no exterior drain tile or waterproofing system at the building perimeter.



3. Vertical Circulation

- a. **Elevator** - There is no working elevator in the building. There is an existing elevator floor opening that can potentially be reused for a new elevator system to be retrofitted into the structure.
- b. **Stairs** - There are two existing stair structures. One in the wood portion of the building, built out of wood. The other in the concrete portion of the

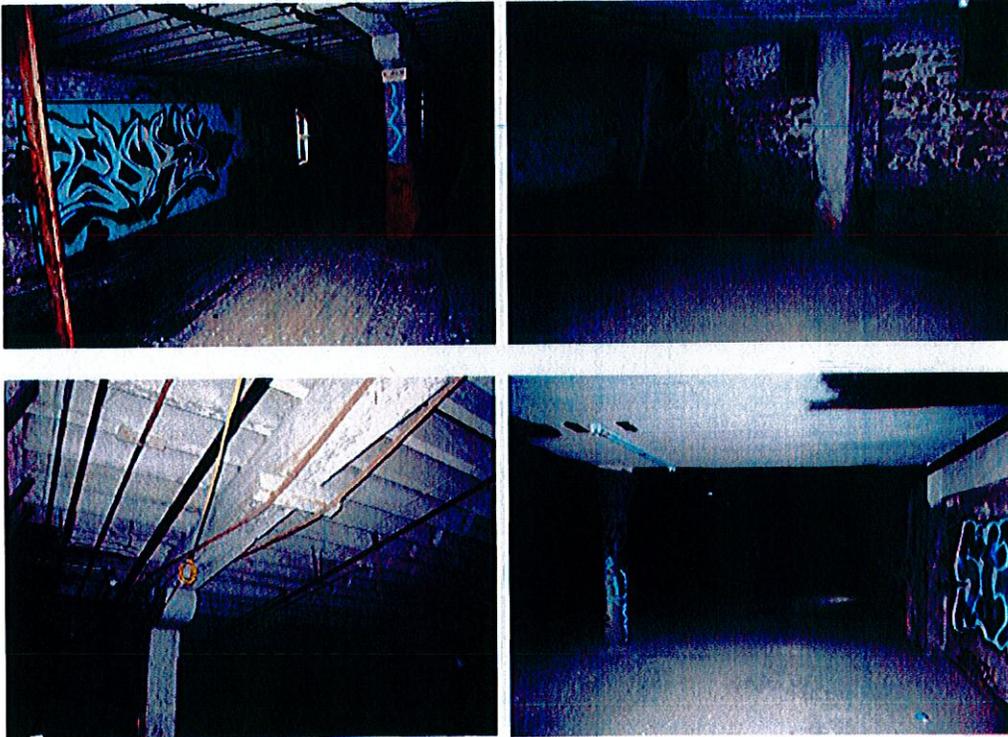
building, built out of concrete. In both cases the stairs do not comply with current code requirements of rise and run, width, handrails, etc. New stairs will need to be built. There is currently no safe roof access.



4. Interior Building Structure

- a. **Slab on Grade** - The slab on grade is very rough. It was further damaged to do structural review of existing building structure. Slab will need to be patched and a topping slab of concrete or gypcrete will be required to bring the floor up to code.
- b. **Wood Floor Structure** - In general the structure is in good condition including the T&G flooring. There are a couple of locations where the floor is worn through and will need to be replaced. Also the roof leak mentioned earlier in this document will need to be repaired. All wood floors will need to be sanded and refinished or have a subfloor and new floor added.
- c. **Concrete Floor Structure** - The concrete floor is in very good condition and only minor patching is required. Because of the proposed new use, there will most likely be a gypcrete and sound matt added to receive the new finish floor.

- d. **Interior Walls** - There is a very limited number of interior walls and they are all non-bearing and expected to be demolished and the adjacent structure patched, since the walls do not help in the re-use of the building as housing.



5. Utilities

- a. **Water** - Currently there is no active water in the building. It has been capped in the basement. New lines will be required to run throughout the building.
- b. **Gas** - Currently there is no active gas in the building. It has been capped in the basement. New lines will be required to be run to the new rooftop mechanical units and new domestic hot water system.
- c. **Electric** - Currently there is electric service to the building, but very minimum and potentially not in compliance with current code requirements. Upgrade of entire system will be required.
- d. **Sanitary Sewer** - There is only two toilet rooms on the first floor that are no longer active. There is no sanitary sewer system beyond the bathrooms. It will be required throughout the building for housing. Also based on invert

- elevations, there may be the requirement for a lift station within the building.
Final item is that there is no public sanitary sewer line in the street.
- e. **Fire Sprinkler** - Although there is sporadic locations of fire sprinkler lines the system is inactive and would need a lot of work to reactivate.

In conclusion, the Cameron Transfer Building property is in need of a tremendous amount of effort just to stabilize the property and even more to rehabilitate it into a new active use such as rental housing.

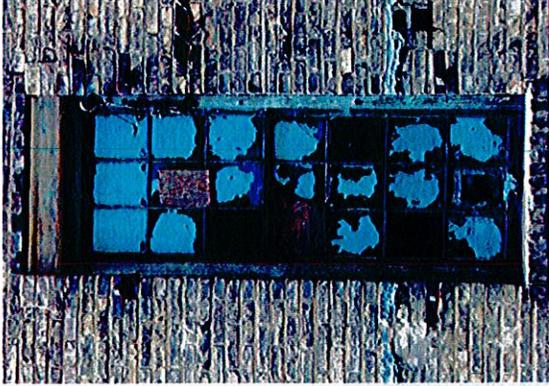
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Cameron Transfer Building | 756 N 4th St
MINNEAPOLIS, MN | 08.09.2011 | 11-0048

EXISTING BUILDING IMAGERY:
EXTERIOR



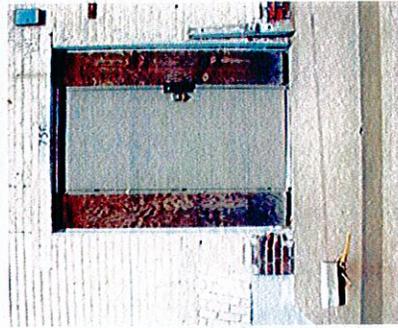
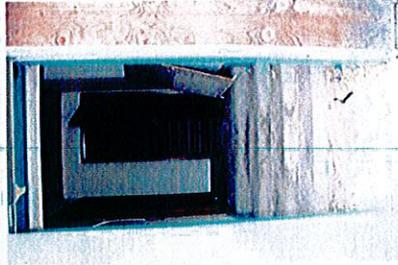
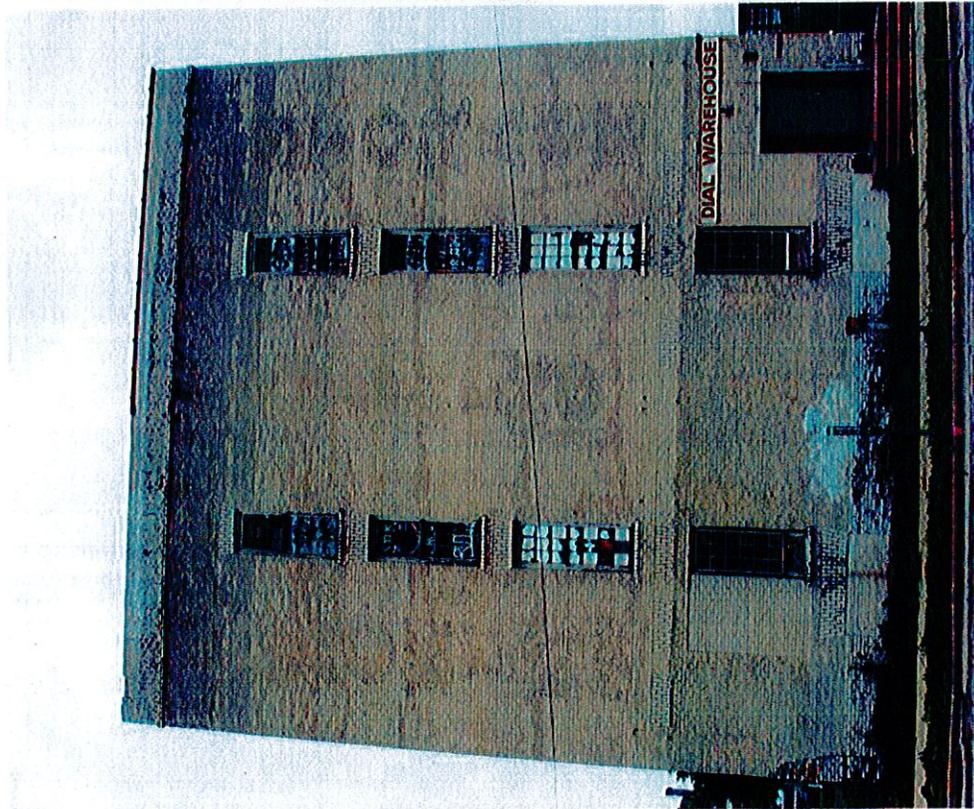


Schafer
Richardson

Cameron Transfer Building | 756 N 4th St

MINNEAPOLIS, MN | 08.09.2011 | 11-0048

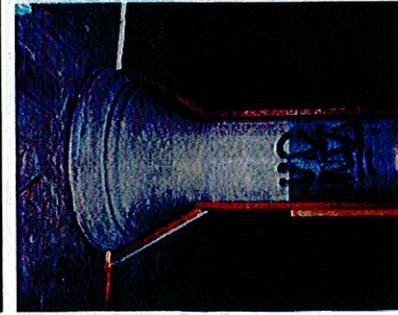
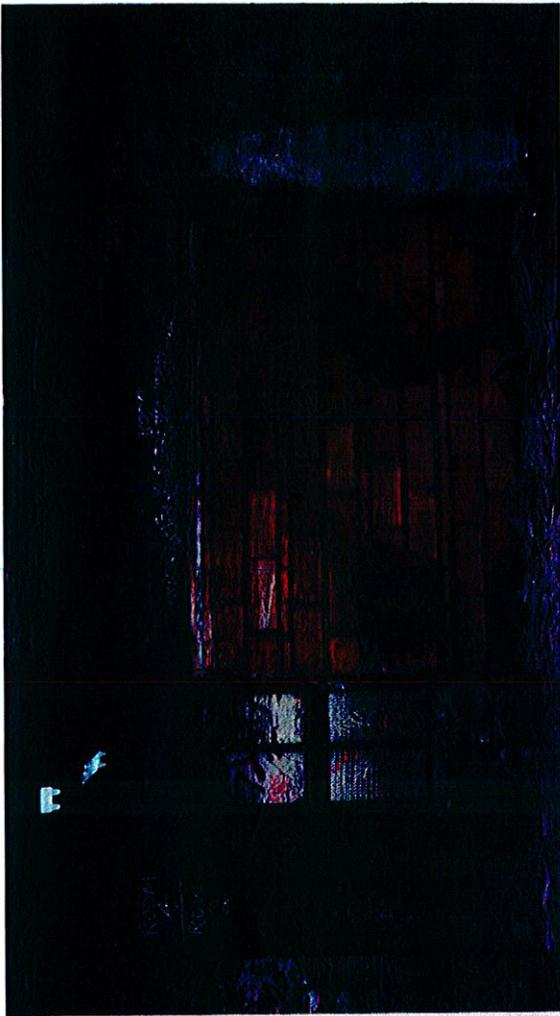
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OPENINGS



Cameron Transfer Building | 756 N 4th St

MINNEAPOLIS, MN | 08.09.2011 | 11-0048

EXISTING BUILDING IMAGERY:
ENTRY



Cameron Transfer Building | 756 N 4th St

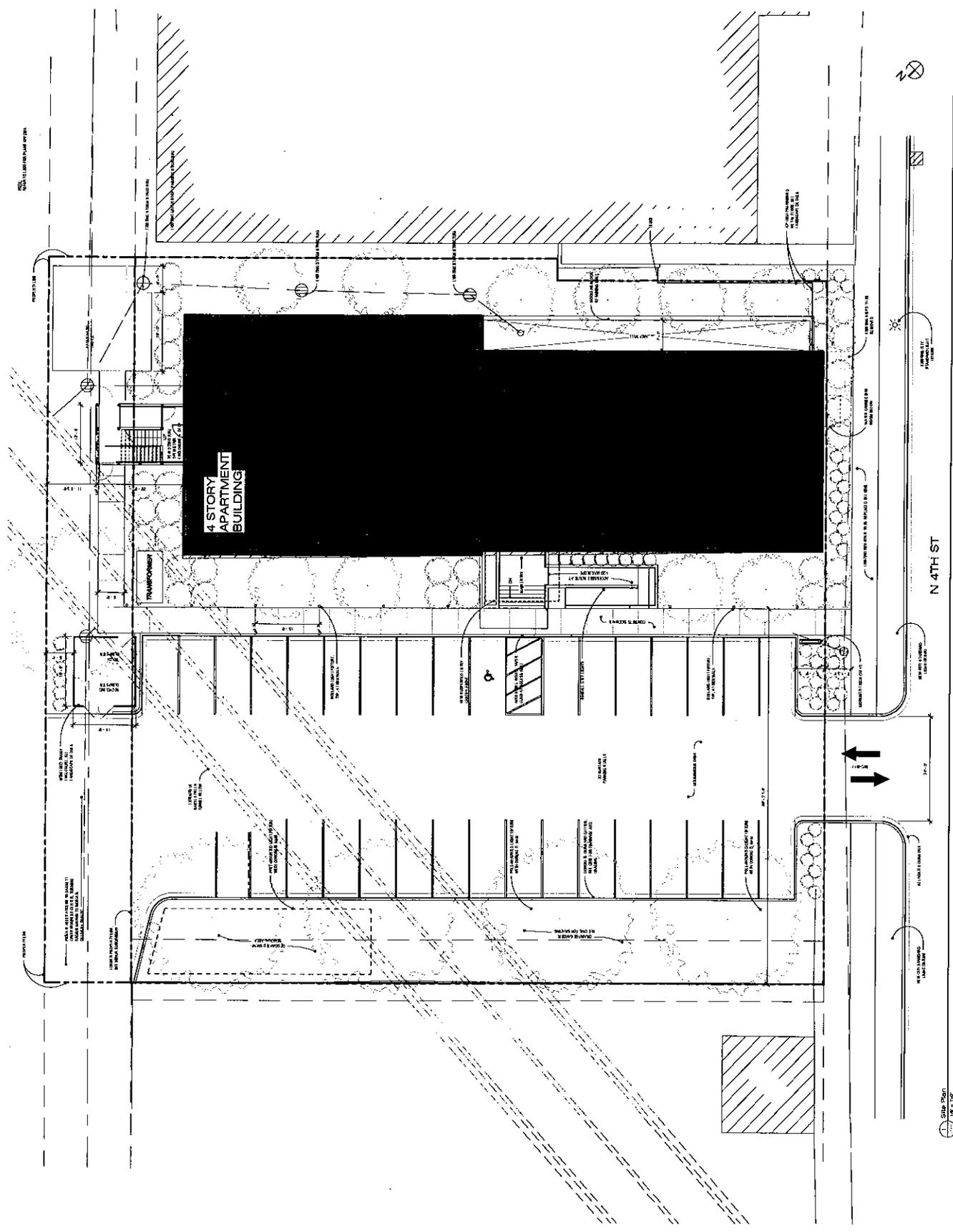
MINNEAPOLIS, MN | 08.09.2011 | 11-0648

EXISTING BUILDING IMAGERY:
INTERIOR



Cameron Transfer Building | 756 N 4th St
MINNEAPOLIS, MN | 08.09.2011 | 11-0048

EXISTING BUILDING IMAGERY: INTERIOR



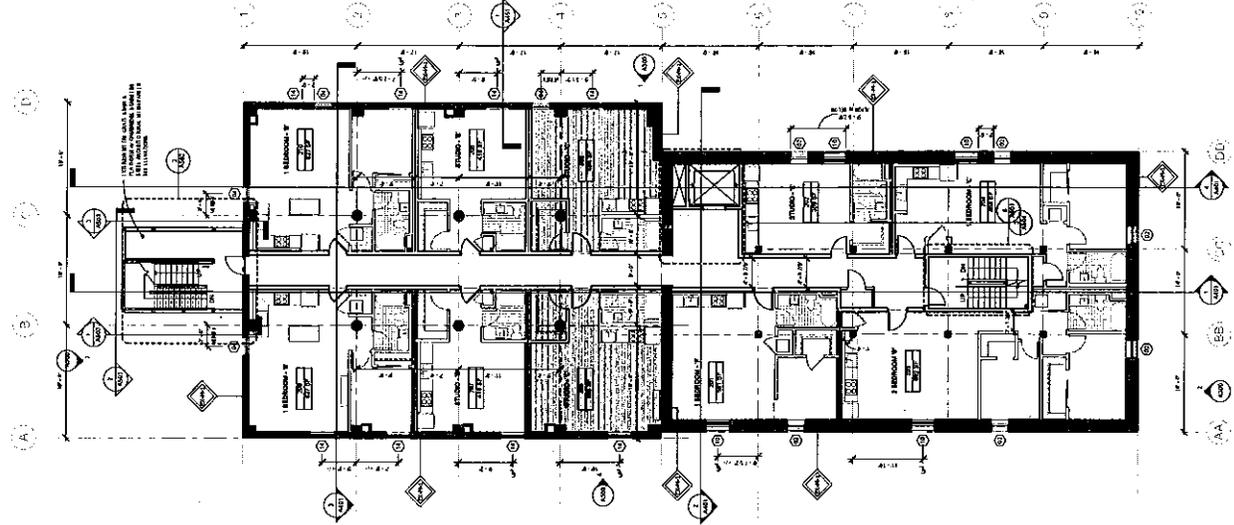
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3. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2010 MECHANICAL CODES.
4. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2010 MECHANICAL CODES.
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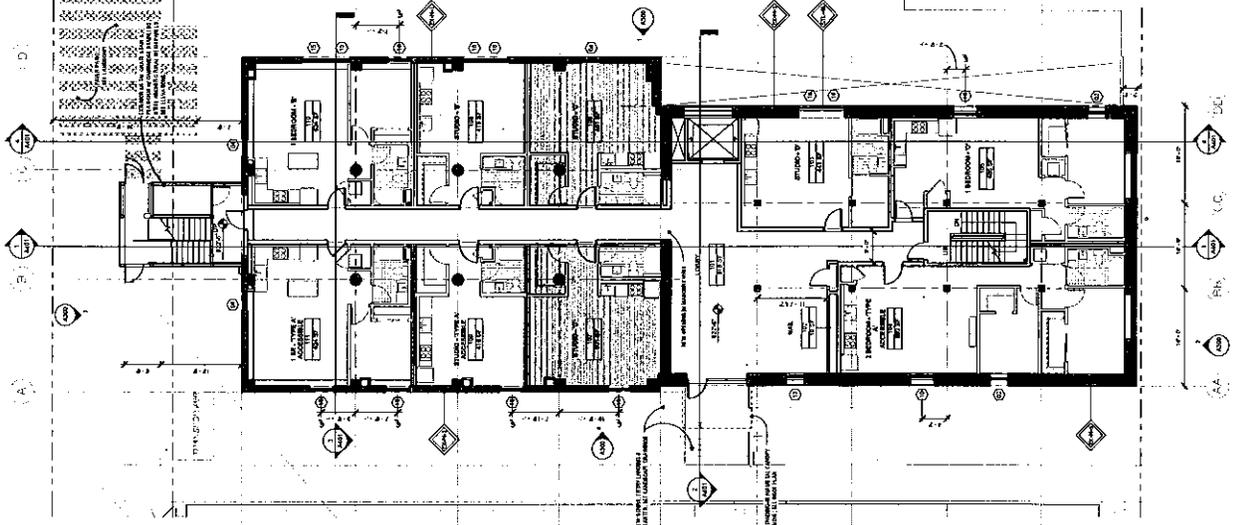
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WINDOW LEGEND

