# ZONING COMMITTEE STAFF REPORT

1. **FILE NAME:** CP Railway Radio Shop **FILE #** 17-215-822
2. **APPLICANT:** Canadian Pacific Railway **HEARING DATE:** December 7, 2017
3. **TYPE OF APPLICATION:** Conditional Use Permit
4. **LOCATION:** 1000 Shop Road,
5. **PIN & LEGAL DESCRIPTION:** 032822320005, Section 3 Town 28 Range 22 Ex Area In Lease 82316 The Fol; Part Of Nw 1/4 Of Sw 1/4 Swly Of C M St P & P Rr R/w In Sec 3 Tn 28 Rn 22; 032822320006, SECTION 3 TOWN 28 RANGE 22 THAT PART OF THE FOLLOWING WHICH LIES NLY OF THE N L OF GOVT LOT 5 SEC 4 TN 28RN 22 & NLY OF THE N L OF SW 1/4 OF SW 1/4 OF SEC 3 TN 28 RN 22 AN IRREGULAR SHAPED PARCEL FKA LEASE NO.82316 LYING SWLY OF RR COS HUMP YARD ELY OF PIGS EYE RUN RUN FROM NW COR OF SEC 10 SE TO SE COR OF NE 1/4 OF NW 1/4 OF SEC 10 BEING PART OF SECS 3 & 4 TN 28 RN 22
6. **PLANNING DISTRICT:** 1 **PRESENT ZONING:** I2, FF/RC2
7. **ZONING CODE REFERENCE:** §61.501, §72.73, §72.73
8. **STAFF REPORT DATE:** November 29, 2017 **BY:** Josh Williams
9. **DATE RECEIVED:** November 21, 2017 **60-DAY DEADLINE FOR ACTION:** January 20, 2018

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A. **PURPOSE:** Conditional use permit for elevation of a building on piles rather than fill to be above the regulatory flood protection elevation.

B. **PARCEL SIZE:** 22.49 acres (19,830 s.f. area of disturbance)

C. **EXISTING LAND USE:** Railyard (I2, FF/RC2)

D. **SURROUNDING LAND USE:**

North, East, West, and South: Industrial and railroad (I2, FF/RC2)

E. **ZONING CODE CITATION:** §72.73 states that any structure in the FF flood fringe district not elevated on fill requires a conditional use permit; §72.74 lists standards for conditional uses in the FF flood fringe district; §61.501 lists general conditions that must be met by all conditional uses.

F. **HISTORY/DISCUSSION:** Multiple conditional use permits have been granted for structures within the railyard, which is comprised of multiple parcels. The most recent CUP was for an office building for the car repair department in August 2017. The proposed building includes new garage space attached to an existing garage (both below the Regulatory Flood Protection Elevation or RFPE), plus new office and work space (above the RPFE).

G. **PARKING:** The gross floor area (GFA) of the proposed building is approximately 3,700 square feet, and requires a minimum of nine off-street parking spaces (the zoning code requires one off-street parking space per 400 sq. ft. GFA for office uses). The plans provided do not indicate how space in the attached garage will be allocated. The existing and new garages would accommodate a portion but not all of these vehicles. However, the proposed building is part of a larger facility where ample off-street surface parking is available. Staff recommend that identification of parking on the site sufficient to meet the required minimum for the building be handled as part of the required site plan review, at the discretion of site plan review staff.

H. **DISTRICT COUNCIL RECOMMENDATION:** As of the date of this staff report, the District 1 Council had not provided a recommendation.

I. **FINDINGS:**

1. The applicant proposes to construct a new office building for the radio department. The new building will have approximately 3,700 finished square feet elevated to the Regulatory Flood Protection Elevation (RFPE, elevation of 708.8') and approximately 1,900 square feet of new garage at grade (705.7'). The Base Flood Elevation (BFE, or 100-year flood) for the site has been calculated at 706.8'.
2. The garage and exterior foundation walls will be constructed to the FP-3 or FP-4 floodproofing standards. The garage is designed to flood internally, and required automatic openings are provided to allow movement of water and equalization of hydrostatic pressure. The remainder of

the building will be elevated on fill within the foundation walls. The foundation walls will be anchored to helical piles.

3. §72.74 lists standards for conditional uses in the FF flood fringe district. Subsections (a) through (d) are applicable to the proposed project:

*(a) Alternative elevation methods other than the use of fill may be utilized to elevate a structure's lowest floor above the regulatory flood protection elevation. These alternative methods may include the use of stilts, pilings, parallel walls or above grade, enclosed areas such as crawl spaces or tuck-under garages. The base or floor of an enclosed area shall be considered above grade and not a structure's basement or lowest floor if: 1) the enclosed area is above grade on at least one (1) side of the structure; 2) is designed to internally flood and is constructed with flood-resistant materials; and 3) is used solely for parking of vehicles, building access or storage. The above-noted alternative elevation methods are subject to the following additional standards:*

*(1) Design and certification. The structure's design and as-built condition must be certified by a registered professional engineer or architect as being in compliance with the general design standards of the Minnesota State Building Code and, specifically, that all electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities must be at or above the regulatory flood protection elevation or be designed to prevent floodwater from entering or accumulating within these components during times of flooding.*

*(2) Specific standards for above grade, enclosed areas. Above grade, fully enclosed areas such as crawl spaces or tuck-under garages must be designed to internally flood and the design plans must stipulate:*

a. *A minimum area of "automatic" openings in the walls where internal flooding is to be used as a floodproofing technique. There shall be a minimum of two (2) openings on at least two (2) sides of the structure and the bottom of all openings shall be no higher than one (1) foot above grade. The automatic openings shall have a minimum net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding unless a registered professional engineer or architect certifies that a smaller net area would suffice. The automatic openings may be equipped with screens, louvers, valves or other coverings or devices, provided that they permit the automatic entry and exit of floodwaters without any form of intervention.*

b. *That the enclosed area will be designed of flood-resistant materials in accordance with the FP-3 or FP-4 classifications in the Minnesota State Building Code and shall be used solely for building access, parking of vehicles or storage.*

*(b) Basements, as defined in §72.14, shall be subject to the following:*

*(1) Residential basement construction shall not be allowed below the regulatory flood protection elevation except as authorized in subsection (e) of this section.*

*(2) Nonresidential basements may be allowed below the regulatory flood-protection elevation, provided the basement is protected in accordance with subsection (c) or (e) of this section.*

*(c) All areas of nonresidential structures including basements to be placed below the regulatory flood protection elevation shall be structurally dry floodproofed in accordance with the FP-1 or FP-2 floodproofing classifications in the Minnesota State Building Code. This shall require making the structure watertight, with the walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy. Structures floodproofed to the FP-3 or FP-4 classification shall not be permitted.*

*(d) The storage or processing of materials that are, in times of flooding, flammable, explosive or potentially injurious to human, animal or plant life is prohibited. Storage of other materials or*

*equipment may be allowed if readily removable from the area within the time available after a flood warning and in accordance with a plan approved by the planning commission, or if elevated above the regulatory flood protection elevation by alternative methods which meet the requirements of subsection (a) above. Storage of bulk materials may be allowed provided an erosion/sedimentation control plan is submitted which clearly specifies methods to be used to stabilize the materials on site for a regional flood event. The plan must be prepared and certified by a registered professional engineer or other qualified individual acceptable to the planning commission.*

*(e) When the Federal Emergency Management Agency has issued a letter of map revision-fill (LOMR-F) for vacant parcels of land elevated by fill to the one (1) percent chance flood elevation, the area elevated by fill remains subject to the provisions of this chapter. A structure may be placed on the area elevated by fill with the lowest floor below the regulatory flood protection elevation provided the structure meets the following provisions:*

*(1) No floor level or portion of a structure that is below the regulatory flood protection elevation shall be used as habitable space or for storage of any property, materials, or equipment that might constitute a safety hazard when contacted by floodwaters. Habitable space shall be defined as any space in a structure used for living, sleeping, eating or cooking. Bathrooms, toilet compartments, closets, halls, storage rooms, laundry or utility space, and similar areas are not considered habitable space.*

*(2) For residential and nonresidential structures, the basement floor may be placed below the regulatory flood protection elevation subject to the following standards:*

*a. The top of the immediate floor above any basement area shall be placed at or above the regulatory flood protection elevation.*

*b. Any area of the structure placed below the regulatory flood protection elevation shall meet the "reasonably safe from flooding" standards in the Federal Emergency Management Agency (FEMA) publication entitled "Ensuring that Structures Built on Fill In or Near Special Flood Hazard Areas Are Reasonably Safe From Flooding," Technical Bulletin 10-01, a copy of which is hereby adopted by reference and made part of this chapter. In accordance with the provisions of this chapter, and specifically section 72.33(g), the applicant shall submit documentation that the structure is designed and built in accordance with either the "Simplified Approach" or "Engineered Basement Option" found in FEMA Technical Bulletin 10-01.*

*c. If the ground surrounding the lowest adjacent grade to the structure is not at or above the regulatory flood protection elevation, then any portion of the structure that is below the regulatory flood protection elevation must be floodproofed consistent with any of the FP-1 through FP-4 floodproofing classifications found in the Minnesota State Building Code.*

These standards can be met. The applicant has proposed a building consistent with the requirements of this section. As a condition of approval, the applicant should provide building and foundation plans and record of as-built condition for the building signed by a registered professional engineer or architect and verifying consistency with the applicable requirements of §72.74 of the Saint Paul code, the Minnesota State Building Code, and FEMA Technical Bulletin 10-01. Storage may be allowed in the garage of the proposed building, provided all stored materials are removed in times of flooding. Review and acceptance by the Department of Safety and Inspections of an updated flood response plan for the CP Rail Pig's Eye yard that incorporates the proposed building should be a condition of approval.

4. §72.32 lists thirteen (13) factors to be considered in evaluating applications for conditional use permits in the FF flood fringe district:

*(a) The relationship of the proposed use to the comprehensive plan and floodplain management program for the city.* Subject to meeting the standards listed in §72.74, this proposed use is in conformance with the Saint Paul Comprehensive Plan and the City's floodplain management

program. Policy 5.1.3 of the river corridor chapter of the comprehensive plan supports continuation of and additions to industrial uses in the Childs Road industrial area if said additions will not have significant adverse impacts on air or water quality nor impair river valley views. The proposed additions are to an existing facility located in a large industrial area, and will not significantly alter river valley views. The proposed building will not result in air or water quality impacts.

(b) *The importance of the services provided by the proposed facility to the community.* This finding is not applicable. The proposed building will be part of an existing facility.

(c) *The ability of the existing topography, soils, and geology to support and accommodate the proposed use.* The proposed use is a new building within an existing railyard facility. The area is characterized by flat topography. While soils and geology of the area have long supported railyard operations and associated structures, the proposed building is to be constructed on helical piles to ensure sufficient foundational support.

(d) *The compatibility of the proposed use with existing characteristics of biologic and other natural communities.* The proposed building is to be located in an existing railyard; the area is industrial in character, and does not contain significant biological communities. Impacts of the proposed building will not extend beyond the immediate area.

(e) *The proposed water supply and sanitation systems and the ability of those to prevent disease, contamination, and unsanitary conditions.* The area is already served by adequate water supply and sanitation systems. The proposed building will replace an existing building, which is to be demolished, and will not create significant additional demand for water supply or sanitation capability.

(f) *The requirements of the facility for a river-dependent location, if applicable.* The proposed building is part of an existing railyard facility that is located within the river corridor.

(g) *The safety of access to the property for ordinary vehicles.* Safe access to the site is available via Childs Road and Shop Road.

(h) *The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner.* The proposed structure will be built to FP-3 or FP-4 wet floodproofing standards. In times of flooding, the building will be evacuated per the applicant's flood response plan. The applicant is self-insured.

(i) *The dangers to life and property due to increased flood heights or velocities caused by encroachments.* The proposed encroachments are of limited footprint and located in the flood fringe where impacts on flood flows are negligible.

(j) *The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters expected at the site.* The proposed building is located in the flood fringe, where the velocity of flood flow is generally minimal.

(k) *The danger that materials may be swept onto other lands or downstream to the injury of others.* The proposed building will be constructed of floodproof materials, and any items stored below the RFPE will be removed in times of flooding. The proposed building will also be located in the flood fringe, where velocity of flood flows is generally minimal.

(l) *The availability of alternative locations or configurations for the proposed use.* The proposed building is part of an existing facility which is located within the flood fringe.

(m) *Such other factors as are relevant to the purposes of this chapter.* The factors and findings enumerated and described herein adequately evaluate the proposed use for the purposes of this chapter.

5. §61.501 lists five standards that all conditional uses must satisfy:

(a) *The extent, location and intensity of the use will be in substantial compliance with the Saint Paul Comprehensive Plan and any applicable subarea plans which were approved by the city council.* Subject to meeting the standards listed in §72.74, this proposed use is in

conformance with the Saint Paul Comprehensive Plan and the City's floodplain management program. Policy 5.1.3 of the river corridor chapter of the comprehensive plan supports continuation of and additions to industrial uses in the Childs Road industrial area if said additions will not have significant adverse impacts on air or water quality nor impair river valley views. The proposed additions are to an existing facility located in a large industrial area, and will not significantly alter river valley views. The proposed building is replacing and existing building that will be demolished, and will not result in air or water quality impacts.

(b) *The use will provide adequate ingress and egress to minimize traffic congestion in the public streets.* This condition is met. The proposed facility will be served by Childs and Shop Roads. The use is not expected to generate additional traffic.

(c) *The use will not be detrimental to the existing character of the development in the immediate neighborhood or endanger the public health, safety and general welfare.* This condition is met. The proposed facility is consistent with the existing industrial character of the immediate neighborhood.

(d) *The use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.* This condition is met. The use is industrial in nature, and will not impeded improvement of surrounding properties for allowed uses.

(e) *The use shall, in all other respects, conform to the applicable regulations of the district in which it is located.* This condition can be met. Subject to the acceptance by the Department of Safety and Inspections of a flood response plan for the proposed building and certification of plans by a registered engineer or architect, the use conforms to all applicable regulations of the I2 general industrial district, RC2 river corridor district, and the FF flood fringe district.

J. **STAFF RECOMMENDATION:** Based on the above findings, staff recommends approval of the conditional use permit for construction of a building in the (FF) flood fringe on an alternative to fill subject to the following additional condition(s):

1. Site plan approval. Final plans approved by the Zoning Administrator for this use shall be in substantial compliance with the plans submitted and approved as part of this application.
2. A flood response plan including the proposed building shall be accepted by the Department of Safety and Inspections, and the applicant shall conduct operations consistent with said plan.
3. At or prior to building permit review, the plans for the proposed structure must be certified by a registered engineer or architect as consistent with the applicable requirements of §72.74 of the Saint Paul code, the Minnesota State Building Code, and FEMA Technical Bulletin 10-01..
4. After construction, the applicant shall submit to the zoning administrator the required elevation certification certifying the as-built elevation of the proposed building, and as-built plans certified by a registered professional engineer or architect as consistent with the applicable requirements of §72.74 of the Saint Paul code, the Minnesota State Building Code, and FEMA Technical Bulletin 10-01.

