Southwest Transitway DEIS Comments

Comments Received from Agencies and Other Public Entities

Part 3 of 4

Part VIII. Railroad emergencies

Railroad emergencies are usually very serious. Injuries are often severe, property damage great, and other dangers can erupt such as fires or chemical spills. During such emergencies, local public safety departments will likely be called upon to respond.

U. Response to emergencies

EPA 24-hour emergency number: 651-649-5451 or 800-422-0798.

TTY 24-hour emergency number: 651-297-5353 or 800-627-3529.

When a crash, derailment, fire or other incident occurs, there may be several situations that need to be addressed. There certainly will be some property damage, and very likely there will be people who have sustained injuries. But there may also be a release of chemicals. Fires must sometimes be handled differently if certain chemicals are involved. If a chemical is toxic, an evacuation may need to occur.

1. Responding entities

A copy of "*Working Together for a Safer Tomorrow*" is available from Phil Marbut of Canadian Pacific Railway, (612) 904-6133.

When a railroad accident or emergency occurs, there are several entities that will likely be involved. It is important that the many different organizations responding to the emergency are able to work together efficiently to deal with the situation. Canadian Pacific Railway publishes a document designed to help local public safety officials and other agencies coordinate efforts when responding to an emergency. The following are the common players who typically respond to railroad emergencies:

- ***Local.*** This includes local police, fire, and ambulance. Generally, these are the first departments to arrive at the scene of an accident, fire or spill. Since these departments are usually the first to respond, they must assess the situation to the best of their abilities and establish a first response to the situation. This includes helping the injured, controlling crowds, and the first possible response to environmental hazards that exist because of the incident, such as fires or chemical spills.
- ***State and federal agencies.*** These agencies will generally have involvement during the assessment and clean-up stage. They often have strict procedures that must be followed after an accident or chemical spill, such as drug testing of the engineer, clean-up procedures, and accident investigation.
- ***Railroad.*** The railroad will be involved throughout the incident. It knows its equipment and the contents of the train.

- ***Manufacturers.*** Companies that have shipped freight on the railroad will also be involved. They need to know what has happened to their shipments for business purposes. They are also in the best position to know the possible hazards that may surround the product they are shipping.

Local public safety departments can get a 24-hour emergency number from their railroad company. Public safety departments should keep the number in a safe and accessible place. The number is a special emergency number public safety officials can use to report train accidents and should not be used for any other reason.

2. Hazardous material shipments

The U.S. Department of Transportation is responsible for regulating hazardous materials, substances, and waste. The Environmental Protection Agency (EPA) also regulates hazardous substances and waste. For example, labeling of cars, placement of cars within a train, and train speed are regulated at the federal level.

Each train crew carries a sequential listing of all the cars and their contents, as well as emergency instructions for the handling of the materials if a release occurs.

For further information on emergency response training for railroad accidents, contact Phil Marbut, Canadian Pacific Railway, (612) 904-6133.

The railroad industry offers training to local public safety officials. Cities should contact the railroad directly for information about coordinating training. Canadian Pacific Railway offers training and will help to coordinate training. This training includes classes on rail facilities; rail equipment; and the interaction of railroad employees, local response personnel, and other agencies that may respond to a train accident.

V. Liability

It is not easy to determine who is responsible for an incident involving a railroad. Such conclusions are not usually made until considering all the factors that contributed to an accident. However, the following generalizations may be made based upon decisions of the courts over the years:

Federal Register Vol. 68, No. 243 Thursday, December 18, 2003 p. 70607.

- ***Railroads.*** Railroads are often found liable for accidents if the crossing or tracks have not been properly maintained. They are also responsible for the actions of their engineers or employees for errors or speeding. The federal train horn rule is intended to remove liability from the railroads for failure to sound the horn at highway-rail crossings within a quiet zone.

- ***Victims.*** Victims of train accidents sometimes are responsible for the accident if they have trespassed or ignored signals or warnings.

- ***Cities.*** Cities may be subject to claims for quiet zones and other types of regulation. Cities also have a general responsibility to maintain their streets and sidewalks, including those that approach railroad crossings. However, discretionary immunity may protect a city from liability exposure if reasons for the council's decisions are well documented in the council meeting minutes.

Liability for an accident must be determined on a case-by-case basis. It is possible that defective equipment or hazardous weather conditions could also be factors that can contribute to an accident.

1. Grade crossing surfaces

Smrt v. Duluth, Winnipeg & Pac. Ry., 265 N.W.2d 815 (Minn. 1978).

Several Minnesota court decisions have indicated that railroads have a duty to maintain grade crossing surfaces. The Minnesota Supreme Court found that whether the railroad's failure to maintain its grade crossing surface was more negligent for an accident than a motor vehicle driver's inattention was a decision for the jury.