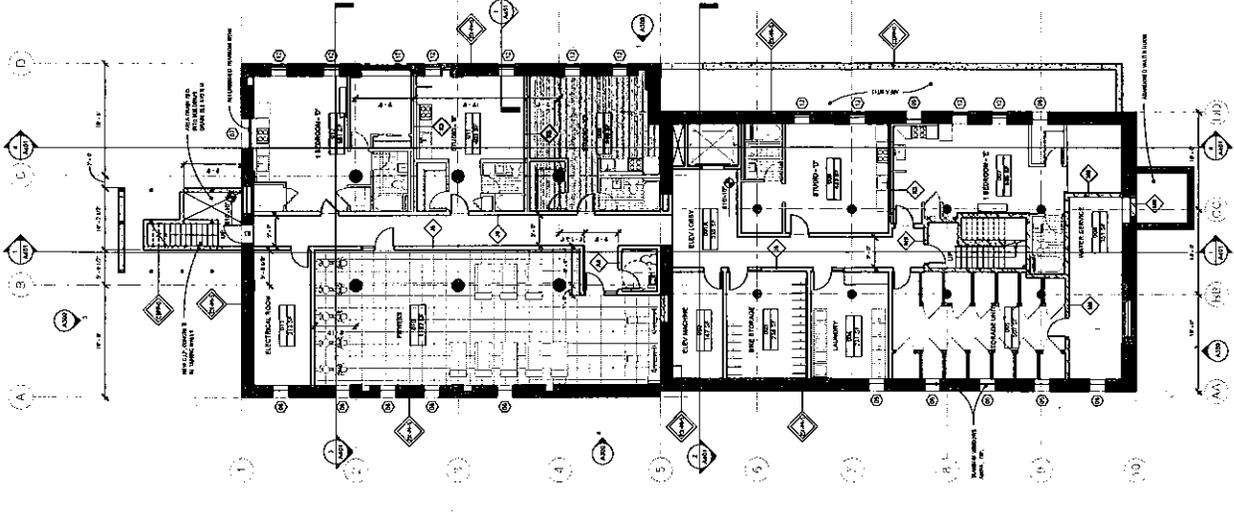
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LEVELS 2-3 TYPICAL PLAN



LEVEL 4 PLAN



SUBLEVEL PLAN

THE CAMERON

PHASE 1
HOMESVILLE PARK

URBANVOLUTION
 1000 Peachtree Street NE
 Atlanta, GA 30309
 (404) 525-2000
 (404) 525-2000 (F)

CONSULTANT

**STUBBINS
 WATSON
 CONSTRUCTION**

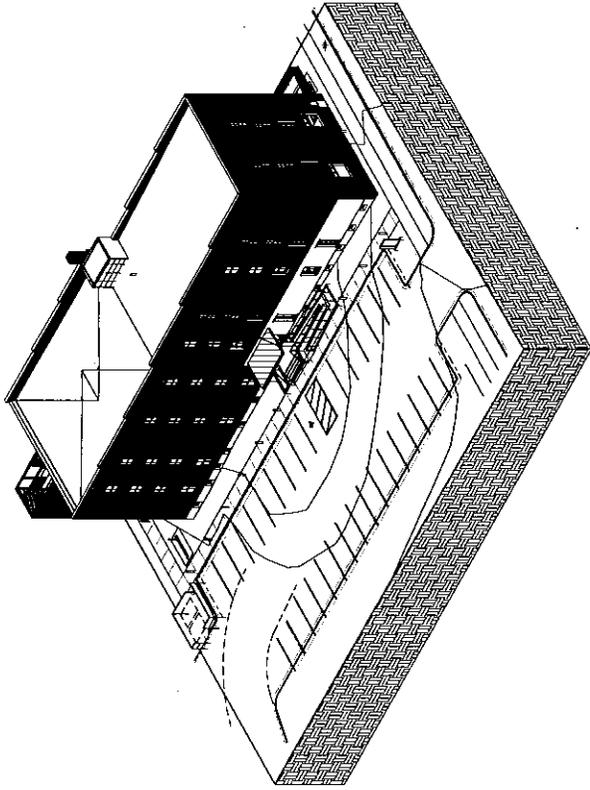
ARCHITECTS
 1000 Peachtree Street NE
 Atlanta, GA 30309

DATE: 08/14/14
 PROJECT: SPAN BUILDING
 DRAWING: 01
 SHEET: 01

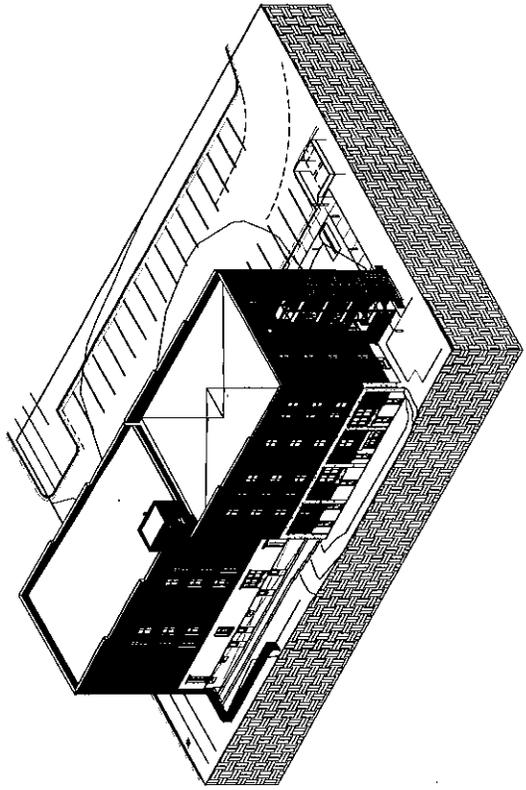
**BUILDING
 AXONOMETRIC
 VIEWS**

A351

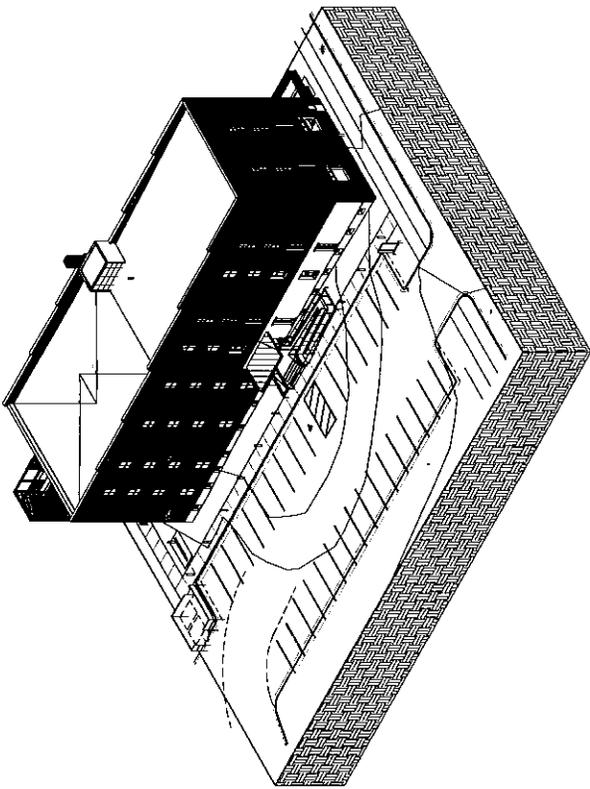
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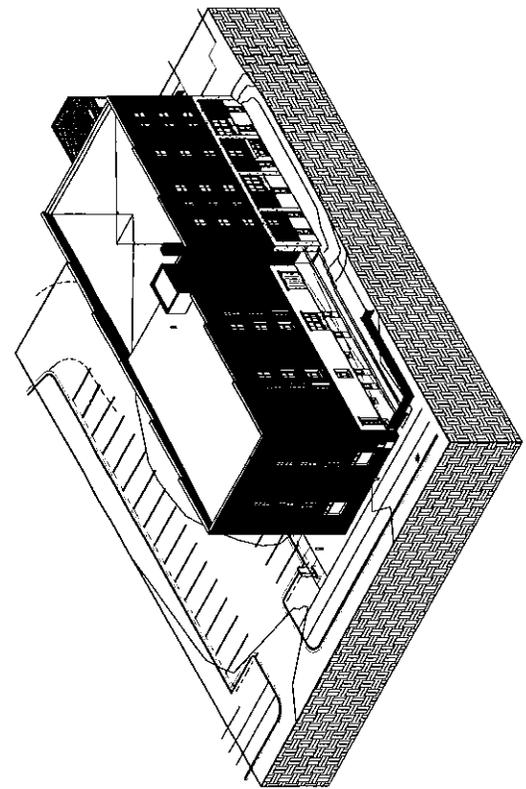
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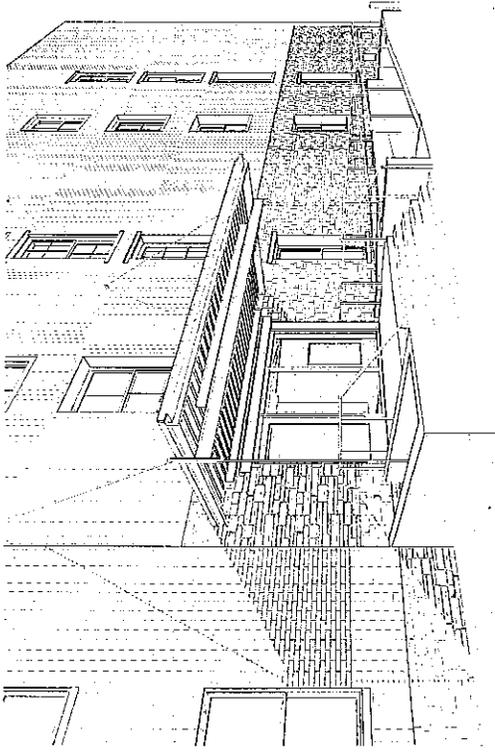
2 AXONOMETRIC VIEW FROM NORTHWEST



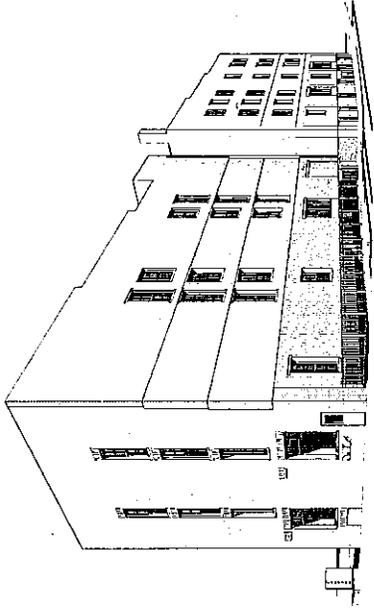
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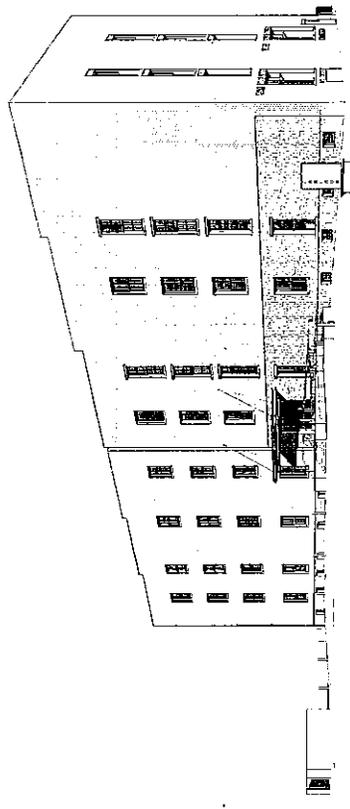
4 AXONOMETRIC VIEW FROM NORTHEAST



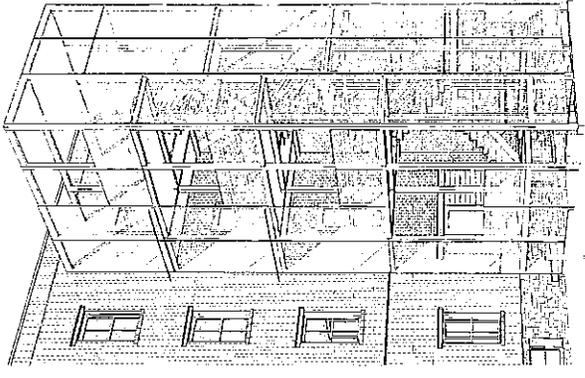
3. PERSPECTIVE VIEW OF CANOPY AT MAIN ENTRY



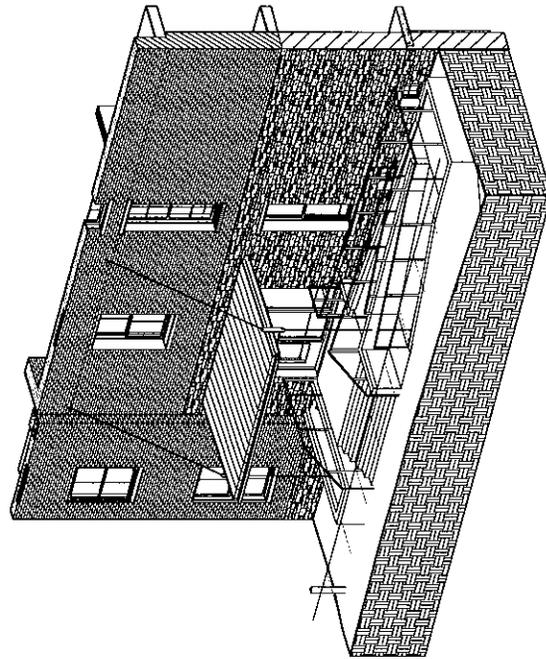
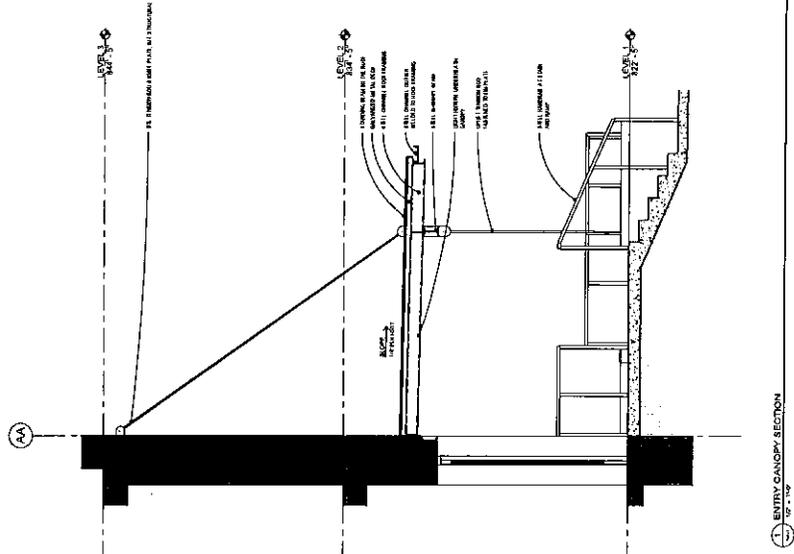
2. PERSPECTIVE VIEW FROM 4TH STREET - SOUTH



1. OPTION 2 VIEW FROM 4TH STREET - NORTH



4. PERSPECTIVE OF EXTERIOR STAIR



AXONOMETRIC VIEW FROM SOUTHEAST

ENTRY CANOPY SECTION

ATTACHMENT 2
Historical Information



United States Department of the Interior

NATIONAL PARK SERVICE

1849 C Street, N.W.
Washington, D.C. 20240

May 11, 2011

Mr. Bradley J. Schafer
Creamette Building, LLC
615 First Avenue NE, Suite 500
Minneapolis, MN 55413

PROPERTY: Cameron Transfer and Storage Building, 756 North Fourth Street, Minneapolis, MN
PROJECT NUMBER: 25960

Dear Mr. Schafer:

The National Park Service (NPS) has reviewed the Historic Preservation Certification Application -- Part 1 for the property cited above, and, based on the documentation submitted as part of the application has determined that the property appears to meet the National Register Criteria for Evaluation and will likely be listed in the National Register of Historic Places if nominated by the State Historic Preservation Officer.

The warehouse appears to be eligible under Criterion C as the work of a master, C.A.P. Turner, and retains character-defining features that embody the distinctive characteristics of the building, its site and environment. These features include the brick and limestone exterior with multi-pane industrial windows and large wood doors, but particularly the interior with its exposed structural systems. As described in the draft nomination, the building features wood post and beam mill construction, a modification of post and beam with trussed girder construction, and reinforced concrete flat slab floors supported on distinctive mushroom columns.

This determination is preliminary only. This building will become a "certified historic structure" only when the property is listed in the National Register of Historic Places.

As you plan your rehabilitation, we strongly recommend that you review the Preservation Briefs and other preservation-related information provided online by the NPS at <http://www.nps.gov/history/hps/tps/tax/index.htm> to help you plan a successful rehabilitation that will preserve the historic character of this building/site/complex and will meet the Secretary of the Interior's Standards for Rehabilitation. The National Park Service also strongly encourages applicants to submit the Part 2 - Description of Rehabilitation - prior to beginning work, in order to ensure conformance with the Standards.

Regulations require NPS to review the rehabilitation work as a single overall project, and to issue rehabilitation certification on the merits of the overall project rather than only for the structure. Consequently, a Part 2 application must describe all proposed work on the property, although the 20% investment tax credit is based only on costs for the rehabilitation of "certified historic structures"

A copy of this decision will be forwarded to the Internal Revenue Service. If you have any questions regarding the review of your Part I application, please the State Historic Preservation Office or me at 202-354-2278.

Sincerely,

Roger G. Reed, Historian
National Register of Historic Places

Enclosure

cc: IRS
MN SHPO
Maureen Michalski

**HISTORIC PRESERVATION CERTIFICATION APPLICATION
PART 1 - EVALUATION OF SIGNIFICANCE**

NPS Office Use Only

NRIS No:

NPS Office Use Only

Project No:

25960

Instructions: Read the Instructions carefully before completing application. No certifications will be made unless a completed application form has been received. Type or print clearly in black ink. If additional space is needed, use continuation sheets or attach blank sheets.

1. Name of Property: Cameron Transfer and Storage Building

Address of Property: Street 756 North Fourth Street

City Minneapolis County Hennepin State MN Zip 55401

Name of historic district: Not Applicable

National Register district certified state or local district potential district

2. Check nature of request:

certification that the building contributes to the significance of the above-named historic district (or National Register property) for the purpose of rehabilitation.

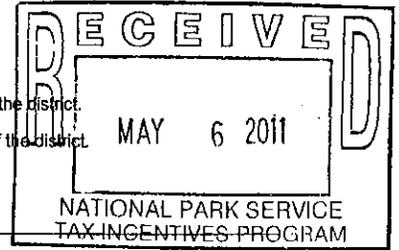
certification that the structure or building, and where appropriate, the land area on which such structure or building is located contributes to the significance of the above-named historic district for a charitable contribution for conservation purposes

certification that the building does not contribute to the significance of the above-named historic district.

preliminary determination for individual listing in the National Register.

preliminary determination that a building located within a potential historic district contributes to the significance of the district.

preliminary determination that a building outside the period or area of significance contributes to the significance of the district.