**CONDITIONAL USE PERMIT APPLICATION**

*Department of Planning and Economic Development*
*Zoning Section*
*1400 City Hall Annex*
*25 West Fourth Street*
*Saint Paul, MN 55102-1634*
*(651) 266-6589*

Zoning office use only
File # 17-215822
Fee
Tentative Hearing Date

**APPLICANT**

Name Pat Mooney
Address 126 south 6th Street #700
City Minneapolis St. MN Zip 55402 Daytime Phone 612-904-5996
Name of Owner (if different) Canadian Pacific Railway
Contact Person (if different) Phone

**PROPERTY LOCATION**

Address / Location 1000 Shop Road, Saint Paul MN 55106-6706
Legal Description PID: 032822320005
Current Zoning Industrial I-2
(attach additional sheet if necessary)

**TYPE OF PERMIT:** Application is hereby made for a Conditional Use Permit under provisions of Chapter 72, Section 74, Paragraph a of the Zoning Code.

**SUPPORTING INFORMATION:** Explain how the use will meet all of the applicable standards and conditions. If you are requesting modification of any special conditions or standards for a conditional use, explain why the modification is needed and how it meets the requirements for modification of special conditions in Section 61.502 of the Zoning Code. Attach additional sheets if necessary.

The building structure addition will be elevated on piles with surrounding foundation wall at perimeter base. Finished floor elevation will be 2' above FEMA base flood elevation with encroachment. The Structural Engineer is working on calculation to verify resistance against uplift and hydro pressures.

☒ Required site plan is attached

Applicant's Signature [signature] Date 11/15/17 City Agent pdd 11-17-17

City of Saint Paul Department of Safety & Inspections, 375 Jackson Street, Suite 220, Saint Paul MN 55101

# SITE PLAN REVIEW APPLICATION

Date Application Received:

| Staff Use Only |
|---|
| SPR File # |
| Application Fee $ |
| Staff Meeting Date: |
| City Agent: |

| | |
|---|---|
| Project Name: Canadian Pacific Railway Radio Repair Shop | |
| Site Address: 1000 Shop Road - Building C | Property Identification Number: 032822320005 |
| Project Description: Construction of an addition to a garage building for yard personnel. | |

Provide (5) five Paper Copies 11x17 and an electronic PDF version (11x17 print format) of the complete Site Plan package including **certificate of survey, civil site plan, exterior architectural plan, and landscape plan.**

***Project Summary***

| | | |
|---|---|---|
| Est. Project Cost: $ *(exclusive of land value)* TBD | Est. Construction Start April 2018 | Proposed Land Use: |
| Parcel Area *[sq. ft.]* 675,180 sf | Disturbed Area *[sq. ft.]* 19,830 sf | ☐ Residential ☐ Institutional ☐ Parking Only<br>☐ Commercial ☒ Industrial<br>☐ Mixed-Use ☐ Other |
| Floor Area Ratio .0119 | Building Gross Floor Area 8,092 sf | # Off-Street Parking Spaces |
| ☐ Historic District/Property | ☒ Flood Plain Property | ☐ Steep Slope (>12%) |

***Residential Project Details***

| | | |
|---|---|---|
| # Residential Units NA | # Affordable NA | % AMI for Affordable NA |

***Applicant Information*** [Name, company, address, phone, e-mail]

| Developer or Property Owner | Project Contact [PM, architect] | Construction Contact |
|---|---|---|
| Pat Mooney<br>Canadian Pacific Railway<br>120 South 6th Street #700<br>Minneapolis, MN 55402 | Brian Gadient<br>Momentum Design Group<br>765 North Hampden Ave #180<br>St. Paul, MN 55114 | Mike Johnson<br>MP Johnson Construction, Inc.<br>50 South 6th Street #1413<br>Minneapolis, MN 55402 |

Signature

11/16/17
Date

| Staff Use Only | | | |
|---|---|---|---|
| Zoning District | Overlay Zoning District | | District Council |
| Ward | Watershed District | | MnDOT or County |
| ☐ Parkland Dedication | ☐ TDMP | ☐ CUP Required | Previous SPR |

# CITY OF SAINT PAUL

DEPARTMENT OF SAFETY AND INSPECTIONS
375 JACKSON STREET, SUITE 220
ST. PAUL, MN 55101

# FLOODPLAIN APPLICATION

2017-01

SAINT PAUL LEGISLATIVE CODE CHAPTER 72
AND THE
NATIONAL FLOOD INSURANCE PROGRAM

## APPLICANT

Name Canadian Pacific Railway
Address 120 South 6th Street #700 Minneapolis, MN 55402
Phone and E-mail 612-904-5996, PatrickL_Mooney@cpr.ca

Owner
(if different)
Contact Person Pat Mooney

## PROPERTY LOCATION & FLOOD INSURANCE RATE MAP (FIRM)

consult FEMA Map Service Center at https://msc.fema.gov

Address / Location

FIRM No. 27123C 0108G Effective Date 06/04/10

Special Flood Hazard Area
☐ Zone A ☒ Zone AE

Other Flood Area
☐ Zone X

Base Flood Elevation (BFE)
706.8 ft. (NGVD)

Regulatory Flood Protection Elevation (RFPE)
708.8 ft. (NGVD)

Floodplain Management Overlay District (Zone A or AE only)
☒ FF Flood Fringe ☐ FW Flood Way

Historic Structure? ☐ Yes ☒ No

(If Zone A, describe on separate sheet how BFE was derived)

## PROPOSED ACTIVITY

Land Use
☐ Residential
☒ Comm/Industrial
☐ Mixed
☐ Other

Structural Development
☐ New structure
☒ Addition/Alteration*
☐ Rehabilitation/Repair*
☐ Demolition

Material / equipment storage? ☒ Yes ☐ No

Est. Market Value of Structure
$ TBD
*Is proposed activity less than 50 percent of value prior to start of construction?
☐ Yes ☒ No

Other Development
☐ Grading and/or paving
☐ Drainage improvement
☐ Linear construction (trail, street, bridge, etc.)
☐ Watercourse alteration

## REQUIRED FLOOD PROOFING

(**Applicant** to complete before or with building permit app)

Is structure elevated on fill?
☐ Yes ☒ No
If no, what is alternative elevation method proposed? (Describe on separate sheet)

Is any area of the structure below the RFPE?
☒ Yes ☐ No
*If yes, applicant shall provide evidence of conformance with FEMA Technical Bulletin 10-01.*

Structural flood proofing method
☐ Dry flood proofing (FP-1 or FP-2)
☒ Wet flood proofing (FP-3 or FP-4)
☐ Other method(s)
(Describe on separate sheet)

A registered architect or professional engineer **must** submit the form below as part of a building permit application.
*Non-residential Floodproofed Construction Certification FEMA Form 086-0-34 (7/12)*

## SUPPLEMENTAL REVIEWS

(Answer in consultation with city staff as needed)

Is a **Conditional Use Permit** required? (Dept. of PED)
☒ Yes ☐ No
If yes, has a Flood Response Plan (FRP) been submitted?
☒ Yes ☐ No*

Is a **No-Rise Certificate** required? (projects in FW District)
☐ Yes ☒ No
If yes, has a No-Rise analysis been submitted?
☐ Yes ☐ No*

Is a **levee permit** required? (Dept. of Public Works)
☐ Yes ☒ No
If yes, has a levee analysis been submitted?
☐ Yes ☐ No*

**If no, this item(s) must be submitted prior to Site Plan Review*

Provide a completed **MT-1 Form** If applicant is requesting from DHS-FEMA a Letter of Map Revision Based on Fill (LOMR-F), Conditional LOMR-F, or Letter of Map Amendment (FW District).

## ACTION/DETERMINATION

☐ The proposed development is in conformance with applicable floodplain standards.
**Application is approved conditioned on receiving as-built elevation certifications.**
☐ The proposed development is not in conformance with applicable floodplain standards (explanation attached).
**Application is denied.**

Community official responsible for floodplain management

Name
Title

Signature
Date

# FLOODPROOFING CERTIFICATE
# FOR NON-RESIDENTIAL STRUCTURES (Continued)

The floodproofing of non-residential buildings may be permitted as an alternative to elevating to or above the Base Flood Elevation; however, a floodproofing design certification is required. This form is to be used for that certification. Floodproofing of a residential building does not alter a community's floodplain management elevation requirements or affect the insurance rating unless the community has been issued an exception by FEMA to allow floodproofed residential basements. The permitting of a floodproofed residential basement requires a separate certification specifying that the design complies with the local floodplain management ordinance.

| BUILDING OWNER'S NAME | FOR INSURANCE COMPANY USE |
|---|---|
| Canadian Pacific Railway | POLICY NUMBER |
| STREET ADDRESS (Including Apt., Unit, Suite, and/or Bldg. Number) OR P.O. ROUTE AND BOX NUMBER<br>1000 Shop Road, Saint Paul MN 55106-6706 | COMPANY NAIC NUMBER |
| OTHER DESCRIPTION (Lot and Block Numbers, etc.)<br>PID: 032822320005 | |

| CITY | STATE | Zip Code |
|---|---|---|
| St. Paul | MN | 55106-6706 |

## SECTION I – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

Provide the following from the proper FIRM:

| COMMUNITY NUMBER | PANEL NUMBER | SUFFIX | DATE OF FIRM INDEX | FIRM ZONE | BASE FLOOD ELEVATION (in AO Zones, Use Depth) |
|---|---|---|---|---|---|
| | 27123 | C0108G | 6/4/10 | AE | 706.8 |

Indicate elevation datum used for Base Flood Elevation shown above: ☒ NGVD 1929 ☐ NAVD 1988 ☐ Other/Source: _____

## SECTION II – FLOODPROOFED ELEVATION CERTIFICATION (By a Registered Professional Land Surveyor, Engineer, or Architect)

All elevations must be based on finished construction.

**Floodproofing Elevation Information**:

Building is floodproofed to an elevation of 708 . 8 feet (In Puerto Rico only: _____ . _____ meters).

☒ NGVD 1929 ☐ NAVD 1988 ☐ Other/Source: _____

(Elevation datum used must be the same as that used for the Base Flood Elevation.)

Height of floodproofing on the building above the lowest adjacent grade is _____ feet (In Puerto Rico only: _____ meters).

**For Unnumbered A Zones Only**:

Highest adjacent (finished) grade next to the building (HAG) _____ . _____ feet (In Puerto Rico only: _____ . _____ meters).

☐ NGVD 1929 ☐ NAVD 1988 ☐ Other/Source: _____

(NOTE: For insurance rating purposes, the building's floodproofed design elevation must be at least 1 foot above the Base Flood Elevation to receive rating credit. If the building is floodproofed only to the Base Flood Elevation, then the building's insurance rating will result in a higher premium. See the Instructions section for information on documentation that must accompany this certificate if being submitted for flood insurance rating purposes.)

# FLOODPROOFING CERTIFICATE
# FOR NON-RESIDENTIAL STRUCTURES (Continued)

1000 Shop Road, Saint Paul MN 55106-6706 St. Paul MN 55106-6706

**Non-Residential Floodproofed Elevation Information Certification:**

Section II certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information

*I certify that the information in Section II on this Certificate represents a true and accurate interpretation and determination by the undersigned using the available information and data. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.*

| CERTIFIER'S NAME | LICENSE NUMBER (or Affix Seal) 52306 | | | PLACE SEAL HERE |
|---|---|---|---|---|
| TITLE | COMPANY NAME | | | |
| ADDRESS | CITY | STATE Minnesota | ZIP CODE | |
| SIGNATURE | DATE | PHONE | | |

**SECTION III – FLOODPROOFED CERTIFICATION (By a Registered Professional Engineer or Architect)**

**Non-Residential Floodproofed Construction Certification:**

*I certify the structure, based upon development and/or review of the design, specifications, as-built drawings for construction and physical inspection, has been designed and constructed in accordance with the accepted standards of practice (ASCE 24-05, ASCE 24-14 or their equivalent) and any alterations also meet those standards and the following provisions.*

The structure, together with attendant utilities and sanitary facilities is watertight to the floodproofed design elevation indicated above, is substantially impermeable to the passage of water, and shall perform in accordance with the 44 Code of Federal Regulations (44 CFR 60.3(c)(3).

All structural components are capable of resisting hydrostatic and hydrodynamic flood forces, including the effects of buoyancy, and anticipated debris impact forces.

*I certify that the information in Section III on this certificate represents a true and accurate determination by the undersigned using the available information and data. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.*

| CERTIFIER'S NAME | LICENSE NUMBER (or Affix Seal) | | | PLACE SEAL HERE |
|---|---|---|---|---|
| Andrew Wagstrom | 52306 | | | |
| TITLE | COMPANY NAME | | | |
| Senior Registered Engineer | TKDA | | | |
| ADDRESS | CITY | STATE | ZIP CODE | |
| 444 Cedar Street, Suite 1500 | St Paul | Minnesota | 55101 | |
| SIGNATURE | DATE | PHONE | | |
| | 11/16/17 | +1 (651) 292-4580 | | |

**Copy all pages of this Floodproofing Certificate and all attachments for 1) community official, 2) insurance agent/company, and 3) building owner.**

## St. Paul Flood Mechanical Plan

**Flood Alert Level 1 – Monitoring**

1. Participate in Service Area cross- functional flood planning meetings.

**Flood Alert Level 2 – Warning** Prediction of crest above 18.0 at Roberts St Gauge

1. Begin to store some equipment and materials in the buildings up off the floor.

2. Block up four containers & store welders in them. (Safety,Gut,QM,SI Supply)

3. Store some of the large pieces of equipment on the high ground located on the other side of the clean out track.

4. Identify and relocate selected equipment to a temporary repair point.

5. Start to divert all B/O or Scheduled units that were heading to St Paul to other locations.

6. Complete repairs on those units which can be released within the next 24 hours. (All remaining units in the shop are to be moved out to other locations depending on the work involved).

7. Request the FRA to grant permission to extend the limit of the schedule maintenance on four axle units. (See appendix for letter to FRA).

8. The St Paul GE Managers are to provide the MS NMC Planner a list of units presently at St Paul highlighting whether units are in queue, in progress (and what stage), and ready to release.

9. Units will be re-assigned to appropriate MS Facilities as follows:
   - AC units will be re-assigned to Coquitlam and Moose Jaw
   - EMD units with light scheduled or unscheduled work will be assigned to Thief River Falls ILS Facility (until maximum capacity is reached)
   - EMD units with heavy scheduled or unscheduled work will be assigned to Toronto, Alyth, Moose Jaw and Winnipeg. Consideration will also be given to Thunder Bay and St Luc for assistance.

