ZONING COMMITTEE STAFF REPORT

FILE #19-088-143 (PC)
FILE #19-075-478 (SPR)

1. **APPLICANT:** Rohn Industries **HEARING DATE:** 10/24/2019
2. **TYPE OF APPLICATION:** Site Plan Review
3. **LOCATION:** 2495 Kasota Ave
4. **PIN & LEGAL DESCRIPTION:** 202923330007 Auditor's Subdivision No. 64 Subj To Kasota Ave Part N Of Cl Of Sd Ave Of Lot 2
5. **PLANNING DISTRICT:** 12 – St. Anthony Park Community Council **PRESENT ZONING:** I1
6. **ZONING CODE REFERENCE:** §61.402 – Site plan review by the Planning Commission
7. **STAFF REPORT DATE:** 10/18/19 **BY:** Amanda Smith
8. **DATE RECEIVED:** 8-9-19 **DEADLINE FOR ACTION:** 12-7-2019 (Extension letter sent)

A. **PURPOSE:** Site Plan Review for improvement of an existing vacant lot proposed for outdoor storage.

B. **PARCEL SIZE:** 72,652 square feet (approximately 1.668 acres)

C. **EXISTING LAND USE:** Vacant

D. **SURROUNDING LAND USE:**
North: Railroad, Industrial (I1)
East: Railroad, Minnesota Trunk Highway 280 (I1)
South: Public Works drainage pond, Industrial (I1, I2)
West: Railroad, Industrial (I2)

E. **ZONING CODE CITATION:**
- §61.402(c) – Findings for site plan review and approval

F. **HISTORY/DISCUSSION:**
Rohn Industries (the applicant) is a paper recycling business located at 862 Hersey Street, approximately 1.3 miles south-east of 2495 Kasota. The applicant proposes to pave the currently vacant site located at 2495 Kasota Street for use as a trailer staging area for their current and expanding business operations.

A site plan review committee meeting for the proposed project was held on 8/27/19 and a site plan review conditional approval was issued on 9/16/19. (Reference attached SPR Conditional Approval Letter). A site plan review status memo update was issued on 9/20/19. (Reference attached SPR Status Memo Update). The site plan conditional approval zoning decision was appealed by the St. Anthony Park Community Council on 9/25/19. (Reference attached SAPCC Zoning Appeal). A site plan review 15.99 extension was issued on 9/30/19. (Reference attached SPR 15.99 Extension).

G. **DISTRICT COUNCIL RECOMMENDATION:**
The St. Anthony Park Community Council issued three letters addressed to city staff in opposition

of this project (electronically dated 8/26/19, 8/31/19, and 9/5/19). (Reference attached SAPCC letters). The three letters have been provided to the developer and city site plan review committee staff. On 9/27/19 the district council provided in person to city staff a document entitled "Historic Waters of the Capitol Region Watershed District Ramsey County, Minnesota" by Greg Brick, M.S. (dated November 2008). (Reference attached Historic Waters of the CRWD document).

H. **FINDINGS:** Section 62.108(c) of the Zoning Code says that in "order to approve the site plan, the planning commission shall consider and find that the site plan is consistent with" the findings listed below:

1. *The city's adopted comprehensive plan and development or project plans for sub-areas of the city.*

   The site plan meets this finding.

   The proposed development is consistent with the goals and issues as defined in the Saint Anthony Park Community Plan as part of the purview of Water, Soil and Air (pg. 39-57)

   - WSA3 seeks to Reduce the input of contaminants to surface waters from Saint Anthony Park. Capping this site with a bituminous surface will limit the amount of water percolating through contaminants underground on the site.

   The Development Guidelines for the St. Anthony Park Community Council are supported by the site plan, specifically among the following priorities:

   - 3: Green Space: Maintain, enhance, and if possible, create green space on a developed parcel. We encourage going beyond City landscaping and site requirements. The site plan proposed exceeds the tree planting requirements within the zoning code.
   - 9: Dark Skies: To the maximum extent possible, keep site lighting from spilling onto adjacent properties and keep it aimed down. The site plan submitted proposes lighting that is aimed downward and does not spill onto adjacent properties.

   The 2040 Comprehensive Plan of the City of St. Paul is supported, championing the following points:

   - Economic Development – Growing Saint Paul's tax base to maintain and expand the City services, amenities and infrastructure. Developing this lot as a storage site for trailers will allow Rohn Industries to continue to operate within the City of Saint Paul. Improvements on this parcel will be taxable, and will contribute more than the current vacant parcel.
   - The parcel has not been identified as a Public water basin, park, wetland, river source nor other public watercourse (pg. 199)
   - The parcel has not been identified as a storm sewer or other type of green infrastructure.

2. *Applicable ordinances of the City of Saint Paul.*

   The site plan meets this finding. Per Legislative Code §66.541 the site plan meets the required conditions for outdoor storage/outdoor use in an I1 zoning district. (Reference attached Site Development Plans and Photometric Plan).

   - The site is located approximately 375 feet from the closest residentially zoned parcel which is located to the east of the site and separated by an elevated four-lane highway (MNTH 280). (Reference attached Photos Residential towards site).
   - The outdoor storage is enclosed with a six-foot-high chain link fence, and the portion of

the outdoor storage that is visible from Kasota Avenue (a thoroughfare) is screened with privacy slat inserts.
- There is no proposed servicing, processing, or manufacturing on-site.

3. *Preservation of unique geologic, geographic or historically significant characteristics of the city and environmentally sensitive areas.*

An incidental wetland determination application was submitted to city staff on 7/30/19. (Reference attached MN WCA Notice of Decision). The application asserted the area in question reflects wetland characteristics but is an incidental wetland created in an upland for a purpose other than creating a wetland. The applicant's opinion was based on a site visit, historic aerials, soil information, and previous development plans approved by Saint Paul. (Reference attached Sambatek Wetland Determination Memorandum- Online).

In 1986 a stormwater pond was designed, approved by the City, and constructed in the southwest corner of 2495 Kasota Avenue. The state Wetland Conservation Act (WCA) was passed in 1991. The WCA does not regulate impacts of incidental wetlands, defined as wetland areas that the landowner can demonstrate, to the satisfaction of the local government unit (LGU), were created in nonwetland areas solely by actions, the purpose of which was not to create the wetland. This includes stormwater retention improvements which over time may take on wetland characteristics. City staff reviewed the information and found the area in question to be adequately demonstrated as historically upland. Therefore, city staff concurred with the assertion and on 8/23/19 noticed a decision that the area in question is an incidental wetland.

The WCA provides for a specific process to appeal a LGA staff decision pursuant MN Rule 8420.0905. (Reference attached MN Rule 8420.0905). This appeal information was provided to St. Anthony Park Community Council on 9/6/19 after the letter dated 9/5/19 from the district council requested information as it relates to the wetland delineation alteration documentation. Appeals can only be commenced by mailing a petition for appeal, including applicable fee, within 30 calendar days of the date of the mailing of the notice of decision.

4. *Protection of adjacent and neighboring properties through reasonable provision for such matters as surface water drainage, sound and sight buffers, preservation of views, light and air, and those aspects of design which may have substantial effects on neighboring land uses.*

This finding is met.

The applicant voluntarily enrolled in the MPCA's Brownfield Program on 7/2/19. (Reference attached MPCA Voluntary Remediation Program Enrollment). The MPCA issued a No Association Determination letter on 9/10/19. (Reference attached MPCA No Association Determination letter). The MPCA's staff determination was based on the following documents prepared by Landmark Environmental:

- Landmark Environmental Phase I Environmental Site Assessment (4/30/19) (reference online)

- Landmark Environmental Phase II Investigation (6/25/19) (reference online)

- Proposed/Past Action Letter (6/28/19) (reference attached Landmark Environmental NAD Request Letter)

A MPCA No Association Determination letter is a legal determination that the developer is not responsible for the contamination detected at the site, as described in the letter, and that the actions proposed by the developer, as described in the letter, will not alter that determination. The letter contained several conditions and qualifications that must be met for the determination to remain valid.

The developer additionally provided the following documents to the MPCA on 7/2/19 at the date of enrollment, relative to how they will manage environmental activities during construction:

- Response Action Plan (RAP) (7/1/19) (reference online)

- Construction Contingency Plan (CCP) (7/2/19) (reference online)

On 10/17/19 MPCA Brownfields staff issued an approval letter for both the RAP and CCP. (Reference attached MPCA RAP/CCP letter).

The MPCA's Brownfield Program does not have regulatory authority relative to land-use decisions. The role of the Brownfield Program is to make sure that environmental issues are appropriately addressed during construction and redevelopment, for those projects that voluntarily enroll in the Brownfield Program. MPCA staff were provided the three referenced letters submitted by the St. Anthony Park Community Council to the city, outlining their environmental concerns. MPCA staff indicate that they considered the expressed concerns during their review of the project.

The Minnesota Department of Health issued a Letter Health Consultation (LHC) on 10-7-19 addressed to Kathryn Murray and the St. Anthony Park Community Council. (Reference attached MDH Letter Health Consultation). The letter indicated the MDH believes the proposed development at 2495 Kasota does not pose a public health hazard, based on staff's review of environmental reports and comparing site containment levels to environmental criteria.

5. *The arrangement of buildings, uses and facilities of the proposed development in order to assure abutting property and/or its occupants will not be unreasonably affected.*

   The site plan meets this finding. Per Legislative Code §63.114 (visual screens) the site meets the screening requirements.

   - Wherever a visual screen is required by this code, it shall be of sufficient height and density to visually separate the screened activity from adjacent property. The screen may consist of various fence materials, masonry walls, earth berms, plant materials or a combination thereof.
   - Height regulations for outdoor storage require a minimum of a six-foot fence.
   - Visual screens shall be located completely within the lot line.
   - The land between the screen and the property line shall be landscaped and maintained so that all plant materials are healthy and that the area is free from refuse and debris.

6. *Creation of energy-conserving design through landscaping and location, orientation and elevation of structures.*

This finding is met. Per Legislative Code §63.314 (landscaping) the site meets the requirement through landscaping and tree plantings.

- On plan sheet L1.01 the developer proposes to plant 16 shade trees, and all undeveloped space are shown as a MNDOT seed mix.

7. *Safety and convenience of both vehicular and pedestrian traffic both within the site and in relation to access streets, including traffic circulation features, the locations and design of entrances and exits and parking areas within the site.*

This finding is met.

MnDOT was provided the site plan based on the proposed project's proximity to MNTH280. MNDOT issued a review letter on 8/30/19 recommending that the city require a traffic study and requiring the applicant to obtain a MnDOT Drainage Permit. (Reference attached MnDOT Review Letter).

The applicant provided a traffic narrative to the city dated 9/26/19. This narrative identified a defined traffic pattern between the main site at 862 Hersey Street and the proposed development at 2495 Kasota Avenue. (Reference attached Rohn traffic narrative). Ingress to the site will be from the east via Energy Park Drive, egress from the site will be towards the west via Energy Park Drive, and there is no proposed use of MNTH280. Turning movement exhibits for a 53-foot trailer (WB 67) and fire truck were required and provided. (Reference attached turning movement exhibits). The driveway entrance allows adequate space for trucks entering and exiting the site to queue on private property and not public right-of-way. The site plan shows space for 25 trailers, with a projection of 20 truck movements per day.

The applicant noted that they employ their own drivers whom will be made aware of the traffic flow policy. The travel route within the traffic narrative dated 9/26/19 will become the standard operating procedure, and added to the driver's instructions.

The applicant worked with city Public Works staff to design an entrance location based on the proposed traffic pattern. A best practice in the Public Works street design guidelines is to locate driveway entrances 100 feet outside of an intersection, but based on site specific considerations this guideline was not required.

If at a future date the current or new land owner determines that west bound or MNTH280 access is needed the orientation of the driveway would require modification. This modification would require review and approval by the city's Public Works Department.

On 10/17/19 city staff were notified in writing by MnDOT staff that the proposed driveway location at Energy Park Drive is MnDOT right of way, and therefore will require a MnDOT access permit. (Reference attached MnDOT graphic). Ramsey County data available to city staff does not show this area to be MnDOT right-of-way. MnDOT staff additionally indicated they are currently evaluating the intersection of Energy Park Drive and MNTH 280 ramps. There is likely to be a traffic signal installed there in the future, but because MnDOT is still completing their evaluation, MnDOT could not provide information on precisely where and how the equipment will be located and configured. Based on this new information city staff and MnDOT staff have agreed that the access driveway should line up directly opposite the MNTH 280 ramps intersection. City Public Works staff will work with the applicant to

review an updated design of the driveway entrance. The site plan will not be approved until it receives approval from city Public Works staff and a MnDOT Access Permit.

Additionally, based on recent MnDOT staff reviews of the Rohn Industries Traffic Narrative, conversations with City staff, and the requirement that city staff will review any future change(s) in operations or use(s) that will affect trip volumes to/from the site, MnDOT is no longer recommending that the city require a traffic impact study for this development.

8. *The satisfactory availability and capacity of storm and sanitary sewers, including solutions to any drainage problems in the area of the development.*

   This finding is met.

   The stormwater system meets City standards for run-off rate control. Changes in stormwater runoff rate are a result of changes in land use and land cover. The city's stormwater rate control standard restricts a site's discharge rate to 1.64 cubic feet per second per acre of disturbed area. This standard is based on mitigating changes in land cover that accelerate the rate of runoff. The modeling appropriately reflected proposed land cover and land use drainage patterns, and proposed stormwater practices to control changes in runoff rate.

   The applicant's stormwater engineering report dated 8/9/19 states "the soils on-site are largely contaminated." (Reference attached Sambatek Preliminary Stormwater Management Plan report- Online). A geotechnical report dated 6/21/19 was included as an appendix. (Reference attached geotechnical report Appendix C - online). The geotechnical report describes test pit and soil boring results.

   The stormwater engineering report and site plan indicates alternative (non-infiltration) methods to manage stormwater will be employed. This is consistent with the Minnesota Construction Stormwater Permit which prohibits permittees from constructing infiltrating systems where infiltrating stormwater may mobilize high levels of contaminants in soil or groundwater.

   Therefore, the infiltration test method, as well as other infiltration requirements including a three-foot buffer, are not relevant given the extent of documented contamination which precludes infiltration as a stormwater management practice.

   Final site plan approval will not be granted by city staff until the project shows conformance with MWMO standards. (Reference attached MWMO Letter and MWMO Design Sequence Flow Chart). This approval includes calculations and/or device sizing information showing that a 60% total phosphorus removal is provided by the proposed design. The report and plans must also indicate the specific type of filtration device and include an operation and maintenance plan.

9. *Sufficient landscaping, fences, walls and parking necessary to meet the above objectives.*

   This finding is met. Reference line items #5 and #6 of this staff report.

10. *Site accessibility in accordance with the provisions of the Americans with Disabilities Act (ADA), including parking spaces, passenger loading zones and accessible routes.*

    This finding is not applicable.

11. *Provision for erosion and sediment control as specified in the ``Ramsey Erosion Sediment and Control Handbook."*

    The site plan meets this finding. The site plan includes an erosion and sediment control plan that meets this standard.

I. **STAFF RECOMMENDATION:**

Based on the findings above, the staff recommends approval of the site plan to allow outdoor storage at 2495 Kasota Ave., subject to the following conditions:

1. Final approval by the DSI Zoning Division to reflect compliance with MWMO standards.
2. Final approval by the Public Works Sewer Division to include a public sewer easement and encroachment permit.
3. Final approval by the Public Works Transportation Planning and Safety Division.
4. Receipt of a MnDOT access permit.

ZONING APPEAL APPLICATION

To/From Board of Zoning Appeals
Dept. of Safety & Inspections
Zoning Section
375 Jackson Street, Suite 220
Saint Paul, MN 55101-1806
(651) 266-9008

To / From Planning Commission
Dept. of Planning & Econ. Devt.
Zoning Section.
1400 City Hall Annex, 25 W 4th St.
Saint Paul, MN 55102-1634
(651) 266-6583

Zoning Office Use Only
File # 19-075-478 19-088-143
Fee Paid $ 547.00
Received By / Date 9/25/19
Tentative Hearing Date 10/24/19

RECEIVED IN D.S.I. SEP 25 2019

APPELLANT
Name(s) St. Anthony Park Community Council
Address 2395 University Ave. Ste. 300E City St.Paul State MN Zip 55114
Email kathryn@sapcc.org Phone 651-649-5992

PROPERTY LOCATION
Project Name Rohn Industries Trailer Parking
Address / Location 2495 Kasota Ave. St. Paul MN 55108

TYPE OF APPEAL: Application is hereby made for an appeal to the:

- ☐ **Board of Zoning Appeals,** under provisions of Zoning Code § 61.701(c), of a decision made by the Zoning Administrator.
- ■ **Planning Commission,** under provisions of Zoning Code § 61.701(c), of a decision made by the Planning Administrator or Zoning Administrator.
- ☐ **City Council,** under provisions of Zoning Code § 61.702(a), of a decision made by the Board of Zoning Appeals or the Planning Commission.

Date of decision September 16, 20 19 File Number SPR #19-075478

GROUNDS FOR APPEAL: Explain why you feel there has been an error in any requirement, permit, decision or refusal made by an administrative official, or an error in fact, procedure or finding made by the Planning Commission or Board of Zoning Appeals. Attach additional sheets if necessary.

St. Anthony Park Community Council believes there are serious concerns with this project, which has received conditional approval from the Department of Safety and Inspections. If it is built, it will affect the health, safety and welfare of our neighborhood a surrounding communities and damage a remaining wetland area. The attached document outlines our grounds for appeal.

☐ If you are a religious institution you may have certain rights under RLUIPA. Please check this box if you identify as a religious institution.

Appellant's Signature Kathryn Murray **Date** 09/25/19

Rev 7.4.2019

St. Anthony Park Community Council
2395 University Avenue West, Suite 300E
Saint Paul, MN 55114

ST. ANTHONY PARK COMMUNITY COUNCIL 12 DISTRICT

TO:
Dept. of Planning & Econ. Devt. Zoning Section
1400 City Hall Annex, 25 W 4th St.
Saint Paul, MN 55102-1634

DATE: September 25, 2019

Dept. of Safety & Inspections Zoning Section
375 Jackson Street, Suite 220
Saint Paul, MN 55101-1806

RE: Rohn Industries Trailer Parking - 2495 Kasota - SPR File# 19-075478

This appeal letter is in response to the City of St. Paul – DSI Site Plan Review Report (SPR File# 19-075478) dated September 16, 2019. We are formally challenging the premature Conditional Approval provided via this review report as we have made the Site Plan Review Committee aware of these below listed serious and disturbing concerns prior to and during the plan review process to no avail. Therefore, we are issuing the following concerns to be addressed by the City and other agencies responsible for protecting the health, safety and welfare of our neighborhood and the surrounding communities directly impacted by this overt negligence.

There are serious and disturbing health and environmental concerns being ignored by the City that pose significant danger to human health due to the release of toxins from disturbing topsoil because an old ash dump underlies this site. We have brought these concerns forward so they can be fully explored and have been ignored by the City.

Grounds for Appeal:

1. The site is a known brownfield, and excavation for this project will disturb that material. Under section 19, Mississippi Watershed Management Organization is cited as the applicable agency and since the conditional approval was issued, MWMO has sent a letter outlining its required involvement in this process. Based on this alone, the conditional approval should be overturned in favor of the MWMO process.
2. Despite conditional approval in section 13, Public Works Sewers, we dispute that the site meets City design standards for stormwater because the site has shallow springs and a very high water table and we believe neither were taken into account when developing the Hydro-Cad Model and Drainage Map for the Site. Additionally, MPCA Stormwater Design Standards are not followed as it relates to infiltration testing prior to design as well as required three-foot buffer requirement minimum to depth of modeled soils which indicate water table.
3. Under item 14b Water Quality/Erosion Control, we dispute that the existing historic remnant wetland onsite is an incidental wetland. This wetland is part of the original larger wetland complex that existed prior to pre-European settlement. Under item 14c, we also dispute that the existing historic remnant wetland onsite is an existing stormwater pond.

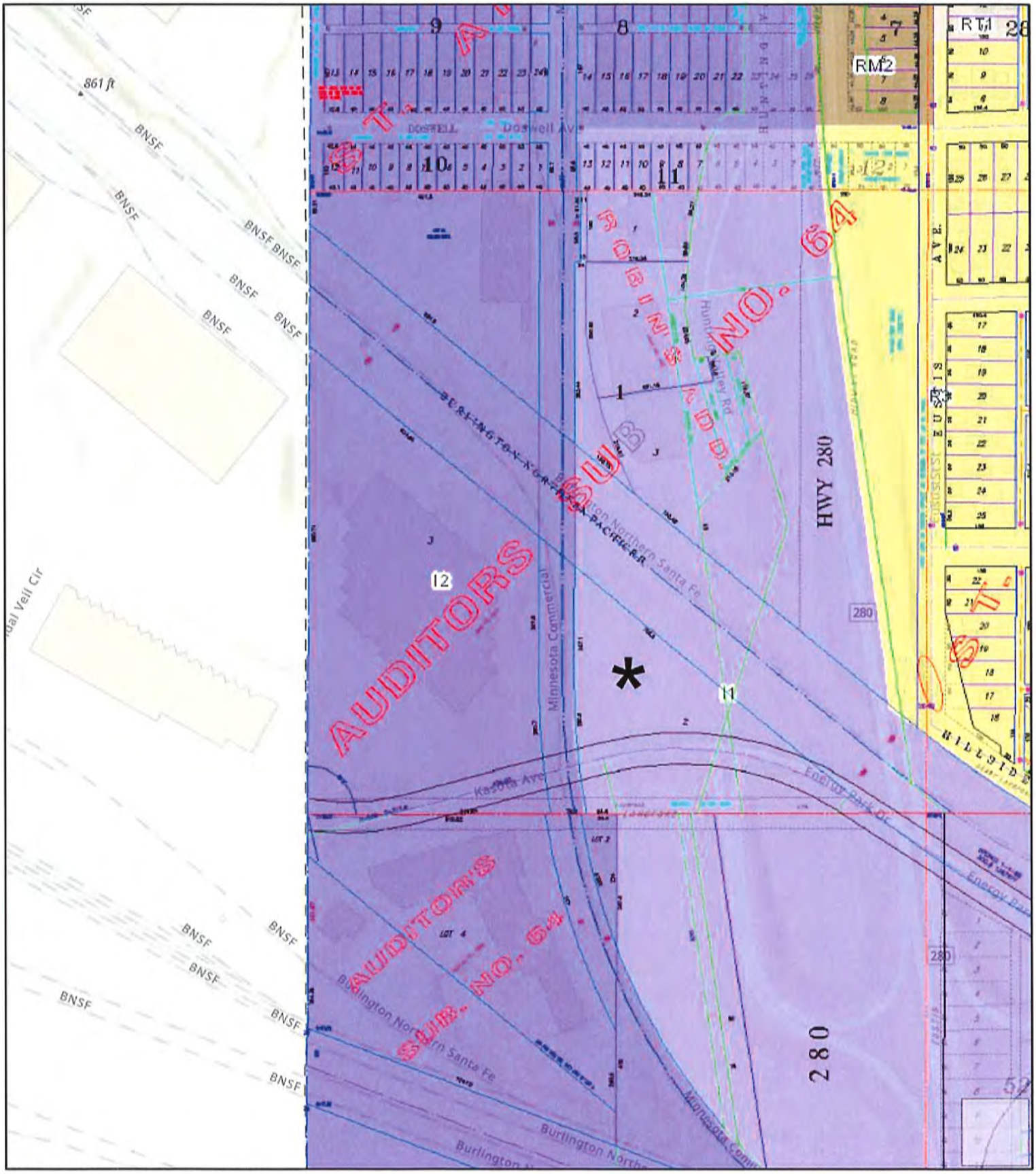
4. Under Zoning 2b (first bullet point) we note the correction that the closest residential zoning district is to the EAST not the west as is incorrectly noted in the report.
5. Under Zoning 2b (second bullet point), we dispute the following: In addition to landscape screening being required on the Kasota Avenue side, we interpret that all sides of this property are in full view due to the location of the site being in full view of and adjacent to 280 as well as open views presented from the west and that it therefore requires screening around the perimeter of the property to meet the intent of the City's screening requirements. We also disagree with the City's interpretation that a screening fence shall be the answer. As a neighborhood, it has been our experience that these vertical surfaces quickly become tagging/graffiti opportunities for vandals. Therefore, we suggest the full perimeter be screened with a natural screen in the form of evergreen vegetation, providing year-round coverage with no opportunity for vandalism.
6. Under District Council item 6a, the conditional approval does not acknowledge the fact that District 12 staff provided comments on the long history of this site as a brownfield, transportation concerns, and more, and they were not included in the conditional approval.
7. Public Works Construction item 8a pointed out that the site entrance is within 100' of the TH280 ramp terminal. If one applies the MnDOT parameters stated, it is NOT possible to safely provide access to and from this site. This should in effect render this site for the proposed use not feasible/allowable.
8. Under Public Works Transportation Planning item 9, we believe it would be a minimum of care to do a thorough traffic study, including turning movements in and out of the site in every direction as well as within the site for the appropriate design vehicle (WB 67 semi-truck / trailer).
9. Under MnDOT, item 10b, the conditional approval appears to ignore the MnDOT letter dated August 30, 2019 and its stated requirements.

SIGNED: Kathryn Murray

Its: Executive Director

2495 Kasota Avenue

10/1/2019 4:04 PM



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Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, For technical background on this

City of Saint Paul – Department of Safety and Inspections
Site Plan Review Report
Date of Report: 09/16/2019
SPR File # 19-075478
Site Plan Address Location: 2495 Kasota Avenue
Primary Business Address: 862 Hersey Street
Project: Rohn Industries

Dave Carland
Venture Pass Partners, LLC
19620 Waterford Court
Shorewood, MN 55331

Randy Rauwerdink
Venture Pass Partners, LLC
19620 Waterford Court
Shorewood, MN 55331

Chad Ayers
Sambatek
12800 Whitewater Drive,
Suite 300
Minnetonka, MN 55343

On Tuesday, August 27, 2019, you met with City staff to discuss the site plan for the Rohn Industries project including development of a vacant lot for accessory outdoor storage (2495 Kasota Avenue) which shall service an existing primary use located at 862 Hersey Street (indoor recycling process center). The comments from that meeting are summarized below.

1. **Site Plan Approval Process**
   a) The project's Site Plan is *conditionally approved* pending updates based on the comments summarized in this letter.
   b) b) A Final Site Plan approval decision may be appealed within ten days after the date of the decision per Leg. Code Sec. 61.701 – Administrative Appeals, to the Planning Commission. An Appeal of a Site Plan shall be filed with the Zoning Administrator.
   c) Provide a pdf version of the updated Site Plan package for review by the Site Plan Review Committee.
   d) A Final Site Plan Approval letter will be issued after City Staff sign-off on the updated Site Plan. A Final Site Plan approval decision may be appealed within ten days after the date of the decision per Leg. Code Sec. 61.701 – Administrative Appeals.
   e) Per Minnesota State Statute 326, the final plans submitted shall be signed by the appropriate licensed Professional, i.e. PE, LA, RLS, etc., responsible for plan development.
   f) Building permits will not be issued until the Site Plan has final approval.

2. **Zoning**
   Reviewer: Tia Anderson/651-266-9086 tia.anderson@ci.stpaul.mn.us
   Reviewer: Amanda Smith/651-266-6507 amanda.smith@ci.stpaul.mn.us
   Comments:
   a) The proposed use of the property as Outdoor Storage is permitted at this location in an I1 zoning district.
   b) Zoning conditions for Outdoor storage in an I1 zoning district are as follows.
      - Outdoor storage shall be at least three hundred (300) feet from a residential neighborhood district boundary. *The closest residentially zoning district is across Highway 280 to the west. Condition is met.*
      - Outdoor storage shall be fenced or walled. Outdoor storage which abuts a thoroughfare shall be behind a six-foot-high obscuring fence. *Kasota Avenue is classified as a thoroughfare. In addition to the proposed landscaping, update the site plan to include a six-foot high obscuring fence, and include a detail.*
      - Outdoor uses. In an I1 industrial district, all business, servicing, processing or manufacturing shall be conducted within completely enclosed buildings, except for off-street parking, off-street loading, and outdoor uses specifically allowed as permitted or conditional uses. *There is no proposed servicing, processing, or manufacturing on-site.*

c) Off-street parking spaces shall be a minimum of 4' from any lot line. *Condition is met.*

3. **Lighting and Landscaping for the Site and Exterior Parking Lot**
   a) Exterior lighting shall meet Zoning Code Sec. 63.116. - Exterior lighting.
      - All outdoor lighting shall be shielded to reduce glare and shall be so arranged as to reflect lights away from all adjacent residential districts or adjacent residences in such a way as not to exceed three (3) footcandles measured at the residence district boundary.
      - All lighting in all districts used for the external illumination of buildings shall be placed and shielded so as not to interfere with the vision of persons on adjacent highways or adjacent property.

   b) A photometric plan has been provided for review. *Lighting conditions are met.*

   c) All required yards and any underdeveloped space shall be landscaped using materials such as trees, shrubs, sod, groundcover plants, or stormwater landscaping. *Landscape plan shows 16 shade trees and 4 ornamentals. Areas of sod will be seeded with a MnDOT seed mix.*

   d) For any parking facility, landscaping shall be provided to buffer the facility from adjacent properties and from the public right-of-way; reduce the visual glare and heat effects of large expanses of pavement; and provide areas for the retention and absorption of stormwater runoff. The standards can be found in Sec. 63.313 and 63.314 of the Zoning Code.
      - *Perimeter Landscape* - A landscaped yard at least four (4) feet wide along the public street or sidewalk. *Condition is met.*
      - *Tree plantings* – At least 1 shade tree shall be planted for every 5 surface parking spaces. *Condition is met.*

4. **Signs**
   Reviewer: Ashley Skarda/651-266-9013 ashley.skarda@ci.stpaul.mn.us
   Comments:
   a) Business signs require a separate review and Sign Permit from the Department of Safety and Inspections. Site plan approval does not constitute approval of signs shown on the site plan. Contact Ashley Skarda of DSI Zoning regarding signs.

5. **Planning**
   Reviewer: Anton Jerve/651-266-6567 anton.jerve@ci.stpaul.mn.us
   Comments:
   a) No comments.

6. **District Council**
   Comments:
   a) The site is located in the District 12 Community Council. A copy of the site plan was provided to the District Council for comments. Staff reserves the right to make additional comments and conditions based on their feedback.

7. **Public Works Records and Mapping**
   Contact Number: 651-266-6150
   Comments:
   a) No comments.

8. **Public Works Construction**
   Reviewer: Jary Lee/651-266-1107 jary.lee@ci.stpaul.mn.us
   Comments:
   a) Check with MnDOT policy regarding entrances adjacent to ramp terminal. Driveway entrance is not located 100' outside intersection of Kasota and TH280 ramp terminal. Consider moving entrance to west side of property if possible but avoid stopping on tracks when queuing left turns on EB Kasota.

9. **Public Works Transportation Planning**
Reviewer: David Kuebler/651-266-6217 david.kuebler@ci.stpaul.mn.us
Reviewer: Colleen Paavola/651-266-6104 colleen.paavola@ci.stpaul.mn.us
Comments:

a) Please be advised that a Temporary Pedestrian Access Route (TPAR) and/or a Temporary Traffic Control (TTC) plan may be required as part of the Right-of-Way (ROW) permitting process. Said TTC or TPAR plans must be approved by the City prior to the ROW Permitting office issuing a permit(s).
b) Per Minnesota State Statute 326, the final plans submitted must be signed by the appropriate licensed Professional, i.e. PE, LA, PLS, etc., responsible for plan development.
c) Add the street names to the plan sheets.
d) Please use the City Standard Detail plate 1206D for driveways.

e) Update the Site Plan with the following notes:
- INSPECTION CONTACT: The developer shall contact the Right of Way inspector Dick Rohland, 651-485-1688 (one week prior to beginning work) to discuss traffic control, pedestrian safety and coordination of all work in the public right of way. Note: If a one week notice is not provided to the City, any resulting delays shall be the sole responsibility of the Contractor.
- As part of the ROW permitting process, two weeks before any work begins that impacts the ROW in any way the developer shall provide to the ROW Inspector the name and contact information of the Construction Project Manager or Construction Project Superintendent. If this information is not provided there may be a delay in obtaining permits for the work in the ROW. Said delays will be the sole responsibility of the developer
- SAFE WORK SITE REQUIREMENTS: The Contractor shall provide a continuous, accessible and safe pedestrian walkway that meets ADA and MN MUTCD standards if working in a sidewalk area, and traffic control per MN MUTCD requirements for work in the public right of way.
- ENCROACHMENTS: Per Chapter 134 of the Legislative Code, no person shall construct and maintain any projection or encroachment within the public right-of-way.
- Construction of the development that necessitates temporary use of the Right-of-Way (ROW) for construction purposes shall be limited to equipment, personnel, devices and appurtenances that are removable following construction. Encroachment permits will not be granted for devices such as tie backs, rock bolts, H-piles, lagging, timbers, sheet piling, etc. that the owner is seeking to abandon in the ROW.
- The Contractor shall contact Don Bjorkman, General Foreman, Lighting - Signal Maintenance, (651-266-9780), if removal or relocation of existing facilities is required or in the event of damage to the lighting or signal utilities. The Contractor shall assume responsibility (and related costs) for any damage or relocations.
- ROADWAY RESTORATION: As per the City's "Standard Specification for Street Openings" policy, restoration on roadway surfaces less than 5 years old will require full width mill and overlay or additional degradation fees. Degradation fees are determined by contacting the Right of Way Service Desk at (651) 266-6151. Pavement restoration shall be completed by the St. Paul Public Works Street Maintenance Division. All related costs are the responsibility of the developer/contractor. Contact Street Maintenance at (651) 266-9700 for estimate of costs for pavement restoration.

f) CITY OF ST. PAUL PERMIT REQUIREMENTS:
- ORDERING OBSTRUCTION AND EXCAVATION PERMITS: Contact Public Works Right of Way Service Desk at (651) 266-6151. It is strongly recommended that contractors call for cost estimates prior to bidding to obtain accurate cost estimates.
- OBSTRUCTION PERMITS: The contractor must obtain an Obstruction Permit if construction (including silt fences) will block City streets, sidewalks or alleys, or if driving over curbs.
- EXCAVATION PERMITS: All digging in the public right of way requires an Excavation Permit. If the proposed building is close to the right of way, and excavating into the right of way is needed to facilitate construction, contact the utility inspector.

- FAILURE TO SECURE PERMITS: Failure to secure Obstruction Permits or Excavation Permits will result in a double-permit fee and other fees required under City of St. Paul Legislative Codes.

10. **MnDOT**
Reviewer: David Elvin/651-234-7795 david.elvin@state.mn.us
Comments:
a) A copy of the Site Plan was provided to MnDOT for review.
b) Please see attached letter from MnDOT dated August 30, 2019 for additional requirements.

11. **Metro Transit**
Reviewer: Scott Janowiak scott.janowiak@metrotransit.org
Comments:
a) A copy of the Site Plan was provided to Metro Transit for review.

12. **Public Works Sidewalks**
Reviewer: Ryan Lowry/651-266-6147 ryan.lowry@ci.stpaul.mn.us
Comments:
a) Contractor is responsible for damage to the mainline sidewalk, curb, drive access and boulevard landscaping cause during the construction. Contractor advised to document pre-existing condition of the right of way prior to commencement of the construction.
b) Sidewalk grades must be carried across driveways.

c) Update the Site Plan with the following notes:
- CONSTRUCTION IN RIGHT OF WAY: All work on curbs, driveways, and sidewalks within the public right of way must be done to City Standards and Specifications by a contractor licensed to work in the City right-of-way under a permit from Public Works Sidewalk Section (651-266-6108). Sidewalk grades must be carried across driveways.
- RIGHT OF WAY RESTORATION: Restoration of asphalt and concrete pavements are performed by the Public Works Street Maintenance Division. The contractor is responsible for payment to the City for the cost of these restorations. The contractor shall contact Public Works Street Maintenance to set up a work order prior to beginning any removals in the street at 651-266-9700. Procedures and unit costs are found in Street Maintenance's "General Requirements - All Restorations" and are available at the permit office.

13. **Public Works Sewers**
Reviewer: Anca Sima/651-266-6237 anca.sima@ci.stpaul.mn.us
Comments:
a) The plan for storm water rate control meets city requirements.
b) Provide TV inspection file the whole pipe network (catch basins, leads, mainline, outfalls) in that area. Submit to PW sewers for review.
c) No buildings, structures, trees or any temporary structure, material storage, fixture, or any other objects which may prohibit normal access to utility facilities for maintenance purposes will be permitted within the easement area.

d) Update the Site Plan with the following notes:
- SEWER CONNECTION PERMIT: License house drain contractor to obtain (Sewer Connection Permit) to construct new sanitary and storm connection in street from main to the property. Call St Paul PW permit desk (651-266-6234) for information on obtaining this permit.

14. **Water Quality/Erosion Control**
Reviewer: Wes Saunders-Pearce/651-266-9112 wes.saunders-pearce@ci.stpaul.mn.us
Comments:
a) Erosion control plan is satisfactory as shown.

b) A Wetland Conservation Act decision was separately issued regarding the existing stormwater pond. It has been determined to be an incidental wetland and a No Loss approval was provided.
c) The proposed stormwater pond will be expanded and a filtration device added to treat water quality. The hydrology report must be updated to show conformance with Mississippi WMO standards. Provide calculations and/or device sizing information showing that a 60% total phosphorus removal is provided by the proposed design. The report and plans must also indicate the specific type of filtration device. Submit an operation and maintenance plan.

15. **Water Utility**
Reviewer: Jeff Murphy/ 651-266-6276 jeffrey.murphy@ci.stpaul.mn.us
Reviewer: Amanda Leier/651-266-6276 amanda.leier@ci.stpaul.mn.us
Reviewer: Brian Galloway/651-266-6205 brian.galloway@ci.stpaul.mn.us
Comments:
a) No comments

16. **Fire**
Reviewer: Ann Blaser/651-266-9140 ann.blaser@ci.stpaul.mn.us
Comments:
a) Provide address sign and key box on site for emergency personnel

17. **City Forestry**
Reviewer: Zach Jorgensen/651-632-2437 zach.jorgensen@ci.stpaul.mn.us
Comments:
a) No comments

18. **Parks and Recreation**
Reviewer: Paul Sawyer/651-266-6417 paul.sawyer@ci.stpaul.mn.us
Comments:
a) No comments

19. **Mississippi Watershed Management Organization**
Reviewer: Douglas Snyder/612-746-4971 dsnyder@mwmo.org
Comments:
a) A copy of the site plan was provided to the Mississippi Watershed Management Organization.

20. **MPCA Permit**
This project will be affecting more than one acre. A General Storm Water Permit for Construction Activity from the Minnesota Pollution Control Agency is required. No land disturbance activity for the project is allowed, until this permit is obtained and is in addition to any City or watershed district permits required. Call the Brian Green MPCA Statewide Compliance Coordinator for the Storm Water Program MPCA at 507-206-2610 if you have questions about the process for obtaining this permit.
The applicant has requested a No Association Determination from the MPCA's Petroleum Brownfield and Voluntary Investigation and Cleanup program, and received said determination (letter dated 09-10-19). The applicant has filed a Construction Contingency Plan and Response Action Plan with MPCA for review to support the No Association request.

21. **Plumbing**
Reviewer: Rick Jacobs/651-266-9051 rick.jacobs@ci.stpaul.mn.us
Comments:
a) No comments

22. **Building Code Requirements**
Reviewer: James Williamette/651-266-9077 james.williamette@ci.stpaul.mn.us
Comments:

a) This proposal will require a building (grading) permit from this office to proceed with the grading activity.

Report Prepared By:

Amanda Smith

Amanda Smith
DSI Inspector III
Dept. of Safety and Inspection
375 Jackson St - Suite 220
Saint Paul MN. 55101-1806

cc: File, Site Plan Review Staff, MWMO, MnDOT, Metro Transit, MPCA, City Council Ward 4 Office, District Council 12

DEPARTMENT OF SAFETY AND INSPECTIONS
Ricardo X. Cervantes, Director

CITY OF SAINT PAUL

375 Jackson Street, Suite 220
St Paul, Minnesota 55101-1806

Telephone: 651-266-8989
Facsimile: 651-266-9124
Web: www.stpaul.gov/dsi

September 20, 2019

Dave Carland
Venture Pass Partners, LLC
19620 Waterford Court
Shorewood, MN 55331

Randy Rauwerdink
Venture Pass Partners, LLC
19620 Waterford Court
Shorewood, MN 55331

Chad Ayers
Sambatek
12800 Whitewater Drive, Suite 300
Minnetonka, MN 55343

RE: **Updated Site Plan 19-075478**– Rohn Industries at 2495 Kasota Avenue

Dave Carland, Randy Rauwerdink, and Chad Ayers,

Below is an additional condition requested by Public Works Transportation Planning:

Public Works Transportation Planning
David Kuebler/651-266-6217 david.kuebler@ci.stpaul.mn.us

1. Provide a traffic narrative which includes: explanation as to why the business has a need for additional outdoor trailer storage, frequency of trips generated, how access/departure from the site will work, and if MnDOT right-of-way will be utilized.

If you have questions, please contact me at amanda.smith@ci.stpaul.mn.us or at 651-266-6507.

Amanda Smith

Amanda Smith
Site Plan Review Coordinator
City of Saint Paul
Department of Safety and Inspection
375 Jackson St - Suite 220
Saint Paul, MN 55101-1806

cc: File, Site Plan Review Committee

DEPARTMENT OF SAFETY AND INSPECTIONS
Ricardo X. Cervantes, Director

CITY OF SAINT PAUL

375 Jackson Street, Suite 220
Saint Paul, Minnesota 55101-1806

Telephone: 651-266-8989
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September 30, 2019

Dave Carland
Venture Pass Partners, LLC
19620 Waterford Court
Shorewood, MN 55331

Randy Rauwerdink
Venture Pass Partners, LLC
19620 Waterford Court
Shorewood, MN 55331

Chad Ayers
Sambatek
12800 Whitewater Dr, Ste 300
Minnetonka, MN 55343

RE: Application for Site Plan Review – SPR #19-075478 – Rohn Industries Outdoor Storage at 2495 Kasota Avenue – Notice to extend the time limit for decision under Minnesota Statute 15.99

Dave Carland, Randy Rauwerdink, Chad Ayers,
This letter is to inform you that the City is extending the site plan review period to December 7, 2019.

MN Statute 15.99 (1995) requires the City of Saint Paul to approve or deny zoning applications within 60 days of submission, but allows the City to "extend the time line ... by providing written notice of the extension to the applicant. The notification must state the reasons for the extension and its anticipated length, which may not exceed 60 days unless approved by the applicant."

On August 9, 2019, the property owner applied for site plan review for development of a vacant parcel as accessory outdoor storage. Site Plan Review is a function delegated by the Saint Paul Planning Commission to City staff. However, a Site Plan may be appealed to the Planning Commission for public hearing. An appeal of the Site Plan decision was received on September 25, 2019. The planned public hearing date for the Site Plan with the Zoning Committee of the Planning Commission is October 24, 2019 followed by a Planning Commission vote on November 1, 2019. Planning Commission decisions are appealable to the City Council.

The City's present deadline to act on the site plan review application is October 8, 2019. Because this deadline is prior to the November 1, 2019 Planning Commission meeting, the City elects to extend the deadline for the additional 60 days allowed under Minnesota Statute 15.99. The additional 60-day period takes effect immediately upon the expiration of the initial 60-day period. Therefore, the deadline to make a final decision on your application is December 7, 2019.

For questions regarding this matter, contact me at 651-266-6507 or amanda.smith@ci.stpaul.mn.us.

Regards,

Amanda Smith
Site Plan Review Coordinator

cc: File, Zoning Administrator, Planning Administrator, Ward 4 Council Office, St Anthony Park Community Council

DEPARTMENT OF SAFETY AND INSPECTIONS
Ricardo X. Cervantes, Director

CITY OF SAINT PAUL

375 Jackson Street, Suite 220
St Paul, Minnesota 55101-1806

Telephone: 651-266-8989
Facsimile: 651-266-9124
Web: www.stpaul.gov/dsi

October 17, 2019

Dave Carland
Venture Pass Partners, LLC
19620 Waterford Court
Shorewood, MN 55331

Randy Rauwerdink
Venture Pass Partners, LLC
19620 Waterford Court
Shorewood, MN 55331

Chad Ayers
Sambatek
12800 Whitewater Drive, Ste. 300
Minnetonka, MN 55343

RE: **Updated Site Plan 19-075478**– Rohn Industries – Site Plans with revisions through 10/1/2019

Dear Dave Carland, Randy Rauwerdink, and Chad Ayers,

Below is a summary of outstanding conditions for the Rohn Industries Site Plan:

General Comments

1. On 10/16/19 city staff were notified by MnDOT staff that the proposed driveway location at Energy Park Drive is MnDOT right of way, and therefore will require a MnDOT access permit. Please reference attached graphic provided by MnDOT that shows MnDOT right-of-way and turnback's at the site and vicinity. Ramsey County data available to City staff does not show this area to be MnDOT right-of-way.
2. MnDOT is currently evaluating the intersection of Energy Park Drive and MNTH 280 ramps.
3. Based on MnDOT staff reviews of the Rohn Industries Traffic Narrative (dated 9/26/19), conversations with City staff, and the requirement that city staff will review any future change(s) in operations or use(s) that will affect trip volumes to/from the site, MnDOT is no longer recommending that the city require a traffic impact study for this development.
4. City staff and MnDOT staff will facilitate a meeting with the applicant to discuss the above referenced comments.
5. The first bullet in Item 2.b. of the Site Plan Conditional Approval letter dated 9/16/19, incorrectly identifies the cardinal direction of closest residentially zoned property. The corrected statement shall read: *The closest residential zoning district is across MNTH 280 to the east.*
6. Per Minnesota State Statute 326, the final plans submitted shall be signed by the appropriate licensed Professional, i.e. PE, LA, RLS, etc., responsible for plan development. Also, the final plans should not be marked "preliminary" or "not for construction."

Public Works Transportation Planning

David Kuebler/651-266-6217 david.kuebler@ci.stpaul.mn.us
Colleen Paavola/651-266-6104 colleen.paavola@ci.stpaul.mn.us

7. Please update the Site Plan with the following note:
   - STATE PERMITTING REQUIREMENTS: Work conducted on State Roadways, Trunk Highways or State Right-of-Way will also require permitting through MnDOT. The MnDOT contact permitting is Buck Craig at 651-234-7911. State and City approval is required on MnDOT roadways maintained by the City.
   - The note can be placed just before the City's permitting requirements notes on plan sheet C3.01

Public Works Sewers

Anca Sima/651-266-6237 anca.sima@ci.stpaul.mn.us

8. Provide a public storm sewer easement.
9. An encroachment permit is required prior to the issuance of a storm permit.

Water Quality/Erosion Control

Wes Saunders-Pearce/651-266-9112 wes.saunders-pearce@ci.stpaul.mn.us

10. Reflect compliance with MWMO standards.
11. Contact city staff (building inspector and/or Wes Saunders-Pearce) to set up an erosion control inspection prior to commencing work, to ensure compliance with MPCA NPDES permit requirements.

If you have questions, please contact me at amanda.smith@ci.stpaul.mn.us or at 651-266-6507.

Amanda Smith

Amanda Smith
DSI Inspector III

cc: File, Site Plan Review Committee, MnDOT, MWMO, MPCA, Metro Transit, City Council Ward 4 Office, District Council 12

Site Development Plans

for

ROHN INDUSTRIES TRAILER STORAGE

St. Paul, Minnesota

Presented by:

Venture Pass Partners

CONSULTANT CONTACT LIST:

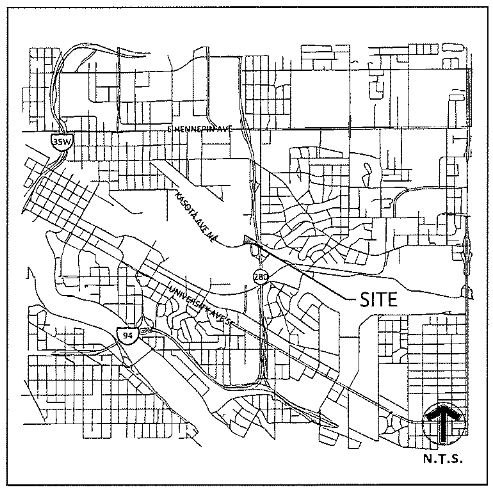
DEVELOPER/OWNER
VENTURE PASS PARTNERS, LLC
19620 WATERFORD COURT
SHOREWOOD, MN 55331
TEL 612-801-4313
CONTACT: RANDY RAUWERDINK

CIVIL ENGINEER
SAMBATEK
12800 WHITEWATER DRIVE, SUITE 300
MINNETONKA, MN 55343
TEL 763-476-6010
FAX 763-476-8532
CONTACT: CHAD AYERS, PE, LEED AP

GEOTECHNICAL
BRAUN INTERTEC
11001 HAMPSHIRE AVENUE SOUTH
MINNEAPOLIS, MN 55438
TEL 952-995-2000
FAX 952-995-2020
CONTACT: ROBERT JANSSEN, PE

SURVEYOR
SUNDE LAND SURVEYING, LLC
9001 EAST BLOOMINGTON FREEWAY, SUITE 118
BLOOMINGTON, MN 55420
TEL 952-881-2455
FAX 952-888-9526
CONTACT: ARLEE CARLSON, PLS

LANDSCAPE ARCHITECT
SAMBATEK
12800 WHITEWATER DRIVE, SUITE 300
MINNETONKA, MN 55343
TEL 763-476-6010
FAX 763-476-8532
CONTACT: WILLIAM DELANEY, PLA



VICINITY MAP
NO SCALE

SHEET INDEX

SHEET	DESCRIPTION
C1.01	TITLE SHEET
C3.01	SITE PLAN
C4.01	GRADING PLAN
C5.01	EROSION CONTROL PHASE 1
C5.02	EROSION CONTROL PHASE 2
C5.03	EROSION CONTROL NOTES AND DETAILS
C5.04	SWPPP NARRATIVE
C5.05	SWPPP NARRATIVE
C6.01	UTILITY PLAN
C9.01	DETAILS
C9.02	DETAILS
L1.01	LANDSCAPE PLAN
L1.02	LANDSCAPE DETAILS-NOTES
ATTACHED	
C2.01	ALTA/NSPS LAND TITLE SURVEY

Sambatek
www.sambatek.com
12800 Whitewater Drive, Suite 300
Minnetonka, MN 55343
763.476.6010 telephone
763.476.8532 facsimile
Engineering | Surveying | Planning | Environmental

Client
VENTURE PASS PARTNERS

Project
ROHN INDUSTRIES TRAILER STORAGE

Location
ST PAUL, MINNESOTA
2495 KASOTA AVENUE

Certification
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.

NOT FOR CONSTRUCTION

Chad M. Ayers
Registration No. 41301 Date: 08/09/2019
If applicable, contact us for a wet signed copy of this survey which is available upon request at Sambatek's Minnetonka, MN office.

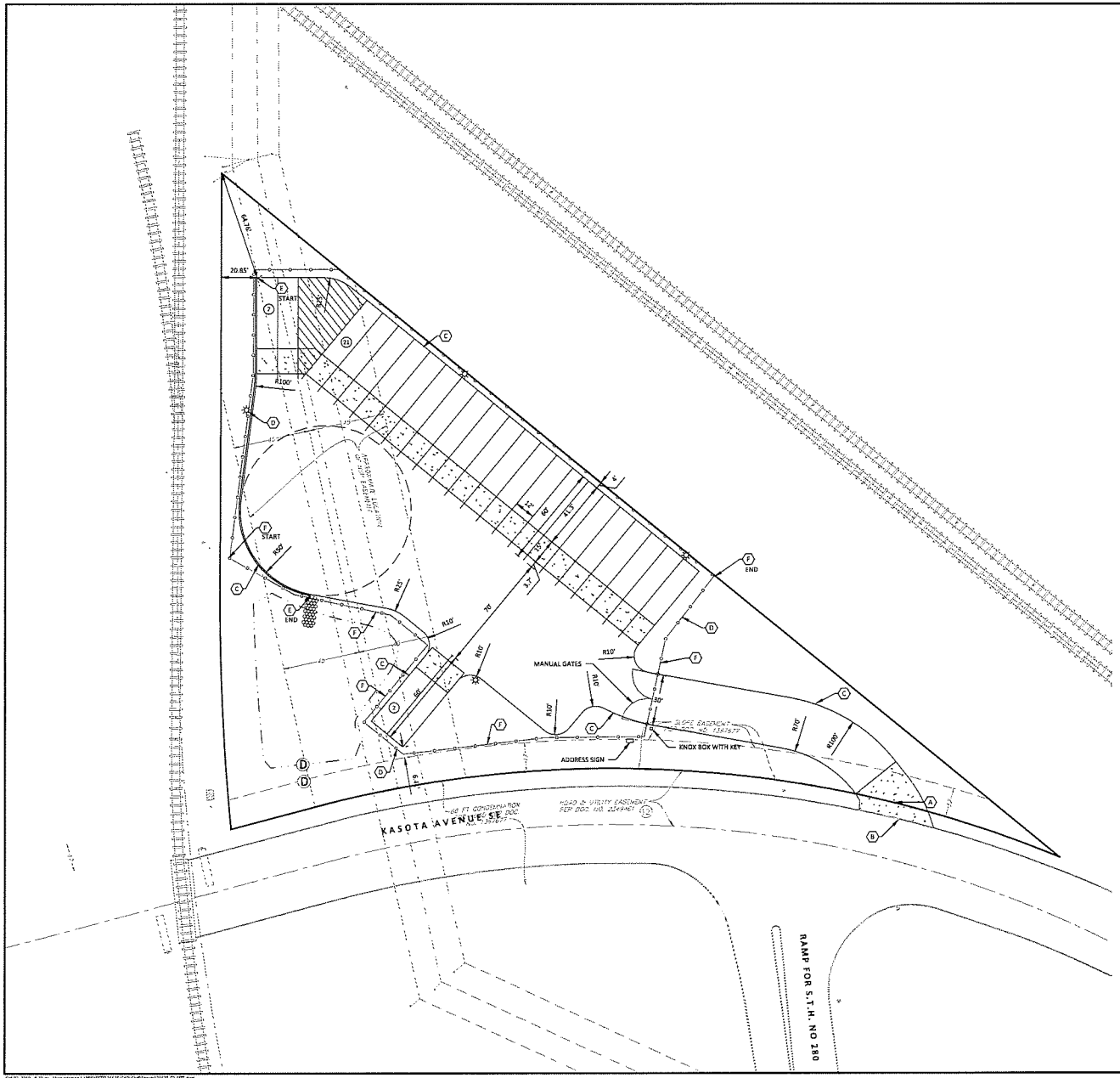
Summary
Designed: CMA Drawn: MLL
Approved: CMA Book / Page:
Phase: PRELIM Initial Issue: 08/09/2019

Revision History
No. Date By Submittal / Revision
08/09/2019 MLL SITE PLAN REVIEW
10/01/2019 MLL CITY COMMENT RESPONSE

Sheet Title
TITLE SHEET

Sheet No. Revision
C1.01

Project No. 21625



LEGEND

	PROPOSED	EXISTING
PROPERTY LIMIT		
CURB & GUTTER		
EASEMENT		
BUILDING		
RETAINING WALL		
WETLAND LIMITS		
TREELINE		
SAWCUT LINE		
SIGN		
PIPE BOLLARD		
NUMBER OF PARKING STALLS PER ROW		
KEY NOTE		

STANDARD DUTY ASPHALT PAVING
HEAVY DUTY ASPHALT PAVING
CONCRETE PAVING
CONCRETE SIDEWALK

DEVELOPMENT SUMMARY

AREA		
GROSS SITE AREA	70,711 SF	1.85 AC
GREENSPACE	35,030 SF	0.80 AC
IMPERVIOUS	45,681 SF	1.05 AC
IMPERVOUS COVERAGE		57%

DEVELOPMENT NOTES

1. ALL DIMENSIONS ARE ROUNDED TO THE NEAREST TENTH FOOT.
2. ALL AREAS ARE ROUNDED TO THE NEAREST SQUARE FOOT.
3. SEE ARCHITECTURAL PLANS FOR LIGHT POLE FOUNDATION DETAIL AND FOR EXACT LOCATIONS OF LIGHT POLE.
4. REFER TO FINAL PLAT FOR LOT BOUNDARIES, LOT NUMBERS, LOT AREAS, AND LOT DIMENSIONS.