3. Project contact:

Name Maureen Michalski

Street 615 First Avenue NE, Suite 500 City Minneapolis

State Minnesota Zip 55413 Daytime Telephone Number 612-359-5842

4. Owner:

I hereby attest that the information I have provided is, to the best of my knowledge, correct, and that I own the property described above. I understand that falsification of factual representations in this application is subject to criminal sanctions of up to \$10,000 in fines or imprisonment for up to five years pursuant to 18 U.S.C. 1001.

Name Bradley J. Schafer Signature [Signature] Date 4/18/11

Organization Creamette Building, LLC

Street 615 First Avenue NE, Suite 500 City Minneapolis

State MN Zip 55413 Daytime Telephone Number 612-359-5840

NPS Office Use Only

The National Park Service has reviewed the "Historic Certification Application - Part 1" for the above-named property and hereby determines that the property:

- contributes to the significance of the above-named district (or National Register property) and is a "certified historic structure" for the purpose of rehabilitation.
- contributes to the significance of the above-named district and is a "certified historic structure" for a charitable contribution for conservation purposes in accordance with the Tax Treatment Extension Act of 1980.
- does not contribute to the significance of the above-named district.

Preliminary determinations:

- appears to meet the National Register Criteria for Evaluation and will likely be listed in the National Register of Historic Places if nominated by the State Historic Preservation Officer according to the procedures set forth in 36 CFR Part 60.
- does not appear to meet the National Register Criteria for Evaluation and will likely not be listed in the National Register.
- appears to contribute to the significance of a potential historic district, which will likely be listed in the National Register of Historic Places if nominated by the State Historic Preservation Officer.
- appears to contribute to the significance of a registered historic district but is outside the period or area of significance as documented in the National Register nomination or district documentation on file with the NPS.
- does not appear to qualify as a certified historic structure.

Date 5/11/11

National Park Service Authorized Signature [Signature]

National Park Service Office/Telephone No. 202-354-2278

See Attachments

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

HISTORIC PRESERVATION CERTIFICATION APPLICATION
PART 1 – EVALUATION OF SIGNIFICANCE

NPS Office Use Only

NRIS No:

NPS Office Use Only

Project No:

Instructions: Read the instructions carefully before completing application. No certifications will be made unless a completed application form has been received. Type or print clearly in black ink. If additional space is needed, use continuation sheets or attach blank sheets.

1. **Name of Property:** Cameron Transfer and Storage Building

Address of Property: Street 756 North Fourth Street

City Minneapolis County Hennepin State MN Zip 55401

Name of historic district: Not Applicable

- National Register district
- certified state or local district
- potential district

2. **Check nature of request:**

- certification that the building contributes to the significance of the above-named historic district (or National Register property) for the purpose of rehabilitation.
- certification that the structure or building, and where appropriate, the land area on which such structure or building is located contributes to the significance of the above-named historic district for a charitable contribution for conservation purposes
- certification that the building does not contribute to the significance of the above-named historic district.
- preliminary determination for individual listing in the National Register.
- preliminary determination that a building located within a potential historic district contributes to the significance of the district.
- preliminary determination that a building outside the period or area of significance contributes to the significance of the district.

3. **Project contact:**

Name Maureen Michalski

Street 615 First Avenue NE, Suite 500 City Minneapolis

State Minnesota Zip 55413 Daytime Telephone Number 612-359-5842

4. **Owner:**

I hereby attest that the information I have provided is, to the best of my knowledge, correct, and that I own the property described above. I understand that falsification of factual representations in this application is subject to criminal sanctions of up to \$10,000 in fines or imprisonment for up to five years pursuant to 18 U.S.C. 1001.

Name Bradley J. Schafer Signature _____ Date _____

Organization Creamette Building, LLC

Street 615 First Avenue NE, Suite 500 City Minneapolis

State MN Zip 55413 Daytime Telephone Number 612-359-5840

NPS Office Use Only

The National Park Service has reviewed the "Historic Certification Application – Part 1" for the above-named property and hereby determines that the property:

- contributes to the significance of the above-named district (or National Register property) and is a "certified historic structure" for the purpose of rehabilitation.
- contributes to the significance of the above-named district and is a "certified historic structure" for a charitable contribution for conservation purposes in accordance with the Tax Treatment Extension Act of 1980.
- does not contribute to the significance of the above-named district.

Preliminary determinations:

- appears to meet the National Register Criteria for Evaluation and will likely be listed in the National Register of Historic Places if nominated by the State Historic Preservation Officer according to the procedures set forth in 36 CFR Part 60.
- does not appear to meet the National Register Criteria for Evaluation and will likely not be listed in the National Register.
- appears to contribute to the significance of a potential historic district, which will likely be listed in the National Register of Historic Places if nominated by the State Historic Preservation Officer.
- appears to contribute to the significance of a registered historic district but is outside the period or area of significance as documented in the National Register nomination or district documentation on file with the NPS.
- does not appear to qualify as a certified historic structure.

Date

National Park Service Authorized Signature

National Park Service Office/Telephone No.

See Attachments

HISTORIC PRESERVATION
CERTIFICATION APPLICATION –

Cameron Transfer and Storage Building

Property Name

PART 1

NPS Office Use Only

Project Number:

756 4th Street N, Minneapolis, MN 55401

Property Address

5. Description of physical appearance:
Please See Attached Continuation Sheet

Date of Construction: November 1909 (1st half) and November 1910 (2nd half) Source of Date: Building Permits from City of Minneapolis

Date(s) of Alteration(s): Exact dates of most alterations are unknown. However, below is a listing of known modifications and estimations of alteration dates.

A 100 x 30 feet, one-story, brick wagon shed was added in 1914 attaching to the north 30 feet of the rear structure on the east side and extending eastward 100 feet running perpendicular to the building. This shed was demolished sometime after 1972 based on real estate data records. The building permit card for the property ends at 1968, so exact date of demolition is unknown.

Based on historic photos it appears that the following modifications were made after the mid-1950's: north façade basement windows blocked in, north façade first story windows modified to narrower openings and partially blocked in, north façade main entry raised approximately 2 feet and widened a foot, north façade concrete stoop and steps added at entry.

Based on real estate data records the following modifications were made after 1972: east façade dock attached to front structure demolished, east façade dock and warehouse attached to rear structure demolished.

The interior of the building appears to have been modified in late 1955 and early 1956 to accommodate new wiring, fixtures, and plumbing. It is estimated that this was likely the time that the office space in the interior of the building was added to the first floor on the south side of the building. This built out area of office is approximately 1,300 square feet.

Has building been moved? yes no If so, when? _____

6. Statement of significance:
Please See Attached Continuation Sheet

7. Photographs and maps.

Please see Exhibit A: site photos. Exhibit A printed on photo quality paper, type: Carolina Cover 10pt C2S.
Please see Exhibit B: site map. Please see Exhibit C: photo key plan, indicating the exterior views of numbered photos in Exhibit A. Please see Exhibit D: structural plans for rear structure.

Continuation sheets attached: yes no

CONTINUATION / AMENDMENT SHEET

Cameron Transfer and Storage Building
Property Name

**Historic Preservation
Certification Application**

756 4th Street North, Minneapolis, MN 55401
Property Address

Instructions. Read the instruction carefully before completing. Type, or print clearly in black ink. Use this sheet to continue sections of the Part 1 and Part 2 application, or to amend an application already submitted. Photocopy additional sheets as needed.

This sheet: continues Part 1 continues Part 2 amends Part 1 amends Part 2 NPS Project Number: _____

5. Description of physical appearance:

The Cameron Transfer and Storage Building is a four story warehouse building, plus a full basement, designed and engineered by the internationally famous Minneapolis structural engineer Claude Allen Porter (C.A.P.) Turner. There are two different components of the building with two different structural systems: 1.) The older original portion, fronting on Fourth Street North, is a 46' x 80' exterior load-bearing masonry wall warehouse with a heavy timber structural system bearing on masonry walls and a reinforced concrete basement with mushroom capital columns; 2.) The rear structure, which is 55' x 70', consists of five levels of a cast-in-place reinforced concrete structure with mushroom capital columns. The front portion was constructed in two parts: levels basement through three in 1909 and a fourth floor addition in 1911, while the rear structure was built in 1910. All structures and systems were designed by C.A.P. Turner and illustrate the evolution and acceptance of C.A.P. Turner's work in promoting reinforced concrete, flat slab structural systems in place of the older heavy timber post and beam framing system. The building is generally rectangular in shape with a slight jog outward where the rear structure joins the front portion of the building.

Dimensions for both structure types are typical for their period of construction. The interior bay dimensions for the front heavy timber structure are 16 feet by 14 feet. The interior bay dimensions for the rear fully reinforced concrete structure are 17 feet by 18 feet, according to the structural engineering drawings (see Exhibit D). These dimensions are in keeping with the typical dimensions of C.A.P. Turner's work between 1906 and 1910 as evidenced by the D.A. Gasparini article "Contributions of C.A.P. Turner to the Development of Reinforced Concrete Flat Slabs 1905-1909." The slab thickness at the Cameron Transfer and Storage building is 7 inches rough with a 1 inch cement finish; this is also in keeping with the nominal slab thickness at other buildings Turner designed during this time period.

The building's character defining features are the posts, beams, capitals, purlins, columns, spandrel beams, and other structural elements that render it significant as the work of a master (C.A.P. Turner) and significant as a type, period and method of construction. These features, in their design and materials, define both why a property is significant (as a type, period, method of construction, work of a master) and when it was significant (1909-1911). In the front portion of the building, the heavy timber post and beam structure varies in size among the floors. In the basement, which is made of reinforced concrete, each column is 15 inches in diameter. Floors one through four utilize wood posts which vary in size as follows: 1st floor- 11 1/4" x 11 1/4"; 2nd floor- 11 1/4" x 11 1/4"; 3rd floor- 10" x 9 1/2"; 4th floor- 8" x 10". These posts extend from the floor to ceiling but are separated from the beams by rectangular wood column capitals. The fully sized wood capitals that remain intact are 4 ft long, 9 1/2" deep and 10" thick and are rounded at each end (photo 24). In most locations the capitals are not intact and have been cut short on one or both of the sides (photo 42). It is unknown when these modifications may have occurred but they may represent the business requirement for greater height in storage areas, which requirement led directly to Turner's revolutionary flat slab concrete structural system. The wood beams, which rest on the above described capitals and posts, are the following sizes: 1st floor- 12"d x 11 1/2" w; 2nd floor- 11 1/2"d x 11 1/2" w; 3rd floor- 13 1/2" d x 9 1/2" w; 4th floor- 10"d x 8" w. The timber structure supporting the second and third floors of the building is different from the other floors because of the trussed girder system that is used to increase the loading capacity of the heavy timber beams (photos 30,31,41). The steel rods run the length of the beams, on either side, extending from one post to the next and following the stress lines of the beam. They are embedded in the area between the post and the beam then extend at a slight downward angle underneath a piece of wood (the strut) attached to the underside of the beam in the middle of two posts and then back upward to the next post (photos 32, 33). This structural element is used to support the second floor and third floor, and visible on the first and second levels of the building in the wood structure section. "Trussed girders utilize a tension rod to support a

CONTINUATION / AMENDMENT SHEET

Cameron Transfer and Storage Building

Property Name

**Historic Preservation
Certification Application**

756 4th Street North, Minneapolis, MN 55401

Property Address

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vertical strut at mid-span or two vertical struts at one-third points, utilizing the principle that the tension in the rods would provide a vertical uplift on the strut and thus support the beam at these points" (Rabun, 290). In the heavy timber portion of the building the exterior masonry wall is load bearing.

The structural, character defining features in the rear portion of the building are significantly different from the heavy timber wood frame structure of the front portion. In the rear, fully reinforced concrete structure the concrete columns vary in diameter from the basement to the fourth floor. The main shaft diameter for each column varies between the floors as follows: Basement- 23", 1st Floor- 21", 2nd Floor- 19", 3rd Floor- 17", 4th Floor- 15" based on measurements taken in the field. All of the columns employ CAP Turner's revolutionary mushroom slab system within the slab (see Exhibit D) but visibly display this technology by the slight fan outwards in the capital of each column (photo 15). The rear building also utilizes concrete spandrel beams along the exterior walls which transfer loads to the rectangular columns on the perimeter of this structure. These perimeter columns are 22" wide and 12.5" deep (as measured from the internal portion of exterior masonry wall). The exterior masonry walls in this section of the building are not load bearing.

Ceiling heights and floor-to-floor dimensions vary by floor in the building. In the rear reinforced concrete section the ceiling heights are as follows: Basement- 11'-0"; 1st floor- 11'-4"; 2nd through 4th floors- 9'-3". In the heavy timber portion of the building the floor to floor heights are: Basement to 1st- 11'-0", 1st to 2nd- 11'-0" 2nd to 3rd- 8'-8", 3rd to 4th- 8'-8", 4th to roof deck- 14'-0" on the north side of building and 17'-5" on the south side of building as roof is sloped for drainage to an interior drain near the interior demising wall.

There are a number of vertical shafts and passages in the building including two stairways, one elevator shaft and 10 venting shafts. The front, heavy timber portion of the building contains a freight elevator and shaft that was added in 1911 in the northeast corner of that structure when the fourth floor was added to the building (photos 35,36). There is an open wood stairway from the basement to the fourth floor in the front structure (photos 21,46). This stair abuts the east exterior wall, south of the elevator shaft by approximately fifteen to twenty feet, and runs parallel to the east façade. The second stairwell is located in the rear concrete structure, directly abutting the south and east walls of that structure. This stairwell is cast-in-place concrete and runs from the first to the fourth floor (photos 29,40). It runs perpendicular to the east exterior wall. The remaining vertical shafts are 10 clay tile, rectangular vent shafts that run from basement through roof in the reinforced concrete portion of the building. These shafts are adjacent to the exterior walls and cast-in-place columns but are separate from the structure. They are all approximately 22" wide and 14.5" deep. In the basement these shafts are open (photo 18) and on floors 1-4 they look very similar to the load bearing columns that they are abutting (photos 44,49). Three are located on the east wall, three on the west wall and four across the north wall (with two of these four at the northeast and northwest corners of the building). It is believed that these shafts, which are not structural, were used for venting air from the basement when horses were kept in the lowest level of the rear building.

The basement level on both the front structure and rear structure is reinforced concrete with C.A.P. Turner engineered mushroom columns. There are eight mushroom columns in the front portion of the building and six mushroom columns in the rear of the building. The foundation is made up of load-bearing limestone masonry walls while the floor is a concrete slab on grade. Demising the front and rear structures is a load-bearing masonry wall 17" thick with a connecting opening reinforced with steel framing. This opening has two metal fire doors that swing open towards the rear portion of the building (photo 16). The ceiling in both portions of the basement is reinforced concrete. The basement in the rear structure has one large, garage door sized, opening (photo 17) by which it was connected to a wooden barn and shed to the east during the early 1900's. This large opening is located in the east foundation wall towards the north end of the building. The rear structure has five small blocked-in window openings along the west wall near the ceiling, three on the north wall, and six on the east wall.

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On the east wall three of the six blocked windows have been blocked from the interior so that the openings are more visible from the exterior (photos 6,7). There is an interior brick wall in the rear portion of the building in the south east corner of that structure enclosing the former boiler room (photo 19). The front portion of the basement has six small blocked-in window openings along the west wall near the ceiling, two (slightly larger) on the south wall, and seven on the east wall. The front structure has a smaller door leading to a vault underneath the public right of way (photo 20). The entire basement has steel piping attached to the ceiling for the disconnected sprinkler system.

The first floor of the building has small offices built out in the southern or front portion of the structure. This office build out (now partially demolished) was erected in the mid 1950's and extends from the front of the building to the second bay of heavy timber columns. This built out area, which conceals the heavy timber structure, is approximately 1300 square feet and is connected to the main, front entrance on Fourth Street North (photo 22). Beyond (to the north of) the office build out is the cold storage warehouse and loading dock portion of the building. The heavy timber structure is visible beyond the office area. Beyond the office the exterior walls are exposed brick and stone in both the front and rear portions of the building. The floor is cast-in-place concrete in the front section and is cast around the bases of the wood columns. There is a non-functional sprinkler system hanging from the ceiling in this portion of the building (photo 23). Heavy timber trussed girders carrying second floor are visible from this first floor (photos 23,24). There are two garage door size openings on the east wall in this area that are located to the south of the elevator shaft; both openings have an old wood garage door (photos 5,25). There is another opening on the west wall, located opposite the elevator shaft, which is a more recent loading dock with a metal garage door and which connects to a more recent concrete loading dock on the exterior of the building (photos 12,13). There is also evidence of a large, garage sized opening on the east elevation towards the south end of the building that spans a portion of both basement and first levels; this opening was filled in with stone at an unknown time and is visible from the exterior (photo 3). There are seven window openings in this section of the building- one on the east wall (boarded), two on the south wall and four on the west wall. There is a 17" thick load-bearing masonry wall dividing the front structure and the rear structure, with an opening between the two structures that is slightly larger than a standard doorway width. There is a rolling metal fire door located at this opening (photo 26). The rear or north portion of the building is cast-in-place reinforced concrete with CAP Turner's mushroom column and capital system. In this section there are six concrete columns. At the north side of the building is a large, garage door sized opening with a rolling metal fire door which would have been used for loading from the former rail siding (photos 11,27). There are two additional window size openings on the north wall that have been bricked in. On the east wall there are two larger sized openings- one near the north wall (in-filled with concrete block) and one just south of the middle of the structure (with rolling metal door) (photos 8,10,28). There are also two window sized openings on the east wall that are filled in with brick. There is sprinkler system piping in this section that follows the exterior walls of the building but the system is not functional.

The second floor of the building is completely open in the front heavy timber section of the building only; the structure divides the floor into three bays running north-south. There are eight heavy timber columns in this area of the building. The flooring is a 2 1/2" rough wood decking in the front section. There is a non-functional sprinkler system hanging from the wood ceiling in this portion of the building (photo 34). Heavy timber trussed girders carrying the third floor are visible from this floor (photos 31,32,33). The front section of the building has exposed, load-bearing brick walls that are covered with metallic paint graffiti. In this portion of the building there are six window openings, two on each exterior wall. There is a 17" thick masonry wall dividing the front structure from the rear structure with a small opening between the two structures that is slightly larger than a standard doorway width. There is a rolling metal fire door here (photo 37). The rear or north portion of the building is reinforced concrete with C.A.P. Turner's mushroom column and capital system. In this section there are six concrete

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columns. There are four window openings in this section- two on the east exterior wall and two on the north exterior wall. The rear section of this floor is broken up by clay tile storage units that are independent of the structural system. These storage stalls are adjacent to each other in three rows and are separated by two hallways running north and south and in line with the two sets of windows on the north side of the building (photo 11). The storage stalls extend from the northern wall to the southernmost set of columns in the middle and easterly sections, and extend from the northern wall to the middle set of columns on the west side of the building. There are three storage stalls flanking each side of the easterly hallway (photos 38, 39). In the westerly hallway there are two storage stalls on the westerly side of that hall and three storage stalls on the easterly side of that hall.

The third floor is open, without demising walls in both the front and rear sections of the building. The front section is a heavy timber wood post and beam structure dividing the floor into three bays running north-south (photo 41). There are eight wood posts in the front area of the building. The flooring is a 2 1/2" rough wood decking in the front section. Wood trusses associated with the fourth floor are visible from below. The front section of the building has exposed brick walls that are covered in metallic paint graffiti (photo 41). In this portion of the building there are six window openings, two on each exterior wall. There is a 17" thick masonry wall dividing the front structure from the rear structure with a small opening between the two structures that is slightly larger than a standard doorway width. There is a rolling metal fire door here (photo 43). The rear/north portion of the building is reinforced concrete with CAP Turner's mushroom column and capitol system. In this section there are six concrete columns. There are four window openings in this section- two on the east exterior wall and two on the north exterior wall. There are some electrical fixtures in the concrete portion of the building at this level attached to the ceiling and are outside of the period of significance for the building. Also, there are remnants of wood framing, attached to ceiling and some columns, that was previously used for internal walls to create individual storage stalls (photo 44).