11. The MS NMC Planner will work with the System Locomotive Manager from the Asset Optimization Group and with the various Corridor Locomotive Managers (particularly the SOO desk) to arrange for the movement of units from St Paul MS Facility to the re-assigned MS Facilities.

12. This same group will further work together to identify units already en route and re-direct same to other MS Facilities as per the above.

13. The MS NMC Planner will also look at units scheduled/planned to St Paul for the next two-week period and re-assigned same as per the aforementioned distribution.

- Grove Crane
- Mobilifts (2)
- Marklift
- Road trucks (4) (2 road, 1 chase, 1 Car Department pickup)
- Welders
- Air Compressor (in building #835)
- Samsung Bucket
- Samsung Plow Blade
- Bobcat Brush
- End Pusher
- Light Plant
- Hydraulic Jacks
- Drop Table (Remove Completely, no sand bagging or pumping is required)

Run Through 1 & 2 Track

- Condensation return pump 1 track east, remove
- 10 heaters under ramp on the south side, remove

Back Shop

- Remove battery charger/starting unit
- Remove trash compactor (Facilities)
- Remove all necessary machines in Air Brake Department
- Remove water heater and condensation pump lower level
- Remove drop table lift & drive motors (Alltech)
- Wheel truer, remove motors (dyked in 2001)
- Remove all electrical equipment from Air Brake Shop
- Dyke transformers outside of air brake shop north wall
- Move CP Production Coordinators and SI FLM to Humboldt (Facilities)

Back Shop Air Compressor Room

- Remove all motors and compressors

Training Room

- Remove video equipment and furniture (Facilities)
- Remove water heater from under sink
- Remove water heaters from training room bathrooms

Boiler Room

- Remove condensation pump from pit
- Remove boiler feed pump
- Remove water softener
- Remove water treatment pump
- Remove burner and blower motor from boiler

Mechanical Department Head Office

- Remove all computers (Facilities)
- Remove water heater in main hallway
- Remove locomotive and personal files from all offices (Facilities)

4. Put staff on furlough status.

5. The MS NMC Planner will continuously monitor the situation at St Paul MS Facility and ensure units are not assigned to same until the decision has been reached by all stakeholders to resume operations (MS, ES, and Field Ops).

**Flood Alert Level 4 - Recovery**

1. Call in contractors to re-install and test all equipment in and around the shop, (including turntable and drop table).

2. Perform diesel inspections to those units which were deferred during the flood.

3. Call back employees on furlough and those dispatched to other locations.

4. Have new supplies delivered to those areas which were removed prior to the flood.

5. The following positions will resume discussions and determine an appropriate assignment of units back to the St Paul MS Facility:

    - the MS NMC Planner, the System Locomotive Manager (Asset Optimization group), the Locomotive Managers (in particular the SOO desk), the St Paul MS Facility Planner, and the St Paul GE Managers.

    - Units will be re-directed appropriately, and the work load will be reviewed and properly balanced for St Paul and the other MS Facilities.

    This will be particularly important when the FRA inspection waiver expires or is lifted as the yard/shop will become congested and locomotive availability will suffer.

6. Issue notice to employees regarding tetanus shots and post-flood health and safety concerns/precautionary measures.

7. Arrange for contractor and/or employees to clean /disinfect the diesel shop.

8. Re-install the air compressor for the Car Department track and for the train line as soon as the water allows.

9. Re-install the data board in the MS office.

10. Turn on the fire hydrants and use reducers.

11. Order a second Hulcher sucker truck to assist in the clean up.

12. Participate in the coordination of the contracted cleaning arrangements for all buildings so only one company is used.

## St. Paul Flood Mechanical Plan

**Flood Alert Level 1 – Monitoring**

1. Participate in Service Area cross- functional flood planning meetings.

**Flood Alert Level 2 – Warning** Prediction of crest above 18.0 at Roberts St Gauge

1. Begin to store some equipment and materials in the buildings up off the floor.

2. Block up four containers & store welders in them. (Safety,Gut,QM,SI Supply)

3. Store some of the large pieces of equipment on the high ground located on the other side of the clean out track.

4. Identify and relocate selected equipment to a temporary repair point.

5. Start to divert all B/O or Scheduled units that were heading to St Paul to other locations.

6. Complete repairs on those units which can be released within the next 24 hours. (All remaining units in the shop are to be moved out to other locations depending on the work involved).

7. Request the FRA to grant permission to extend the limit of the schedule maintenance on four axle units. (See appendix for letter to FRA).

8. The St Paul GE Managers are to provide the MS NMC Planner a list of units presently at St Paul highlighting whether units are in queue, in progress (and what stage), and ready to release.

9. Units will be re-assigned to appropriate MS Facilities as follows:
   - AC units will be re-assigned to Coquitlam and Moose Jaw
   - EMD units with light scheduled or unscheduled work will be assigned to Thief River Falls ILS Facility (until maximum capacity is reached)
   - EMD units with heavy scheduled or unscheduled work will be assigned to Toronto, Alyth, Moose Jaw and Winnipeg. Consideration will also be given to Thunder Bay and St Luc for assistance.

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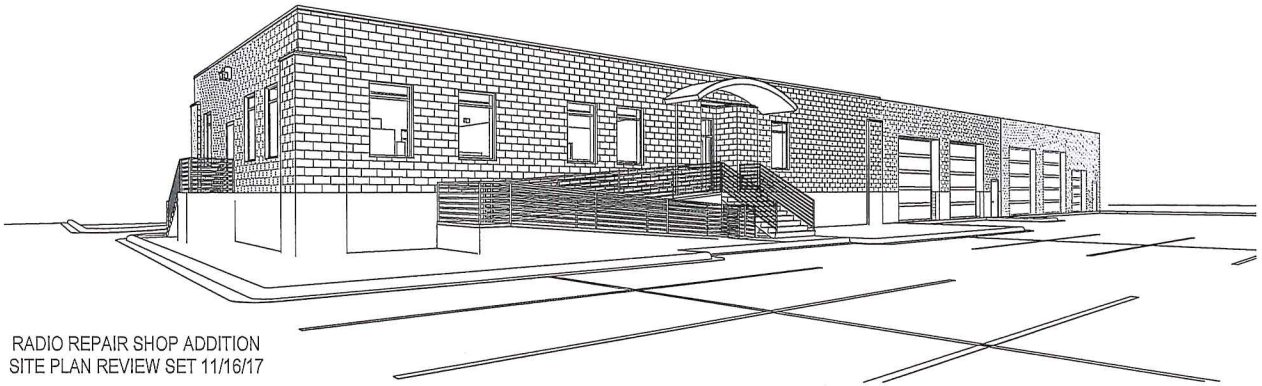


RADIO REPAIR SHOP ADDITION
SITE PLAN REVIEW SET 11/16/17

## SHEET INDEX



## PROPERTY OWNER:

**CANADIAN PACIFIC RAILWAY**

PAT MOONEY 612-904-5996

125 SOUTH 6TH STREET
SUITE 900
MINNEAPOLIS, MINNESOTA 55402

## ARCHITECT:

**MOMENTUM DESIGN GROUP, LLC**

BRIAN GADIENT 952-583-9788

765 NORTH HAMPDEN AVENUE
SUITE 180
ST. PAUL, MINNESOTA 55114

## CIVIL ENGINEER:

**TKDA, INC**

ANDREW WAGSTROM, P.E. 651-292-4400
WESLEY WEGNER, P.E.

444 CEDAR STREET
SUITE 1500
ST. PAUL, MINNESOTA 55101

## GENERAL CONTRACTOR:

**TBD**

## STRUCTURAL ENGINEER:

**TBD**

## PROJECT SITE LOCATION:



## ABBREVIATIONS:

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ABV | -ABOVE | CJ | -CONTROL JOINT | FD | -FLOOR DRAIN | JST | -JOIST | OHD | -OVERHEAD DOOR | RM | -ROOM | UR | -URINAL |
| ACC | -ACCESSIBLE | DTL | -DETAIL | FTG | -FOOTING | LAM | -LAMINATE | PAR | -PARALLEL | RO | -ROUGH OPENING | UNO | -UNLESS NOTED OTHERWISE |
| AFF | -ABOVE FINISHED FLOOR | DIA | -DIAMETER | FND | -FOUNDATION | LAV | -LAVATORY | PART | -PARTITION | R&S | -ROD AND SHELF | VERT | -VERTICAL |
| ARCH | -ARCHITECT | DIM | -DIMENSION | FH | -FIRE HYDRANT | LH | -LEFT HAND | PVMT | -PAVEMENT | SHTG | -SHEATHING | VTR | -VENT THRU ROOF |
| ALUM | -ALUMINUM | DR | -DOOR | GA | -GAGE, GAUGE | LT | -LIGHT | P LAM | -PLASTIC LAMINATE | SHR | -SHOWER | WD | -WOOD |
| APPROX | -APPROXIMATE | DS | -DOWNSPOUT | GALV | -GALVANIZED | MAT | -MATERIAL | PL | -PLATE | SIM | -SIMILAR | WC | -WATER CLOSET |
| BPL | -BEARING PLATE | DWG | -DRAWING | GC | -GENERAL CONTRACTOR | MH | -MANHOLE | PT | -PRESSURE TREATED | SC | -SOLID CORE | WH | -WATER HEATER |
| BM | -BENCH MARK | DF | -DRINKING FOUNTAIN | GB | -GRAB BAR | MFR | -MANUFACTURE | PVC | -POLYVINYL CHLORIDE | SPEC | -SPECIFICATIONS | WP | -WATERPROOFING |
| BLKG | -BLOCKING | ELECT | -ELECTRIC (AL) | HDW | -HARDWARE | MAS | -MASONRY | PSF | -POUNDS PER SQUARE FOOT | SQ | -SQUARE | WR | -WATER RESISTANT |
| BOT | -BOTTOM | EL | -ELEVATION | HVAC | -HEATING/VENTILATION/ AIR CONDITIONING | MO | -MASONRY OPENING | PSI | -POUNDS PER SQUARE INCH | S STL | -STAINLESS STEEL | WWF | -WELDED WIRE FABRIC |
| BOW | -BOTTOM OF WALL | EQ | -EQUAL | | | MTL | -METAL | PC | -PRECAST | SD | -STORM DRAIN | W | -WIDTH, WIDE |
| CIP | -CAST-IN-PLACE | EXH | -EXHAUST | HT | -HEIGHT | MISC | -MISCELLANEOUS | PL | -PROPERTY LINE | STRUCT | -STRUCTURAL | YH | -YARD HYDRANT |
| CB | -CATCH BASIN | EXIST | -EXISTING | HC | -HANDICAP | NIC | -NOT IN CONTRACT | PP | -POWER POLE | SYM | -SYMMETRY (ICAL) | YD | -YARD DRAIN |
| CLG | -CEILING | EJ | -EXPANSION JOINT | HM | -HOLLOW METAL | NTS | -NOT TO SCALE | QT | -QUARRY TILE | THK | -THICKNESS | YI | -YARD INLET |
| CT | -CERAMIC TILE | EXP | -EXPANSION | HOR | -HORIZONTAL | NO | -NUMBER | R | -RADIUS | TOC | -TOP OF CONCRETE | | |
| CLR | -CLEAR (ANCE) | EF | -EXHAUST FAN | HB | -HOSE BIBB | OC | -ON CENTER | RA | -RETURN AIR | TOS | -TOP OF SLAB | | |
| CONC | -CONCRETE | ELEC PNL | -ELECTRICAL PANEL | INCL | -INCLUDE | OPNG | -OPENING | RD | -ROOF DRAIN | TOW | -TOP OF WALL | | |
| CMU | -CONCRETE MASONRY UNIT | EWC | -ELECTRIC WATER COOLER | ID | -INSIDE DIAMETER | OPP | -OPPOSITE | REF | -REFERENCE | T | -TREAD | | |
| CONST | -CONSTRUCTION | EXT | -EXTERIOR | INSUL | -INSULATION | OPH | -OPPOSITE HAND | RF | -ROCK FACE | TYP | -TYPICAL | | |
| CONT | -CONTINUE (OUS) | FFE | -FINISHED FLOOR ELEVATION | INT | -INTERIOR | OD | -OUTSIDE DIAMETER | RH | -RIGHT HAND | TOF | -TOP OF FOOTING | | |
| CRS | -COURSE | FPL | -FIREPLACE | INV | -INVERT | OH | -OVERHEAD | ROW | -RIGHT OF WAY | UNF | -UNFINISHED | | |

**CONTRACTOR NOTES:**

INSPECTION CONTACT: THE DEVELOPER SHALL CONTACT THE RIGHT OF WAY INSPECTOR JASON POMMIER AT 651.485.4263 ONE WEEK PRIOR TO BEGINNING WORK TO DISCUSS SAFETY ISSUES SUCH AS TRAFFIC CONTROL, PEDESTRIAN SAFE WALKWAYS. OTHER ISSUES THAT MAY AFFECT THE ROW SUCH AS EROSION CONTROL AND COORDINATION WITH OTHER WORK NEARBY THAT THE DEVELOPER MAY NOT BE AWARE OF SHOULD BE DISCUSSED AS WELL. NOTE: IF A ONE-WEEK NOTICE IS NOT PROVIDED TO THE CITY, ANY RESULTING DELAYS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

SEWER REPAIR PERMIT: PLUMBING CONTRACTOR TO OBTAIN "REPAIR PERMITS" FROM PUBLIC WORKS FOR PROPOSED MODIFICATION TO THE EXISTING STORM SEWER CONNECTIONS. CALL ST. PAUL PW PERMIT DESK (651-266-6234) FOR INFORMATION ON OBTAINING THIS PERMIT.