CITY OF ST. PAUL NOTES

1. INSPECTION CONTACT: THE DEVELOPER SHALL CONTACT THE RIGHT OF WAY INSPECTOR DICK ROHLAND, 651-485-1688 (ONE WEEK PRIOR TO BEGINNING WORK) TO DISCUSS TRAFFIC CONTROL, PEDESTRIAN SAFETY AND COORDINATION OF ALL WORK IN THE PUBLIC RIGHT OF WAY. NOTE: IF A ONE WEEK NOTICE IS NOT PROVIDED TO THE CITY, ANY RESULTING DELAYS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
2. AS PART OF THE ROW PERMITTING PROCESS, TWO WEEKS BEFORE ANY WORK BEGINS THAT IMPACTS THE ROW IN ANY WAY THE DEVELOPER SHALL PROVIDE TO THE ROW INSPECTOR THE NAME AND CONTACT INFORMATION OF THE CONSTRUCTION PROJECT MANAGER OR CONSTRUCTION PROJECT SUPERINTENDENT. IF THIS INFORMATION IS NOT PROVIDED THERE MAY BE A DELAY IN OBTAINING PERMITS FOR THE WORK IN THE ROW. SAID DELAYS WILL BE THE SOLE RESPONSIBILITY OF THE DEVELOPER
3. SAFE WORK SITE REQUIREMENTS: THE CONTRACTOR SHALL PROVIDE A CONTINUOUS, ACCESSIBLE AND SAFE PEDESTRIAN WALKWAY THAT MEETS ADA AND MN MUTCD STANDARDS IF WORKING IN A SIDEWALK AREA, AND TRAFFIC CONTROL PER MN MUTCD REQUIREMENTS FOR WORK IN THE PUBLIC RIGHT OF WAY.
4. ENCROACHMENTS: PER CHAPTER 134 OF THE LEGISLATIVE CODE, NO PERSON SHALL CONSTRUCT AND MAINTAIN ANY PROJECTION OR ENCROACHMENT WITHIN THE PUBLIC RIGHT-OF-WAY.
5. CONSTRUCTION OF THE DEVELOPMENT THAT NECESSITATES TEMPORARY USE OF THE RIGHT-OF-WAY (ROW) FOR CONSTRUCTION PURPOSES SHALL BE LIMITED TO EQUIPMENT, PERSONNEL, DEVICES AND APPURTENANCES THAT ARE REMOVABLE FOLLOWING CONSTRUCTION. ENCROACHMENT PERMITS WILL NOT BE GRANTED FOR DEVICES SUCH AS TIE BACKS, ROCK BOLTS, H-PILES, LAGGING, TIMBERS, SHEET PILING, ETC. THAT THE OWNER IS SEEKING TO ABANDON IN THE ROW.
6. THE CONTRACTOR SHALL CONTACT DON BJORKMAN, GENERAL FOREMAN, LIGHTING - SIGNAL MAINTENANCE, (651-266-9780), IF REMOVAL OR RELOCATION OF EXISTING FACILITIES IS REQUIRED OR IN THE EVENT OF DAMAGE TO THE LIGHTING OR SIGNAL UTILITIES. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY (AND RELATED COSTS) FOR ANY DAMAGE OR RELOCATIONS.
7. ROADWAY RESTORATION: AS PER THE CITY'S "STANDARD SPECIFICATION FOR STREET OPENINGS" POLICY, RESTORATION ON ROADWAY SURFACES LESS THAN 5 YEARS OLD WILL REQUIRE FULL WIDTH MILL AND OVERLAY OR ADDITIONAL DEGRADATION FEES. DEGRADATION FEES ARE DETERMINED BY CONTACTING THE RIGHT OF WAY SERVICE DESK AT (651) 266-6151. PAVEMENT RESTORATION SHALL BE COMPLETED BY THE ST. PAUL PUBLIC WORKS STREET MAINTENANCE DIVISION. ALL RELATED COSTS ARE THE RESPONSIBILITY OF THE DEVELOPER/CONTRACTOR. CONTACT STREET MAINTENANCE AT (651) 266-9700 FOR ESTIMATE OF COST FOR PAVEMENT RESTORATION.
8. CONSTRUCTION IN RIGHT OF WAY: ALL WORK ON CURBS, DRIVEWAYS, AND SIDEWALKS WITHIN THE PUBLIC RIGHT-OF-WAY MUST BE DONE TO CITY STANDARDS AND SPECIFICATIONS BY A CONTRACTOR LICENSED TO WORK IN THE CITY RIGHT-OF-WAY UNDER A PERMIT FROM THE PUBLIC WORKS SIDEWALKS SECTION (651-266-6108). SIDEWALK GRADES MUST BE CARRIED ACROSS DRIVEWAYS.

   RIGHT OF WAY RESTORATION: RESTORATION OF ASPHALT AND CONCRETE PAVEMENTS ARE PERFORMED BY THE PUBLIC WORKS STREET MAINTENANCE DIVISION. THE CONTRACTOR IS RESPONSIBLE FOR PAYMENT TO THE CITY FOR THE COST OF THESE RESTORATIONS. THE CONTRACTOR SHALL CONTACT PUBLIC WORKS STREET MAINTENANCE TO SET UP A WORK ORDER PRIOR TO BEGINNING ANY REMOVALS IN THE STREET AT 651-266-9700. PROCEDURES AND UNIT COSTS ARE FOUND IN THE STREET MAINTENANCE'S "GENERAL REQUIREMENTS - ALL RESTORATIONS" AND ARE AVAILABLE AT THE PERMIT OFFICE.

CITY OF ST. PAUL PERMIT REQUIREMENTS

1. ORDERING OBSTRUCTION AND EXCAVATION PERMITS: CONTACT PUBLIC WORKS RIGHT OF WAY SERVICE DESK AT (651) 266-6151. IT IS STRONGLY RECOMMENDED THAT CONTRACTORS CALL FOR COST ESTIMATES PRIOR TO BIDDING TO OBTAIN ACCURATE COST ESTIMATES.
2. OBSTRUCTION PERMITS: THE CONTRACTOR MUST OBTAIN AN OBSTRUCTION PERMIT IF CONSTRUCTION (INCLUDING SILT FENCES) WILL BLOCK CITY STREETS, SIDEWALKS OR ALLEYS, OR IF DRIVING OVER CURBS.
3. EXCAVATION PERMITS: ALL DIGGING IN THE PUBLIC RIGHT OF WAY REQUIRES AN EXCAVATION PERMIT. IF THE PROPOSED BUILDING IS CLOSE TO THE RIGHT OF WAY, AND EXCAVATING INTO THE RIGHT OF WAY IS NEEDED TO FACILITATE CONSTRUCTION, CONTACT THE UTILITY INSPECTOR.
4. FAILURE TO SECURE PERMITS: FAILURE TO SECURE OBSTRUCTION PERMITS OR EXCAVATION PERMITS WILL RESULT IN A DOUBLE-PERMIT FEE AND OTHER FEES REQUIRED UNDER CITY OF ST. PAUL LEGISLATIVE CODES.
5. SEWER CONNECTION PERMIT: LICENSE HOUSE DRAIN CONTRACTOR TO OBTAIN (SEWER CONNECTION PERMIT) TO CONSTRUCT NEW SANITARY AND STORM CONNECTION IN STREET FROM MAIN TO THE PROPERTY. CALL ST PAUL PW PERMIT DESK (651-266-6234) FOR INFORMATION ON OBTAINING THIS PERMIT.
6. A BUILDING (GRADING) PERMIT FROM THE BUILDING CODE OFFICE WILL BE REQUIRED TO PROCEED WITH GRADING ACTIVITY.

KEY NOTES

A. CONCRETE DRIVEWAY - ST PAUL TYPE 6 DETAIL 1206D
B. MEET AND MATCH EXISTING
C. EDGE OF BITUMINOUS
D. 6' CHAIN LINK FENCE WITH MANUAL GATES
E. BITUMINOUS CURB
F. PRIVACY SLAT INSERTS IN FENCE- SEE EZ SLAT DETAIL ON SHEET C9.02

NORTH

SCALE 0 30 60 IN FEET

Sambatek
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Engineering | Surveying | Planning | Environmental

Client
VENTURE PASS PARTNERS

Project
ROHN INDUSTRIES TRAILER STORAGE

Location
ST PAUL, MINNESOTA
2495 KASOTA AVENUE

Certification

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.

NOT FOR CONSTRUCTION

Chad M. Ayers
Registration No. 41301 Date: 08/09/2019

If applicable, contact us for a wet signed copy of this document which is available upon request at Sambatek's Minnetonka, MN office.

Summary

Designed: CMA Drawn: MLL
Approved: CMA Book / Page:
Phase: PRELIM Initial Issue: 08/09/2019

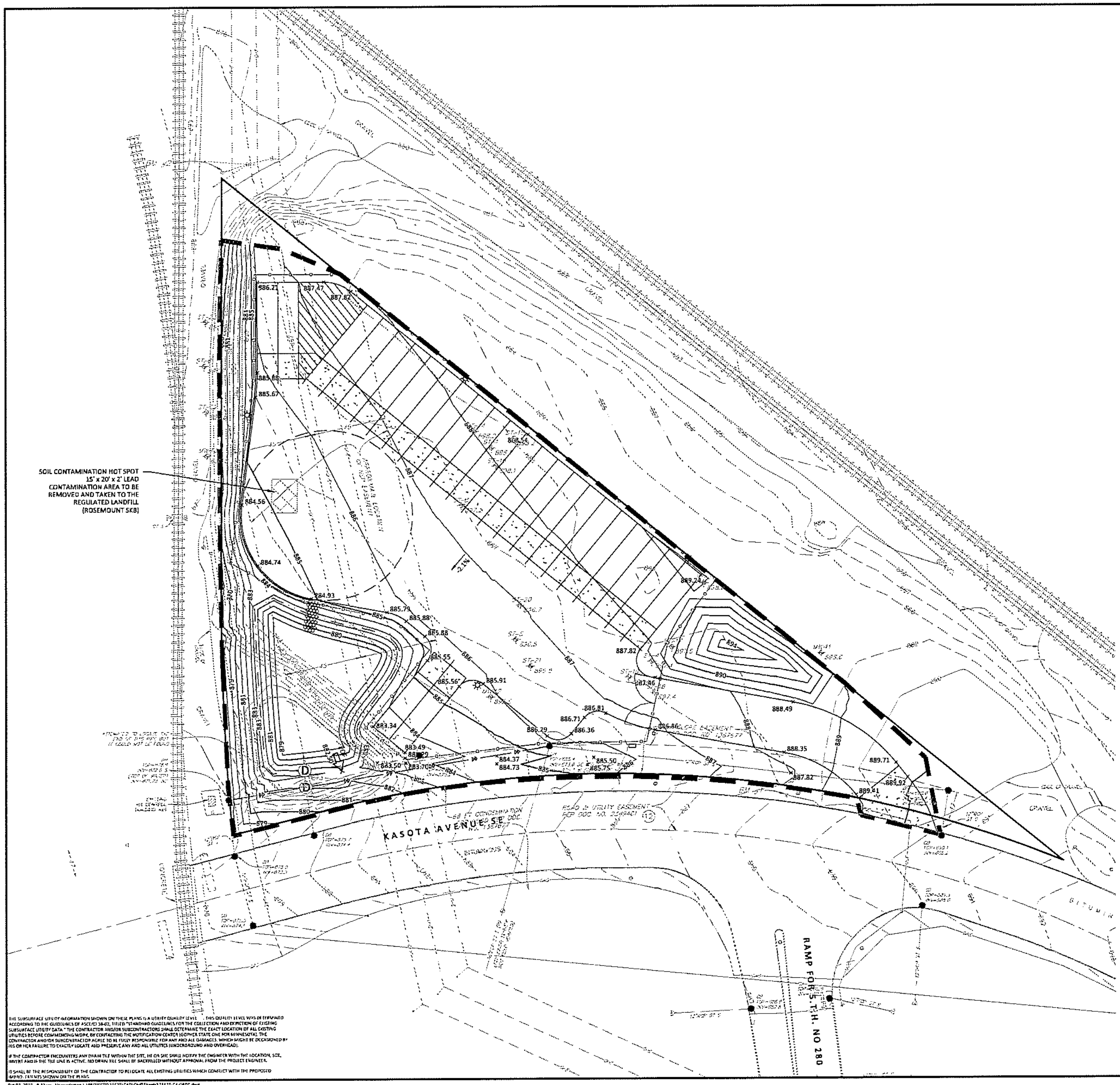
Revision History

No.	Date	By	Submittal / Revision
	08/09/2019	MLL	SITE PLAN REVIEW
	10/01/2019	MLL	CITY COMMENT RESPONSE

Sheet Title
SITE PLAN

Sheet No. Revision
C3.01

Project No. 21625



LEGEND

	PROPOSED	EXISTING
PROPERTY LIMIT		
CURB & GUTTER		
STORM SEWER		
DRAINTILE		
BUILDING		
RETAINING WALL		
WETLAND LIMITS		
TREELINE		
SPOT ELEVATION	902.5	902.5
CONTOUR	902	902
RIP RAP		
OVERFLOW ELEV.	EOF 902.5	
SOIL BORINGS		

GRADING NOTES

1. PROPOSED CONTOURS ARE TO FINISHED SURFACE ELEVATION. SPOT ELEVATIONS ALONG PROPOSED CURB DENOTE GUTTER GRADE.
2. CONTRACTOR SHALL REVIEW PAVEMENT GRADIENT AND CONSTRUCT "GUTTER OUT" WHERE WATER DRAINS AWAY FROM CURB. ALL OTHER AREAS SHALL BE CONSTRUCTED AS "GUTTER IN" CURB.
3. ALL GRADIENT ON SIDEWALKS ALONG THE ADA ROUTE SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 5% (1:20), EXCEPT AT CURB RAMPS (1:12), AND A MAXIMUM CROSS SLOPE OF 2.08% (1:48). MAXIMUM SLOPE IN ANY DIRECTION ON AN ADA PARKING STALL OR ACCESS AISLE SHALL BE IN 2.08% (1:48). CONTRACTOR SHALL REVIEW AND VERIFY THE GRADIENT IN THE FIELD ALONG THE ADA ROUTES PRIOR TO PLACING CONCRETE OR BITUMINOUS. CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF THERE IS A DISCREPANCY BETWEEN THE GRADIENT IN THE FIELD VERSUS THE DESIGN GRADIENT. COORDINATE ALL WORK WITH PAVING CONTRACTOR.
4. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
5. SAFETY NOTICE TO CONTRACTORS: IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS ON THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE ENGINEER OR THE DEVELOPER TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON OR NEAR THE CONSTRUCTION SITE.
6. CONTRACTOR SHALL COMPLETE THE SITE GRADING CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE OWNER'S SOILS ENGINEER. ALL SOIL TESTING SHALL BE COMPLETED BY THE OWNER'S SOILS ENGINEER. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED SOIL TESTS AND INSPECTIONS WITH THE SOILS ENGINEER.

   A GEOTECHNICAL ENGINEERING SOILS REPORT HAS BEEN COMPLETED BY:

   COMPANY: BRAUN INTERTEC CORPORATION
   ADDRESS: 11001 HAMPSHIRE AVE S. MINNEAPOLIS, MN 55438
   PHONE: 952-995-2000
   DATED: 6-21-2019

   CONTRACTOR SHALL OBTAIN A COPY OF THE SOILS REPORT.
7. CONTRACTOR SHALL COMPLETE DEWATERING AS REQUIRED TO COMPLETE THE SITE GRADING CONSTRUCTION.
8. PRIOR TO PLACEMENT OF THE AGGREGATE BASE, A TEST ROLL SHALL BE PERFORMED ON THE STREET AND PARKING AREA SUBGRADE. CONTRACTOR SHALL PROVIDE A LOADED TANDEM AXLE TRUCK WITH A GROSS WEIGHT OF 25 TONS. THE TEST ROLLING SHALL BE AT THE DIRECTION OF THE SOILS ENGINEER AND SHALL BE COMPLETED IN AREAS AS DIRECTED BY THE SOILS ENGINEER. CORRECTION OF THE SUBGRADE SOILS SHALL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SOILS ENGINEER.
9. REPLACE ALL SUBGRADE SOIL DISTURBED DURING THE CONSTRUCTION THAT HAVE BECOME UNSUITABLE AND WILL NOT PASS A TEST ROLL. REMOVE UNSUITABLE SOIL FROM THE SITE AND IMPORT SUITABLE SOIL AT NO ADDITIONAL COST TO THE OWNER.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING VEHICULAR AND PEDESTRIAN TRAFFIC CONTROL DEVICES SUCH AS BARRICADES, WARNING SIGNS, DIRECTIONAL SIGNS, FLAGMEN AND LIGHTS TO CONTROL THE MOVEMENT OF TRAFFIC WHERE NECESSARY. TRAFFIC CONTROL DEVICES SHALL CONFORM TO APPROPRIATE MINNESOTA DEPARTMENT OF TRANSPORTATION STANDARDS.
11. EXISTING TREES AND OTHER NATURAL VEGETATION WITHIN THE PROJECT AND/OR ADJACENT TO THE PROJECT ARE OF PRIME CONCERN TO THE CONTRACTOR'S OPERATIONS AND SHALL BE A RESTRICTED AREA. CONTRACTOR SHALL PROTECT TREES TO REMAIN AT ALL TIMES. EQUIPMENT SHALL NOT NEEDLESSLY BE OPERATED UNDER NEARBY TREES AND EXTREME CAUTION SHALL BE EXERCISED WHEN WORKING ADJACENT TO TREES. SHOULD ANY PORTION OF THE TREE BRANCHES REQUIRE REMOVAL TO PERMIT OPERATION OF THE CONTRACTOR'S EQUIPMENT, CONTRACTOR SHALL OBTAIN THE SERVICES OF A PROFESSIONAL TREE TRIMMING SERVICE TO TRIM THE TREES PRIOR TO THE BEGINNING OF OPERATION. SHOULD CONTRACTOR'S OPERATIONS RESULT IN THE BREAKING OF ANY LIMBS, THE BROKEN LIMBS SHOULD BE REMOVED IMMEDIATELY AND CUTS SHALL BE PROPERLY PROTECTED TO MINIMIZE ANY LASTING DAMAGE TO THE TREE. NO TREES SHALL BE REMOVED WITHOUT AUTHORIZATION BY THE ENGINEER. COSTS FOR TRIMMING SERVICES SHALL BE CONSIDERED INCIDENTAL TO THE GRADING CONSTRUCTION AND NO SPECIAL PAYMENT WILL BE MADE.
12. EXCAVATE TOPSOIL FROM AREAS TO BE FURTHER EXCAVATED OR REGRADED AND STOCKPILE IN AREAS DESIGNATED ON THE SITE. CONTRACTOR SHALL SALVAGE ENOUGH TOPSOIL FOR RESPREADING ON THE SITE AS SPECIFIED. EXCESS TOPSOIL SHALL BE PLACED IN EMBANKMENT AREAS, OUTSIDE OF BUILDING PADS, ROADWAYS AND PARKING AREAS. CONTRACTOR SHALL SUBCUT CUT AREAS, WHERE TURF IS TO BE ESTABLISHED, TO A DEPTH OF 6 INCHES. RESPREAD TOPSOIL IN AREAS WHERE TURF IS TO BE ESTABLISHED TO A MINIMUM DEPTH OF 6 INCHES.
13. TRENCH BORROW CONSTRUCTION: IF ALLOWED BY THE OWNER, CONTRACTOR SHALL COMPLETE "TRENCH BORROW" EXCAVATION IN AREAS DIRECTED BY THE ENGINEER IN ORDER TO OBTAIN STRUCTURAL MATERIAL. TREES SHALL NOT BE REMOVED OR DAMAGED AS A RESULT OF THE EXCAVATION, UNLESS APPROVED BY THE ENGINEER. THE EXCAVATION SHALL COMMENCE A MINIMUM OF 10 FEET FROM THE LIMIT OF THE BUILDING PAD. THE EXCAVATION FROM THIS LIMIT SHALL EXTEND AT A MINIMUM SLOPE OF 1 FOOT HORIZONTAL TO 1 FOOT VERTICAL (1:1) DOWNWARD AND OUTWARD FROM THE FINISHED SURFACE GRADE ELEVATION. THE TRENCH BORROW EXCAVATION SHALL BE BACKFILLED TO THE PROPOSED FINISHED GRADE ELEVATION, AND SHALL BE COMPACTED IN ACCORDANCE WITH REQUIREMENTS OF THE QUALITY COMPACTION METHOD AS OUTLINED IN MN/DOT SPECIFICATION 2105.3F2. SNOW FENCE SHALL BE FURNISHED AND PLACED ALONG THE PERIMETER OF THE TRENCH BORROW AREA WHERE THE SLOPES EXCEED 2 FOOT HORIZONTAL TO 1 FOOT VERTICAL (2:1).
14. FINISHED GRADING SHALL BE COMPLETED, CONTRACTOR SHALL UNIFORMLY GRADE AREAS WITHIN LIMITS OF GRADING, INCLUDING ADJACENT TRANSITION AREAS. PROVIDE A SMOOTH FINISHED SURFACE WITHIN SPECIFIED TOLERANCES, WITH UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE SHOWN, OR BETWEEN SUCH POINTS AND EXISTING GRADES. AREAS THAT HAVE BEEN FINISHED GRADED SHALL BE PROTECTED FROM SUBSEQUENT CONSTRUCTION OPERATIONS, TRAFFIC AND EROSION. REPAIR ALL AREAS THAT HAVE BECOME RUTTED, ERODED OR HAS SETTLED BELOW THE CORRECT GRADE. ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO EQUAL OR BETTER THAN ORIGINAL CONDITION OR TO THE REQUIREMENTS OF THE NEW WORK.
15. TOLERANCES
    - 15.a. THE STREET OR PARKING AREA SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.05 FOOT ABOVE, OR 0.10 FOOT BELOW, THE PRESCRIBED ELEVATION OF ANY POINT WHERE MEASUREMENT IS MADE.
    - 15.b. AREAS WHICH ARE TO RECEIVE TOPSOIL SHALL BE GRADED TO WITHIN 0.30 FOOT ABOVE OR BELOW THE REQUIRED ELEVATION, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
    - 15.c. TOPSOIL SHALL BE GRADED TO PLUS OR MINUS 1/2 INCH OF THE SPECIFIED THICKNESS.
16. AFTER THE SITE GRADING IS COMPLETED, IF EXCESS OR SHORTAGE OF SOIL MATERIAL EXISTS, CONTRACTOR SHALL TRANSPORT ALL EXCESS SOIL MATERIAL OFF THE SITE TO AN AREA SELECTED BY THE CONTRACTOR, OR IMPORT SUITABLE MATERIAL TO THE SITE.
17. CONTRACTOR SHALL DETERMINE THE LOCATION OF ANY HAUL ROADS THAT MAY BE REQUIRED TO COMPLETE THE SITE GRADING CONSTRUCTION AND SHALL INDICATE HAUL ROADS ON EROSION AND SEDIMENT CONTROL "SITE MAP". CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE GOVERNING AUTHORITY OF EACH ROADWAY. CONTRACTOR SHALL POST WHATEVER SECURITY, AND COMPLY WITH ALL CONDITIONS WHICH ARE REQUIRED BY EACH GOVERNING AUTHORITY OF EACH ROADWAY.

NORTH

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SCALE IN FEET

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Client
VENTURE PASS PARTNERS

Project
ROHN INDUSTRIES TRAILER STORAGE

Location
ST PAUL, MINNESOTA
2495 KASOTA AVENUE

Certification
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.

Chad M. Ayers
Registration No. 41301 Date: 08/09/2019

If applicable, contact us for a wet signed copy of this plan which is available upon request at Sambatek's, Minnetonka, MN office.

NOT FOR CONSTRUCTION

Summary
Designed: CMA Drawn: MLL
Approved: CMA Book / Page:
Phase: PRELIM Initial Issue: 08/09/2019

Revision History

No.	Date	By	Submittal / Revision
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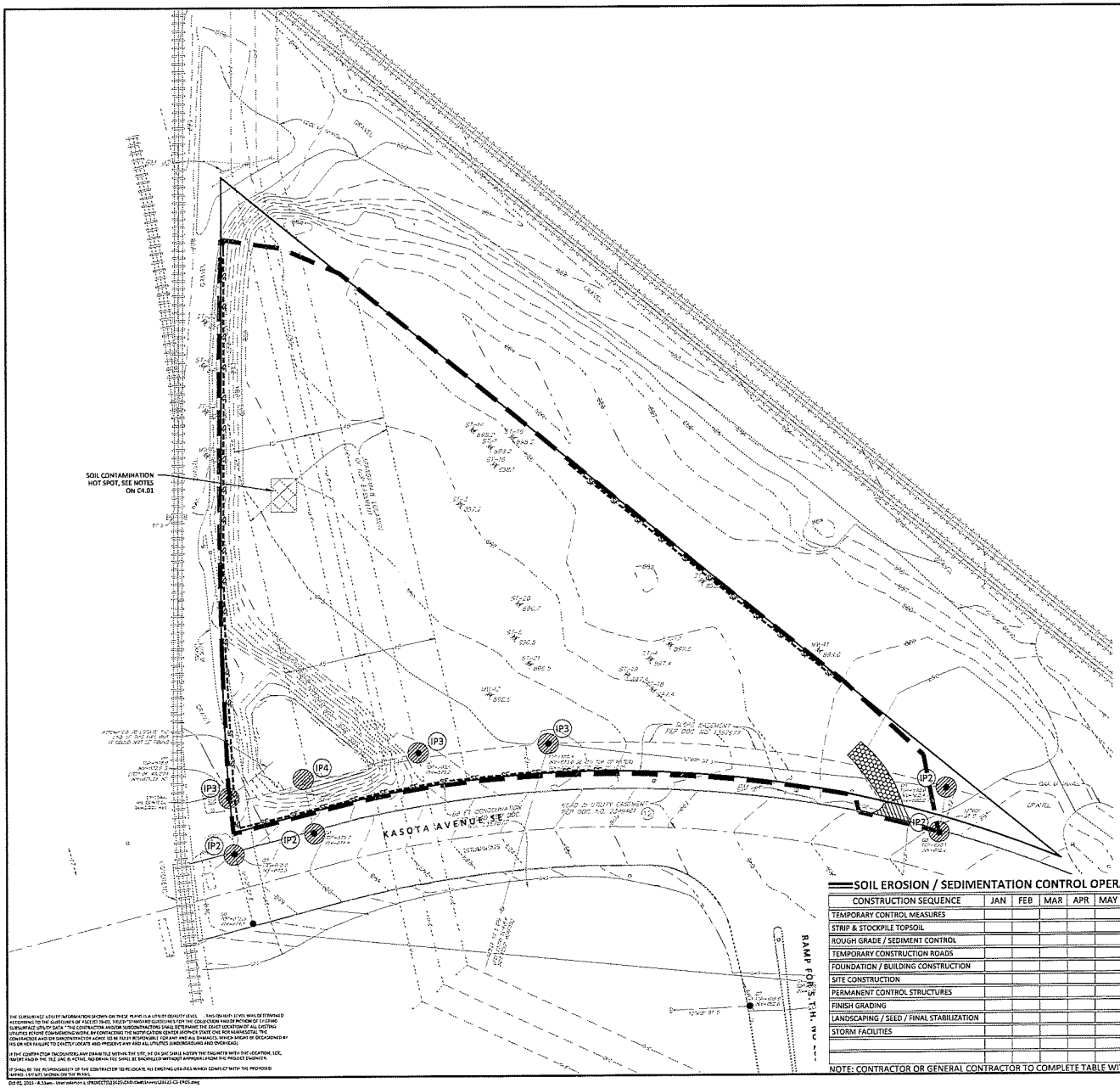
	10/01/2019	MLL	CITY COMMENT RESPONSE

Sheet Title
GRADING PLAN

Sheet No. C4.01 **Revision**

Project No. 21625



LEGEND

	PROPOSED	EXISTING
CURB & GUTTER		
STORM SEWER	D S	D S
DRAINTILE		
CONTOUR	902	902
RIP RAP		
OVERFLOW ELEV.	EOF 902.5	
SILT FENCE	SF SF	
SILT DIKE	SD SD	
LIMITS OF DISTURBANCE		
SOIL BORINGS		ST-1
DIRECTION OF OVERLAND FLOW		
TEMPORARY DIVERSION DITCH		
CHECK DAM		
LIMITS OF DRAINAGE SUB-BASIN		
BIO-ROLL		
INLET PROTECTION DEVICE 1	IP-1	
INLET PROTECTION DEVICE 2	IP-2	
TEMPORARY STONE CONSTRUCTION ENTRANCE		
TEMPORARY SEDIMENT BASIN	SB	
TEMPORARY STORAGE AND PARKING AREA	TS	
TEMPORARY STABILIZATION MEASURES (SEED, MULCH, MATS OR BLANKETS AS OUTLINED IN THE SWPPP)	TSM	

NOTE TO CONTRACTOR

THE EROSION CONTROL PLAN SHEETS ALONG WITH THE REST OF THE SWPPP MUST BE KEPT ONSITE UNTIL THE NOTICE OF TERMINATION IS FILED WITH THE MPCA, THE CONTRACTOR MUST UPDATE THE SWPPP, INCLUDING THE EROSION CONTROL PLAN SHEETS AS NECESSARY TO INCLUDE ADDITIONAL REQUIREMENTS, SUCH AS ADDITIONAL OR MODIFIED BMPS DESIGNED TO CORRECT PROBLEMS IDENTIFIED. AFTER FILING THE NOTICE OF TERMINATION, THE SWPPP, INCLUDING THE EROSION CONTROL PLAN SHEETS, AND ALL REVISIONS TO IT MUST BE SUBMITTED TO THE OWNER, TO BE KEPT ON FILE IN ACCORDANCE WITH THE RECORD RETENTION REQUIREMENTS DESCRIBED IN THE SWPPP NARRATIVE.

EROSION CONTROL MATERIALS QUANTITIES

ITEM	UNIT	QUANTITY
SILT FENCE	LINEAR FEET	850
SILT DIKE	LINEAR FEET	X
BIO-ROLL	LINEAR FEET	X
CONSTRUCTION ENTRANCE	UNIT	1
INLET PROTECTION DEVICE (IP-1)	UNIT	X
INLET PROTECTION DEVICE (IP-2)	UNIT	4
INLET PROTECTION DEVICE (IP-3)	UNIT	3
INLET PROTECTION DEVICE (IP-4)	UNIT	1

* REFER TO SHEET C5.03 FOR GENERAL NOTES, MAINTENANCE NOTES, LOCATION MAPS, AND STANDARD DETAILS

NORTH

SCALE 0 30 60 IN FEET

SOIL EROSION / SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
TEMPORARY CONTROL MEASURES																		
STRIP & STOCKPILE TOPSOIL																		
ROUGH GRADE / SEDIMENT CONTROL																		
TEMPORARY CONSTRUCTION ROADS																		
FOUNDATION / BUILDING CONSTRUCTION																		
SITE CONSTRUCTION																		
PERMANENT CONTROL STRUCTURES																		
FINISH GRADING																		
LANDSCAPING / SEED / FINAL STABILIZATION																		
STORM FACILITIES																		

NOTE: CONTRACTOR OR GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

THE SUBSURFACE UTILITY INFORMATION SHOWN ON THESE PLANS IS A UTILITY QUALITY LEVEL ... THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF ASCE 38-02, ENTITLED STANDARD GUIDELINES FOR THE COLLECTION AND/OR INDICATION OF EXISTING SUBSURFACE UTILITY DATA. "THE CONTRACTOR AND/OR SUBCONTRACTORS SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, BY CONTACTING THE NOTIFICATION CENTER (GOPHER STATE ONE FOR MINNESOTA). THE CONTRACTOR AND/OR SUBCONTRACTOR AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES, WHICH MIGHT BE OCCASIONED BY HIS OR HER FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES SHOWN/NOT SHOWN AND ENCOUNTERED.

IF THE CONTRACTOR ENCOUNTERS ANY DRAIN TILE WITHIN THE SITE, HE OR SHE SHALL NOTIFY THE ENGINEER WITH THE LOCATION, SIZE, DEPTH AND IF THE TILE LINE IS ACTIVE. NO DRAIN TILE SHALL BE BACKFILLED WITHOUT APPROVAL FROM THE PROJECT ENGINEER.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS AS SHOWN ON THE PLANS.

Oct 02, 2019 - 8:33am - User name: L:\PROJECTS\21625\CAD\Civil\Plan\21625-C5-EP01.dwg

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Client
VENTURE PASS PARTNERS

Project
ROHN INDUSTRIES TRAILER STORAGE

Location
ST PAUL, MINNESOTA
2495 KASOTA AVENUE

Certification

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.

Chad Myers
Registration No. 41301 Date: 08/09/2019

If applicable, contact us for a wet signed copy of this which is available upon request at Sambatek's Minnetonka, MN office.

NOT FOR CONSTRUCTION

Summary

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Approved: CMA Book / Page:
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Revision History

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	10/01/2019	MLL	CITY COMMENT RESPONSE

Sheet Title
EROSION CONTROL PHASE 1

Sheet No. Revision
C5.01

Project No. 21625

LEGEND

	PROPOSED	EXISTING
CURB & GUTTER		
STORM SEWER		
DRAINTILE		
CONTOUR		
RIP RAP		
OVERFLOW ELEV.		
SILT FENCE		
SILT DIKE		
LIMITS OF DISTURBANCE		
SOIL BORINGS		
DIRECTION OF OVERLAND FLOW		
TEMPORARY DIVERSION DITCH		
CHECK DAM		
LIMITS OF DRAINAGE SUB-BASIN		
BIO-ROLL		
INLET PROTECTION DEVICE 1	IP-1	
INLET PROTECTION DEVICE 2	IP-2	
TEMPORARY STONE CONSTRUCTION ENTRANCE		
TEMPORARY SEDIMENT BASIN	SB	
TEMPORARY STORAGE AND PARKING AREA	TS	
TEMPORARY STABILIZATION MEASURES (SEED, MULCH, MATS OR BLANKETS AS OUTLINED IN THE SWPPP)	TSM	

NOTE TO CONTRACTOR

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EROSION CONTROL MATERIALS QUANTITIES

ITEM	UNIT	QUANTITY
SILT FENCE	LINEAR FEET	1188
SILT DIKE	LINEAR FEET	X
BIO-ROLL	LINEAR FEET	X
CONSTRUCTION ENTRANCE	UNIT	1
INLET PROTECTION DEVICE (IP-1)	UNIT	X
INLET PROTECTION DEVICE (IP-2)	UNIT	4
INLET PROTECTION DEVICE (IP-3)	UNIT	1
INLET PROTECTION DEVICE (IP-4)	UNIT	1

* REFER TO SHEET C5.03 FOR GENERAL NOTES, MAINTENANCE NOTES, LOCATION MAPS, AND STANDARD DETAILS

NORTH

0 30 60
SCALE IN FEET

SOIL EROSION / SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
TEMPORARY CONTROL MEASURES																		
STRIP & STOCKPILE TOPSOIL																		
ROUGH GRADE / SEDIMENT CONTROL																		
TEMPORARY CONSTRUCTION ROADS																		
FOUNDATION / BUILDING CONSTRUCTION																		
SITE CONSTRUCTION																		
PERMANENT CONTROL STRUCTURES																		
FINISH GRADING																		
LANDSCAPING / SEED / FINAL STABILIZATION																		
STORM FACILITIES																		

THE SUBSURFACE UTILITY INFORMATION SHOWN ON THESE PLANS IS A UTILITY QUALITY LEVEL . THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF ASCE/CI 38-02, TITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA." THE CONTRACTOR AND/OR SUBCONTRACTORS SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, BY CONTACTING THE NOTIFICATION CENTER (GOPHER STATE ONE FOR MINNESOTA). THE CONTRACTOR AND/OR SUBCONTRACTOR AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES, WHICH MIGHT BE OCCASIONED BY HIS OR HER FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES (UNDERGROUND AND OVERHEAD).

IF THE CONTRACTOR ENCOUNTERS ANY DRAIN TILE WITHIN THE SITE, HE OR SHE SHALL NOTIFY THE ENGINEER WITH THE LOCATION, SIZE, INVERT AND IF THE TILE LINE IS ACTIVE. NO DRAIN TILE SHALL BE BACKFILLED WITHOUT APPROVAL FROM THE PROJECT ENGINEER.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

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Engineering | Surveying | Planning | Environmental

Client
VENTURE PASS PARTNERS

Project
ROHN INDUSTRIES TRAILER STORAGE

Location
ST PAUL, MINNESOTA
2495 KASOTA AVENUE

Certification
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.

Chad M. Ayers
Registration No. 41301 Date: 08/09/2019

If applicable, contact us for a wet signed copy of this plan which is available upon request at Sambatek's, Minnetonka, MN office.

NOT FOR CONSTRUCTION

Summary
Designed: CMA Drawn: MLL
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No.	Date	By	Submittal / Revision
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	10/01/2019	MLL	CITY COMMENT RESPONSE

Sheet Title
EROSION CONTROL PHASE 2

Sheet No. Revision
C5.02

Project No. 21625

EROSION & SEDIMENTATION CONTROL NOTES & DETAILS / "SITE MAP"

SITE LOCATION MAP
NOT TO SCALE

USGS MAP
NOT TO SCALE

AREA SUMMARY IN ACRES

PAVEMENT AREA	1.05 AC±
BUILDING AREA	0.00 AC±
SEEDED AREA	0.77 AC±
TOTAL DISTURBED	1.82 AC±
PRE - CONSTRUCTION IMPERVIOUS	0.00 AC±
POST - CONSTRUCTION IMPERVIOUS	1.05 AC±

DEVELOPER/OWNER VENTURE PASS PARTNERS 1620 WATERWOOD CT EXCELSIOR, MN 55331 (612) 563-9107
SITE OPERATOR / GENERAL CONTRACTOR
ENVIRONMENT:

CONCRETE WASHOUT AREA
NOT TO SCALE

ROAD DRAIN INLET PROTECTION TOP SLAB MODEL (IP-3)
NOT TO SCALE

ROCK PIPE INLET PROTECTION (IP-4)
NOT TO SCALE

ROAD DRAIN INLET PROTECTION (IP-2)
NOT TO SCALE

ROCK EXIT DRIVE
NOT TO SCALE

GENERAL EROSION NOTES:

1. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME. WHERE A CONFLICT EXISTS BETWEEN LOCAL JURISDICTIONAL STANDARD SPECIFICATIONS AND SANITATED STANDARD SPECIFICATIONS, THE MORE STRINGENT SPECIFICATION SHALL APPLY.
2. THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IS COMPRISED OF THIS DRAWING (EROSION & SEDIMENTATION CONTROL PLAN-ESC PLANS, THE STANDARD DETAILS, THE PLAN NARRATIVE, AND ITS APPENDICES, FILED THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING & SUBMITTING THE APPLICATION FOR THE MPCA GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE SWPPP AND THE STATE OF MINNESOTA NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (MPDES PERMIT), ISSUED AUGUST 1, 2018) AND BECOME FAMILIAR WITH THE CONTENTS. THE SWPPP AND ALL OTHER RELATED DOCUMENTS MUST BE KEPT AT THE SITE DURING CONSTRUCTION.
4. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES (BMP'S) AS REQUIRED BY THE SWPPP & PERMITS. CONTRACTOR SHALL OVERSEE THE INSPECTION & MAINTENANCE OF THE BMP'S AND EROSION PREVENTION FROM BEGINNING OF CONSTRUCTION AND UNTIL CONSTRUCTION IS COMPLETED, IS APPROVED BY ALL AUTHORITIES, AND THE NOTICE OF TERMINATION (NOT) HAS BEEN FILED WITH THE MPCA BY EITHER THE OWNER OR OPERATOR AS APPROVED ON PERMIT. ADDITIONAL BMP'S SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
5. CONTRACTOR SHALL COMPLY WITH TRAINING REQUIREMENTS IN PART 21.1-(2.1 OF THE GENERAL PERMIT.
6. BMP'S AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
7. ESC PLAN MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.
8. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OF AS REQUIRED BY THE GENERAL PERMIT. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THE ESC PLANS SHALL BE CLEARLY DELINEATED (E.G. WITH FLAGS, STAKES, SIGNS, SILT FENCE, ETC.) ON THE DEVELOPMENT SITE BEFORE WORK BEGINS. GROUND DISTURBING ACTIVITIES MUST NOT OCCUR OUTSIDE THE LIMITS OF DISTURBANCE.
9. GENERAL CONTRACTOR SHALL DESIGN ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING POTTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
10. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) MUST BE LIMITED TO A DIVIDED AREA OF THE SITE AND SHALL BE CONTAINED AND PROPERLY TREATED OR DISPOSED. NO ENGINE DEGREASING IS ALLOWED ON SITE.
11. ALL LIQUID AND SOLID WASTES GENERATED BY CONCRETE WASHOUT OPERATIONS MUST BE CONTAINED IN A LEAK-PROOF CONTAINMENT FACILITY OR IMPERMEABLE LINER. A COMPACTED CLAY LINER IS NOT ACCEPTABLE. THE LIQUID AND SOLID WASTES MUST NOT CONTACT THE GROUND, AND THERE MUST NOT BE RUNOFF FROM THE CONCRETE WASHOUT OPERATIONS OR AREAS. LIQUID AND SOLID WASTES MUST BE DISPOSED OF PROPERLY AND IN COMPLIANCE WITH MPCA REGULATIONS. A SIGN MUST BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE PROPER FACILITIES. SELF-CONTAINED CONCRETE WASHOUTS ON CONCRETE DELIVERY TRUCKS ARE ALLOWED.
12. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN UP FUEL OR CHEMICAL SPILLS AND LEAKS.
13. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
14. SOLID WASTE: COLLECTED SEDIMENT, ASPHALT & CONCRETE MILLINGS, FLOATING DEBRIS, PAPER, PLASTIC, FABRIC, CONSTRUCTION & DEMOLITION DEBRIS & OTHER WASTES MUST BE DISPOSED OF PROPERLY & MUST COMPLY WITH MPCA DISPOSAL REGULATIONS.
15. HAZARDOUS MATERIALS: OIL, GASOLINE, PAINT & ANY HAZARDOUS SUBSTANCES MUST BE PROPERLY STORED, INCLUDING SECONDARY CONTAINMENT, TO PREVENT SPILLS, LEAKS OR OTHER DISCHARGE. RESTRICTED ACCESS TO STORAGE AREAS MUST BE PROVIDED TO PREVENT VANDALISM. STORAGE & DISPOSAL OF HAZARDOUS WASTE MUST BE IN COMPLIANCE WITH MPCA REGULATIONS.
16. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE SWPPP, SHALL BE INITIATED AS SOON AS PRACTICABLE AND PRIOR TO SOIL DISTURBING ACTIVITIES UPSLOPE.
17. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED SHALL BE TEMPORARILY SEEDED, WITHIN 14 DAYS OF INACTIVITY. SEEDING SHALL BE IN ACCORDANCE WITH MNDOT SEED MIXTURE NUMBER'S 21- 111 OR 21-112 DEPENDING ON THE SEASON OF PLANTING (SEE MNDOT SPECIFICATION SECTION 2575. 3) SEEDING METHOD AND APPLICATION RATE SHALL CONFORM TO MN/DOT SPECIFICATION SECTION 2575.3. TEMPORARY MULCH SHALL BE APPLIED IN ACCORDANCE WITH MNDOT SPECIFICATION SECTION 2575.3F1 AND 2575.3G. ALTERNATIVELY, HYDRAULIC SOIL STABILIZER IN ACCORDANCE WITH MNDOT SPECIFICATION SECTION 2575.3H MAY BE USED IN PLACE OF TEMPORARY MULCH.
18. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY STABILIZED. THESE AREAS SHALL BE STABILIZED IN ACCORDANCE WITH THE TIME TABLE DESCRIBED ABOVE, REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN FOR VEGETATING COVER.
19. CONTRACTOR OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT FROM CONVEYANCES & FROM TEMPORARY SEDIMENTATION BASINS THAT ARE TO BE USED AS PERMANENT WATER QUALITY MANAGEMENT BASINS. SEDIMENT MUST BE STABILIZED TO PREVENT IT FROM BEING WASHED BACK INTO THE BASIN, CONVEYANCES, OR DRAINAGEWAYS DISCHARGING OFF-SITE OR TO SURFACE WATERS. THE CLEANOUT OF PERMANENT BASINS MUST BE SUFFICIENT TO RESTORE THE BASIN TO DESIGN CAPACITY.
20. ON SITE & OFF-SITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BMP'S. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
21. TEMPORARY SOIL STOCKPILES MUST HAVE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS & CANNOT BE PLACED IN SURFACE WATERS, INCLUDING STORMWATER CONVEYANCES SUCH AS CURB & GUTTER SYSTEMS OR CONDUITS & DITCHES.
22. SLOPES SHALL BE 3:1 OR A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
23. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, DIKES DAMS, INLET PROTECTION DEVICES, ETC.) TO PREVENT EROSION.
24. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

MAINTENANCE NOTES:

ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OF FINAL STABILIZATION OF THE SITE. THE DESIGNATED CONTACT PERSON NOTED ON THIS PLAN MUST ROUTINELY INSPECT THE CONSTRUCTION ON SITE DAILY DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

5. ALL SILT FENCES MUST BE REPAIRED, REPLACED, OR SUPPLEMENTED WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES 1/2 OF THE HEIGHT OF THE FENCE. THESE REPAIRS MUST BE MADE WITHIN 24 HOURS OF DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS.
6. TEMPORARY AND PERMANENT SEDIMENTATION BASINS MUST BE DRAINED AND THE SEDIMENT REMOVED WHEN THE DEPTH OF SEDIMENT COLLECTED IN THE BASIN REACHES 1/2 THE STORAGE VOLUME. DRAINAGE AND REMOVAL MUST BE COMPLETED WITHIN 72 HOURS OF DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS (SEE PART 22.2.H(3) OF THE GENERAL PERMIT).
7. SURFACE WATERS, INCLUDING DRAINAGE DITCHES AND CONVEYANCE SYSTEMS, MUST BE INSPECTED FOR EVIDENCE OF SEDIMENT BEING DEPOSITED BY EROSIONAL CONTRACTOR MUST REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATERS, INCLUDING DRAINAGE WAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS, AND RESTABILIZE THE AREAS WHERE SEDIMENT REMOVAL RESULTS IN EXPOSED SOIL. THE REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. CONTRACTOR SHALL USE ALL REASONABLE EFFORTS TO OBTAIN ACCESS. IF PRECLUDED, REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) CALENDAR DAYS OF OBTAINING ACCESS. CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL LOCAL, REGIONAL, STATE AND FEDERAL AUTHORITIES AND RECEIVING ANY APPLICABLE PERMITS, PRIOR TO CONDUCTING ANY WORK.
8. CONSTRUCTION SITE VEHICLE EXIT LOCATIONS MUST BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING ONTO PAVED SURFACES. TRACKED SEDIMENT MUST BE REMOVED FROM ALL OFF-SITE PAVED SURFACES WITHIN 24 HOURS OF DISCOVERY, OR IF APPLICABLE, WITHIN A SHORTER TIME TO COMPLY WITH PART 5.13-5.17 OF THE GENERAL PERMIT.
9. CONTRACTOR IS RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF TEMPORARY AND PERMANENT WATER QUALITY MANAGEMENT BMPS, AS WELL AS ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPS, FOR THE DURATION OF THE CONSTRUCTION WORK AT THE SITE. THE PERMITTEE(S) ARE RESPONSIBLE UNTIL ANOTHER PERMITTEE HAS ASSUMED CONTROL (ACCORDING TO PART 5.1 TO 5.8 OF THE MPCA GENERAL PERMIT) OVER ALL AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED OR THE SITE HAS UNDERGONE FINAL STABILIZATION, AND A (N.O.T.) HAS BEEN SUBMITTED TO THE MPCA.
10. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT MUST BE REMOVED IN A MANNER AND AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G., FUGITIVE SEDIMENT IN STREETS COULD BE WASHED INTO STORM SEWERS BY THE NEXT RAIN AND/OR POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS).
11. ALL INFILTRATION AREAS MUST BE INSPECTED TO ENSURE THAT NO SEDIMENT FROM ONGOING CONSTRUCTION ACTIVITIES IS REACHING THE INFILTRATION AREA AND THESE AREAS ARE PROTECTED FROM COMPACTION DUE TO CONSTRUCTION EQUIPMENT DRIVING ACROSS THE INFILTRATION AREA.

SEQUENCE OF CONSTRUCTION

PHASE I:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCES.
2. PREPARE TEMPORARY PARKING AND STORAGE AREA.
3. CONSTRUCT THE SILT FENCES ON THE SITE.
4. INSTALL INLET PROTECTION DEVICES ON EXISTING STORM STRUCTURES, AS SHOWN ON THE PLAN.
5. CONSTRUCT THE SEDIMENTATION AND SEDIMENT TRAP BASINS, AS REQUIRED.
6. HALT ALL ACTIVITIES AND CONTACT THE CIVIL ENGINEERING CONSULTANT TO PERFORM INSPECTION OF BMPs. GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT STORM WATER PRE-CONSTRUCTION MEETING WITH ENGINEER AND ALL GROUND DISTURBING CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.
7. CLEAR AND GRUB THE SITE.
8. BEGIN GRADING THE SITE.
9. START CONSTRUCTION OF BUILDING PAD AND STRUCTURES.

PHASE II:

1. TEMPORARILY SEED DENUDED AREAS.
2. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
3. INSTALL RIP RAP AROUND OUTLET STRUCTURES.
4. INSTALL INLET PROTECTION AROUND ALL STORM SEWER STRUCTURES.
5. PREPARE SITE FOR PAVING.
6. PAVE SITE.
7. INSTALL INLET PROTECTION DEVICES.
8. COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND PLANTING.
9. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES (ONLY IF SITE IS STABILIZED), IF REQUIRED BY THE CONTRACT

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Client
VENTURE PASS PARTNERS

Project
ROHN INDUSTRIES TRAILER STORAGE

Location
ST PAUL, MINNESOTA
2495 KASOTA AVENUE

Certification

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.

Chad M. Ayers

Chad M. Ayers
Registration No. 41301 Date: 08/09/2019

NOT FOR CONSTRUCTION

Printable version on file in a wet-signed copy of this sheet which is available upon request at Sambatek's Minnetonka, MN office.

Summary

Designed: CMA | Drawn: MEL
Approved: CMA | Book / Page:
Phase: PHASE | Initial Issue: 08/09/2019

Revision History

No.	Date	By	Submittal / Revision
	09/05/2019	MEL	SITE PLAN REVIEW
	10/01/2019	MEL	CITY COMMENT RESPONSE

Sheet Title
EROSION CONTROL NOTES AND DETAILS

Sheet No. Revision
C5.03

Project No. 21625

SECTION 1: SITE EVALUATION, ASSESSMENT, AND PLANNING

1.1 PROJECT/SITE INFORMATION

ROHN INDUSTRIES TRAILER STORAGE
2495 KASOTA AVENUE
CITY: ST PAUL
STATE: MN
ZIP CODE: 55108
COUNTY: RAMSEY

THE PROPOSED PROJECT IS THE CONSTRUCTION OF A TRAILER PARKING FACILITY AT KASOTA AVENUE AND HIGHWAY 280.

NPDES PERMIT NUMBER: ______________

1.2 CONTACT INFORMATION/RESPONSIBLE PARTIES

COMPANY/ORGANIZATION NAME:
CONTACT NAME:
ADDRESS:
CITY, STATE, ZIP CODE:
TELEPHONE NUMBER:
FAX/EMAIL:

GENERAL CONTRACTOR (TO BE COMPLETED BY GENERAL CONTRACTOR):
COMPANY/ORGANIZATION NAME:
CONTACT NAME:
ADDRESS:
CITY, STATE, ZIP CODE:
TELEPHONE NUMBER:
FAX/EMAIL:
INSERT AREA OF CONTROL (IF MORE THAN ONE OPERATOR AT SITE):

THE GENERAL CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE MINNESOTA GENERAL PERMIT AUTHORIZATION TO DISCHARGE STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM/STATE DISPOSAL SYSTEM PERMIT PROGRAM (GENERAL PERMIT). THE GENERAL CONTRACTOR MUST COMPLY WITH ANY LOCAL GOVERNING AGENCY (LGU) HAVING JURISDICTION CONCERNING EROSION AND SEDIMENT CONTROL. THE GENERAL CONTRACTOR SHALL BE REQUIRED TO BE A CO-APPLICANT WITH THE OWNER. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE EROSION AND SEDIMENT CONTROL DEVICES.

THE "APPLICATION FOR GENERAL STORM-WATER PERMIT FOR CONSTRUCTION ACTIVITY (MN R100001)" SHALL BE COMPLETED BY THE GENERAL CONTRACTOR AND SUBMITTED ONLINE, ALONG WITH THE REQUIRED APPLICATION FEE, THROUGH THE MPCA'S WEBSITE.

UNLESS NOTIFIED BY THE MINNESOTA POLLUTION CONTROL AGENCY (MPCA) TO THE CONTRARY, APPLICANTS WHO SUBMIT A COMPLETE APPLICATION FORM IN ACCORDANCE WITH THE REQUIREMENTS OF THE GENERAL PERMIT ARE AUTHORIZED TO DISCHARGE STORM WATER FROM THE CONSTRUCTION SITE UNDER THE TERMS AND CONDITIONS OF THIS PERMIT SEVEN (7) CALENDAR DAYS THE ONLINE APPLICATION PROCESS IS COMPLETE(HTTPS://NETWEB.PCA.STATE.MN.US/PRIVATE/).

(NOTE: ALL PROJECTS UNDER 50 ACRES MUST SUBMIT THE PERMIT APPLICATION USING THE ONLINE PROCESS. MAILED APPLICATIONS ARE ONLY ACCEPTED FOR PROJECTS THAT DISTURB 50 OR MORE ACRES, AND HAVE A DISCHARGE POINT WITHIN 1 MILE OF A PROTECTED WATER.)

ADDITIONALLY, AUTHORIZATION WILL BE DELAYED UNDER THE FOLLOWING CIRCUMSTANCES:

- IF THE PROJECT DISTURBS 50 ACRES OR MORE AND HAS A DISCHARGE POINT WITHIN 1 MILE AND FLOWS TO AN IMPAIRED OR SPECIAL WATER WHOSE DISCHARGE MAY REACH AN IMPAIRED OR SPECIAL WATER LISTED IN SECTION 23 OF THE GENERAL PERMIT THE APPLICANT SHALL SUBMIT THE STORM WATER POLLUTION PREVENTION PLAN AND A COMPLETED APPLICATION AT LEAST 30 CALENDAR DAYS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES. UNLESS NOTIFIED BY THE MPCA TO THE CONTRARY, COVERAGE BECOMES EFFECTIVE 30 CALENDAR DAYS AFTER THE POSTMARKED DATE OF THE COMPLETED APPLICATION.
- IF THE PROJECT INCLUDES ALTERNATIVE METHODS THE APPLICATION AND TWO ALTERNATIVE TREATMENT PLANS MUST BE SUBMITTED A MINIMUM OF 90 DAY BEFORE CONSTRUCTION STARTS.

EROSION & SEDIMENT CONTROL SUBCONTRACTOR (RESPONSIBLE FOR IMPLEMENTING & UPDATING SWPPP - TO BE COMPLETED BY CONTRACTOR):
COMPANY/ORGANIZATION NAME:
CONTACT NAME:
ADDRESS:
CITY, STATE, ZIP CODE:
TELEPHONE NUMBER:
FAX/EMAIL:

EROSION & SEDIMENT CONTROL INSPECTOR (SEE PART 6.1 OF THIS SWPPP FOR MORE INFORMATION ON INSPECTION RESPONSIBILITIES- TO BE COMPLETED BY CONTRACTOR):
COMPANY/ORGANIZATION NAME:
CONTACT NAME:
ADDRESS:
CITY, STATE, ZIP CODE:
TELEPHONE NUMBER:
FAX/EMAIL:

GROUND DISTURBING SUBCONTRACTOR(S):
COMPANY/ORGANIZATION NAME:
CONTACT NAME:
ADDRESS:
CITY, STATE, ZIP CODE:
TELEPHONE NUMBER:
FAX/EMAIL:

THE GENERAL CONTRACTOR SHALL PROVIDE A CHAIN OF RESPONSIBILITY WITH ALL OPERATORS ON THE SITE TO ENSURE THAT THE SWPPP WILL BE IMPLEMENTED AND STAY IN EFFECT UNTIL THE CONSTRUCTION PROJECT IS COMPLETE AND THE NOT SUBMITTED.

THIS SWPPP WAS PREPARED BY:
COMPANY/ORGANIZATION NAME: SAMBATEK
CONTACT NAME: MEGAN LARSON
ADDRESS: 12800 WHITEWATER DR SUITE 300
CITY, STATE, ZIP CODE: MINNETONKA, MN 55343
TELEPHONE NUMBER: 763-476-6010
FAX/EMAIL: MLARSON@SAMBATEK.COM

SWPPP DESIGNER CERTIFICATION CARD:

UNIVERSITY OF MINNESOTA
Megan Larson
Construction Installer (May 31 2022)
Design of Construction SWPPP (May 31 2022)

1.3 NATURE OF CONSTRUCTION ACTIVITY

NATURE OF CONSTRUCTION:
THIS SWPPP HAS BEEN PREPARED FOR MAJOR ACTIVITIES ASSOCIATED WITH CONSTRUCTION OF ROHN INDUSTRIES TRAILER STORAGE IN ST PAUL. CONSTRUCTION WILL INCLUDE GRADING AND PAVING OF THE PARKING AREA AND STORMWATER IMPROVEMENTS, INCLUDING EXPANDING THE EXISTING STORMWATER POND.

ANTICIPATED APPROXIMATE TIMELINES:
ESTIMATED PROJECT START DATE: XX/XX/XX
ESTIMATED PROJECT COMPLETION DATE: XX/XX/XX

1.4 SOILS, SLOPES, VEGETATION, AND CURRENT DRAINAGE PATTERNS

SOIL TYPE(S):
A GEOTECHNICAL INVESTIGATION BY BRAUN INTERTEC GENERALLY FOUND A TOPSOIL LAYER OF LESS THAN 1' OVER A SILTY SAND FILL LAYER. THIS LAYER INCLUDES DEBRIS INCLUDING GLASS, CONCRETE, GRAVEL, BRICK, WOOD, PAPER, AND COAL. THE FILL LAYER RANGES FROM 14-22 FEET AND WAS ENCOUNTERED AT ALL BORINGS. THE NATIVE SOILS BENEATH THE FILL IS A SANDY LEAN CLAY (GLACIAL TILL), LEAN CLAY OR SILT (ALLUVIUM), OR ORGANIC CLAY (SWAMP DEPOSIT).

PREVIOUS ENVIRONMENTAL INVESTIGATIONS INDICATED THE PROPERTY SUPPORTED A PORTION OF THE ELM STREET ASH DUMP. FURTHER INVESTIGATION WAS CONDUCTED BY LANDMARK ENVIRONMENTAL AND THE SITE WAS IDENTIFIED AS A RECOGNIZED ENVIRONMENTAL CONDITIONS. SEE THE FULL GEOTECHNICAL REPORT BY BRAUN INTERTEC AND THE PHASE 1, PHASE 2, AND VRAP REPORTS FROM LANDMARK ENVIRONMENTAL FOR FURTHER INFORMATION.