State ex rel. City of Fairmont v. Chicago, St. P., M & O Ry. Co., 148 Minn. 91 (1921).

In a 1921 decision, the same court found that a city could compel a railroad company to pave its crossing at the railroad's own expense.

Chicago, M & St. P. Ry. Co. v. LeRoy, 124 Minn. 107 (1914).

Likewise, the cost of expanding a new city street across a railroad company's tracks was properly imposed upon the railroad.

A.G. Op. 369-K (May 5, 1933).

The Minnesota attorney general has also concluded that a railroad must maintain the part of a town road that crosses a railroad right-of-way.

2. Obstructed views

Bryant v. Northern Pac. Ry. Co., 221 Minn. 577 (1946); *Bray v. Chicago, R.I. & P.R. Co.*, 232 N.W.2d 97 (Minn. 1975).

Railroads have been held responsible for accidents that occurred because of obstructions that kept motorists from seeing approaching trains. In one situation, trees and weeds had been allowed to grow on a railroad right-of-way and blocked a motorist's view of a crossing. The Minnesota Supreme Court found the railroad had a duty to correct the dangerous condition of the crossing. A similar decision was reached in a 1975 decision where evidence showed that proper view was obstructed by a railroad's signal house.

Munkel v. Chicago, M., St. P. & P.R. Co., 202 Minn. 264 (1938).

A railroad may be found negligent if conditions obstructing or interfering with the view of the train on the crossing are caused in whole or in part by the railroad's acts or omissions.

3. Signs

Minn. Stat. § 219.06 and Minn. R. § 8830.0800, .0600, and .0900.

Both railroads and cities share responsibility to warn of a crossing. Railroads must maintain a sign at all railroad crossings. Public road authorities, including cities, are responsible for advanced warning signs that are off the railroad right-of-way. The road authority is also responsible for pavement markings.

4. Fires

Minn. Stat. § 219.761.

All railroads operating in Minnesota are liable for all reasonable expenses to put out fires caused as a result of their railroads. If a local fire department extinguishes a fire, it can receive reimbursement from the railroad by submitting a claim to the railroad within 60 days after the first full day after the fire was extinguished. The claim must include the following information:

Minn. Stat. § 219.761, subd. 2.

- The basis for the claim.
- The time, date, and place of the claim.
- The circumstances of the claim.
- The itemized cost incurred for the claim.

5. City discretionary immunity

Young v. Wlazik, 262 N.W.2d 300 (Minn. 1977) (overruled on other grounds by *Perkins v. Nat. RR. Passenger Corp*. 289 N.W.2d 462 (Minn. 1979).

Cities should remember they may have discretionary immunity from liability for many decisions or actions involving railroad crossings. In one situation, a city decided not to close a street that led to a hazardous railroad crossing. The Minnesota Supreme Court found that the city's decision involved a "legislative judgment balancing the risks and convenience the crossing presents," and concluded that the decision was protected by discretionary immunity.

McEwen v. Burlington Northern R. Co., 494 N.W.2d 313 (Minn. App. 1993).

In a 1993 decision, the Minnesota Court of Appeals held that the state was protected by discretionary immunity for its decision not to upgrade a railroad crossing. The state had considered financial constraints, limited funding, and safety considerations in making its decision not to upgrade the crossing.

Keeping good records will help protect the city from lawsuits regarding its legislative decisions. City councils should document the reasons for any decisions they make regarding railroad issues. . For example, a city might document why a street or sidewalk repair near a grade crossing may be undertaken at a later date rather than immediately.

Attachment B

FRA Track Standards and Inspection Fact Sheet

Class of Track
FRA's track safety standards establish nine specific classes of track (Class 1 to Class 9), plus a category known as Excepted Track. The difference between each Class of Track is based on progressively more exacting standards for track structure, geometry, and inspection frequency. Furthermore, each Class of Track has a corresponding maximum allowable operating speed for both freight and passenger trains. The higher the Class of Track, the greater the allowable track speed and the more stringent track safety standards apply.

Railroads determine the Class of Track to which each stretch of track belongs based upon business and operational considerations. Once the designation is made, FRA holds railroads accountable for maintaining the track to the corresponding standards for that particular class. If through regular maintenance and inspection efforts a railroad discovers that a section of its track fails to meet the specified federal standard, the railroad is required to make appropriate repairs to maintain that Class of Track designation, or downgrade the track segment to a lower Class of Track to which the federal standard can be met.

Track Inspection Requirements
Under FRA regulations, each railroad has primary responsibility to ensure its own track meets or exceeds the federal safety standards. This includes railroad inspectors performing track inspections at specified minimum frequencies based on the Class of Track, the type of track, the annual gross tonnage operated over the track, and whether it carries passenger trains. Railroads are required to maintain accurate records of regular and ad hoc track inspections subject to review and audit by FRA federal inspectors at any time.