RADIO SHOP BUILDING ADDITION
CPR ST. PAUL - SNELLING YARD

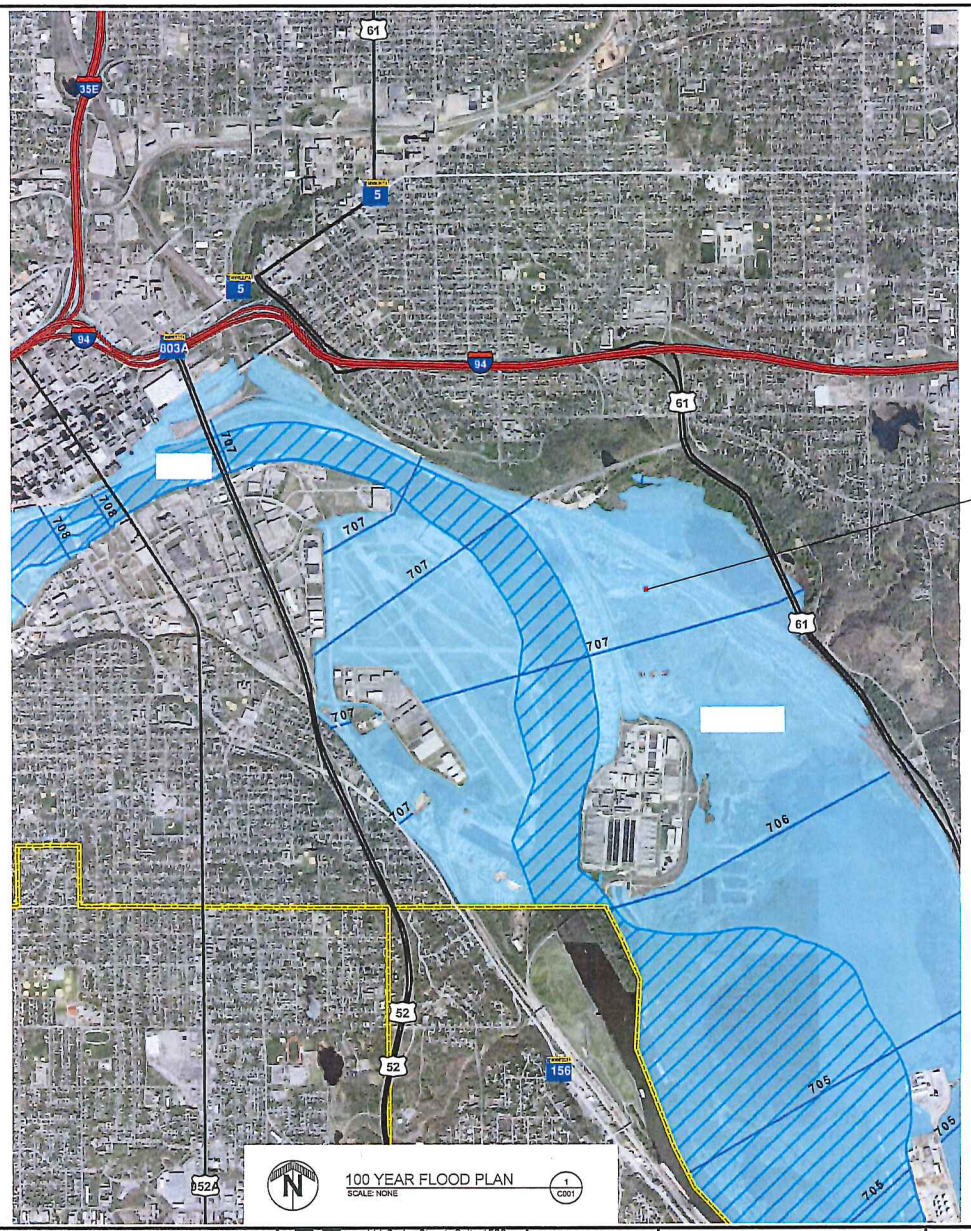
COVER SHEET
11/16/17
-CS-

BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS DRAWING ADJUST SCALES ACCORDINGLY.

0 1"

NOTE:

100 YEAR FLOOD ELEVATION DETERMINED USING THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE STUDY FOR RAMSEY COUNTY, MINNESOTA SEPTEMBER 16, 2015 REVISION. FLOOD NUMBER 27123CV000B.




100 YEAR FLOOD PLAN
SCALE: NONE
1 C001

NOT FOR CONSTRUCTION

| NO. | DATE | BY | DESCRIPTION OF REVISIONS |
|---|---|---|---|
| A | 11/16/17 | AJW | ISSUE FOR REVIEW |

DESIGNED MGM
DRAWN MGM
CHECKED AJW

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE:_____ DATE:_____

PRINTED NAME:_____ LIC. NO.:_____

TKDA
444 Cedar Street, Suite 1500
Saint Paul, MN 55101
651.292.4400
tkda.com

ST. PAUL YARD

CANADIAN PACIFIC RAILWAY

100 YEAR FLOOD PLAN

DRAWING NO. C001

PLOT DATE:
FILENAME:

BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS DRAWING ADJUST SCALES ACCORDINGLY.


EXISTING PARCEL PLAN
SCALE: NONE
1 C002

NOT FOR CONSTRUCTION

PLOT DATE:
FILENAME:

| NO. | DATE | BY | DESCRIPTION OF REVISIONS |
|---|---|---|---|
| A | 11/16/17 | AJW | ISSUE FOR REVIEW |

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CHECKED AJW

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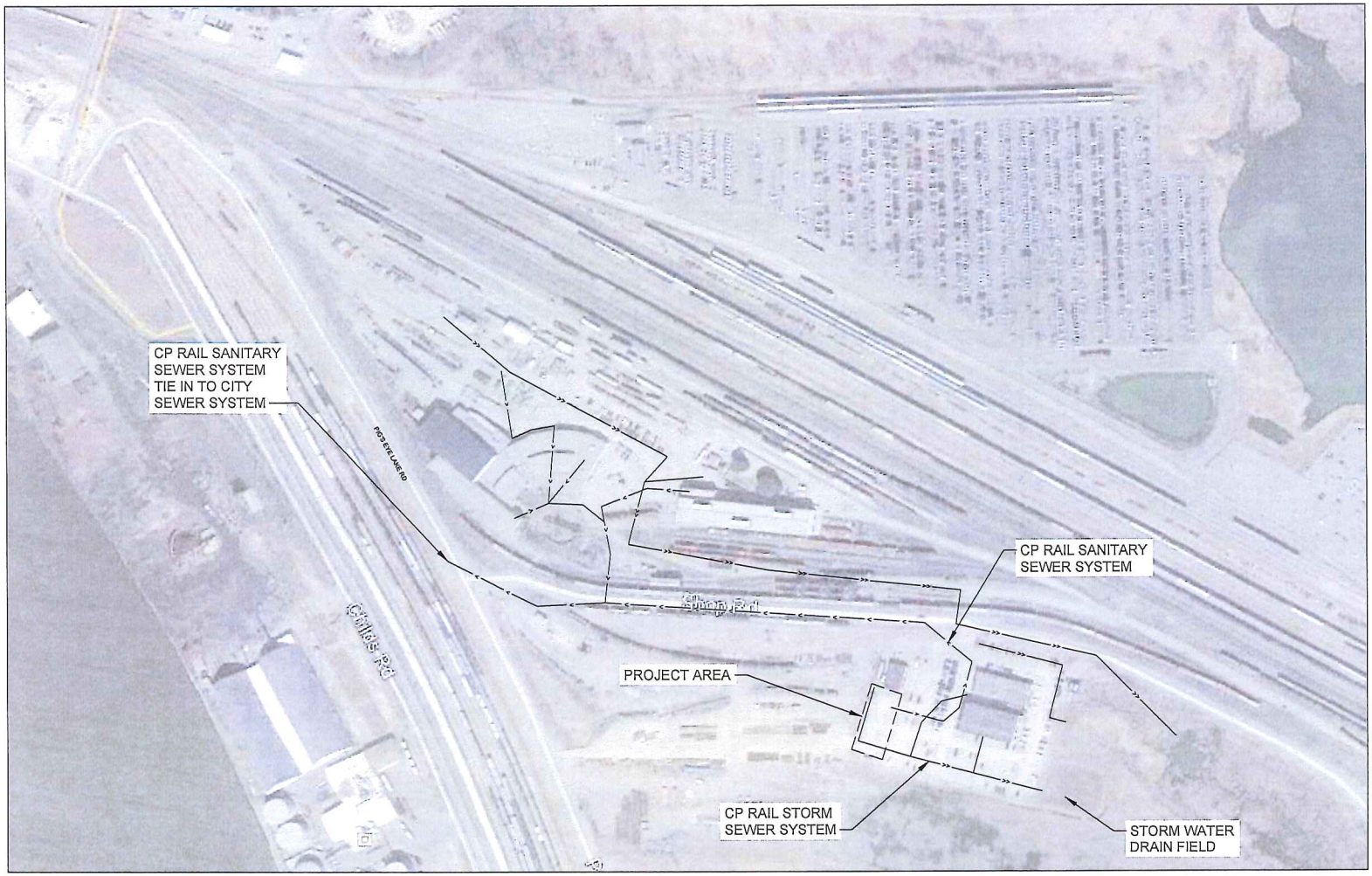
ST. PAUL YARD

CANADIAN PACIFIC RAILWAY

EXISTING PARCEL PLAN

DRAWING NO. C002




EXISTING SEWER PLAN
SCALE: NONE
1 C003

NOT FOR CONSTRUCTION

BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS DRAWING ADJUST SCALES ACCORDINGLY.

PLOT DATE:
FILENAME:

| NO. | DATE | BY | DESCRIPTION OF REVISIONS |
|---|---|---|---|
| A | 11/15/17 | AJW | ISSUE FOR REVIEW |

DESIGNED
DRAWN
CHECKED

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PRINTED NAME: LIC. NO.:

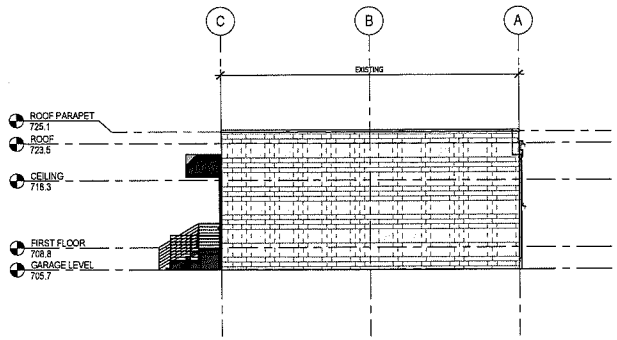
TKDA
444 Cedar Street, Suite 1500
Saint Paul, MN 55101
651.292.4400
tkda.com