SLOPES:
THE SITE GENERALLY SLOPES TOWARDS AN EXISTING POND ON THE SW CORNER OF THE SITE AROUND 2-3 PERCENT. SLOPES ARE AROUND 3:1 ON THE WEST EDGE OF THE SITE AND SURROUNDING THE POND.
THROUGH CONSTRUCTION, THE PARKING LOT WILL MAINTAIN THE 2-3 PERCENT SLOPE TOWARDS THE SW CORNER. THE 3:1 SLOPES ON THE WEST EDGE AND AROUND THE POND WILL REMAIN, BUT THE POND WILL BE EXPANDED.

DRAINAGE PATTERNS:
THE SOUTH PORTION OF THE SITE DRAINS OVERLAND TO THE EXISTING POND. THE REMAINDER OF THE SITE DRAINS UNCONTROLLED OFFSITE.

IN THE PROPOSED CONDITION, THE POND WILL BE EXPANDED AND A MAJORITY OF THE SITE WILL DRAIN OVERLAND TO THE POND. THE POND WILL ROUTE TO A FILTRATION DEVICE BEFORE CONTINUING TO DOWNSTREAM RECEIVING WATERS. THE NORTH SIDE OF THE SITE AND THE WEST WILL CONTINUE TO FLOW OVERLAND OFFSITE.

VEGETATION:
THE CURRENT SITE IS COVERED WITH NATIVE ROUGH VEGETATION. IN THE PROPOSED CONDITION, THE GREENSPACE WILL BE PLANTED WITH NATIVE GRASSES.

RAINFALL INFORMATION:
RAINFALL INFORMATION - THE AVERAGE TOTAL ANNUAL PRECIPITATION IS ABOUT 28.32 INCHES. OF THIS ABOUT 17.31 INCHES, OR 61 PERCENT, USUALLY FALLS IN MAY THROUGH SEPTEMBER. THE AVERAGE ANNUAL SNOWFALL IS 57.3 INCHES.

1.5 CONSTRUCTION SITE ESTIMATES

PROJECT AREA SUMMARY:
TOTAL PROJECT AREA: 1.85 ACRES
CONSTRUCTION SITE AREA TO BE DISTURBED: 1.82 ACRES

IMPERVIOUS AREAS:
IMPERVIOUS AREA BEFORE CONSTRUCTION (ACRES): 0
IMPERVIOUS AREA AFTER CONSTRUCTION (ACRES): 1.05

1.6 RECEIVING WATERS

CONSTRUCTION PHASE STORM WATER SYSTEM DESCRIPTION:
DURING CONSTRUCTION, EROSION AND SEDIMENT CONTROL DEVICES (SILT FENCE, INLET PROTECTION, SILT DIKES, ETC.) WILL WORK TO PREVENT SEDIMENT FROM LEAVING THE SITE AND THEREBY PROTECTING RECEIVING WATERS.

DESCRIPTION OF RECEIVING WATERS:
STORMWATER LEAVING THE SITE ENTERS THE STORM SEWER SYSTEM IN KASOTA AVE AND OUTLETS TO MALLARD MARSH. THERE ARE NO IMPAIRED WATERS WITHIN 1 MILE OF THE PROJECT SITE.

1.7 SITE FEATURES AND SENSITIVE AREAS TO BE PROTECTED

DUE TO THE PRESENCE OF EXISTING CONTAMINATED SOILS ON THE PROJECT SITE, EXTRA MEASURES WILL BE REQUIRED FOR HANDLING AND DISPOSAL OF CONTAMINATED SOILS. SEE THE FINAL VOLUNTARY RESPONSE ACTION PLAN FROM LANDMARK ENVIRONMENTAL DATED JUNE 2019.

1.8 POTENTIAL SOURCES OF POLLUTION

POTENTIAL SOURCES OF SEDIMENT AND OTHER POLLUTANTS TO STORMWATER RUNOFF:
CONSTRUCTION PHASE POLLUTANT SOURCES ANTICIPATED AT THE SITE ARE DISTURBED (BARE) SOIL, VEHICLE FUELS AND LUBRICANTS, CHEMICALS ASSOCIATED WITH BUILDING CONSTRUCTION, AND BUILDING MATERIALS. WITHOUT ADEQUATE CONTROL THERE IS THE POTENTIAL FOR EACH TYPE OF POLLUTANT TO BE TRANSPORTED BY STORM WATER. (DESCRIBE ANY ADDITIONAL ANTICIPATED SOURCES OF SEDIMENT/POLLUTANTS)

1.9 ENDANGERED/THREATENED SPECIES

THERE ARE NO KNOWN THREATENED OR ENDANGERED SPECIES ON OR NEAR THE CONSTRUCTION SITE.

1.10 HISTORIC PRESERVATION

THERE ARE NO KNOWN HISTORIC SITES ON OR NEAR THE CONSTRUCTION SITE.

1.11 APPLICABLE FEDERAL, TRIBAL, STATE OR LOCAL PROGRAMS

LOCAL GOVERNING UNIT (LGU) REQUIREMENTS:
(DESCRIBE CITY, WATERSHED, SWCD, ETC. REQUIREMENTS)

1.12 MITIGATION MEASURES FROM ENVIRONMENTAL REVIEWS/TMDLS/IMPAIRED WATERS

1.13 MAPS

EROSION AND SEDIMENT CONTROL PLANS:
THE FOLLOWING SITE DEVELOPMENT PLAN SHEETS ARE AN INTEGRAL PART OF THIS SWPPP:

C-5.01 - PHASE I EROSION AND SEDIMENTATION CONTROL PLAN/"SITE MAP"
C-5.02 - PHASE II EROSION AND SEDIMENTATION CONTROL PLAN/"SITE MAP"
C-5.03 - EROSION AND SEDIMENTATION CONTROL DETAILS
C-5.03 - EROSION AND SEDIMENTATION CONTROL NOTES/"SITE MAP"

SECTION 2: EROSION AND SEDIMENT CONTROL BMPS

EROSION CONTROL BMPS:
THE PURPOSE OF EROSION CONTROL IS TO PREVENT SOIL PARTICLES FROM BECOMING SUSPENDED IN WATER AND BEING TRANSPORTED TO EITHER DOWNSTREAM SURFACE WATERS OR DOWNSTREAM PROPERTIES.

APPROPRIATE CONSTRUCTION PHASING, VEGETATIVE BUFFER STRIPS, HORIZONTAL SLOPE GRADING, AND OTHER CONSTRUCTION PRACTICES THAT MINIMIZE EROSION MUST BE PLANNED FOR AND IMPLEMENTED.

IN THE NATURAL CONDITION, SOIL IS STABILIZED BY NATIVE VEGETATION. THE PRIMARY TECHNIQUE TO BE USED AT THIS PROJECT FOR FINAL STABILIZATION OF SITE SOIL WILL BE TO PROVIDE A PROTECTIVE COVER OF VEGETATION, PAVEMENT, OR BUILDING.

ALL EXPOSED AREAS MUST BE STABILIZED AS SOON AS POSSIBLE (BUT NO LATER THAN THE NEXT WORK DAY) TO LIMIT SOIL EROSION, BUT IN NO CASE LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY SOIL STOCKPILES WITHOUT SIGNIFICANT SILT, CLAY OR ORGANIC COMPONENTS (E.G. CLEAN AGGREGATED STOCKPILES, DEMOLITION CONCRETE STOCKPILES, SAND STOCKPILES) AND THE CONSTRUCTED BASE COMPONENTS OF ROADS, PARKING LOTS AND SIMILAR SURFACES ARE EXEMPT FROM THIS REQUIREMENT, BUT MUST COMPLY WITH SECTION 2.7 OF THIS SWPPP (SECTION 8.4, 9.9, 9.10, AND 23.9 OF THE GENERAL PERMIT).

SEDIMENT CONTROL BMPS:
THE PURPOSE OF SEDIMENT CONTROL IS TO PREVENT SOIL PARTICLES THAT HAVE BEEN SUSPENDED IN WATER FROM ENTERING SURFACE WATERS, INCLUDING CURB AND GUTTER SYSTEMS AND STORM SEWER INLETS. SEDIMENT CONTROL BMPS HAVE BEEN DESIGNED AS PART OF THIS SWPPP.

IF THE DOWN GRADIENT TREATMENT SYSTEM IS OVERLOADED, THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING ADDITIONAL UP GRADIENT SEDIMENT CONTROL PRACTICES OR REDUNDANT BMPS TO ELIMINATE THE OVERLOADING AND MUST AMEND THE SWPPP TO IDENTIFY THE ADDITIONAL PRACTICES.

SEDIMENT CONTROL PRACTICES MUST ALWAYS BE ESTABLISHED ON ALL DOWN GRADIENT PERIMETERS AND BE LOCATED UPGRADIENT OF ANY BUFFER ZONES. THE PERIMETER SEDIMENT CONTROL PRACTICES MUST BE IN PLACE BEFORE ANY UP GRADIENT LAND DISTURBING ACTIVITIES BEGIN. THESE PRACTICES MUST REMAIN IN PLACE UNTIL FINAL STABILIZATION IS ACHIEVED (SEE SECTION 8 OF THIS SWPPP).

THE TIMING OF THE INSTALLATION OF SEDIMENT CONTROL PRACTICES MAY BE ADJUSTED TO ACCOMMODATE SHORT-TERM ACTIVITIES SUCH AS CLEARING OR GRUBBING, OR PASSAGE OF VEHICLES. ANY SHORT TERM ACTIVITY MUST BE COMPLETED AS QUICKLY AS POSSIBLE AND THE SEDIMENT CONTROL PRACTICES MUST BE RE-INSTALLED IMMEDIATELY AFTER THE ACTIVITY IS COMPLETED. SEDIMENT CONTROL PRACTICES MUST BE INSTALLED BEFORE THE NEXT RAIN EVENT EVEN IF THE ACTIVITY IS NOT COMPLETE.

2.1 MINIMIZE DISTURBED AREA AND PROTECT NATURAL FEATURES AND SOIL

CONSTRUCTION IS TO BE PHASED IN ACCORDANCE WITH THE PHASING PLAN ON SHEET C3.1 SUCH THAT EROSION AND SEDIMENT LOSS TO DOWNSTREAM RECEIVING WATERS IS MINIMIZED.

2.2 PRESERVE 50 FOOT NATURAL BUFFER

THE CONTRACTOR MUST PRESERVE A 50 FOOT NATURAL BUFFER WHEN A SURFACE WATER IS LOCATED WITHIN 50 FEET OF THE PROJECTS EARTH DISTURBANCES AND STORMWATER FLOWS TO THE SURFACE WATER. THE CONTRACTOR IS NOT REQUIRED TO ENHANCE THE QUALITY OF THE VEGETATION THAT ALREADY EXISTS IN THE BUFFER OR PROVIDE VEGETATION IF NONE EXISTS.

2.3 CONTROL STORMWATER FLOWING ONTO AND THROUGH THE PROJECT

MEASURES SHOULD BE TAKEN TO ENSURE THAT "CLEAN" RUNOFF FROM OFF SITE IS DIVERTED AROUND DISTURBED AREAS ON SITE. CARE SHOULD BE TAKEN THAT RE-ROUTING OFF SITE RUNOFF DOES NOT RESULT IN FLOODING OR OTHER ISSUES ON ADJACENT PROPERTIES.

BMP DESCRIPTION: TEMPORARY DIVERSION DITCH

INSTALLATION SCHEDULE: INSTALL TEMPORARY DIVERSION DITCHES AS SHOWN ON THE SWPPP PLAN SHEETS, AND AS NEEDED THROUGHOUT CONSTRUCTION, PRIOR TO UP GRADIENT GROUND DISTURBING ACTIVITIES

MAINTENANCE AND INSPECTION REQUIREMENTS: THE WETTED PERIMETER OF ANY TEMPORARY OR PERMANENT DRAINAGE DITCH MUST BE STABILIZED WITHIN 200 LINEAL FEET FROM THE PROPERTY EDGE OR FROM THE POINT OF DISCHARGE INTO ANY SURFACE WATER. THIS STABILIZATION MUST BE COMPLETED WITHIN 24 HOURS OF CONNECTING TO A SURFACE WATER. THE REMAINDER OF THE DITCH MUST BE STABILIZED WITHIN 14 DAYS OF CONNECTING TO A SURFACE WATER AND AFTER CONSTRUCTION HAS CEASED.

TEMPORARY OR PERMANENT DITCHES THAT ARE BEING USED AS A SEDIMENT CONTAINMENT SYSTEM DO NOT NEED TO BE STABILIZED, BUT MUST BE STABILIZED WITHIN 24 HOURS AFTER NO LONGER BEING USED AS A SEDIMENT CONTAINMENT SYSTEM.

DITCHES MUST BE INSPECTED EVERY 7 DAYS, AND WITHIN 24 HOURS AFTER A 0.5" 24-HOUR RAIN EVENT. ANY SEDIMENT DEPOSITED IN DIVERSION DITCHES MUST BE REMOVED AND ANY EXPOSED SOILS STABILIZED WITHIN 7 DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. IF PRECLUDED, NOTE REASON FOR DELAY ON MAINTENANCE LOG.

RESPONSIBLE STAFF (CONTRACTOR TO COMPLETE):

2.4 STABILIZE SOILS

1. TEMPORARY SEEDING - DISTURBED AREAS THAT ARE NOT YET AT FINAL GRADE BUT THAT WILL NOT BE ACTIVELY WORKED FOR 14 DAYS OR MORE MUST BE TEMPORARILY STABILIZED. TEMPORARY STABILIZATION MUST BE INITIATED IMMEDIATELY WHERE WORK HAS TEMPORARILY CEASED AND MUST BE COMPLETED NO LATER THAN 14 CALENDAR DAYS AFTER WORK IN THAT PORTION OF THE SITE HAS TEMPORARILY CEASED. TEMPORARY SEEDING SHALL BE IN ACCORDANCE WITH MN/DOT SEED MIXTURE NUMBER 21-111 OR 21-112 DEPENDING ON THE SEASON OF PLANTING (SEE MN/DOT SPECIFICATION SECTION 2575.3) SEEDING METHOD AND APPLICATION RATE SHALL CONFORM TO MN/DOT SPECIFICATION SECTION 2575.3. TEMPORARY MULCH SHALL BE APPLIED IN ACCORDANCE WITH MN/DOT SPECIFICATION SECTION 2575.3C. ALTERNATIVELY, HYDRAULIC SOIL STABILIZER IN ACCORDANCE WITH MN/DOT SPECIFICATION SECTION 2575.3E MAY BE USED IN PLACE OF TEMPORARY MULCH.
2. PERMANENT STABILIZATION - ALL AREAS AT FINAL GRADE MUST BE STABILIZED WITHIN 14 DAYS AFTER COMPLETION OF THE MAJOR CONSTRUCTION ACTIVITY. PERMANENT STABILIZATION MUST BE INITIATED IMMEDIATELY WERE WORK HAS PERMANENTLY CEASED AND MUST BE COMPLETED NO LATER THAN 14 CALENDAR DAYS AFTER CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS PERMANENTLY CEASED. SEEDED AREAS SHALL BE PROTECTED WITH MULCH. PERMANENT MULCH SHALL CONFORM TO MN/DOT SPECIFICATION 3882, TYPE 3 AT 2 TONS/ACRE AND SHALL BE DISK ANCHORED. HYDRAULIC SOIL STABILIZER MAY BE USED IN PLACE OF MULCH IF APPROVED BY CIVIL ENGINEER. IF HYDRAULIC SOIL STABILIZER IS USED, IT SHALL BE MN/DOT TYPE 6. (DESCRIBE THE PERMANENT STABILIZATION).

2.5 PROTECT SLOPES

STEEP SLOPE AREAS - THE CONTRACTOR MUST MINIMIZE THE NEED FOR DISTURBANCE OF PORTIONS OF THE PROJECT THAT HAVE STEEP SLOPES (3:1 OR STEEPER). FOR THOSE SLOPED AREAS WHICH MUST BE DISTURBED, THE CONTRACTOR MUST USE TECHNIQUES SUCH AS PHASING AND STABILIZATION PRACTICES DESIGNED FOR STEEP SLOPES, SUCH AS DRAINING AND TERRACING. SLOPES STEEPER THAN 3:1 MUST BE PROTECTED BY EROSION CONTROL BLANKETS.

BMP DESCRIPTION: EROSION CONTROL BLANKET

INSTALLATION SCHEDULE: INSTALL EROSION CONTROL BLANKETS AS SHOWN ON THE SWPPP PLAN SHEETS, AND AS NEEDED THROUGHOUT CONSTRUCTION, WITHIN THE TIMEFRAME ALLOWED FOR STABILIZATION AFTER WORK HAS CEASED IN AN AREA, DEPENDING ON THE LOCATION (I.E. 24 HOURS, 7 DAYS, 14 DAYS)

MAINTENANCE AND INSPECTION REQUIREMENTS: TO FUNCTION PROPERLY, EROSION CONTROL BLANKETS MUST BE IN CONTACT WITH THE SOIL BENEATH THE BLANKET. BLANKETS MUST BE SECURED PER THE CONSTRUCTION DETAIL PROVIDED WITH THE SWPPP PLAN SHEETS. INSPECT BLANKETS EVERY 7 DAYS OR WITHIN 24 HOURS AFTER A 0.5" 24-HOUR RAIN EVENT. REPAIR, REPLACE, OR SUPPLEMENT NON-FUNCTIONAL BLANKETS WITHIN 3 DAYS OR BY THE NEXT RAIN EVENT, WHICHEVER COMES FIRST.

RESPONSIBLE STAFF (CONTRACTOR TO COMPLETE):

2.6 PROTECT STORM DRAIN INLETS

ALL STORM DRAIN INLETS MUST BE PROTECTED BY APPROPRIATE MEANS DURING CONSTRUCTION UNTIL ALL SOURCES WITH POTENTIAL FOR DISCHARGING TO THE INLET HAVE BEEN STABILIZED. INLET PROTECTION MAY BE REMOVED FOR A PARTICULAR INLET IF A SPECIFIC SAFETY CONCERN (STREET FLOODING/FREEZING) HAS BEEN IDENTIFIED AND PERMITTEE(S) HAVE RECEIVED WRITTEN CORRESPONDENCE FROM THE JURISDICTIONAL AUTHORITY (E.G. CITY/COUNTY/TOWNSHIP/MNDOT/ETC.) VERIFYING THE NEED FOR REMOVAL. THE WRITTEN CORRESPONDENCE MUST BE DOCUMENTED IN THIS SWPPP.

BMP DESCRIPTION: SILT FENCE INLET PROTECTION

INSTALLATION SCHEDULE: INSTALL INLET PROTECTION IN EXISTING STRUCTURES AS DIRECTED ON THE SWPPP PLAN SHEETS, AND AS NEEDED THROUGHOUT CONSTRUCTION, PRIOR TO BEGINNING GROUND DISTURBING ACTIVITIES UP GRADIENT OF THE INLET. INSTALL INLET PROTECTION ON NEW STRUCTURES AS SOON AS THE STRUCTURES ARE PUT INTO USE.

MAINTENANCE AND INSPECTION REQUIREMENTS: INSPECT SILT FENCE EVERY 7 DAYS OR WITHIN 24 HOURS AFTER A 0.5" 24-HOUR RAIN EVENT. SEDIMENT ACCUMULATIONS SHOULD BE REMOVED WHEN SEDIMENT BUILD-UP REACHES 1/2 THE HEIGHT OF THE SILT FENCE. THIS MAINTENANCE MUST BE COMPLETED WITHIN 24 HOURS OF DISCOVERY.

RESPONSIBLE STAFF (CONTRACTOR TO COMPLETE):

BMP DESCRIPTION: INLET PROTECTION (INLET INSERT DEVICE)

INSTALLATION SCHEDULE: INSTALL INLET PROTECTION IN EXISTING STRUCTURES AS DIRECTED ON THE SWPPP PLAN SHEETS, AND AS NEEDED THROUGHOUT CONSTRUCTION, PRIOR TO BEGINNING GROUND DISTURBING ACTIVITIES UP GRADIENT OF THE INLET. INSTALL INLET PROTECTION ON NEW STRUCTURES AS SOON AS THE STRUCTURES ARE PUT INTO USE.

MAINTENANCE AND INSPECTION REQUIREMENTS: INSPECT INLET PROTECTION EVERY 7 DAYS OR WITHIN 24 HOURS AFTER A 0.5" 24-HOUR RAIN EVENT. SEDIMENT ACCUMULATIONS SHOULD BE REMOVED WHEN SEDIMENT BUILD-UP REACHES 1/2 THE CAPACITY OF THE DEVICE, OR, IF MORE STRINGENT, IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS. THIS MAINTENANCE MUST BE COMPLETED WITHIN 24 HOURS OF DISCOVERY.

RESPONSIBLE STAFF (CONTRACTOR TO COMPLETE):

2.7 ESTABLISH PERIMETER CONTROLS AND SEDIMENT BARRIERS

ALL STRUCTURAL SEDIMENT CONTROLS INTENDED TO RECEIVE AND TREAT CONSTRUCTION RUNOFF MUST BE IN PLACE BEFORE ANY UP GRADIENT LAND ALTERATION CAN BEGIN AND MUST STAY IN OPERATION UNTIL FINAL STABILIZATION OF THE SITE HAS BEEN ACHIEVED.

TEMPORARY SOIL STOCKPILES MUST HAVE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS, AND CANNOT BE PLACED IN ANY NATURAL BUFFERS OR SURFACE WATERS, INCLUDING STORMWATER CONVEYANCES SUCH AS CURB AND GUTTER SYSTEMS, OR CONDUITS AND DITCHES UNLESS THERE IS A BYPASS IN PLACE FOR THE STORMWATER.

BMP DESCRIPTION: SILT FENCE

INSTALLATION SCHEDULE: INSTALL SILT FENCE AS DIRECTED ON THE SWPPP PLAN SHEETS, AND AS NEEDED THROUGHOUT CONSTRUCTION, PRIOR TO COMMENCING UP GRADIENT LAND DISTURBING ACTIVITIES.

MAINTENANCE AND INSPECTION REQUIREMENTS: INSPECT SILT FENCE EVERY 7 DAYS OR WITHIN 24 HOURS AFTER A 0.5" 24-HOUR RAIN EVENT. SEDIMENT ACCUMULATIONS SHOULD BE REMOVED WHEN SEDIMENT BUILD-UP REACHES 1/2 THE HEIGHT OF THE SILT FENCE. THIS MAINTENANCE MUST BE COMPLETED WITHIN 24 HOURS OF DISCOVERY.

RESPONSIBLE STAFF (CONTRACTOR TO COMPLETE):

BMP DESCRIPTION: BIOLOGS

INSTALLATION SCHEDULE: INSTALL BIOLOGS AS DIRECTED ON THE SWPPP PLAN SHEETS, AND AS NEEDED THROUGHOUT CONSTRUCTION, PRIOR TO COMMENCING UP GRADIENT LAND DISTURBING ACTIVITIES.

MAINTENANCE AND INSPECTION REQUIREMENTS: INSPECT BIOLOGS EVERY 7 DAYS OR WITHIN 24 HOURS AFTER A 0.5" 24-HOUR RAIN EVENT. SEDIMENT ACCUMULATIONS SHOULD BE REMOVED WHEN SEDIMENT BUILD-UP REACHES 1/2 THE HEIGHT OF THE BIOLOG. THIS MAINTENANCE MUST BE COMPLETED WITHIN 24 HOURS OF DISCOVERY.

RESPONSIBLE STAFF (CONTRACTOR TO COMPLETE):

2.8 RETAIN SEDIMENT ON-SITE

ANY OFF-SITE ACCUMULATIONS OF SEDIMENT MUST BE REMOVED IN A MANNER AND AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACT (E.G. FUGITIVE SEDIMENT IN STREETS COULD BE WASHED INTO STORM SEWERS BY THE NEXT RAIN AND/OR POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS.

BMP DESCRIPTION: TEMPORARY SEDIMENTATION BASIN

INSTALLATION SCHEDULE: INSTALL TEMPORARY SEDIMENTATION BASIN PRIOR TO BEGINNING UPSLOPE LAND DISTURBING ACTIVITIES. IF THIS IS NOT POSSIBLE DUE TO EXISTING TOPOGRAPHY, LIMIT DISTURBANCE TO ONLY THOSE AREAS NECESSARY TO INSTALL TEMPORARY SEDIMENTATION BASIN.

MAINTENANCE AND INSPECTION REQUIREMENTS: INSPECT TEMPORARY SEDIMENTATION BASINS EVERY 7 DAYS OR WITHIN 24 HOURS AFTER A 0.5" 24-HOUR RAIN EVENT. TEMPORARY AND PERMANENT SEDIMENTATION BASINS MUST BE DRAINED AND THE SEDIMENT REMOVED WHEN THE VOLUME OF SEDIMENT COLLECTED IN THE BASIN REACHES ½ THE STORAGE VOLUME. THIS MAINTENANCE MUST BE COMPLETED WITHIN 72 HOURS OF DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS. IF CONDITIONS DO NOT ALLOW MAINTENANCE TO BE PERFORMED WITHIN 72 HOURS, DOCUMENT THE CAUSE OF DELAY ON THE MAINTENANCE FORM. REFER TO SECTION 3.1 OF THIS SWPPP FOR BASIN DRAINING GUIDELINES.

RESPONSIBLE STAFF (CONTRACTOR TO COMPLETE):

2.9 ESTABLISH VEHICLE TRACKING PADS

VEHICLE TRACKING PADS HAVE BEEN DESIGNED TO PREVENT SEDIMENT TRACK OFF. IF THERE IS EVIDENCE OF SEDIMENT TRACKING FROM VEHICLES IN PAVED AREAS, THE SEDIMENT MUST BE REMOVED BY STREET SWEEPING OR OTHER METHOD AS SOON AS FEASIBLY POSSIBLE. BUT NO LONGER THAN 24 HOURS AFTER DISCOVERY. (SECTION 9.11 AND 9.12 OF THE GENERAL PERMIT)

BMP DESCRIPTION: VEHICLE TRACKING PAD

INSTALLATION SCHEDULE: INSTALL VEHICLE TRACKING PAD AS SHOWN ON THE SWPPP PLAN SHEETS AS SOON AS POSSIBLE AT THE BEGINNING OF CONSTRUCTION ACTIVITIES. INSTALL ADDITIONAL VEHICLE TRACKING PADS AS NEEDED THROUGHOUT CONSTRUCTION.

MAINTENANCE AND INSPECTION REQUIREMENTS: INSPECT VEHICLE TRACKING PADS EVERY 7 DAYS OR WITHIN 24 HOURS AFTER A 0.5" 24-HOUR RAIN EVENT. VEHICLE TRACKING PADS MUST BE PERIODICALLY 'REFRESHED' TO ENSURE PROPER FUNCTIONALITY. MAINTENANCE SHOULD BE PERFORMED WHEN THE EXIT APPEARS SMOOTH AND COMPACTED OR WHEN THE VEHICLE TRACKING PAD CEASES TO FUNCTION PROPERLY. VEHICLE TRACKING PAD LOCATIONS SHOULD BE INSPECTED FOR SIGNS OF OFF-SITE SEDIMENT TRACKING. TRACKED SEDIMENT MUST BE REMOVED FROM ALL PAVED SURFACES WITHIN 24 HOURS OF DISCOVERY. STREET SWEEPING MUST BE USED IF VEHICLE TRACKING PADS ARE NOT ADEQUATE TO PREVENT SEDIMENT FROM BEING TRACKED ONTO THE STREET.

RESPONSIBLE STAFF (CONTRACTOR TO COMPLETE):

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Client
VENTURE PASS PARTNERS

Project
ROHN INDUSTRIES TRAILER STORAGE

Location
ST PAUL, MINNESOTA
2495 KASOTA AVENUE

Certification
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.

NOT FOR CONSTRUCTION

Chad M. Ayers
Registration No. 41301 Date: 08/09/2019
If applicable, contact us for a wet signed copy of this plan which is available upon request at Sambatek's, Minnetonka, MN office.

Summary
Designed: CMA Drawn: MLL
Approved: CMA Book / Page:
Phase: PRELIM Initial Issue: 08/09/2019

Revision History

No.	Date	By	Submittal / Revision
	08/09/2019	MLL	SITE PLAN REVIEW
	10/01/2019	MLL	CITY COMMENT RESPONSE

Sheet Title
SWPPP NARRATIVE

Sheet No. Revision
C5.04

Project No. 21625

2.10 CONTROL STORMWATER DISCHARGE POINTS

1. PIPE OR OTHER TEMPORARY OR PERMANENT OUTLETS MUST BE STABILIZED WITH TEMPORARY OR PERMANENT ENERGY DISSIPATION WITHIN 24 HOURS AFTER CONNECTION TO A SURFACE WATER.
2. STABILIZE THE NORMAL WETTED PERIMETER OF A DRAINAGE DITCH OR SWALE WITHIN 200 FEET OF THE PROPERTY EDGE WITHIN 24 HOURS OF CONNECTION TO A SURFACE WATER. THE REMAINDER OF THE DITCH MUST BE STABILIZED WITHIN 14 CALENDAR DAYS OF CONNECTION.

2.11 CHEMICAL EROSION AND SEDIMENT CONTROL BMPS

POLYMERS, FLOCCULANTS, OR OTHER SEDIMENTATION TREATMENT CHEMICALS MUST BE APPLIED AFTER CONVENTIONAL EROSION AND SEDIMENT CONTROL DEVICES ARE UTILIZED. CHEMICALS MAY ONLY BE APPLIED WHERE TREATED STORMWATER IS DIRECTED TO A SEDIMENT CONTROL SYSTEM WHICH ALLOWS FOR FILTRATION OR SETTLEMENT OF THE FLOC PRIOR TO DISCHARGE. CONSIDERATION MUST BE GIVEN WHEN SELECTING CHEMICALS TO THE EXPECTED SOIL TYPES TO BE EXPOSED DURING CONSTRUCTION, AND TO THE EXPECTED TURBIDITY, PH AND FLOW RATE OF STORMWATER FLOWING INTO THE CHEMICAL TREATMENT SYSTEM OR AREA. IF CHEMICALS ARE PART OF THE EROSION CONTROL PLAN, THEY MUST BE USED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICES, AND WITH DOSING SPECIFICATION AND SEDIMENT REMOVAL DESIGN SPECIFICATIONS PROVIDED BY THE MANUFACTURER OR PROVIDER/SUPPLIER OF THE APPLICABLE CHEMICALS.

SECTION 3: DEWATERING & BASIN DRAINING

3.1 DEWATERING AND BASIN DRAINING

ALLOWABLE NON-STORMWATER DISCHARGES, AS DEFINED BY THE GENERAL PERMIT, ARE LIMITED TO DEWATERING AND BASIN DRAINING. DEWATERING OR BASIN DRAINING THAT MAY HAVE TURBID OR SEDIMENT LADEN DISCHARGE WATER MUST BE DISCHARGED TO A TEMPORARY OR PERMANENT SEDIMENTATION BASIN ON THE PROJECT SITE WHENEVER POSSIBLE. IF THE WATER CANNOT BE DISCHARGED TO A SEDIMENTATION BASIN PRIOR TO ENTERING THE SURFACE WATER, IT MUST BE TREATED WITH THE APPROPRIATE BMPS, SUCH THAT THE DISCHARGE DOES NOT ADVERSELY AFFECT THE RECEIVING WATER OR DOWNSTREAM LANDOWNERS. THE CONTRACTOR MUST ENSURE THAT DISCHARGE POINTS ARE ADEQUATELY PROTECTED FROM EROSION AND SCOUR. THE DISCHARGE MUST BE DISPERSED OVER NATURAL ROCK RIPRAP, SAND BAGS, PLASTIC SHEETING OR OTHER ACCEPTED ENERGY DISSIPATION MEASURES. ADEQUATE SEDIMENTATION CONTROL MEASURES ARE REQUIRED FOR DISCHARGE WATER THAT CONTAINS SUSPENDED SOLIDS. ALL WATER FROM DEWATERING OR BASIN DRAINING MUST BE DISCHARGED IN A MANNER THAT DOES NOT CAUSE NUISANCE CONDITIONS, EROSION IN RECEIVING CHANNELS OR ON DOWNSLOPE PROPERTIES, OR INUNDATION IN WETLANDS CAUSING SIGNIFICANT ADVERSE IMPACT TO THE WETLAND. IF THE CONTRACTOR ELECTS TO UTILIZE FILTERS WITH BACKWASH WATER, THE CONTRACTOR MUST HAUL THE BACKWASH WATER AWAY FOR DISPOSAL, RETURN THE BACKWATER TO THE BEGINNING OF THE TREATMENT PROCESS, OR INCORPORATE THE BACKWASH WATER INTO THE SITE IN A MANNER THAT DOES NOT CAUSE EROSION. THE CONTRACTOR MUST REPLACE AND CLEAN THE FILTER MEDIA USED IN DEWATERING DEVICES WHEN REQUIRED TO RETAIN ADEQUATE FUNCTION. CONTRACTOR SHALL OBTAIN A WATER USE (APPROPRIATION) PERMIT FROM THE MINNESOTA DNR FOR DEWATERING ACTIVITIES THAT WILL WITHDRAW MORE THAN 10,000 GALLONS OF WATER PER DAY OR 1 MILLION GALLONS PER YEAR.

SECTION 4: GOOD HOUSEKEEPING BMPS

4.1 MATERIAL HANDLING AND WASTE MANAGEMENT

1. SOLID WASTE DISPOSAL - NO SOLID MATERIALS, INCLUDING CONSTRUCTION AND DEMOLITION MATERIALS, COLLECTED SEDIMENT, ASPHALT AND CONCRETE MILLINGS, SHALL BE ALLOWED TO BE CARRIED FROM THE SITE WITH STORM WATER. ALL SOLID WASTE, INCLUDING DISPOSABLE MATERIALS INCIDENTAL TO THE MAJOR CONSTRUCTION ACTIVITIES, MUST BE COLLECTED AND PLACED IN CONTAINERS. THE CONTAINERS WILL BE EMPTIED PERIODICALLY BY A CONTRACT TRASH DISPOSAL SERVICE AND HAULED AWAY FROM THE SITE. DISPOSAL OF SOLID WASTES MUST COMPLY WITH MPCA REQUIREMENTS.
2. GROUNDWATER PROTECTION - SUBSTANCES THAT HAVE THE POTENTIAL FOR POLLUTING SURFACE AND/OR GROUNDWATER MUST BE CONTROLLED BY WHATEVER MEANS NECESSARY IN ORDER TO ENSURE THAT THEY DO NOT DISCHARGE FROM THE SITE. AS AN EXAMPLE, SPECIAL CARE MUST BE EXERCISED DURING EQUIPMENT FUELING AND SERVICING OPERATIONS. IF A SPILL OCCURS, IT MUST BE CONTAINED AND DISPOSED OF SO THAT IT WILL NOT FLOW FROM THE SITE OR ENTER GROUNDWATER, EVEN IF THIS REQUIRES REMOVAL, TREATMENT, AND DISPOSAL OF SOIL. IN THIS REGARD, POTENTIALLY POLLUTING SUBSTANCES SHOULD BE HANDLED IN A MANNER CONSISTENT WITH THE IMPACT THEY REPRESENT.
3. SANITARY FACILITIES - ALL PERSONNEL INVOLVED WITH CONSTRUCTION ACTIVITIES MUST COMPLY WITH STATE AND LOCAL SANITARY SEPTIC SYSTEM REGULATIONS. PORTABLE TOILETS MUST BE POSITIONED SO THAT THEY ARE SECURE AND WILL NOT BE TIPPED OR KNOCKED OVER. TEMPORARY SANITARY FACILITIES WILL BE PROVIDED AT THE SITE THROUGHOUT THE CONSTRUCTION PHASE WHERE REQUIRED BY STATE OR LOCAL REGULATIONS. THEY MUST BE UTILIZED BY ALL CONSTRUCTION PERSONNEL AND BE SERVICED BY A COMMERCIAL OPERATOR.

4.2 ESTABLISH PROPER STORAGE, HANDLING & DISPOSAL PRACTICES

HAZARDOUS MATERIALS & TOXIC WASTE (INCLUDING OIL, DIESEL FUEL, GASOLINE, HYDRAULIC FLUIDS, PAINT SOLVENTS, PETROLEUM-BASED PRODUCTS, WOOD PRESERVATIVES, ADDITIVES, CURING COMPOUNDS, AND ACIDS) MUST BE STORED IN WATERPROOF CONTAINERS WITH SECONDARY CONTAINMENT, AND THEIR LOCATION(S) MUST BE NOTED ON THE SWPPP MAP. EXCEPT DURING APPLICATION, THE CONTENTS MUST BE KEPT IN TRUCKS OR WITHIN STORAGE FACILITIES IN ACCORDANCE WITH SECTION 12.4 OF THE GENERAL PERMIT. STORAGE AND DISPOSAL OF HAZARDOUS WASTE MUST BE IN COMPLIANCE WITH MCPA REGULATIONS. RUNOFF CONTAINING SUCH MATERIAL MUST BE COLLECTED, REMOVED FROM THE SITE, TREATED, AND DISPOSED AT AN APPROVED SOLID WASTE OR CHEMICAL DISPOSAL FACILITY.

BUILDING PRODUCTS THAT HAVE THE POTENTIAL TO LEACH POLLUTANTS AND PESTICIDES, HERBICIDES, INSECTICIDES, FERTILIZERS, TREATMENT CHEMICALS AND LANDSCAPE MATERIALS MUST BE UNDER COVER BY PLASTIC SHEETING OR TEMPORARY ROOFS TO PREVENT DISCHARGE, OR PROTECTED BY SIMILAR EFFECTIVE MEANS TO PREVENT CONTACT WITH STORMWATER.

4.3 DESIGNATE WASHOUT AREAS

THE CONTRACTOR SHALL DESIGNATE AREAS FOR CONCRETE AND OTHER (STUCCO, PAINT, FOR RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS RELATED TO THE CONSTRUCTION ACTIVITY) WASHOUTS, AND NOTE THE LOCATIONS ON THE SITE MAP. ALL LIQUID AND SOLID WASTES GENERATED BY WASHOUT OPERATIONS MUST BE CONTAINED IN A LEAK PROOF CONTAINMENT FACILITY OR IMPERMEABLE LAYER. A COMPACTED CLAY LINER IS NOT AN ACCEPTABLE IMPERMEABLE LAYER. THE LIQUID AND SOLID WASTES MUST NOT CONTACT THE GROUND, AND THERE MUST NOT BE RUNOFF FROM THE WASHOUT OPERATIONS OR AREAS. LIQUID AND SOLID WASTE MUST BE DISPOSED OF PROPERLY AND IN COMPLIANCE WITH MPCA REGULATIONS. A SIGN MUST BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY TO INFORM SITE WORKERS TO UTILIZE PROPER FACILITIES FOR DISPOSAL OF CONCRETE AND OTHER WASTES.

BMP DESCRIPTION: CONCRETE WASHOUT

INSTALLATION SCHEDULE: PRIOR TO CONCRETE WORK.

MAINTENANCE AND INSPECTION REQUIREMENTS: INSPECT CONCRETE WASHOUTS FOR EVIDENCE OF DISCHARGE EVERY 7 DAYS OR WITHIN 24 HOURS AFTER A 0.5" 24-HOUR RAIN EVENT. REPAIR, REPLACE OR SUPPLEMENT NON-FUNCTIONING CONCRETE WASHOUTS WITHIN 3 DAYS OR BY THE NEXT USE, WHICHEVER COMES FIRST.

RESPONSIBLE STAFF (CONTRACTOR TO COMPLETE):

4.4 ESTABLISH PROPER EQUIPMENT/VEHICLE FUELING AND MAINTENANCE PRACTICES

THE CONTRACTOR SHALL DESIGNATE AREAS FOR EQUIPMENT FUELING, CLEANING, MAINTENANCE AND REPAIR, AND NOTE THE LOCATION(S) ON THE SWPPP SITE MAPS. RUNOFF MUST BE CONTAINED WITHIN THE DESIGNATED AREAS (I.E. THROUGH USE OF A TEMPORARY BERM). THE AREAS MUST NOT BE LOCATED IN ANY SURFACE WATER. SPECIAL CARE MUST BE EXERCISED DURING EQUIPMENT FUELING AND SERVICING OPERATIONS. IF A SPILL OCCURS, IT MUST BE CONTAINED AND DISPOSED OF SO THAT IT WILL NOT FLOW FROM THE SITE OR ENTER GROUNDWATER, EVEN IF THIS REQUIRES REMOVAL, TREATMENT, AND DISPOSAL OF SOIL. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT ADEQUATE SUPPLIES ARE AVAILABLE AT ALL TIMES TO CLEAN UP DISCHARGED MATERIALS AND THAT AN APPROPRIATE DISPOSAL METHOD IS AVAILABLE FOR RECOVERED SPILLED MATERIALS. NO ENGINE DEGREASING IS ALLOWED ON SITE.

4.5 CONTROL EQUIPMENT/VEHICLE WASHING

THE CONTRACTOR SHALL DESIGNATE LOCATION(S) FOR VEHICLE WASHING, AND NOTE THE LOCATION(S) ON THE SWPPP SITE MAP. RUNOFF FROM THE WASHING AREA MUST BE CONTAINED IN A SEDIMENT BASIN OR OTHER SIMILARLY EFFECTIVE CONTROLS AND WASTE FROM THE WASHING ACTIVITY MUST BE PROPERLY DISPOSED OF. THE CONTRACTOR MUST PROPERLY USE AND STORE SOAPS, DETERGENTS AND SOLVENTS. ENGINE DEGREASING OF TRUCKS AND OTHER CONSTRUCTION VEHICLES IS ALSO PROHIBITED.

4.6 SPILL PREVENTION AND CONTROL PLAN

1. ACCIDENTAL SPILL - DISCHARGE OF OIL OR OTHER HAZARDOUS SUBSTANCES IS SUBJECT TO REPORTING AND CLEAN UP REQUIREMENTS. IN CASE OF AN ACCIDENTAL SPILL, THE MINNESOTA POLLUTION CONTROL AGENCY IS TO BE NOTIFIED AT THEIR 24-HOUR **TELEPHONE NUMBER: 651-649-5451.** REFER TO SECTION 12 OF THE GENERAL PERMIT.
2. GROUNDWATER PROTECTION - SUBSTANCES THAT HAVE THE POTENTIAL FOR POLLUTING SURFACE AND/OR GROUNDWATER MUST BE CONTROLLED BY WHATEVER MEANS NECESSARY IN ORDER TO ENSURE THAT THEY DO NOT DISCHARGE FROM THE SITE. AS AN EXAMPLE, SPECIAL CARE MUST BE EXERCISED DURING EQUIPMENT FUELING AND SERVICING OPERATIONS. IF A SPILL OCCURS, IT MUST BE CONTAINED AND DISPOSED OF SO THAT IT WILL NOT FLOW FROM THE SITE OR ENTER GROUNDWATER, EVEN IF THIS REQUIRES REMOVAL, TREATMENT, AND DISPOSAL OF SOIL. IN THIS REGARD, POTENTIALLY POLLUTING SUBSTANCES SHOULD BE HANDLED IN A MANNER CONSISTENT WITH THE IMPACT THEY REPRESENT.

SECTION 5: POST-CONSTRUCTION BMPS

[DESCRIBE PERMANENT STORM WATER SYSTEM, AND INCLUDE REFERENCE TO DESIGN CALCULATIONS. REFER TO SECTION 15, 16, 17, 18, AND 19 OF THE GENERAL PERMIT, AS WELL AS LGU REQUIREMENTS. NOTE: THE 2018 GENERAL PERMIT REQUIRES INFILTRATION OF THE WATER QUALITY VOLUME (1" OVER THE NEW IMPERVIOUS)]

BMP DESCRIPTION: SUMP MANHOLE

INSTALLATION SCHEDULE: ALONG WITH STORM SEWER NETWORK

MAINTENANCE AND INSPECTION REQUIREMENTS: PRACTICE SHOULD BE INSPECTED (AND CLEANED OUT IF DEEMED NECESSARY) SEMI-ANNUALLY TO ENSURE THAT SEDIMENT IS NOT BEGINNING TO WASH OUT DURING STORM EVENTS. DEVICES SHOULD BE CLEANED OUT AT LEAST ONCE PER YEAR OR AS NEEDED.

RESPONSIBLE STAFF (CONTRACTOR TO COMPLETE):

BMP DESCRIPTION: FILTRATION BASIN

INSTALLATION SCHEDULE: THE FILTRATION BASIN WILL BE INSTALLED DURING THE INITIAL GRADING FOR THE SITE. THE STORM SEWER SYSTEM WILL THEN BE CONNECTED INTO THE FILTRATION BASIN.

MAINTENANCE AND INSPECTION REQUIREMENTS: ONCE CONSTRUCTION IS COMPLETE, THE BASIN WILL BE INSPECTED AND CLEARED OF ANY SEDIMENT BUILD-UP TWICE PER YEAR AND AS NEEDED. INSPECTION WILL ALSO INCLUDE CHECKING FOR EROSION ISSUES ALONG THE SLOPES OF THE BASIN AND CLEANING ANY DEBRIS FROM THE INLET PIPES.

RESPONSIBLE STAFF (CONTRACTOR TO COMPLETE):

SECTION 6: INSPECTIONS

6.1 INSPECTIONS

1. INSPECTION FREQUENCT AND RESPONSIBILITY
   BETWEEN THE TIME THIS SWPPP IS IMPEEMENTED AND FINAL SITE STABILIZATION IS ACHIEVED AND THE NOTICE OF TERMINATION FILED WITH THE MPCA, ALL DISTURBED AREAS AND POLLUTANT CONTROLS MUST BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS FOLLOWING A RAINFALL OF 0.5 INCHES OR GREATER. THE PURPOSE OF SITE INSPECTIONS IS TO ASSESS PERFORMANCE OF POLLUTANT CONTROLS. THE INSPECTIONS WILL BE CONDUCTED BY THE CONTRACTOR'S DESIGNATED REPRESENTATIVE. BASED ON THESE INSPECTIONS, THE CONTRACTOR WILL DECIDE WHETHER IT IS NECESSARY TO MODIFY THIS SWPPP, ADD OR RELOCATE STRUCTURAL BMPS, OR WHATEVER ELSE MAY BE NEEDED IN ORDER TO PREVENT POLLUTANTS FROM LEAVING THE SITE VIA STORM WATER RUNOFF. IF THE SWPPP REQUIRES MODIFICATION, THOSE CHANGES TO THE SWPPP MUST BE DOCUMENTED. THE CONTRACTOR HAS THE DUTY TO CAUSE POLLUTANT CONTROL MEASURES TO BE REPAIRED, MODIFIED, MAINTAINED, SUPPLEMENTED, OR WHATEVER ELSE IS NECESSARY IN ORDER TO ACHIEVE EFFECTIVE POLLUTANT CONTROL.

2. INSPECTION PROCEDURES - EXAMPLES OF PARTICULAR ITEMS TO EVALUATE DURING SITE INSPECTIONS ARE LISTED BELOW. THIS LIST IS NOT INTENDED TO BE COMPREHENSIVE. DURING EACH INSPECTION THE INSPECTOR MUST EVALUATE OVERALL POLLUTANT CONTROL SYSTEM PERFORMANCE AS WELL AS PARTICULAR DETAILS OF INDIVIDUAL SYSTEM COMPONENTS. ADDITIONAL FACTORS SHOULD BE CONSIDERED AS APPROPRIATE TO THE CIRCUMSTANCES.
   - A. PRE-INSPECTION PREPARATION:
     1. INSPECTORS SHOULD BE FAMILIAR WITH THE SWPPP, INCLUDING THE EROSION AND SEDIMENT CONTROL PLANS, PAST INSPECTION REPORTS, AND MAINTENANCE LOGS.
   - B. SITE ENTRY:
     1. BEFORE ENTERING THE SITE, OBSERVE THE SURROUNDINGS AND VARIOUS STAGES OF CONSTRUCTION. NOTE AREAS FOR IN-DEPTH REVIEW AND ANY POTENTIAL ISSUES.
     2. THIS IS A GOOD TIME TO VIEW CONSTRUCTION SITE VEHICLE TRACKING PAD LOCATIONS AND PERIMETER CONTROLS.
   - C. RECORDS REVIEW:
     1. VERIFY THAT A COPY OF THE SWPPP AND APPLICATION FOR THE NPDES STORM WATER PERMIT, AND COPIES OF ALL CONSTRUCTION SITE INSPECTIONS ARE ON SITE.
     2. VERIFY THAT THE TIMING FOR INSTALLATION OF ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPS, AS WELL AS CONSTRUCTION PHASING, IS GENERALLY BEING FOLLOWED.
     3. SWPPPS ARE INTENDED TO BE DYNAMIC DOCUMENTS, VERIFY THAT AMENDMENTS OR CHANGES TO THE SWPPP ARE BEING MADE WHEN:
        - A. A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE, WEATHER OR SEASONAL CONDITIONS HAVE A SIGNIFICANT EFFECT ON STORM WATER DISCHARGES
        - B. INSPECTIONS INDICATE THE SWPPP IS NOT EFFECTIVE
        - C. THE SWPPP IS NOT CONSISTENT WITH THE TERMS OF THE GENERAL PERMIT
   - D. SITE INSPECTION (NOTE TIMELINES FOR MAINTENANCE INCLUDED IN INSPECTION/MAINTENANCE REPORT)
     1. INSPECT DISCHARGE POINTS DOWNSTREAM AND OFF-SITE AREAS FOR SIGNS OF IMPACT.
     2. INSPECT PERIMETER CONTROLS:
        - A. HAVE PERIMETER CONTROLS BEEN PROPERLY INSTALLED AND MAINTAINED?
        - B. ARE VEHICLE TRACKING PADS FUNCTIONING PROPERLY? ARE ADDITIONAL ENTRANCES/EXITS BEING USED THAT ARE NOT STABILIZED?
        - C. ALL STORM DRAINS MUST BE PROTECTED AND TEMPORARY STOCKPILES MUST HAVE SEDIMENT CONTROLS INSTALLED.
        - D. ALL EXPOSED SOILS MUST HAVE TEMPORARY OR PERMANENT EROSION PROTECTION WITHIN 14 DAYS OF INACTIVITY.
     3. COMPARE BMPS IN THE SWPPP WITH CONSTRUCTION SITE CONDITIONS: ARE REQUIRED BMPS IN PLACE; ARE ADDITIONAL BMPS NEEDED; ARE BMPS IN PLACE PROPERLY INSTALLED AND MAINTAINED?
     4. INSPECT AREAS THAT HAVE BEEN DISTURBED AND ARE NOT CURRENTLY BEING WORKED. ANY UNSEEDED OR UNMULCHED BARE AREAS THAT HAVE BEEN IDLE FOR 14 DAYS SHOULD BE NOTED.
     5. INSPECT AREAS WITH FINAL STABILIZATION. IN ORDER FOR FINAL STABILIZATION TO BE ACHIEVED, AREAS MUST HAVE A UNIFORM COVER WITH A DENSITY OF 70% OVER ENTIRE AREA. TEMPORARY BMPS SHOULD BE REMOVED AND AREAS DISTURBED BY REMOVAL SEEDED AS NECESSARY.
   - E. EXIT INTERVIEW:
     1. DEBRIEF THE PERSON IN CHARGE. EXPLAIN THE IDENTIFIED DEFICIENCIES AND ANY AREAS OF CONCERN.
   - F. A COPY OF THE COMPLETED INSPECTION REPORT MUST BE KEPT WITH THE SWPPP ON SITE.

     THE INSPECTION REPORT USED SHOULD INCLUDE, AT A MINIMUM, THE FOLLOWING:
     - DATE & TIME OF INSPECTION
     - NAME OF INSPECTOR(S)
     - FINDINGS OF INSPECTIONS AND RECOMMENDATIONS FOR CORRECTIVE ACTIONS
     - CORRECTIVE ACTIONS TAKEN, INCLUDING DATES, TIMES AND NAMES OF PARTY COMPLETING MAINTENANCE
     - DATE & AMOUNT OF RAINFALL
     - RECORD OF ALL POINTS OF DISCHARGE FROM THE PROPERTY AND DESCRIPTION OF DISCHARGE
     - NOTE TO UPDATE THE SWPPP

6.2 DELEGATION OF AUTHORITY

DULY AUTHORIZED REPRESENTATIVE(S) OR POSITION(S):

COMPANY OR ORGANIZATION NAME:
NAME:
POSITION:
ADDRESS:
CITY, STATE, ZIP CODE:
TELEPHONE NUMBER:
FAX/EMAIL:

6.3 CORRECTIVE ACTION LOG

THE INSPECTION/MAINTENANCE FORM, AVAILABLE UPON REQUEST, INCORPORATES BOTH INSPECTION AND MAINTENANCE REPORTING INTO A SINGLE FORM. THIS FORM ALSO SPECIFIES THE TIME ALLOWED FOR CORRECTIONS TO BE PERFORMED. IF THE PARTY PERFORMING INSPECTIONS CHOOSES TO USE ANOTHER INSPECTION FORM, A SEPARATE CORRECTIVE ACTION LOG MUST BE PROVIDED.

SECTION 7: RECORD KEEPING AND TRAINING

7.1 RECORDKEEPING

RECORD RETENTION - THE OWNER MUST KEEP THE SWPPP INCLUDING ALL CHANGES MADE TO IT DURING CONSTRUCTION (SEE SECTION 7.2 OF THIS SWPPP), ALONG WITH THE FOLLOWING ADDITIONAL RECORDS ON FILE FOR THREE YEARS AFTER COMPLETION OF THE CONSTRUCTION PROJECT (FINAL STABILIZATION AND NOTICE OF TERMINATION):

1. ANY OTHER STORMWATER RELATED PERMITS REQUIRED FOR THE PROJECT
2. RECORDS OF ALL INSPECTIONS AND MAINTENANCE CONDUCTED DURING CONSTRUCTION
3. ALL PERMANENT OPERATION AND MAINTENANCE AGREEMENTS THAT HAVE BEEN IMPLEMENTED, INCLUDING ALL RIGHT OF WAY, CONTRACTS, COVENANTS AND OTHER BINDING REQUIREMENTS REGARDING PERPETUAL MAINTENANCE
4. ALL REQUIRED CALCULATIONS FOR DESIGN OF THE TEMPORARY AND PERMANENT STORM WATER MANAGEMENT SYSTEMS

7.2 AMENDMENTS

THE CONTRACTOR SHALL KEEP A RECORD LOG OF ALL MODIFICATIONS TO THE SWPPP. AN EXAMPLE OF A SWPPP UPDATE LOG FORM CAN BE PROVIDED UPON REQUEST.

MODIFICATIONS TO THE SWPPP - THIS SWPPP INTENDS TO CONTROL WATER-BORNE AND LIQUID POLLUTANT DISCHARGES BY SOME COMBINATION OF INTERCEPTION, FILTRATION, AND CONTAINMENT. THE GENERAL CONTRACTOR AND SUBCONTRACTORS IMPLEMENTING THIS SWPPP MUST REMAIN ALERT TO THE NEED TO PERIODICALLY REFINE AND UPDATE THE SWPPP IN ORDER TO ACCOMPLISH THE INTENDED GOALS. THIS SWPPP MUST BE AMENDED AS NECESSARY DURING THE COURSE OF CONSTRUCTION IN ORDER TO KEEP IT CURRENT WITH THE POLLUTANT CONTROL MEASURES UTILIZED AT THE SITE. AMENDING THE SWPPP DOES NOT MEAN THAT IT HAS TO BE REPRINTED. IT IS ACCEPTABLE TO ADD ADDENDA, SKETCHES, NEW SECTIONS, AND/OR REVISED DRAWINGS. THIS SWPPP MUST BE UPDATED AS NECESSARY TO INCLUDE ADDITIONAL REQUIREMENTS, SUCH AS ADDITIONAL OR MODIFIED BMPS, DESIGNED TO CORRECT PROBLEMS IDENTIFIED OR ADDRESS SITUATIONS WHENEVER:

1. THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE, WEATHER OR SEASONAL CONDITIONS THAT HAS A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR UNDERGROUND WATERS.
2. INSPECTIONS OR INVESTIGATIONS BY SITE OPERATORS, LOCAL, STATE OR FEDERAL OFFICIALS INDICATE THE SWPPP IS NOT EFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR UNDERGROUND WATERS OR THAT THE DISCHARGES ARE CAUSING WATER QUALITY STANDARD EXCEEDANCES.
3. THE SWPPP IS NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY, OR THE SWPPP IS NOT CONSISTENT WITH THE TERMS AND CONDITIONS OF THE GENERAL PERMIT.
4. THE MPCA HAS DETERMINED THAT THE PROJECT'S STORM WATER DISCHARGES MAY CAUSE OR CONTRIBUTE TO NON-ATTAINMENT OF ANY APPLICABLE WATER STANDARD, OR THAT THE SWPPP DOES NOT INCORPORATE REQUIREMENTS RELATED TO AN APPROVED TOTAL MAXIMUM DAILY LOAD (TMDL) IMPLEMENTATION PLAN. IN THIS CASE, THE SWPPP MUST BE UPDATED OR A SUPPLEMENTAL BMP ACTION PLAN DEVELOPED TO ADDRESS THE IDENTIFIED CONCERNS.

7.3 TRAINING

THE PERMITTEE(S) MUST FULFILL TRAINING REQUIREMENTS AND INCLUDE RECORDS OF TRAINING IN THE SWPPP. REFRESHER TRAINING MUST BE ATTENDED EVERY THREE YEARS STARTING THREE YEARS, FROM THE ISSUANCE OF THE 2018 GENERAL PERMIT (ISSUED 8/1/18). INDIVIDUALS REQUIRED TO BE TRAINED INCLUDE:

1. INDIVIDUALS PREPARING THE SWPPP
2. INDIVIDUALS OVERSEEING IMPLEMENTATION OF, REVISING, AND AMENDING THE SWPPP AND INDIVIDUALS PERFORMING INSPECTIONS. ONE OF THESE INDIVIDUALS MUST BE AVAILABLE FOR AN ON SITE INSPECTION WITHIN 72 HOURS UPON REQUEST BY THE MPCA.
3. INDIVIDUALS PERFORMING OR SUPERVISING THE INSTALLATION, MAINTENANCE AND REPAIR OF BMPS. AT LEAST ONE INDIVIDUAL ON A PROJECT MUST BE TRAINED IN THESE JOB DUTIES.