Class of Track	**Minimum Track Inspection Frequency**
Excepted Track	Weekly
Class 1,2, and 3 Mainline or Sidings	Weekly, or twice weekly if the track carries passenger trains or more than 10 million gross tons of traffic during the preceding year.
Class 1, 2 and 3 Not Mainline or Sidings	Monthly
Class 4 and 5	Twice Weekly
Class 6, 7, and 8	Twice Weekly
Class 9	Three Times a Week

Establishing Track Speed
Track speed is determined by the Class of Track. Railroads can change the Class of Track (and thus increase or decrease the track speed) whenever it deems appropriate and without prior notification to, or approval by, the FRA. FRA's interest is in ensuring the railroad maintains the track to the appropriate federal safety standards for that Class of Track.

In addition, local or state governments cannot establish their own train speed limits over highway-rail grade crossings or through urban settings unless they can meet an extremely high legal standard. That is, federal preemption exists unless it can be demonstrated that a more stringent speed restriction is necessary to eliminate or reduce a local safety or security hazard;

that such local or state provision is not incompatible with a Federal law, regulation, or order; and that it does not unreasonably burden interstate commerce.

Furthermore, the safest train is one that maintains a steady speed, and locally established speed limits would result in hundreds of individual speed restrictions along a train's route. This would not only cause train delays, but it could actually increase the chance of a derailment as every time a train must slow down and then increase speed, buff and draft forces (those generated when individual freight cars are compressed together or stretched out along a train's length) are introduced. This increases the chance of derailment along with the potential risk of injury to train crews, the traveling public, and those living and working in surrounding communities.

Class of Track	Maximum Allowable Speed for Freight Trains	Maximum Allowable Speed for Passenger Trains
Excepted Track	10 mph	N/A
Class 1	10 mph	15 mph
Class 2	25 mph	30 mph
Class 3	40 mph	60 mph
Class 4	60 mph	80 mph
Class 5	80 mph	90 mph
Class 6	N/A	110 mph
Class 7	N/A	125 mph
Class 8	N/A	150 mph
Class 9	N/A	200 mph

Track Inspection Technology

Prior to the mid-1970s, track inspection was primarily performed visually. Since then, the development of measurement technologies fitted on moving equipment has greatly increased the accuracy and speed of inspections, and has been a major contributing factor in the decline of track-caused derailments.

Railroads initially developed Gage Restraint Measuring Systems (GRMS) to assess the ability of their track to maintain proper gage (the distance between two rails). To advance the science of automated track inspections even further, FRA developed its own Automated Track Inspection Program (ATIP) outfitted with custom-made vehicles equipped with state-of-the-art technology to help identify track flaws that could lead to train derailments. FRA now has five such cars in service that will inspect approximately 100,000 miles of track each year. In January 2008, the ATIP reached the milestone of surpassing its one millionth mile of track inspected.

The ATIP cars are primarily used on high-volume traffic density rail lines that carry the majority of hazardous materials transported by rail, as well as passenger trains. They are also used to quickly respond and evaluate routes where the integrity of track is suspected or known to be substandard. The ATIP cars use a variety of technologies to measure track geometry characteristics. The measurements are recorded in real-time and at operating speed. The precise location of problem areas are noted using global positioning system (GPS) technology and shared immediately with the railroad so appropriate corrective actions can be taken. FRA's

newest ATIP car also video records every 50 feet of track bed, which are analyzed by track inspectors and the railroad.

The nation's Class I, or largest railroads all operate similar cars while regional and short line railroads sometimes arrange to have such cars inspect their track under contract. In addition, some railroads have installed Vehicle Track Interaction devices in locomotives to measure high impacts, which instantly alert track maintenance personnel of abnormalities and potential problems areas. Similarly, Visible Joint Bar Detection Systems use a high-speed camera placed on a service truck to scan for broken joint bars. In addition, FRA operates a high rail car with a Joint Bar Inspection System to spot cracks in continuous welded rail.

Technological advances currently being tested include a more refined high-speed photo inspection system that will take a high-resolution picture of the joint bars, and use pattern-recognition software to automatically detect cracks which are difficult to see. A laser vision system is being tested that will scan the track and track bed for anomalies, and ground penetrating radar shows promise to inspect track bed and soil conditions. Driven by FRA research, the industry will soon initiate ultrasound and laser testing of rails to detect internal flaws, fatigue and minute cracks.

Track Speed and Highway-Rail Grade Crossings

The potential danger of a train /vehicle collision present at a highway-rail grade crossing is a separate issue from train speeds. The physical properties of a train moving at almost any reasonable operating speed generally, if not inevitably, prevent it from stopping in time to avoid hitting an object on the tracks. In more than 37 percent of collisions between trains and motor vehicles at public grade crossings, the train was operating at less than 20 mph.