The fourth floor of the building is completely open, with no demising walls, in the front section of the building. The front section is a continuation of the heavy timber wood post and beam structure. There are eight wood posts in this area of the building. The flooring is a 2 1/2" rough wood decking in the front section. There is a non-functioning sprinkler system hanging from the ceiling in the portion of the building (photo 45). Wood trusses associated with the roof are visible from below. The front section of the building has exposed brick walls that are covered in metallic paint graffiti. In this portion of the building there are six window openings with two on each exterior wall. There is a small wooden ships ladder for roof access on the north side of the front portion of the building (photo 47). There is a 17" thick masonry wall dividing the front structure from the rear structure. There is a small opening between the two structures that is slightly larger than a standard doorway width and two rolling metal fire doors, one on each side of the opening, in this location (photo 48). The rear/north portion of the building is reinforced concrete with CAP Turner's mushroom column and capitol system and cast-in-place slab. In this section there are six concrete columns (photo 49). On this floor is a clay tile wall running north and south and bisecting the westerly set of columns running most of the length of the rear structure (photos 49,50). This wall is not structural but rather was previously used to divide storage areas on this floor. The fourth floor has electrical lighting fixtures attached to the ceiling in both the wood frame and reinforced concrete sections of the building which are outside of the period of significance for the building. Like the second and third floors, the fourth floor has four window openings in this section; two on the east exterior wall and two on the north exterior wall. There is also metallic paint graffiti on the walls in this area of the building (photo 49).

The exterior weathering material on three sides is primarily a soft, buff-colored brick, while the primary façade fronting Fourth Street North is made up of an even softer white sand brick (photo 1). Portions of the exposed lower level and first level walls consist of limestone and elements of reinforced concrete showing a number of

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modifications to the building (photo 1). The east façade consists of limestone on the basement level and first level both in the original building and in the addition structure (photo 3,5). A wooden shed, previously attached to the east side of the building, has been demolished sometime after 1968 (photos 9,10).

The upper floors of the east façade are the buff-colored brick (photo 9). The north façade consists entirely of buff-colored brick with the exception of the basement level, which is limestone, and a number of exposed concrete frame elements (photo 11). The west façade consists of the buff-colored brick with the exception of the first floor and basement level of the heavy timber portion of the building where there is limestone exposed (photo 12).

Several painted wall signs from the historic use of the building, although faded, exist on the east, north, and west facades. On the east façade is a sign approximately 20-25 feet in height and 10 feet in width that abuts the south east corner of the building as well as the parapet. This sign was painted in a black background with white lettering and reads "Cameron Transfer & Storage Co. Agents Allied Van Lines Inc." This sign is in good condition at the top, where it reads "Cameron Transfer & Storage Co." and in fair condition on the bottom, where it reads "Agents Allied Van Lines Inc.." (photos 1,5) It is estimated that this sign has been in existence on the building since the mid 1950's (photo 56) and it is possible that the sign is one of the wall signs called out as painted in 1956 and 1957 on the building permit card. On the north façade along the top of the structure and running the length of this façade is another painted sign that reads "Warehouse No. 2 Cameron Transfer & Storage Co. Fire Proof" (photo 11). This sign is painted in white lettering and is bisected by two window openings. These openings break the sign into three parts- "Warehouse No. 2" "Cameron Transfer & Storage Co." and "Fire Proof". The signage is underlined by a white line across the length of the façade. The text on this sign is faded but readable with the center portion ("Cameron Transfer & Storage Co." being the most distinguishable part of the sign (photo 11). It is in poor condition and the date of painting is unknown. It is possible that the sign is one of the wall signs called out as painted in 1956 and 1957 on the building permit card. On the western façade of the building are two painted wall signs which are in poor to fair condition (photo 12). These signs were once a black background with white lettering. The larger sign is at the rear portion of the building and extends from the north wall until the mid-point on the west façade, it is between five and ten feet in height and extends from roughly the parapet downwards. This sign reads "Fire Proof Storage" on the upper half, in larger letters, and "Warehouse No. 2" on the lower half, in slightly smaller letters (photo 12). The other sign on the west façade is also at the top of the building from a portion of the parapet downwards. This sign is five feet or less in height and extends from the front, south, edge of the building back towards the end of the original structure. This sign reads "Cameron Transfer & Storage Co." (photo 13). The dates of the signs on the west façade are unknown, however, they do not appear to be on a photograph from 1925 of the building (photo 55). It is possible that the sign is one of the wall signs called out as painted in 1956 and 1957 on the building permit card. The south façade of the building had painted signage approximately in the mid-1900's (photo 56) but that signage is no longer visible on the façade. The exception is that one can barely make out the word "Storage" running vertically between edge of west side of building and the first vertical set of window openings (photos 1,53).

Window openings are present on all sides of the building and larger, garage door sized openings exist on the east and west sides of the structure. On the primary façade there are two bays with three windows each on the 2nd through fourth floors (photo 1) On the first floor of the main façade are two small main floor windows that once were larger and have been enclosed with brick at an unknown time. There are also two small basement windows that have also been bricked closed (photos 2,53,54). The main façade has a door opening with non-original concrete steps to the sidewalk. This door is larger and higher on the building than as originally constructed. That alteration is estimated to have occurred after the mid-1900's (photos 1, 53,54,55).

The east façade has two sections- in the front, heavy timber section, there are two bays of windows on floors 2-4 of the building, one window opening on the first floor near the front of the building, and two larger openings on the

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first floor near the rear portion of this structure (photos 3,5). All first floor openings are boarded in this area. Also on the east façade, in the post and beam structure, is a larger opening that has been filled in at an unknown time that spans the basement and first floors approximately in the middle of the structure. The basement level in this area also has smaller sized openings- seven in this area- that were filled in with concrete at unknown times (photo 3). The back, addition structure on the east façade has two bays of windows on floors two through four (photo 10). At the first floor in this area are one window opening towards the front of the structure and one larger opening towards the middle of the structure with a metal door (photos 8,10). There are a window and door opening in this area that have been previously filled in with stone and concrete at an unknown date (photo 10). The basement level in this area has three smaller window openings and one larger opening (photos 6,7,10).

The north, or rear, façade of the structure has two bays of windows on floors one through four (photo 11). There is also a larger, garage door sized opening on the first floor between the window bays. The basement level of the north façade has three window openings that have been filled in with concrete at unknown times.

The west façade of the building has two bays of windows on floors two through four in the wood post and beam portion of the building (photos 12,13). One of the openings on the first floor, directly in line with 2nd through 4th floor windows, has been blocked in with concrete at an unknown time (photo 13). There are no past or current openings on the west wall of the rear structure floors one through four. There are twelve small openings at the basement level of the building on the west façade running the entire length of the structure, all of which have been filled in with concrete at an unknown time. Also along the west façade, in the heavy timber structure, is an opening for a large garage door. In front of this opening is a concrete platform that is approximately 15 feet wide and extends approximately 15 feet from the face of the building into the unpaved parking lot (photo 12).

The windows remaining in the front, heavy timber frame structure are wood frame and sash, double hung windows with nine panes on the top (three wide by three tall) and 12 panes on the bottom (three wide by four tall) (photos 3,13). The only exceptions are the two windows on the south façade which are on the first level. Those windows are eighteen panes (three wide by six tall) and are inoperable (photo 2). They also have a larger opening at bottom that currently does not contain glass. All of the remaining operable windows in this portion of the building have a rope/weight system. Very little glass remains in the window sashes due to vandalism (photos 2, 13).

The windows in the reinforced concrete portion of the building are metal frame and sash units (photos 6,7,9,10). Most of the openings in this portion of the building are blocked or boarded. In some cases windows remain and the brick and concrete blocking is behind the windows on the inside of the building. The only remaining windows are the six on the easterly façade of the building on levels two through four, two per floor. All of the metal frame windows are double hung with two panes on the top and two panes on the bottom.

There is a chimney which served the basement boiler room and is located in the rear concrete portion of the building, in the south east corner of the structure,. The chimney projects approximately 10 feet above the flat concrete roof and is the same buff colored brick as the rest of the rear structure (photo 4)

The area surrounding the Cameron Transfer and Storage building has mostly been redeveloped. To the east of the structure is a 10 -story condominium building completed in 2008 (photo 53). Two other recently completed condominium buildings are further to the east. To the west of the Cameron building is an unpaved parking lot, which is part of the property, then a storage yard followed by a large brick building that currently houses a Salvation Army store, warehouse, and apartments at 900 North Fourth Street (photo 54). The Salvation Army

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building dates to 1923. Directly to the south, and across Fourth Street North from the building, is the elevated I-94 highway viaduct with surface parking below the structure.

The National Register Minneapolis Warehouse Historic District boundaries are one block north of the site and three blocks east of the site.

6. Statement of significance:

The Cameron Transfer and Storage building has significance under National Register Criterion C, in the area of engineering. The period of significance of the building is 1909-1911, which represents the period when the building began construction and was completed for both portions and the addition. The building is significant for its embodiment of the work of a master, pioneering Minneapolis engineer Claude Allen Porter (C.A.P.) Turner, who made many significant contributions to the advancement of the engineering profession, specifically within realm of building design. Turner's advances to the engineering profession have recognized nationally by the American Society of Civil Engineers, the professional organization of his profession. The building is also significant as a type (warehouse, locally), period (1909-1911, locally) and method (post and beam to reinforced concrete mushroom system, locally) of construction. It represents a significant time in building history when a major shift occurred from traditional post and beam structures to those of reinforced concrete, primarily seen in warehouses at the time (1909-1911). It illustrates the shift in construction methods by showing both "old" and "new" structural techniques within the same super structure, both designed by Turner.

The significance of the Cameron Transfer and Storage building is in its structural systems designed by C.A.P. Turner. In the front half of the building Turner devised a unique and unusual hybrid design that combines his reinforced concrete flat slab mushroom system with heavy timber post and beam utilizing exterior load bearing masonry walls. In the rear addition, the structure is constructed entirely of cast in place reinforced concrete with a flat slab system with mushroom cap columns. The building is the only extant example in Minneapolis where one can see both the "old" way of construction and the "new" construction method revolutionized by C.A.P Turner, both built within only a few years of each other in the same building. Even more significantly, both structures are designed by Turner himself and exemplify the market's initial reluctance, then rapid acceptance of the flat slab structural system. Turner's mushroom system made it possible to construct structurally sound buildings with improved fire resistance, more natural light, and increased useable space- all at a lower cost. The building exemplifies the rapid changes in construction, particularly with reinforced concrete, during the early 1900's.

Evolution of Reinforced Concrete Construction

Prior to the invention of reinforced concrete as a building material, wood, iron and steel were most commonly used as structural supports in bridges and buildings. The invention of Portland cement in 1824 sparked the widespread use of concrete for columns, floor spans and vaulting (Boake, 12).

The invention of reinforced concrete at the beginning of the twentieth century had immense design ramifications in the fields of architecture and engineering. The material and structural capabilities of reinforced concrete facilitated a type of design that would not otherwise have been possible using the existing materials of steel, stone and timber. Reinforced concrete could be sculptural and freeform, whereas steel and timber required repetition as it is more modular in nature. The adoption of reinforced concrete into design allowed former "visionary" styles of architecture to become realizable (Boake, 5).

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The development of reinforced concrete slabs in the United States is credited to a variety of individuals and "the history of reinforced concrete in the nineteenth century is more complex than that of iron construction mainly because it was concentrated in a shorter period of time (Condit, 168). We know that Ernest Ransome was the first person in the United States to experiment with reinforced concrete construction, beginning in the 1880s. The first reinforced concrete building in the United States was the Pacific Coast Borax Company Refinery in Alameda, CA- built in 1893 and designed by Ransome (Kampinen, 2). Ramsome's early systems were "variations of the slab, beam and girder concept that imitated the one-way action of timber and steel framed floor traditions" (Kampinen, 2). A variety of other individuals contributed to the development of reinforced concrete as well, but there is quite a bit of uncertainty regarding the timing of these contributions as well as individuals involved. Innovations in reinforced concrete during this time were not all well documented and in some cases included multiple variations on similar concepts. Although many engineers experimented with reinforced concrete as a new building material in the first decade of the twentieth century, C.A.P. Turner revolutionized reinforced concrete building design and construction practices with his flat-slab, mushroom cap, or mushroom slab, system which he applied for patents for in 1907 and received patents for in 1911 (Gasparini, 1251). The development of this revolutionary new system, and his advocacy and application of it, is what qualifies Turner as a "master" engineer.

The mushroom capital and flat-slab system designed by C.A.P. Turner was revolutionary in building construction because it increased useable space and decreased the cost of construction. Prior to the use of this system, early reinforced-concrete construction utilized thick steel and concrete beams for additional load bearing support that were expensive and which occupied almost as much interior volume as heavy-timber construction (Boake, 2). Unlike earlier reinforced concrete construction, Turner's design eliminated the need for beams by replacing them with load bearing columns. This in turn reduced the height of the buildings, thus saving money by reducing the amount of the exterior cladding materials.

"The major structural innovations of the twentieth century have been the products of concrete technology, and many of these have led to radical changes in the form and action of structural systems. No building was treated to a more scientific investigation than concrete, with the consequence that by mid-century its chemistry, its internal structure, and its behavior under every condition are as well understood as the properties of familiar metals. Indeed, the engineers regard it as the most scientific material, one that allows the closest approach to the organic ideal, in which structural form exactly corresponds to the pattern of internal stresses" (Condit, 240).

C.A.P. Turner as a "Master" Engineer

C.A.P Turner was one of the most influential engineers of the 20th century, pioneering the use of reinforced concrete and eventually patenting over thirty processes related to reinforced concrete construction. Turner was born in Lincoln, Rhode Island in 1869 and graduated from Lehigh University in Bethlehem, Pennsylvania in 1890 with an engineering degree. He then worked for a number of bridge construction and engineering companies across the country as a civil and structural engineer before coming to Minneapolis in 1897 where he worked for the American Bridge Company. He started his own practice in 1901, in Minneapolis, as a designer and contractor for concrete work with the Soo Railroad as a principal client (Gasparini, 1245). He eventually opened offices in New York, Chicago, and Winnipeg. Turner lived in Minneapolis for most of his career, and during the period in which his engineering work was most innovative, until 1936. He was a member of the American Society of Civil Engineers, the Society for Promotion of Engineering Education, and the Engineering Council's Committee for Patent Reform (CPED, 13). Turner died in Columbus, Ohio on January 10, 1955 (Gasparini, 1251).

Turner was successful in both bridge and building design. One of his early projects was the Duluth Ferry Bridge in 1904. It was the first of its kind in the United States- constructed using the cantilever method and with a span

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of 394 feet, featuring a "stiff traveler" car to carry people across the canal (Gasparini, 1245). While Turner's early use of concrete as a building material is not well documented, it is probable that he gained his familiarity with concrete while working as a bridge engineer from 1890 to 1901 (Gasparini, 1245). In 1904, Turner also designed Minneapolis' first building made entirely of reinforced concrete- the Northwestern Knitting Company Warehouse (now International Market Square, located at 718 Glenwood Avenue).

The Northwestern Knitting Company Warehouse building used a concrete beam system more in keeping with traditional design- mimicking timber frame construction. "The floor has continuous girders in both directions, framing typical bays of 15 ft 8 in. x 16 ft 8 in. Turner used a two-way slab, 5 ¼ in. thick, reinforced each way with 3/8 in. bars at 4 in. on center. The slab was designed to carry a safe load of 500 lb/ft². Turner used McMullin's diamond mesh netting as shear reinforcement for the girders. The concrete columns have vertical reinforcing bars 'connected together by hoops riveted at the joints and fastened to the vertical rods by U-bolts.'" (Gasparini, 1245) "An article from the Minneapolis Tribune featuring the warehouse boasted that benefits of using concrete were 'that it is considerably more economical than the protected steel frame, while fully as strong and thoroughly fireproof.' To demonstrate the warehouse's strength, the article reported that the building, 'could be filled on every floor with sand up to the ceiling and still have strength to spare'" (CPED, 13).

The following year, Turner designed the Minneapolis Paper Company Building, located at 400-04 4th Street. This building, like the Northwestern Knitting Company Building, was designed with a traditional concrete beam system. The building used bays of 15 ft 4 in. x 21 ft 6 in. and a 6.25 in. slab reinforced each way with 3/8 in. bars at 6 in. on center (Gasparini, 1245). ASCE Transactions Journal from 1906 included a description of load tests of the Northwest Knitting Co and Minneapolis Paper Company. For the Northwest Knitting Company the test load was 900 lb/ft² in one bay. For the Minneapolis Paper Company test Turner loaded one bay with 670 lb/ft² and then two and a half bays with 370 lb/ft². "Such load tests, whether prescribed by building officials or owners or initiated by Turner, enabled Turner to calibrate his design procedures with confidence regarding the minimum capacities of his slabs" (Gasparini, 1245). Both the Northwest Knitting Company and Minneapolis Paper Company building are extant.

With the success of these two buildings, at least in terms of their structural strength, Turner was able to develop a better understanding of reinforced concrete, which allowed him to fine tune his designs. With this knowledge in hand, Turner was able to take a major leap with his design philosophy, which resulted in his development of the mushroom system. Turner first published the concept for this system in *Engineering News* on October 15, 1905. The first building to be constructed using this revolutionary new technique was the Johnson-Bovey Building (non-extant), which was constructed in 1906 at 426-32 2nd Avenue North in Minneapolis. This was Turner's first use of the mushroom system. "The building had five stories, typical bays of 16ft 6 in. x 14 ft 10 in. and a 7 ½ in. thick flat slab floor. The flat slab flexural reinforcement consisted of 17 3/8 in. bars in each of the four belts" (Gasparini, 1246). Turner described the building in the October 1906 issue of *Engineering News* that, "In applying for a permit for this building, the building department refused to grant one, except for an experimental building, it being agreed and understood between the owner the engineer, and the contractor that the construction should stand a test load of 700 lb/ft.2 of floor, with a maximum deflection of 5/8 of an inch in the center of the slab." When the test load was applied, "the elastic deflection was a scant quarter of an inch" (Turner, 1906, 261). Later that year Turner designed the Hoffman (Marshall) Building in Milwaukee, which is the oldest extant example of Turner's mushroom system. In 1907, Turner designed a several buildings that incorporated the mushroom system, including the Wisconsin Central Freight Station and the Fordham Ford Building in Minneapolis (both non-extant), two buildings in St. Paul, as well as buildings in Toledo, Ohio, and Philadelphia.

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With continued testing, Turner was able to refine his system to allow for increased spans. He also refined the column design from the octagonal column design used on his early mushroom system building, to a round column design that was included in his patent. The oldest extant building in Minneapolis constructed with Turner's system, and which also has round columns, is the Green and DeLaittre Grocery Warehouse (1908), located at 500 North 3rd Street. The next known example is the Fairmont Hotel/Apartments, also constructed in 1908 at 901-10 Hennepin Avenue. While the Fairmont Hotel is an early example of Turner's system as a residential building, it does not fully embody the potential of Turner's system, which he felt was especially adapted for warehousing and similar heavy load uses (ASCE, 3) such as the Cameron Transfer and Storage Company building.