THE CONTENT AND EXTENT OF TRAINING MUST BE COMMENSURATE WITH THE INDIVIDUAL'S JOB DUTIES AND RESPONSIBILITIES WITH REGARD TO ACTIVITIES COVERED UNDER THE GENERAL PERMIT. AT LEAST ONE INDIVIDUAL TRAINED IN THE JOB DUTIES LISTED ABOVE MUST BE PRESENT ON THE SITE OR AVAILABLE TO THE SITE IN 72 HOURS.

TRAINING DOCUMENTATION MUST INCLUDE:

1. NAMES OF PERSONNEL ASSOCIATED WITH THE PROJECT THAT ARE REQUIRED TO BE TRAINED
2. DATES OF TRAINING AND NAMES OF INSTRUCTOR AND ENTITY PROVIDING TRAINING
3. CONTENT OF TRAINING COURSE, INCLUDING NUMBER OF HOURS OF TRAINING
4. DOCUMENTATION MUST BE KEPT WITH THE SWPPP. TRAINING RECORD/CERTIFICATION TEMPLATE IS AVAILABLE UPON REQUEST.

INDIVIDUALS MUST BE TRAINED BY LOCAL, STATE, FEDERAL AGENCIES, PROFESSIONAL ORGANIZATIONS, OR OTHER ENTITIES WITH EXPERTISE IN EROSION PREVENTION, SEDIMENT CONTROL, OR PERMANENT STORMWATER MANAGEMENT SUCH AS THE UNIVERSITY OF MINNESOTA, MINNESOTA EROSION CONTROL ASSOCIATION, SOIL AND WATER CONSERVATION DISTRICTS, OR THE MPCA.

SECTION 8: FINAL STABILIZATION / PERMIT TERMINATION

FINAL STABILIZATION - TO ACHIEVE FINAL STABILIZATION OF THE SITE, THE CONTRACTOR WILL IMPLEMENT THE FOLLOWING MEASURES AFTER ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED.

1. ALL SOILS MUST BE STABILIZED BY A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70 PERCENT OVER THE ENTIRE PERVIOUS SURFACE AREA, OR BY OTHER EQUIVALENT MEANS NECESSARY TO PREVENT SOIL FAILURE UNDER EROSIVE CONDITIONS. REFER TO LANDSCAPING PLANS/SPECIFICATIONS FOR TYPE OF VEGETATIVE COVER.
2. THE PERMANENT STORMWATER MANAGEMENT SYSTEM IS CONSTRUCTED, MEETS ALL REQUIREMENTS IN SECTIONS 15, 16, 17, 18, AND 19 OF THE GENERAL PERMIT AND IS OPERATING AS DESIGNED. TEMPORARY OR PERMANENT SEDIMENTATION BASINS THAT ARE TO BE USED AS PERMANENT WATER QUALITY MANAGEMENT BASINS HAVE BEEN CLEAN OF ANY ACCUMULATED SEDIMENT. ALL SEDIMENT HAS BEEN REMOVED FROM CONVEYANCE SYSTEMS AND DITCHES ARE STABILIZED WITH PERMANENT COVER.
3. ALL TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL BMPS MUST BE REMOVED.
4. FOR CONSTRUCTION PROJECTS ON LAND USED FOR AGRICULTURAL PURPOSES FINAL STABILIZATION MAY BE ACCOMPLISHED BY RETURNING THE DISTURBED LAND TO ITS PRECONSTRUCTION AGRICULTURAL USE.
5. FOR RESIDENTIAL CONSTRUCTION ONLY, INDIVIDUAL LOTS ARE CONSIDERED FINALLY STABILIZED IF THE STRUCTURE(S) ARE FINISHED AND TEMPORARY EROSION PROTECTION AND DOWNGRADIENT PERIMETER CONTROL HAS BEEN COMPLETED AND THE RESIDENCE HAS BEEN SOLD TO THE HOMEOWNER. ADDITIONALLY, THE PERMITTEE HAS DISTRIBUTED THE MPCA'S "HOMEOWNER FACT SHEET" TO THE HOMEOWNER TO INFORM THE HOMEOWNER OF THE NEED FOR, AND BENEFITS OF, PERMANENT COVER.

PERMIT TERMINATION - TO ACHIEVE PERMIT TERMINATION FOR THE SITE, PERMITTEES MUST COMPLY WITH SECTIONS 4 & 13 OF THE GENERAL PERMIT.

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Client
VENTURE PASS PARTNERS

Project
ROHN INDUSTRIES TRAILER STORAGE

Location
ST PAUL, MINNESOTA
2495 KASOTA AVENUE

Certification
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.

NOT FOR CONSTRUCTION

Chad M. Ayers
Registration No. 41301 Date: 08/09/2019
If applicable, contact us for a wet signed copy of this plan which is available upon request at Sambatek's, Minnetonka, MN office.

Summary
Designed: CMA Drawn: MLL
Approved: CMA Book / Page:
Phase: PRELIM Initial Issue: 08/09/2019

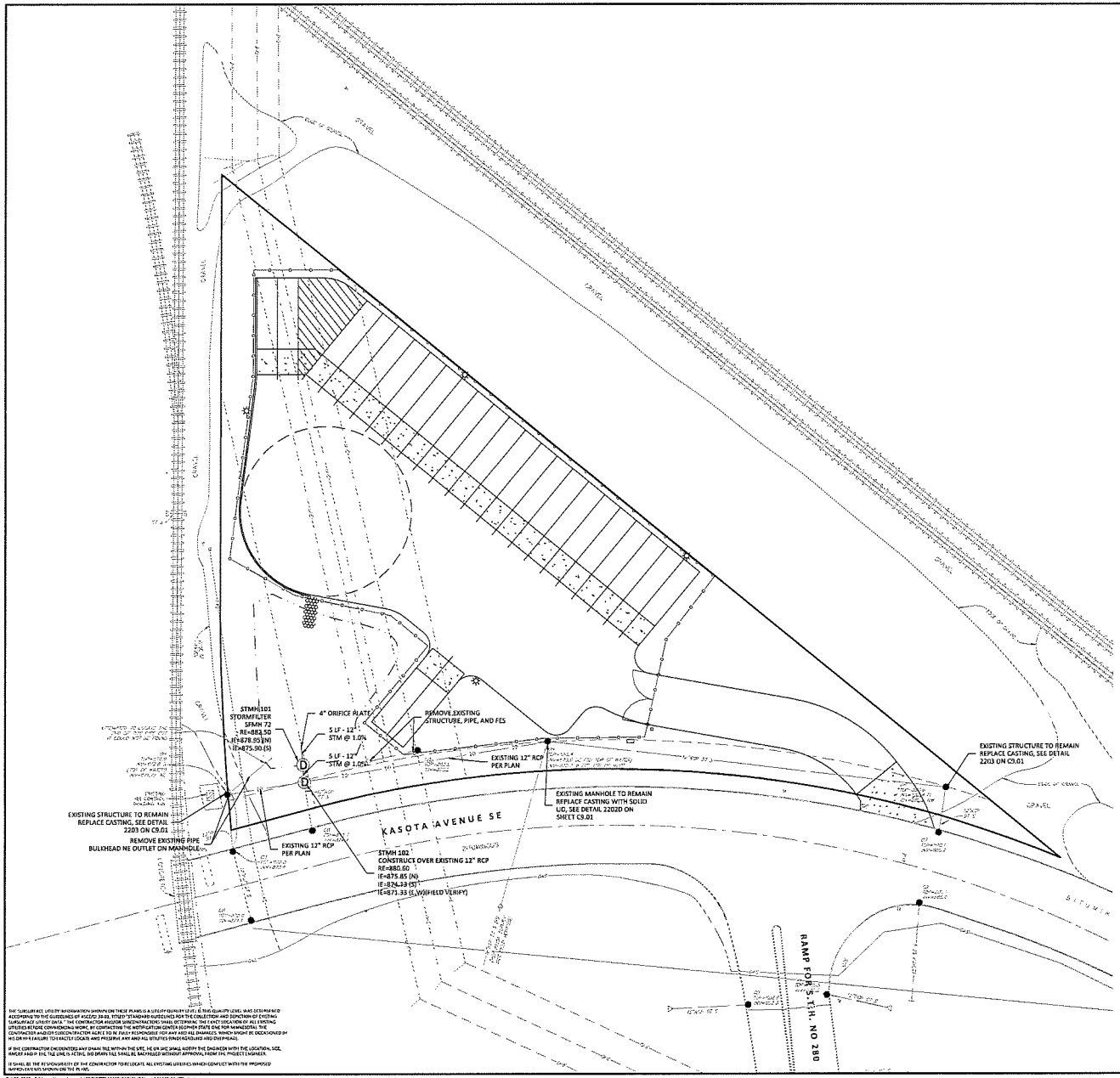
Revision History

No.	Date	By	Submittal / Revision
	08/09/2019	MLL	SITE PLAN REVIEW
	10/01/2019	MLL	CITY COMMENT RESPONSE

Sheet Title
SWPPP NARRATIVE

Sheet No. Revision
C5.05

Project No. 21625



THE SUBSURFACE UTILITY INFORMATION SHOWN ON THESE PLANS IS A UTILITY QUALITY LEVEL 'C' TWO QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF ASCE/CI 38-02, TITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA." THE CONTRACTOR AND/OR SUBCONTRACTORS SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, BY CONTACTING THE NOTIFICATION CENTER (GOPHER STATE ONE FOR MINNESOTA). THE CONTRACTOR AND/OR SUBCONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES, WHICH MIGHT BE OCCASIONED BY HIS OR HER FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES (UNDERGROUND AND OVERHEAD).

IF THE CONTRACTOR ENCOUNTERS ANY DRAIN TILE WITHIN THE SITE, HE OR SHE SHALL NOTIFY THE ENGINEER WITH THE LOCATION, SIZE, AMOUNT AND IF THE TILE LINE IS FLOWING. NO DRAIN TILE SHALL BE BACKFILLED WITHOUT APPROVAL FROM THE PROJECT ENGINEER.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

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LEGEND

	PROPOSED	EXISTING
CURB & GUTTER		
STORM SEWER		
SANITARY SEWER		
FORCEMAIN (SAN.)		
WATERMAIN		
EASEMENT		
DRAINTILE		
GAS LINE		
ELECTRIC		
TELEPHONE		

UTILITY CONSTRUCTION NOTES

1. THE UTILITY IMPROVEMENTS FOR THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "STANDARD UTILITIES SPECIFICATIONS" AS PUBLISHED BY THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM), EXCEPT AS MODIFIED HEREIN. CONTRACTOR SHALL OBTAIN A COPY OF THESE SPECIFICATIONS.
   - 1.1. ALL UTILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY REQUIREMENTS.
   - 1.2. CONTRACTOR SHALL NOT OPEN, TURN OFF, INTERFERE WITH, OR ATTACH ANY PIPE OR HOSE TO OR TAP WATERMAIN BELONGING TO THE CITY UNLESS DULY AUTHORIZED TO DO SO BY THE CITY. ANY ADVERSE CONSEQUENCES OF ANY SCHEDULED OR UNSCHEDULED DISRUPTIONS OF SERVICE TO THE PUBLIC ARE THE LIABILITY OF CONTRACTOR.
   - 1.3. A MINIMUM VERTICAL SEPARATION OF 18 INCHES AND HORIZONTAL SEPARATION OF 10-FEET BETWEEN OUTSIDE PIPE DIAMETERS IS REQUIRED AT ALL WATERMAIN AND SEWER MAIN (BUILDING, STORM AND SANITARY) CROSSINGS.
2. ALL MATERIALS SHALL BE AS SPECIFIED IN CEAM SPECIFICATIONS EXCEPT AS MODIFIED HEREIN.
   - 2.1. ALL MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY.
   - 2.2. ALL SANITARY SEWER TO BE PVC SDR-35, UNLESS NOTED OTHERWISE.
     - 2.2.1. ALL SANITARY SEWER SERVICES TO BUILDING SHALL BE PVC SCH 40 CONFORMING TO ASTM D2665.
   - 2.3. ALL WATERMAIN TO BE DUCTILE IRON - CLASS 52, UNLESS NOTED OTHERWISE.
     - 2.3.1. ALL WATERMAIN TO HAVE 7.5-FEET OF COVER OVER TOP OF WATERMAIN.
     - 2.3.2. PROVIDE THRUST BLOCKING AND MECHANICAL JOINT RESTRAINTS ON ALL WATERMAIN JOINTS PER CITY STANDARDS.
   - 2.4. ALL STORM SEWER PIPE TO BE SMOOTH INTERIOR DUAL WALL HDPE PIPE WITH WATER TIGHT GASKETS, UNLESS NOTED OTHERWISE.
     - 2.4.1. ALL STORM SEWER PIPE FOR ROOF DRAIN SERVICES TO BUILDING SHALL BE PVC SCH 40 CONFORMING TO ASTM D2665.
   - 2.5. RIP RAP SHALL BE Mn/DOT CLASS 3.
3. COORDINATE ALL BUILDING SERVICE CONNECTION LOCATIONS AND INVERT ELEVATIONS WITH MECHANICAL CONTRACTOR PRIOR TO CONSTRUCTION.
4. ALL BUILDING SERVICE CONNECTIONS (STORM, SANITARY, WATER) WITH FIVE FEET OR LESS COVER ARE TO BE INSULATED FROM BUILDING TO POINT WHERE 5-FEET OF COVER IS ACHIEVED.
5. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
6. SAFETY NOTICE TO CONTRACTORS: IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS ON THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE ENGINEER OR THE DEVELOPER TO CONDUCT CONSTRUCTION REVIEW OF CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF CONTRACTOR'S SAFETY MEASURES IN, ON OR NEAR THE CONSTRUCTION SITE.
7. ALL AREAS OUTSIDE THE PROPERTY BOUNDARIES THAT ARE DISTURBED BY UTILITY CONSTRUCTION SHALL BE RESTORED IN KIND. SODDED AREAS SHALL BE RESTORED WITH 6 INCHES OF TOPSOIL PLACED BENEATH THE SOD.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING TRAFFIC CONTROL DEVICES SUCH AS BARRICADES, WARNING SIGNS, DIRECTIONAL SIGNS, FLAGMEN AND LIGHTS TO CONTROL THE MOVEMENT OF TRAFFIC WHERE NECESSARY. TRAFFIC CONTROL DEVICES SHALL CONFORM TO APPROPRIATE MINNESOTA DEPARTMENT OF TRANSPORTATION STANDARDS.
9. ALL SOILS TESTING SHALL BE COMPLETED BY AN INDEPENDENT SOILS ENGINEER. EXCAVATION FOR THE PURPOSE OF REMOVING UNSTABLE OR UNSUITABLE SOILS SHALL BE COMPLETED AS REQUIRED BY THE SOILS ENGINEER. THE UTILITY BACKFILL CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS OF THE SOILS ENGINEER. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED SOILS TESTS AND SOIL INSPECTIONS WITH THE SOILS ENGINEER.

   A GEOTECHNICAL ENGINEERING REPORT HAS BEEN COMPLETED BY:

   COMPANY: BRAUN INTERTEC CORPORATION
   ADDRESS: 11001 HAMPSHIRE AVENUE SOUTH, MINNEAPOLIS, MN 55438
   PHONE: 952-995-2000
   DATED: 952-995-2020

   CONTRACTOR SHALL OBTAIN A COPY OF THIS SOILS REPORT.
10. CONTRACTOR AND MATERIAL SUPPLIER SHALL DETERMINE THE MINIMUM DIAMETER REQUIRED FOR EACH STORM SEWER STRUCTURE.

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Engineering | Surveying | Planning | Environmental

Client
VENTURE PASS PARTNERS

Project
ROHN INDUSTRIES TRAILER STORAGE

Location
ST PAUL, MINNESOTA
2495 KASOTA AVENUE

Certification

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.

Chad M. Myers
Registration No. 41301 Date: 08/09/2019

If applicable, contact us for a wet signed copy of this document which is available upon request at Sambatek's Minnetonka, MN office.

NOT FOR CONSTRUCTION

Summary

Designed: CMA Drawn: MLL
Approved: CMA Book / Page:
Phase: PRELIM Initial Issue: 08/09/2019

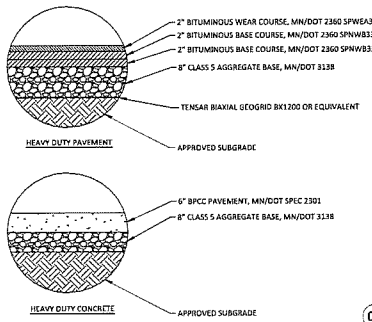
Revision History

No.	Date	By	Submittal / Revision
1	08/09/2019	MLL	SITE PLAN REVIEW
2	10/01/2019	MLL	CITY COMMENT RESPONSE

Sheet Title
UTILITY PLAN

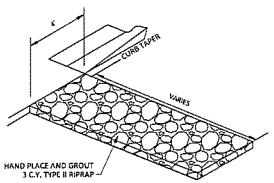
Sheet No. Revision
C6.01

Project No. 21625

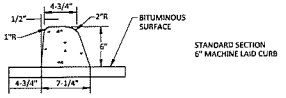


NOTES:
1. THE PAVEMENT SECTIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH MNDOT "STANDARD SPECIFICATION FOR CONSTRUCTION", AND ALSO THE REQUIREMENTS OF THE OWNER'S GEOTECHNICAL CONSULTANT.
2. ALL THICKNESSES, AS SPECIFIED, ARE TO BE CONSIDERED MINIMUM DEPTHS, AFTER COMPACTION.
3. MN/DOT SPEC. 2357 BITUMINOUS TACK COAT SHALL BE PLACED BETWEEN SUCCESSIVE BITUMINOUS LIFTS AND AGAINST ABUTTING CONCRETE CURB EDGES.

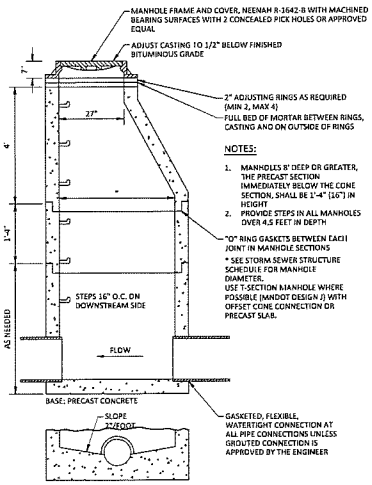
01 PAVEMENT SECTIONS
N.T.S.



02 CURB END WITH RIPRAP
N.T.S.

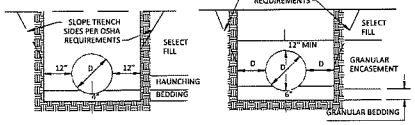


03 BITUMINOUS CURB
N.T.S.



NOTES:
1. MANHOLES 8' DEEP OR GREATER, THE PRECAST SECTION IMMEDIATELY BELOW THE CONE SECTION, SHALL BE 1'-4" (16") IN HEIGHT
2. PROVIDE STEPS IN ALL MANHOLES OVER 4.5 FEET IN DEPTH

04 STORM SEWER MANHOLE
N.T.S.



REINFORCED CONCRETE PIPE OR DIP

1. BEDDING AND HAUNCHING MATERIAL SHALL BE ASTM D2321-CLI, II, III, OR IV A SOILS, AND SHALL BE SHAPED TO THE BOTTOM OF THE PIPE. COMPACT BEDDING MATERIAL TO 95% STANDARD PROCTOR.
2. SELECT FILL SHALL BE SELECT MATERIAL FREE OF LARGE ROCKS (3"+) AND SHALL BE PLACED IN 8" MAX. LOOSE LIFTS AND COMPACTED TO 95% STANDARD PROCTOR.

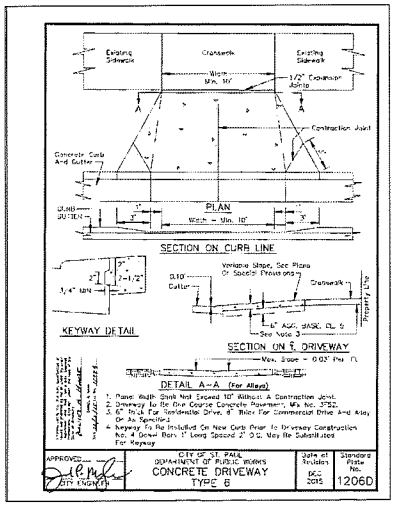
FLEXIBLE PIPE: INCLUDES CORRUGATEDMETAL PIPE

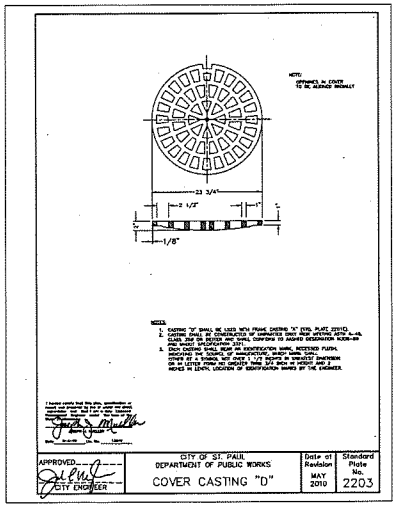
CORRUGATED POLYETHYLENE PIPE AND/OR POLYVINYL CHLORIDE PIPE

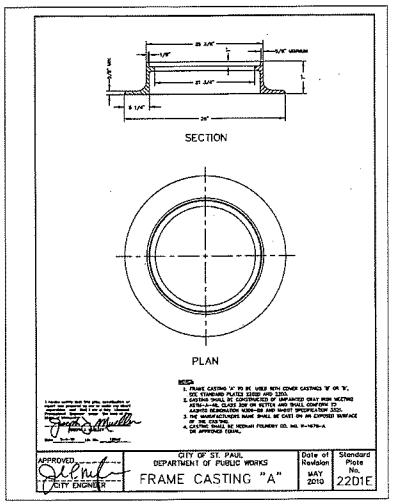
1. GRANULAR BEDDING AND ENCASEMENT MATERIAL SHALL BE CLASS I OR II (REF. ASTM D2321 OR MN/DOT 3149.2F) GRANULAR MATERIAL, AND SHALL BE COMPACTED TO 95% STANDARD PROCTOR.
2. SELECT FILL PLACEMENT AND COMPACTION. SAME AS FOR RCP.

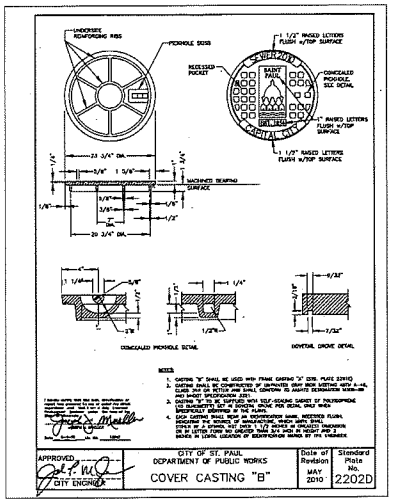
NOTE: FOR HDPE INSTALLED BELOW EXISTING OR FUTURE GROUND WATER ELEVATIONS, PIPE BEDDING AND ENCASEMENT SHALL BE CLASS I, CRUSHED ROCK PER ASTM D3321.

05 TRENCH AND BEDDING DETAILS
N.T.S.









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NOT FOR CONSTRUCTION

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Chad Myers
Registration No. 41301 Date: 08/09/2019

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Summary

Designed: CMA Drawn: MLL
Approved: CMA Book / Page:
Phase: PERMIT Initial Issue: 08/09/2019

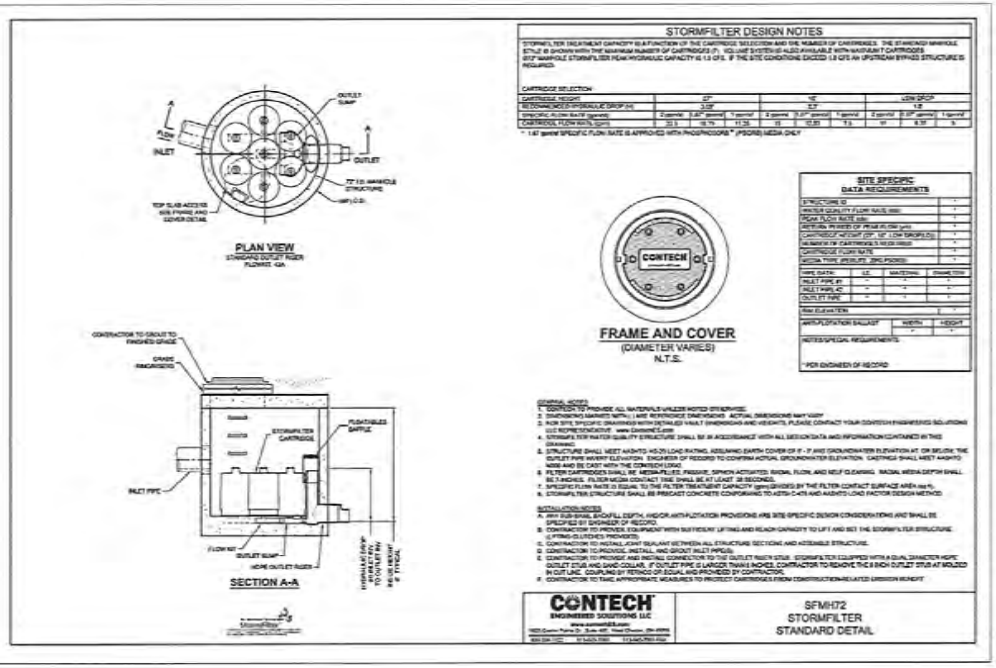
Revision History

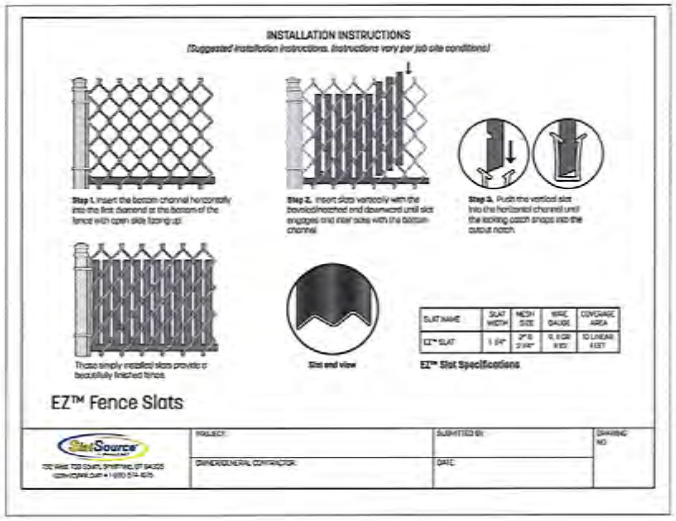
No.	Date	By	Submittal / Revision
	08/09/2019	MLL	SITE PLAN REVIEW
	10/01/2019	MLL	CITY COMMENT RESPONSE

Sheet Title
DETAILS

Sheet No. Revision
C9.01

Project No. 21625





Sambatek
www.sambatek.com
12800 Whitewater Drive, Suite 300
Minnetonka, MN 55343
763.476.6010 telephone
763.476.6032 facsimile
Engineering | Surveying | Planning | Environmental

Client
VENTURE PASS PARTNERS

Project
ROHN INDUSTRIES TRAILER STORAGE

Location
ST PAUL, MINNESOTA
2495 KASOTA AVENUE

Certification
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.

Chad M. Ayers
Registration No. 41301 Date: 08/09/2019

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Printed copies of this document are not considered signed and sealed and the signatures must be verified on any electronic copies. A hard copy bearing original signatures is available upon request at Sambatek's Minnetonka, MN office.

Summary
Designed: CMA Drawn: MLL
Approved: CMA Book / Page:
Phase: PRELIM Initial Issue: 08/09/2019

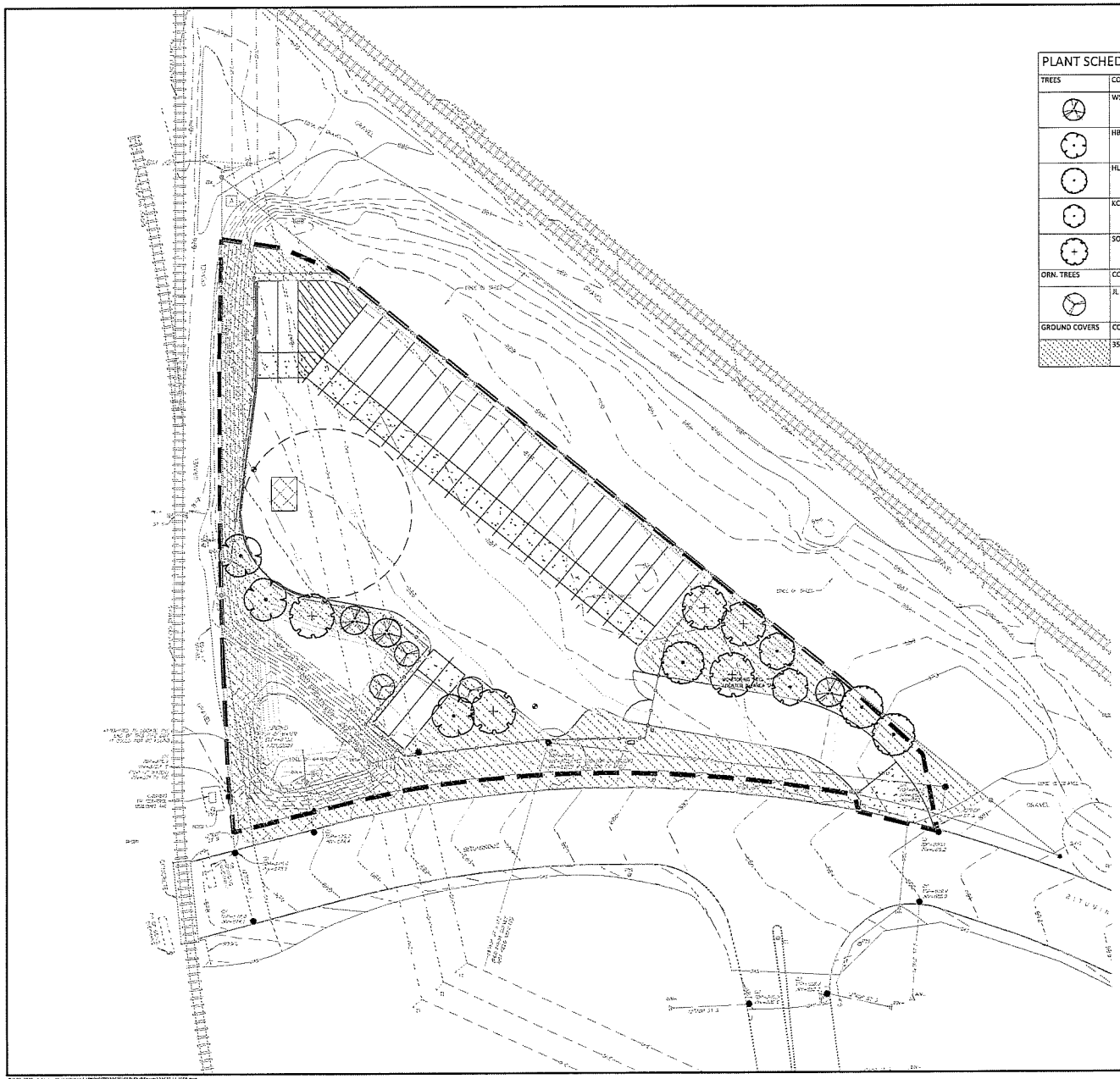
Revision History

No.	Date	By	Submittal / Revision
1	09/25/2019	MLL	SITE PLAN REVIEW
2	10/01/2019	MLL	CITY COMMENT RESPONSE

Sheet Title
DETAILS

Sheet No. Revision
C9.02

Project No. 21625



PLANT SCHEDULE						
TREES	CODE	BOTANICAL / COMMON NAME	CONT	CAL		QTY
	WS	Betula papyrifera 'Whitespire' / Whitespire Birch	B & B	2.5"Cal		3
	HB	Celtis occidentalis / Common Hackberry	B & B	2.5"Cal		3
	HL	Gleditsia triacanthos 'Skyline' / Skyline Honey Locust	B & B	2.5"Cal		3
	KC	Gymnocladus dioica 'Espresso' / Kentucky Coffeetree	B & B	2.5"Cal		2
	SO	Quercus bicolor / Swamp White Oak	B & B	2.5"Cal		5
ORN. TREES	CODE	BOTANICAL / COMMON NAME	CONT	CAL		QTY
	JL	Syringa reticulata / Japanese Tree Lilac	B & B	2"Cal		4
GROUND COVERS	CODE	BOTANICAL / COMMON NAME	CONT			QTY
	35-241	MNDOT Seed Mix 35-241 / Native-Gen. roadside	Seed			31,167 sf

NORTH

0 30 60

SCALE IN FEET

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Project
ROHN INDUSTRIES TRAILER STORAGE

Location
ST PAUL, MINNESOTA
2495 KASOTA AVENUE

Certification

I hereby certify that this survey, plan, or report was prepared by me or under my direct supervision and that I am a duly Licensed LANDSCAPE ARCHITECT under the laws of the State of Minnesota.

William O'Leary

William O'Leary
Registration No. 40252 Date: 08/09/2019

This certification is not valid unless wet signed in blue ink. If applicable, contact us for a wet signed copy of the survey which is available upon request at Sambatek, Minnetonka, MN office.

NOT FOR CONSTRUCTION

Summary

Designed: CMA Drawn: MLL
Approved: CMA Book / Page:
Phase: PRELIM Initial Issue: 08/09/2019

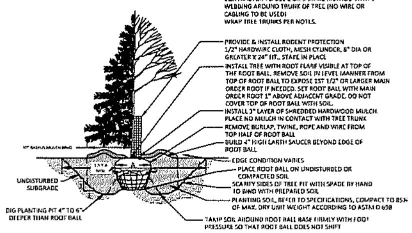
Revision History

No.	Date	By	Submittal / Revision
	08/09/2019	MLL	SITE PLAN REVIEW
	10/01/2019	MLL	CITY COMMENT RESPONSE

Sheet Title
LANDSCAPE PLAN

Sheet No. Revision
L1.01

Project No. 21625



1 / L1.02 TREE PLANTING DETAIL

1/4" = 1'-0" P-01

NOTES

GENERAL NOTES:

1. THE CONTRACTOR SHALL INSPECT THE SITE AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS RELATING TO THE NATURE AND SCOPE OF THE WORK.
2. THE CONTRACTOR SHALL VERIFY PLAN LAYOUT AND BRING TO THE ATTENTION OF THE LANDSCAPE ARCHITECT DISCREPANCIES WHICH MAY COMPROMISE THE DESIGN OR INTENT OF THE LAYOUT.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE CODES, REGULATIONS, AND PERMITS GOVERNING THE WORK.
4. THE CONTRACTOR SHALL PROTECT EXISTING ROADS, CURBS/GUTTERS, TRAILS, TREES, LAWNS AND SITE ELEMENTS DURING CONSTRUCTION. DAMAGE TO SAME SHALL BE REPAIRED AND/OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
5. LOCATE AND VERIFY ALL UTILITIES, INCLUDING IRRIGATION LINES, WITH THE OWNER FOR PROPRIETARY UTILITIES AND GOPHER STATE ONE CALL 48 HOURS BEFORE DIGGING. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ANY DAMAGES TO SAME. NOTIFY THE LANDSCAPE ARCHITECT OF ANY CONFLICTS TO FACILITATE PLANT RELOCATION.
6. THE LANDSCAPE CONTRACTOR SHALL COORDINATE THE PHASES OF CONSTRUCTION AND PLANTING INSTALLATION WITH OTHER CONTRACTORS WORKING ON SITE.
7. THE CONTRACTOR SHALL REVIEW THE SITE FOR DEFICIENCIES IN SITE CONDITIONS WHICH MIGHT NEGATIVELY AFFECT PLANT ESTABLISHMENT, SURVIVAL OR WARRANTY. UNDESIRABLE SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO BEGINNING OF WORK.
8. THE PLAN TAKES PRECEDENCE OVER THE LANDSCAPE LEGEND IF DISCREPANCIES EXIST. QUANTITIES SHOWN IN THE PLANTING SCHEDULE ARE FOR THE CONTRACTOR'S CONVENIENCE. CONTRACTOR TO VERIFY QUANTITIES SHOWN ON THE PLAN.
9. THE SPECIFICATIONS TAKE PRECEDENCE OVER THE PLANTING NOTES AND GENERAL NOTES.
10. EXISTING TREES AND SHRUBS TO REMAIN SHALL BE PROTECTED TO THE DRIP LINE FROM ALL CONSTRUCTION TRAFFIC, STORAGE OF MATERIALS ETC. WITH 4' HT. ORANGE PLASTIC SAFETY FENCING ADEQUATELY SUPPORTED BY STEEL FENCE POSTS 6' O.C. MAXIMUM SPACING.
11. LONG-TERM STORAGE OF MATERIALS OR SUPPLIES ON-SITE WILL NOT BE ALLOWED.
12. CONTRACTOR SHALL REQUEST IN WRITING, A FINAL ACCEPTANCE INSPECTION.

PLANTING NOTES:

1. NO PLANTS SHALL BE INSTALLED UNTIL FINAL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
2. A GRANULAR PRE-EMERGENT HERBICIDE SHALL BE APPLIED TO ALL PLANT BEDS AT THE MANUFACTURERS RECOMMENDED RATE PRIOR TO PLANT INSTALLATION.
3. ALL PLANTING STOCK SHALL CONFORM TO THE "AMERICAN STANDARD FOR NURSERY STOCK," ANSI-Z60, LATEST EDITION, OF THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIALS.
4. OVERSTORY TREES SHALL BEGIN BRANCHING NO LOWER THAN 6' ABOVE PAVED SURFACES.
5. ALL PLANTS MUST BE HEALTHY, VIGOROUS MATERIAL, FREE OF PESTS AND DISEASE AND BE CONTAINER GROWN OR BALLED AND BURLAPPED AS INDICATED IN THE LANDSCAPE LEGEND.
6. PLANT MATERIALS TO BE INSTALLED PER PLANTING DETAILS.
7. ALL TREES MUST BE STRAIGHT TRUNKED AND FULL HEADED AND MEET ALL REQUIREMENTS SPECIFIED.
8. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANTS WHICH ARE DEEMED UNSATISFACTORY BEFORE, DURING, OR AFTER INSTALLATION.
9. NO SUBSTITUTIONS OF PLANT MATERIAL SHALL BE ACCEPTED UNLESS APPROVED IN WRITING BY THE LANDSCAPE ARCHITECT.
10. ALL PLANT MATERIAL QUANTITIES, SHAPES OF BEDS AND LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE COVERAGE OF ALL PLANTING BEDS AT SPACING SHOWN AND ADJUSTED TO CONFORM TO THE EXACT CONDITIONS OF THE SITE. THE LANDSCAPE ARCHITECT SHALL APPROVE THE STAKING LOCATION OF ALL PLANT MATERIALS PRIOR TO INSTALLATION.
11. ALL PLANTING AREAS MUST BE COMPLETELY MULCHED AS SPECIFIED.
12. MULCH: SHREDDED HARDWOOD MULCH, CLEAN AND FREE OF NOXIOUS WEEDS OR OTHER DELETERIOUS MATERIAL, IN ALL MASS PLANTING BEDS AND FOR TREES, UNLESS INDICATED AS ROCK MULCH ON DRAWINGS. SUBMIT SAMPLE TO LANDSCAPE ARCHITECT PRIOR TO DELIVERY ON-SITE FOR APPROVAL. DELIVER MULCH ON DAY OF INSTALLATION. USE 3" FOR SHRUB BEDS, TREE RINGS, AND 3" FOR PERENNIAL/GROUND COVER BEDS, UNLESS OTHERWISE DIRECTED.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MULCHES AND PLANTING SOIL QUANTITIES TO COMPLETE THE WORK SHOWN ON THE PLAN.
14. USE ANTI-DESICCANT (WILTPRUF OR APPROVED EQUAL) ON DECIDUOUS PLANTS MOVED IN LEAF AND FOR EVERGREENS MOVED ANYTIME. APPLY AS PER MANUFACTURER'S INSTRUCTION. ALL EVERGREENS SHALL BE SPRAYED IN THE LATE FALL FOR WINTER PROTECTION DURING WARRANTY PERIOD.
15. WRAP ALL SMOOTH-BARKED DECIDUOUS TREES PLANTED IN THE FALL PRIOR TO DECEMBER 1 AND REMOVE WRAPPING AFTER MAY 1. TREE WRAPPING MATERIAL SHALL BE WHITE TWO-WALLED PLASTIC SHEETING APPLIED FROM TRUNK FLARE TO THE FIRST BRANCH.
16. ALL DECIDUOUS, PINE, AND LARCH PLANTINGS SHALL RECEIVE RODENT PROTECTION PER MNDOT 2571.3.1.2
17. PLANTING SOIL FOR TREES, SHRUBS AND GROUND COVERS: FERTILE FRIABLE LOAM CONTAINING A LIBERAL AMOUNT (4% MIN.) OF HUMUS AND CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH. IT SHALL COMPLY WITH MNDOT SPECIFICATION 3877 TYPE B SELECT TOPSOIL. MIXTURE SHALL BE FREE FROM HARDPACK SUBSOIL, STONES, CHEMICALS, NOXIOUS WEEDS, ETC. SOIL MIXTURE SHALL HAVE A PH BETWEEN 6.1 AND 7.5 AND 10-0-10 FERTILIZER AT THE RATE OF 3 POUNDS PER CUBIC YARD. IN PLANTING BEDS INCORPORATE THIS MIXTURE THROUGHOUT THE ENTIRE BED IN A 6" LAYER AND ROTO-TILLING IT INTO THE TOP 12" OF SOIL AT A 1:1 RATIO.ANY PLANT STOCK NOT PLANTED ON DAY OF DELIVERY SHALL BE HEELED IN AND WATERED UNTIL INSTALLATION. PLANTS NOT MAINTAINED IN THIS MANNER WILL BE REJECTED.
18. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THAT EACH EXCAVATED TREE AND SHRUB PIT WILL PERCOLATE PRIOR TO INSTALLING PLANTING MEDIUM AND PLANTS. THE CONTRACTOR SHALL FILL THE BOTTOM OF SELECTED HOLES WITH SIX INCHES OF WATER AND CONFIRM THAT THIS WATER WILL PERCOLATE WITHIN A 24-HOUR PERIOD. IF THE SOIL AT A GIVEN AREA DOES NOT DRAIN PROPERLY, A PVC DRAIN OR GRAVEL SUMP SHALL BE INSTALLED OR THE PLANTING SHALL BE RELOCATED IF DIRECTED BY THE LANDSCAPE ARCHITECT.
19. CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT AT LEAST 3 DAYS PRIOR TO PLANNED DELIVERY. THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT AT LEAST 24 HOURS IN ADVANCE OF BEGINNING PLANT INSTALLATION.
20. SEASONS/TIME OF PLANTING AND SEEDING: NOTE: THE CONTRACTOR MAY ELECT TO PLANT IN OFF-SEASONS ENTIRELY AT HIS/HER RISK.
    - 20.1. POTTED PLANTS: 4/1 - 6/1; 9/21 - 11/1
    - 20.2. DECIDUOUS /B&B: 4/1 - 6/1; 9/21 - 11/1
    - 20.3. EVERGREEN POTTED PLANTS: 4/1 - 6/1; 9/21-11/1
    - 20.4. EVERGREEN B&B: 4/1 - 5/1; 9/21 - 11/1
    - 20.5. TURF/LAWN SEEDING: 4/1 - 6/1; 7/20 - 9/20
    - 20.6. NATIVE MIX SEEDING: 4/15 - 7/20; 9/20-10/20
21. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER EACH PORTION OF THE WORK IS IN PLACE. PLANT MATERIAL SHALL BE PROTECTED AND MAINTAINED UNTIL THE INSTALLATION OF THE PLANTS IS COMPLETE, INSPECTION HAS BEEN MADE, AND PLANTINGS ARE ACCEPTED EXCLUSIVE OF THE GUARANTEE. MAINTENANCE SHALL INCLUDE WATERING, CULTIVATING, MULCHING, REMOVAL OF DEAD MATERIALS, RE-SETTING PLANTS TO PROPER GRADE AND KEEPING PLANTS IN A PLUMB POSITION. AFTER ACCEPTANCE, THE OWNER SHALL ASSUME MAINTENANCE RESPONSIBILITIES. HOWEVER, THE CONTRACTOR SHALL CONTINUE TO BE RESPONSIBLE FOR KEEPING THE TREES PLUMB THROUGHOUT THE GUARANTEE PERIOD.
22. ANY PLANT MATERIAL WHICH DIES, TURNS BROWN, OR DEFOLIATES (PRIOR TO TOTAL ACCEPTANCE OF THE WORK) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE AND MEETING ALL LANDSCAPE LEGEND SPECIFICATIONS.
23. HAND WATERING DURING ESTABLISHMENT: MAINTAIN A WATERING SCHEDULE WHICH WILL THOROUGHLY WATER ALL PLANTS ONCE A WEEK. IN EXTREMELY HOT, DRY WEATHER, WATER MORE OFTEN AS REQUIRED BY INDICATIONS OF HEAT STRESS SUCH AS WILTING LEAVES. CHECK MOISTURE UNDER MULCH PRIOR TO WATERING TO DETERMINE NEED. CONTRACTOR SHALL MAKE THE NECESSARY ARRANGEMENTS FOR WATER.

SEED NOTES:

TURF ESTABLISHMENT SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE PROVISIONS OF THE MN/DOT 2105 AND 2575 EXCEPT AS MODIFIED BELOW:

1. ALL DISTURBED AREAS TO RECEIVE NATIVE SEED, ARE TO RECEIVE PLANTING SOIL, SEED, MULCH, AND WATER UNTIL A HEALTHY STAND OF GRASS IS OBTAINED. FOR SLOPES STEEPER THAN 3:1 OR IN DRAINAGE SWALES INSTALL EROSION CONTROL BLANKET.

GENERAL TREE SPECIFICATIONS:

1. ALL STREET AND PARKING LOT TREES SHALL BE LIMBED UP TO THE FOLLOWING HEIGHTS:
    - 1.1. 2" CAL. TREES: LOWEST BRANCH 6' HT.
    - 1.2. 3" CAL.+ TREES: LOWEST BRANCH 7' HT.
2. TREE CANOPY WIDTH SHALL BE RELATIVE TO HEIGHT/CALIPER OF TREE AND TYPE OF TREE.
    - 2.1. 1" CALIPER/6-8' HT: 3-4' WIDTH MIN.
    - 2.2. 2" CALIPER/12-14' HT: 4-5' WIDTH MIN.
    - 2.3. 3" CALIPER/14-16' HT: 6-7' WIDTH MIN.
3. CANOPY TREES SHALL NOT HAVE CO-DOMINATE LEADERS IN LOWER HALF OF TREE CROWN.
4. ALL TREES SHALL HAVE SYMMETRICAL OR BALANCED BRANCHING ON ALL SIDES OF THE TREE.
5. TREES SHALL NOT BE TIPPED PRUNED.
6. TREES SHALL BE FREE OF PHYSICAL DAMAGE FROM SHIPPING AND HANDLING. DAMAGED TREES SHALL BE REJECTED.
7. SUMMER DUG TREES SHALL HAVE ROOTBALL SIZE INCREASED BY 20%
8. TREES WHICH EXCEED RECOMMENDED CALIPER TO HEIGHT RELATIONSHIP SHALL BE REJECTED.

NORTH

0 ## ##
SCALE IN FEET

Sambatek
www.sambatek.com
12800 Whitewater Drive, Suite 300
Minnetonka, MN 55343
763.476.6010 telephone
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Engineering | Surveying | Planning | Environmental

Client
VENTURE PASS PARTNERS

Project
ROHN INDUSTRIES TRAILER STORAGE

Location
ST PAUL, MINNESOTA
2495 KASOTA AVENUE

Certification
I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly Licensed LANDSCAPE ARCHITECT under the laws of the State of Minnesota.

William Delaney
Registration No. 40252 Date: 08/09/2019

This certification is not valid unless wet signed in blue ink. If applicable, contact us for a wet signed copy of this survey which is available upon request at Sambatek, Minnetonka, MN office.

NOT FOR CONSTRUCTION

Summary
Designed: CMA Drawn: MLL
Approved: CMA Book / Page:
Phase: PRELIM Initial Issue: 08/09/2019

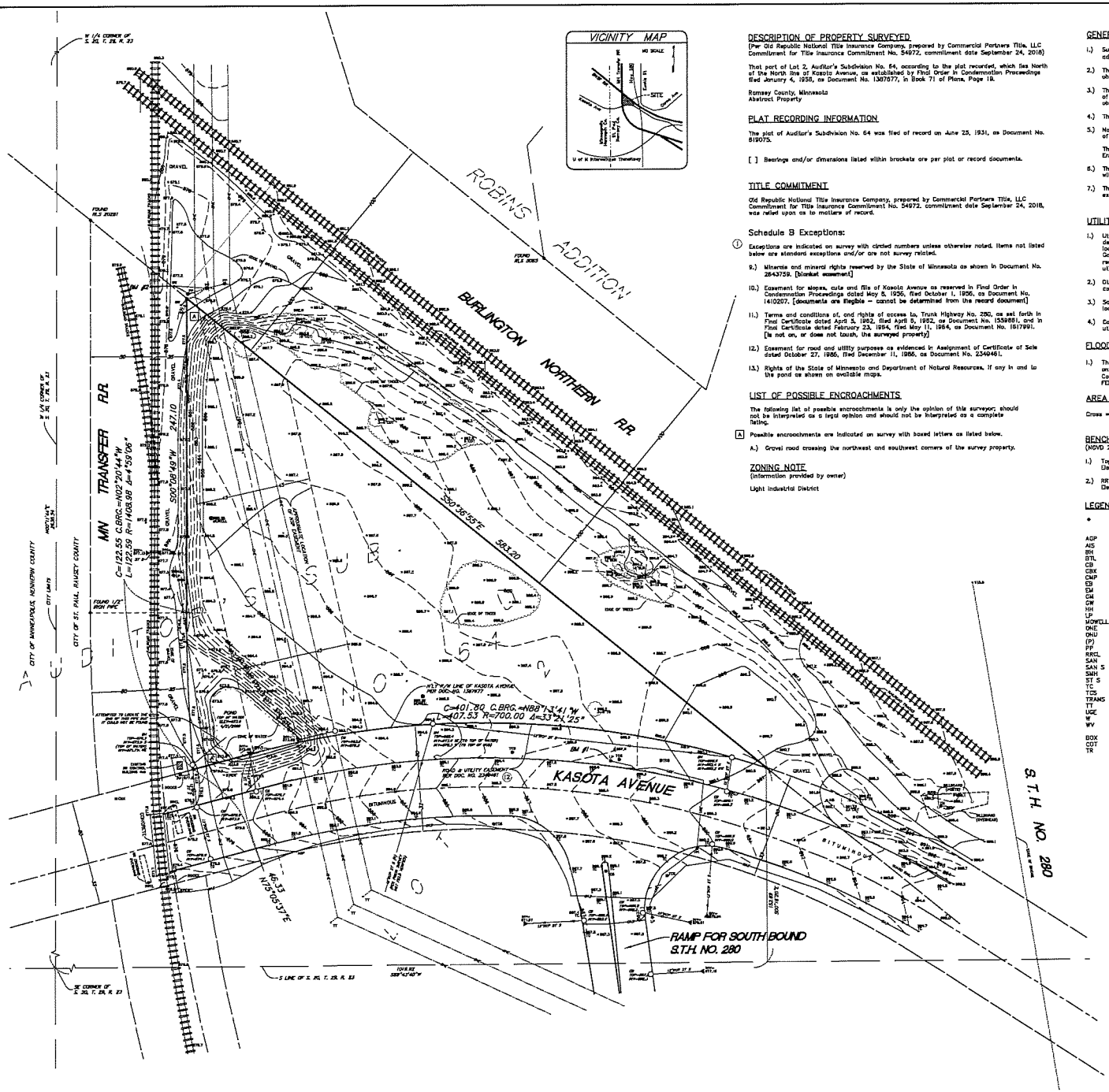
Revision History

No.	Date	By	Submittal / Revision
	08/09/2019	MLL	SITE PLAN REVIEW
	10/01/2019	MLL	CITY COMMENT RESPONSE

Sheet Title
LANDSCAPE DETAILS-NOTES

Sheet No. Revision
L1.02

Project No. 21625



DESCRIPTION OF PROPERTY SURVEYED

(Per Old Republic National Title Insurance Company, prepared by Commercial Partners Title, LLC Commitment for Title Insurance Commitment No. 54972, commitment date September 24, 2018)

That part of Lot 2, Auditor's Subdivision No. 64, according to the plat recorded, which lies North of the North line of Kasota Avenue, as established by Final Order in Condemnation Proceedings filed January 4, 1938, as Document No. 1387677, in Book 71 of Plans, Page 18.

Ramsey County, Minnesota
Abstract Property

PLAT RECORDING INFORMATION

The plat of Auditor's Subdivision No. 64 was filed of record on June 23, 1931, as Document No. 819075.

[ ] Bearings and/or dimensions listed within brackets are per plat or record documents.

TITLE COMMITMENT

Old Republic National Title Insurance Company, prepared by Commercial Partners Title, LLC Commitment for Title Insurance Commitment No. 54972, commitment date September 24, 2018, was relied upon as to matters of record.

Schedule B Exceptions:

(1) Exceptions are indicated on survey with circled numbers unless otherwise noted. Items not listed below are standard exceptions and/or are not survey related.

9.) Minerals and mineral rights reserved by the State of Minnesota as shown in Document No. 2643759. [blanket easement]

10.) Easement for slopes, cuts and fills of Kasota Avenue as reserved in Final Order in Condemnation Proceedings dated May 8, 1935, filed October 1, 1935, as Document No. 1410207. [documents are illegible — cannot be determined from the record document]

11.) Terms and conditions of, and rights of access to, Trunk Highway No. 280, as set forth in Final Certificate dated April 5, 1982, filed April 5, 1982, as Document No. 1539881, and in Final Certificate dated February 23, 1984, filed May 11, 1984, as Document No. 1617991. [is not on, or does not touch, the surveyed property]

12.) Easement for road and utility purposes as evidenced in Assignment of Certificate of Sale dated October 27, 1986, filed December 11, 1986, as Document No. 2340461.

13.) Rights of the State of Minnesota and Department of Natural Resources, if any in and to the pond as shown on available maps.

LIST OF POSSIBLE ENCROACHMENTS

The following list of possible encroachments is only the opinion of this surveyor; should not be interpreted as a legal opinion and should not be interpreted as a complete listing.

[A] Possible encroachments are indicated on survey with boxed letters as listed below.

A.) Gravel road crossing the northwest and southwest corners of the survey property.

ZONING NOTE

(information provided by owner)

Light Industrial District

GENERAL NOTES

1.) Survey coordinate basis: Ramsey County System (North American Datum of 1983 Coordinates, final adjustment December 17, 1991)

2.) There was no evidence of recent earth moving work, building construction or building additions observed in the process of conducting the fieldwork.

3.) There are no proposed changes in street right of way lines per the Public Works of St. Paul Right of Way Department. There was no evidence of recent street or sidewalk construction or repairs observed in the process of conducting the fieldwork.

4.) There were no wetland delineation markers observed in the process of conducting the fieldwork.

5.) No easement documents were found for the high-tension power lines or the pond on the west side of the subject property.

The NSP Easement shown on the survey is approximate per a survey by Advance Surveying & Engineering Company, survey date of September 25, 1968, last revision date of November 21, 1986.

6.) The Right-of-way for Kasota Avenue is shown on this survey per MNDot R/W Map in accordance with C. F. No. 174378, recorded December 3, 1953 as Document No. 1387677.

7.) There does not appear to be an outlet for the pond on the subject property according to the existing storm sewer invert elevations shown on this survey.

UTILITY NOTES

1.) Utility information from plans and markings was combined with observed evidence of utilities to develop a view of the underground utilities shown hereon. However, locking excavation, the exact location of underground features cannot be accurately, completely and reliably depicted. In addition, Gopher State One Call locate requests from surveyors may be ignored or result in an incomplete response. Where additional or more detailed information is required, excavation and/or a private utility locate request may be necessary.

2.) Other underground utilities of which we are unaware may exist. Verify all utilities critical to construction or design.

3.) Some underground utility locations are shown as marked onsite by those utility companies whose locators responded to our Gopher State One Call, ticket numbers 19092201 and 182868240.

4.) Contact GOPHER STATE ONE CALL at 651-454-0002 (800-252-1166) for precise onsite location of utilities prior to any excavation.

FLOOD ZONE NOTE

1.) The subject property appears to lie within Zone X (Areas determined to be outside the 0.2% annual chance floodplain) per the National Flood Insurance Program, Flood Insurance Rate Map Community Panel No. 27123C0080G, dated 6/4/2010. This information was obtained from the FEMA Map Service Center web site.