ST. PAUL YARD

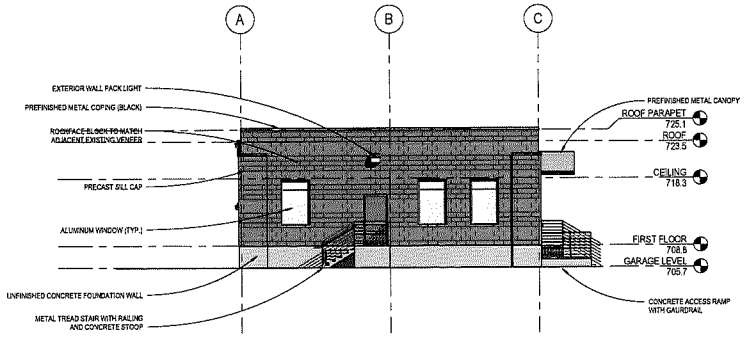
CANADIAN PACIFIC RAILWAY

EXISTING SEWER TERMINATIONS

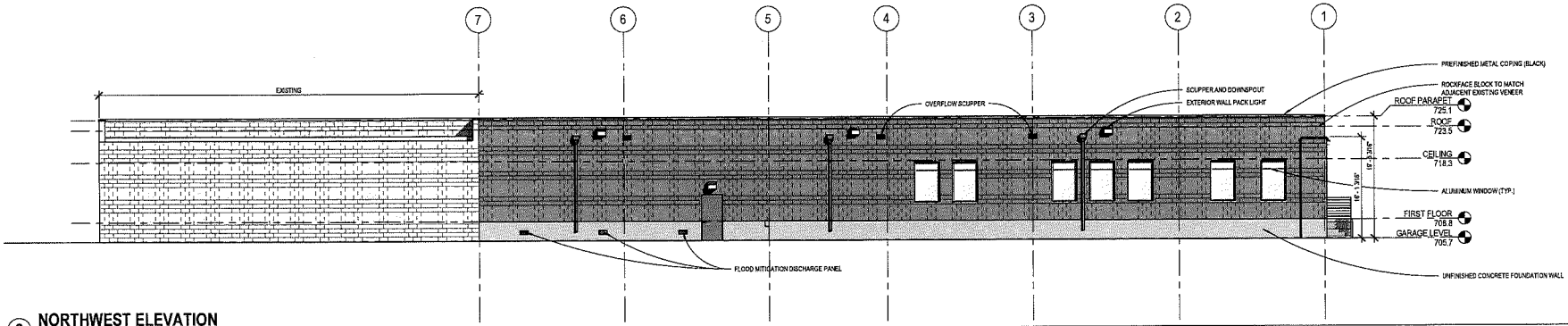
DRAWING NO. C003



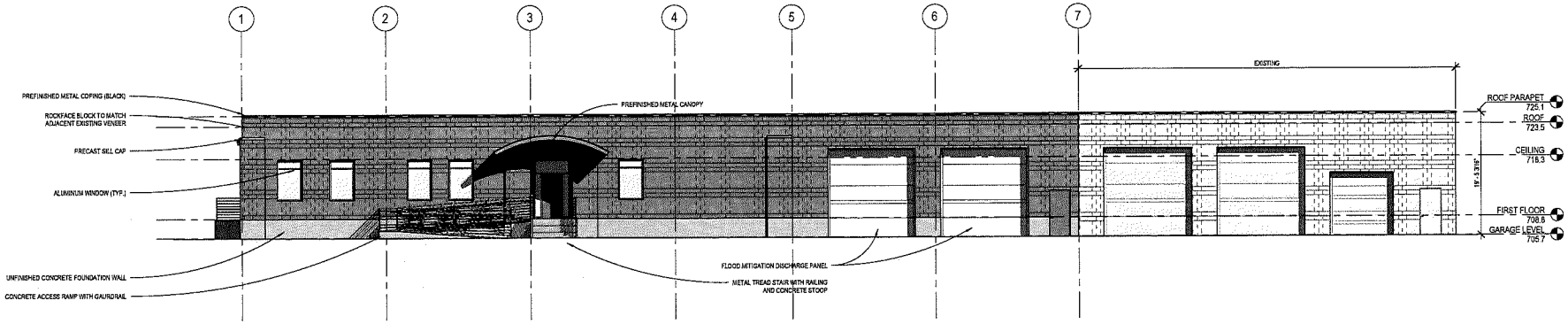

## 1 NORTHEAST ELEVATION
SCALE 1/8" = 1'-0"




## 2 SOUTHWEST ELEVATION
SCALE 1/8" = 1'-0"



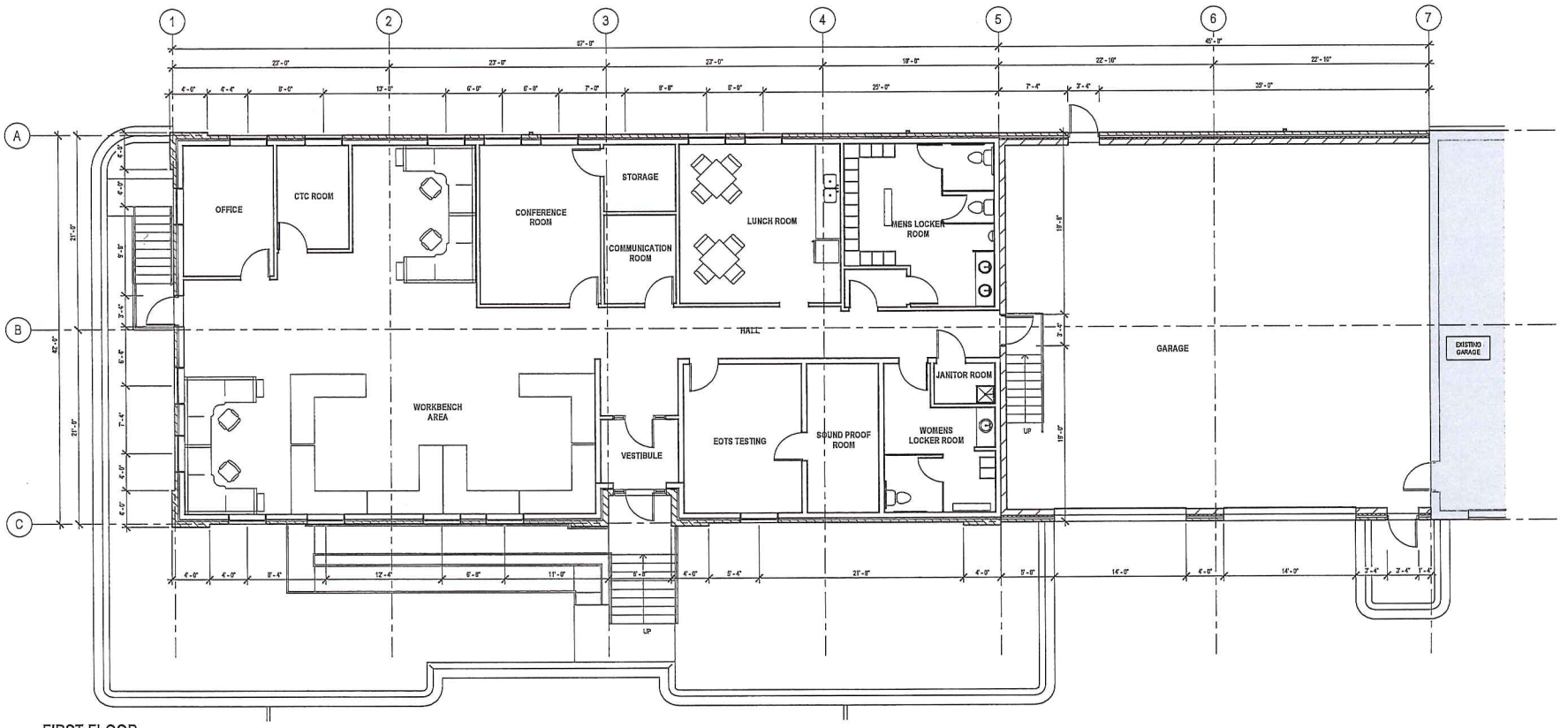

## 3 NORTHWEST ELEVATION
SCALE 1/8" = 1'-0"




## 4 SOUTHEAST ELEVATION
SCALE 1/8" = 1'-0"

RADIO SHOP BUILDING ADDITION
CPR ST. PAUL - BATTLE CREEK

EXTERIOR ELEVATIONS
A200

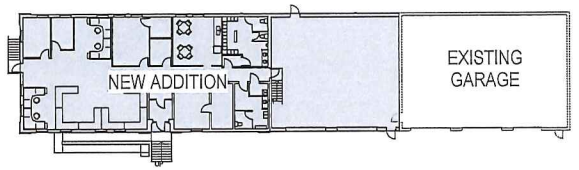



1 FIRST FLOOR
SCALE 3/16" = 1'-0"

ELECTRICAL SERVICE:
1. REQUIRE MINIMUM 400 AMPS 120/240 SINGLE PHASE SERVICE.
2. EXTERIOR FLOOD LIGHTS TO BE ON PHOTO CELL. LIGHTS OVER VESTIBULES WILL BE 70 WATT METAL HALIDE (WHITE LIGHT) AND FLOOD LIGHTS ON SIDE OF BUILDING WILL BE 100 WATT HIGH PRESSURE SODIUM (YELLOW LIGHT). THE FLOOD LIGHTS ARE TO BE IN FIXTURES SUCH THAT THE LIGHT POINTS STRAIGHT DOWN TO THE GROUND, NOT "OUT" PERPENDICULAR TO THE EXTERIOR WALL. GARAGE BAY LIGHTS TO BE T-5 HO 4 TUBE FIXTURES AND BULBS.
3. ALL EXIT SIGNS TO HAVE A BATTERY BACK-UP WITH 2 EMERGENCY HEADS WHICH WOULD COME ON WHEN POWER GOES OUT.
4. A RECESSED CAN SHOWER LIGHT WITH APPROVED WATERPROOF LENS TO BE IN CENTER OF EACH SHOWER STALL.
5. OUTLETS ARE TO BE INSTALLED AS INDICATED UNDER WIRING REQUIREMENTS, OTHERWISE TO BUILDING CODE.
6. PERMITS BY CONTRACTOR.
7. ELECTRICAL OUTLETS TO BE BUILT TO CODE AND IN ADDITION TO BE ADJACENT TO ALL DATA LOCATIONS
8. 1" CONDUIT TO A DUAL GANG BOX WITH A SINGLE GANG MUD RING AT ALL DATA/VOICE LOCATIONS STUBBED INTO CEILING SPACE.
9. 2-20 AMP DEDICATED OUTLETS IN A DUAL GANG PLATE AT 8' FROM FLOOR FOR RACK IN COMM CLOSET.
10. BUILDING GROUND IN COMM CLOSET.
11. COMM CLOSET TO BE VENTED WITH FAN GOING TO CEILING PLENUM AND DOOR TO HAVE SLOTTED VENTS.
12. WORK BELOW SLAB TO ALLOW FOR FLEXIBILITY DUE TO SETTLING OF SUB MATERIAL.

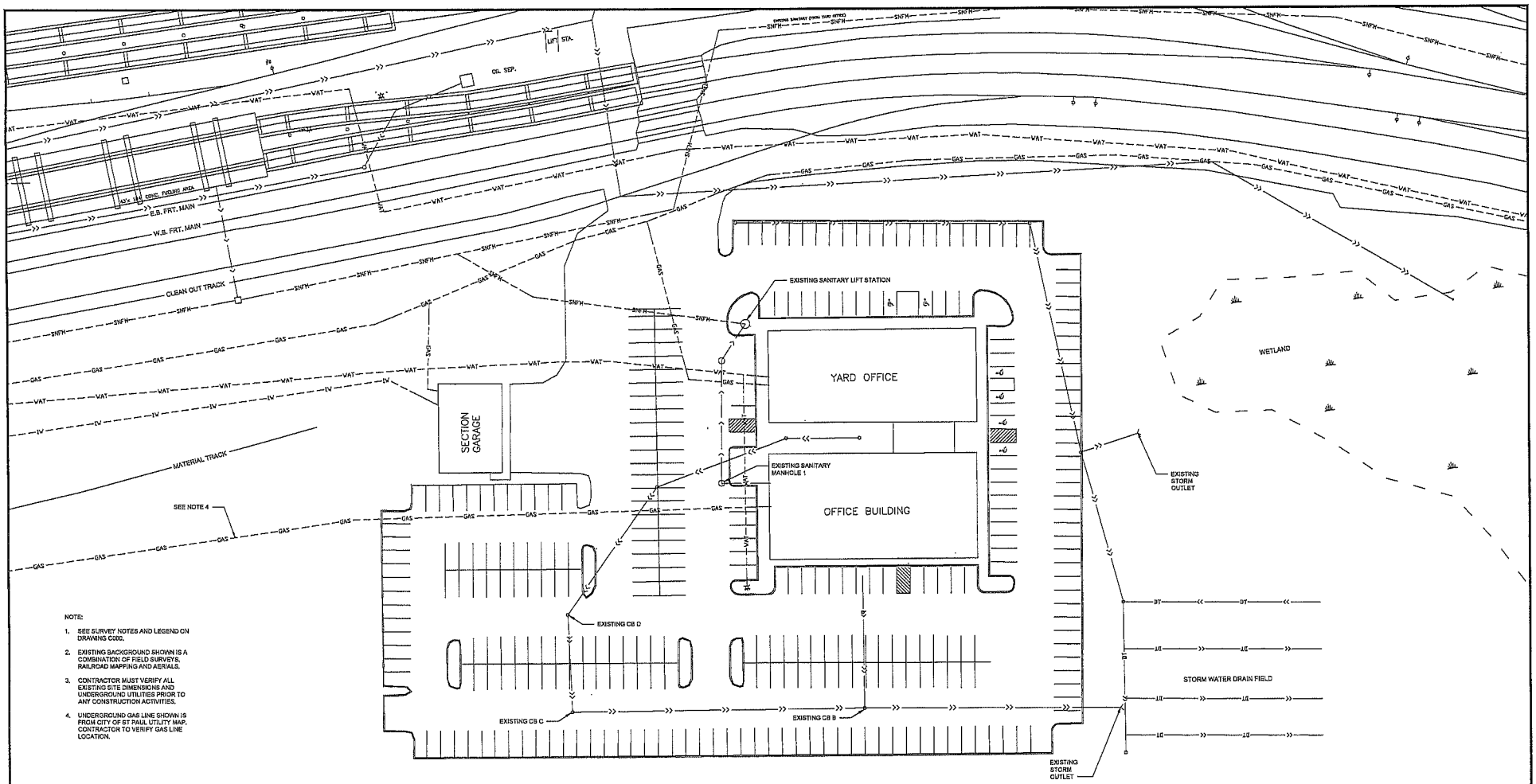
HVAC REQUIREMENTS:
1. ELECTRICAL FORCED-AIR HEATING SYSTEM
2. ELECTRICAL CENTRAL AIR CONDITIONING SYSTEM – TO BE LOCATED OUTSIDE MECHANICAL ROOM.
3. DUCT WORK AS REQUIRED.
4. PERMITS BY CONTRACTOR.
5. WORK BELOW SLAB TO ALLOW FOR FLEXIBILITY DUE TO SETTLING OF SUB MATERIAL.

GENERAL FLOOR PLAN NOTES:
1. ALL ROUGH OPENINGS ARE LOCATED 3 1/2" FROM INSIDE FRAMED CORNER OF A WALL (4" WITHIN MASONRY WALLS) UNLESS NOTED OTHERWISE.
2. THIS PLAN COMPLIES TO ALL ADA REGULATIONS. DOORS OF OCCUPIABLE ROOMS SHALL HAVE A CLEARANCE OF 1'-6" TO ANY OBSTRUCTION ADJACENT TO THE PUSH SIDE OF A DOOR, AND 1'-6" TO ANY OBSTRUCTION ADJACENT TO THE PULL SIDE OF A DOOR. CLEARANCE SHALL BE MEASURED FROM THE DOOR EDGE TO THE FINISHED FACE OF ANY ADJOINING WALL CASEWORK, OR PERMANENT PIECE OF EQUIPMENT.
3. THIS PLAN COMPLIES TO ADA REQUIREMENTS. MINOR FIELD ADJUSTMENTS TO DIMENSIONS MAY AFFECT REQUIRED CLEARANCES. DIMENSIONAL ADJUSTMENT WITHIN INDUSTRY TOLERANCES MAY NOT BE ACCEPTABLE. ADJUSTMENTS IN TOILET ROOMS, KITCHENS, AND UNDERCOUNTER CASEWORK AREAS ARE OF PARTICULAR IMPORTANCE AND SHALL BE DISCUSSED WITH THE ARCHITECT PRIOR TO PROCEEDING.
4. PROVIDE IN-WALL BLOCKING FOR ALL TOILET ACCESSORIES, HANDRAILS, CHAIR RAILS, UPPER CABINETS AND ANY WALL MOUNTED EQUIPMENT SHOWN ON THE PLANS.
5. IF THERE ARE ANY DISCREPANCIES WITHIN THE PLANS OR WORK PREVIOUSLY INSTALLED NOTIFY THE ARCHITECT IMMEDIATELY.
6. ANY PENETRATION OF A WALL SHALL BE CAULKED, FIRE CAULKED, OR SEALED WITH AN ESCUTCHEON TO MAINTAIN THE ACOUSTICAL AND/OR FIRE RATED REQUIREMENTS OF THE WALL.
7. PROVIDE AND INSTALL HUNTER DOUGLAS CD-69 1" MINI ALUMINUM BLINDS (BLACK IN COLOR) FOR ALL WINDOW LOCATIONS.
8. FURNITURE BY OWNER.




FIRST FLOOR KEY PLAN
1" = 20'-0"

RADIO SHOP BUILDING ADDITION
CPX ST. PAUL - BATTLE CREEK
NEW WORK PLAN
A100
11/16/17




NOTE:

1. SEE SURVEY NOTES AND LEGEND ON DRAWING C000.
2. EXISTING BACKGROUND SHOWN IS A COMBINATION OF FIELD SURVEYS, RAILROAD MAPPING AND AERIALS.
3. CONTRACTOR MUST VERIFY ALL EXISTING SITE DIMENSIONS AND UNDERGROUND UTILITIES PRIOR TO ANY CONSTRUCTION ACTIVITIES.
4. UNDERGROUND GAS LINE SHOWN IS FROM CITY OF ST PAUL UTILITY MAP. CONTRACTOR TO VERIFY GAS LINE LOCATION.

EXISTING SITE PLAN (1 / C100)
SCALE: 1" = 30'

NOT FOR CONSTRUCTION

BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS DRAWING ADJUST SCALES ACCORDINGLY.