Among his contemporaries, Turner alone is cited for his innovation and advocacy within the realm of reinforced concrete structures during the first decade of the 1900s, in particular because of his mushroom flat slab technology. The only other contemporary of Turner's mentioned in this regard is Swiss engineer Robert Maillert who invented the flat slab idea in 1900 in Europe but the concept was "independently developed in the United States by Claude A.P. Turner of Minneapolis (Condit, 243). There were a handful of other engineers recognized for reinforced concrete design in bridge decks and floor slabs that were set apart from their contemporaries because of "their ability to move beyond the beam and deck paradigm of the traditional steel and wood framed systems.... Among this group of individuals, C.A.P. Turner set himself apart as the true champion of the flat slab system" (ASCE, 6). As noted by the American Society of Civil Engineers, "Turner's persistent promotion, application, and defense of his system are at the core of his contribution to the engineering profession.... He forced the engineering profession to consider the unique nature and application of reinforced concrete systems" (ASCE, 6).

When the concrete mushroom capital and flat-slab system was introduced it was a source of intense debate and controversy but within a few years it became one of the most efficient forms of construction in reinforced concrete and received much acclaim in the engineering community (Kampinen, 1). In the period between 1905 and 1910 concrete flat slab floor systems, made possible by the innovative mushroom capitals and their reinforcing design, became commonplace, almost completely because of the efforts of C.A.P. Turner (Gasparini, 1248). In addition to being a regular contributor to Engineering News, he published a series of bulletins that advertised his work using client testimonials and photographs of test loads. "These tests, in which loads up to twice the design load were placed in one or more building bays, became common for Turner buildings. He soon began marketing them as promotional events, advertising when and where the next load test would occur..." (Kampinen, 5).

By 1909 & 1910 Turner's system was well-known and, as Turner noted, by the end of that year the area of flat slab floors in the United States was "rapidly approaching 1,000 acres" (Turner, 1910). By 1913, the process had been used in over 1,000 buildings throughout the world. The total number of buildings constructed using Turner's Mushroom System is difficult to quantify due to the nature of his consulting business. Many building permits where Turner was consulting engineer were signed or obtained by the architects or contractors of record (CPED, 17).

It was Turner's persistent promotion, application and defense of this new system that makes him the key figure in contributions to the structural engineering profession. According to documents nominating the Marshall Building (the earliest extant example of Turner's flat-slab mushroom system) as a National Historic Civil Engineering Landmark, the assertions of Turner and the debate surrounding reinforced concrete flat slabs "seem to have been a significant contributing factor in the development of: the widespread recognition and understanding of the monolithic nature of concrete, rigorous analytical understanding of flat-plate behavior... a viable and attractive option for engineers, architects, and owners in the design of industrial and warehouse buildings. Certainly, Turner's actions are a critical step in the evolution of building design... The flat slab design that was pioneered by

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C.A.P. Turner is still a common and popular design option in building construction" (ASCE, 6). Turner's innovations also were the precursor to other innovations in reinforced concrete construction, leading to the more organic and efficient forms seen in today's concrete structures.

"Mushroom System" of Reinforced Concrete Flat Slab Construction

Turner unveiled his flat slab system in a 1905 article in Engineering News. Turner's design used load bearing columns in the place of traditional steel and concrete beams for support. "The load bearing columns came to be known as the "mushroom system" for the shear head which was shaped like a shallow truncated cone concealed in the concrete slab. Reinforcing rods extended both directly and diagonally between columns. Additional reinforcing hoops were laid on the radial rods" (CPED, 14). "The mushroom head, along with the column capital, provides greatest shear strength at the columns, which is the natural location where the structure has the greatest load. The radial mushroom head reinforcement is concentrated at the column and the reinforcement radiates outward into the floor slab" (ASCE, 5).

Benefits of the mushroom slab system included: minimizing of form work; a reduction in floor-framing depths; an increase in floor framing speed; a reduction in material, shipping and construction costs; an increase in fire protection by reducing the number of sprinkler heads required; improvement in illumination from windows and overhead lights; increased useable space; and flexible placement in shafts and other floor openings that were previously impossible in traditional beam framing (Gasparini, 1247) and (ASCE, 5).

The economic benefits of the flat slab system brought Turner a significant amount of work until patent suits ensued over ownership of the design as there was "uncertainty regarding both the timing and contributions of various individuals to the development of reinforced concrete flat slabs in the United States" (Gasparini, 1243). However, according to Gasparini, "there is no doubt that C.A.P. Turner, with his 'mushroom system,' proved the reliability and cost effectiveness of flat-slab systems for both buildings and bridges from 1905 to the end of 1909" (Gasparini, 1250). It was in 1910 that the Deere and Webber building was built in Minneapolis, Turner's "backyard", by the C.M. Leonard Construction Company who built the mushroom slab structure without including Turner in the process. This began a series of patent lawsuits with regards to the flat slab system which Turner ultimately lost.

Prior to the resolution of the patent disputes (in 1916), there was a rapid proliferation of different flat-slab systems. The "Concrete Engineers Handbook" written in 1918 contains descriptions of nine different flat-slab systems. "The primary differences among them were the arrangement of flexural reinforcement and the technique used to provide shear strength. These alternate systems used flexural reinforcement in two, three or four directions... A unique flat-slab system consisting of columns at apexes of equilateral triangles and three bands of flexural steel, all with the same span, was patented...in 1912" (Gasparini 1251). These advances followed "Turner's revolutionary success in introducing reinforced concrete flat slabs" (Gasparini, 1251).

Minneapolis

Minneapolis is where C.A.P. Turner resided and practiced during the period in which he developed and perfected the "mushroom system" of reinforced concrete flat slab construction. Consequently, no location in the United States contained a greater collection of his work. Moreover, Turner's body of work in Minneapolis between 1904 and approximately early 1910 embodies the evolution of the mushroom system he invented. Turner designed buildings in Minneapolis from this period show a clearly defined progression of Turner's experimentation with reinforced concrete as he developed and perfected the mushroom system, the demonstration and promotion of the system, and finally, widespread acceptance of it. By 1911 the Minneapolis Building Code included a

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dedicated section, Part 10, to Reinforced Concrete and encouraged continuous construction of beams and slabs. This shows the acceptance of the use of reinforced concrete within the city, largely due to C.A.P. Turner's work and previous buildings considered as "experimental" by the building inspector and codes department.

In 1909, Turner is credited with two buildings in Minneapolis. One was the Tibbs Hutching & Company Building ("FurTex Building"), located at 123-29 North 3rd Street, which was later changed by the addition of a secondary steel structural support system that altered the integrity of Turner's original design (Kampinen, 6). The second building was the Cameron Storage and Transfer Company building located at 756 North 4th Street, with Minneapolis Building permits dated 11/09 and 11/10 for the main structures and 11/11 for the fourth story addition. This building is one of Turner's last documented and currently extant commissions in Minneapolis before he started to lose a hold on his revolutionary success. The other buildings Turner designed between 1910 and 1915 in Minneapolis utilizing the mushroom slab system (Experimental Engineering Building, Walker Commission Warehouse, and the Andrews Building) have been demolished. The only other extant building in Minneapolis designed by Turner with the mushroom system around this time is the Herschel Roth Building designed in 1915, which is not within the period of significant success and growth of Turner's work and commissions.

The very beginning of Turner's slide in success began with the construction of the Deere and Webber Company Building in 1910 at 800 Washington Avenue North, Minneapolis. The C.M. Leonard Construction Co. of Chicago built the building using the flat slab system without involving Turner, based on the fact that they had purchased the Orlando Norcross patents of 1902. Norcross was an engineer who described in his patent of 1902 a system without "floor beams, girders, and joists, in which flooring formed by strips of wire netting, would be directly supported on separate posts" (Kampinen, 3). "The extent to which the Norcross system was used is unknown, and it appeared through later patent investigations that no buildings using his system were ever built this early" (Kampinen, 3). The engineering community largely credits Turner with the flat slab system as we know it today, but the Deere and Webber Building kicked off a series of patent disputes, beginning in late 1914 and extending to 1916, that ultimately caused Turner to purportedly stop designing mushroom slab structures until 1919, when the Norcross patents were no longer in effect (Gasparini, 1251). The next documented and extant building in Minneapolis designed by Turner after the Herschel Roth building of 1915 is the Great Northern Warehouse Building (716-718 Washington Avenue North), which was built in 1919.

The Cameron Transfer and Storage Company and Building at 756 N 4th Street

The Cameron Transfer and Storage Company was founded by Carlisle Cameron, its President and Treasurer. Cameron was born in Brigham, Broome County, in the province of Quebec, Canada on October 31, 1858. In April 1880, he came to Minneapolis. In the fall of 1882 he began work with the Myers & Davis Transfer Company, and liking the work, began his own transfer business in 1884 calling it the Cameron Transfer Company. He started with one team of horses, which he drove himself (Shutter, 208-209). He grew his business and incorporated the Cameron Transfer and Storage Company in 1904, in addition to maintaining the Cameron Transfer Company. As of 1923 the business utilized twenty teams of horses and ten trucks. The main warehouse for the company was the building at 756 N. Fourth Street in Minneapolis (Shutter, 208-209). Carlisle Cameron died in Minneapolis in 1930. It is unknown who ran the company after Cameron's death. The company changed its name to "Cameron Transit Co." in 1947 then merged with the Security Warehouse Company in 1976 (Minnesota Secretary of State).

The building at 756 North Fourth Street was designed specifically to accommodate the needs of the successful Cameron Transfer and Storage Company. The basement of the structure and sheds that were previously

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attached to the buildings accommodated the horses and vehicles that were the main tools of the business. The large, garage door sized openings seen on the east, north, and west sides of the building were essential for delivery and loading into the building by horse and vehicle (east and west) and train (north). The building is purely functional for its use and, as such, has minimal window openings and ornamentation. The building was cold storage and did not have any source of heat above the basement level until the furnace to heat the office build out was added in 1956, prior to that a boiler was used to heat the basement area of the building only. The structure of the building, its most significant feature both historically and functionally, allowed for the storage of heavy loads and the large, open spaces to maneuver the stored items and equipment. It is unclear why Mr. Cameron chose a hybrid structure for the building and did not build it fully with CAP Turner's reinforced concrete, mushroom slab system but it is speculated that this decision was based on the Turner system's relative newness at the time. The rear, reinforced concrete structure, is able to support larger loads and has fewer columns/posts dividing the space when compared to the front post and beam structure- this makes it ideal for warehouse/storage uses. The remnants of signs on the exterior of the building were advertisements promoting the storage business located there.

Significance as a Type of Construction (Warehouse)

The Cameron Transfer and Storage building is significant in its type of construction- a warehouse structure- during a period in Minneapolis when manufacturing, warehousing and wholesaling were the main drivers in the economy. The dramatic shift to these economic strongholds from the previously dominant lumber and milling industries was facilitated by the railroads, which ran through the warehouse district and directly behind the Cameron Transfer and Storage Company. The growth of warehousing in Minneapolis during the late nineteenth and early twentieth centuries is directly linked to the rapid expansion of the railroads in the northwest making Minneapolis the westernmost hub of trading and shipping (CPED, 2009, 10). In Minneapolis, the Warehouse District grew from one or two warehouses in 1865 to approximately 300 in 1920 (CPED, 2009, 7). The building is significant in its type because it is the sole example in Minneapolis of a warehouse utilizing both the wood post and beam "old" structural technique and the "new" reinforced concrete structural technique within the same super structure. The Cameron Transfer and Storage Company "clearly possesses the defined characteristics required to be strongly representative of the context" (National Register, Part VI)- the "context" being the evolution in design in warehouse buildings from wood post and beam to reinforced concrete. This is significant in that the "new" construction method allowed for greater storage capacities within a structure both in terms of loads carried and physical amounts/sizes of items that were able to be stored. It illustrates the historical context of evolution of building design in the time around 1910 and was designed by master engineer C.A.P. Turner, who was the main innovator credited with this shift in construction methods.

As a building that represents a transition of construction types it is necessary to note the impact that the shift in construction methods had on warehouse buildings during the period of significance and later in time. Owners and engineers found reinforced concrete so effective in handling the loads and increasing storage capacity within buildings that almost all warehouse and storage buildings in Minneapolis after the period of significance noted here utilize reinforced concrete in some manner, rather than the previously used wood, post and beam structure. This use of reinforced concrete in Minneapolis warehouses can be seen in buildings such as the Warehouse Building- 419 Washington Avenue N (1913), The Maytag Company Building- 515 Washington Avenue North (1916), Parlin and Orendorff Plow company- 607 Washington Avenue North (1910/1926), and Luther Ford & Company Building- 414 3rd Avenue N (1924) (CPED, 47-179).

Later storage and manufacturing buildings that are known to incorporate the mushroom system, specifically, in Minneapolis, include: Herschel Roth Building (1915), Great Northern Warehouse -716/718 Washington Avenue

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North (1919-21), Great Northern Warehouse- 730/750 Washington Avenue North (1920-1922), International Harvester Building- 618 Washington Avenue N (1916), and Northern Bag Company- 700 Washington (1920) (CPED, 47-179). The Herschel Roth and Great Northern Warehouse building (at 716/718 Washington) are known to have been designed by Turner.

The structural elements that are the Cameron Transfer and Storage Building's historic character defining features and contribute to its significance as a type (warehouse) of building remain intact within the building as described in Section 5 of this application.

Significance as the Work of a Master

The Cameron Transfer and Storage Company is significant as a work of a master, Claude Allen Porter (CAP) Turner. Turner is recognized in the field of structural engineering for his innovation and accomplishments in the area of reinforced concrete. CAP Turner was recognized as engineer primarily because of his pioneering mushroom slab system. His commissions ranged throughout the United States in the first decade of the twentieth century, when he was developing this technique. As noted previously, he is widely respected and considered to be the person primarily responsible for promoting the use of reinforced concrete as a building method- particularly for use in warehousing and other heavy load facilities. The Cameron Transfer and Storage Company building represents the time in Turner's career when he was intensely promoting his new mushroom slab system, before patent disputes and variations on his design were brought to market.

The Cameron Storage and Transfer building is unique among Turner's body of work in Minneapolis because it, more than any other Turner designed building in the city, embodies both his prowess as an engineer and mastery of a range of design techniques. The 1909 portion of the building is the only known example in Minnesota of C.A.P. Turner's use of heavy timber construction. This section of the building also demonstrates Turner's mastery of engineering and his ability to successfully incorporate two vastly different structural systems and design methods into one structure. In the 1909 portion of the building Turner was able to design a hybrid system that blended his cutting edge, state of the art reinforced concrete flat slab mushroom system, which was utilized in the basement, with traditional nineteenth century heavy timber post-and-beam construction methods that were utilized on the first, second and third floors, and then later in the fourth floor addition (photo 52). Trussed girders were used to support the second and third floors and provided a solution for having longer span beams within the confines of the wood post and beam structural method chosen. The trussed girders were a common solution, from the late 1800s onward, for buildings designed for larger than average loads where length of column spacing was also a factor. In fact, "trussed girders were by far the most popular method of reinforcing... wood beams and girders at the turn of the twentieth century" (Rabun, 289). Turner's ability to utilize both traditional and innovative structural methods within the same structure illustrates his mastery as an engineer and the uniqueness of this building in relation to other structures from this time.

The Cameron Transfer and Storage Building is one of the first buildings in Minneapolis still extant that utilizes the historically significant flat slab construction method pioneered by C.A.P. Turner. The building is also significant for being the last known extant example in Minneapolis of the flat slab technology designed by C.A.P. Turner during the height of his success. After the Cameron Building, the next known extant example of a C.A.P. Turner designed building in Minneapolis is the Herschel Roth Building (748-752 3rd Street North) of 1915, which is attributed to Turner via pictorial reference in one of his advertising bulletins. The Herschel Roth building was designed during the period of Turner's patent disputes and is therefore outside the period of Turner's greatest success as an engineer and the period of significance.

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The proliferation of designs based on Turner's techniques and the fact that his designs were referenced well beyond the period of significance are a testament to Turner's impact on the engineering profession. A text from 1918 describes "nine different flat-slab systems. The primary differences among them were the arrangement of flexural reinforcement and the technique used to provide shear strength. These alternate systems used flexural reinforcement in two, three or four directions" (Gasparini, 1951). These advances in "understanding of behavior and codification of modeling and construction practices" (Gasparini, 1251) that occurred following Turner's success in introducing reinforced concrete flat slabs speak to the importance of this innovation. Flat slab systems were even being discussed in 1963, when "Sozen and Seiss describe[d] the process of codification of flat-slab design by the American Concrete Institute" (Gasparini, 1251).

Another testament to Turner's success are later buildings, not utilized for a warehouse and manufacturing nature, incorporating variations on Turner's mushroom system in an artful way. An example of this is Frank Lloyd Wright's Johnson Wax Building in Racine, Wisconsin (1936-1939).

Significance as a Method of Construction (Wood Post and Beam to Reinforced Concrete)

The Cameron Transfer and Storage Company is also significant in its construction technique used- a two part structural system within the same building consisting of the "old" style wood post and beam structure and the "new" reinforced concrete mushroom slab system proliferated at the beginning of the twentieth century. This is the only known example of a building with both structural techniques combined in Minneapolis during this time period. Further, the 1909 portion of the building is the only known example in Minnesota of C.A.P. Turner's use of heavy timber construction. The front portion of the structure itself is a combination of reinforced concrete (basement) and wood post and beam (first through fourth) further complicated by the trussed girder system used on floors one and two to support additional loads in the structure.

In addition to demonstrating Turner's range of design skills, the Cameron Storage and Transfer building, more than any other Turner designed building in Minneapolis, embodies the challenges Turner faced as he developed his flat slab system and sought acceptance for it. By the time Turner designed the original portion of the Cameron Storage and Transfer building in 1909, his flat slab system was already becoming a popular construction system. Its popularity and acceptance is demonstrated by the fact that by 1909 more than a thousand buildings, with a floor area of over 125 acres had been constructed according to his mushroom system (Turner, 1910). However, while his revolutionary system had gained acceptance in many engineering circles, it had not yet been wholeheartedly embraced by everyone, despite its proven inherent advantages in terms of lower construction costs and greater design flexibility. This fact is evidenced through his design for the original, 1909 portion of the Cameron Storage and Transfer building. In this portion of the building he utilized a hybrid design with both "traditional" and "modern" design practices. That design makes this building a unique and unparalleled example of Turner's ability to utilize his "modern" construction system with a more traditional and accepted construction technique, heavy timber post and beam, to address his clients concerns about his relatively "new" mushroom system. The rear addition, which was completed only a year later, is fully executed using Turner's mushroom system, indicating that its successful use on the basement/first floor of the original portion of the building had alleviated his client's concerns about this "new" technology (photo 51). The flat slab system used in the rear allowed for heavier loads in that area of the Cameron Transfer and Storage Building. The building retains most of the physical features that show these structural systems, as described in Section 5 of this application.

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Beyond Turner, the 1909 portion of the building is a very unique engineering design that successfully uses and blends these two very different systems into one structure. Moreover, it represents an important evolutionary step in structural design from traditional post and beam construction that was commonplace through the end of the nineteenth century and the flat slab system that became the predominant structural system for heavy construction, such as industrial buildings and warehouses, by the end of the first decade of the twentieth century. As a whole, the Cameron Storage and Transfer Company building, the entirety of which was designed by C.A.P. Turner and constructed within a period of two years, epitomizes the rapid evolution structural design for heavy use buildings in the first decade of the twentieth century from traditional building techniques honed over centuries, to one reliant upon innovative engineering and the use of new materials that revolutionized construction in this period. No other known building in Minneapolis so clearly embodies this evolution and stark contrasts in engineering and construction.