AREA

Gross = 72,852 square feet or 1.688 acres

BENCHMARKS (BM)

(NGVD 29)

1.) Top of SW bolt of light pole base on N side of Kasota Avenue
Elevation = 890.77 feet

2.) RR spike on E side W'ly power pole at the NW corner of property
Elevation = 879.04 feet

LEGEND

◆	Denotes found iron monument marked with R.L.S. No. 15480
AGP	Denotes above ground pipe
AIS	Denotes advertisement/information sign
BH	Denotes beehive catch basin
BTL	Denotes bituminous curb
CB	Denotes catch basin
CBX	Denotes communication box
CMP	Denotes corrugated metal pipe
EB	Denotes electric box
EM	Denotes electric meter
GM	Denotes gas meter
GW	Denotes guy wire
HH	Denotes hand hole
LP	Denotes light pole
MONWELL	Denotes monitoring well
ONE	Denotes overhead electric line
ONU	Denotes overhead utility lines
(P)	Denotes per plan/not field verified
PP	Denotes power pole
RRCL	Denotes railroad crossing light
SAN	Denotes sanitary manhole
SAN S	Denotes sanitary sewer
SMH	Denotes storm manhole
ST S	Denotes storm sewer
TC	Denotes top of concrete curb
TCS	Denotes traffic control sign
TRANS	Denotes transformer
TT	Denotes transmission tower
UGE	Denotes underground electric line
W	Denotes water line
WV	Denotes water valve
BOX	Denotes Boxelder tree
COT	Denotes Cottonwood tree
TR	Denotes deciduous tree

SURVEYOR'S CERTIFICATION

To: Stan Koch & Sons Trucking, Inc., Venture Pass Partners, LLC, a Minnesota limited liability company, Commercial Partners Title, LLC and Old Republic National Title Insurance Company

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes items 1, 2, 3, 4, 5, 8, 11, 16, 17, 18, and 19 of Table A thereof. The fieldwork was completed on September 28, 2018.

Dated this 9th day of October, 2018.

SUNDE LAND SURVEYING, LLC.

By: _____
Arlen J. Carlson, P.L.S. Minn. Lic. No. 44900

ARLEN J. CARLSON — REGISTERED LAND SURVEYOR — 44900 — STATE OF MINNESOTA

Revision	By	Date
	WTZ	

Drawing Title:
ALTA/NSPS LAND TITLE SURVEY FOR:
STAN KOCH & SONS TRUCKING, INC.
KASOTA AVENUE & HIGHWAY 280

SUNDE LAND SURVEYING
Main Office: 9001 East Bloomington Freeway (35W) - Suite 110, Bloomington, Minnesota 55420-2430, 952-881-2430 (Fax 952-888-6328), www.sunde.com

Project: 2009-050-A	Bk/Pg: 731/29
Township: 29 Range: 23 Section: 20	Date: 10/09/2018
File: 20090504.dwg	Sheet 1 of 1

CITY VIEW

ELECTRIC INC.

Trailer Parking

Kasota Ave.

Lighting Submittal

Jason Kinsella
City View Electric
14309 Lake Drive NE
Columbus, MN 55025
Phone 651.659.9496 • Fax
651.659.0905 cityviewelectric.com

McGraw-Edison

DESCRIPTION

The Galleon™ LED luminaire delivers exceptional performance in a highly scalable, low-profile design. Patented, high-efficiency AccuLED Optics™ system provides uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and security lighting applications. IP66 rated and UL/cUL Listed for wet locations.

Catalog #	GLEON-AF-06-LED-E1-T4W-BK	Type
Project	TRAILER PARKING - KASOTA AVE	AA
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction
Extruded aluminum driver enclosure thermally isolated from Light Squares for optimal thermal performance. Heavy-wall, die-cast aluminum end caps enclose housing and die-cast aluminum heat sinks. A unique, patent pending interlocking housing and heat sink provides scalability with superior structural rigidity. 3G vibration tested and rated. Optional tool-less hardware available for ease of entry into electrical chamber. Housing is IP66 rated.

Optics
Patented, high-efficiency injection-molded AccuLED Optics technology. Optics are precisely designed to shape the distribution maximizing efficiency and application spacing. AccuLED Optics create consistent distributions with the scalability to meet customized application requirements. Offered standard in 4000K (+/- 275K) CCT 70 CRI. Optional 3000K, 5000K and 6000K CCT.

Electrical
LED drivers are mounted to removable tray assembly for ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Standard with 0-10V dimming. Shipped standard with Eaton proprietary circuit module designed to withstand 10kV of transient line surge. The Galleon LED luminaire is suitable for operation in -40°C to 40°C ambient environments. For applications with ambient temperatures exceeding 40°C, specify the HA (High Ambient) option. Light Squares are IP66 rated. Greater than 90% lumen maintenance expected at 60,000 hours. Available in standard 1A drive current and optional 600mA, 800mA and 1200mA drive currents (nominal).

Mounting
STANDARD ARM MOUNT: Extruded aluminum arm includes internal bolt guides allowing for easy positioning of fixture during mounting. When mounting two or more luminaires at 90° and 120° apart, the EA extended arm may be required. Refer to the arm mounting requirement table. Round pole adapter included. For wall mounting, specify wall mount bracket option. QUICK MOUNT ARM: Adapter is bolted directly to the pole. Quick mount arm slide into place on the adapter and is secured via two screws, facilitating quick and easy installation. The versatile, patent pending, quick mount arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8". Removal of the door on the quick mount arm enables wiring of the fixture without having to access the driver compartment. A knock-out enables round pole mounting.

Finish
Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Heat sink is powder coated black. Standard housing colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available.

Warranty
Five-year warranty.

GLEON
GALLEON LED

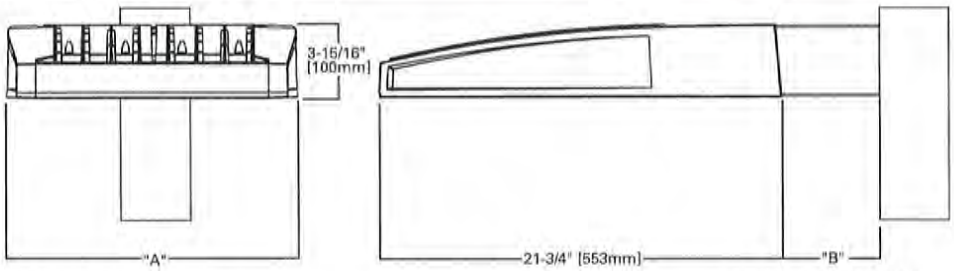
1-10 Light Squares
Solid State LED

AREA/SITE LUMINAIRE

LumenSafe Technology
CLICK HERE

WaveLinx

DIMENSIONS



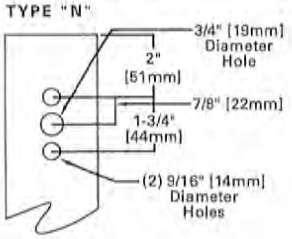
DIMENSION DATA

Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Optional Arm Length [1]	Weight with Arm (lbs.)	EPA with Arm [2] (Sq. Ft.)
1-4	15-1/2" (394mm)	7" (178mm)	10" (254mm)	33 (15.0 kgs.)	0.96
5-6	21-5/8" (549mm)	7" (178mm)	10" (254mm)	44 (20.0 kgs.)	1.00
7-8	27-5/8" (702mm)	7" (178mm)	13" (330mm)	54 (24.5 kgs.)	1.07
9-10	33-3/4" (857mm)	7" (178mm)	16" (406mm)	63 (28.6 kgs.)	1.12

NOTES: 1. Optional arm length to be used when mounting two fixtures at 90° on a single pole. 2. EPA calculated with optional arm length.

DRILLING PATTERN

TYPE "N"



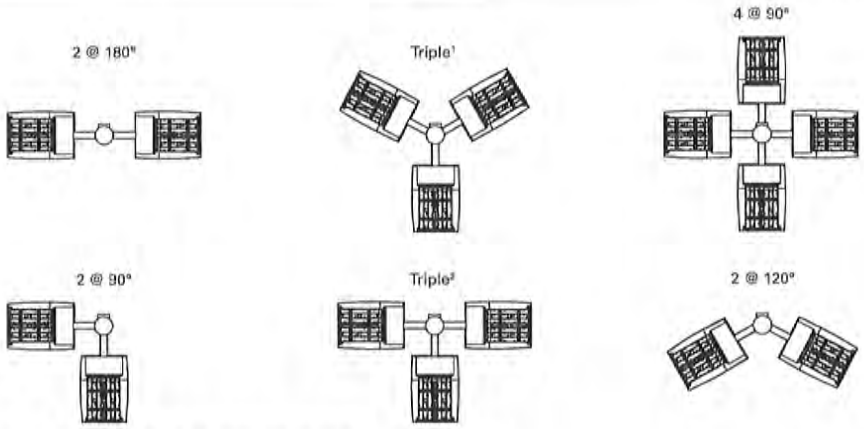
CERTIFICATION DATA
3G Vibration Rated
DesignLights Consortium® Qualified*
IP66 Rated
ISO 9001
LM79 / LM80 Compliant
UL/cUL Wet Location Listed

ENERGY DATA
Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120V-277V 50/60Hz
347V, 480V 60Hz
-40°C Min. Temperature
40°C Max. Temperature
50°C Max. Temperature (HA Option)

*www.designlights.org

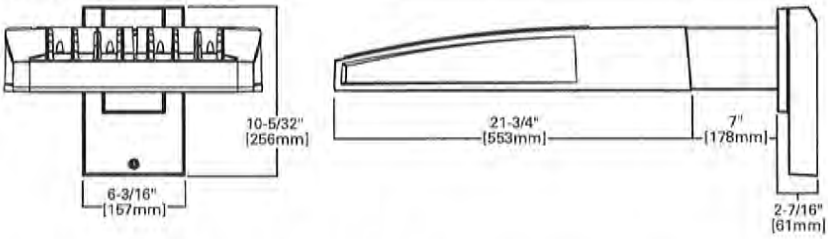
ARM MOUNTING REQUIREMENTS

Configuration	90° Apart	120° Apart
GLEON-AF-01	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-02	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-03	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-04	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-05	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AF-06	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AF-07	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AF-08	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AF-09	16" Extended Arm (Required)	16" Extended Arm (Required)
GLEON-AF-10	16" Extended Arm (Required)	16" Extended Arm (Required)

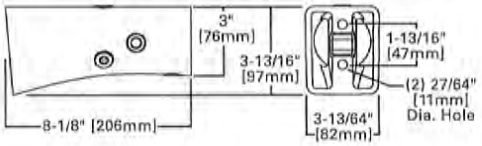


NOTES: 1 Round poles are 3 @ 120°. Square poles are 3 @ 90°. 2 Round poles are 3 @ 90°.

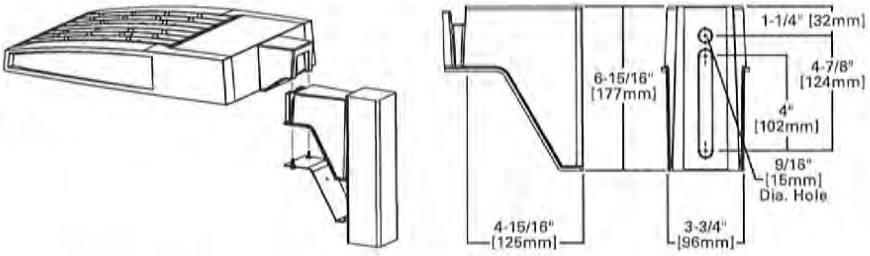
STANDARD WALL MOUNT



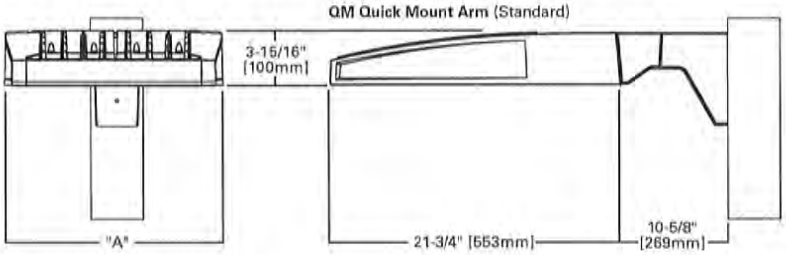
MAST ARM MOUNT



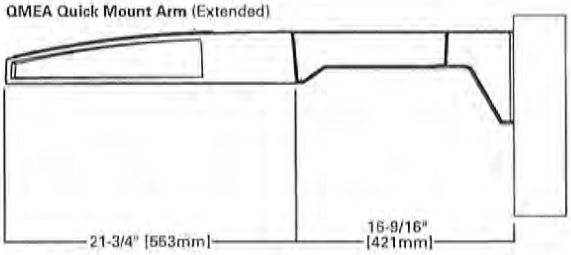
QUICK MOUNT ARM (INCLUDES FIXTURE ADAPTER)



QM Quick Mount Arm (Standard)



QMEA Quick Mount Arm (Extended)

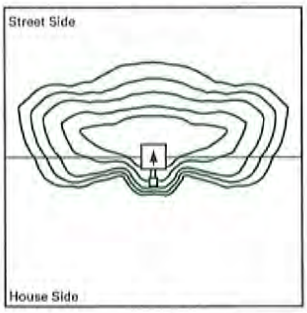


QUICK MOUNT ARM DATA

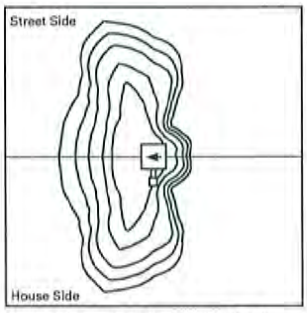
Number of Light Squares [1,2]	"A" Width	Weight with QM Arm (lbs.)	Weight with QMEA Arm (lbs.)	EPA (Sq. Ft.)
1-4	15-1/2" (394mm)	35 (15.91 kgs.)	38 (17.27 kgs.)	1.11
5-6 [3]	21-5/8" (549mm)	46 (20.91 kgs.)	49 (22.27 kgs.)	
7-8	27-5/8" (702mm)	56 (25.45 kgs.)	N/A	

NOTES: 1 QM option available with 1-8 light square configurations. 2 QMEA option available with 1-6 light square configurations. 3 QMEA arm to be used when mounting two fixtures at 90° on a single pole.

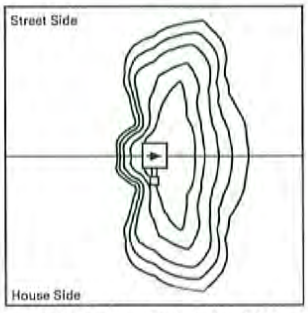
OPTIC ORIENTATION



Standard



Optics Rotated Left @ 90° [L90]

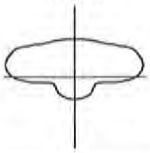


Optics Rotated Right @ 90° [R90]

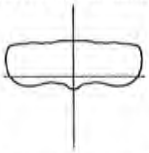
OPTICAL DISTRIBUTIONS

Asymmetric Area Distributions

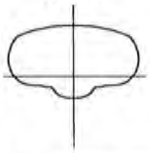
T2 (Type II)



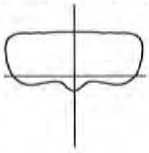
SL2 (Type II with Spill Control)



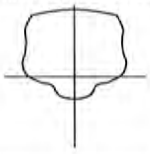
T3 (Type III)



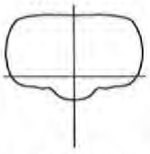
SL3 (Type III with Spill Control)



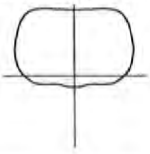
T4FT (Type IV Forward Throw)



T4W (Type IV Wide)

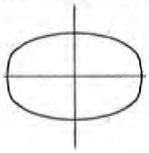


SL4 (Type IV with Spill Control)

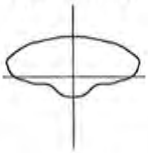


Asymmetric Roadway Distributions

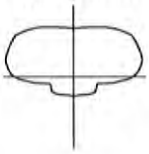
RW (Rectangular Wide Type I)



T2R (Type II Roadway)

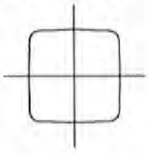


T3R (Type III Roadway)

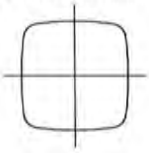


Symmertric Distributions

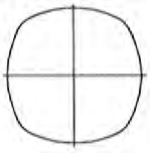
5NQ (Type V Square Narrow)



5MQ (Type V Square Medium)

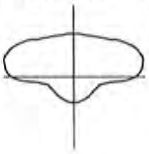


5WQ (Type V Square Wide)

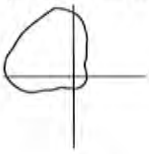


Specialized Distributions

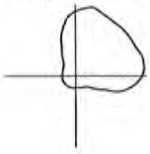
AFL (Automotive Frontline)



SLL (90° Spill Light Eliminator Left)

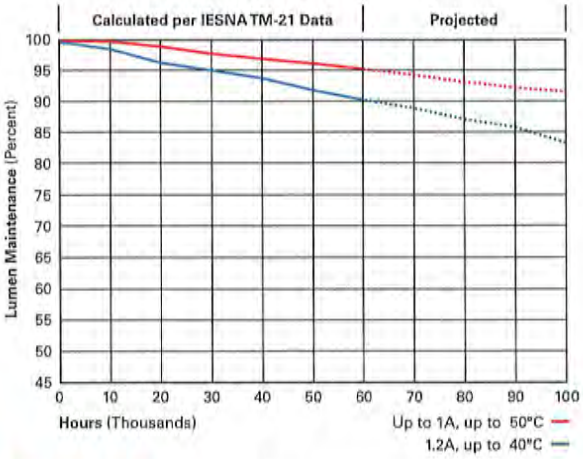


SLR (90° Spill Light Eliminator Right)



LUMEN MAINTENANCE

Drive Current	Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Projected L70 (Hours)
Up to 1A	Up to 50°C	> 95%	416,000
1.2A	Up to 40°C	> 90%	205,000



LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

NOMINAL POWER LUMENS (1.2A)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		67	129	191	258	320	382	448	511	575	640
Input Current @ 120V (A)		0.58	1.16	1.78	2.31	2.94	3.56	4.09	4.71	5.34	5.87
Input Current @ 208V (A)		0.33	0.63	0.93	1.27	1.57	1.87	2.22	2.52	2.8	3.14
Input Current @ 240V (A)		0.29	0.55	0.80	1.10	1.35	1.61	1.93	2.18	2.41	2.71
Input Current @ 277V (A)		0.25	0.48	0.70	0.96	1.18	1.39	1.69	1.90	2.09	2.36
Input Current @ 347V (A)		0.20	0.39	0.57	0.78	0.96	1.15	1.36	1.54	1.72	1.92
Input Current @ 480V (A)		0.15	0.30	0.43	0.60	0.73	0.85	1.03	1.16	1.28	1.45
Optics											
T2	4000K/5000K Lumens	6,863	13,412	20,011	26,441	32,761	39,205	46,364	52,534	58,601	64,880
	3000K Lumens	6,489	12,681	18,919	25,000	30,974	37,066	43,836	49,668	55,405	61,341
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T2R	4000K/5000K Lumens	7,285	14,238	21,246	28,072	34,780	41,621	49,221	55,770	62,212	68,878
	3000K Lumens	6,888	13,462	20,087	26,541	32,884	39,351	46,537	52,729	58,819	65,122
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
T3	4000K/5000K Lumens	6,995	13,670	20,397	26,951	33,391	39,959	47,256	53,544	59,728	66,130
	3000K Lumens	6,613	12,924	19,284	25,480	31,570	37,780	44,679	50,624	56,471	62,524
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T3R	4000K/5000K Lumens	7,150	13,973	20,850	27,549	34,134	40,848	48,307	54,734	61,056	67,598
	3000K Lumens	6,761	13,212	19,713	26,046	32,272	38,619	45,673	51,750	57,726	63,911
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T4FT	4000K/5000K Lumens	7,036	13,748	20,515	27,107	33,586	40,191	47,530	53,854	60,074	66,512
	3000K Lumens	6,652	12,999	19,397	25,629	31,754	37,999	44,938	50,917	56,797	62,885
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T4W	4000K/5000K Lumens	6,945	13,571	20,249	26,756	33,152	39,671	46,917	53,160	59,298	65,653
	3000K Lumens	6,566	12,831	19,146	25,297	31,344	37,508	44,358	50,260	56,064	62,072
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL2	4000K/5000K Lumens	6,851	13,388	19,977	26,396	32,704	39,137	46,283	52,444	58,498	64,768
	3000K Lumens	6,477	12,658	18,888	24,957	30,920	37,003	43,759	49,584	55,308	61,235
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL3	4000K/5000K Lumens	6,994	13,668	20,394	26,947	33,388	39,953	47,249	53,537	59,720	66,119
	3000K Lumens	6,612	12,922	19,281	25,477	31,567	37,774	44,673	50,618	56,463	62,514
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
SL4	4000K/5000K Lumens	6,845	12,986	19,378	25,603	31,723	37,962	44,893	50,868	56,743	62,824
	3000K Lumens	6,282	12,279	18,321	24,207	29,993	35,892	42,445	48,094	53,648	59,398
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	7,214	14,097	21,036	27,795	34,437	41,210	48,734	55,220	61,597	68,199
	3000K Lumens	6,820	13,329	19,888	26,279	32,558	38,962	46,077	52,208	58,237	64,479
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
5MQ	4000K/5000K Lumens	7,347	14,356	21,423	28,306	35,071	41,969	49,632	56,237	62,730	69,454
	3000K Lumens	6,947	13,573	20,254	26,762	33,158	39,680	46,925	53,170	59,309	65,667
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
5WQ	4000K/5000K Lumens	7,366	14,396	21,480	28,381	35,164	42,080	49,765	56,386	62,898	69,639
	3000K Lumens	6,964	13,610	20,308	26,833	33,247	39,786	47,050	53,311	59,468	65,842
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	4000K/5000K Lumens	6,147	12,010	17,921	23,679	29,339	35,109	41,521	47,046	52,478	58,102
	3000K Lumens	5,811	11,355	16,944	22,388	27,739	33,194	39,256	44,479	49,617	54,933
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
RW	4000K/5000K Lumens	7,149	13,970	20,846	27,543	34,126	40,837	48,295	54,722	61,042	67,582
	3000K Lumens	6,760	13,208	19,709	26,041	32,264	38,610	45,661	51,738	57,713	63,897
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
AFL	4000K/5000K Lumens	7,175	14,021	20,921	27,643	34,249	40,986	48,470	54,920	61,262	67,828
	3000K Lumens	6,784	13,256	19,780	26,136	32,381	38,760	45,827	51,925	57,922	64,129
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4

* Nominal data for 70 CRI.

NOMINAL POWER LUMENS (1A)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		59	113	166	225	279	333	391	445	501	558
Input Current @ 120V (A)		0.51	1.02	1.53	2.03	2.55	3.06	3.56	4.08	4.60	5.07
Input Current @ 208V (A)		0.29	0.56	0.82	1.11	1.37	1.64	1.93	2.19	2.46	2.75
Input Current @ 240V (A)		0.26	0.48	0.71	0.96	1.19	0.41	1.67	1.89	2.12	2.39
Input Current @ 277V (A)		0.23	0.42	0.61	0.83	1.03	1.23	1.45	1.65	1.84	2.09
Input Current @ 347V (A)		0.17	0.32	0.50	0.64	0.82	1.00	1.14	1.32	1.50	1.68
Input Current @ 480V (A)		0.14	0.24	0.37	0.48	0.61	0.75	0.91	0.99	1.12	1.28
Optics											
T2	4000K/5000K Lumens	6,256	12,225	18,242	24,104	29,865	35,739	42,265	47,888	53,420	59,144
	3000K Lumens	5,915	11,559	17,248	22,789	28,236	33,790	39,960	45,277	50,506	55,919
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T2R	4000K/5000K Lumens	6,642	12,979	19,366	25,589	31,705	37,941	44,870	50,840	56,711	62,789
	3000K Lumens	6,280	12,271	18,311	24,193	29,976	35,872	42,423	48,068	53,619	59,365
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
T3	4000K/5000K Lumens	6,377	12,461	18,593	24,568	30,439	36,426	43,077	48,810	54,447	60,282
	3000K Lumens	6,029	11,781	17,580	23,229	28,781	34,441	40,731	46,150	51,480	56,997
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T3R	4000K/5000K Lumens	6,518	12,739	19,006	25,113	31,116	37,235	44,036	49,895	55,658	61,622
	3000K Lumens	6,029	11,781	17,579	23,229	28,779	34,440	40,729	46,148	51,478	56,995
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T4FT	4000K/5000K Lumens	6,414	12,533	18,702	24,710	30,616	36,637	43,328	49,093	54,763	60,631
	3000K Lumens	6,064	11,849	17,681	23,363	28,946	34,638	40,966	46,417	51,776	57,325
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T4W	4000K/5000K Lumens	6,331	12,372	18,459	24,391	30,221	36,163	42,769	48,459	54,056	59,849
	3000K Lumens	5,986	11,697	17,452	23,061	28,572	34,192	40,436	45,817	51,108	56,585
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL2	4000K/5000K Lumens	6,245	12,205	18,212	24,062	29,813	35,677	42,192	47,807	53,326	59,042
	3000K Lumens	5,904	11,539	17,218	22,750	28,187	33,732	39,891	45,199	50,418	55,822
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL3	4000K/5000K Lumens	6,376	12,460	18,591	24,564	30,436	36,421	43,072	48,803	54,439	60,273
	3000K Lumens	6,028	11,780	17,578	23,224	28,776	34,435	40,723	46,141	51,471	56,986
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
SL4	4000K/5000K Lumens	6,058	11,838	17,664	23,340	28,918	34,605	40,924	46,370	51,727	57,269
	3000K Lumens	5,727	11,193	16,701	22,067	27,341	32,718	38,692	43,841	48,906	54,146
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	6,577	12,851	19,176	25,336	31,392	37,566	44,426	50,337	56,151	62,170
	3000K Lumens	6,218	12,151	18,131	23,955	29,680	35,517	42,003	47,592	53,089	58,779
	BUG Rating	B2-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5MQ	4000K/5000K Lumens	6,697	13,088	19,528	25,803	31,970	38,258	45,243	51,264	57,185	63,313
	3000K Lumens	6,332	12,374	18,463	24,395	30,227	36,171	42,776	48,468	54,066	59,861
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
5WQ	4000K/5000K Lumens	6,715	13,122	19,580	25,871	32,055	38,360	45,365	51,401	57,337	63,482
	3000K Lumens	6,348	12,406	18,513	24,461	30,307	36,268	42,891	48,599	54,210	60,021
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	4000K/5000K Lumens	5,604	10,949	16,337	21,586	26,745	32,004	37,850	42,886	47,838	52,965
	3000K Lumens	5,298	10,361	15,446	20,409	25,287	30,258	35,786	40,547	45,229	50,077
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
RW	4000K/5000K Lumens	6,517	12,735	19,002	25,107	31,109	37,227	44,025	49,883	55,644	61,607
	3000K Lumens	6,162	12,040	17,965	23,738	29,413	35,197	41,623	47,163	52,609	58,247
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
AFL	4000K/5000K Lumens	6,541	12,781	19,072	25,199	31,221	37,362	44,185	50,065	55,846	61,831
	3000K Lumens	6,184	12,084	18,032	23,825	29,519	35,325	41,775	47,334	52,801	58,459
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4

* Nominal data for 70 CRI.

NOMINAL POWER LUMENS (800MA)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		44	85	124	171	210	249	295	334	374	419
Input Current @ 120V (A)		0.39	0.77	1.13	1.54	1.90	2.26	2.67	3.03	3.39	3.80
Input Current @ 208V (A)		0.22	0.44	0.62	0.88	1.06	1.24	1.50	1.68	1.87	2.12
Input Current @ 240V (A)		0.19	0.38	0.54	0.76	0.92	1.08	1.30	1.46	1.62	1.84
Input Current @ 277V (A)		0.17	0.36	0.47	0.72	0.83	0.95	1.19	1.31	1.42	1.67
Input Current @ 347V (A)		0.15	0.24	0.38	0.49	0.63	0.77	0.87	1.01	1.15	1.52
Input Current @ 480V (A)		0.11	0.18	0.29	0.37	0.48	0.59	0.66	0.77	0.88	0.96
Optics											
T2	4000K/5000K Lumens	5,054	9,878	14,739	19,475	24,129	28,875	34,148	38,691	43,159	47,785
	3000K Lumens	4,779	9,338	13,935	18,412	22,813	27,301	32,286	36,581	40,805	45,179
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5
T2R	4000K/5000K Lumens	5,366	10,486	15,647	20,675	25,616	30,654	36,252	41,076	45,819	50,730
	3000K Lumens	5,074	9,914	14,794	19,548	24,218	28,982	34,276	38,835	43,320	47,964
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
T3	4000K/5000K Lumens	5,153	10,068	15,022	19,849	24,593	29,430	34,805	39,436	43,990	48,705
	3000K Lumens	4,872	9,519	14,203	18,766	23,251	27,825	32,907	37,285	41,591	46,048
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
T3R	4000K/5000K Lumens	5,266	10,292	15,356	20,290	25,140	30,084	35,578	40,312	44,968	49,786
	3000K Lumens	4,979	9,731	14,518	19,184	23,769	28,443	33,638	38,114	42,516	47,071
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4FT	4000K/5000K Lumens	5,182	10,126	15,109	19,964	24,736	29,600	35,006	39,664	44,245	48,987
	3000K Lumens	4,899	9,574	14,285	18,876	23,387	27,986	33,097	37,501	41,832	46,315
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4W	4000K/5000K Lumens	5,115	9,995	14,914	19,706	24,417	29,218	34,554	39,152	43,674	48,354
	3000K Lumens	4,836	9,450	14,100	18,631	23,085	27,624	32,670	37,017	41,292	45,717
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
SL2	4000K/5000K Lumens	5,046	9,860	14,713	19,441	24,087	28,825	34,089	38,625	43,085	47,702
	3000K Lumens	4,771	9,322	13,911	18,381	22,774	27,253	32,229	36,518	40,735	45,101
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5
SL3	4000K/5000K Lumens	5,152	10,067	15,020	19,846	24,591	29,426	34,800	39,431	43,984	48,698
	3000K Lumens	4,871	9,518	14,200	18,764	23,249	27,822	32,902	37,280	41,585	46,042
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
SL4	4000K/5000K Lumens	4,894	9,565	14,271	18,857	23,364	27,959	33,065	37,465	41,792	46,270
	3000K Lumens	4,627	9,043	13,492	17,829	22,090	26,434	31,261	35,422	39,513	43,746
	BUG Rating	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	5,313	10,383	15,493	20,470	25,363	30,351	35,893	40,669	45,367	50,229
	3000K Lumens	5,024	9,817	14,647	19,354	23,980	28,696	33,936	38,452	42,893	47,490
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3
5MQ	4000K/5000K Lumens	5,411	10,574	15,778	20,848	25,830	30,911	36,554	41,418	46,202	51,154
	3000K Lumens	5,117	9,997	14,917	19,710	24,421	29,225	34,561	39,160	43,682	48,364
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
5WQ	4000K/5000K Lumens	5,426	10,603	15,820	20,903	25,899	30,992	36,652	41,529	46,325	51,290
	3000K Lumens	5,130	10,025	14,958	19,763	24,486	29,302	34,654	39,263	43,799	48,493
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
SLL/SLR	4000K/5000K Lumens	4,528	8,846	13,199	17,440	21,609	25,858	30,580	34,649	38,651	42,792
	3000K Lumens	4,281	8,364	12,480	16,489	20,430	24,448	28,912	32,759	36,543	40,459
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
RW	4000K/5000K Lumens	5,265	10,289	15,353	20,285	25,134	30,077	35,569	40,303	44,958	49,775
	3000K Lumens	4,978	9,727	14,516	19,179	23,763	28,437	33,629	38,105	42,506	47,060
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4
AFL	4000K/5000K Lumens	5,285	10,327	15,409	20,360	25,225	30,186	35,699	40,450	45,120	49,956
	3000K Lumens	4,996	9,763	14,569	19,249	23,849	28,540	33,752	38,244	42,659	47,232
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3

* Nominal data for 70 CRI.

NOMINAL POWER LUMENS (600MA)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		34	66	96	129	162	193	226	257	290	323
Input Current @ 120V (A)		0.30	0.58	0.86	1.16	1.44	1.73	2.03	2.33	2.59	2.89
Input Current @ 208V (A)		0.17	0.34	0.49	0.65	0.84	0.99	1.14	1.30	1.48	1.63
Input Current @ 240V (A)		0.15	0.30	0.43	0.56	0.74	0.87	1.00	1.13	1.30	1.43
Input Current @ 277V (A)		0.14	0.28	0.41	0.52	0.69	0.81	0.93	1.04	1.22	1.33
Input Current @ 347V (A)		0.11	0.19	0.30	0.39	0.49	0.60	0.69	0.77	0.90	0.99
Input Current @ 480V (A)		0.08	0.15	0.24	0.30	0.38	0.48	0.53	0.59	0.71	0.77
Optics											
T2	4000K/5000K Lumens	4,121	8,055	12,019	15,881	19,676	23,547	27,847	31,552	35,196	38,967
	3000K Lumens	3,896	7,615	11,363	15,015	18,604	22,263	26,328	29,831	33,276	36,842
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
T2R	4000K/5000K Lumens	4,376	8,552	12,760	16,860	20,890	24,998	29,563	33,497	37,365	41,369
	3000K Lumens	4,138	8,085	12,064	15,941	19,751	23,635	27,951	31,670	35,328	39,113
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
T3	4000K/5000K Lumens	4,201	8,210	12,251	16,187	20,055	23,999	28,383	32,159	35,873	39,718
	3000K Lumens	3,973	7,763	11,583	15,304	18,961	22,691	26,835	30,406	33,916	37,552
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
T3R	4000K/5000K Lumens	4,294	8,393	12,523	16,546	20,501	24,532	29,014	32,875	36,671	40,600
	3000K Lumens	4,060	7,936	11,840	15,644	19,383	23,195	27,432	31,082	34,671	38,386
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
T4FT	4000K/5000K Lumens	4,226	8,257	12,321	16,280	20,172	24,139	28,547	32,346	36,082	39,948
	3000K Lumens	3,996	7,807	11,849	15,392	19,071	22,822	26,990	30,582	34,114	37,770
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
T4W	4000K/5000K Lumens	4,171	8,151	12,162	16,071	19,912	23,827	28,178	31,928	35,615	39,432
	3000K Lumens	3,943	7,706	11,498	15,194	18,825	22,527	26,642	30,187	33,673	37,281
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
SL2	4000K/5000K Lumens	4,114	8,041	11,998	15,854	19,643	23,506	27,799	31,498	35,135	38,901
	3000K Lumens	3,890	7,603	11,344	14,989	18,572	22,224	26,282	29,780	33,219	36,779
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
SL3	4000K/5000K Lumens	4,200	8,209	12,249	16,184	20,053	23,996	28,379	32,154	35,869	39,712
	3000K Lumens	3,972	7,762	11,580	15,302	18,960	22,688	26,831	30,400	33,913	37,546
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
SL4	4000K/5000K Lumens	3,992	7,799	11,638	15,378	19,053	22,801	26,964	30,552	34,081	37,733
	3000K Lumens	3,774	7,374	11,003	14,539	18,015	21,557	25,493	28,886	32,222	35,674
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G4	B2-U0-G5	B2-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	4,333	8,467	12,634	16,694	20,683	24,751	29,271	33,166	36,996	40,961
	3000K Lumens	4,097	8,005	11,945	15,784	19,555	23,401	27,674	31,357	34,978	38,727
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3
5MQ	4000K/5000K Lumens	4,413	8,622	12,867	17,000	21,064	25,207	29,810	33,777	37,677	41,715
	3000K Lumens	4,173	8,152	12,165	16,073	19,915	23,832	28,185	31,934	35,623	39,440
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
5WQ	4000K/5000K Lumens	4,424	8,646	12,900	17,046	21,120	25,274	29,890	33,866	37,778	41,826
	3000K Lumens	4,182	8,175	12,197	16,117	19,968	23,896	28,260	32,018	35,717	39,545
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
SLL/SLR	4000K/5000K Lumens	3,692	7,214	10,763	14,222	17,621	21,086	24,937	28,256	31,519	34,897
	3000K Lumens	3,491	6,820	10,176	13,447	16,660	19,937	23,577	26,715	29,800	32,994
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
RW	4000K/5000K Lumens	4,293	8,390	12,520	16,542	20,496	24,527	29,007	32,866	36,662	40,591
	3000K Lumens	4,059	7,932	11,837	15,640	19,378	23,189	27,425	31,074	34,662	38,377
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3
AFL	4000K/5000K Lumens	4,310	8,421	12,566	16,602	20,571	24,616	29,112	32,986	36,795	40,738
	3000K Lumens	4,074	7,962	11,881	15,697	19,448	23,273	27,525	31,187	34,788	38,516
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3

* Nominal data for 70 CRI.

CONTROL OPTIONS

0-10V (DIM)
This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

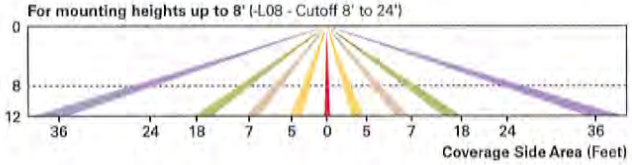
Photocontrol (P, R and PER7)
Optional button-type photocontrol (P) and photocontrol receptacles (R and PER7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

After Hours Dim (AHD)
This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

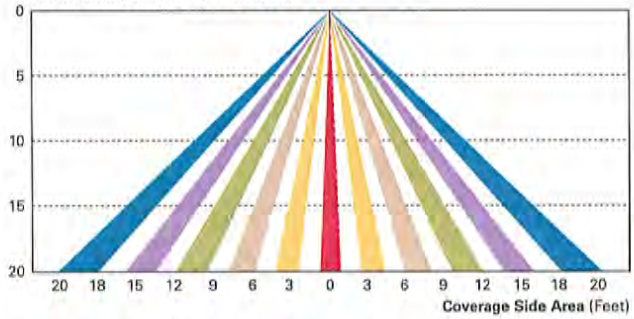
Dimming Occupancy Sensor (MS/DIM-LXX, MS/X-LXX and MS-LXX)
These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines.

These occupancy sensors includes an integral photocell that can be activated with the FSIR-100 accessory for "dusk-to-dawn" control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters. A variety of sensor lens are available to optimize the coverage. pattern for mounting heights from 8'-40'.

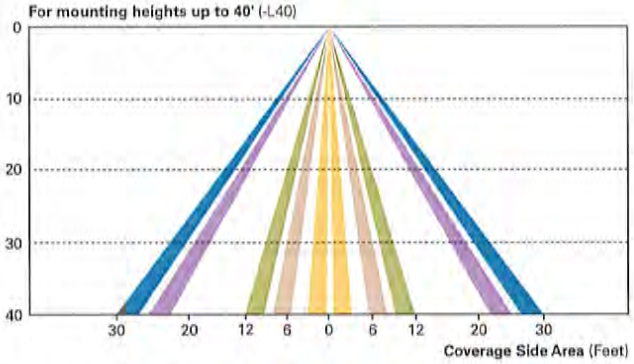
For mounting heights up to 8' (-L08 - Cutoff 8' to 24')



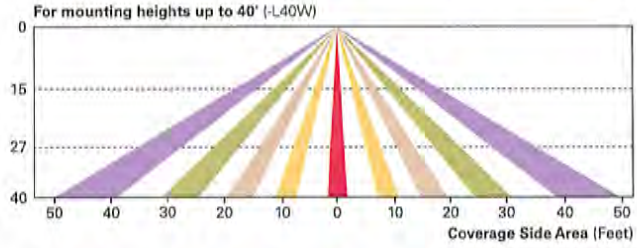
For mounting heights up to 20' (-L20)



For mounting heights up to 40' (-L40)

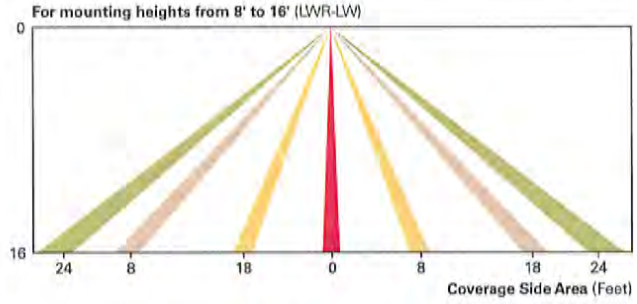


For mounting heights up to 40' (-L40W)

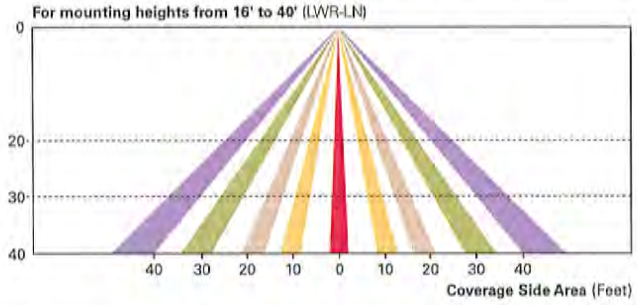


LumaWatt Pro Wireless Control and Monitoring System (LWR-LW and LWR-LN)
The Eaton's LumaWatt Pro powered by Enlighted is a connected lighting solution that combines a broad selection of energy-efficient LED luminaires with a powerful integrated wireless sensor system. The sensor controls the lighting system in compliance with the latest energy codes and collects valuable data about building performance and use. Software applications turn the granular data into information through energy dashboards and specialized apps that make it simple and help optimize the use of building resources, beyond lighting.

For mounting heights from 8' to 16' (LWR-LW)



For mounting heights from 16' to 40' (LWR-LN)



WaveLinx Wireless Outdoor Lighting Control Module (WOLC-7P-10A)
The 7-pin wireless outdoor lighting control module enables WaveLinx to control outdoor area, site and flood lighting. WaveLinx controls outdoor lighting using schedules to provide ON, OFF and dimming controls based on astronomic or time schedules based on a 7 day week.

LumenSafe Integrated Network Security Camera (LD)
Eaton brings ease of camera deployment to a whole new level. No additional wiring is needed beyond providing line power to the luminaire. A variety of networking options allows security integrators to design the optimal solution for active surveillance. As the ideal solution to meet the needs for active surveillance, the LumenSafe integrated network camera is a streamlined, outdoor-ready fixed dome that provides HDTV 1080p video. This IP camera is optimally designed for deployment in the video management system or security software platform of choice.

ORDERING INFORMATION

Sample Number: GLEON-AF-04-LED-E1-T3-GM-QM

Product Family [1, 2]	Light Engine	Number of Light Squares [3]	Lamp Type	Voltage	Distribution	Color	Mounting
GLEON=Galleon	AF=1A Drive Current	01=1 02=2 03=3 04=4 05=5 [4] 06=6 07=7 [5] 08=8 [5] 09=9 [6] 10=10 [5]	LED=Solid State Light Emitting Diodes	E1=120-277V 347=347V [7] 480=480V [7,8]	T2=Type II T2R=Type II Roadway T3=Type III T3R=Type III Roadway T4FT=Type IV Forward Throw T4W=Type IV Wide 5NQ=Type V Narrow 5MQ=Type V Square Medium 5WQ=Type V Square Wide SL2=Type II w/Spill Control SL3=Type III w/Spill Control SL4=Type IV w/Spill Control SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right RW=Rectangular Wide Type I AFL=Automotive Frontline	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White	[Blank]=Arm for Round or Square Pole EA=Extended Arm [9] MA=Mast Arm Adapter [10] WM=Wall Mount QM=Quick Mount Arm (Standard Length) [11] QMEA=Quick Mount Arm (Extended Length) [12]

Options (Add as Suffix)

7027=70 CRI 2700K [13]
7030=70 CRI 3000K [13]
8030=80 CRI 3000K [13]
7050=70 CRI 5000K [13]
7060=70 CRI 6000K [13]
600=Drive Current Set to Nominal 600mA [15]
800=Drive Current Set to Nominal 800mA [15]
1200=Drive Current Set to Nominal 1200mA [15,16]
F=Single Fuse (120, 277 or 347V, Specify Voltage)
FF=Double Fuse (208, 240 or 480V, Specify Voltage)
2L=Two Circuits [12,19]
DIM=External 0-10V Dimming Leads [19,20]
AHD145=After Hours Dim, 5 Hours [22]
AHD245=After Hours Dim, 6 Hours [22]
AHD255=After Hours Dim, 7 Hours [22]
AHD355=After Hours Dim, 8 Hours [22]
HA=50°C High Ambient [23]
L90=Optics Rotated 90° Left
R90=Optics Rotated 90° Right
MT=Installed Mesh Top
TH=Tool-less Door Hardware
HSS=Installed House Side Shield [29]
CE=CE Marking [29]
LCF=Light Square Trim Painted to Match Housing [27]
P=Button Type Photocontrol (120, 208, 240 or 277V, Must Specify Voltage) [21]
PER7=NEMA 7-PIN Photocontrol Receptacle [21]
R=NEMA Photocontrol Receptacle [21]
MS-L20=Motion Sensor for ON/OFF Operation, 9' - 20' Mounting Height [24]
MS-L40W=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height [24]
MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height [24]
MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height [24]
MS/DIM-L40W=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height [24]
MS/X-L08=Bi-Level Motion Sensor, Maximum 8' Mounting Height [24,25]
MS/X-L20=Bi-Level Motion Sensor, 9' - 20' Mounting Height [24,25]
MS/X-L40W=Bi-Level Motion Sensor, 21' - 40' Mounting Height [24,25]
MS-L08=Motion Sensor for ON/OFF Operation, Maximum 8' Mounting Height [24]
LWR-LW=LumaWatt Pro Wireless Sensor, Wide Lens for 8' - 16' Mounting Height [26]
LWR-LN=LumaWatt Pro Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height [26]
ZW=WaveLinx-enabled 4-PIN Twistlock Receptacle [18,33]
ZW-SWPD4WH=Wavelinx Wireless Sensor, 7' – 15' Mounting Height, White [19,33]
ZW-SWPD4BZ=Wavelinx Wireless Sensor, 7' – 15' Mounting Height, Bronze [19,33]
ZW-SWPD5WH=Wavelinx Wireless Sensor, 15' – 40' Mounting Height, White [19,34]
ZW-SWPD5BZ=Wavelinx Wireless Sensor, 15' – 40' Mounting Height, Bronze [19,33]

Accessories (Order Separately)

OA/RA1016=NEMA Photocontrol Multi-Tap - 105-285V
OA/RA1027=NEMA Photocontrol - 480V
OA/RA1201=NEMA Photocontrol - 347V
OA/RA1013=Photocontrol Shorting Cap
OA/RA1014=120V Photocontrol
MA1252=10kV Surge Module Replacement
MA1036-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon
MA1037-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon
MA1197-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon
MA1188-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1189-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1190-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1191-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon
MA1038-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon
MA1039-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon
MA1192-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon
MA1193-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon
MA1194-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon
MA1195-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon
FSIR-100=Wireless Configuration Tool for Occupancy Sensor [24]
GLEON-MT1=Field Installed Mesh Top for 1-4 Light Squares
GLEON-MT2=Field Installed Mesh Top for 5-6 Light Squares
GLEON-MT3=Field Installed Mesh Top for 7-8 Light Squares
GLEON-MT4=Field Installed Mesh Top for 9-10 Light Squares
GLEON-QM=Quick Mount Arm Kit [11]
GLEON-QMEA=Quick Mount Extended Arm Kit [12]
LS/HSS=Field Installed House Side Shield [28,29]
WOLC-7P-10A=WaveLinx Outdoor Control Module [19,31]
SWPD4-WH=Wavelinx Wireless Sensor, 7' – 15' Mounting Height, White [19,33,34]
SWPD4-BZ=Wavelinx Wireless Sensor, 7' – 15' Mounting Height, Bronze [19,33,34]
SWPD5-WH=Wavelinx Wireless Sensor, 15' – 40' Mounting Height, White [19,33,34]
SWPD5-BZ=Wavelinx Wireless Sensor, 15' – 40' Mounting Height, Bronze [19,33,34]

NOTES:
1 Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information. 2 DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details. 3 Standard 4000K CCT and minimum 70 CRI. 4 Not compatible with MS/A-LXX or MS/1-LXX sensors. 5 Not compatible with extended quick mount arm (QMEA). 6 Not compatible with standard quick mount arm (QM) or extended quick mount arm (QMEA). 7 Requires the use of an internal step down transformer when combined with sensor options. Not available with sensor at 1200mA. Not available in combination with the HA high ambient and sensor options at 1A. 8 Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems). 9 May be required when two or more luminaires are oriented on a 90° or 120° drilling pattern. Refer to arm mounting requirement table. 10 Factory installed. 11 Maximum 8 light squares. 12 Maximum 6 light squares. 13 Extended lead times apply. Use dedicated IES files for 2700K, 3000K, 5000K and 6000K when performing layouts. 14 Reserved 15 1 Amp standard. Use dedicated IES files for 600mA, 800mA and 1200mA when performing layouts. 16 Not available with HA option. 17 2L is not available with MS, MS/X or MS/DIM at 347V or 480V. 2L in AF-02 through AF-04 requires a larger housing, normally used for AF-05 or AF-06. Extended arm option may be required when mounting two or more fixtures per pole at 90° or 120°. Refer to arm mounting requirement table. 18 Not available with LumaWatt Pro wireless sensors. 19 Cannot be used with other control options. 20 Low voltage control lead brought out 18" outside fixture. 21 Not available if any "MS" sensor is selected. Motion sensor has an integral photocell. 22 Requires the use of P photocontrol or the PER7 or R photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information. 23 50°C lumen maintenance data applies to 600mA, 800mA and 1A drive currents. 24 The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information. 25 Replace X with number of Light Squares operating in low output mode. 26 LumaWatt Pro wireless sensors are factory installed only requiring network components LWP-EM-1, LWP-GW-1 and LWP-PoEB in appropriate quantities. See www.eaton.com/lighting for LumaWatt Pro application information. 27 Not available with house side shield (HSS). 28 Only for use with SL2, SL3, SL4 and AFL distributions. The Light Square trim plate is painted black when the HSS option is selected. 29 CE is not available with the LWR, MS, MS/X, MS/DIM, P, R or PER7 options. Available in 120-277V only. 30 One required for each Light Square. 31 Requires PER7. 32 Reserved. 33 WAC Gateway required to enable field-configurability: Order WAC-PoE and WPOE-120 (10V to PoE injector) power supply if needed. 34 Requires ZW. 35 Reserved.

LumenSafe Integrated Network Security Camera Technology Options (Add as Suffix)

Product Family	Camera Type	Data Backhaul	
L=LumenSafe Technology®	D=Dome Camera, Standard H=Dome Camera, Hi-Res Z=Dome Camera, Remote PTZ	C=Cellular, Customer Installed SIM Card A=Cellular, Factory Installed AT&T SIM Card V=Cellular, Factory Installed Verizon SIM Card S=Cellular, Factory Installed Sprint SIM Card	W=Wi-Fi Networking w/ Omni-Directional Antenna E=Ethernet Networking

*Consult LumenSafe system pages for additional details and compatibility.

Steel Poles

SSS SQUARE STRAIGHT STEEL

Catalog #	SSS5A30SYN2XV	Type
Project	TRAILER PARKING - KASOTA AVE	AA
Comments		Date
Prepared by		

FEATURES

- ASTM Grade steel base plate with ASTM A366 base cover
- Hand hole assembly 3" x 5" on 5" and 6" pole; and 2" x 4" on 4" pole
- 10'-39' mounting heights
- Drilled or tenon (specify)

DESIGN CONSIDERATIONS

Wind induced vibrations resulting from steady, unidirectional winds and other aerodynamic forces, as well as vibration and coefficient of height factors for non-grounded mounted installations (e.g., installations on bridges or buildings) are not included in this document. The information contained herein is for general guidance only and is not a replacement for professional judgement. Consult with a professional, and local and federal standards, before ordering to ensure product is appropriate for the intended purpose and installation location. Also, please review Eaton's Light Pole White Paper for risk factors and design considerations. Learn more.

Specifications and dimensions subject to change without notice. Consult your lighting representative at Eaton or visit www.eaton.com/lighting for available options, accessories and ordering information.

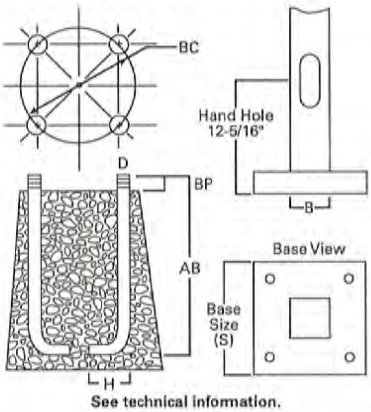
ORDERING INFORMATION

SAMPLE NUMBER: SSA5A20SFM1XG

Product Family	Shaft Size (Inches)[1]	Wall Thickness (Inches)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Number and Location of Arms	Arm Lengths (Feet)	Options (Add as Suffix)
SSS=Square Straight Steel	4=4" 5=5" 6=6"	A=0.120" M=0.188" X=0.250"	10=10' 15=15' 20=20' 25=25' 30=30' 35=35' 39=39'	S=Square Steel Base	F=Dark Bronze G=Galvanized Steel J=Summit White K=Carbon Bronze L=Dark Platinum R=Hartford Green S=Silver T=Graphite Metallic V=Grey W=White X=Custom Color Y=Black	2=2-3/8" O.D. Tenon (4" Long) 3=3-1/2" O.D. Tenon (5" Long) 4=4" O.D. Tenon (6" Long) 9=3" O.D. Tenon (4" Long) 6=2-3/8" O.D. Tenon (6" Long) 7=4" O.D. Tenon (10" Long) A=Type A Drilling C=Type C Drilling E=Type E Drilling F=Type F Drilling G=Type G Drilling J=Type J Drilling K=Type K Drilling M=Type M Drilling N=Type N Drilling R=Type R Drilling S=Standard Upsweep Arm Z=Type Z Drilling	1=Single 2=2 at 180°[2] 3=Triple[2] 4=4 at 90° 5=2 at 90° X=None	X=None 2=2' 3=2.5' 4=4' 6=6' 8=8'	A=1/2" Tapped Hub[3] B=3/4" Tapped Hub[3] C=Convenience Outlet[4] E=GFCI Convenience Outlet[4] G=Ground Lug H=Additional Hand Hole[5] V=Vibration Dampener

NOTES: 1. All shaft sizes nominal. **2.** Square poles are 3 at 90°, round poles are 3 at 120°. **3.** Tapped Hub is located 5' below the pole top and on the same side of pole as hand hole, unless specified otherwise. **4.** Outlet is located 4' above base and on same side of pole as hand hole, unless specified otherwise. Receptacle not included, provision only. **5.** Additional hand hole is located 12" below pole top and 90° from standard hand hole location, unless otherwise specified.

ANCHORAGE DATA



See technical information.

Pole	Template Number	Bolt Number	Bolt Circle (inches)	Number of Bolts	Bolt Size (inches)
SSS4	TMP1	AB1	8.5 - 11.0	4	3/4 x 25 x 3
SSS5	TMP1	AB1	11.0	4	3/4 x 25 x 3
SSS6	TMP2	AB3	12.5	4	1 x 36 x 4

Effective Projected Area (At Pole Top)

Mounting Height (Feet)	Catalog Number [1,2]	Wall Thickness (Inches)	Base Square [3] (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection [3] (Inches)	Shaft Size [3] (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) [4]				Max. Fixture Load - Includes Bracket (Pounds)
MH			S	BC	BP	B	D x AB x H		80 mph	90 mph	100 mph	110 mph	
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	30.0	22.0	17.0	13.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	15.0	11.5	8.7	6.5	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	8.7	5.9	3.9	2.5	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	15.4	11.1	7.9	5.5	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.7	1.7	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	9.3	6.0	3.5	1.6	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.9	6.1	3.5	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	4.7	2.1	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	10.4	6.4	3.5	1.5	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.3	1.4	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	19.0	13.0	8.7	5.6	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.8	2.8	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	12.8	7.2	3.7	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.5	11.0	6.8	3.5	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.3	3.0	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	13.0	7.0	3.7	0.8	300

Effective Projected Area (Two Feet Above Pole Top)

Mounting Height (Feet)	Catalog Number [1,2]	Wall Thickness (Inches)	Base Square [3] (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection [3] (Inches)	Shaft Size [3] (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) [4]				Max. Fixture Load - Includes Bracket (Pounds)
MH			S	BC	BP	B	D x AB x H		80 mph	90 mph	100 mph	110 mph	
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	23.0	17.5	14.0	11.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	13.4	10.0	7.5	5.7	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	7.6	5.2	3.4	2.1	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	13.8	9.9	7.1	4.9	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.4	1.6	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	8.5	5.5	3.2	1.5	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.1	5.6	3.0	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	1.8	--	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	9.6	5.9	1.9	0.2	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.1	1.3	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	18.5	12.5	8.4	5.3	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.5	2.4	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	11.8	7.0	3.5	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.0	10.5	6.4	3.4	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.0	2.4	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	12.0	6.7	3.0	0.5	300

NOTES:

1. Catalog number includes pole with hardware kit. Anchor bolts not included. Before installing, make sure proper anchor bolts and templates are obtained.
2. Tenon size or machining for rectangular arms must be specified. Hand hole position relative to drill location.
3. Shaft size, base square, anchor bolts and projections may vary slightly. All dimensions nominal.
4. EPAs based on shaft properties with wind normal to flat. EPAs calculated using base wind velocity as indicated plus 30% gust factor.

October 1, 2019

Amanda Smith
City of St. Paul
375 Jackson Street – Suite 220
St. Paul, MN 55101-1806

SUBJECT: SPR Conditional Approval Letter – Rohn Industries
City Comment Responses

Dear Amanda:

Please find below a compilation of all City comments received on the Rohn Industries project to date. We have provided a response to each comment and are including a revised set of Civil drawings that correspond with the changes noted below.

1. **Site Plan Approval Process**
   a) The project's Site Plan is *conditionally approved* pending updates based on the comments summarized in this letter.
   b) A Final Site Plan approval decision may be appealed within ten days after the date of the decision per Leg. Code Sec. 61.701 – Administrative Appeals, to the Planning Commission. An Appeal of a Site Plan shall be filed with the Zoning Administrator.
   c) Provide a pdf version of the updated Site Plan package for review by the Site Plan Review Committee.
   d) A Final Site Plan Approval letter will be issued after City Staff sign-off on the updated Site Plan. A Final Site Plan approval decision may be appealed within ten days after the date of the decision per Leg. Code Sec. 61.701 – Administrative Appeals.
   e) Per Minnesota State Statute 326, the final plans submitted shall be signed by the appropriate licensed Professional, i.e. PE, LA, RLS, etc., responsible for plan development.
   f) Building permits will not be issued until the Site Plan has final approval.