PLOT DATE:
FILENAME:

| NO. | DATE | BY | DESCRIPTION OF REVISIONS |
|---|---|---|---|
| A | 11/16/17 | AJW | ISSUE FOR REVIEW |

DESIGNED MGM
DRAWN MGM
CHECKED AJW

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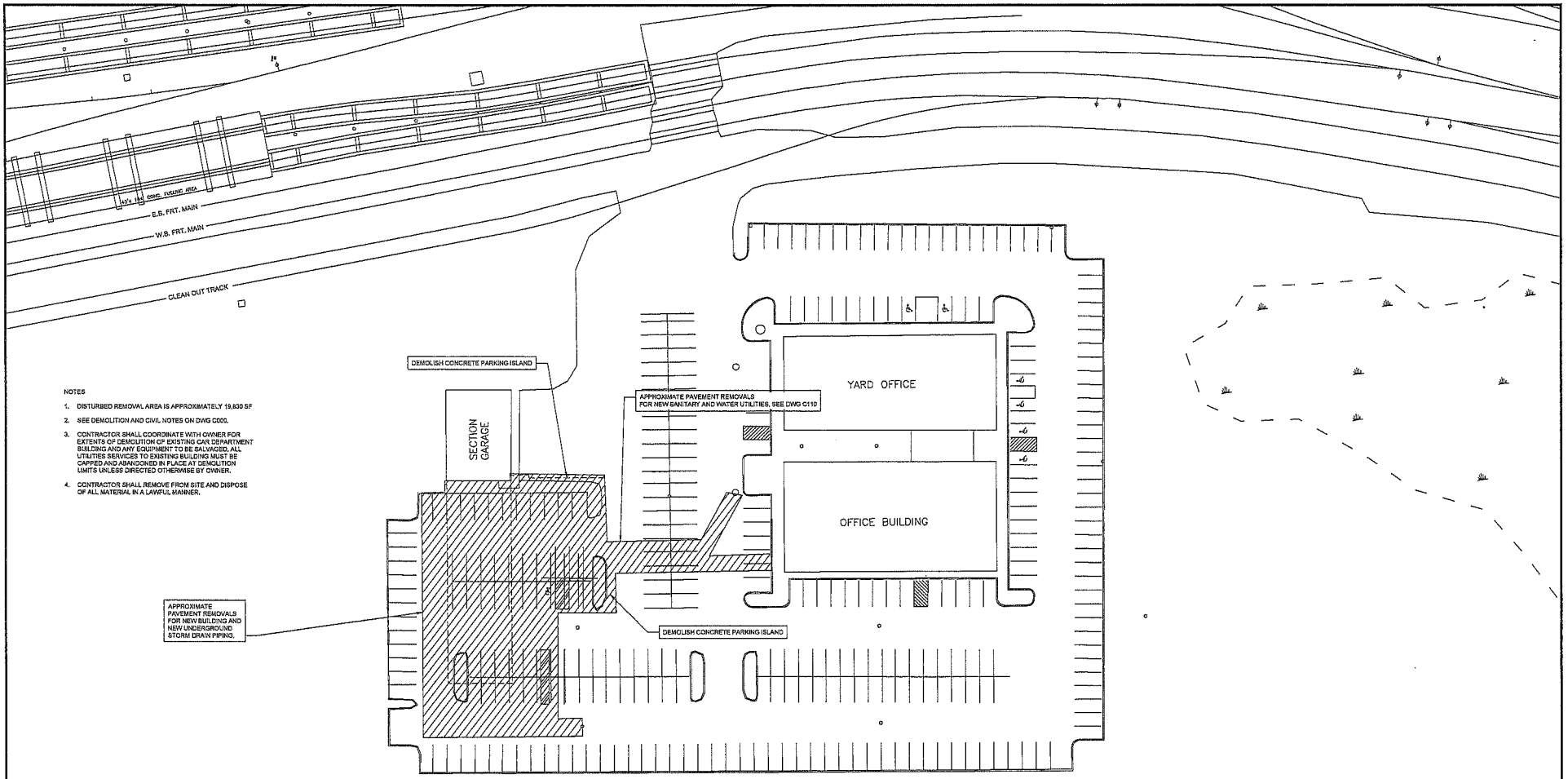
ST. PAUL YARD

CANADIAN PACIFIC RAILWAY

EXISTING SITE PLAN

DRAWING NO. C100




NOTES

1. DISTURBED REMOVAL AREA IS APPROXIMATELY 19,830 SF
2. SEE DEMOLITION AND CIVIL NOTES ON DWG C000.
3. CONTRACTOR SHALL COORDINATE WITH OWNER FOR EXTENTS OF DEMOLITION OF EXISTING CAR DEPARTMENT BUILDING AND ANY EQUIPMENT TO BE SALVAGED, ALL UTILITIES SERVICES TO EXISTING BUILDING MUST BE CAPPED AND ABANDONED IN PLACE AT DEMOLITION LIMITS UNLESS DIRECTED OTHERWISE BY OWNER.
4. CONTRACTOR SHALL REMOVE FROM SITE AND DISPOSE OF ALL MATERIAL IN A LAWFUL MANNER.

DEMOLITION PLAN
SCALE: 1" = 30' (1 / C101)

NOT FOR CONSTRUCTION

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CANADIAN PACIFIC RAILWAY

DEMOLITION PLAN

DRAWING NO. C101

PLOT DATE:
FILENAME:

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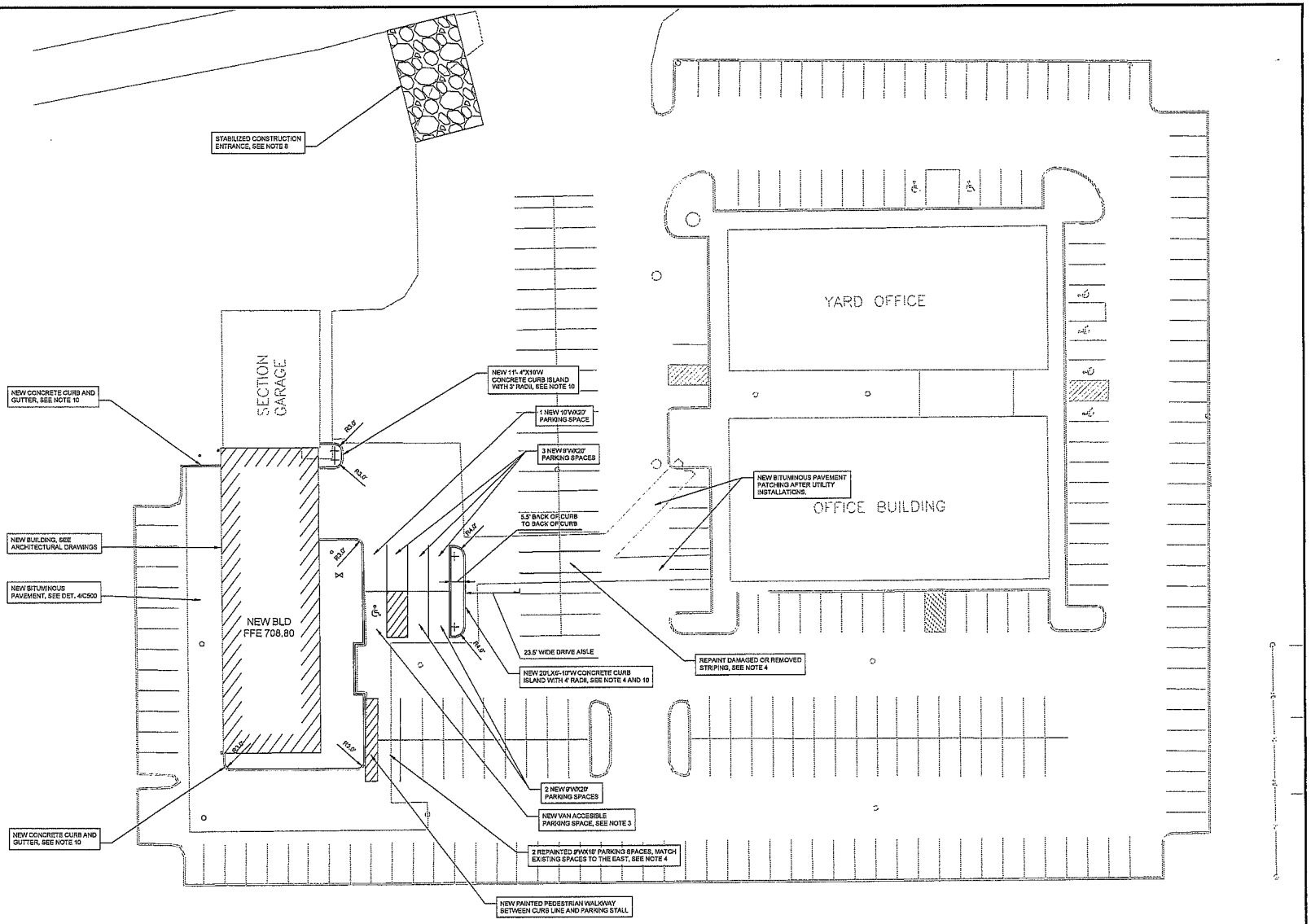
NOTES

1. ALL NEW CONSTRUCTION SHALL COMPLY WITH CITY OF ST. PAUL AND CANADIAN PACIFIC REGULATIONS.
2. REPLACE REMOVED PAVEMENT WITH NEW PAVEMENT. MATCH ADJACENT EXISTING PAVEMENT GRADES AND MATCH EXISTING ELEVATIONS AT OUTER EDGES OF EXISTING PAVEMENT. DO NOT CREATE ANY LOW AREAS IN NEW PAVEMENT. ALL NEW PAVEMENT WILL HAVE POSITIVE DRAINAGE TOWARDS FLOWLINES AND DRAINAGE STRUCTURES.
3. NEW HANDICAP SPACE IS 10'WX20'L WITH A 8'X20'L PAINTED ACCESS AISLE. NEW HANDICAP PARKING SIGNAGE, STRIPING, WHEEL STOP, PAINTING, SYMBOLS AND DIMENSIONS SHALL ADHERE TO CITY OF ST PAUL REQUIREMENTS.
4. REPAINT ANY STRIPING THAT IS DAMAGED OR REMOVED DURING DURING CONSTRUCTION.
5. CONCRETE PARKING ISLAND #1 IS APPROXIMATELY 20' LONG. ISLAND WILL BE WEST OF EXISTING PARKING ALLOWING A 23.5' WIDE DRIVE LANE.
6. ADJACENT STREETS MUST BE SWEPT TO KEEP THEM FREE OF SEDIMENT. CONTRACTOR MUST MONITOR CONDITIONS AND SWEEP AS NEEDED OR WITHIN 24 HRS OF NOTICE BY THE CITY.
7. CONTRACTOR RESPONSIBLE FOR HAVING PRIVATE UTILITIES LOCATED PRIOR TO DEMOLITION AND CONSTRUCTION ACTIVITIES.
8. STABILIZED CONSTRUCTION EXIT LOCATION AND DIMENSIONS TO BE DETERMINED BY CP RAILWAY AND CONTRACTOR, SEE MNDOT STANDARD PLAN 5-297.405. FOR REQUIREMENTS.
9. CONTRACTOR MUST MAINTAIN EMERGENCY VEHICLE ACCESS AND MANEUVERING DURING CONSTRUCTION.+
10. USE B612 CONCRETE CURB, SEE CITY OF ST PAUL STANDARD PLATE 3100C. ALL NEW CURB SHALL MATCH EXISTING CURB ON SITE AND HAVE OUTFALL GRADE TOWARDS PARKING AND DRIVE LANES. SEE DRAWING C111 FOR DRAINAGE PLAN.
9. THE DEVELOPER MUST CONTACT THE RIGHT OF WAY INSPECTOR , JASON POMMIER, AT 651-465-4203 ONE WEEK PRIOR TO BEGINNING WORK TO DISCUSS SAFETY ISSUES SUCH AS TRAFFIC CONTROL, AND PEDESTRIAN SAFE WALKWAYS. OTHER ISSUES THAT MAY AFFECT THE R.O.W. SUCH AS EROSION CONTROL, AND COORDINATION WITH OTHER WORK NEARBY THAT THE DEVELOPER MAY NOT BE AWARE OF SHOULD BE DISCUSSED AS WELL. IF A ONE WEEK NOTICE IS NOT PROVIDED TO THE CITY, ANY RESULTING DELAYS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.




CIVIL SITE PLAN (1 / C105)
SCALE: 1" = 20'

NOT FOR CONSTRUCTION

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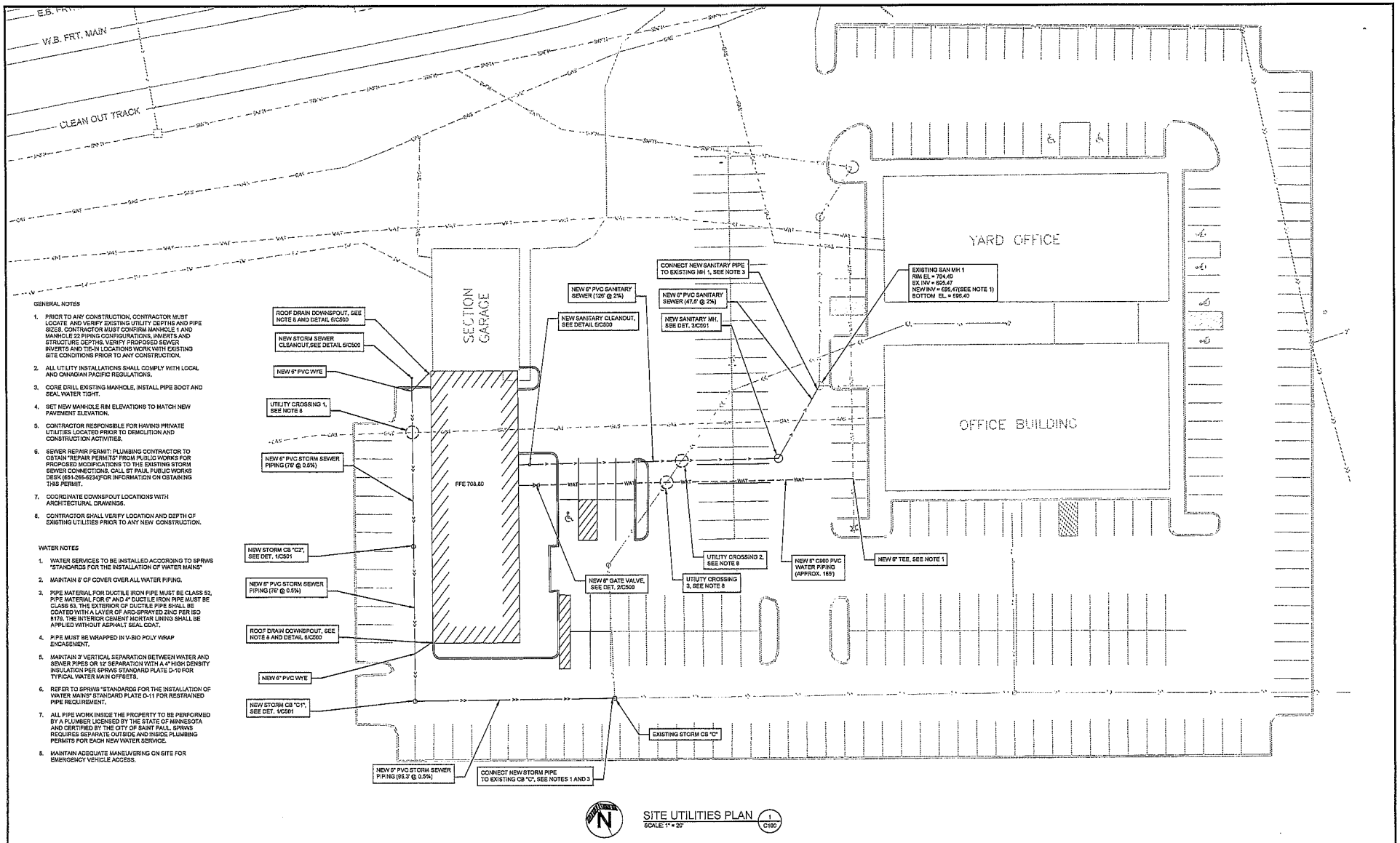
ST. PAUL YARD | CANADIAN PACIFIC RAILWAY | CIVIL SITE PLAN | DRAWING NO. C105