Significance as a Period of Construction (1909-1911)

The building is also significant as period of construction. The first decade of the twentieth century brought many innovations in building technology, in particular related to the manufacturing and storage industries. The period between 1905 and 1910, specifically, was the time period in which concrete flat slab floor systems, made possible by the innovative mushroom capitals and their reinforcing design, became commonplace (Gasparini, 1248). After 1910 other engineers proliferated a variety of different flat slab systems that were slight variations on Turner's seminal system (Gasparini, 1251). 1910 appears to be the tipping point when the flat slab system and the use of reinforced concrete became a standard method of construction for warehouse and manufacturing facilities. In 1911 the Minneapolis Building Code included a dedicated section to reinforced concrete and this method of construction no longer was considered "experimental" in the eyes of building officials. Further, as noted on pages 13 and 14, most of the warehouse and manufacturing buildings within Minneapolis after this period were constructed of reinforced concrete, indicating a significant shift in the materials used to construct buildings. The use of concrete as a building material, and the use of the flat slab system, increased on a national scale around this time. Turner himself noted in 1910 that by the end of that year the area of flat slab floors in the United States was "rapidly approaching 1,000 acres" (Turner, 1910).

Conclusion

The Cameron Transfer and Storage Company building is significant locally as the work or a "master" (C.A.P. Turner), a type (warehouse), period (1909-1911) and method (post and beam to reinforced concrete mushroom system) of construction. It represents a significant time in building history when a major shift occurred from traditional post and beam structures to those of reinforced concrete, primarily seen in warehouses at the time (1909-1911). It illustrates the shift in construction methods by showing both "old" and "new" structural techniques within the same super structure, both designed by Turner.

The Cameron Transfer and Storage Company is the most illustrative example in Minneapolis of C.A.P. Turner's mushroom system of design and its evolution into popular acceptance as a structural method. C.A.P. Turner was a pioneer in the use of flat slab reinforced concrete construction and his designs revolutionized the use of concrete as a building material, highlighting him as a standout or "master" in the engineering profession. Prior to his invention increasing floor loads required of buildings were met by "simply increasing the size of the structural elements" which resulted in a significant amount of valuable space being "consumed by the sheer quantity of material in long beams and trusses" (Condit, 243). Turner's flat slab framing system offered a "considerable saving and material and overhead space...by transferring the action of girders and beams to the floor slab and thus eliminating the horizontal members. [Instead] the floor slab rests directly on the columns and behaves somewhat like a continuous beam, bending down like an umbrella around the columns and like a saucer in the

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intermediate areas" (Condit, 243). The Cameron Building is a prime example of this technology put to its best use, a storage warehouse as "the economies of flat-slab construction were most obvious in the case of warehouses and freight-handling facilities, where overhead space is at a premium" (Condit, 243).

Turner's designs allowed buildings to be constructed more soundly in less time, for less money, with more useable area and transformed building technology. CAP Turner's innovative work and tireless promotion sparked a flood of advancements in reinforced concrete, changing forever the ways that buildings are built. "As the engineers steadily increased their knowledge of reinforcing techniques, they gradually came to realize that the structural possibilities of concrete are virtually unlimited. In its reinforced form it combines the elastic properties of ferrous metals with its own initial plasticity and ultimate rigidity, an almost paradoxical union of virtues that makes it the *most adaptable of all building materials*. Indeed, it is the supreme engineering material because it is susceptible of the most exact scientific analysis and can be cast in the most nearly organic form, in which the shape of the structural element most closely approximates the distribution of stresses within it. We can understand why the quantity of concrete in building now exceeds by more than one-third the quantity of all other materials combined..." (Condit, 168).

Without Turner's innovation, and his ability to convince companies such as the Cameron Transfer and Storage Company of the benefits of building with the reinforced concrete mushroom system instead of wood post and beam, we would not have the innovative concrete structures we have today in a volume that far exceeds construction in any other material.

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Instructions. Read the instruction carefully before completing. Type, or print clearly in black ink. Use this sheet to continue sections of the Part 1 and Part 2 application, or to amend an application already submitted. Photocopy additional sheets as needed.

This sheet: continues Part 1 continues Part 2 amends Part 1 amends Part 2 NPS Project Number: _____

References

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CONTINUATION / AMENDMENT SHEET

Cameron Transfer and Storage Building
Property Name

**Historic Preservation
Certification Application**

756 4th Street North, Minneapolis, MN 55401
Property Address

Instructions. Read the instruction carefully before completing. Type, or print clearly in black ink. Use this sheet to continue sections of the Part 1 and Part 2 application, or to amend an application already submitted. Photocopy additional sheets as needed.

This sheet: continues Part 1 continues Part 2 amends Part 1 amends Part 2 NPS Project Number: _____

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Additional credit is due to Greg Mathis, Senior Preservation Planner, of 106 Group and Meghan Elliot, of the Minneapolis Historic Preservation Commission, who reviewed a draft of this application and provided input.

CONTINUATION / AMENDMENT SHEET

Cameron Transfer and Storage Building
Property Name

**Historic Preservation
Certification Application**

756 4th Street North, Minneapolis, MN 55401
Property Address

Instructions. Read the instruction carefully before completing. Type, or print clearly in black ink. Use this sheet to continue sections of the Part 1 and Part 2 application, or to amend an application already submitted. Photocopy additional sheets as needed.

This sheet: continues Part 1 continues Part 2 amends Part 1 amends Part 2 NPS Project Number: _____

Name _____ Signature _____ Date _____

Street _____ City _____

State _____ Zip _____ Daytime Telephone Number _____

NPS Office Use Only

- The National Park Service has determined that these project amendments meet the Secretary of the Interior's "Standards for Rehabilitation."
- The National Park Service has determined that these project amendments will meet the Secretary of the Interior's "Standard for Rehabilitation" if the attached conditions are met.
- The National Park Service had determined that these project amendments do not meet the Secretary of the Interior's "Standards for Rehabilitation."

Date	National Park Service Authorized Signature	National Park Service
Office/Telephone No.		

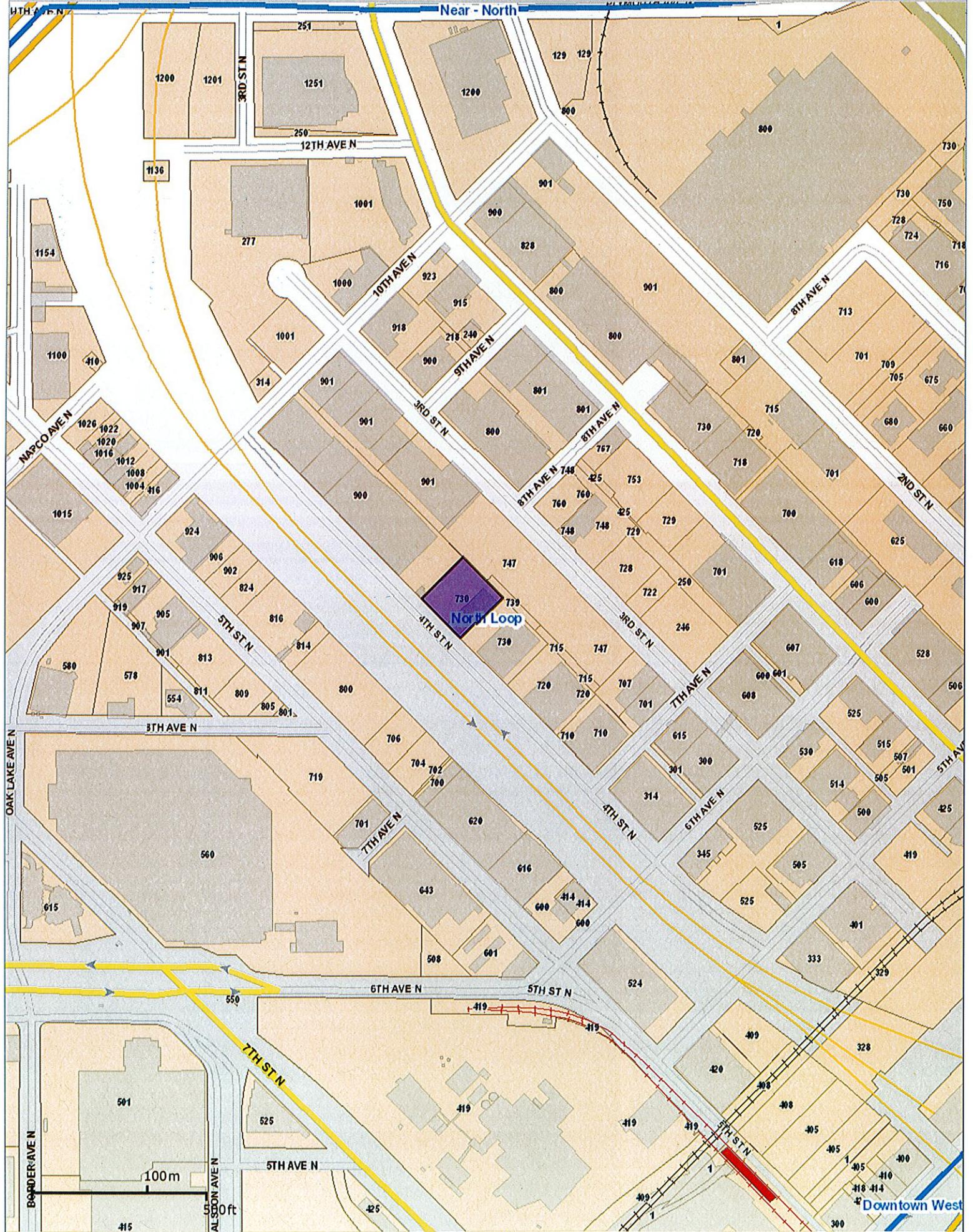
Attachments

ATTACHMENT 3

FEMA map

The Cameron - Floodplain Overlay Map

Near - North



North Loop

Downtown West

ATTACHMENT 4

Wetlands map



U.S. Fish and Wildlife Service National Wetlands Inventory

The Cameron - Wetlands Map

Feb 5, 2013



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

Status

- Digital
- Scan
- Non-Digital
- No Data

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:
No wetlands present.

ATTACHMENT 5

NHIS report



Minnesota Department of Natural Resources

Division of Ecological and Water Resources, Box 25

500 Lafayette Road

St. Paul, Minnesota 55155-4025

Phone: (651) 259-5109 E-mail: lisa.joyal@state.mn.us

February 26, 2013

Correspondence # ERDB 20130223

Ms. Hilary Dvorak
City of Minneapolis, CPED-Planning Division
250 South 4th Street, Room 300
Minneapolis, MN 55404

RE: Natural Heritage Review of the proposed Cameron Renovation;
T29N R24W Section 22; Hennepin County

Dear Ms. Dvorak,

As requested, the above project has been reviewed for potential effects to known occurrences of rare features. A search of the Minnesota Natural Heritage Information System did identify rare features within an approximate one-mile radius of the proposed project, but these records did not include any federally listed species and were either historical or not of concern given the project details that were provided with the data request form. As such, I do not believe the proposed project will adversely affect any known occurrences of rare features.

The Natural Heritage Information System (NHIS), a collection of databases that contains information about Minnesota's rare natural features, is maintained by the Division of Ecological and Water Resources, Department of Natural Resources. The NHIS is continually updated as new information becomes available, and is the most complete source of data on Minnesota's rare or otherwise significant species, native plant communities, and other natural features. However, the NHIS is not an exhaustive inventory and thus does not represent all of the occurrences of rare features within the state. Therefore, ecologically significant features for which we have no records may exist within the project area.

For environmental review purposes, the results of this Natural Heritage Review are valid for one year; the results are only valid for the project location (noted above) and project description provided on the NHIS Data Request Form. Please contact me if project details change or if an updated review is needed.

Please note that locations of the gray wolf (*Canis lupus*), state-listed as special concern, and the Canada lynx (*Lynx canadensis*), federally-listed as threatened, are not currently tracked in the NHIS. As such, the Natural Heritage Review does not address these species.

Furthermore, the Natural Heritage Review does not constitute review or approval by the Department of Natural Resources as a whole. Instead, it identifies issues regarding known occurrences of rare features and potential effects to these rare features. Additional rare features for which we have no data may be present in the project area, or there may be other natural resource concerns associated with the proposed project. For these concerns, please contact your DNR Regional Environmental Assessment Ecologist (contact information available at http://www.dnr.state.mn.us/eco/ereview/erp_regioncontacts.html). Please be aware that additional site assessments or review may be required.

Thank you for consulting us on this matter, and for your interest in preserving Minnesota's rare natural resources. An invoice will be mailed to you under separate cover.

Sincerely,

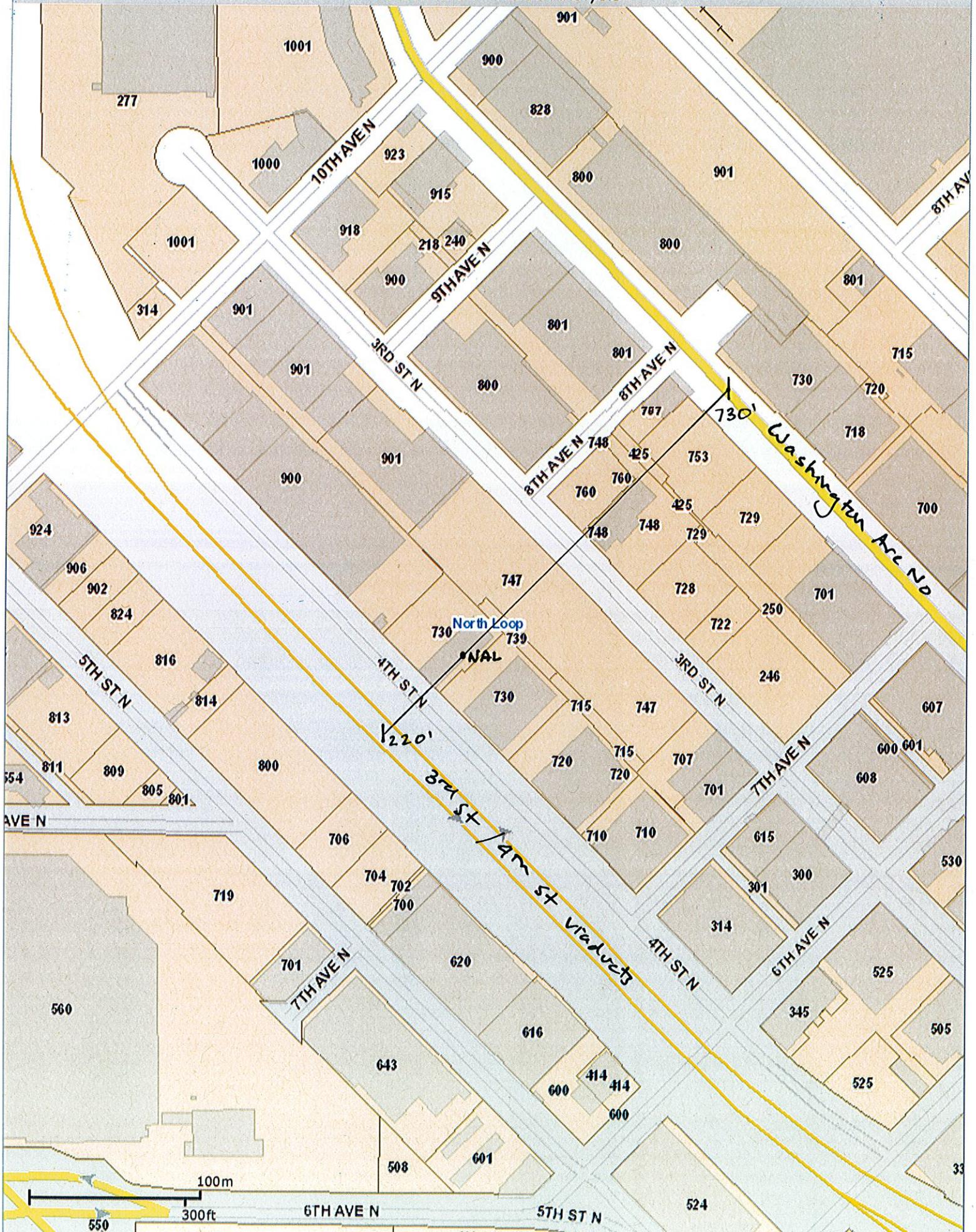
A handwritten signature in black ink that reads "Samantha Bump".

Samantha Bump
NHIS Review Technician

ATTACHMENT 6

Noise Assessment

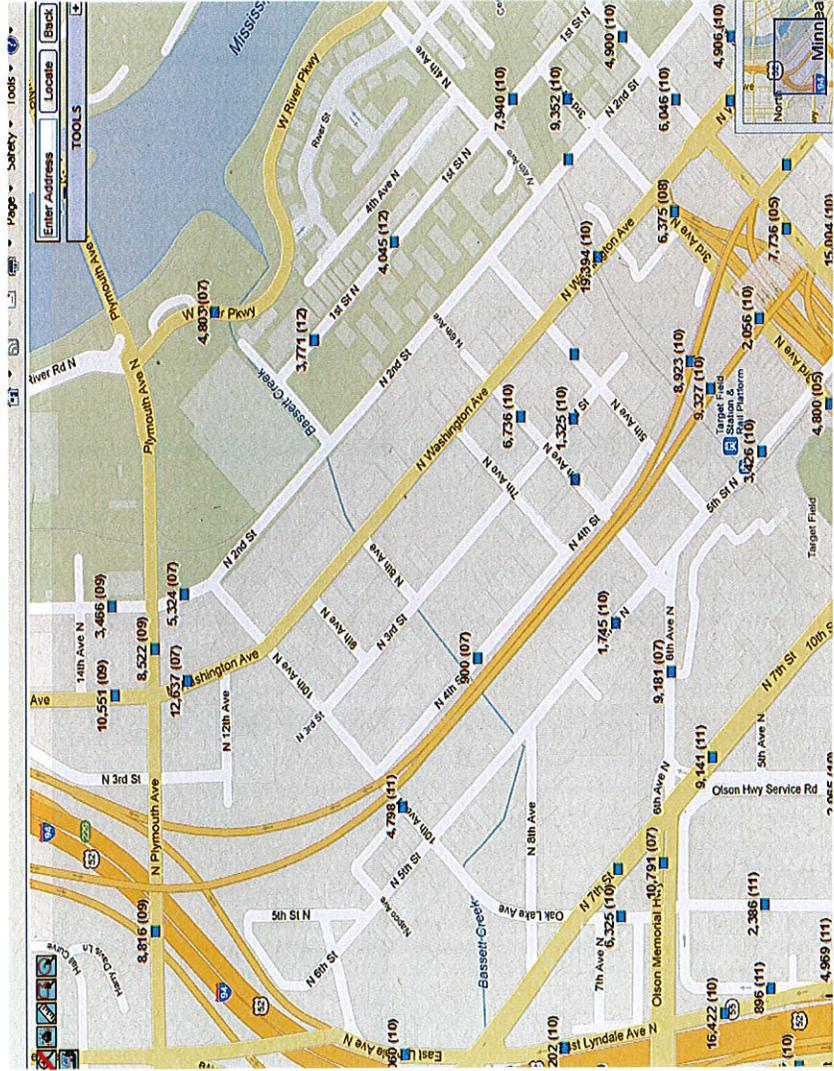
The Cameron - Noise Analysis



The Cameron: Average Daily Traffic (ADT) Counts

- **Washington Avenue North:** The street, located 730 feet from the Noise Assessment Location (NAL), has a Total Average Daily Traffic (ADT) of 19,394 vehicles (2010 figures) in the vicinity of the NAL. The street is a County State Aid (CSA) road and a truck route. The Minneapolis Public Works Department estimates that trucks constitute 3-5% of all traffic on MSA roadways.
- **3rd Street/4th Street viaducts:** The streets, located 220 feet from the Noise Assessment Location (NAL), have a Total Average Daily Traffic (ADT) of 9,125 vehicles (2010 figures) in the vicinity of the NAL. The streets are part of the Interstate Highway System and are truck routes. The Minneapolis Public Works Department estimates that trucks constitute 3-5% of all traffic on roadways.