Response: See comment responses below and revised Site Development Plans dated 10/1/2019.

2. **Zoning Review – Contacts:** Tia Anderson – tia.anderson@ci.stpaul.mn.us, 651-266-9086
   Amanda Smith – amanda.smith@ci.stpaul.mn.us, 651-266-6507
   a) The proposed use of the property as Outdoor Storage is permitted at this location in an I1 zoning district.
   b) Zoning conditions for Outdoor storage in an I1 zoning district are as follows.
      - Outdoor storage shall be at least three hundred (300) feet from a residential neighborhood

district boundary. *The closest residentially zoning district is across Highway 280 to the west. Condition is met.*

- Outdoor storage shall be fenced or walled. Outdoor storage which abuts a thoroughfare shall be behind a six-foot-high obscuring fence. Kasota Avenue is classified as a thoroughfare. *In addition to the proposed landscaping, update the site plan to include a six-foot high obscuring fence, and include a detail.*

  Response: Privacy slat inserts (EZ Slats by Privacy Link) will be installed in the fence adjacent to Kasota Ave to screen the trailer storage from Kasota Ave. See C3.01 for location and C9.01 for a detail.
- Outdoor uses. In an I1 industrial district, all business, servicing, processing or manufacturing shall be conducted within completely enclosed buildings, except for off-street parking, offstreet loading, and outdoor uses specifically allowed as permitted or conditional uses. *There is no proposed servicing, processing, or manufacturing on-site.*

c) Off-street parking spaces shall be a minimum of 4' from any lot line. *Condition is met.*

3. **Lighting and Landscaping for the Site and Exterior Parking Lot**

   Contacts: Tia Anderson – tia.anderson@ci.stpaul.mn.us, 651-266-9086
   Amanda Smith – amanda.smith@ci.stpaul.mn.us, 651-266-6507

a) Exterior lighting shall meet Zoning Code Sec. 63.116. - Exterior lighting.
   - All outdoor lighting shall be shielded to reduce glare and shall be so arranged as to reflect lights away from all adjacent residential districts or adjacent residences in such a way as not to exceed three (3) footcandles measured at the residence district boundary.
   - All lighting in all districts used for the external illumination of buildings shall be placed and shielded so as not to interfere with the vision of persons on adjacent highways or adjacent property.

   Response: Lighting plan has been provided for review. Site lighting averages around 2 footcandles and is near 0 along Kasota Ave.

b) A photometric plan has been provided for review. *Lighting conditions are met.*

c) All required yards and any underdeveloped space shall be landscaped using materials such as trees, shrubs, sod, groundcover plants, or stormwater landscaping. *Landscape plan shows 16 shade trees and 4 ornamentals. Areas of sod will be seeded with a MnDOT seed mix.*

d) For any parking facility, landscaping shall be provided to buffer the facility from adjacent properties and from the public right-of-way; reduce the visual glare and heat effects of large expanses of pavement; and provide areas for the retention and absorption of stormwater runoff. The standards can be found in Sec. 63.313 and 63.314 of the Zoning Code.
   - *Perimeter Landscape* - A landscaped yard at least four (4) feet wide along the public street or sidewalk. *Condition is met.*
   - *Tree plantings* – At least 1 shade tree shall be planted for every 5 surface parking spaces. *Condition is met.*

4. **Signs – Contact**: Ashley Skarda/651-266-9013 ashley.skarda@ci.stpaul.mn.us

Comments:

a) Business signs require a separate review and Sign Permit from the Department of Safety and Inspections. Site plan approval does not constitute approval of signs shown on the site plan. Contact Ashley Skarda of DSI Zoning regarding signs.
Response: There will be no proposed business sign at this site. An address sign will be installed near the gate, see C3.01.

5. **Planning – Contact:** Anton Jerve/651-266-6567 anton.jerve@ci.stpaul.mn.us
Comments:
a) No comments.

6. **District Council**
Comments:
a) The site is located in the District 12 Community Council. A copy of the site plan was provided to the District Council for comments. Staff reserves the right to make additional comments and conditions based on their feedback.

7. **Public Works Records and Mapping – Contact Number:** 651-266-6150
Comments:
a) No comments.

8. **Public Works Construction – Contact:** Jary Lee/651-266-1107 jary.lee@ci.stpaul.mn.us
Comments:
a) Check with MnDOT policy regarding entrances adjacent to ramp terminal. Driveway entrance is not located 100' outside intersection of Kasota and TH280 ramp terminal. Consider moving entrance to west side of property if possible but avoid stopping on tracks when queuing left turns on EB Kasota.
Response: The entrance driveway is long enough for trucks to be fully in the driveway and not obstruct Kasota Ave or the ramp to TH 280 while drivers park to open or close the gates. It is anticipated that there will be only approximately 20 truck movements at this site per day. The minimal traffic associated with this site will not interfere with the intersection, and the driveway will not be required to move. For more information, refer to the traffic memo by Rohn Industries dated September 26, 2019 which was approved on September 27, 2019.

9. **Public Works Transportation Planning**
Contacts: David Kuebler/651-266-6217 david.kuebler@ci.stpaul.mn.us
Colleen Paavola/651-266-6104 colleen.paavola@ci.stpaul.mn.us
Comments:

a) Please be advised that a Temporary Pedestrian Access Route (TPAR) and/or a Temporary Traffic Control (TTC) plan may be required as part of the Right-of-Way (ROW) permitting process. Said TTC or TPAR plans must be approved by the City prior to the ROW Permitting office issuing a permit(s).
Response: Comment noted.

b) Per Minnesota State Statute 326, the final plans submitted must be signed by the appropriate licensed Professional, i.e. PE, LA, PLS, etc., responsible for plan development.
Response: Signatures for the PE and PLA have been added to the revised plans.

c) Add the street names to the plan sheets.
Response: Street names have been added to all plan sheets.

d) Please use the City Standard Detail plate 1206D for driveways.
Response: Detail plate 1206 has been added to C9.01.

e) Update the Site Plan with the following notes:
- INSPECTION CONTACT: The developer shall contact the Right of Way inspector Dick Rohland, 651-485-1688 (one week prior to beginning work) to discuss traffic control, pedestrian safety and coordination of all work in the public right of way. Note: If a one week notice is not provided to the City, any resulting delays shall be the sole responsibility of the Contractor.
- As part of the ROW permitting process, two weeks before any work begins that impacts the ROW in any way the developer shall provide to the ROW Inspector the name and contact information of the Construction Project Manager or Construction Project Superintendent. If this information is not provided there may be a delay in obtaining permits for the work in the ROW. Said delays will be the sole responsibility of the developer
- SAFE WORK SITE REQUIREMENTS: The Contractor shall provide a continuous, accessible and safe pedestrian walkway that meets ADA and MN MUTCD standards if working in a sidewalk area, and traffic control per MN MUTCD requirements for work in the public right of way.
- ENCROACHMENTS: Per Chapter 134 of the Legislative Code, no person shall construct and maintain any projection or encroachment within the public right-of-way.
- Construction of the development that necessitates temporary use of the Right-of-Way (ROW) for construction purposes shall be limited to equipment, personnel, devices and appurtenances that are removable following construction. Encroachment permits will not be granted for devices such as tie backs, rock bolts, H-piles, lagging, timbers, sheet piling, etc. that the owner is seeking to abandon in the ROW.
- The Contractor shall contact Don Bjorkman, General Foreman, Lighting - Signal Maintenance, (651-266-9780), if removal or relocation of existing facilities is required or in the event of damage to the lighting or signal utilities. The Contractor shall assume responsibility (and related costs) for any damage or relocations.
- ROADWAY RESTORATION: As per the City's "Standard Specification for Street Openings" policy, restoration on roadway surfaces less than 5 years old will require full width mill and overlay or additional degradation fees. Degradation fees are determined by contacting the Right of Way

Service Desk at (651) 266-6151. Pavement restoration shall be completed by the St. Paul Public Works Street Maintenance Division. All related costs are the responsibility of the developer/contractor. Contact Street Maintenance at (651) 266-9700 for estimate of costs for pavement restoration.

Response: Theses notes have been added to sheet C3.01.

f) CITY OF ST. PAUL PERMIT REQUIREMENTS:
- ORDERING OBSTRUCTION AND EXCAVATION PERMITS: Contact Public Works Right of Way Service Desk at (651) 266-6151. It is strongly recommended that contractors call for cost estimates prior to bidding to obtain accurate cost estimates.
- OBSTRUCTION PERMITS: The contractor must obtain an Obstruction Permit if construction (including silt fences) will block City streets, sidewalks or alleys, or if driving over curbs.
- EXCAVATION PERMITS: All digging in the public right of way requires an Excavation Permit. If the proposed building is close to the right of way, and excavating into the right of way is needed to facilitate construction, contact the utility inspector.
- FAILURE TO SECURE PERMITS: Failure to secure Obstruction Permits or Excavation Permits will result in a double-permit fee and other fees required under City of St. Paul Legislative Codes.

Response: Theses notes have been added to sheet C3.01.

10. **MnDOT – Contact:** David Elvin/651-234-7795 david.elvin@state.mn.us
Comments:
a) A copy of the Site Plan was provided to MnDOT for review.
b) Please see attached letter from MnDOT dated August 30, 2019 for additional requirements.
Response: MnDOT letter and comment responses attached.

11. **Metro Transit – Contact:** Scott Janowiak scott.janowiak@metrotransit.org
Comments:
a) A copy of the Site Plan was provided to Metro Transit for review.

12. **Public Works Sidewalks – Contact:** Ryan Lowry/651-266-6147 ryan.lowry@ci.stpaul.mn.us
Comments:
a) Contractor is responsible for damage to the mainline sidewalk, curb, drive access and boulevard landscaping cause during the construction. Contractor advised to document pre-existing condition of the right of way prior to commencement of the construction.
b) Sidewalk grades must be carried across driveways.
Response: There is no existing sidewalk at this site.

c) Update the Site Plan with the following notes:
   - CONSTRUCTION IN RIGHT OF WAY: All work on curbs, driveways, and sidewalks within the public right of way must be done to City Standards and Specifications by a contractor licensed to work in the City right-of-way under a permit from Public Works Sidewalk Section (651-2666108). Sidewalk grades must be carried across driveways.
   - RIGHT OF WAY RESTORATION: Restoration of asphalt and concrete pavements are performed by the Public Works Street Maintenance Division. The contractor is responsible for payment to the City for the cost of these restorations. The contractor shall contact Public Works Street Maintenance to set up a work order prior to beginning any removals in the street at 651-266-9700. Procedures and unit costs are found in Street Maintenance's "General Requirements - All Restorations" and are available at the permit office.

Response: Theses notes have been added to sheet C3.01.

13. **Public Works Sewers- Contact:** Anca Sima/651-266-6237 anca.sima@ci.stpaul.mn.us

Comments:

a) The plan for storm water rate control meets city requirements.

b) Provide TV inspection file the whole pipe network (catch basins, leads, mainline, outfalls) in that area. Submit to PW sewers for review.
   Response: Cleaning and televising to be completed by City of St. Paul Sewer Maintenance to determine the condition of the existing pipes.

c) No buildings, structures, trees or any temporary structure, material storage, fixture, or any other objects which may prohibit normal access to utility facilities for maintenance purposes will be permitted within the easement area.
   Response: There are no structures proposed in the easement area.

d) Update the Site Plan with the following notes:
   - SEWER CONNECTION PERMIT: License house drain contractor to obtain (Sewer Connection Permit) to construct new sanitary and storm connection in street from main to the property. Call St Paul PW permit desk (651-266-6234) for information on obtaining this permit.
     Response: Note has been added to sheet C3.01.

14. **Water Quality/Erosion Control**
Contact: Wes Saunders-Pearce/651-266-9112 wes.saunders-pearce@ci.stpaul.mn.us

Comments:

a) Erosion control plan is satisfactory as shown.

b) A Wetland Conservation Act decision was separately issued regarding the existing stormwater pond. It has been determined to be an incidental wetland and a No Loss approval was provided.

c) The proposed stormwater pond will be expanded and a filtration device added to treat water quality. The hydrology report must be updated to show conformance with Mississippi WMO standards. Provide calculations and/or device sizing information showing that a 60% total phosphorus removal is provided by the proposed design. The report and plans must also indicate the specific type of filtration device. Submit an operation and maintenance plan.
Response: A filtration device (Contech Stormfilter) has been added to meet the Mississippi WMO standards. See updated Utility Plan (C6.1) and updated Stormwater Management Plan dated 10/1/2019 for calculations. Operation and maintenance plan provided by Contech is provided with this submittal.

15. **Water Utility – Contacts:** Jeff Murphy/ 651-266-6276 jeffrey.murphy@ci.stpaul.mn.us
Amanda Leier/ 651-266-6276 amanda.leier@ci.stpaul.mn.us
Brian Galloway/ 651-266-6205 brian.galloway@ci.stpaul.mn.us

Comments:

a) No comments

16. **Fire – Contact:** Ann Blaser/651-266-9140 ann.blaser@ci.stpaul.mn.us
Comments:
a) Provide address sign and key box on site for emergency personnel.
Response: Address sign and key box added near the front gate, see sheet C3.01.

17. **City Forestry – Contact:** Zach Jorgensen/651-632-2437 zach.jorgensen@ci.stpaul.mn.us
Comments:
a) No comments

18. **Parks and Recreation – Contact:** Paul Sawyer/651-266-6417 paul.sawyer@ci.stpaul.mn.us
Comments:
a) No comments

19. **Mississippi Watershed Management Organization**
Contact: Douglas Snyder/612-746-4971 dsnyder@mwmo.org
Comments:
a) A copy of the site plan was provided to the Mississippi Watershed Management Organization.
Response: Stormwater Management Plan has been revised to meet MWMO Flexible Treatment Option 2. See updated report dated 10/1/2019.

20. **MPCA Permit**

This project will be affecting more than one acre. A General Storm Water Permit for Construction Activity from the Minnesota Pollution Control Agency is required. No land disturbance activity for the project is allowed, until this permit is obtained and is in addition to any City or watershed district permits

required. Call the Brian Green MPCA Statewide Compliance Coordinator for the Storm Water Program MPCA at 507-206-2610 if you have questions about the process for obtaining this permit.
The applicant has requested a No Association Determination from the MPCA's Petroleum Brownfield and Voluntary Investigation and Cleanup program, and received said determination (letter dated 09-10-19).
The applicant has filed a Construction Contingency Plan and Response Action Plan with MPCA for review to support the No Association request.
Response: Comment noted.

21. **Plumbing – Contact:** Rick Jacobs/651-266-9051 rick.jacobs@ci.stpaul.mn.us
    Comments:
    a) No comments

22. **Building Code Requirements**
    Contact: James Williamette/651-266-9077 james.williamette@ci.stpaul.mn.us
    Comments:
    a) This proposal will require a building (grading) permit from this office to proceed with the grading activity.
       Response: Permit requirements are included on C3.01.

23. **Public Works Transportation Planning**
    Contact: David Kuebler/ 651-266-6217 david.kuebler@ci.stpaul.mn.us
    Comments:
    a) Provide a traffic narrative which includes: explanation as to why the business has a need for additional outdoor storage, frequency of trips generated, how access/departure from the site will work, and if MnDOT right-of-way will be utilized.
    Response: Traffic memo was approved on 9/27/2019.

24. **MnDOT comments from letter dated August 30,2019 by David Elvin.**

    a) **Traffic Impact Study Recommended**
       The vehicle mix of new trips from this development will consist of a high percentage of heavy vehicles. Therefore, MnDOT recommends that the city require a traffic impact study be performed to provide adequate information on the number and distribution of heavy vehicle trips that will be using city, county, and MnDOT roads, as well as the expected ramps and intersections where these heavy vehicles will be accessing the MnDOT highway network, including MN 280, I-35W, MN 51, and MN 65 (see Chapter 5 Section 5.4 of MnDOT's Access Management Manual).

A lead concern is the fact that access is proposed via a single driveway at a skewed angle on the north side of Kasota Avenue that is also offset 20-30 ft to the east from the existing "T" intersection ramps to/from MN 280. Also of concern are potential congestion and backups on Kasota Avenue related to the at-grade railroad crossing to the east.

Please contact Ashley Roup of MnDOT's Metro District's Traffic Engineering Section at Ashley.Roup@state.mn.us or 651-234-7815 with questions.

Response: The entrance driveway is long enough for trucks to be fully in the driveway and not obstruct Kasota Ave or the ramp to TH 280 while drivers park to open or close the gates. It is anticipated that there will be only approximately 20 truck movements at this site per day. The minimal traffic associated with this site will not interfere with the intersection. For more information, refer to the traffic memo by Rohn Industries dated September 26, 2019 which was approved on September 27, 2019.

b) **Transit Impact Mitigation**

Metro Transit Route 3 travels along Kasota Avenue and services bus stops just to the west of the site. If any work will impact this transit service on Kasota Avenue, the proponent should contact Metro Transit as soon as possible to share information and develop a plan to minimize those impacts.

Please contact Carl Jensen, MnDOT Metro District Transit Advantages Engineer, at 651-234-7505 or CarlJensen@state.mn.us with related questions.

Response: Work on this site will not impact the bus stop or route for Metro Transit Route 3.

c) **Drainage Permit Required**

A MnDOT drainage permit will be required for this site to ensure that current drainage rates to MnDOT right-of-way will not be increased. Please provide computations and plans so that MnDOT may verify that the proposed development maintains or reduces drainage rates to the state right-of-way. Please include both existing and proposed site conditions. Drainage permit applications are available and may be submitted online at: https://dotapp7.dot.state.mn.us/OLPA. Please submit the following documents with the drainage permit application:

1. A grading plan showing existing and proposed contours.
2. Drainage area maps for the proposed project showing existing and proposed drainage areas. Any off-site areas that drain to the project area should also be

included in the drainage area maps. The direction of flow for each drainage area must be indicated by arrows.

3. Drainage computations for pre- and post-construction conditions during the 2-, 10-, 50-, and 100-year rain events.
4. Time of concentration calculations.
5. An electronic copy of any computer modeling used for the drainage computations.

MnDOT's drainage permits checklist is attached for your convenience. For questions, please contact Jason Swenson of MnDOT's Metro District Water Resources Engineering Section at (651) 234-7539 or Jason.Swenson@state.mn.us.

Response: A Stormwater Management Plan and updated Site Development Plans will be issued for a MnDOT drainage permit.

d) **Permits**

In addition to the drainage permit required above, an appropriate permit will be required for any other work within or affecting MnDOT-owned right-of-way. Permit forms are available and may be submitted online at https://dotapp7.dot.state.mn.us/OLPA.

Please contact Buck Craig of MnDOT's Metro District Permits Section at 651-234-7911 or Buck.Craig@state.mn.us for related questions.

Response: There will be no additional work in MnDOT owned right-of-way.

Sincerely,

Chad Ayers

Chad Ayers, PE
Senior Project Manager

ing west towards site

ing west towards site and sound wall

St. Anthony Park Community Council
2395 University Ave. W., Ste. 300E
Saint Paul, MN 55114

ST. ANTHONY PARK COMMUNITY COUNCIL · DISTRICT 12 ·

Amanda Smith
Zoning Inspector III- Site Plan Review
Department of Safety and Inspections
375 Jackson St. Suite #220
Saint Paul, MN 55101

Re: Rohn Industries Semi-Trailer Parking - 2495 Kasota Ave

Dear Ms. Smith,

On behalf of the St. Anthony Park Community Council, I am writing to request a postponement of the site plan review for 2495 Kasota Ave. As it stands at this time, our board and committee members feel strongly that more time is needed to review this plan.

The Rohn proposal and their contractors seem to be completely unaware of the existence of the historic Elm Street Ash Dump and the previous history of investigation by MPCA. The ESAD at this site has never been remediated, but has been largely undisturbed for decades. The ESAD extends roughly from approximately 26th and Kasota in Minneapolis to TH280. It contains tons of partially incinerated hospital waste from HCMC, and ash from the City of Minneapolis and the U of MN, and dates from the 1930s to the 1960s. It was covered with topsoil when 280 was built, and developers were allowed to construct warehouses and other buildings on top of the ESAD. It intersects with the Valentine-Clark superfund site at the remediated Bridal Veil Creek site.

Members of our Environment Committee are greatly concerned with potential to damage the pond complex and possibly impact air quality and public health in surrounding communities. The plan intends to excavate soil and stockpile topsoil on site , which will clearly disturb and expose the underlying polluted material. How the underlying polluted material would be contained is not clear. There is also an ephemeral DNR-designated wetland on the SE corner of the property, which could be impacted if underlying materials are disturbed.

The plan seems to intend that stormwater would be diverted to the East pond. If stormwater is contaminated with the polluted subsoil, the pond would certainly be exposed to cadmium, mercury, boron, hospital waste, incinerator ash and other highly toxic substances.

The very short time for review is unacceptable and does not allow sufficient time to bring in technical experts with more knowledge than us. I spoke briefly with Doug Snyder, Executive Director of the Mississippi Watershed Management Organization, and am waiting to hear back

from the Minnesota Pollution Control Agency. The MWMO has been monitoring the wetlands adjacent and have plans for a hydrological study, which should be done in about six months, and could then do a water quality impact study of the area. Mr. Snyder was clear that a site specific water quality impact study would not give a full picture of the implications of this project. There are at least two large bankers' boxes on file at MPCA about the ESAD with tons of data and reports about the site (we know because one of our committee members read the entire file about twenty years ago). Apparently this site has been a sleeper for a long time. Craig Biglow, Brownfield Program Manager for the MPCA would likely need time to familiarize themselves with the files.

Certainly MPCA, DNR and MWMO need to be involved, and possibly the MN Department of Health. There could be serious public health, environmental and liability concerns should this plan be implemented.

Thank you for your consideration.

Sincerely,

Kathryn Murray

Kathryn Murray
Executive Director

Cc: Tia Anderson, DSI - City of St. Paul
Ricardo X. Cervantes, DSI Director - City of St. Paul
Mitra Nelson, Ward 4 City Council Representative
Doug Snyder, MWMO
Dan Kalmon, MWMO
Cragué Biglow, MPCA
Jamie Wallersted, MPCA

ST. ANTHONY PARK COMMUNITY COUNCIL · 12 · DISTRICT

St. Anthony Park Community Council
2395 University Ave. West, Ste. 300E
Saint Paul, MN 55114

Amanda Smith
Zoning Inspector III- Site Plan Review
Department of Safety and Inspections
375 Jackson St. Suite #220
Saint Paul, MN 55101

Re: Rohn Industries Semi-Trailer Parking - 2495 Kasota Ave

Dear Ms. Smith,

We have many serious concerns about the potential air/waterborne pollutants that could manifest with the continuation of the 2495 Kasota Avenue project without proper research and community engagement because an old ash dump underlies this site. Two prior MWMO Commissioners representing the City of Saint Paul, who are current members of the SAPCC Environment Committee (Karlyn Eckman and Betty Wheeler), have prior knowledge and longstanding concerns about contaminants stored at this site.

About 20 years ago, Amoco BP proposed a substantially similar project on this site. It was shut down unanimously because of environmental concerns. At a special City Council hearing the permit to develop the site was revoked after Council members learned of the significant danger to human health due to toxins released (air, water and subsoil leachate plumes) from disturbing topsoil at the site following the Amoco BP Phase I environmental study.

Since that time, much scientific knowledge has accumulated to better understand health concerns from exposure to the types of pollutants which exist in that old ash layer. Therefore, it is appropriate to re-evaluate potential impacts that this project could have on the several nearby surrounding neighborhoods, each of which has significant numbers of residents (North and South St. Anthony Park, Prospect Park, and Southeast Como). It is also important to note that all of these neighborhoods are rapidly growing with many new and recently completed residential and commercial developments.

We are also concerned with the traffic congestion this project would add to our neighborhood. There are already frequent back-ups along Kasota Avenue Southeast and on the 280 entrance/exit ramps, when trains travel the railroad spur only a few hundred feet away from the

proposed entrance/exit. It seems extremely important that you require the developers to conduct a thorough traffic study before approving this project.

We strongly urge that you table discussion of this project, initiate a community engagement process, and hold a public hearing. We sincerely request that you take no vote for approval without going through a more thorough scientific review and public process.

We will follow up with another response letter next week once we have time to gather all of our concerns in one place. We appreciate your support in ensuring that you submit this site to the same scrutiny as any other.

Sincerely,

Kathryn Murray

Kathryn Murray
Executive Director

Cc:
Wes Saunders-Pearce, Water Resource Coordinator - City of St. Paul
Mark Doneux, Executive Administrator - Capitol Region Watershed District
Forrest Kelley, PE Regulatory Division Manager - Capitol Region Watershed District
Dr. Udai Singh,Water Resources Director - Mississippi Watershed Management Organization
Doug Snyder, Executive Director - Mississippi Watershed Management Organization
Dan Kalmon, AICP, Planning Principal - Mississippi Watershed Management Organization
Crague Biglow, Site Remediation 2 - Minnesota Pollution Control Agency
Jamie Wallersted, Section Manager - Minnesota Pollution Control Agency
Russ Stark, Chief Resilience Officer - City of St. Paul
Mitra Nelson, Ward 4 Council Representative, City of St. Paul
Pat Murphy, P.E. - City of Saint Paul Sewer Utility

St. Anthony Park Community Council
2395 University Ave. West, Ste. 300E
Saint Paul, MN 55114

ST. ANTHONY PARK COMMUNITY COUNCIL · DISTRICT 12 ·

Amanda Smith
Zoning Inspector III - Site Plan Review
Department of Safety and Inspections
375 Jackson St. Suite #220
Saint Paul, MN 55101

Re: Rohn Industries Semi-Trailer Parking - 2495 Kasota Ave

Dear Ms. Smith,

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Since that time, much scientific knowledge has accumulated to better understand health concerns from exposure to the types of pollutants that exist in the old ash layer. Therefore, it is appropriate to reevaluate potential impacts this project could have on the several nearby surrounding neighborhoods, each of which has significant numbers of residents (North and South St. Anthony Park, Prospect Park, and Southeast Como). It is also important to note that all of these neighborhoods are rapidly growing with many new and recently completed residential and commercial developments.

About 20 years ago, Amoco BP proposed a substantially similar project on this site. It was shut down [is "shut down" the right phrase? Would "stopped" or "refused" be better?] unanimously because of environmental concerns. At a special City Council hearing, the permit to develop the site was revoked after Council members learned of the significant danger to human health due to toxins released (air, water and subsoil leachate plumes) from disturbing topsoil at the site following the Amoco BP Phase I environmental study.

The proposed development is located within DNR Wetland complex 62-259. The wetlands are the last remaining remnants of a much larger historic wetland system that was largely drained and filled over the last 150 years. The few ponds that remain are valued not only for their ecosystem and watershed functions, but also by the surrounding communities, which are actively involved in maintaining them. MWMO will be doing a wetland delineation under its current work plan.

We would like to request information as it relates to the **wetland delineation and wetland alteration documentation** as it appears the historic remnant wetland that currently exists on-site is

being eliminated as part of this proposed project. We have several questions and assumptions in regards to this project and would appreciate the opportunity to ask them.

We are also concerned about the inadequately designed ingress/egress for the proposed use and traffic congestion this project would add to our neighborhood. There are already frequent backups along Kasota Avenue Southeast and on the highway 280 entrance/exit ramps, especially when trains travel the railroad spur only a few hundred feet west of the proposed ingress/egress. The project does not include **turning models for wheel-base 67**, which is the size of the semi-trucks the site appears to be designed for. It seems extremely important that you require the developers to conduct a thorough **traffic study** before approving this project, taking into account the amount of time railroad blocks it, and the State Fair traffic back to Raymond and beyond.

We strongly urge that you add these contingencies to your conditional approval of this project, initiate a community engagement process, and hold a public hearing. We sincerely request that you take no vote for approval without going through a more thorough scientific review and public process.

Sincerely,

Kathryn Murray

Kathryn Murray
Executive Director

Cc:
Wes Saunders-Pearce, Water Resource Coordinator - City of St. Paul
Mark Doneux, Executive Administrator - Capitol Region Watershed District
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Russ Stark, Chief Resilience Officer - City of St. Paul
Mitra Nelson, Ward 4 Council Representative, City of St. Paul
Pat Murphy, P.E. - City of Saint Paul Sewer Utility
Brandon Long, Executive Director - Union Park Community Council
Alex Farrell, Executive Director - SE Como Improvement Association
Eric Amel, Board Chair - Prospect Park Association
Stephen Klimek, Project Manager - Towerside Innovation District

Historic Waters of the Capitol Region Watershed District
Ramsey County, Minnesota

Prepared for Emmons & Olivier Resources, Inc.

By Greg Brick, M.S.

November 2008

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Introduction

The Capitol Region Watershed District (CRWD), located in southwestern Ramsey County, Minnesota, has within its boundaries some of the most historic hydrological features in the Upper Midwest: Carver's Cave is the first cave to be described in the literature following Jonathan Carver's visits to it in 1766 and 1767, and nearby Fountain Cave was the first commercial show cave in the Upper Midwest, offering torchlight tours to visitors in the 1850s. Some of the pristine surface streams lovingly described by the pioneers and early visitors to our region still exist, flowing as lustily as ever, but through underground conduits. A complete inventory of these historic waters has been long overdue.

The purpose of this report is to describe the historic waters of CRWD, including its natural caves, historic springs, and former surface streams, now buried. In addition to describing physical and historical information for each feature, and how they were formed, suggestions will be offered as to possibilities for potential restoration, where appropriate.

Geology/Hydrogeology of CRWD

More than one billion years ago North America was nearly cleft in half by plate tectonic action and lava flows oozed out from the resulting rift—flows that can still be seen along the North Shore of Lake Superior and, closer to home, in the Dalles of the St. Croix River, at Taylor's Falls. This defunct rift runs like a giant scar from Minnesota south to Kansas, where it is located far underground. The rifting stopped but it left a depression that filled with sediments over time. This was the origin of the Twin Cities Basin, a thousand-square-mile geologic saucer that formed the foundation for all the rock layers to follow—including the familiar layers seen locally in the Mississippi River gorge.

After the Ice Ages, meltwaters from the great ice sheet, which ponded back to form an enormous lake, called Glacial Lake Agassiz, cut the present river gorge through the Twin Cities. This left a lowered base-level—a lower place for water to drain to. This was important for the development of natural caves.

Below the glacial deposits we encounter bedrock but there is an enormous geological time gap between these two layers. It just happens that the missing layers in between were not laid down in Minnesota to begin with, or, if they were, they were completely removed by erosion over a vast span of time. This uppermost bedrock layer we encounter was laid down in Ordovician times (505 to 438 million years ago).

In the old brickyards of Lilydale, in West St. Paul, just to the east of CRWD, the Galena Limestone is exposed at the very tops of the cliffs. No caves are found in this layer in the Twin Cities, but in southeastern Minnesota, especially Fillmore County, which has been called the heart of Minnesota cave country, all the big caves, like Mystery and Niagara, and several hundred others, are found in the Galena. This rock formation was named for exposures in Galena, Illinois; there, and in the adjacent states, it often contains lead veins.

The Decorah Shale, named for its outcrops in Decorah, Iowa, is very well exposed in the brickyards, just below the Galena Limestone. Owing to the fact that the shale provided the clay content for the former brick-making operation, the brickyards are also known as claypits. Owing to the imperviousness of this clay, there are abundant springs in the claypits, where the shale has intercepted descending groundwater, forcing it sideways to the exposed rock face. In winter, the springwater freezes, leading to the growth of gigantic ice columns, stout as oak trees, that last well into the spring season. The floors of the claypits, equally impervious, are lined with cattail marshes. Within the boundaries of CRWD, the distribution of Decorah Shale is somewhat patchy, leaving "islands" that stand up above the surface. These islands have been called Decorah Shale highlands by geologists, and by a nice coincidence, much of Highland Park itself occupies a Decorah Shale highland.

Below the Decorah Shale is the Platteville Limestone, formed in warm shallow seas about 450 million years ago, an environment frequently compared to the Bahama Islands of today. The presence of fossil green algae indicates that the Platteville seas were fairly shallow, about 150 feet deep, for the light to be able to penetrate the water column. The Platteville also contains volcanic ash layers, derived from ancient former volcanoes in what are now the Appalachians. Many species of invertebrates living in the Platteville seas become extinct when this ash fell, as if from atomic fallout. The ash layers are impervious to water and some of the most famous springs in Minneapolis, such as Chalybeate Springs, owe their existence to them. This limestone layer, named for rock exposures in Platteville, Wisconsin, frequently makes up waterfall ledges, as at Shadow Falls and Hidden Falls within CRWD. The Platteville Limestone is almost always 30 feet thick under the Twin Cities. Immediately underlying the Platteville is a 3-feet thick layer of greenish Glenwood Shale. While you might expect to see springs at this contact, only a few, scattered seeps are encountered.

The lowermost and oldest rock layer having exposures within CRWD is the St. Peter Sandstone The pioneer geologist David Dale Owen officially named this rock in 1847 for outcrops near Fort Snelling, along the St. Peter's River—now the Minnesota River. The St. Peter layer has an average thickness of about 100 feet regionally. However, it's about 150 feet thick at its type section at Fort Snelling and it ranges up to 500 feet thick at Joliet, Illinois, as determined from drilling records. The St. Peter is very extensive for a single formation, underlying nearly a quarter of a million square miles in the Midwest. The St. Peter has an almost saintly purity throughout most of this range, suggesting that it has been recycled from older sandstones, geologically winnowed of its impurities. The St. Peter is called a "sheet sand," meaning that it was laid down flat, like a sheet, over large areas, by a warm shallow sea that invaded the continent from the south. It was the last major sandstone layer to be deposited in the Upper Mississippi Valley. The St. Paul area was known to the Dakota Indians as "White Rocks" because of this glaringly white layer, exposed in its river bluffs.

Most importantly, the St. Peter Sandstone, in the Minnesota part of its range, lacks natural cementation, hence it is friable, and easily excavated. Natural caves form in the St. Peter Sandstone by a process known as "piping," a form of erosion caused by flowing groundwater. Piping forms two different kinds of cave in the St. Peter: tubular caves, best exemplified by Fountain Cave in St. Paul, and maze caves, best seen in Schieks Cave under downtown Minneapolis (Brick, 1997b). The term was borrowed from civil engineering practice in the late 1940s, where it was used originally to refer to the pipe-shaped voids formed by seepage of water around failing dams. Note that while the rocks themselves are old, the caves found in them are usually much younger, no older than the carving of the postglacial river gorge to which they presently drain.

Caves

The three important natural caves within the boundary of CRWD are Carver's Cave, Dayton's Bluff Cave, and Fountain Cave. These three caves are often confused with each other in the historical literature but are easily distinguished upon further examination. Carver's Cave is the short cave downriver from downtown St. Paul containing a lake, whereas Fountain Cave is the long cave above the city containing a stream. Stratigraphically, the two caves differ in that Carver's Cave is located near the middle of the St Peter Sandstone, whereas Fountain Cave is located near its top. There are subtle differences in the character of the sandstone itself at both locations, which was perceptively noted by Long, who visited both caves on the same day in 1817. Dayton's Bluff Cave is a smaller twin of Carver's Cave and located a short distance upriver from the latter. (Brick, article in review.)

Carver's Cave

Carver's Cave is a spring-cut cave in the St. Peter Sandstone, formed by the eroding away of sand grains by flowing water, a process called "piping." In form, it belongs to the tubular variety of St. Peter cave (Brick, 1997b).

Native Americans have always referred to Carver's Cave as *Wakan Tibi*, the Dwelling of the Great Spirit. Jonathan Carver visited what he called the "Great Cave" in 1766 and again in 1767, and it became the earliest Minnesota cave in the published literature when the first edition of Carver's *Travels Through the Interior Parts of North America* appeared in 1778 (Carver, 1956). Major Stephen H. Long, U.S. Corps of Topographical Engineers, visited the cave and named it "Carver's Cave" on July 16, 1817. Many accounts of visits to the cave subsequently appeared in the historical travel literature. While the cave has changed little over long stretches of time, and thus approaches extreme stasis, the overall impression you get from some of these accounts is exactly the opposite (Brick, 2006).

St. Paul druggist Robert O. Sweeny drafted a map of Carver's Cave about the time of the 1867 centennial of Carver's original visit and with certain exceptions it differs little from a 1981 survey map. The 1867 map is thus important in establishing the true identity of the cave, because there are similar caves nearby, such as Dayton's Cave, with which it has been confused over the years.

Carver's Cave has undergone repeated episodes of naturally sealing itself with debris from the cliffs above and being dug open again by some enterprising individual, about once each generation. Water levels of the lake inside the cave have fluctuated considerably over the years depending on whether cliff debris has dammed back the water. While it is uncertain how extensive the subterranean spring-shed is for Carver's Cave, it is known that in 1913, when the lake inside the cave was drained, the water level in Dayton's Cave, located about 400 feet upriver, was affected.

The most famous reopening of Carver's Cave, which generated by far the most publicity, was that by John H. Colwell in 1913. Since the cave entrance was concealed by sand deposits, one of the methods used by Colwell to relocate the cave was to trace the spring water leaking from the deposits at the foot of the bluff. It was in the wake of Colwell's activity that journalist Charles T. Burnley produced a conjectural map of the cave that resembled the gut chambers of a cow, showing several rooms beyond the present back end of the cave (Brick, 2007b).

Carver's Cave sealed itself again and was relocated and dug open in 1977 by the St Paul Parks and Recreation Department as an official Bicentennial project. Afterwards, the steel doors now seen in front of the cave were constructed to restrict access, but it is still quite easy for determined individuals to crawl past them. Owing to the funnel-shaped morphology of the bluff face above the cave, which channels avalanche debris, an alluvial cone formed in front of the steel doors over time. While the outer half of this cone—outside the cave—was removed several years ago during landscaping for the newly established Bruce Vento Nature Sanctuary, the other half—inside the cave—remains. As you proceed farther into the lake inside the cave, there is a drop-off into deeper water, which marks the edge of the debris cone.

The author of this report began making regular visits to Carver's Cave in the late 1980s and in the late 1990s undertook a series of measurements in the cave lake using electronic equipment (AquaCheck™). The average water temperature was 10°C. Other values recorded included pH, electrical conductivity, and the amount of dissolved oxygen in the cave lake. Using various configurations of a flume, discharge from the cave was measured as approximately 100 liters per minute.

While a full biological survey of the cave has never been conducted, the author of this report has regularly observed the amphipod *Gammarus pseudolimnaeus* (a crustacean more commonly known as a scud, or freshwater shrimp) in the lake that fills the cave (Brick, 2000), along with white planarians (flatworms), snails, minnows, and frogs. The Carver's Cave ecosystem, lacking photosynthetic inputs, is based on organic detritus, chiefly decaying leaves that have blown in through the cave entrance, providing food for the amphipods, which in turn serve as prey for fishes. The most unusual creature observed by the author in the cave, however, was a beaver, in 1999, which had assembled a cache of sticks on the beach just inside the entrance.

It would be very difficult to bar access from Carver's Cave. However, from the author's experience, if the current water levels in the cave are maintained, that will be sufficient to deter visitors from proceeding further, owing to the depth and painfully cold temperature of the water, which acts as a strong deterrent to casual exploration.

Apart from the author's numerous publications on Carver's Cave, two other important sources are Woolworth and Woolworth (1980) and Terrell (2003).

Dayton's Bluff Cave

This natural cave is located about 400 feet upriver from Carver's Cave in the St Peter Sandstone of Dayton's Bluff but its entrance is sealed by accumulations from the bluffs above. The exact location is suggested by the spring water seeping from the colluvium. In some respects this cave seems to be a smaller version of Carver's Cave in that it contained a lake and was graced by petroglyphs. The cave may have been visited as early as Long, in 1817. In pioneer days, this cave was frequently mistaken for Carver's Cave, with which it was hydrologically connected, and it was used as a root cellar or for the storage of ale. Newspaper reports suggest that the cave was open as late as 1961. (Information from author's files; Terrell, 2003.)

Fountain Cave

Fountain Cave in St. Paul, the longest natural sandstone cave in Minnesota, is a cave of many state firsts. The first graphic depiction of a Minnesota cave, in 1850, was of Fountain Cave; it became the first show cave in Minnesota in 1852; and it was the first cave in Minnesota to have its speleogenesis thoroughly discussed by the many visitors traveling up the Mississippi River (Brick, 2004). The cave still exists but is inaccessible because the highway department sealed it during the construction of Shepard Road in 1960 (Brick, 1995).

Fountain Cave dates to the waning of the last Ice Age. The melting ice sheet to the north pooled up to form the enormous Glacial Lake Agassiz, with more water than all the present Great Lakes combined, and the spillover from this lake formed Glacial River Warren, an ancestor of the present Mississippi. A waterfall on this glacial river, thought to have been grander than Niagara Falls, chewed its way upstream from downtown St. Paul, carving the present gorge. Migrating past the site of the future cave, it exposed the St. Peter Sandstone. The sandstone aquifer, thus uncorked, drained laterally to the new gorge along pre-existing rock joints. The flowing water enlarged the joints into a cave—a process that geologists called "piping." In 1932, St. Paul landscape architect George L. Nason described how the 400-foot long ravine at the cave's entrance—"the beautiful little valley," as he lovingly called it—was "formed by the caving in of the roof at various times" (Brick, 2008).

Fountain Cave was discovered and named on July 16, 1817, by Major Stephen H. Long, U. S. Corps of Topographical Engineers. Joseph N. Nicollet, the French émigré scientist who drafted the so-called "mother map" of Minnesota, visited Fountain Cave in 1837. It is marked "New Cave" on his famous 1843 map, *Hydrographic Basin of the Upper Mississippi River*. In the report that accompanied the map, he stated that "The cave now referred to is of recent formation. The aged Sioux say that it did not exist formerly." The idea of recent formation apparently influenced the Native American name for Fountain Cave, "the new stone house." It is more likely, however, that Fountain Cave was not "new" at this time, merely newly reopened. The cave entrance had been concealed by collapse debris, it may be conjectured, and was flushed open again by Fountain Creek in 1811 (Brick, 1995).

The famous Pierre "Pig's Eye" Parrant—depicted with his eye-patch on countless beer cans in our own day—arrived on the scene in 1837. Parrant was a French Canadian voyageur who attempted sedentary habits in his old age but he did not actually live in Fountain Cave. On the contrary, much of his supposed historical importance rests in the fact that he erected a log cabin, one of the first buildings on the site of what is now St. Paul, on or about June 1st, 1838. Often loosely described as a "saloon," it was sited at the mouth of the secluded gorge so that potential customers could see it from the river. Some squatters at Camp Coldwater, near Fort Snelling, soon moved downriver to join Parrant, and cabins began to sprout like mushrooms at the cave. But since the platting of the city of St. Paul actually began in 1849 with "St. Paul Proper," in what is now the downtown area, and not at Fountain Cave, the traditional claim that Parrant founded the city is untenable.

The most elaborate account of Fountain Cave was presented in E. S. Seymour's *Sketches of Minnesota, the New England of the West*, published in 1850—a version that was to be reprinted and plagiarized more than any other in the coming years. Seymour's description establishes that the cave was basically an unbranched tube, wholly in the sandstone layer. Apart from widenings of this passage, called rooms, much of the passage was crawlway. There were four rooms successively decreasing in size upstream, of which he gave the dimensions. The third room back was the only named feature in the cave, called "Cascade Parlor" because it contained a waterfall two feet high. He

did not go beyond the fourth room, having penetrated an estimated distance of sixty rods (990 feet), but stated that he could hear a second waterfall in the distance.

In 1880, the newly formed Chicago, St. Paul, Minneapolis, and Omaha Railroad began building a roundhouse and repair shops in the triangle of land bounded by Randolph, Drake, and the river. The oldest and only complete map of Fountain Cave known to exist dates to the 1880s and shows this facility already in place. The map also shows Fountain Creek, a surface stream arising from wetlands in the Fort Road neighborhood in St. Paul, draining into a sinkhole at the upper end of the cave, flowing through the cave and out again into a ravine that led to the Mississippi River. A shaft was constructed so that sewage could drain from the shops into the cave (Brick, 2007a).

The author of this report was able to pinpoint the exact location of the sinkhole draining into Fountain Cave using old real estate plats. A railroad spur servicing the Ford Motor Company plant in Highland Park was built right over that very spot in 1923. Once the Fort Road wetlands and the sinkhole were built over, the water supply to the cave was cut off and cliff debris began to accumulate at its entrance, debris that ordinarily would have been flushed away by the cave stream itself.

Springs

Springs in CRWD tend to be found along spring lines at discrete elevations, depending on bedrock contacts, where there are perched water tables. The springs discussed below are organized by spring-line, starting with the stratigraphically most elevated one. Of course, many of these spring-lines continue into adjoining areas. Not all of these springs are perennial; some of them will only be found during wet years. Coverage for the city of St. Paul is more complete than for the northern part of CRWD, away from the Mississippi River, where scattered, depression-type springs in glacial drift may exist and are as yet unmapped; this latter area remains to be thoroughly researched.

Drift-Decorah Shale Springline

The most coherent spring-line in St. Paul is that marking the contact of the glacial drift with the underlying Decorah Shale, along the edges of the Decorah Shale highlands. In the classification presented by Schwartz (1936) this is called the "third type" of spring, which he defined as "Springs at contact of unconsolidated material with solid rock." Water seeps down through porous material until meeting an impervious layer and is then shed laterally to the river gorge. Schwartz & Thiel (1954) published a diagram of this type of spring. Since the relevant geological contact is not directly visible in most cases, its presence was inferred based on the elevation of the top of the Decorah Shale, as determined from the bedrock topography map of Mossler (1992). This map has 50-foot contour intervals, and the author was most concerned with the 850-900 foot interval. Unless specified otherwise, the average flow rate of many of these springs is less than one gallon per minute. The following passage from Bond (1857) may be the earliest allusion to the drift-Decorah spring-line:

> There is one serious objection to the back-grounds of St. Paul, at present, though in time, it will prove to be a great blessing. A great many springs of 'pure cold water' are continually gushing from the base of the above-mentioned hills, forming several bad marshes, and rendering an access to

> many of the choice situations rather difficult. Good roads have been constructed over these wet places, while the water supplied by the living fountains, can easily be brought in town.

According to Brick (2007c), "When plotted on the topographic map, I fancied that the dozens of sparkling springs along the drift-Decorah contact had the outline of a necklace, eight miles long, looping around the neck of St. Paul, roughly following the Mississippi River. And while waterlogged landowners might object to using the word 'diamond' in reference to them, they are St Paul's most distinctive springs, just as the Platteville spring-line best characterizes neighboring Minneapolis."

Here are a few of the better known springs along this spring-line:

Ninth Street Springs

Formerly located in downtown St Paul, but now dried up or buried. Mentioned in historical accounts, it is not certain which spring-line they belonged to, but it is likely that they were drift-Decorah contact springs (Brick, 1997a).

College Avenue Springs

According to St Paul historian Don Empson (pers. comm.), the College Avenue springs were located near (or under) the present Minnesota History Center, but the author of this report could not find any trace of them, except perhaps for a persistent sound of rushing water in one of the storm drains below the building (Brick, 2007c).

Walnut Street Spring

The Walnut Street stairway runs alongside the James J. Hill House, and about half way down there is seepage on the stairs. No historical or other information is available. (Brick, 2007c)

Irvine Avenue Springs

According to Brick (2007c), "I continued mapping this spring-line through the Irvine Avenue neighborhood of St Paul, below Summit Avenue, certainly the most scenic part of the project. Historic houses cling to the steep slopes, and I found myself spring-hunting midst the gables. At a residence whose address plate said, 'Rue Eugene-Dupont,' water poured from a crack across the driveway, streaming downhill along the switchbacks before vanishing into a storm drain. The Irvine springs, though charming, bring trouble for residents, causing slick winter pavements, slope movements, and wet basements, as reported in a recent newspaper article (Agha, 2003)."

Grand Avenue Springs

"Where the spring-line crossed Grand Avenue, I found [in 1993] ornate lampposts with water gushing from their bases, which were swathed with filamentous green algae, suggesting an on-going, rather than merely temporary, situation." (Brick, 2007c)

Pleasant Avenue Springs

"Along Pleasant Avenue (as at its intersection with St Albans, and with St Clair) I found retaining walls of limestone rubble masonry, at the foot of which there were springs. A local resident told me that his parents used to drink water from the Pleasant Avenue springs. Indeed, the 'Pleasant avenue and St. Clair street' location was officially listed in the *Annual Report of the City Engineer for the City of St. Paul* (1895) under the heading 'Street Fountains,' along with the clarification, 'water from spring.' The 1901 report, however, strikes a different tone, describing 'the success that has been achieved in the doing away of numerous springs at various parts of the city that in the past have been a considerable source of annoyance, danger and expense during the winter months. These springs have been properly intercepted, and we are not annoyed during the winter months by ice creeping all over the street, forming regular icebergs.'" (Brick, 2007c)

Linwood Park Springs

"Along greenish outcroppings of Decorah Shale in Linwood Park, I found a place where one of the springs could be observed issuing directly from the ground, supporting a growth of cattails, and measured the flow as 1 gpm." (Brick, 2007c)

Highland Springs

The following account of Highland Springs has been heavily abridged from Empson (1975).

Between 1871 and 1885, William Nettleton owned a 130-acre dairy farm in the area around St. Paul's Randolph Avenue and Lexington Parkway. His house and property were subsequently purchased by the Wardell family who, for three generations, lived in the Nettleton house and supplied the city with pure drinking water from a bountiful spring on the property. The spring that was to supply a livelihood to the Wardell family for 65 years, delivered a constant flow, summer and winter, of 27 gallons per minute. The temperature was a constant 42 degrees Fahrenheit, no matter what the season. The water had 25 grains of hardness (13 calcium, 12 magnesia) and was said to derive from drainage bounded by Montreal, Saratoga, Summit, and Syndicate streets, percolating down 20 feet before flowing to the spring.

The company supplied drinking water to businesses and private homes. Weekday mornings, a wagon loaded with bottles of spring water, plus a generous helping of crushed ice, made its way down the Randolph hill to downtown St. Paul. Following a regular route, Wardell carried bottles into office buildings, setting them up in a cooler, and surrounding them with crushed ice. Afternoons, the wagon's route extended out into residential areas, where the weekly 6½ gallon containers were delivered. Sundays, the wagon made a long trip to White Bear to supply that area.

Since providing water also meant providing ice, the Wardells created a pond on their property by letting the spring overflow into a depression. The pond, as much as 9 feet deep, had dimensions of 100 by 200 feet. The annual ice harvest amounted to 300,000 tons, all neatly cut with a rotary saw into foot-thick blocks, 11 by 22 inches. The blocks were drawn by horse pulley up a track into the three story icehouse built into the hillside.

The company grew over the years, and trucks began to replace wagons. By 1920, the company employed about 25 people, but that same year, Prohibition dealt a blow to the firm. The soda pop business, carried forward from the years on the West Side, had to be discontinued. Saloons, where soda pop was consumed at that time, were largely controlled by the breweries who, with the advent of Prohibition, switched to manufacturing their own soda pop. Henceforth, the Wardells had to depend solely on the spring water business.

By 1965, the old Nettleton farm, home of the Highland Spring Water Company, had become a choice piece of real estate with a commanding view. At the same time, the business of deriving a livelihood from a spring in an urbanized area had become problematical. An excavation in the wrong place, a break in the sewer, pollution in any form, and the company would be out of business overnight. The Wardells sold their property to a developer, and their equipment to the Chippewa Spring Water Company. The old Nettleton house was torn down and Montcalm Estates was constructed on the hillside.

Today, Highland Spring is routed into the storm drains, but behind Montcalm Estates, peering down through the manhole grating, you can still see the flow of the spring from the hillside above, running at its constant 27 gallons per minute.

Additional information on Highland Spring, including a chemical analysis, can be found in Schwartz (1936), who, however, states that there are two springs, with flows of 800 and 1,000 gallons per hour (which adds up to 30 gpm).

Fountain Park Spring

"Just beyond [Randolph and Lexington], the spring-line passed through the eponymous Fountain Park, a small, unmarked city park wedged between two residential properties on Lexington Avenue." (Brick, 2007c) This spring probably only flows during very wet weather.

Dawson Park Spring

"The spring-line then ran through Dawson Park, also unmarked, where I encountered a healthy flow in the ravine." (Brick, 2007c)

McDonough Park Springs

"In McDonough Park, also unmarked, along the north side of St. Paul Avenue, I mapped several more springs. Empson (2006) charmingly refers to these unmarked, neglected city parks as 'ghost parks,' and gives a list of them. The association between ghost parks and springs is hardly accidental, because these frequently rugged little lots were donated to the city by individuals who found them useless for building purposes and the city probably did not formally develop them for

the same reason. But that happens to be exactly the sort of hillside situation in which the drift-Decorah spring is lurking." (Brick, 2007c)

Sunny Slope Lane Spring

"At Sunny Slope Lane, I encountered a rivulet flowing in the street [in 1993], and traced it back to a private residence (No. 1760). Had I not been walking the spring-line I would have missed this one, because it looked merely as if a garden hose had been left running in the front yard. Contacting the owner, I learned that there was a trapdoor in the basement that could be lifted to view the spring." (Brick, 2007c)

Dew Drop Pond

"Dew Drop [is] a pond at the foot of 'Chapel Hill' (as it's known locally) on the campus of the University of St. Catherine. The pond's elevation suggested to me that it was fed by these springs, and just recently I found an old postcard depicting the spring itself. When I spoke with the college archivist, Sister Margery Smith, she informed me that she had never seen an image of the spring anywhere, and asked me if I would donate the postcard to their archives. Postmarked 1909, this artistic rendering—one of the earliest depictions of Highland Park scenery—shows the Dew Drop in the background, before it was landscaped in the 1920s, with the addition of an island. Even though the spring pool is quite shallow (several feet at most), I recall having read in the newspapers years ago of students drowning in it, giving it a melancholy distinction among the springs of St. Paul.

"Bruce Erickson, campus engineer, gave me a tour of the Dew Drop this past summer [2007] and informed me that St. Catherine's Library has a sump pump that used to run 24 hours a day owing to the shallow water-table. In 2002, during a major reconstruction project, it was decided to deal conclusively with the ground water problem, and a concrete pipe, 24 inches in diameter, was laid under the site, draining into the pond. Erickson says that the discharge from the pipe is 18 gallons per minute, keeping the pond ice-free in winter. The library's sump pump rarely activates nowadays." (Brick, 2007c)

St. Paul Seminary Grotto

"At...St. Paul Seminary...there's a smaller ravine running back from the Mississippi River, at the head of which is a grotto, dated 1919, which displays a sculpture called 'Tongues of Fire.' The dry-weather flow in this ravine is entirely from ground water seepage and on the particular day that I measured its cumulative flow, at the little waterfall in the lower ravine, it was 10 gpm. Ironically, no spring-water arises within the grotto itself, calling to mind the old adage about how springs often refuse to bubble up into the marble basins we build for them. I noticed that there were several other small spring-cut ravines of this type along the Mississippi River Boulevard, usually containing visible outcrops of greenish Decorah Shale." (Brick, 2007c)

Shadow Falls

Shadow Falls is formed where a stream pours over a ledge of Platteville Limestone near the west end of Summit Avenue. The waterfall is frequently attributed to a spring, because when you trace the stream uphill through the Decorah Shale ravine, the water is seen to be vigorously emerging

from the ground at one point. However, upon digging about with a shovel, the author of this report encountered a storm drain and a strong odor of hydrogen sulfide, so it appears that the "spring" is in fact the buried exit point of a storm drain (Brick, 1997a).

Nonetheless, the evidence is somewhat ambiguous. Nason (1932), a reliable source, asserts that there is a spring here. Likewise, the earliest record of Shadow Falls is identified as "Spring Leap" on Plympton's 1839 map of the Fort Snelling Military Reserve. Moreover, in April, 1933, there was newspaper coverage of children succumbing to typhoid after drinking from a "spring" at this location. It could be that the storm drain leads back to an authentic spring, now buried.

Town & Country Club Spring

"The final spring that I dealt with was at the Town & Country Club along Marshall Avenue, where there's a spring in the golf course rough. The ground was so waterlogged that it was like walking on a bog mat. Surrounded by giant willow trees, the scenery here probably best recreates the appearance of this type of spring back in the early days of St. Paul; a sign on the gatepost indicated that the club was established in 1888." (Brick, 2007c)

Les Bolstad Golf Course Springs

The Decorah Shale tends to form isolated "islands" around the Twin Cities area. The headwaters of Bridal Veil Creek (see below) are found in springs in ravines on the wooded slopes below the University of Minnesota's golf course. In 1994, the author of this report cultured filamentous algae from water samples collected at these springs for a class in cryptogamic botany.

Drift-Platteville Limestone Springline

This spring-line follows the glacial drift-Platteville Limestone contact. It is most noticeable along the Mississippi River Boulevard, where the springs, eroding headward, have carved ravines, necessitating a series of bridges and bends in the road. Most of these springs appear to be minor, such as the one at the former Stonebridge estate.

Platteville Limestone Springline

This spring-line, very pronounced in Minneapolis, is characterized by countless minor seepages along the outcrop of the Platteville Limestone in CRWD, and examples can be seen in the outcrops below the western end of Eustis Avenue. No named or historical springs are found here, however, unless the former Rum Town Spring (exact location uncertain, but it was in St. Paul, across from Fort Snelling) fell into this category.

Platteville-Glenwood Springline

This spring-line is very minor in CRWD. No named or historical springs are found here.

St. Peter Sandstone Springline

Where the water-table in the St Peter Sandstone intersects the Mississippi River gorge, springs can sometimes be found. However, apart from Carver's Cave and Fountain Cave, described above, this spring-line is very minor in CRWD.

Other Springs

Midway Springs is located in a closed glacial depression where Fairview Avenue passes under Interstate 94 in St. Paul. The water, probably derived from the glacial drift, is diverted into storm drains in a small fenced off area along the east side of Fairview Avenue.