PLOT DATE:
FILENAME:




SITE UTILITIES PLAN (1/C100)
SCALE: 1" = 20'

GENERAL NOTES

1. PRIOR TO ANY CONSTRUCTION, CONTRACTOR MUST LOCATE AND VERIFY EXISTING UTILITY DEPTHS AND PIPE SIZES. CONTRACTOR MUST CONFIRM MANHOLE 1 AND MANHOLE 22 PIPING CONFIGURATIONS, INVERTS AND STRUCTURE DEPTHS. VERIFY PROPOSED SEWER INVERTS AND TIE-IN LOCATIONS WORK WITH EXISTING SITE CONDITIONS PRIOR TO ANY CONSTRUCTION.
2. ALL UTILITY INSTALLATIONS SHALL COMPLY WITH LOCAL AND CANADIAN PACIFIC REGULATIONS.
3. CORE DRILL EXISTING MANHOLE, INSTALL PIPE BOOT AND SEAL WATER TIGHT.
4. SET NEW MANHOLE RIM ELEVATIONS TO MATCH NEW PAVEMENT ELEVATION.
5. CONTRACTOR RESPONSIBLE FOR HAVING PRIVATE UTILITIES LOCATED PRIOR TO DEMOLITION AND CONSTRUCTION ACTIVITIES.
6. SEWER REPAIR PERMIT: PLUMBING CONTRACTOR TO OBTAIN "REPAIR PERMITS" FROM PUBLIC WORKS FOR PROPOSED MODIFICATIONS TO THE EXISTING STORM SEWER CONNECTIONS. CALL ST PAUL PUBLIC WORKS DESK (651-266-6234)FOR INFORMATION ON OBTAINING THIS PERMIT.
7. COORDINATE DOWNSPOUT LOCATIONS WITH ARCHITECTURAL DRAWINGS.
8. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO ANY NEW CONSTRUCTION.

WATER NOTES

1. WATER SERVICES TO BE INSTALLED ACCORDING TO SPRWS "STANDARDS FOR THE INSTALLATION OF WATER MAINS"
2. MAINTAIN 8' OF COVER OVER ALL WATER PIPING.
3. PIPE MATERIAL FOR DUCTILE IRON PIPE MUST BE CLASS 52, PIPE MATERIAL FOR 6" AND 4" DUCTILE IRON PIPE MUST BE CLASS 53. THE EXTERIOR OF DUCTILE PIPE SHALL BE COATED WITH A LAYER OF ARC-SPRAYED ZINC PER ISO 8179. THE INTERIOR CEMENT MORTAR LINING SHALL BE APPLIED WITHOUT ASPHALT SEAL COAT.
4. PIPE MUST BE WRAPPED IN V-BIO POLY WRAP ENCASEMENT.
5. MAINTAIN 3' VERTICAL SEPARATION BETWEEN WATER AND SEWER PIPES OR 12' SEPARATION WITH A 4" HIGH DENSITY INSULATION PER SPRWS STANDARD PLATE D-10 FOR TYPICAL WATER MAIN OFFSETS.
6. REFER TO SPRWS "STANDARDS FOR THE INSTALLATION OF WATER MAINS" STANDARD PLATE D-11 FOR RESTRAINED PIPE REQUIREMENT.
7. ALL PIPE WORK INSIDE THE PROPERTY TO BE PERFORMED BY A PLUMBER LICENSED BY THE STATE OF MINNESOTA AND CERTIFIED BY THE CITY OF SAINT PAUL. SPRWS REQUIRES SEPARATE OUTSIDE AND INSIDE PLUMBING PERMITS FOR EACH NEW WATER SERVICE.
8. MAINTAIN ADEQUATE MANEUVERING ON SITE FOR EMERGENCY VEHICLE ACCESS.

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ST. PAUL YARD

CANADIAN PACIFIC RAILWAY

SITE UTILITIES PLAN

DRAWING NO. C110

PLOT DATE:
FILENAME:

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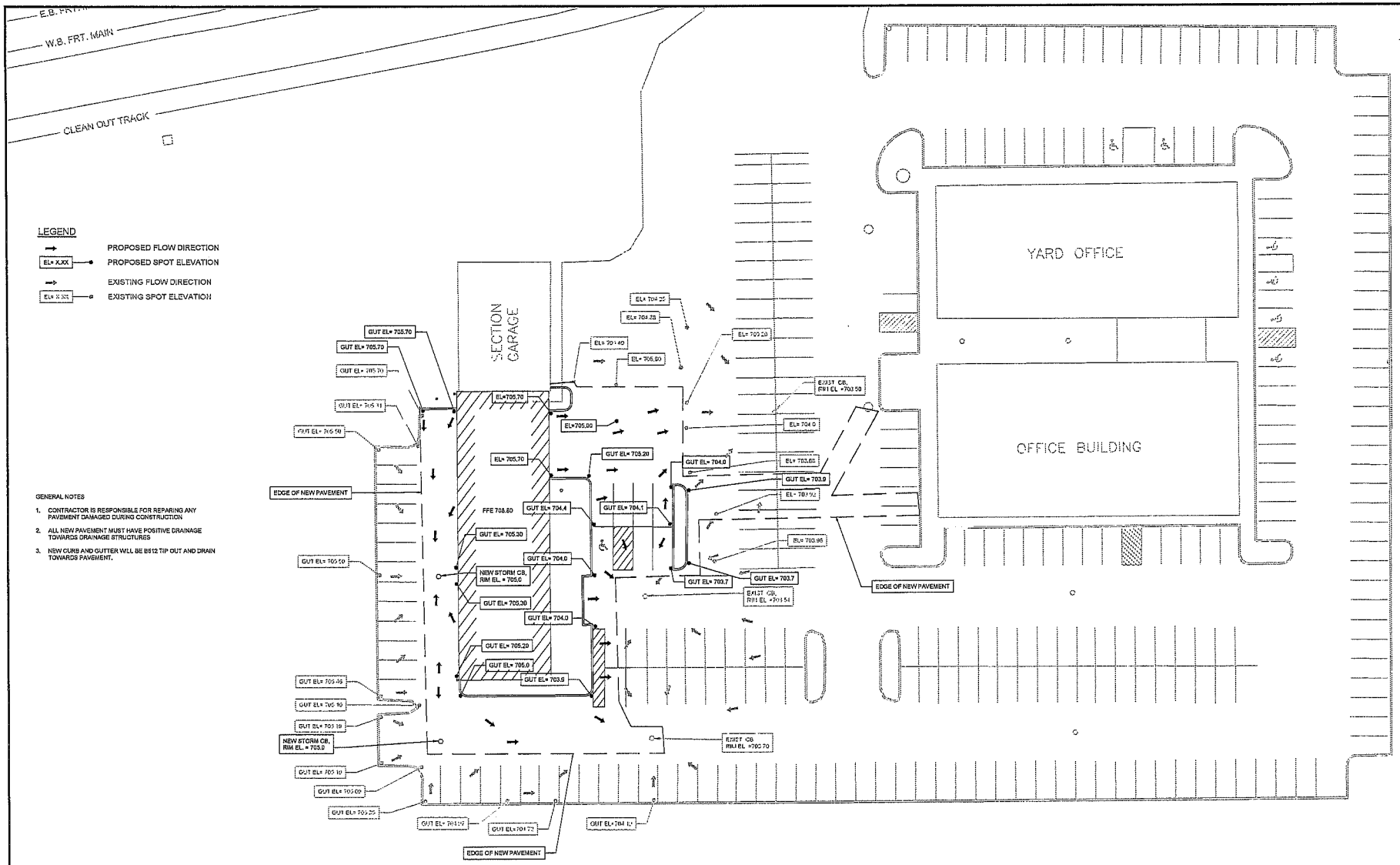


SITE DRAINAGE PLAN (1 / C111)
SCALE: 1" = 20'

NOT FOR CONSTRUCTIO

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SITE DRAINAGE PLAN

DRAWING NO. C111

PLOT DATE:
FILENAME:

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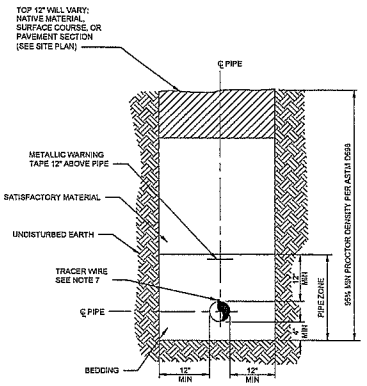
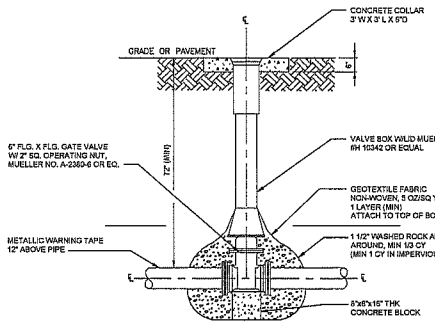



BACKFILL DETAIL (1 / C500)
SCALE: NONE

TRENCH NOTES

1. EXCAVATE UNSUITABLE MATERIALS AS DIRECTED BY THE PROJECT ENGINEER.
2. TRENCH WIDTH SHALL BE KEPT TO A MINIMUM NECESSARY TO INSTALL THE PIPE IN A SAFE MANNER. IN ALL CASES TRENCHES MUST BE OF SUFFICIENT WIDTH TO ALLOW FOR PROPER JOINING OF PIPE AND COMPACTION OF THE BACKFILL MATERIAL ALONG SIDES OF PIPE. MINIMUM TRENCH WIDTH IN THE PIPE ZONE, MUST PROVIDE A CLEAN WORKING SPACE
3. PLACE ALL PIPE BEDDING MATERIALS IN A UNIFORM MANNER WITH THOROUGHLY COMPACTED LIFTS NOT TO EXCEED 6" UP TO 12" ABOVE TOP OF PIPE. ALL BACKFILL MATERIAL SHALL ALSO BE THOROUGHLY COMPACTED
4. BACKFILL TRENCH ABOVE THE PIPE ZONE TO THE SPECIFIED GRADE, OR AS SHOWN ON THE PLANS, IN LIFTS OF 4' LOOSE TO 2' LOOSE DEPTH DEPENDING ON COMPACTION EQUIPMENT AND MATERIALS
5. TRENCHING METHODS SHALL COMPLY WITH OSHA REQUIREMENTS AND CANADIAN PACIFIC SAFETY STANDARD.
6. ALL UNDERGROUND NON-METALLIC PIPING SHALL BE INSTALLED WIMETALLIC WARNING TAPE AND TRACER WIRE.
7. WATER PIPING TO HAVE A MINIMUM 72" COVER.



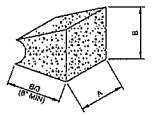

NOTES:

1. COORDINATE WITH SITE DRAWINGS FOR VALVE TYPE AND SIZE.
2. ALL UNDERGROUND PIPING SHALL INCLUDE METALLIC WARNING TAPE AND TRACER WIRE.
3. PROVIDE THREE TEE HANDLE WRENCHES, EXTENDED 4'-0" ABOVE GRADE TO OWNER FOR GATE AND/OR PLUG VALVE OPERATION.

GATE VALVE DETAIL (2 / C500)
SCALE: NONE

MINIMUM DIMENSIONS FOR THRUST BLOCKING

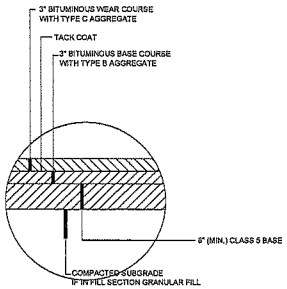
| FITTING SIZE | TEES & PLUGS | | 90° BENDS | | 45° BENDS AND WYES | | REDUCERS & 22 1/2° BENDS | | 11 1/4° BENDS | |
|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | A | B | A | B | A | B | A | B |
| 4" | 1'-7" | 1'-2" | 1'-9" | 1'-6" | 1'-5" | 0'-10" | 1'-7" | 0'-6" | 0'-5" | 0'-5" |
| 6" | 2'-0" | 1'-11" | 2'-5" | 2'-2" | 1'-10" | 1'-7" | 1'-9" | 0'-10" | 1'-0" | 0'-6" |
| 8" | 2'-5" | 2'-5" | 3'-2" | 3'-0" | 2'-5" | 2'-1" | 1'-9" | 1'-5" | 1'-0" | 1'-0" |
| 10" | 3'-4" | 3'-3" | 4'-0" | 3'-10" | 3'-0" | 2'-9" | 2'-2" | 1'-11" | 1'-5" | 1'-0" |
| 12" | 4'-0" | 3'-10" | 4'-8" | 4'-5" | 3'-5" | 3'-3" | 2'-7" | 2'-3" | 2'-0" | 1'-0" |
| 14" | 5'-5" | 3'-10" | 6'-0" | 4'-11" | 4'-9" | 3'-5" | 3'-5" | 2'-5" | 2'-0" | 1'-0" |
| 20" | 6'-0" | 5'-0" | 6'-0" | 6'-0" | 5'-0" | 4'-0" | 3'-5" | 3'-0" | 3'-0" | 2'-0" |
| 24" | 6'-0" | 6'-0" | 7'-0" | 7'-0" | 5'-0" | 5'-0" | 4'-6" | 3'-0" | 3'-0" | 3'-0" |
| 30" | 7'-8" | 7'-8" | 8'-0" | 8'-0" | 6'-3" | 6'-3" | 4'-8" | 4'-6" | 3'-3" | 3'-3" |



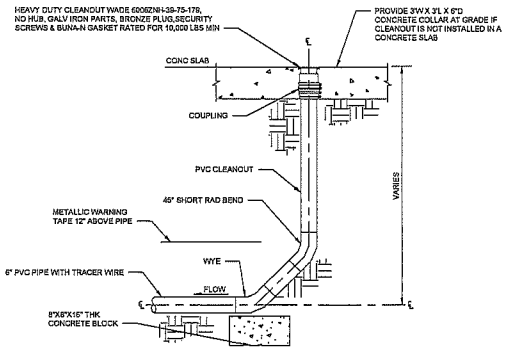

NOTES:

1. FITTING TO BE SEPARATED FROM BLOCKS WITH AN APPROVED BOND BREAKER, SUCH AS POLY WRAP.
2. ALL BLOCKS TO BEAR AGAINST UNDISTURBED MATERIAL.
3. DESIGN IS BASED ON 150 PSI MAIN PRESSURE AND 2000 PSF SOIL BEARING CAPACITY.