**VEHICULAR TRAFFIC FLOW IN THE CITY OF MINNEAPOLIS
AVERAGE ANNUAL DAILY TRAFFIC
CITY OF MINNEAPOLIS, DEPARTMENT OF PUBLIC WORKS, TRAFFIC AND PARKING SERVICES DIVISION**



Site DNL Calculator

For more information on using the noise calculator, to access the user guidebook, or send comments, please visit the following page:

Day/Night Noise Level Electronic Assessment Tool

Guidelines:

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

Site ID The Cameron

Record Date February 27, 2013

User's Name Hilary Dvroak

Road # 1 Name: Washington Avenue North

Road #1			
Vehicle Type	Cars <input type="checkbox"/>	Medium Trucks <input type="checkbox"/>	Heavy Trucks <input type="checkbox"/>
Effective Distance	730		730
Distance to Stop Sign	0		0
Average Speed	30		30
Average Daily Trips (ADT)	19394		582
Night Fraction of ADT	2909		58
Road Gradient (%)			0
Vehicle DNL	58.8657		57.2805
Calculate Road #1 DNL		Reset	

Road # 2 Name: 3rd Street and 4th Street viaducts

Road #2			
Vehicle Type	Cars <input type="checkbox"/>	Medium Trucks <input type="checkbox"/>	Heavy Trucks <input type="checkbox"/>
Effective Distance	220		220
Distance to Stop Sign	0		0
Average Speed	55		55
Average Daily Trips (ADT)	9125		274
Night Fraction of ADT	1369		27
Road Gradient (%)			0
Vehicle DNL	65.4148		63.055
Calculate Road #2 DNL		67.4069	Reset

Airport Noise Level

Loud Impulse Sounds? Yes NoCombined DNL for all
Road and Rail sources 67.4069Combined DNL including Airport ^{N/A}
Site DNL with Loud Impulse Sound

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**

Cancel the project at this location **DNL Calculator**

- **Other Reasonable Alternatives**

Choose an alternate site **DNL Calculator**

- **Mitigation**

- **Contact your Field or Regional Environmental Officer - Environmental Contacts**
- **Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas).**
- **Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses **DNL Calculator****
- **Incorporate natural or man-made barriers. See The Noise Guidebook**
- **Construct noise barrier. See the Barrier Performance Module**

Refresh

Figure 19
Description of Noise Attenuation Measures
(Acoustical Construction)

Part I

Project Name The Cameron

Location 756 4th St. N, Minneapolis MN

Sponsor/Developer Schafer Richardson

Noise Level (From NAG) 67.4069 Attenuation Required 25db

Primary Noise Source(s) Highway noise: 4th St. Viaduct - I-94 access

Part II

1. For Walls(s) facing and parallel to the noise source(s) (or closest to parallel):

a. Description of wall construction Multiple wythes of clay brick (12" thick min. at elevation facing viaduct on upper floors; thicker at lower floors)

b. STC rating for wall (rated for no windows or doors): 54 (from Chapt. 4, fig. 16)

c. Description of Windows: Facing 4th: Combination of existing wood windows and new storefront system; single glazing with new interior storm windows.

d. STC rating for window type 23

e. Description of doors Historic front door, sealed shut and located below noise source; Construction t.b.d.

f. STC rating for doors 23 (approximate)

g. Percentage of wall (per wall, per dwelling unit) composed of (per wall type windows 11.0% and doors n/a - not in typical unit)

h. Combined STC rating for wall component 54 - 20 = 34db reduction

2. For walls perpendicular to noise source(s):

a. Description of wall construction* Multiple wythes of clay brick (12" thick min. at half of building; thicker (24") at lower portion of building near highway; using 12" for purposes of this calculation

b. STC rating for wall (rated for no windows or doors): 54

c. Description of Windows: Facing 730 Lofts and proposed parking lot: existing wood and steel windows, refurbished with interior storm windows.

- d. STC rating for window type 23
- e. Description of doors New aluminum storefront system at entry; not located in unit.
-
- f. STC rating for doors 23 (approximate)
- g. Percentage of wall (per wall, per dwelling unit) composed of windows 11% and doors n/a
- h. Combined STC rating for wall component 54-20 = 34db reduction
3. Roofing component (if overhead attenuation is required due to aircraft noise): N/A
- a. Description of roof construction* _____
- b. STC rating (rated as if no skylights or other openings) _____
- c. Description of skylights or overhead windows _____
- d. STC rating for skylights or overhead windows _____
- e. Percentage of roof composed of skylights or windows (per dwelling unit) _____
- f. Percentage of roof composed of large uncapped openings such as chimneys _____
- g. Combined STC rating for roof component _____
4. Description of type of mechanical ventilation provided Heat pump or fan coil with boiler in basement and chiller on roof; fresh air provided through common unit on roof.

Prepared by David Haaland, Urbanworks Architecture LLC

Date 03/13/13

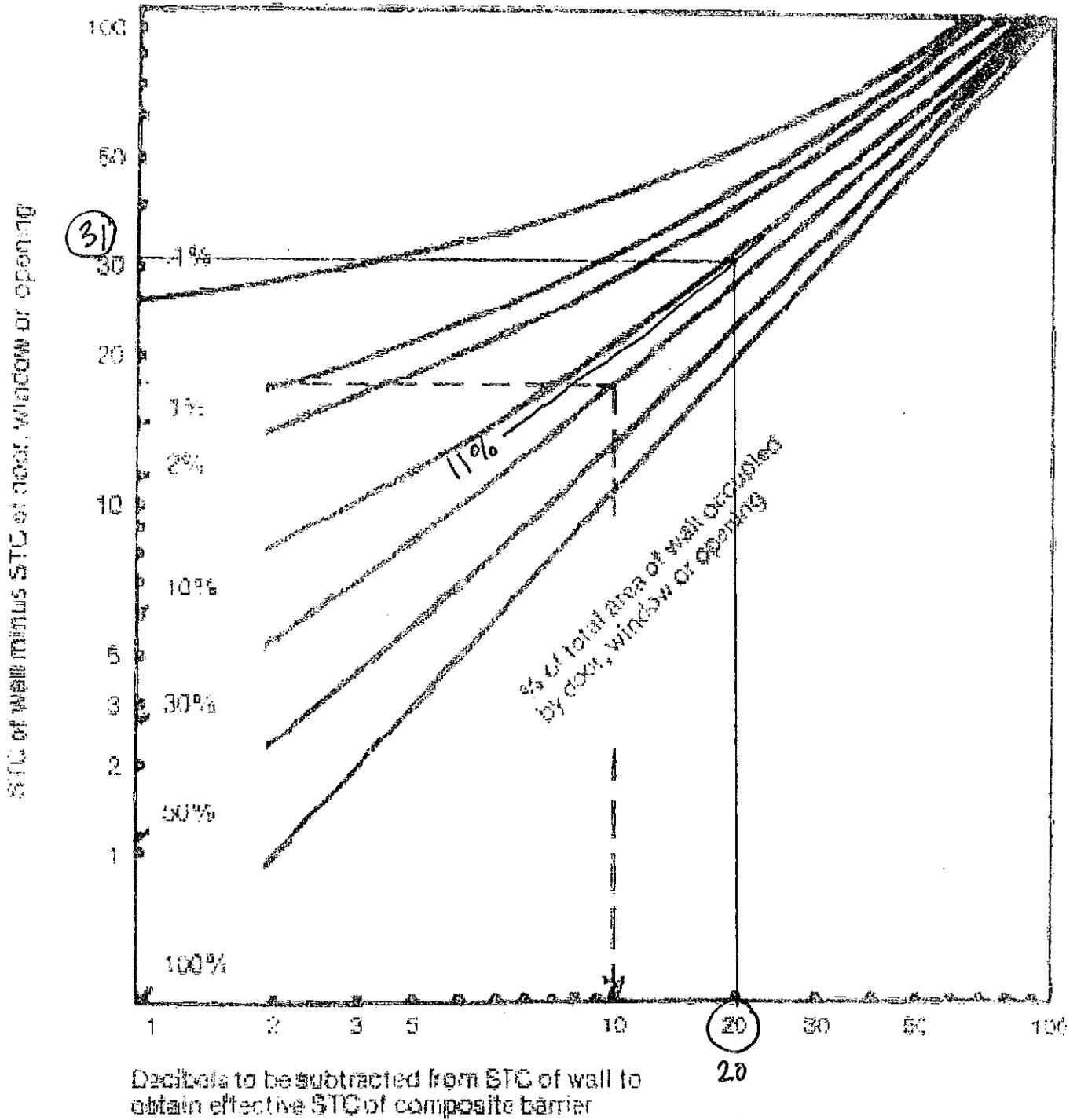
*If walls contain vents or similar openings, attach a description of duct arrangement and insulation and a statement of how much the wall STC is reduced by the presence of the vent.

The Cameron

Sound attenuation - Figure 17

3/11/13

Figure 17
STC



ATTACHMENT 7

Response Action Plan and Construction Contingency Plan (excerpt)

Response Action Plan and Construction Contingency Plan

The Cameron Apartments
756 North 4th Street
Minneapolis, Minnesota

Prepared For

Shafer Richardson, Inc.

Professional Certification:

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a Licensed Professional Geologist under the laws of the State of Minnesota.



Jennifer A. Force, PG
License Number 30305
September 29, 2011



BL-06-06138A

Braun Intertec Corporation

September 29, 2011

Project BL-06-06138A

Ms. Maureen Michalski
Shafer Richardson, Inc.
500 Banks Building, 615 First Avenue NE
Minneapolis, Minnesota 55413

Re: Response Action Plan/Construction Contingency Plan
The Cameron Apartments
756 4th Street North
MPCA Project Number 32VP14080
Minneapolis, Minnesota

Dear Ms. Michalski:

Attached is a copy of the Response Action Plan (RAP) and Construction Contingency Plan (CCP) for the above-referenced site. The RAP/CCP describes procedures that will be used to manage contaminated materials at the Site and is being submitted to the Minnesota Pollution Control Agency Voluntary Investigation and Cleanup Program for review and approval.

If you have any questions, please call Tim Lenway at 952.995.2488 or Jennifer Force at 952.995.2454.

Sincerely,

BRAUN INTERTEC CORPORATION



Timothy S. Lenway, MPH
Associate Principal



Jennifer A. Force, PG
Associate Principal

Attachment:
Response Action Plan/Construction Contingency Plan

RAP/CCP - The Cameron Apartments

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Figure 1: Site Location Map

Figure 2: Site Sketch

Appendix:

Appendix A: Proposed Development Plans

Response Action Plan /Construction Contingency Plan

The Cameron Apartments

Minneapolis, Minnesota

A. Introduction

On behalf of Shafer Richardson, Inc. (Shafer Richardson), Braun Intertec prepared this Response Action Plan (RAP) and Construction Contingency Plan (CCP) for the proposed Cameron Apartments redevelopment located at 756 North 4th Street in Minneapolis, Minnesota (Site). A Site location map is included as Figure 1.

The RAP is being prepared as a condition of the affidavit that has been filed with Hennepin County for this Site. The affidavit states that any person who is planning any use or activity, which has the potential to disturb the areas of contamination, should contact the Minnesota Pollution Control Agency (MPCA) prior to commencement of the planned activities. This RAP/CCP will be submitted to the MPCA Voluntary Investigation and Cleanup (VIC) program for review and approval.

The RAP provides procedures for managing risk associated with the presence of known soil contamination, as well as the proper management of contaminated soil that will be excavated during earthwork for the planned construction at the Site. The CCP provides procedures for the detection, evaluation, handling, treatment and/or disposal of contaminated materials that are unknown at this time, but might be encountered during redevelopment activities.

If any persons or parties are unclear about the procedures discussed herein or how this RAP/CCP applies to environmental conditions at the Site, one of the following parties identified in Section B should be contacted for further clarification.

B. Project Contacts

Owner

Shafer Richardson
500 Banks Building, 615 First Avenue NE
Minneapolis, Minnesota 55413

Primary Contact: Maureen Michalski
Phone: 612-359-5842
Email: mmichalski@sr-re.com

Environmental Consultant & Analytical Laboratory

Braun Intertec Corporation
11001 Hampshire Avenue South
Bloomington, Minnesota 55438
Phone: 952.995.2000
Fax: 952.995.2020

Primary Contact: Jennifer Force
Phone: 952.995.2454
Mobile: 612.360.0731
Email: jforce@braunintertec.com

MPCA VIC Program

520 Lafayette Road North
St. Paul, MN 55155

Primary Contact: Mr. Gerald Stahnke
Phone: 651.296.8572
Email: Gerald.Stahnke@state.mn.us

MPCA Emergency (State Duty Officer)

(651) 649-5451

Local Emergency

911

C. Proposed Redevelopment

The proposed redevelopment includes the renovation of the existing Site building for residential use with 44 market rate apartments. The redevelopment plans also include grading and reconstruction of the parking lot and construction of a handicap entrance ramp, a patio and rain garden. As part of the parking lot reconstruction activities, the unpaved lot will be replaced by a paved parking lot. The proposed grading plan for the site includes raising existing grade by approximately one to two feet across the parking lot. A geothermal system also is currently being evaluated as part of the project and would include a four foot excavation of fill soils from the parking lot for installation of the required heat loop system. Proposed development plans are included in Appendix A.

D. Project Background

D.1. Site Location

The Site is located in the northeast quarter of Section 22, Township 29 North, Range 24 West, in the city of Minneapolis, Hennepin County, Minnesota. A Site location map is attached as Figure 1. The Site building has four stories with a full basement and was constructed in 1925. The building currently is vacant, but was most recently used for cold storage. An unpaved surface parking lot is located on the west side of the existing building. The Site layout is shown on Figure 2.

D.2. Previous Environmental Assessments and Site Documents

In December 2000, Pinnacle Engineering (Pinnacle) completed a Phase I environmental site assessment (ESA) for the properties located at 734, 752 and 756 North 4th Street in Minneapolis, Minnesota. Results from the Phase I ESA revealed that the parking lot located west of the 756 building was formerly used as a junkyard. Pinnacle completed a Phase II ESA of the west parking lot in January 2001. Seven soil borings were advanced at the Site as part of the Phase II ESA and included the collection of two groundwater samples and six soil samples for chemical analysis. Results from the Phase II ESA indicated that the fill soil is impacted with polynuclear aromatic hydrocarbons (PAHs), arsenic, cadmium and lead. Groundwater did not appear to be impacted.

The Site was enrolled into the MPCA VIC Program (MPCA Project Number 32VP14080) in March 2001 and a No Association Determination was granted for the identified release to soil at the 756 North 4th Street Parking Lot in correspondence dated March 20, 2011. As a condition of the No Association Determination, an affidavit describing the remaining contamination was prepared and filed with Hennepin County.

Additional details regarding historical Site information pertaining can be found in the documents that are on file at the MPCA.

E. Response Action Plan

E.1 Proposed Response Actions

Because the proposed redevelopment includes shallow excavation activities, impacted fill soil will be removed and disposed of off-site at an appropriately permitted landfill.

The following response actions will be completed at the Site:

- Prior to excavation activities, additional chemical analysis for lead using the toxicity characteristic leaching procedure (TCLP) will be conducted on the fill soil being proposed for off-site disposal. The soil samples will be collected using either push probe drilling equipment or an on-site backhoe from the earthwork contractor selected for the project. If hazardous concentrations of lead are identified, the MPCA will be notified and this RAP will be revised to address the treatment and disposal of the lead impacted soil.
- During excavation activities at the Site, full time environmental monitoring will be conducted and impacted soil and or debris will be evaluated and managed in accordance with subsequent sections of the RAP/CCP.
- If a geothermal system is installed, excavation depths in the parking lot will extend to a depth of approximately four feet below ground surface (bgs) to allow for the installation of the heat loop system. Following installation of the heat loops, the excavation will be back filled with five to six feet of clean fill, thereby raising the overall Site grade by one to two feet and creating a five to six foot separation distance from the ground surface to the underlying soil contamination, if present. If geothermal is not incorporated into the Site plan, excavation in the parking lot will extend to a depth of approximately two to three feet bgs, and the excavation will be backfilled with three to four feet of clean fill, thereby creating a three to four foot separation from remaining soil contamination, if present. Fill soil excavated from the parking lot will be disposed of off-site at an appropriate permitted landfill.
- The proposed rain garden on the west side of the parking lot will be over-excavated on the sidewalls and bottom of the garden to maintain for a four foot separation between final slope contours and the underlying soil contamination, if present.
- It is anticipated that impacted soil may remain in the sidewalls of the Site excavations and documentation samples will be collected in accordance with Section E.2.c.
- It is not anticipated that impacted soil will be encountered during excavation of the handicap entrance ramp or patio. If impacted soil is identified, environmental monitoring will be conducted and impacted soil and or debris will be evaluated and managed in accordance with subsequent sections of the RAP/CCP.

E.2 Methods and Procedures

During implementation of the RAP, the following methods and procedures will be used to monitor, test stage and re-use/dispose of contaminated materials.

E.2.a. Soil Screening

A Braun Intertec environmental technician with asbestos inspector credentials will be on Site during excavation activities associated with the removal of fill soil from the Site. Additional environmental monitoring may be required if unforeseen conditions are identified. Soils will be observed for the presence of visual and olfactory indications of contamination. Direct olfactory evaluation of contaminated soil is not recommended for safety reasons, but incidental observations will be noted and acted on. The technician will follow MPCA-approved headspace methodology using a photoionization detector (PID) equipped with a 10.6-electron-volt lamp to monitor soil for the presence of organic vapors. A minimum of one sample for headspace analysis will be collected for every 10 cubic yards of soil removed. Screening results will be documented.

The headspace procedure is used to field-screen organic vapor levels in soils. The procedure consists of half-filling a new quart-sized sealable bag with a soil sample. The bag is quickly closed and headspace development is allowed to proceed for at least 10 minutes. The bag is shaken vigorously for 15 seconds, both at the beginning and the end of headspace development. After headspace development, the PID probe is inserted into the bag to one-half the headspace depth. The highest reading observed on the PID is then recorded.

E.2.b. Potentially Contaminated Soil

Potentially contaminated soil or fill material excavated at the Site with PID readings greater than background or other indications of contamination will be segregated. When there is no potential on-Site reuse of the soil as restricted fill and the disposal facility does not require additional laboratory data, the potentially contaminated soil will be directly hauled off Site for disposal. If these conditions are not met, the potentially contaminated soil will be stockpiled on polyethylene sheeting or other impervious surface. All soil stockpiles will be covered with polyethylene sheeting at the end of the workday. The stockpiles will be bermed to prevent storm water run-on and/or runoff. The stockpiles will be numbered, a sketch will be made of each stockpile location, and a description will be made of the type of material and where it originated. Soils from different areas with suspected different contaminants, soils exhibiting different visual or olfactory characteristics, or soils with significantly different PID measurements will be stored separately.

E.2.c. Sampling and Analytical Testing

Proposed analytical parameters, given the history of the Site, include PAHs and the 8 RCRA metals. Additional analytical parameters may be required by disposal facilities or because of field conditions encountered. Specific parameters analyzed will be determined by field observations and/or disposal facility requirements.

All samples will be transported under refrigerated conditions and accompanied by Braun Intertec Chain-of-Custody records. All analyses will be performed within United States Environmental Protection Agency (EPA) holding times.