North Star Spring. The North Star Brewery dug lagering caves in the St. Peter Sandstone of Dayton's Bluff in 1855. Abandoned by 1900, the largest of the caves has a powerful spring in its floor, flooding the cave with several feet of water. The spring water drains from the cave and has been channeled through a stone-lined canal into a landscaped pond in the Bruce Vento Nature Sanctuary. A thick growth of watercress can often be found near the mouth of the cave.

Skonard's Spring is located near the intersection of State Highway 280 and Energy Park Drive in St. Paul and the water probably derives from glacial drift. Historically, this spring was used as a water supply by the local residents and today it drains to the nearby Kasota Pond (Dr. Karlyn Eckman, pers. comm.).

Swede Hollow Spring was used as a water supply by the residents of this former St. Paul neighborhood. The author of this report found it difficult to locate former residents who could tell him its exact location but the impression he received was that the spring was located in the valley bottom, rather than among the outcrops. In that case, the spring water could have derived from alluvial materials. Given the abundance of outhouses along Phalen Creek, which ran through the ravine, the water could not have been wholesome to drink (Brick, 1997a).

Streams

Surface streams get buried and "lost" for a variety of reasons. Sometimes the motive is to hide what has become an eyesore, or to alleviate flooding. Sometimes the land on which the stream flows is needed for other purposes. Or sometimes, as in the case of Trout Brook, the streams were not buried *per se*, so much as that the adjacent street grade just grew upwards around them over the years.

In a very real sense, of course, the former surface streams are not "lost" since they are still flowing as lustily as ever. Indeed it would take a very expensive feat of engineering to get rid of them completely. To truly eliminate a stream you would have to fill the drainage basin, eliminating the topographic focus of the drainage. That could involve shifting many cubic miles of soil. These Twin Cities streams are most comprehensively described by Brick (book in review). The subject of daylighting, or re-excavating buried streams, is covered by Pinkham (2000).

The Trout Brook-Phalen Creek System. One of the most salient topographic features of downtown St. Paul is the mile-wide gap in the white crescent of sandstone cliffs along the Mississippi River. City Hall stands on a full thickness of bedrock, but the sandstone thins out where Kellogg Boulevard goes downhill, finally to vanish from sight altogether before reappearing in all its glory at Dayton's Bluff. Lowertown occupies the resulting gap. Geologists long ago surmised that this gap was carved by a preglacial precursor of the Mississippi, flowing down from the north. The Mississippi has changed course several times in the past million years or so and has only lately carved its present gorge. The topographic depression left by its precursor became the focus of postglacial drainage, and the stream that now runs through the gap is called Phalen Creek—together with its largest tributary, Trout Brook.

In pioneer days, just trying to throw a road across the Trout Brook-Phalen Creek lowland was a Herculean task, as may be gleaned from the old City Council minutes. It was first proposed to grade East 7th Street across the "bottomless bog" in 1860 but it wasn't until 1873 that the job actually got done. These streams are reflected in early, but now defunct, street names. Culvert Street was named after Phalen Creek, Brook Street after Trout Brook, and Canal Street for the combined stream below the confluence.

But something had to be done about the Lowertown wetland as a whole. In one of the most dramatic cut-and-fill jobs in municipal history, Baptist Hill, a mound of glacial debris 50 feet high, formerly located where Mears Park is today, was carted eastwards after the Civil War under the direction of city engineer David L. Curtice and dumped into the wetland. In the process, Phalen Creek and Trout Brook were left at their original, lower level—already well on their way to becoming subterranean. But while the Trout Brook-Phalen Creek valley was a curse to roads, it was a blessing for the railroads. Railroads have so dominated this valley ever since that the land between Phalen Creek and Trout Brook came to be known as "Railroad Island."

In 1893, city engineer George Wilson undertook the task of formally burying the lower reaches of the two streams, though several short segments had been roofed over years earlier. It was officially dubbed the Canal Street Sewer. Wilson's magnum opus still exists, and is easily distinguished by its innovative steel beam ceiling, Platteville Limestone rubble masonry walls, and granite floor. Wilson was so proud of his handiwork that he published an article about it in *Engineering News* in 1894, and one of the accompanying figures became incorporated into sewer textbooks (though at least one of the textbooks misattributes it to Minneapolis). Wilson's annual reports for these years contain classic photos of the project.

Trout Brook

Edmund Rice built a mansion, called "Trout Brook," which gave the stream its name. Back then, the stream was not only good enough to support trout, it was good enough to drink, even being piped into the house, as described by a descendant of Rice, Maria Dawson, in her *Letter About Trout Brook*, in 1953. The mansion was purchased in 1883 by the Northern Pacific Railroad and demolished to make way for railroad tracks.

In 1926-27, city engineer George Shepard (for whom Shepard Road is named) extended the Trout Brook Tunnel. Later, the tunnel was extended again, running under Maryland Avenue all the way to Lake Como, reducing the original Trout Brook, which began at Lake McCarron and today plunges

underground near Arlington and Jackson, to a mere side-passage. The most distinctive features of Shepard's handiwork are the square "cleanouts" which jut from the ground like the conning towers of a land-going submarine. You can see the cleanouts today along the various railroad tracks which thread the Trout Brook valley.

During especially heavy rains, Lowertown used to flood very badly. The problem was focused at the meeting of the waters, the junction of Trout Brook with Phalen Creek. Water couldn't get through the tunnels fast enough and backed up into the adjacent streets. To further alleviate flooding in Lowertown, Trout Brook was decoupled from the Phalen Creek Tunnel in the 1980s, giving them separate outfalls, thus increasing the discharge capacity of the system. The new Trout Brook outfall, a double-box section, is located 500 feet upriver from the old Canal Street outfall.

Without question, Trout Brook, as St Paul's major historical subterranean stream, is the largest potential scale daylighting/restoration project in CRWD. But this statement applies only to the segment of the stream upstream from the downtown area: roughly what was described above as having been buried by city engineer Shepard in the late 1920s, and subsequent upstream extensions. The advantages here are, firstly, that Trout Brook, upstream from the downtown area, is out in the middle of railroad right-of-ways rather than under buildings, so there would be adequate room for a riparian corridor, with integrated detention ponds or wetlands. Secondly, Trout Brook is close to the surface in much of this area, such that the crown of the tunnel projects above grade level. On the downside, it must be noted that such a project will almost certainly encounter heavily contaminated railroad soils, and these will be expensive to deal with.

Phalen Creek

Phalen Creek was named after Edward Phelan. Discharged from Fort Snelling, the former soldier built a cabin near downtown St. Paul, circa 1840. We first read of Phalen's Creek in an early deed, dated September 2, 1844, from Edward Phelan to William Dugas, of "160 acres on Faylin's Creek and Falls." Dugas built St. Paul's first sawmill here. But the creek also went by other names back then. On one of the earliest maps of St. Paul it is shown as McCloud Creek. It was also called Mill Creek. The geologist Newton H. Winchell gave a list of the mills on Phalen Creek in 1877, adding that "since the railroads have encroached on the natural course of Phalen's creek and the city water works have diminished its volume, some of them have been abandoned." Winchell's remark refers to St. Paul's first water works, built by Charles Gilfillan, which drew water from Lake Phalen through a 16-inch pipe. Originally, the plan had been to draw water from the creek itself, but mill owners objected.

Above the junction with Trout Brook, Phalen Creek flowed through the famous Swede Hollow. This deep ravine protected residents from the blasts of winter and kept them cool in summer. Originally taking its name from the Swedes, the hollow became a focal point for subsequent immigrant groups, such as Irish, Italians, Poles, and finally Mexicans. Many of them worked for the St. Paul & Duluth Railroad, whose tracks ran alongside the ravine. Living conditions were often unsanitary, with outhouses built on stilts over Phalen Creek. In 1956, the St. Paul Health Department ordered the residents to vacate, after which the fire department torched the hollow in a mighty conflagration.

Above Swede Hollow, and upstream from the historical Hamm's (and later Stroh's) Brewery, now vacant, through which it flowed, Phalen Creek was encased in the finest example of a large circular brick sewer under the Twin Cities. Upstream from this point, it would be expected that Phalen Creek should connect with Lake Phalen, where it originated. At Ocean Street, however, the Phalen Creek Tunnel ends abruptly at a brick wall. Nowadays, Lake Phalen drains to the Mississippi River by way of the Belt Line Tunnel, which runs roughly under Johnson Parkway and discharges to the Mississippi River near the former St. Paul Fish Hatchery, within the Ramsey-Washington-Metro Watershed District. Because of this, Phalen Creek does not present the same sort of daylighting opportunity as Trout Brook. But local water already has been made to flow through the Swede Hollow portion of the former Phalen Creek valley, now a regional park.

Rice's Brook

Edmund Rice, already mentioned in connection with Trout Brook, together with his brother, Henry, owned a considerable amount of prime real estate in early St. Paul (Rice Park and Rice Street, for example, are named after them). An 1849 plat of St. Paul, reproduced in Berthel (1948), shows Rice's Brook running through downtown St. Paul along what is now Exchange and Chestnut streets. Empson (2006) has the most extensive discussion of this stream, which apparently drained two now defunct lakes within the present Downtown Subwatershed. Because the stream no longer exists, there is no potential for daylighting/restoration.

Cascade Creek

Modern maps no longer show Cascade Creek, which was located in the West 7th Street neighborhood of St. Paul. One of the few historical maps that did was the map accompanying Winchell's 1877 report on the *Geology of Ramsey County*. Originating in a wetland near what is today Cretin-Derham Hall, the stream flowed eastwards and down the ravine now occupied by Ayd Mill Road, continued along the line of Jefferson Avenue, and joined the Mississippi River near the foot of Western Avenue.
In the early days, Cascade Creek was famous as a millstream. In 1860, John Ayd built the first and only gristmill in Reserve Township along its course. The creek was dammed to form a millpond, which a subsequent owner stocked with trout. The Milwaukee Road later ran its "Shortline," connecting Minneapolis and St. Paul, through the ravine, obliterating these early features (Brick, 1998).

The name "Cascade Creek" first appears on a real estate plat dated 1856. There was a Cascade Street (now part of Palace Avenue) in the vicinity as early as 1854. The name fascinated me, as it suggested the presence of a defunct waterfall (cascade) somewhere. There are references to the waterfall in the old literature. E. S. Seymour's *Sketches of Minnesota, the New England of the West*, published in 1850, stated that "A short distance below [Fountain] cave there is a little creek or rivulet, that leaps over a succession of cascades, making, in all a fall of about eighty feet." The most elaborate description, however, was by Elizabeth Ellet, who wrote, in 1853, that "A miniature waterfall flashes through the depths of a narrow dell, making thirteen successive shoots in a winding course, each falling into a lovely basin several feet in depth, which serves for a bathing place, curtained by a drapery of woods. This little cascade is closely embowered in foliage of vivid green, and its picturesque beauty makes up for the want of grandeur. It is a lovely spot to spend a summer morning or afternoon." This may be the waterfall that local residents knew in later years as

"Buttermilk Falls." The 1885 *Sanborn Insurance Atlas* showed a pronounced indentation in the river bluffs near Cascade Street—perhaps the waterfall itself.

In the late 1920s and early 1930s the large-bore "Kittsondale tunnels" as they are called in Public Works documents, were built under the Midway district of St Paul. Basically, two mirror-image tunnels, draining sewage in opposite directions, were dug. Kittsondale East drained sewage from Midway toward the east, with an outfall on the Mississippi at Bay Street, while Kittsondale West drained to the west, with an outfall in the shadow of the Lake Street Bridge.

The Kittsondale tunnels are distinguished from all other tunnels under the Twin Cities by their curious architecture. They contain vast subterranean stairways along their course, stairways that descend more than a hundred feet into the earth. Stairways, or "flight sewers," as engineers call them, are occasionally used where a sharp drop is necessary. Ordinary shafts can also serve this function but are plagued with problems of waterfall erosion at the bottom. The Kittsondale stairways served to convey large volumes of water from the highlands of St. Paul down to the level of the Mississippi.

While flight sewers are not uncommon, even in the Twin Cities, what makes the Kittsondales so special is that they contain *spiral* stairways. A spiral stairway—a man-made cascade of sorts—had replaced the old, natural waterfall at the river bluffs. The diverted Cascade Creek now joins the Mississippi at the Bay Street outfall. The West Kittsondale tunnel, built in 1931, on the opposite side of St. Paul, is not associated with any known historical stream.

Because of its depth of burial, and the fact that it has been rerouted from its historical course, the downstream stretch of Cascade Creek could not be daylighted/restored. The possibility remains of daylighting the portion that runs under the Ayd Mill ravine, but this could only be done if the railroad tracks were removed, and they remain in active use at the present time.

Fountain Creek

Fountain Creek, a surface stream arising from former wetlands in the West Seventh Subwatershed, drained into a sinkhole at the upper end of Fountain Cave, flowing through the cave and out again into a ravine that led to the Mississippi River. The source wetland, located west of Fort Road, was paved over by the late nineteenth century, when it became a residential area. Because the stream no longer exists, there is no potential for daylighting/restoration.

When studying the historical streams of the Fort Road area, note that the drainage of the wetlands appears to have been anastomosing. That is, one stream could capture another or change course over the years. This appears to have happened in the case of Fountain Creek in its relation with neighboring Cascade Creek, judging from my study of historical maps.

Bridal Veil Creek

The stream gets its name from Bridal Veil Falls, where it pours out of its concrete pipe and plunges over a ledge in the shadow of the Franklin Avenue Bridge, on the east side of the Mississippi River, in Minneapolis (and thus outside the borders of CRWD). Waterfalls with the "bridal veil" moniker (as for example the more famous one in Yosemite National Park) fall from such great heights as to

dissipate their waters as a "veil" of mist before reaching the bottom. An odd historical fact about Bridal Veil Falls is that it was once a mineral spa of sorts. Famous under the alternative name of Meeker's Creek, it had iron and sulfur springs, and in 1869 was actually described in the newspapers as a "new watering place." Another fact: groundwater seepage often resembles oil slicks, and another old newspaper clipping actually referred to the stream as "Oil Creek." By 1911, however, it was decided to "box" the creek, putting it underground.

Farther upstream, near the Minneapolis-St. Paul border, Bridal Veil Creek runs through several Superfund sites contaminated with coal-tar products, before emptying into Bridal Veil Pond, along Energy Park Drive, which has been entirely reconstructed as of 2008. The stream has been made to run through a culvert that isolates it from the underlying soil, which should improve water quality in the pond, where wild fowl died from mass poisonings in the early 1990s.

The headwaters of Bridal Veil Creek, however, are within CRWD. Originally, before human interference, the stream probably began at springs on what is now the Les Bolstad Golf Course (see above), whose collected waters flow under the adjoining St. Paul Campus of the University of Minnesota, following the boundary with the State Fairgrounds, until emptying into the Sarita Wetland along Como Avenue. In 1909, the state fair board, seeking a new attraction, excavated the wetland in their efforts to create a lagoon and canal that would carry passenger boats, but gave up on the plan (Empson, 2006). Overflow from the Sarita Wetland now drains to the Eustis Street tunnel, which empties into the Mississippi River just above the Lake Street Bridge.

The author of this report, while employed as an environmental consultant, became quite familiar with the wealth of contaminated properties along the course of Bridal Veil Creek near the Minneapolis-St. Paul border. Given the issues of contaminated soils, which are expensive to deal with, and the industrial character of the land through which the stream still flows, it is questionable whether it would be a wise investment at the present time, to attempt any daylighting projects, despite the stream's nearness to the surface. In any case, the exact course of the stream in its headwaters (i.e., east of Highway 280) is obscure and requires further investigation. Restoration efforts are best focused on the series of detention ponds (e.g., Burlington Pond, Kasota Pond) historically associated with this stream, which provide a true amenity to wildlife in a heavily industrialized area.

Shadow Falls / Finn's Glenn Stream

Bennett's *Map of Ramsey County* (1867) shows a stream originating in a wetland near what are now Randolph and Snelling avenues, flowing west to the Shadow Falls ravine, formerly known as Finn's Glenn. (The author of this report respectfully disagrees with Empson (2006), who states that Finn's Glenn is the ravine at the St Paul Seminary; the Bennett map does not seem to support this interpretation.) This is probably also the stream whose waters were dammed to form an artificial lake on the grounds of the University of St Thomas, called Lake Mennith, which drained away in 1902 with the installation of the city sewers (Empson, 2006). Because the stream no longer exists, there is no potential for daylighting/restoration.

Stonebridge Creek

Bennett's *Map of Ramsey County* (1867) shows a stream originating near what is now Groveland Park, flowing west through a shallow ravine on what had been Stonebridge, the former Oliver Crosby estate along Mississippi River Boulevard (near its intersection with what is now Stanford Court). During the Crosby years, before the Great Depression, there was a concrete-lined lake (Lake Elizabeth) and a "frog pond" along the course of a stream that ran through the estate, but these features were apparently supplied with water by a well on the grounds (Pfaender, 2005). Because the stream no longer exists, there is no potential for daylighting/restoration.

Hidden Falls Creek

Bennett's *Map of Ramsey County* (1867) shows a stream originating near what is now Cleveland Avenue and Ford Parkway, flowing southwest to Hidden Falls, a waterfall formed by a ledge of Platteville Limestone located at the head of a postglacial retreatal gorge. Ever since the Work Projects Administration created Hidden Falls Park in the late 1930s, the stream has flowed through a culvert that runs under a bend in Mississippi River Boulevard, before plunging over the waterfall and flowing down through the narrow glen, over the floodplain, and finally into the Mississippi River. Several years ago, the author of this report explored the culvert with a flashlight, following the stream as far as possible to where it runs under the Ford Motor Company property, but the culvert soon became too small for comfort.

Considering the stream's long-standing association with an existing park, and how shallowly buried the culvert is, Hidden Falls Creek is the best candidate for daylighting/restoration of any stream in this report, should the Ford Motor Company property ever be redeveloped. Seemingly, it could also be done at minimal expense.

St. Paul Avenue Stream

Bennett's *Map of Ramsey County* (1867) shows a stream that roughly parallels the course of modern-day St. Paul Avenue, flowing southeast, where that road runs along the base of the Decorah Shale Highlands, within the present Davern Subwatershed. It is very likely that this stream collected drainage from the drift-Decorah spring-line, which it appears to follow. Because the stream no longer exists, there is no potential for daylighting/restoration.

Highland Golf Course Stream

Bennett's *Map of Ramsey County* (1867) shows a stream originating on what is now the Highland Golf Course, flowing southeast down through a ravine near Montreal Avenue, thence to the Mississippi River near Crosby Lake, within the present Crosby Subwatershed. Because the stream no longer exists, there is no potential for daylighting/restoration.

Former Lakes

There were numerous lakes within CRWD in pioneer days that have become wetlands or dried up completely. It is not the purpose of this report to describe these features, about which little is known anyway. The best sources for this topic are old maps , especially the General Land Office surveys, Nicollet's *Hydrographic Basin of the Upper Mississippi River* (1843), Duffy's *Map of Ramsey County* (1859), Bennett's *Map of Ramsey County* (1867), and of course the Surficial Geology plate in the *Geologic Atlas of Ramsey County, Minnesota* by Patterson (1992). Also consult Josiah B. Chaney's classic essay, *Early Bridges and Changes of the Land and Water Surface in the City of St. Paul*, published in 1908. Chaney is a wonderful reference for the vanished streams and lakes of old St. Paul. Empson (2006) has brought the story up to date with a wealth of additional information.

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Minnesota Wetland Conservation Act
Notice of Decision

Local Government Unit (LGU)	Address
City of Saint Paul	**375 Jackson Street, Suite 220** **Saint Paul, MN 55101**

1. PROJECT INFORMATION

Applicant Name	Project Name	Date of Application	Application Number
Randy Rauwerdink - Venture Pass Partners, LLC	**Kasota Avenue & Highway 280**	**7/30/2019**	**19-069322**

☒ Attach site locator map.

Type of Decision:

☐ Wetland Boundary or Type ☒ No-Loss ☐ Exemption ☐ Sequencing
☐ Replacement Plan ☐ Banking Plan

Technical Evaluation Panel Findings and Recommendation (if any):

☐ Approve ☐ Approve with conditions ☐ Deny

Summary (or attach):

2. LOCAL GOVERNMENT UNIT DECISION

Date of Decision: **8/21/19**

☐ Approved ☒ Approved with conditions (include below) ☐ Denied

LGU Findings and Conclusions (attach additional sheets as necessary):

Applicant submitted a Minnesota Interagency Water Resource application dated July 30, 2019 for the above referenced site (2495 Kasota Avenue, west of Highway 280). Applicant is seeking an incidental wetland determination.

A wetland review technical memorandum dated July 30, 2019 was submitted with the application. The opinion is the area in question reflects wetland characteristics but is an "incidental wetland" created in an upland for a purpose other than creating a wetland. This opinion is based on a site visit by Sambatek, historic aerials, soil information, and previous development plans approved by St. Paul.

LGU has reviewed the information and finds the area in question to be adequately demonstrated as historically upland. LGU concurs with the determination that the area in question is an incidental wetland. The Wetland Conservation Act does not regulate impacts to incidental wetlands. LGU further concludes a No-Loss Determination is valid and applies for any proposed site activities with the condition of receiving city site plan review approval.

For Replacement Plans using credits from the State Wetland Bank:

Bank Account #	Bank Service Area	County	Credits Approved for Withdrawal (sq. ft. or nearest .01 acre)

Replacement Plan Approval Conditions. In addition to any conditions specified by the LGU, the approval of a Wetland Replacement Plan is conditional upon the following:

☐ **Financial Assurance:** For project-specific replacement that is not in-advance, a financial assurance specified by the LGU must be submitted to the LGU in accordance with MN Rule 8420.0522, Subp. 9 (List amount and type in LGU Findings).

☐ **Deed Recording:** For project-specific replacement, evidence must be provided to the LGU that the BWSR "Declaration of Restrictions and Covenants" and "Consent to Replacement Wetland" forms have been filed with the county recorder's office in which the replacement wetland is located.

☐ **Credit Withdrawal:** For replacement consisting of wetland bank credits, confirmation that BWSR has withdrawn the credits from the state wetland bank as specified in the approved replacement plan.

Wetlands may not be impacted until all applicable conditions have been met!

LGU Authorized Signature:

Signing and mailing of this completed form to the appropriate recipients in accordance with 8420.0255, Subp. 5 provides notice that a decision was made by the LGU under the Wetland Conservation Act as specified above. If additional details on the decision exist, they have been provided to the landowner and are available from the LGU upon request.

Name	Title	
Wes Saunders-Pearce	**Water Resource Coordinator**	
Signature: Wesley Saunders Pea	Date: **8/21/19**	Phone Number and E-mail: **(651) 266-9112 wes.saunders-pearce@ci.stpaul.mn.us**

THIS DECISION ONLY APPLIES TO THE MINNESOTA WETLAND CONSERVATION ACT. Additional approvals or permits from local, state, and federal agencies may be required. Check with all appropriate authorities before commencing work in or near wetlands.

Applicants proceed at their own risk if work authorized by this decision is started before the time period for appeal (30 days) has expired. If this decision is reversed or revised under appeal, the applicant may be responsible for restoring or replacing all wetland impacts.

This decision is valid for three years from the date of decision unless a longer period is advised by the TEP and specified in this notice of decision.

3. APPEAL OF THIS DECISION

Pursuant to MN Rule 8420.0905, any appeal of this decision can only be commenced by mailing a petition for appeal, including applicable fee, within thirty (30) calendar days of the date of the mailing of this Notice to the following as indicated:

Check one:

☒ Appeal of an LGU staff decision. Send petition and $**490** fee (if applicable) to:	☐ Appeal of LGU governing body decision. Send petition and $500 filing fee to:
Zoning Administrator **City Saint Paul** **379 Jackson Street, Suite 220** **Saint Paul, MN 55101**	Executive Director Minnesota Board of Water and Soil Resources 520 Lafayette Road North St. Paul, MN 55155

4. LIST OF ADDRESSEES

- [x] SWCD TEP member: **Michael Schumann**
- [x] BWSR TEP member: **Ben Meyer**
- [ ] LGU TEP member (if different than LGU Contact):
- [ ] DNR TEP member:
- [ ] DNR Regional Office (if different than DNR TEP member)
- [ ] WD or WMO (if applicable):
- [ ] Applicant and Landowner (if different)
- [ ] Members of the public who requested notice:

- [x] Corps of Engineers Project Manager
- [ ] BWSR Wetland Bank Coordinator (wetland bank plan decisions only)

5. MAILING INFORMATION

➢For a list of BWSR TEP representatives: www.bwsr.state.mn.us/aboutbwsr/workareas/WCA_areas.pdf

➢For a list of DNR TEP representatives: www.bwsr.state.mn.us/wetlands/wca/DNR_TEP_contacts.pdf

➢Department of Natural Resources Regional Offices:

NW Region:	NE Region:	Central Region:	Southern Region:
Reg. Env. Assess. Ecol. Div. Ecol. Resources 2115 Birchmont Beach Rd. NE Bemidji, MN 56601	Reg. Env. Assess. Ecol. Div. Ecol. Resources 1201 E. Hwy. 2 Grand Rapids, MN 55744	Reg. Env. Assess. Ecol. Div. Ecol. Resources 1200 Warner Road St. Paul, MN 55106	Reg. Env. Assess. Ecol. Div. Ecol. Resources 261 Hwy. 15 South New Ulm, MN 56073

For a map of DNR Administrative Regions, see: http://files.dnr.state.mn.us/aboutdnr/dnr_regions.pdf

➢For a list of Corps of Project Managers: www.mvp.usace.army.mil/regulatory/default.asp?pageid=687 or send to:

US Army Corps of Engineers
St. Paul District, ATTN: OP-R
180 Fifth St. East, Suite 700
St. Paul, MN 55101-1678

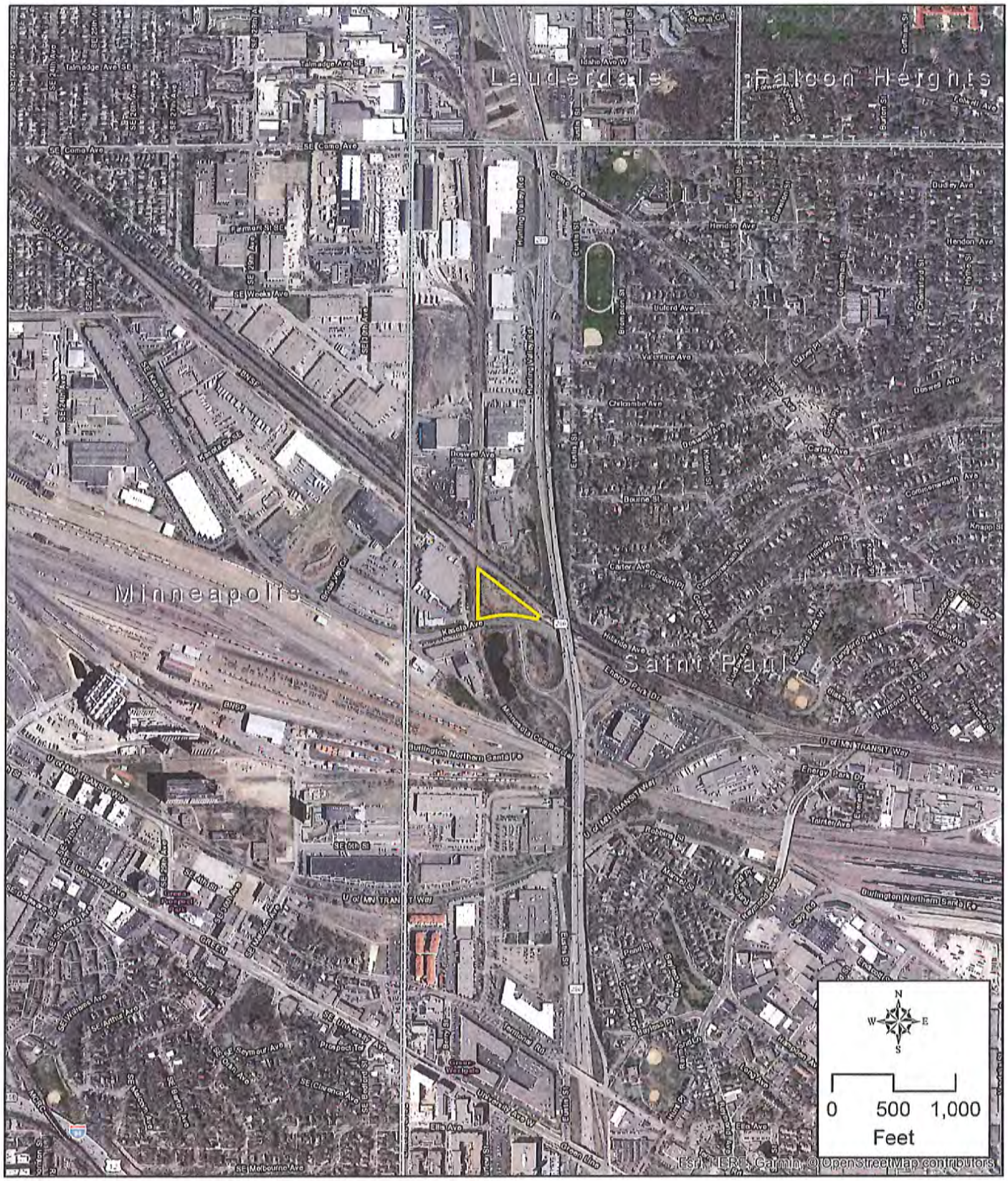
➢For Wetland Bank Plan applications, also send a copy of the application to:

Minnesota Board of Water and Soil Resources
Wetland Bank Coordinator
520 Lafayette Road North
St. Paul, MN 55155

6. ATTACHMENTS

In addition to the site locator map, list any other attachments:

- [x] **National Wetland Inventory Map**
- [x] **City memo dated 11/5/1986 approving site plan and stormwater facility**
- [ ]
- [ ]
- [ ]



Location Map

Kasota Avenue & MN-280

St. Paul, Minnesota

Legend

Project Boundary

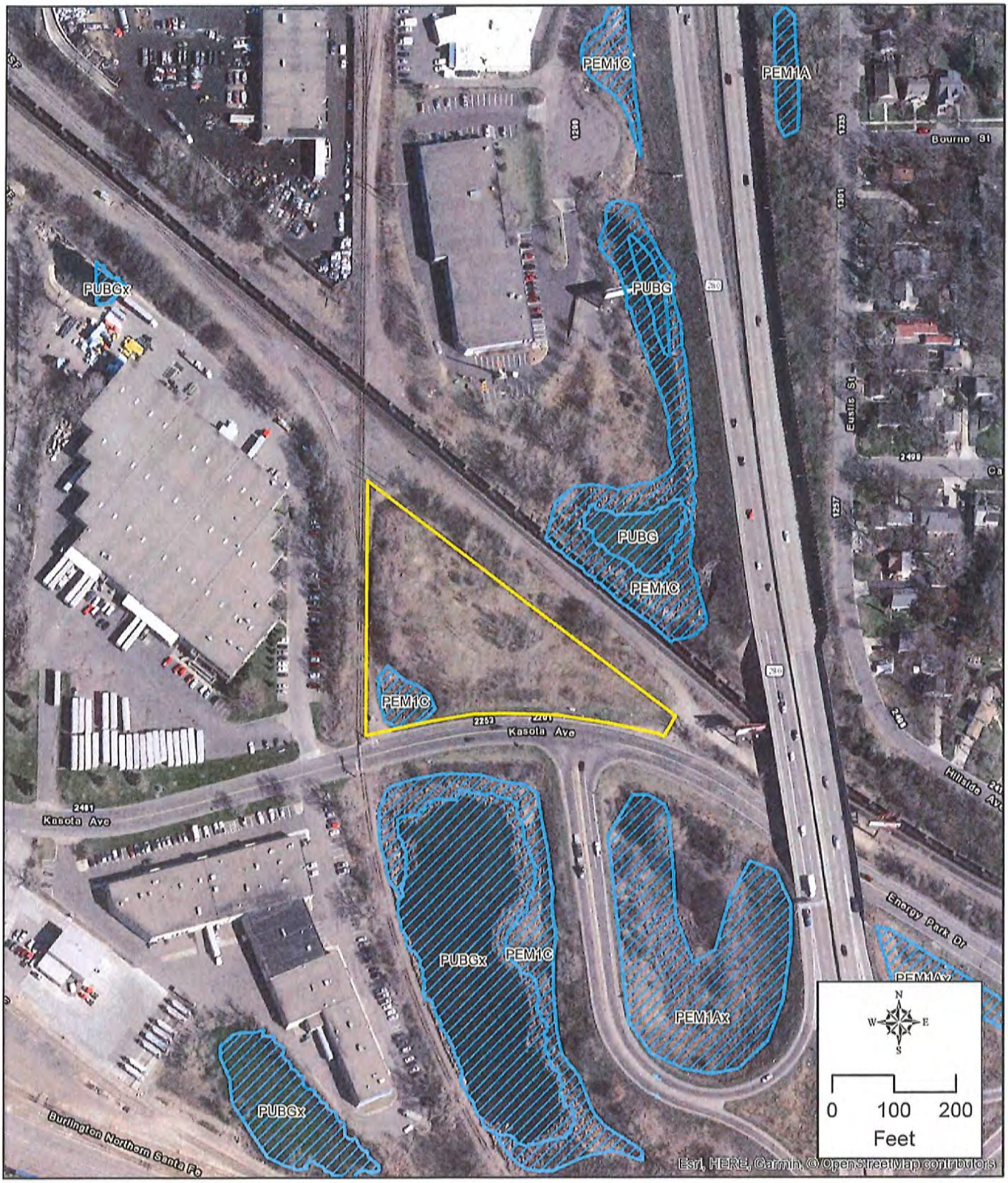
City Boundaries

Sambatek

This map was created using Sambatek's Geographic Information Systems (GIS). It is a compilation of information and data from various sources. This map is not a surveyed or legally recorded map and is intended to be used as a reference. Sambatek is not responsible for any inaccuracies contained herein.

Sources: MetroGIS, NRCS, LMIC

Sambatek # 21265



National Wetland Inventory

Kasota Avenue & MN-280

St. Paul, Minnesota

Legend

- Project Boundary
- NWI mapped wetland

Sambatek

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Sources: MetroGIS, NRCS, LMIC

Sambatek # 21265

CITY OF SAINT PAUL
INTERDEPARTMENTAL MEMORANDUM

TO: Lawrence Zangs
Planning & Economic Development
1100 City Hall Annex

FROM: Roy E. Bredahl, Sewer Engineer
Department of Public Works
700 City Hall Annex

DATE: 11-5-86

DEVELOPMENT NAME: STAN KOCH + SONS SEMI TRAILER PARKING LOT

ADDRESS: KASOTA + 280, NW

SITE PLAN REVIEW NUMBER: 13-13

This Division has reviewed the above referenced proposal, and

☒ The stormwater management plan has been approved.

☐ The sanitary sewer plan has been approved.

☒ A performance bond of $ 2500 should be required for this site until stormwater management facilities are constructed and operational.

☐ Roof drainage should discharge to grade in a manner which will not adversely affect adjacent properties.

☒ Other (1) LETTER FROM MnDOT MUST BE PROVIDED STATING THIS DEVELOPMENT IS NOT IN CONF. WITH T.H. 280 DRAINAGE. (2) LETTER FROM DNR MUST BE PROVIDED PERMITTING STORM DISCHARGE FROM THIS DEVELOPMENT TO DNR POND S. OF KASOTA

REB/ck
Revised 12-15-83

8420.0905 APPEALS.

Subpart 1. **Appeal of replacement and restoration orders to the board.** A landowner or responsible party may appeal the terms and conditions of a restoration or replacement order issued according to part 8420.0900 to the board's executive director within 30 days of receipt of the order by filing a written request for review and paying a nonrefundable filing fee to the board. The time frame for appeal may be extended beyond 30 days upon mutual agreement, in writing, between the landowner or responsible party, the local government unit, and the enforcement authority. The filing fee is an amount determined by the board not to exceed $1,000. If the written request is not submitted within 30 days, the restoration or replacement order is final. The executive director must review the request and supporting evidence and render a decision within 30 days of the request for review. The executive director may stay the restoration or replacement order until the appeal is resolved.

Subp. 2. **Appeal of local government unit staff decisions.**

A. A decision made by local government unit staff is final if not appealed to the local government unit within 30 days after the date on which the decision is sent to those required to receive notice of the decision. Notwithstanding the time frames of Minnesota Statutes, section 15.99, or any other law to the contrary, the local government unit must make a ruling within 30 days from the date of the filing of the appeal, unless the appellant and local government unit mutually agree, in writing, to an extension of time beyond the 30 days.

B. Appeal of a final decision made by staff may be made by the landowner, by any of those required to receive notice of the decision, or by 100 residents of the county in which a majority of the wetland is located.

C. An appeal is effective upon mailing the petition and payment of any applicable fees to the local government unit. A filing fee is not required for appeals petitioned by state agencies or members of the technical evaluation panel.

Subp. 3. **Appeal of local government unit decisions to the board.**

A. The decision of a local government unit to approve, approve with conditions, or deny an application is final if not appealed to the board within 30 days after the date on which the decision is sent to those required to receive notice of the decision unless the applicant and local government unit mutually agree, in writing, to an extension of time beyond the 30 days. Appeals of decisions made by local government staff must be made to the local government unit as provided for in subpart 2. This subpart also applies to decisions made under comprehensive wetland protection and management plans.

B. Appeal may be made by the landowner, by any of those required to receive notice of the decision, or by 100 residents of the county in which a majority of the wetland is located.

C. An appeal is effective upon mailing the petition and payment of a nonrefundable filing fee in an amount determined by the board, not to exceed $1,000, to the board with evidence that a copy of the petition has been mailed to the local government unit. The petition should include information to establish sufficient grounds for the appeal. The filing fee is not required for appeals

petitioned by state agencies or members of the technical evaluation panel. Another filing fee is not required for appeals that have been remanded if the filing fee was paid and the same party appeals the new decision made under remand. After receipt of a petition, the local government unit must send a copy of the petition to all those to whom it was required to send a notice of the decision.

Subp. 4. **Board appeal procedures.**

A. Within 30 days after receiving the petition, the board, its dispute resolution committee, or its executive director must decide whether to grant the petition and hear the appeal. After considering the size of the proposed impacts and the quality of the affected wetland, any patterns of similar acts by the petitioner or responsible party or by the local government unit in administration of this chapter and the act, and the consequences of the delay resulting from the appeal, the board, its dispute resolution committee, or its executive director shall grant the petition unless the appeal is deemed to be without sufficient merit, trivial, or brought solely for the purposes of delay; the petitioner has not exhausted all local administrative remedies; or the petitioner has not submitted the required filing fee.

B. The board, its dispute resolution committee, or its executive director may stay the local government unit decision until the appeal is resolved.

C. The board, its dispute resolution committee, or its executive director may remand the appealed decision back to the local government unit if the petitioner has not exhausted all local administrative remedies, such as a local government unit evidentiary public hearing, if expanded technical review is needed, or if the local government unit's record is not adequate. If an appeal is remanded, a new application is not required and additional information may be submitted before a decision is made by the local government unit. The local government unit must make a decision on an appeal that has been remanded within 60 days unless the remand order, or a subsequent order, specifies a longer period.

D. After the petition is granted, the appeal must be heard by the dispute resolution committee and decided by the board within 60 days after filing of the local government unit's written record, submittal of written briefs for the appeal, and a hearing by the dispute resolution committee. Parties to the appeal are the appellant, the landowner, the local government unit, and those required to receive notice of the local government unit decision.

E. The board or its executive director may elect to combine related appeals and process as one decision, either multiple appeals on the same project or appeals of different local government unit decisions on the same project.

F. Within 30 days of the grant of the appeal, unless an extension of time is approved by the board, the local government unit must forward to the board the written record on which it based its decision. The board must forward one copy of the record to each of the parties to the appeal. The board shall make its decision on the appeal after hearing. The board must give the parties 30 days' notice of the hearing. The board must base its review on the record and the argument presented to the board by the parties. However, if the local government unit did not consider fundamental information, such as aerial photographs, soil maps, or wetland maps, or did not make formal findings contemporaneously with its decision; if there is not accurate verbatim transcript of the proceedings;

if the proceedings were not fairly conducted; or if the record is otherwise incomplete or deficient, the board may remand the matter or receive additional evidence. If, before the date set for the hearing, application is made to the board for leave to present additional evidence on the issues in the case and it is shown to the satisfaction of the board that additional evidence is material and that there were good reasons for failure to present it in the proceeding before the local government unit, the board may order that the additional evidence be taken before the local government unit upon such conditions that the board deems proper. The local government unit may modify its findings and decision by reason of the additional evidence and must file with the board, to become a part of the record, the additional evidence, together with any modifications or new findings or decision.

G. The board shall affirm the local government unit's decision if the local government unit's findings of fact are not clearly erroneous; if the local government unit correctly applied the law to the facts, including this chapter; and if the local government unit made no procedural errors prejudicial to a party. Otherwise, the board shall reverse the decision, amend it, or remand it with instructions for further proceedings. The board must provide notice of its decision to the parties to the appeal.

Subp. 5. **Appeal of board decisions.** An appeal of a board decision may be taken to the state court of appeals and must be considered an appeal from a contested case decision for purposes of judicial review under Minnesota Statutes, sections 14.63 to 14.69.

Statutory Authority: *MS s 103G.2242*

History: *34 SR 145*

Published Electronically: *September 10, 2018*

Service Information

Service ID: 175215
Service Type: Voluntary Remediation Program Enrollment
Created On: 07/02/2019

Location

Facility Name: Vacant Property
Address Line 1: NW of Kasota Ave and Highway 280
Address Line 2:
Address Line 3:
State: Minnesota
County: Ramsey
City: Saint Paul
ZIP/Postal Code: 55108
Coordinate System: Lat Long - decimal degrees
Latitude(Y coordinate): 44.978058
Longitude(X coordinate): -93.204520
Collection Method: Digitized - Permit Application Map
Reference Point: Center of Feature Represented
Collection Date: 07/02/2019

Facility Parcel (PIN):

County	Parcel ID
Ramsey	202923330007

Facility Size (acres): 1.63

Contacts

Name: Randy Rauwerdink
Title: Vice President
Contact Type: Applicant(Billable Party)
Organization Name: Venture Pass Partners, LLC
Organization Type: Private (Non-Government)
E-Mail: rrauwerdink@venturepass.net
Phone: (612) 801-4313 (Office Phone Number)
Contact Address: 19620 Waterford Ct
Excelsior, Minnesota 55331-7025

Name: Bob Buss
Title: Manager
Contact Type: Current Property Owner
Organization Name: Koch Companies
Organization Type: Private (Non-Government)
E-Mail: robert.buss@kochcompanies.com
Phone: (763) 302-5414 (Office Phone Number)
Contact Address: 4200 Dahlberg Dr
Robbinsdale, Minnesota 55422-4840

Name:	Ronald V. Mason Jr.
Title:	President
Contact Type:	Other Party
Organization Name:	Mason Holdings III, LLC c/o Rohn Industries
Organization Type:	Private (Non-Government)
Phone:	(651) 647-1300 (Office Phone Number)
Contact Address:	862 Hersey St Saint Paul, Minnesota 55114-1214

Name:	Shannon Russell
Title:	Engineer
Contact Type:	Applicant's Consultant
Organization Name:	Landmark Environmental
Organization Type:	Private (Non-Government)
E-Mail:	srussell@landmarkenv.com
Phone:	(952) 666-2419 (Office Phone Number)
Contact Address:	2042 West 98th Street Bloomington, Minnesota 55431

Summary

Known Identifier

Previous Site ID Number:

Previous Site Name: Elm Pro

Prevention Opportunities

Have you implemented any prevention activities in the past year?: No

Why not? New facility, site or project

Would you like to be contacted to discuss prevention opportunities?: No

Known Or Suspected Contaminant Type

Known or Suspected Contaminant Type: Non-Petroleum only

Responsible Party Status For a Non-Petroleum Release

Is the applicant a potential Responsible Party for the Non-Petroleum release under Minnesota Statute 115B.03?: No

Voluntary Remediation Program Assistance/Assurances For Non-Petroleum Release

Assistance/Assurances for Non-Petroleum Releases: Lender No Association Determination, No Association Determination

Attachment Upload

Attachment Type	Document Author	Document Date	Uploaded Filename
Phase II Investigation Work Plan	Landmark Environmental	06/25/2019	Final Phase II Report - Kasota.pdf
Proposed/Past Actions Letter	Landmark Environmental	06/28/2019	Final Proposed Actions Letter 06 28 2019.pdf
Response Action Plan	Landmark Environmental	07/01/2019	Final VRAP -Kasota Parking Lot.pdf
Construction Contingency Plan	Landmark Environmental	07/02/2019	ECCP - Kasota.pdf
Phase I Environmental Site Assessment	Landmark Environmental	04/30/2019	FINAL Phase I ESA Kasota and MN280 - April 2019.pdf

Electronic Signature

Signator: Shannon Russell
Signator ID: SRUSSELL
Challenge/Response Question: What is your father's middle name?
Challenge/Response Answer: ******
eSignature PIN: ******
Date/Time of eSignature: 07/02/2019 14:59

Reimbursement of MPCA Costs
By submitting this application, the applicant agrees to pay the MPCA for the MPCA's costs for providing assistance under this Application pursuant to Minn. Stat. § 115B.17 subd. 14. and/or Minn. Stat. § 115C.03 subd. 9, including review of MPCA records and files, investigation plans, reports and RAPs and activities associated with development of requested assurances or no action documents. The current fee is $125.00 per hour. The applicant agrees that the applicant will pay the MPCA's costs within 30 days of receipt of an invoice for the costs. The MPCA shall charge simple interest or late payment fees on past due debt owed to the state. The applicant must notify the MPCA within 20 days of receipt of the invoice if any costs are disputed. The applicant agrees that failure to dispute costs by this time constitutes waiver of its right to dispute the costs, and the applicant agrees to pay all undisputed costs promptly. The MPCA will send invoices to a voluntary party applicant on a monthly basis and to a responsible party applicant on an annual basis. The applicant agrees that failure to pay the MPCA's costs in a timely manner may result in the MPCA terminating its review, declining to issue requested documents or assurances, and taking appropriate administrative or legal action to recover unpaid invoices from the applicant, which may include costs and legal fees associated with collection of the debt.

Use the Help in the upper right-hand corner of this page for additional instructions.

Certification
The applicant or other authorized person signing below on behalf of applicant (Agent):
Certifies that the applicant and/or authorized person has read and is familiar with the information on this form and all referenced documents, and that the submitted information is true, accurate, and complete to the best of the applicant's and/or authorized person's knowledge; and Certifies that the undersigned has the authority to bind the party represented, their agents, successors, and assigns.

Applicant: Shannon Russell
Date: 07/02/2019

Signator: Shannon Russell
Signator ID: SRUSSELL

Challenge/Response Question: What was the first name of your best friend in elementary school?
Challenge/Response Answer: ******
eSignature PIN: ******
Date/Time of eSignature: 07/02/2019 15:00

Reimbursement of MPCA Costs
By submitting this application, the applicant agrees to pay the MPCA for the MPCA's costs for providing assistance under this Application pursuant to Minn. Stat. § 115B.17 subd. 14. and/or Minn. Stat. § 115C.03 subd. 9, including review of MPCA records and files, investigation plans, reports and RAPs and activities associated with development of requested assurances or no action documents. The current fee is $125.00 per hour. The applicant agrees that the applicant will pay the MPCA's costs within 30 days of receipt of an invoice for the costs. The MPCA shall charge simple interest or late payment fees on past due debt owed to the state. The applicant must notify the MPCA within 20 days of receipt of the invoice if any costs are disputed. The applicant agrees that failure to dispute costs by this time constitutes waiver of its right to dispute the costs, and the applicant agrees to pay all undisputed costs promptly. The MPCA will send invoices to a voluntary party applicant on a monthly basis and to a responsible party applicant on an annual basis. The applicant agrees that failure to pay the MPCA's costs in a timely manner may result in the MPCA terminating its review, declining to issue requested documents or assurances, and taking appropriate administrative or legal action to recover unpaid invoices from the applicant, which may include costs and legal fees associated with collection of the debt.

Use the Help in the upper right-hand corner of this page for additional instructions.

Certification
The applicant or other authorized person signing below on behalf of applicant (Agent):
Certifies that the applicant and/or authorized person has read and is familiar with the information on this form and all referenced documents, and that the submitted information is true, accurate, and complete to the best of the applicant's and/or authorized person's knowledge; and Certifies that the undersigned has the authority to bind the party represented, their agents, successors, and assigns.

Authorized Person: Shannon Russell
Date: 07/02/2019

Submission

Date/Time of Submission: 07-02-2019 03:00:44 PM

MINNESOTA POLLUTION CONTROL AGENCY

520 Lafayette Road North | St. Paul, Minnesota 55155-4194 | 651-296-6300

800-657-3864 | Use your preferred relay service | info.pca@state.mn.us | Equal Opportunity Employer

September 10, 2019

Randy Rauwerdink
Venture Pass Partners, LLC
19620 Waterford Court
Excelsior, Minnesota 55331

Ronald Mason Jr.
Mason Holdings III, LLC
c/o Rohn Industries
862 Hersey St.
St Paul, MN 55113

RE: No Association Determination
280 Trailer Storage, NW of Kasota Ave and Highway 280, Saint Paul
MPCA Site ID: BF0001209
Billing ID: 186210
PIN: 202923330007

Dear Randy Rauwerdink and Ronald Mason:

This letter is in response to the request from Jerry Mullin of Landmark Environmental for a determination under Minn. Stat. § 115B.178 that certain actions proposed to be taken by Venture Pass Partners, LLC and Mason Holdings III, LLC (the Parties) at the 280 Trailer Storage site, located in the area referenced above (the Site), will not constitute conduct associating the Parties with the release or threatened release of hazardous substances, pollutants, or contaminants at the Site for the purpose of Minn. Stat. § 115B.03, subd. 3(4).

The Minnesota Pollution Control Agency (MPCA) staff in the Voluntary Investigation and Cleanup (VIC) Program has reviewed the documents submitted for the Site. The approximate 1.7-acre Site is vacant land that has never been developed. Aerial photographs suggest that the Site was originally wetlands that were filled in by 1980, with the exception of a small pond that remains in the southwest corner of the Site. The Site was part of the larger Elm Street Ash Dump, which was used for the disposal of incinerator ash and other debris, such as concrete, brick, wood, metal, glass, plastic, slag, cinders, tires, paper, and clay tile. The Parties intend to purchase the Site and construct a surface lot for the parking of semi-trailers.

Several environmental and geotechnical investigations have been completed at the Site since the mid-1980s. Soil borings have identified up to 22 feet of fill soil intermixed with debris, underlain by peat and/or glacial till. As part of the current environmental due diligence effort, eight test trenches were excavated at the Site in May 2019. Eight soil samples were analyzed for polynuclear aromatic hydrocarbons (PAHs), Resource Conservation and Recovery Act metals, polychlorinated biphenyls (PCBs), and diesel range organics (DRO), and three soil samples were analyzed for volatile organic compounds (VOCs). Elevated concentrations of lead, arsenic, mercury, and chromium were detected in soil; only lead exceeded the MPCA's industrial soil reference value (SRV). PAHs and PCBs were detected in every soil sample at concentrations less than their respective industrial SRVs. A low concentration of trichloroethene (TCE) was detected in the soil, slightly above its soil leaching value. For the purpose of this letter, the identified release consists of lead, arsenic, mercury, chromium, PAHs, PCBs, and TCE in soil (Identified Release). This letter does not address petroleum-related contaminants. Petroleum

contamination detected at the Site is under the oversight of the MPCA's Petroleum Brownfield Program.

Based upon a review of the information provided to the MPCA VIC Program, and subject to the conditions set forth in this letter, a determination is hereby made pursuant to Minn. Stat. § 115B.178, subd. 1 that the proposed actions (Proposed Actions) listed below will not associate the Parties with the Identified Release for the purpose of Minn. Stat. § 115B.03, subd. 3(4). This determination applies only to the following Proposed Actions:

- Purchase of the Site;
- Construction of a surface parking lot and related stormwater management infrastructure at the Site, in accordance with an MPCA-approved Response Action Plan/Construction Contingency Plan (RAP/CCP); and
- Storage and parking of semi-trailers at the Site.

This determination is made in accordance with Minn. Stat. § 115B.178, subd. 1, and is subject to the following conditions:

1. The Proposed Actions shall be carried out as described herein.

2. The Parties shall cooperate with the MPCA, its employees, contractors, and others acting at the MPCA's direction, in the event that the MPCA takes, or directs others to take, response actions at the Site to address the Identified Release or any other as yet unidentified release or threatened release of a hazardous substance, pollutant, or contaminant, including, but not limited to, granting access to the Site so that response actions can be taken.

3. The Parties shall avoid actions that contribute to the Identified Release or that interfere with response actions required under any MPCA-approved response action plan to address the Identified Release.

4. In the event that any suspected hazardous substances are encountered during Site activities (i.e., grading, excavation, etc.), the Parties shall notify the MPCA project staff immediately in order to determine appropriate handling, sampling, analysis, and disposal of such wastes.

5. The three unused monitoring wells at the Site shall be sealed by a licensed well contractor. Please include the well sealing documentation in the pending RAP/CCP implementation report.

6. The Parties shall record, at their own expense, in the office of the County Recorder or Registrar of Titles, whichever is appropriate, in and for Ramsey County, an Environmental Covenant approved by the MPCA as provided in the Uniform Environmental Covenants Act, Minn. Stat. ch. 114E (Supp. 2007) (UECA). A template for the Environmental Covenant and Easement can be found on the MPCA's website. The Environmental Covenant shall prohibit any activities at the Site which would expose or disturb the contaminated subsurface without receiving prior written approval from the MPCA or its successors. The Environmental Covenant must also contain the information described in Minn. Stat. § 115B.16, subd. 2; i.e., it must contain a description of the identity, quantity, location, condition and circumstances of contamination currently located on the property, to the full extent known or reasonably ascertainable. The Environmental Covenant shall be recorded as provided in UECA. A copy of the proposed Environmental Covenant language shall be submitted to

the MPCA staff for review and approval along with the pending RAP/CCP Implementation Report. The Parties shall file the Environmental Covenant within thirty (30) days after receipt of MPCA approval. The Parties shall submit a copy of the Environmental Covenant as recorded to the MPCA within thirty (30) days after the Environmental Covenant is officially recorded. The Parties shall provide notice of the Environmental Covenant to those parties to whom notice is required under UECA.

Pursuant to Minn. Stat. § 115B.178, subd.1, when the Parties take the Proposed Actions in accordance with the determination in this letter, subject to the conditions stated herein, the Proposed Actions will not associate the Parties with the Identified Release for the purpose of Minn. Stat. § 115B.03, subd. 3(4).

The determination made in this letter applies to the Parties' successors and assigns if the successors and assigns: 1) are not otherwise responsible for the Identified Release at the Site; 2) do not engage in activities with respect to the Identified Release which are substantially different from the activities which The Parties propose to take, as described herein; and 3) comply with the conditions set forth in this letter.

Please be advised that the determination made in this letter is subject to the disclaimers found in Attachment A and is contingent on compliance with the terms and conditions set forth herein, including the submittal of the copy of the recorded Environmental Covenant documents.

If you have any questions about the contents of this letter, please contact me at 651-757-2402 or by email at amy.hadiaris@state.mn.us.

Sincerely,

Amy K. Hadiaris

This document has been electronically signed.

Amy K. Hadiaris, P.G.
Supervisor
Redevelopment Unit
Remediation Division

AKH:ah

Enclosure

cc: Jerry Mullin, Landmark Environmental
Amanda Smith, City of St. Paul
Zack Hanson, Ramsey County

Attachment A

Disclaimers

280 Trailer Storage

MPCA Site ID: BF0001209

PIN: 202923330007

1. Reservation of authorities

   The Minnesota Pollution Control Agency (MPCA) Commissioner reserves the authority to take any appropriate actions with respect to any release, threatened release, or other conditions at the Site. The MPCA Commissioner also reserves the authority to take such actions if the voluntary party does not proceed in the manner described in this letter or if actions taken or omitted by the voluntary party with respect to the Site contribute to any release or threatened release, or create an imminent and substantial danger to public health and welfare.

2. No MPCA assumption of liability

   The MPCA, its Commissioner, and staff do not assume any liability for any release, threatened release or other conditions at the Site or for any actions taken or omitted by the voluntary party with regard to the release, threatened release, or other conditions at the Site, whether the actions taken or omitted are in accordance with this letter or otherwise.

3. Letter based on current information

   All statements, conclusions, and representations in this letter are based upon information known to the MPCA Commissioner and staff at the time this letter was issued. The MPCA Commissioner and staff reserve the authority to modify or rescind any such statement, conclusion or representation and to take any appropriate action under his authority if the MPCA Commissioner or staff acquires information after issuance of this letter that provides a basis for such modification or action.

4. Disclaimer regarding use or development of the property

   The MPCA, its Commissioner, and staff do not warrant that the Site is suitable or appropriate for any particular use.

5. Disclaimer regarding investigative or response action at the property

   Nothing in this letter is intended to authorize any response action under Minn. Stat. § 115B.17, subd. 12.

6. This approval does not supplant any applicable state or local stormwater permits, ordinances, or other regulatory documents.

Landmark Environmental, LLC
2042 West 98th Street
Bloomington, MN 55431
Phone: 952-666-2444

www.landmarkenv.com

June 28, 2019
Sent via email

To Whom It May Concern Minnesota
Pollution Control Agency
Voluntary Investigation & Cleanup Program
520 Lafayette Road
St. Paul, Minnesota 55155

Re: **Request for No Association Determination**
Vacant Lot Located Northwest of Kasota Avenue and State Highway MN-280
St. Paul, Minnesota

To Whom It May Concern:

On behalf of Venture Pass Partners, LLC and Mason Holdings III, LLC (collectively, the Applicant), Landmark Environmental, LLC (Landmark) requests that the Minnesota Pollution Control Agency (MPCA) Voluntary Investigation and Cleanup (VIC) Program issue a No Association Determination under Minn. Stat. §115B.178, subd. 1(a) that certain proposed actions, as described in this letter, will not constitute conduct associating the Applicant and its successors and/or assigns with the release or threatened release of hazardous substances, or pollutants, or contaminants at the above referenced property (Property). In addition, Landmark will request that the MPCA VIC Program issue a Lender No Association Determination under Minn. Stat. §115B.03, subd. 6(a) and subd. 6(b), with respect to the Property, as soon as the Lender is identified by the Applicant.