THRUST BLOCK DETAIL (3 / C500)
SCALE: NONE




TYP. 6" BITUMINOUS SECTION (4 / C500)
SCALE: NONE




NOTES:

1. SEE PLANS FOR PIPE ROUTING, INVERT ELEVATIONS AND CLEANOUT LOCATIONS.
2. CONTRACTOR SHALL PROVIDE ALL REQUIRED PIPE, FITTINGS AND TRANSITIONS.
3. ALL UNDERGROUND NON-METALLIC PIPING SHALL BE INSTALLED WITH METALLIC WARNING TAPE AND TRACER WIRE.

CLEANOUT DETAIL (5 / C500)
SCALE: NONE

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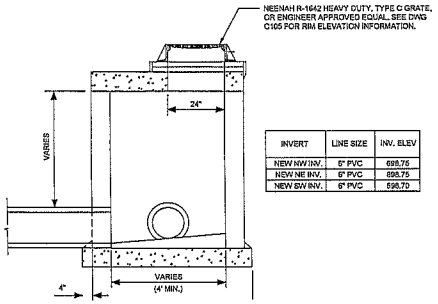
CIVIL DETAILS - SHEET 1

DRAWING NO. C500

PLOT DATE:
FILENAME:



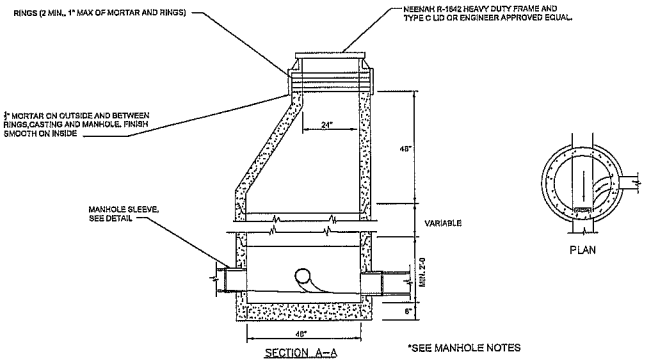

| INVERT | LINE SIZE | INV. ELEV |
|---|---|---|
| NEW NW INV. | 6" PVC | 698.75 |
| NEW NE INV. | 6" PVC | 698.75 |
| NEW SW INV. | 6" PVC | 698.70 |

*ALL INVERTS NOT SHOWN FOR CLARITY

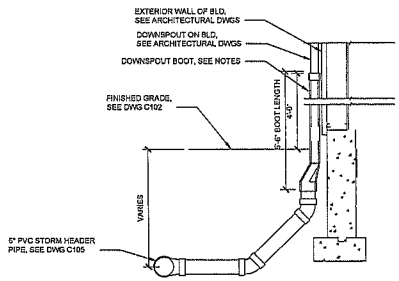
MANHOLE NOTES:

1. PRECAST REINFORCED CONCRETE MANHOLE SECTIONS, CONE AND COVERS PER ASTM C478.
2. A 12" OR 16" BARREL SECTION SHALL BE INSTALLED UNDER THE CONE WHENEVER POSSIBLE.
3. 6" THICK MANHOLE BASE MUST BE MONOLITHIC AND PLACED ON 6" OF THOROUGHLY COMPACTED CLASS 5 AGGREGATE BASE.
4. CONCRETE ADJUSTEMENT RINGS, 2 MIN. WITH MORTAR, 4 MAX. WITH MORTAR. 1/2" MORTAR ON OUTSIDE, BETWEEN RINGS, CASTING & MH. FINISH SMOOTH ON THE INSIDE. NO MORTAR ON INSIDE. NO WOOD SHALL BE USED FOR ADJUSTING CASTING.
5. ALL MANHOLES SHALL HAVE NEENAH R-1642 HEAVY DUTY FRAME WITH SOLID LID OR ENGINEER APPROVED EQUAL.
6. ALL LIDS SHALL BE SOLID, WITH NON-SLIP SURFACE AND HS-20 LOADING. LIDS TO BE LABELED APPROPRIATELY AS, SANITARY, STORM, INDUSTRIAL WASTE, ETC.
7. PROVIDE AND PROTECT LIFTING LOOPS AND/OR HOLES IN TOP SLABS FOR FUTURE REMOVAL. TOP SLABS AND PRECAST COVER SLABS SHALL BE DESIGNED TO HANDLE HS-20 LOADING.
8. MANHOLE LIFT HOLES SHALL BE PLUGGED WITH NON SHRINK EPOXY GROUT.
9. NO STEPS.
10. SUBMIT SHOP DRAWINGS FOR ENGINEERS APPROVAL.

STORM MH - DETAIL (1 / C501)
SCALE: NONE




STORM MH - DETAIL (1 / C501)
SCALE: NONE




DOWNSPOUT BOOT NOTES:

1. INSTALL DOWNSPOUT BOOTS PER MANUFACTURER'S RECOMMENDATIONS.
2. TIE INTO STORM SEWER, SEE DWG C105 FOR STORM SEWER PLAN.
3. COORDINATE SIZE OF DOWNSPOUT BOOT WITH BUILDING MANUFACTURER'S DOWNSPOUT SIZE.
4. INSTALL McKINLEY IRON WORKS BOOT TYPE DS4 OR APPROVED EQUAL.

DOWNSPOUT BOOT- DETAIL (2 / C501)
SCALE: NONE

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CANADIAN PACIFIC RAILWAY

CIVIL DETAILS - SHEET 2

DRAWING NO. C501

PLOT DATE:
FILENAME:


0 82.5 165 330 495 660 Feet

FILE NAME: Building C addition

APPLICATION TYPE: CUP

FILE #: 17-215822 DATE: 11/21/2017

PLANNING DISTRICT: 1

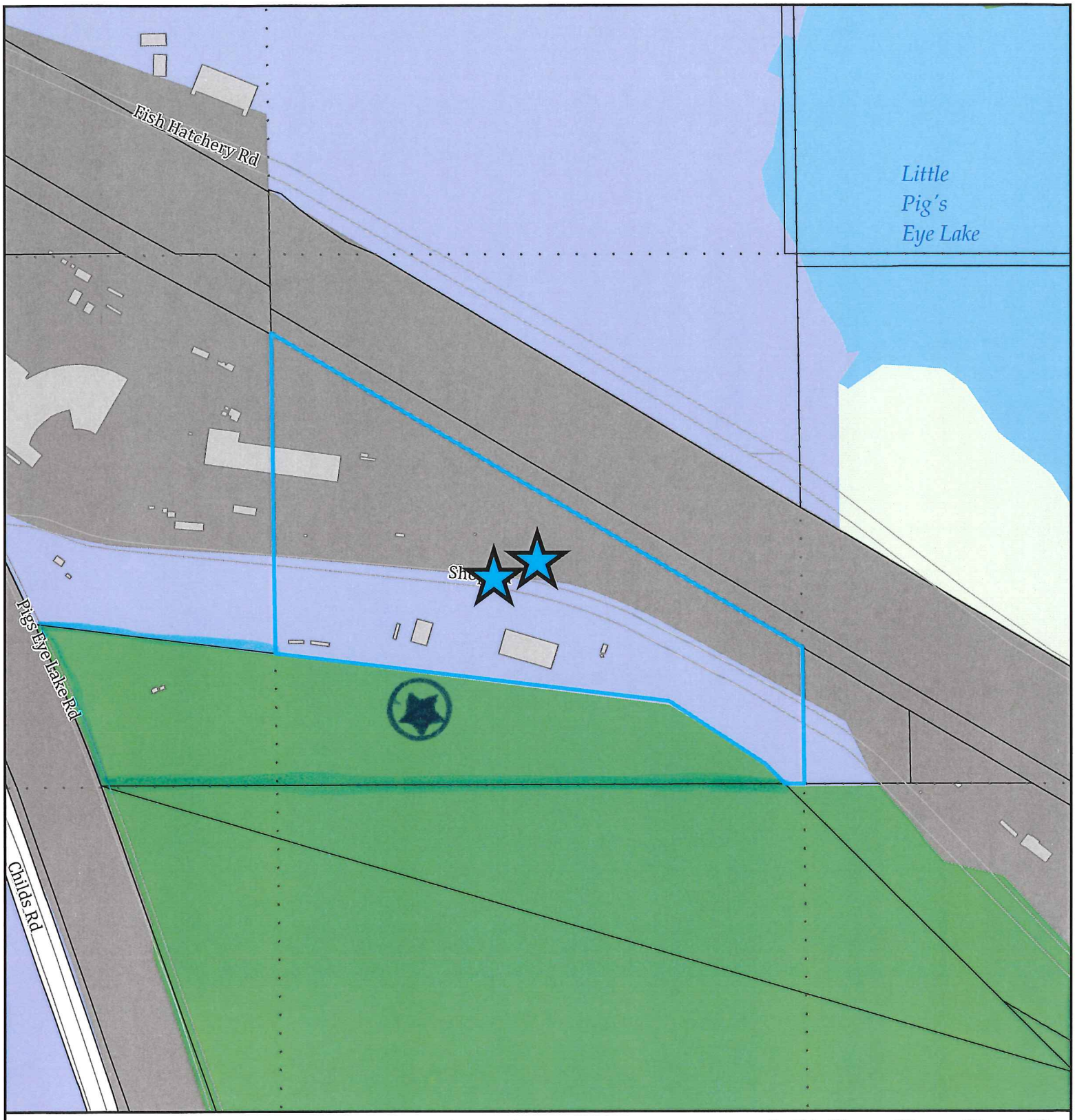
ZONING PANEL: 17

**Aerial**

Subject Parcels

N W E S

*Saint Paul Department of Planning and Economic Development and Ramsey County*




FILE NAME: Building C addition

APPLICATION TYPE: CUP

FILE #: 17-215822 DATE: 11/21/2017

PLANNING DISTRICT: 1

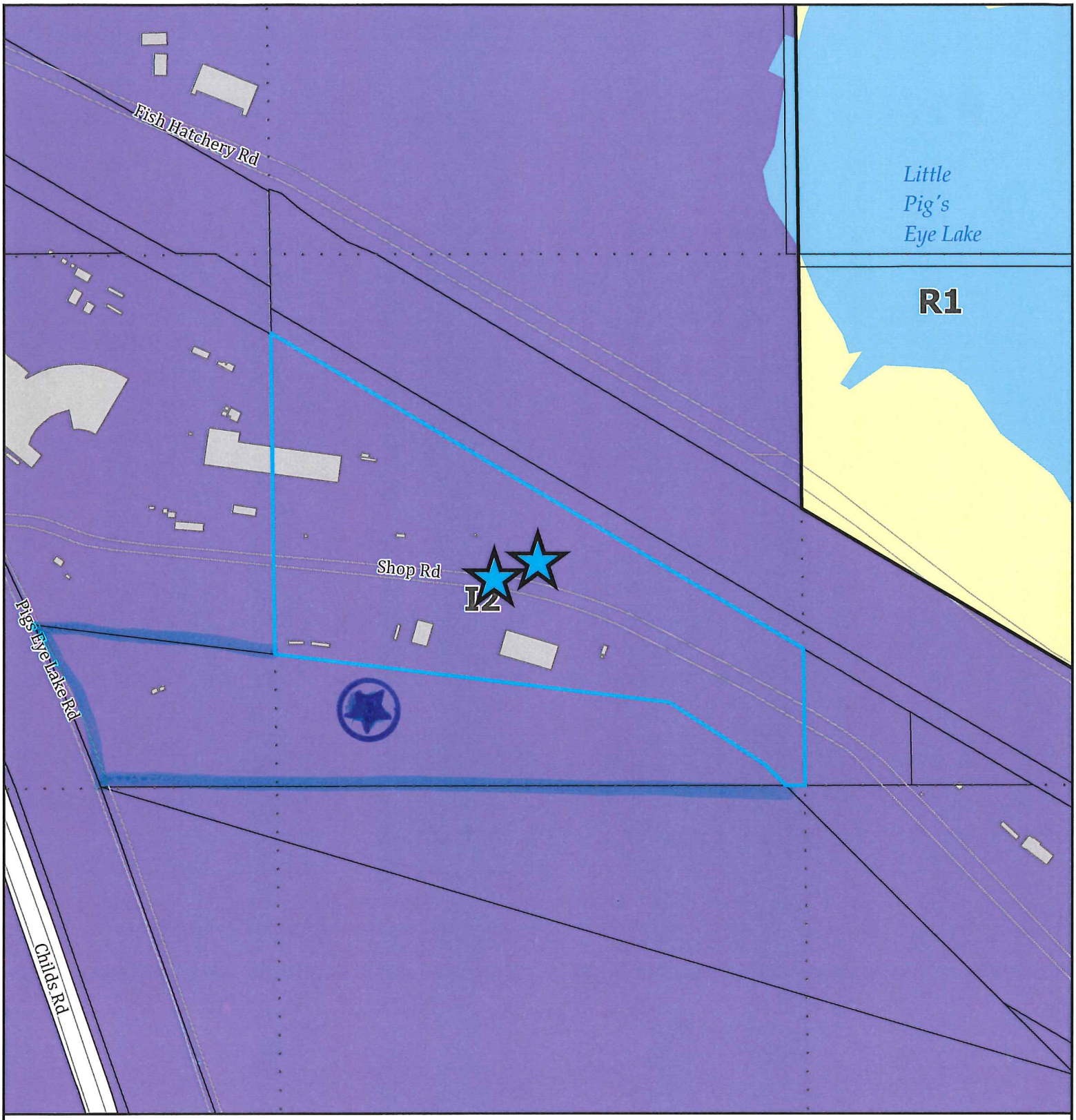
ZONING PANEL: 17

**Land Use**

- Industrial and Utility
- Park, Recreational or Preserve
- Railway
- Undeveloped
- Water
- Subject Parcels
- Section Lines

N
W E
S

*Saint Paul Department of Planning and Economic Development and Ramsey County*




FILE NAME: Building C addition

APPLICATION TYPE: CUP

FILE #: 17-215822 DATE: 11/21/2017

PLANNING DISTRICT: 1

ZONING PANEL: 17

**Zoning**

- Subject Parcels
- Section Lines
- R1 One-Family
- I2 General Industrial

N W E S

*Saint Paul Department of Planning and Economic Development and Ramsey County*