Stockpile Samples

If laboratory analysis of stockpiled soils is required to meet MPCA Guidelines for reuse on Site or off Site, the number of stockpile samples collected will be in accordance with stockpile sampling requirements of the MPCA Petroleum Remediation Program, specifically:

Cubic Yards of Soil in Stockpile	Number of Grab Samples
<500	1 per 100 cubic yards
501-1,000	1 per 250 cubic yards
1,001 or more	1 per 500 cubic yards

Confirmation Samples

When contaminated soils (as indicated by visual, olfactory, or headspace PID data) are excavated, confirmation soil samples will be collected from the excavation base and sidewalls in the area where indications of contamination were found for field-screening. If laboratory analysis of the confirmation samples is needed, the number of soil samples will be collected based on the following:

Base of Excavation (ft ²)	Number of Samples	Sidewalls (ft ²)	Number of Samples
<500	2	<500	4
500-1000	3	500-1000	5
1000-1500	4	1000-1500	6
1500-2500	5	1500-2000	7
2500-4000	6	2000-3000	8
4000-6000	7	3000-4000	9
6000-8500	8	>4000	1 per 45 linear feet
8500-10890	9		

Braun Intertec will discuss the need for laboratory analytical tests to characterize the unexcavated soils with the MPCA prior to initiating any laboratory analyses. In such situations, analytical parameters will be analyzed for parameters in accordance with the scheme described for stockpile sampling based, field observations and discussions with the MPCA.

E.2.d. Soil Disposal and/or Reuse

Decisions regarding onsite and offsite reuse will be based on the following criteria:

- Offsite reuse of soil will be in accordance with the MPCA's Best Management Practices for Off-Site Reuse of Excess Fill from Development Sites and will meet the following criteria: soil will be free from solid waste, will not exhibit field indications of contamination, contaminant concentrations will be less than the Residential (SRVs) and Soil Leaching Values (SLVs) and no diesel range organics (DRO) or gasoline range organics (GRO) greater than 10 milligrams per kilogram (mg/kg) will be present.
- Soil will be re-used on site without restriction, provided there are no indications of contamination based on field screening and contaminant concentrations are less than the Industrial SRVs. In greenspace areas, contamination concentration also will be less than the SLVs.
- Impacted soil might be re-used at the Site as restricted fill provided it meets the stated criteria:

Thin-spread beneath paved surfaces:

- Beneath 2 feet of clean fill.
- PID headspace readings less than 100 ppm.
- Contaminant levels are less than the Industrial SRVs.

Green Space and Rain Garden Areas

- PID headspace readings are between background and 100 ppm.
- Contaminant levels are less than Industrial SRVs and SLVs.
- A four foot buffer and vegetative cover are placed over the impacted soil.

Utility Corridors

- PID headspace readings are between background and 10 ppm.
 - Contaminant levels are less than the Industrial SRVs and SLVs.
 - If PID headspace readings are greater than 10 ppm in the trench sidewalls or base, the need for a vapor barrier will be evaluated.
- Soils containing more than ten percent by volume construction debris, including soil containing asbestos containing material (ACM) will be disposed of at an appropriately permitted landfill.
 - Soil that cannot be reused on-site as restricted fill because of space constraints or because soils exhibit contaminant concentrations in excess of the proposed standards described above will be transported for off-site disposal.

E.2.e. Soil Import

Fill sources will be considered on a case-by-case basis and evaluated for the potential presence of contaminants in the material. If the fill source is from a site with no environmental concerns, such as native pit run material or from a residential development with no underground storage tanks (USTs) or other environmental concerns, no analytical testing of the material will be conducted.

Acceptance of fill from other sources with potential environmental concerns will be made on a case-by-case basis. As part of the decision making process, the land-use history of the source facility will be evaluated, existing environmental reports will be reviewed, the geotechnical suitability of the material will be assessed, and existing analytical data will be reviewed. If additional analytical testing of the material is deemed warranted after input from the MPCA, samples will be collected at a frequency of at least one sample per 1,000 cubic yards of material. Analytical parameters will be determined based on historic use of the source facility and the Site contaminants of concern. Analytical results will be compared to the Residential SRVs and SLVs. Environmental monitoring of fill soils as they are loaded into trucks from the source facilities will be conducted on a case-by-case basis.

F. Construction Contingency Plan

In the event indications of contamination or regulated waste are unexpectedly encountered during construction, this CCP will be implemented.

For the purposes of this CCP, indicators of potentially contaminated soil, groundwater or surface water include, but are not limited to the following:

- Odor including gasoline, diesel, creosote (odor of railroad ties), mothballs, or other chemical-like odor.
- Soil-stained green or black (but not because of organic content), or with dark, oily appearance, or any unusual soil color or texture.
- A rainbow color (sheen) on surface of water or soil.

Indicators of regulated wastes include, but are not limited to the following:

- Cans, bottles, glass, scrap metal, wood (indicators of solid waste and a possible dump)
- Concrete and asphalt rubble (indicators of demolition waste)
- Roofing materials, shingles, siding, vermiculite, floor tiles, any fibrous material (indicators of demolition waste that could contain asbestos, lead or other chemicals)
- Culverts or other pipes with tar-like coating, insulation or transite (indicators of asbestos)
- Ash (ash from burning or regulated materials may contain lead or other chemicals)

- Sandblast residue (could contain lead or other metals)
- Treated wood, including, but limited to products referred to as green-treated, brown-treated and creosote (treated wood disposal is regulated)
- Chemical containers such as storage tanks, drums, filters and other containers (possible sources of chemical contaminants)
- Old basements with intact floor tiles or insulation (could contain asbestos), sumps (could contain chemical waste), waste traps (could contain oily waste) and cesspools (could contain chemical or oily wastes)

F.1 Notification Requirements

In the event that unexpected contaminated materials or debris are encountered during construction when the environmental consultant is not onsite, work in the area shall cease immediately, and the work area shall be secured. Work outside of the vicinity of the discovery area can continue if conditions remain safe to do so for project personnel and the surrounding community. The contractor shall immediately notify the owner and/or the owner's representative. At the owner's and/or owner's representative's request, the environmental consultant will mobilize to the Site in the event that contamination is encountered. At this time, the soils will be assessed in-situ as part of a preliminary reconnaissance for the presence of contamination using both visual and olfactory indications of contamination, as well as laboratory analysis.

In the event contaminated materials are encountered during construction, a release may need to be reported to the State Duty Officer in accordance with Minnesota Statute 115.061.

F.2 Preliminary Reconnaissance

If contamination or regulated waste is unexpectedly encountered, the environmental consultant will mobilize to the Site to conduct a preliminary reconnaissance. During the preliminary reconnaissance, samples of the potentially impacted soil will be collected from any stockpiles or from the excavation base and sidewalls for headspace screening using a PID using MPCA recommended methodologies. A minimum of one sample for headspace analysis will be collected for every 10 cubic yards of material removed. Visual and indirect olfactory indications of contamination will be noted. Screening results will be documented, and Site photographs will be taken, as appropriate.

As part of the preliminary reconnaissance, any potentially contaminated soil that is stockpiled will be placed on polyethylene sheeting or other impervious surfaces and covered with polyethylene sheeting that is secured in place. Staging areas for potentially impacted soil or material will be clearly marked.

The results of the preliminary reconnaissance will be provided to the owner and/or the owner's representative. The contractor will not be allowed to continue to work in the area until the type(s) of contamination is identified and an appropriate response action is defined by the owner and/or the owner's environmental representative.

F.3 Potential Response Actions

In general, after conducting the preliminary reconnaissance and assessing the type of contamination, environmental monitoring will be conducted during excavation of potentially contaminated materials. The results of the environmental monitoring will be used to segregate and stockpile the potentially contaminated material. Field methods and procedures, analytical testing and decisions regarding soil disposition will be consistent with those described in Section E.2.

If potential ACM is encountered, no excavation work will be conducted until the results of polarized light microscopy (PLM) testing are available. If ACM is detected, procedures established in Section F.3.b. will be followed.

Response actions, listed by contaminant/waste type, to manage unidentified contamination that is encountered during construction are detailed below:

F.3.a. Petroleum-Contaminated Soils

If petroleum-contaminated soils are identified during construction, soils will be segregated and handled in accordance with MPCA Petroleum Remediation Guidance Document 3.01 "Excavation of Petroleum Contaminated soil and Tank Removal Sampling."

F.3.b. Debris and Asbestos-Containing Materials

In the event that debris suspected of containing asbestos is encountered during earthwork activities, it will be evaluated in-situ for the presence of asbestos by bulk sampling and analysis by PLM. If ACM is encountered, protocol outlined in the July 1999 MPCA *Asbestos Guidance on Excavation Projects* will be followed including implementation of an Emissions Control Plan (ECP). An ECP will be prepared if needed, upon request. In addition, as the debris is excavated and removed, if encountered, it will be properly recycled or soil containing greater than 10% debris will be disposed. ACM will be properly disposed of off-site; no soil containing ACM will be re-used on Site.

F.3.c. Non-Petroleum Impacted Soil

Soils that exhibit non-petroleum impacts will be segregated, stockpiled, and sampled. The results of the analytical testing will be compared to the re-use criteria in Section E.2.d.

F.3.d. Storage Tanks or Drums

In the event that drums or other storage containers are encountered during earthwork activities, they will be removed and their condition evaluated by appropriately trained personnel. If the containers are determined to be in poor condition, the materials will be transferred to a new drum that is in good condition. The drums will be placed in a secure location. Containerized materials will be evaluated, tested, and properly disposed.

Soil from the area around the container will be screened for indications of contamination. Potentially impacted soil will be segregated and stockpiled. Soil samples will be collected from stockpiled materials for chemical analyses and confirmation soil samples will be collected from remaining in-place soil.

If a possible UST, indicated by a buried metal or concrete surface, is encountered during excavation activities, the area around the possible underground structure will be carefully excavated. The underground structure will be tested to evaluate the depth to bottom or the presence of liquid. If liquid is present, further testing will be conducted to evaluate its contents. Liquid will be removed by pumping prior to removal and disposal of the structure. All UST contents will be handled in accordance with MPCA and OSHA requirements. The UST will be removed by a licensed UST removal contractor and will be completed in accordance with MPCA requirements. Soil surrounding the tank or structure will be monitored for possible impacts and sampled for chemical analyses in accordance with MPCA, Petroleum Remediation Program, Guidance Document #3-01.

F.3.e. Onsite Wells and Septic Systems

All wells must be sealed by a licensed well contractor in accordance to Minnesota Department of Health (MDH) regulations. Septic systems also should be properly abandoned in accordance with local and state code.

G. Institutional Control

If soil contamination remains at the Site, Shafer Richardson will record with Hennepin County an affidavit describing the remaining impacts. A draft copy of the affidavit will be submitted to the MPCA for review and approval with the RAP implementation report.

H. Site Health and Safety Plan

Braun Intertec will prepare a Health and Safety Plan for its personnel that will be on site. Site contractors will be provided with information regarding the locations of potential soil contamination, including this RAP/CCP, as they become available. Exclusion zones will be established as applicable and as required by OSHA regulations. Backhoe operators, environmental technicians and other workers within exclusion zones will have had 40-hour HAZWOPER training. Each contractor working within the exclusion zone will be responsible for implementing its own Site-specific health and safety plan.

I. Schedule

Construction is anticipated to begin in the spring of 2012.

J. Reporting

Upon completion of construction activities and chemical analyses, a RAP Implementation Report will be prepared documenting methods and results of the soil monitoring activities. The report will be submitted to the MPCA and will request approval of the RAP implementation activities and issuance of a No Further Action letter.

K. Standard of Care

In performing its services, Braun Intertec used that degree of care and skill ordinarily exercised under similar circumstances by reputable members of its profession currently practicing in the same locality. No warranty, express or implied, is made.

Figures



Sheet 1 of 1 Fig. 1	Project No.	BL0606138A
	Drawing No.	BL0606138A
	Scale:	1 in = 2,000 ft
	Drawn By:	FER
	Date Drawn:	9/28/11
	Checked By:	TSL
	Last Modified:	9/28/11

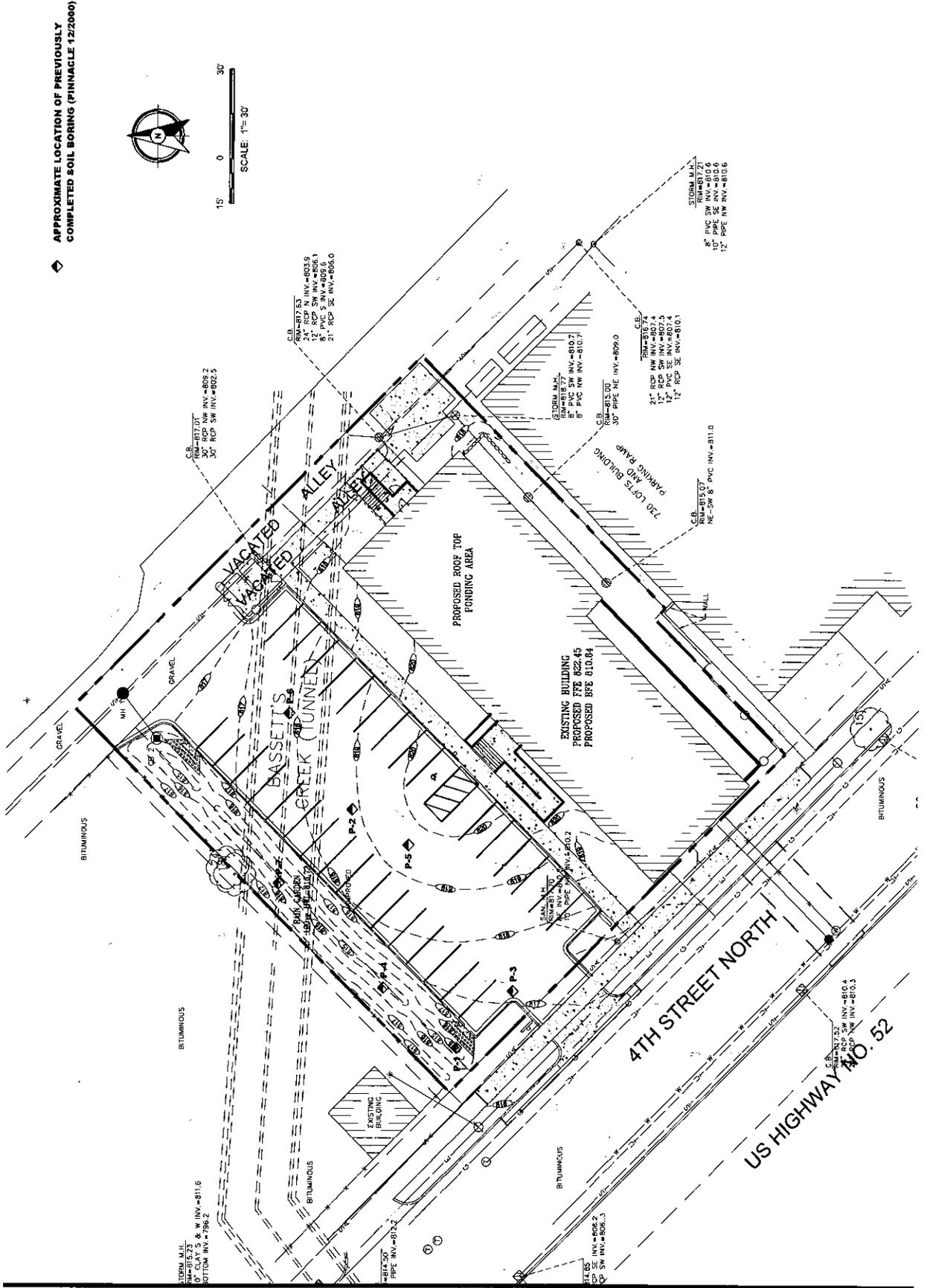
SITE LOCATION MAP
RESPONSE ACTION PLAN
THE CAMERON APARTMENTS
756 4TH STREET NORTH
MINNEAPOLIS, MINNESOTA

BRAUN
INTERTEC

11001 Hampshire Avenue So.
 Minneapolis, MN 55438
 PH (952) 995-2000
 FAX (952) 995-2020

Project No:	BLD006138A
Drawing No:	BLD006138A
Scale:	1" = 30'
Drawn By:	JAC
Checked By:	SP/ML
Let's Model/Date:	8/30/11
Sheet:	of 2

APPROXIMATE LOCATION OF PREVIOUSLY COMPLETED SOIL BORING (PINNACLE 122000)



ATTACHMENT 8

Actions of the Minneapolis Planning Commission

**Actions by the City of Minneapolis:
Actions of the Minneapolis City Planning Commission, October 3, 2011**

The Cameron (BZZ-5279 and MS-213, Ward: 5), 756 4th St N, 739 and 747 3rd St N.

- A. Rezoning:** Application by Maureen Michalski, on behalf of Creamette Building, LLC, to rezone portions of the properties of 739 3rd St N and 747 3rd St N from B4N to B4S to allow a multiple-family dwelling with 44 units in an existing building.

Action: The City Planning Commission recommended that the City Council adopt the findings and **approve** the petition to rezone a portion of the properties of 739 3rd St N and 747 3rd St N from B4N to B4S-1.

- B. Conditional Use Permit:** Application by Maureen Michalski, on behalf of Creamette Building, LLC, for a conditional use permit amendment for a parking lot in the DP overlay district for properties located at 756 4th St N, 739 and 747 3rd St N.

Action: The City Planning Commission adopted the findings and **approved** the application for a conditional use permit to allow 33 space accessory parking lot in the DP Downtown Parking Overlay District for the property located at 756 4th St N, subject to the following condition:

1. The conditional use permit shall be recorded with Hennepin County as required by Minn. Stat. 462.3595, subd. 4 before building permits may be issued or before the use or activity requiring a conditional use permit may commence. Unless extended by the zoning administrator, the conditional use permit shall expire if it is not recorded within one year of approval.

- C. Variance:** Application by Maureen Michalski, on behalf of Creamette Building, LLC, for a variance to increase the maximum number of allowed spaces in a parking lot in the DP overlay district from 20 to 33 for properties located at 756 4th St N, 739 and 747 3rd St N.

Action: The City Planning Commission adopted the findings and **approved** the variance to increase the maximum number of spaces allowed in an accessory parking lot in the DP Overlay District from 20 to 33 for the property located at 756 4th St N.

- D. Site Plan Review:** Application by Maureen Michalski, on behalf of Creamette Building, LLC, for a site plan review for properties located at 756 4th St N, 739 and 747 3rd St N.

Action: The City Planning Commission adopted the findings and **approved** the application for site plan review for the property located at 756 4th St N, subject to the following conditions:

1. Community Planning and Economic Development Department – Planning Division staff review and approval of the final building elevations, floor, site and landscape plans.

2. Site improvements required by Chapter 530 or by the City Planning Commission shall be completed by November 4, 2012, or the permit may be revoked for non-compliance.
3. As an alternative to providing a principal entrance facing 4th St N required by section 530.110 of the zoning code, the applicant shall install enhanced landscaping, including increased seasonal interest, number and variety of plants, in the areas adjacent to the walkway leading to the main entrance.
4. A 7 foot wide landscaped yard shall be provided on-site between the parking area and the 4th St N right-of-way as required by section 530.170 of the zoning code. Two canopy trees shall also be provided in these required yards.
5. The freestanding sign shall comply with the applicable requirements of Chapter 543, On-Premise Signs.

E. Minor Subdivision: Application by Maureen Michalski, on behalf of Creamette Building, LLC, for a minor subdivision to adjust lot lines between the properties of 756 4th St N, 739 3rd St N and 747 3rd St N.

Action: The City Planning Commission adopted the findings and approved the application for a minor subdivision for the properties located at 756 4th St N, 739 3rd St N and 747 3rd St N.