Background
A Phase I Environmental Site Assessment (ESA) Report and Phase II Environmental Investigation (Investigation) Report were prepared by Landmark on behalf of the Applicant and were dated April 2019 and June 2019, respectively. The Property consists of a 1.668 acre parcel located northwest of Kasota Avenue and MN-280 in St. Paul, Ramsey County, Minnesota. The Property is currently vacant and has never been developed. There are no structures, utilities or improvements on the Property. The general Property vicinity was developed in the 1980s and 1990s for commercial and industrial use.

Historical aerial photographs from 1947 show surface water on the northern half and far-south

sections of the Property. Surface water was no longer present by 1953, but visible again in 1966. This fluctuation may be the result of seasonal changes, precipitation or snowmelt. By 1974, the majority of the Property was occupied by surface water. By 1980, fill material appears to have been brought onto the Property because surface water is present on adjacent sites but is no longer present on the Property. The southwestern corner of the Property appears to support a stormwater pond between 1988 and present. Also between 1988 and present, vegetation on the Property appears periodically patchy or stressed. The current Property owner, Stan Koch and Sons Trucking Inc., acquired the Property on February 25, 1992. According to the Property owner representative, the Property has been vacant and unused since acquisition.

Previous environmental investigations described in the Phase I ESA indicate that the Property supported a portion of the Elm Street Ash dump, which was used for disposal of incinerator ash containing heavy metals and other wastes. Therefore, historic uses on the Property have likely involved the use, storage, and/or disposal of hazardous substances and petroleum products.

Identified Releases

Based on the results included in the Investigation Report, soil from eight test trenches were collected, field screened, and submitted for laboratory analysis for volatiles organic compounds (VOCs), diesel range organics (DRO), polynuclear aromatic hydrocarbons (PAHs), Resource Conservation and Recovery Act (RCRA) metals and polychlorinated biphenyls (PCBs). Groundwater and soil vapor samples were not collected as part of the Investigation, based on the current use of the Property and planned future use as a surface parking lot. Fourteen VOCs, sixteen PAHs, all eight RCRA metals, PCBs and DRO were detected in soil samples submitted for laboratory analysis in concentrations above laboratory methods detection limits (MDLs).

Based on the Investigation results, two non-petroleum VOCs (naphthalene and trichloroethene (TCE)), PAHs, RCRA metals, and PCBs were detected above the laboratory MDLs and are considered the "Identified Releases" for purposes of this request.

Proposed Actions

The proposed actions for which the Applicant is seeking a No Association Determination include the following:

- Acquisition and ownership of the Property.
- Redevelopment of the Property as a surface lot for parking semi-trailers.
- Ongoing management and maintenance of the Property for commercial use.

Please address and send the No Association Determination to the following:

Mr. Randy Rauwerdink
Venture Pass Partners, LLC
19620 Waterford Court
Shorewood, MN 55331

LANDMARK Environmental

Minnesota Pollution Control Agency
June 28, 2019

Mr. Ronald V. Mason Jr.
Mason Holdings III, LLC
c/o Rohn Industries
862 Hersey St.
St Paul, MN 55113

We appreciate your assistance in this matter. If you have any questions, please contact me at jmullin@landmarkenv.com or at (952) 666-2415.

Sincerely,

Jerry Mullin
Landmark Environmental, LLC

Cc: Mr. Randy Rauwerdink, Venture Pass Partners, LLC
Mr. Craig Mandery, Mason Holdings III, LLC

MINNESOTA POLLUTION CONTROL AGENCY

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October 17, 2019

Randy Rauwerdink
Venture Pass Partners, LLC
19620 Waterford Ct
Excelsior, Minnesota 55331

Ronald Mason Jr.
Mason Holdings III, LLC
c/o Rohn Industries
862 Hersey St.
St Paul, MN 55113

RE: Approval of Response Action Plan and Construction Contingency Plan
280 Trailer Storage, NW of Kasota Ave and Highway 280, Saint Paul
MPCA Site ID: BF0001209
Billing ID: 186210
PIN: 202923330007

Dear Randy Rauwerdink and Ronald Mason:

The Minnesota Pollution Control Agency (MPCA) Brownfield staff in the Petroleum Brownfield (PB) and Voluntary Investigation and Cleanup (VIC) Programs have reviewed the Voluntary Response Action Plan (RAP) and the Environmental Construction Contingency Plan (CCP) submitted for the 280 Trailer Storage site, located in the area referenced above (the Site). The RAP dated June 2019 and the CCP dated July 2019 were prepared and submitted on your behalf by Landmark Environmental.

The approximate 1.7-acre Site is vacant land that has never been developed. Aerial photographs suggest that the Site was originally wetlands that were filled in by 1980, with the exception of a small pond that remains in the southwest corner of the Site. The Site was part of the larger Elm Street Ash Dump, which was used for the disposal of incinerator ash and other debris, such as concrete, brick, wood, metal, glass, plastic, slag, cinders, tires, paper, and clay tile. Most of the Elm Street Ash Dump has already been redeveloped and is covered by industrial/warehouse buildings and parking lots. Venture Pass Partners, LLC and Mason Holdings III, LLC plans to construct a paved parking lot for the storage of semi-trailers at the Site.

Several environmental and geotechnical investigations have been completed at the Site since the mid-1980s. Soil borings have identified up to 22 feet of fill soil intermixed with debris, underlain by peat and/or glacial till. As part of the current environmental due diligence effort, eight test trenches were excavated at the Site in May 2019. Eight shallow soil samples were analyzed for polynuclear aromatic hydrocarbons (PAHs), Resource Conservation and Recovery Act metals, polychlorinated biphenyls (PCBs), and diesel range organics (DRO), and three soil samples were analyzed for volatile organic compounds (VOCs). The sampled intervals were chosen to collect data representative of soil within the upper four feet below grade. Elevated concentrations of lead, arsenic, mercury, and chromium were detected in soil. Only lead exceeded the MPCA's industrial soil reference value (SRV), in one soil sample. All eight soil samples were subject to a Toxicity Characteristic Leaching Procedure (TCLP) test to determine if lead in the soil samples was characteristically hazardous. Based on the TCLP data, none of the soil samples were determined to be characteristically hazardous for lead. PAHs and PCBs were detected in every soil sample at concentrations less than their respective industrial SRVs. A low concentration of trichloroethene (TCE) was detected in the soil, slightly above its soil leaching value.

Four additional shallow soil samples were collected at the Site in June 2019 to further evaluate the extent and magnitude of lead-impacted soil in the vicinity of test trench #5, where the lead exceedance was discovered during the May investigation. The concentration of lead in one of the four additional soil samples exceeded the industrial SRV.

Venture Pass Parking, LLC voluntarily enrolled the Site in the MPCA's Brownfield Program on July 2, 2019. The role of the Brownfield Program is to make sure that environmental issues are appropriately addressed during construction and redevelopment, for those projects that voluntarily enroll in the Brownfield Program. The RAP and CCP describe how environmental issues will be managed during construction activities.

The RAP proposes to excavate approximately 50 tons of lead-impacted soil and debris around the test trench #5 hot spot to a depth of two feet below final grade. Another estimated 1,255 tons of soil and debris will be excavated during construction of a stormwater pond in the southwest corner of the Site. Standard stormwater runoff and dust control procedures will be implemented during the project. A trained environmental professional will be on site during excavation and earthmoving activities to perform field screening and collect soil samples as needed. Excavated soil will be disposed of off-site at a permitted landfill or reused on-site in accordance with the RAP/CCP and the items below.

The RAP and CCP are approved, subject to the following conditions and clarifications:

1. Soil from 0 to 2 feet below the parking lot and from 0 to 4 feet in greenspace areas must be free of ash and debris and must meet the MPCA's industrial SRVs. Any soil to be reused on-site within these vertical buffer intervals must be free of ash and debris and must be tested to confirm that it meets industrial SRVs. Please refer to the MPCA's stockpile sampling guidance for the number of characterization samples based on stockpile volume.
2. MPCA staff assumes that contaminant concentrations exceeding the cleanup goals (industrial SRVs) will remain below the vertical buffer zones described above. An environmental covenant is required to document the presence of waste material and contaminated soil at the Site and to restrict future disturbance of soil below the established vertical buffers, except as approved by the MPCA.
3. Soil confirmation samples shall be collected from the sidewalls and base of remedial excavations and analyzed for the appropriate contaminants of concern. If concentrations exceed an industrial SRV within the upper two feet (below parking lot) or four feet (in greenspace), the remedial excavation shall be extended until the cleanup goal for vertical buffers is achieved.
4. Petroleum-contaminated soils encountered at the site, at or greater than 200 parts per million (PPM) as measured by a photoionization detector (PID), should be excavated and properly managed at an MPCA approved off-site treatment/disposal facility.
5. Petroleum-contaminated soils less than 200 PPM (PID) and without debris may be thin spread on-site under paved surfaces.
6. Petroleum-contaminated soils at or greater than 10 PPM (PID) encountered during the installation of underground utilities should be removed and properly managed as part of the RAP/CCP. If contamination remains at or above 10 PPM a vapor barrier is required.

7. Imported soil and excess fill targeted for off-site reuse shall be from a native source and/or meet the MPCA's criteria for unregulated fill. Soils that do not meet unregulated fill criteria may not be used at the discretion of the contractor or other project personnel.
8. Any contaminated soils removed from the site must be treated or disposed of in a method approved by the MPCA. Contaminated soils transported to an approved landfill must be in compliance with all state and local permits. The applicant must notify MPCA staff when contaminated soils are initially transported and where soils will be disposed of prior to disposal. Please include all transportation and handling manifests for such soils within the final implementation report.
9. This RAP/CCP approval is contingent on the applicant obtaining all other required state, federal, and local government permits.
10. MPCA Brownfield Program staff does not provide review or approval of the discharge and/or treatment of groundwater, stormwater, or any other dewatering action.

An implementation report describing the completed response action activities, sampling results, soil management and disposal, and imported soils shall be prepared and submitted to the MPCA. If the implementation report will not be submitted within one year of the date of this letter, please notify the MPCA project staff of the status of the development. Approval of this plan does not suggest that any of the costs incurred will be eligible for reimbursement from the Petro Board.

This letter is subject to the disclaimers found in Attachment A. If you have any questions about this letter, please contact Mark Koplitz, Petroleum Brownfields Project Manager, at 651-757-2502 mark.koplitz@state.mn.us or Lynne Grigor, Voluntary Investigation and Cleanup Hydrologist at 651/757-2399 Lynne.Grigor@stae.mn.us .

Sincerely,

Mark Koplitz

This document has been electronically signed.

Mark Koplitz
Project Manager
Petroleum Brownfields
Remediation Division

Amy K. Hadiaris

This document has been electronically signed.

Amy K. Hadiaris, P.G.
Supervisor
Redevelopment Unit
Remediation Division

MK:AKH:ah

Enclosure

cc: Amanda Smith, City of St. Paul (electronic)
Jerry Mullin, Landmark Environmental (electronic)

Attachment A

Disclaimers

280 Trailer Storage

MPCA Site ID: BF0001209

1. Reservation of authorities

   The Minnesota Pollution Control Agency (MPCA) Commissioner reserves the authority to take any appropriate actions with respect to any release, threatened release, or other conditions at the Site. The MPCA Commissioner also reserves the authority to take such actions if the voluntary party does not proceed in the manner described in this letter or if actions taken or omitted by the voluntary party with respect to the Site contribute to any release or threatened release, or create an imminent and substantial danger to public health and welfare.

2. No MPCA assumption of liability

   The MPCA, its Commissioner, and staff do not assume any liability for any release, threatened release or other conditions at the Site or for any actions taken or omitted by the voluntary party with regard to the release, threatened release, or other conditions at the Site, whether the actions taken or omitted are in accordance with this letter or otherwise.

3. Letter based on current information

   All statements, conclusions, and representations in this letter are based upon information known to the MPCA Commissioner and staff at the time this letter was issued. The MPCA Commissioner and staff reserve the authority to modify or rescind any such statement, conclusion or representation and to take any appropriate action under his authority if the MPCA Commissioner or staff acquires information after issuance of this letter that provides a basis for such modification or action.

4. Disclaimer regarding use or development of the property

   The MPCA, its Commissioner, and staff do not warrant that the Site is suitable or appropriate for any particular use.

5. Disclaimer regarding investigative or response action at the property

   Nothing in this letter is intended to authorize any response action under Minn. Stat. § 115B.17, subd. 12.

6. This approval does not supplant any applicable state or local stormwater permits, ordinances, or other regulatory documents.

DEPARTMENT OF HEALTH

Protecting, Maintaining and Improving the Health of All Minnesotans

October 7, 2019

Ms. Kathryn Murray
Executive Director
Saint Anthony Park Community Council
2395 University Ave W
Saint Paul, MN 55114

Dear Ms. Murray,

This Letter Health Consultation (LHC) is in response to your September 20th email request for Minnesota Department of Health (MDH) assistance assessing potential public health impacts from the proposed trailer storage development at 2495 Kasota Avenue. To answer the question you posed, MDH reviewed environmental reports and compared site contaminant levels to environmental criteria. Based on our review, which is described below, MDH believes the proposed conversion of the vacant 2495 Kasota property into a parking lot does not pose a public health hazard.

In addition to the documents that you gave us access to in your email, MDH reviewed the following:

- The Phase I Environmental Site Assessment--describes the site's former use as an ash dump.
- The Phase II Environmental Investigation report--characterizes site soil contaminants.
- The Site Development Plans-describe the proposed steps for addressing site grading, erosion control, road construction, and landscape plan.

Because site is mostly vegetated and is approximately 400 feet from the nearest home, it is unlikely that residents in the area will have exposure to contaminants present in the soil now or during construction. An elevated four-lane highway (MN-280) also separates the site from the nearest residential community. Currently, people may be able to access the site property or its surroundings because it is bordered by public roadways and there are no access restrictions for the parcel itself.

A Phase II investigation of the property conducted in 2019, identified fill materials comprised of ash, glass, slag/coke, wood, rubber, metal, brick and plastic within the first 12 inches below ground surface. Site soils were tested for 42 different chemical parameters that include metals, polynuclear aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), petroleum, and polychlorinated biphenyls (PCBs). Low levels of PAHs, PCBs and metals were measured in the test trenches (LTT1-LTT8); see Figure 1 for trench locations. Only one lead measurement exceeded the Minnesota Pollution Control Agency's industrial soil reference value (700 mg/kg). Table 1 shows a selection of site contaminants with the highest concentrations relative to their criteria. All other contaminants measured in the test trenches were significantly below their respective industrial soil reference value.

Table 1. Soil Contaminants with the Highest Concentrations Relative to Their Respective Soil Criteria

Test Trench (sample depth)	Contaminant (mg/kg)			
	Polychlorinated Biphenyls	Lead	Arsenic	Mercury
LTT1 (1-2ft)	4	579	4.5	0.2
LTT2 (1-2ft)	5.5	260	4.6	0.3
LTT3 (0-2ft)	0.3	154	3.8	0.1
LTT4 (2-4ft)	3.3	208	4.5	0.2
LTT5 (1-2ft)	2.6	**1,430**	10.3	0.51
LTT6 (1-2ft)	0.4	261	5.9	0.3
LTT7 (1-2ft)	3.5	268	7.1	0.2
LTT8 (1-2ft)	0.7	173	5.4	0.2
Industrial Soil Reference Values (mg/kg)	8	700	20	1.5
Bold = Criteria Exceedance				

During parking lot construction, when the soil subsurface is exposed, human receptors onsite and nearby pedestrians have greater potential for exposure to soil contaminants. In this exposure scenario, incidental soil ingestion is the exposure most likely to occur for the onsite worker. Inhalation is a minor exposure route for the onsite worker and nearby pedestrian. Dermal absorption is considered negligible because the site contaminants must stay in contact with the skin many hours before absorption can occur.

During construction, potential exposures to receptors on and off-site can be minimized using standard site management practices such as dust suppression. The use of proper work attire (gloves) and good hygiene (hand washing before eating and drinking) also helps minimize potential exposures. Based on a construction exposure scenario and the contamination levels described in the Phase II report, intermittent exposures to contaminants below industrial soil reference values are not likely to result in health effects.

When completed, the paved parking lot and landscaping will prevent potential soil contaminants exposures for the on-site worker, trespasser, and pedestrian. The pavement cap will also minimize potential leaching of contaminants deeper into the soil profile and groundwater.

MDH believes with proper soil management during site construction and good post-construction maintenance of the parking lot cap, potential public exposures to site contaminants can be avoided.

Please contact me if you have any questions or need further assistance.

Sincerely,

Daniel Peña
Research Scientist, DABT
Environmental Health Division
Site Assessment and Consultation Unit
651-201-4920
daniel.pena@state.mn.us

References:

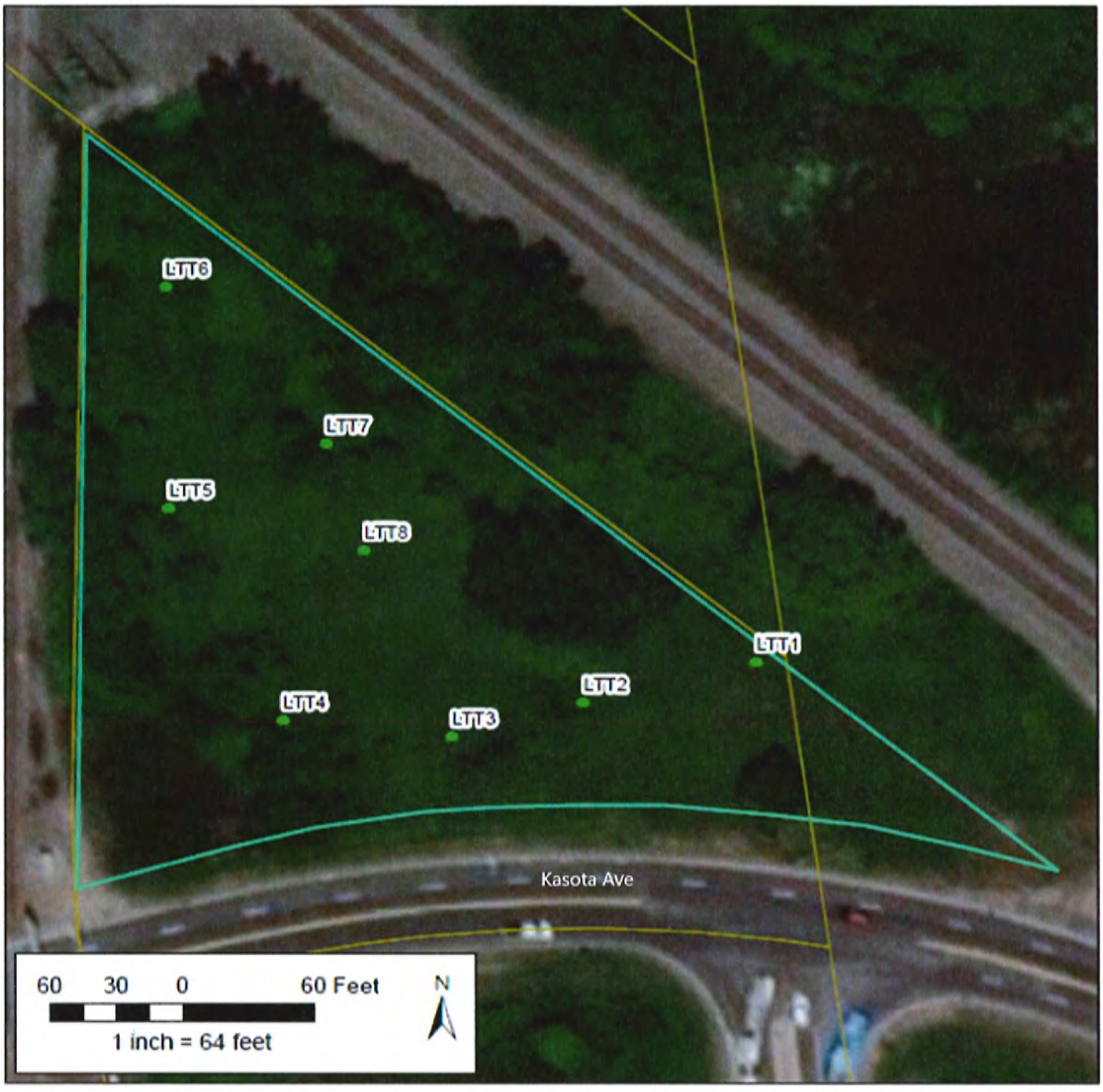
1. Landmark Environmental. 2019. Limited Phase II Environmental Investigation Vacant Property, Highway 280 and Kasota Avenue St. Paul, Minnesota.

2. Landmark Environmental. 2019. Phase I Environmental Site Assessment: Northwest of Kasota Avenue and MN-280, St. Paul, Minnesota.

3. Sambatek. 2019. Site Development Plans for Rohn Industries Trailer Storage, Presented by Venture Pass Partners, St. Paul, Minnesota.

REPORT PREPARATION

This publication was made possible with state cooperative agreement funding provided through the Agency for Toxic Substances and Disease Registry (ATSDR's) Program to Promote Localized Efforts to Reduce Environmental Exposures (APPLETREE). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the ATSDR, or the Department of Health and Human Services.



Legend

- Property Boundary
- Tax Parcels
- Test Trench Locations

Figure 1

PROPERTY LAYOUT MAP WITH INVESTIGATION LOCATIONS
NW of Kasota Ave and MN-280
St. Paul, Minnesota

DEPARTMENT OF TRANSPORTATION

Metropolitan District
1500 County Road B-2 West
Roseville, MN 55113

August 30, 2019

Amanda Smith, Zoning Inspector
City of Saint Paul Department of Safety and Inspections
375 Jackson St Suite #220
Saint Paul, MN 55101

SUBJECT: Rohn Industries
MnDOT Review #S19-051
NE quad MN 280 and Kasota Ave
City of Saint Paul, Ramsey County
Control Section: 6242

Dear Amanda Smith:

MnDOT has reviewed the plans for the above referenced development received 8/16/19 and 8/27/19. Before further development, please address the following:

Traffic Impact Study Recommended
The vehicle mix of new trips from this development will consist of a high percentage of heavy vehicles. Therefore, MnDOT recommends that the city require a traffic impact study be performed to provide adequate information on the number and distribution of heavy vehicle trips that will be using city, county, and MnDOT roads, as well as the expected ramps and intersections where these heavy vehicles will be accessing the MnDOT highway network, including MN 280, I-35W, MN 51, and MN 65 (see Chapter 5 Section 5.4 of MnDOT's Access Management Manual).

A lead concern is the fact that access is proposed via a single driveway at a skewed angle on the north side of Kasota Avenue that is also offset 20-30 ft to the east from the existing "T" intersection ramps to/from MN 280. Also of concern are potential congestion and backups on Kasota Avenue related to the at-grade railroad crossing to the east.

Please contact Ashley Roup of MnDOT's Metro District's Traffic Engineering Section at Ashley.Roup@state.mn.us or 651-234-7815 with questions.

Transit Impact Mitigation
Metro Transit Route 3 travels along Kasota Avenue and services bus stops just to the west of the site. If any work will impact this transit service on Kasota Avenue, the proponent should contact Metro Transit as soon as possible to share information and develop a plan to minimize those impacts.

Please contact Carl Jensen, MnDOT Metro District Transit Advantages Engineer, at 651-234-7505 or Carl.Jensen@state.mn.us with related questions.

Drainage Permit Required
A MnDOT drainage permit will be required for this site to ensure that current drainage rates to MnDOT right-of-way will not be increased. Please provide computations and plans so that MnDOT may verify

that the proposed development maintains or reduces drainage rates to the state right-of-way. Please include both existing and proposed site conditions. Drainage permit applications are available and may be submitted online at: https://dotapp7.dot.state.mn.us/OLPA. Please submit the following documents with the drainage permit application:

1. A grading plan showing existing and proposed contours.
2. Drainage area maps for the proposed project showing existing and proposed drainage areas. Any off-site areas that drain to the project area should also be included in the drainage area maps. The direction of flow for each drainage area must be indicated by arrows.
3. Drainage computations for pre- and post-construction conditions during the 2-, 10-, 50-, and 100-year rain events.
4. Time of concentration calculations.
5. An electronic copy of any computer modeling used for the drainage computations.

MnDOT's drainage permits checklist is attached for your convenience. For questions, please contact Jason Swenson of MnDOT's Metro District Water Resources Engineering Section at (651) 234-7539 or Jason.Swenson@state.mn.us.

Permits

In addition to the drainage permit required above, an appropriate permit will be required for any other work within or affecting MnDOT-owned right-of-way. Permit forms are available and may be submitted online at https://dotapp7.dot.state.mn.us/OLPA.

Please contact Buck Craig of MnDOT's Metro District Permits Section at 651-234-7911 or Buck.Craig@state.mn.us for related questions.

Review Submittal Options

MnDOT's goal is to review proposed development plans and documents within 30 days of receipt. Electronic file submittals are typically processed more rapidly. There are four submittal options:

1. Email documents and plans in PDF format to metrodevreviews.dot@state.mn.us. Attachments may not exceed 20 megabytes per email. If multiple emails are necessary, number each message.
2. Upload PDF file(s) to MnDOT's external shared internet workspace site at: https://mft.dot.state.mn.us. Contact MnDOT Planning development review staff at metrodevreviews.dot@state.mn.us for access instructions and send an email listing the file name(s) after the document(s) has/have been uploaded.
3. Mail, courier, or hand deliver documents and plans in PDF format on a CD-ROM compact disc to:
   MnDOT – Metro District Planning Section
   Development Reviews Coordinator
   1500 West County Road B-2
   Roseville, MN 55113
4. Submit printed documents via U.S. Mail, courier, or hand delivery to the address above. Include one set of full-size plans.

You are welcome to contact me at 651-234-7795 with questions.

Sincerely,

mn DOT

Digitally signed by David Elvin
DN: cn=David Elvin
Date: 2019.08.30 10:58:26 -05'00'

David Elvin, AICP
Principal Planner

Copied by Email:
Shelia Kauppi, North Area Manager
Nick Olson, North Area Engineer
Bryce Fossand, Water Resources
Mark Fairbrother, Water Resources
Jason Swenson, Water Resources
Jeff Rones, Design
John Tompkins, Freight
Buck Craig, Permits
Ben Klismith, Right-of-Way
Ashley Roup, Traffic Engineering
Cameron Muhic, Multimodal Planning
Russell Owen, Metropolitan Council

ROHN INDUSTRIES
A Recycling Solutions Company
Printing | Packaging | Manufacturing

September 26, 2019

The proposed trailer staging area for Rohn Industries will support the growth of our current business, which is the recycling, processing and handling of paper products. This growth is being constrained and limited by a serious lack of staging and parking space at the existing 862 Hersey Street location. The proposed development at 2495 Kasota Ave as a trailer parking/staging lot will be instrumental in meeting this demand and allowing for the continued success and growth of Rohn Industries and our 80 livable wage employees. The proximity of this site to the recycling facilities at 862 Hersey Street positions it well for this purpose.

There will be a very well-defined traffic pattern between the recycling facility at 862 Hersey Street and the proposed 2495 Kasota Ave trailer staging site, and that pattern served as the basis for the proposed site design. Trucks entering the site will be required to come from the 862 Hersey Street location and will approach from the East on Kasota Ave at which point they enter via the curb cut placed very near the East edge of the site. A very generous and wide angle of approach will facilitate a very easy truck movement. Likewise, trucks exiting the site will have a similar movement as they exit back to the East on Kasota Ave. The entrance driveway has been designed with more than sufficient length to allow for entering and exiting trucks to be fully clear of Kasota Avenue when stopped at the entrance gates. The plan has been engineered to support 53' trailers, specifically wb-67 truck movements as illustrated in the attached *Truck Turning Exhibit*.

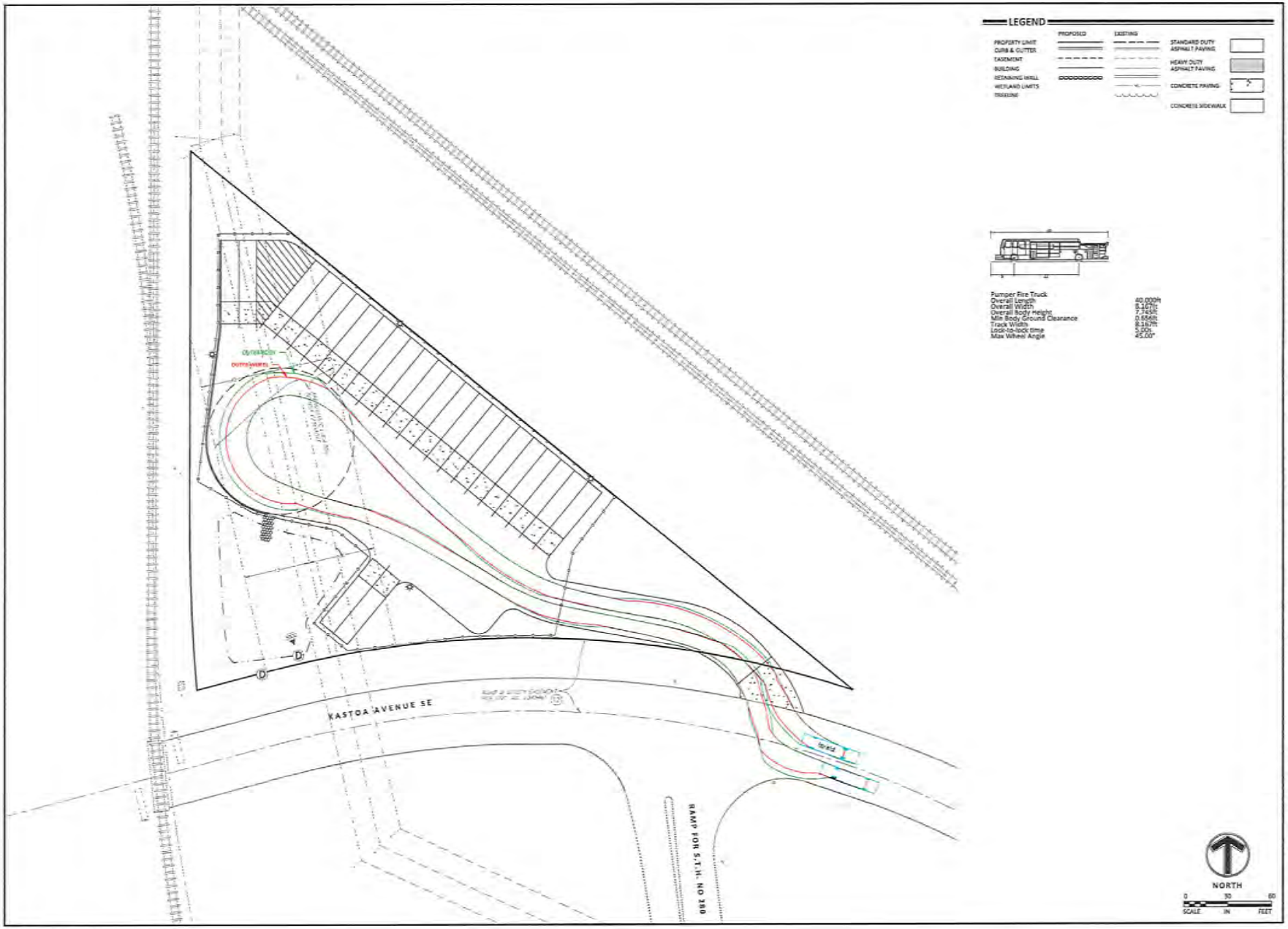
This plan is supported by the fact that we utilize our own drivers and they will be made aware of our traffic flow policy and it will be added to our driver instructions and our standard operating procedures.

There are only 25 trailer positions incorporated into this plan, and the proposed traffic volume will correspondingly be of very low intensity. It is anticipated that there will be only approximately 20 truck movements per day.

MnDot right of way is not utilized or impacted by these traffic patterns.

Cordially,

Craig Mandery
Chief Operating Officer



Sambatek
www.sambatek.com
12800 Whitewater Drive, Suite 300
Minnetonka, MN 55343
763.476.6010 telephone
763.476.8532 facsimile
Engineering | Surveying | Planning | Environmental

Client
VENTURE PASS PARTNERS

Project
ROHN INDUSTRIES TRAILER STORAGE

Location
ST PAUL, MINNESOTA
2495 KASOTA AVENUE

Certification
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.

PRELIMINARY

Chad M. Ayers Reg. No. 23 Date: 08/09/2019

If applicable, contact us for a wet signed copy of this plan which is available upon request at Sambatek's Minnetonka, MN office.

Summary
Designed: CMA Drawn: MCL
Approved: CMA Book / Page:
Phase: PRELIM Initial Issue: 08/09/2019

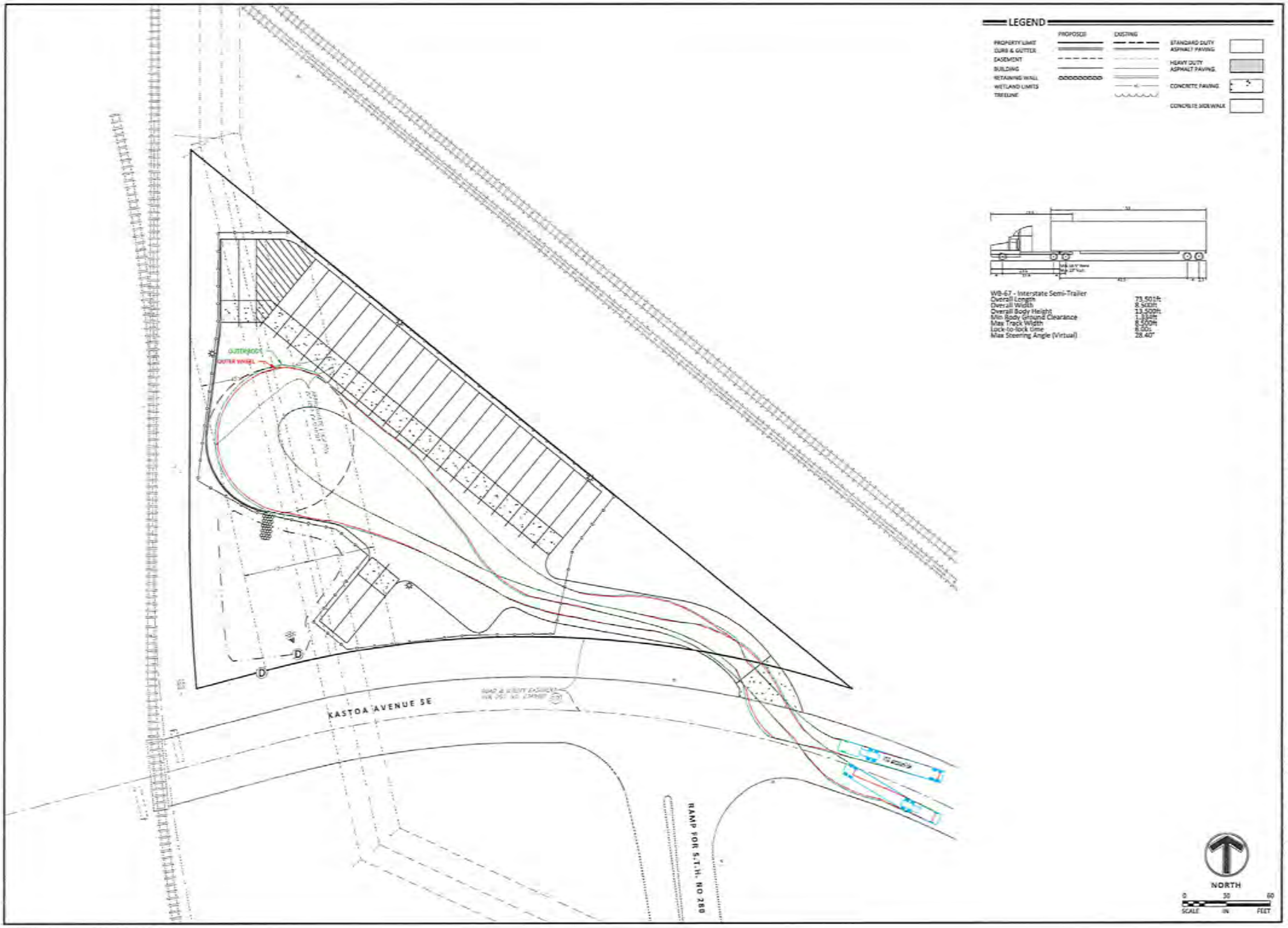
Revision History

No.	Date	By	Submittal / Revision
	08/09/2019	MCL	SITE PLAN REVIEW

Sheet Title
TRUCK TURN EXHIBIT FIRE TRUCK

Sheet No. **Revision**

Project No. 21625



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PRELIMINARY

Chad M. Ayers
Registration No. ...01 Date: 08/09/2019

If applicable, contact us for a wet signed copy of this plan which is available upon request at Sambatek's, Minnetonka, MN office.

Summary
Designed: CMA Drawn: MLL
Approved: CMA Book / Page:
Phase: PRELIM Initial Issue: 08/09/2019

Revision History
No. Date By Submittal / Revision
08/09/2019 MLL SITE PLAN REVIEW

Sheet Title
TRUCK TURN EXHIBIT WB-67

Sheet No. Revision

Project No. 21625

Rohn Site R/W lines and turnbacks

Printed on 10 / 17 / 2019

Protect it. Pass it on.

MISSISSIPPI WATERSHED MANAGEMENT ORGANIZATION

2522 Marshall Street NE
Minneapolis, MN 55418

612-465-8780
contacts@mwmo.org

www.mwmo.org

September 20, 2019

Amanda Smith
Zoning Inspector III - Site Plan Review
Department of Safety and Inspections
375 Jackson St. Suite #220
Saint Paul, MN 55101

Amanda,

I am writing regarding project Site Plan 19-075478– Rohn Industries at 2495 Kasota Avenue ("Project"). Thank you for providing the documentation for the Preliminary Stormwater Management Plan for the Kasota Avenue Trailer Storage for the MWMO to review.

MWMO staff have reviewed the Project and we would appreciate clarification on how the proposed Project will meet the following MWMO's Standards for Water Volume and Water Quality.

The Project narrative and appendices prepared by Sambatek incorrectly states on page 2, Rate Control and Water Quality, that the MWMO does not specify water quality requirements which apply to this Project. The Project site falls under Flexible Treatment Option 2 of the MWMO Standards. (See attached flowchart titled, *MWMO DESIGN SEQUENCE FLOW CHART.*)

The Project would typically be required to meet MWMO's standard to infiltrate 1.1" from the site's impervious surfaces. However, for this site, there are contaminated soils and infiltration is not feasible; therefore, the project should be run through the *MWMO DESIGN SEQUENCE FLOW CHART*. The Project would then fall under Flexible Treatment Option 2.

This option requires the Project to comply with the following conditions:

1) Achieve volume reduction to the maximum extent practicable (as determined by the Local Authority), and
2). Remove 60% of the annual TP load, and the
3) Options considered and presented shall examine the merits of relocating project elements to address, varying soil conditions and other constraints across the site.

Based on the information provided, the Project is proposing to expand the existing pond and add a filtration device to treat water quality. The MWMO staff is requesting the city not move forward with approval of the Project until the applicant has provided calculations and device sizing information showing the project design achieves volume reduction to the maximum extent practicable and removes 60% of the annual total phosphorus load as is required by MWMO standards.

Staff recommends the Project plan should also indicate the specific type(s) of filtration device(s) and the applicant should submit an operation and maintenance plan/agreement to the city to ensure no adverse impacts to downstream water bodies over time. In addition, as the filtration device is for a storage lot and parking facility the city should consider the types materials which may be stored or brought onsite when approving the filtration and device or devices needed on the site and to protect downstream receiving waters.

MWMO staff looks forward to working with city staff on this Project. If you have questions, you may reach me at dsnyder@mwmo.org or 612-746-4971.

Sincerely,

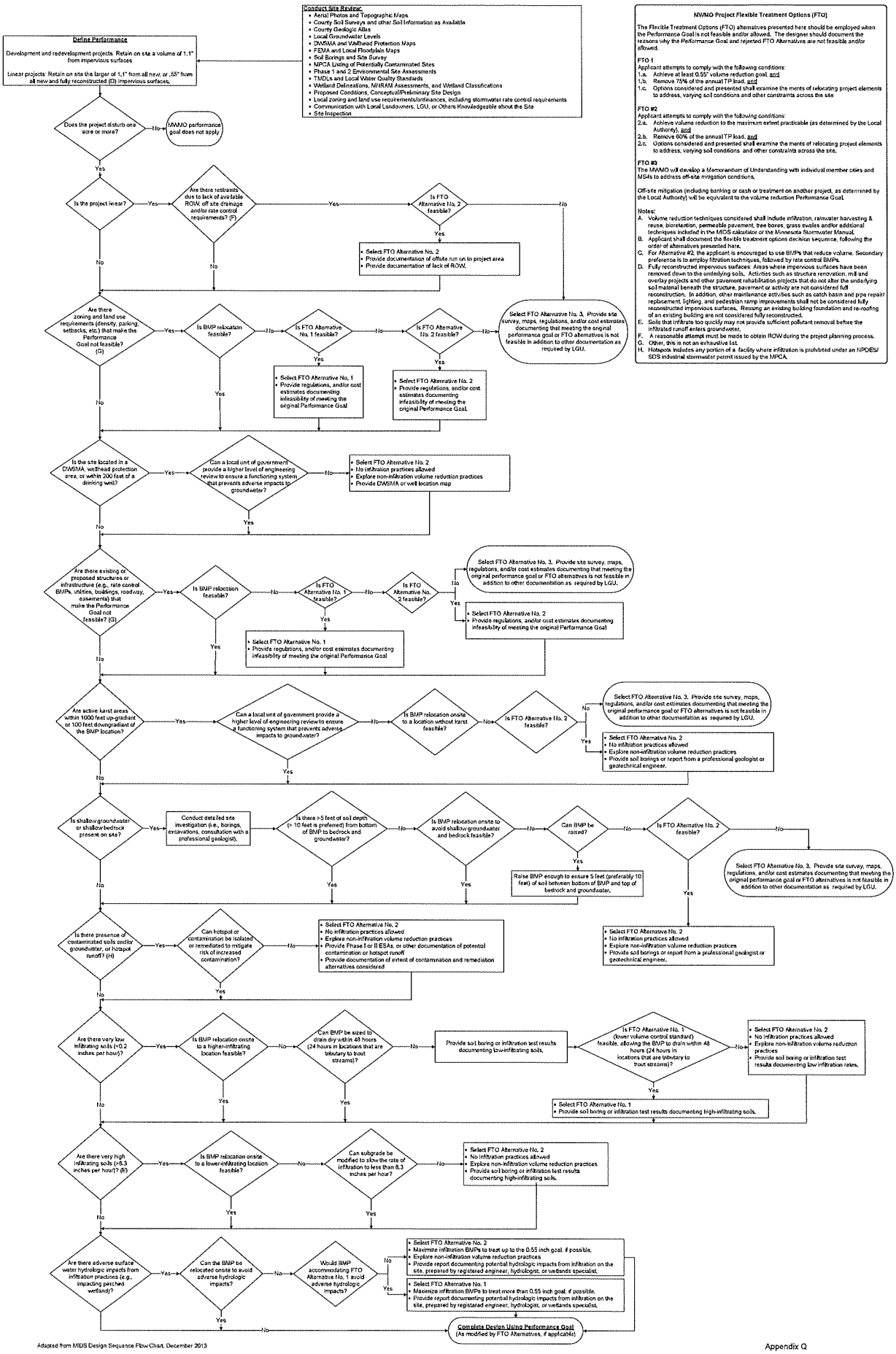
Douglas Snyder

Douglas Snyder
Executive Director

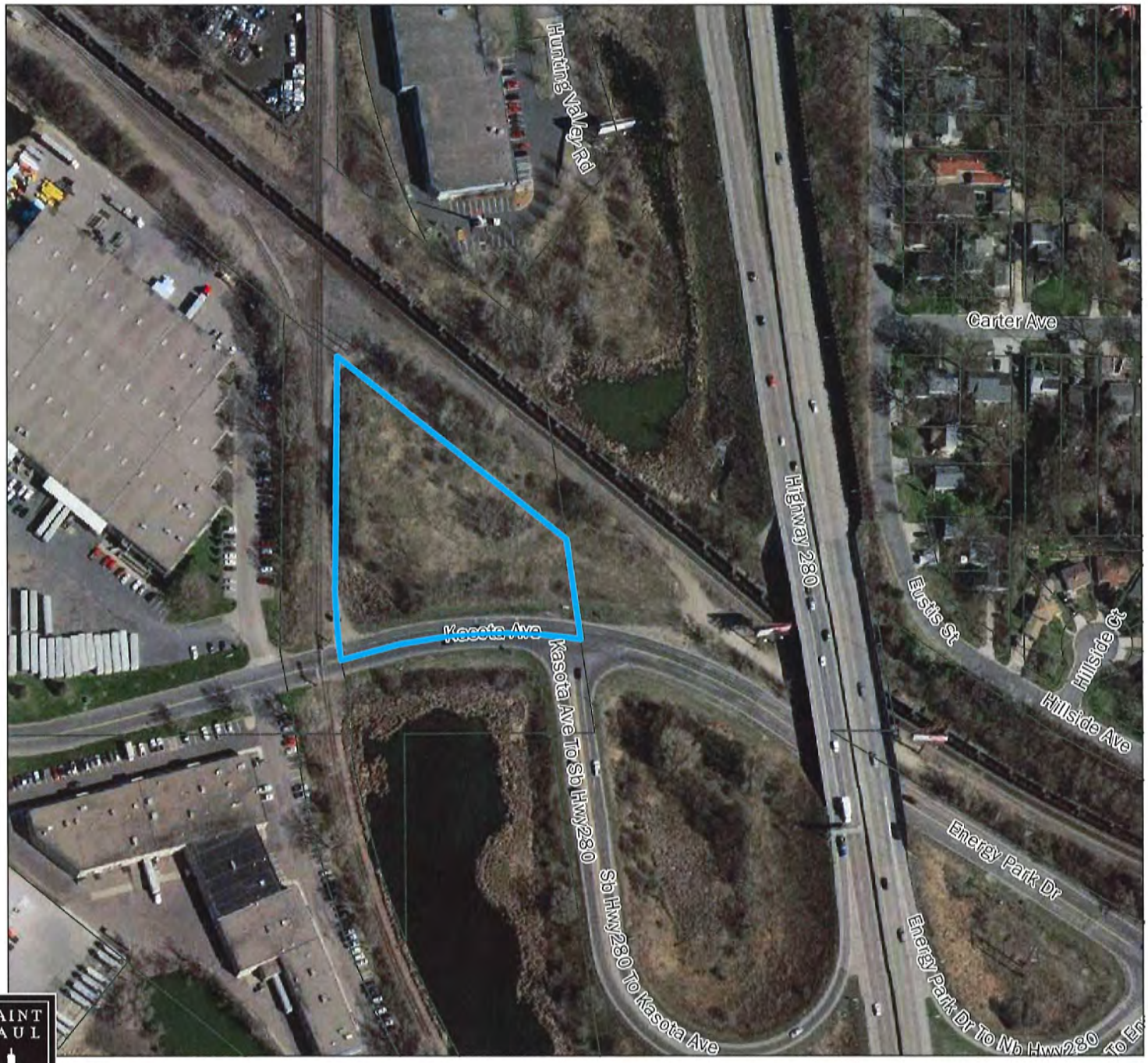
Attachment 1: MWMO DESIGN SEQUENCE FLOW CHART

version 5.12.2015

MWMO DESIGN SEQUENCE FLOW CHART



Adapted from MIDS Design Sequence Flow Chart, December 2013



SAINT PAUL

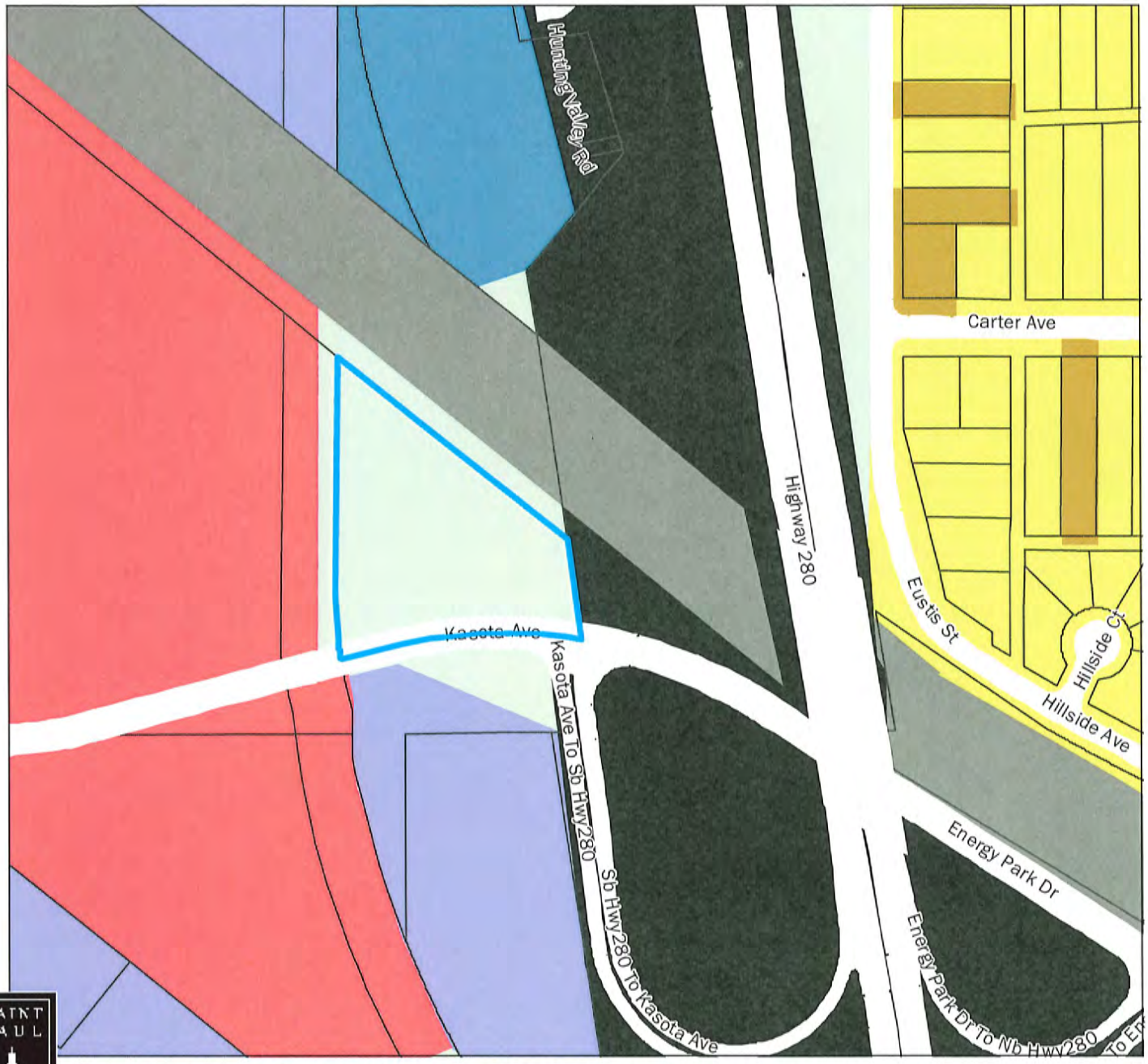
FILE #19-088-143; 19-075-478 | AERIAL MAP

Application of Rohn Industries

Application Type: Site Plan Review
Application Date: 8-9-19
Planning District: 12

Subject Parcel(s) Outlined in Blue

0 50 100 200 300 400 Feet



SAINT PAUL

FILE #19-088-143; 19-075-478 | EXISTING LAND USE MAP

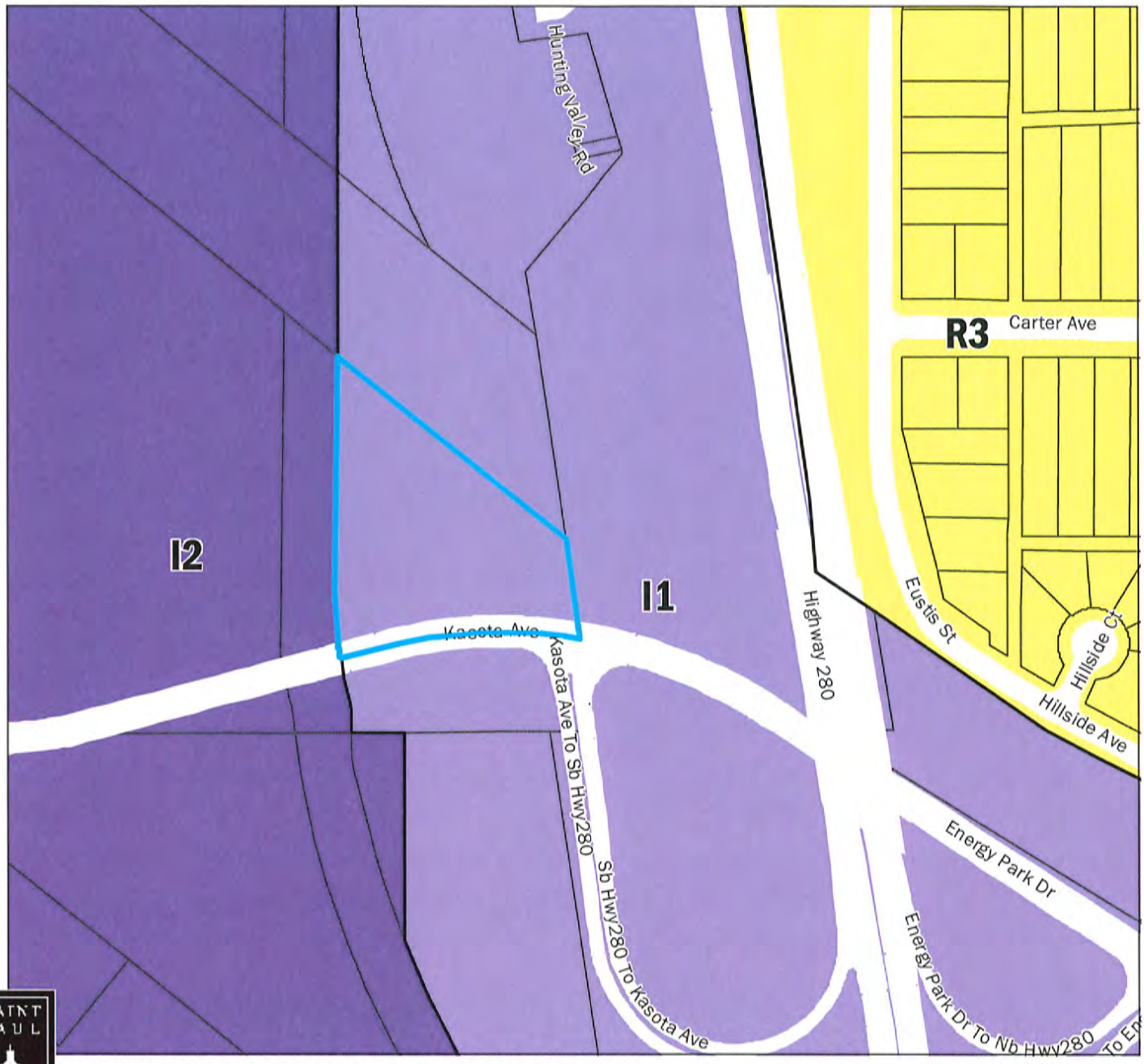
0 50 100 200 300 400 Feet

Application of Rohn Industries

Application Type: Site Plan Review
Application Date: 8-9-19
Planning District: 12

Subject Parcel(s) Outlined in Blue

- InsideRoadEdgesOverlay
- Farmstead
- Seasonal/Vacation
- Single Family Detached
- Manufactured Housing Park
- Single Family Attached
- Multifamily
- Office
- Retail and Other Commercial
- Mixed Use Residential
- Mixed Use Industrial
- Mixed Use Commercial and Other
- Industrial and Utility
- Extractive
- Institutional
- Park, Recreational or Preserve
- Golf Course
- Major Highway
- Railway
- Airport
- Agricultural
- Undeveloped
- Water



FILE #19-088-143; 19-075-478 | ZONING MAP

Application of Rohn Industries

Application Type: Site Plan Review
Application Date: 8-9-19
Planning District: 12

0 50 100 200 300 400 Feet

Subject Parcel(s) Outlined in Blue

- InsideRoadEdgesOverlay
- RL One-Family Large Lot
- R1 One-Family
- R2 One-Family
- R3 One-Family
- R4 One-Family
- RT1 Two-Family
- RT2 Townhouse
- RM1 Multiple-Family
- RM2 Multiple-Family
- RM3 Multiple-Family
- T1 Traditional Neighborhood
- T2 Traditional Neighborhood
- T3 Traditional Neighborhood
- T3M T3 with Master Plan
- T4 Traditional Neighborhood
- T4M T4 with Master Plan
- OS Office-Service
- B1 Local Business
- BC Community Business (converted)
- B2 Community Business
- B3 General Business
- B4 Central Business
- B5 Central Business Service
- IT Transitional Industrial
- ITM IT with Master Plan
- I1 Light Industrial
- I2 General Industrial
- I3 Restricted Industrial
- F1 River Residential
- F2 Residential Low
- F3 Residential Mid
- F4 Residential High
- F5 Business
- F6 Gateway
- VP Vehicular Parking
- PD Planned Development
- CA Capitol Area Jurisdiction