In addition, there is little evidence that wholesale reductions in train speeds will reduce the risk that such grade crossing collisions will occur. Decades of experience and research have shown that prevention of grade crossing incidents is more effectively achieved through the use of roadway warning signage, active warning devices such as flashing lights and gates, and strict observance by motorists of applicable traffic safety restrictions, precautions and laws.

For more information on Federal Track Safety Standards, see 49 CFR Part 213.
For more information on the FRA Automated Track Inspection Program, visit http://atip.fra.dot.gov/

FRA Office of Public Affairs
(202) 493-6024
www.fra.dot.gov
June 2008

Attachment C

The “Train Horn” Final Rule Summary

THE "TRAIN HORN" FINAL RULE
Summary

1. Overview:

- The Final Rule on Use of Locomotive Horns at Highway-Rail Grade Crossings**,** published on April 27, 2005, is intended to:

  - Maintain a high level of public safety;

  - Respond to the varied concerns of many communities that have sought relief from unwanted horn noise; and

  - Take into consideration the interests of localities with ***existing*** whistle bans.

- Currently**,** state laws and railroad operating rules govern use of the horn at highway-rail grade crossings. When this rule takes effect, it will determine when the horn is sounded at public crossings (and private crossings within "quiet zones").

- This Final Rule was mandated by law[1], and was issued by the Federal Railroad Administration (FRA) after consideration of almost 1,400 public comments on the Interim Final Rule (IFR) (68 FR 70586) published December 18, 2003.

- Consistent with the statutory mandate requiring its issuance**,** the rule requires that locomotive horn**s** be sounded at public highway-rail grade crossings, but provides several exceptions to that requirement.[2]

- Local public authorities may designate or request approval of, quiet zones in which train horns may not be routinely sounded. The details for establishment of quiet zones differ depending on the type of quiet zone to be created (Pre-Rule or New) and the type of safety improvements implemented (if required).

- Horns may continue to be silenced at Pre-Rule Quiet Zones, provided certain actions are taken.

- Intermediate Quiet Zones (whistle bans that were implemented after October 9, 1996 but before December 18, 2003) may continue to have the horns silenced for one year (until June 24, 2006), provided certain actions are taken. After which time they must comply with the provisions for a New Quiet Zone if the horns are to remain silent.

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[1] 49 U.S.C. 20153.

Disclaimer: This is a summary of the Final Rule for initial briefing purposes only. Entities subject to the rule should refer to the rule text as published in the Federal Register on April 27, 2005.

- The rule goes into effect on June 24, 2005.

- Pre-Rule Quiet Zones in the six county Chicago region are excepted from the provisions of this rule pending further evaluation of the data.

2. Requirement to sound the locomotive horn:

- Outside of quiet zones, railroads must sound the horn 15-20 seconds prior to a train's arrival at the highway-rail grade crossing, but not more than 1/4 mile in advance of the crossing.

  Note: Most State laws and railroad rules currently require that the horn be sounded beginning at a point 1/4 mile in advance of the highway-rail grade crossing and continued until the crossing is occupied by the locomotive. Under the rule, for trains running at less than 45 mph, this will reduce the time and distance over which the horn is sounded. This will reduce noise impacts on local communities.

- The pattern for sounding the horn will remain, as it currently exists today (two long, one short, one long repeated or prolonged until the locomotive occupies the highway-rail grade crossing).

- Locomotive engineers may vary this pattern as necessary where highway-rail grade crossings are closely spaced; and they will also be empowered (but not required) to sound the horn in the case of an emergency, even in a quiet zone.

- The rule addresses use of the horn only with respect to highway-rail grade crossings. Railroads remain free to use the horn for other purposes as prescribed in railroad operating rules on file with FRA, and railroads must use the horn as specified in other FRA regulations (in support of roadway worker safety and in the case of malfunctions of highway-rail grade crossing active warning devices).

- The rule prescribes both a minimum and ***maximum*** volume level for the train horn. The minimum level is retained at 96 dB(A), and the new maximum will be 110 dB(A). This range will permit railroads to address safety needs in their operating territory (see discussion in the preamble).

- The protocol for testing the locomotive horn will be altered to place the sound-level meter at a height of 15 feet above top of rail, rather than the current 4 feet above the top of the rail. Cab-mounted and low-mounted horns will continue to have the sound-level meter placed 4 feet above the top of the rail.

  Note: The effect of this change will be to permit center-mounted horns to be "turned down" in some cases. The previous test method was influenced by the "shadow

effect" created by the body of the locomotive to indicate a lower sound level than would otherwise be expected several hundred feet in front of the locomotive (where the crossing and approaching motorists are located).

- The effect of these changes will reduce noise impacts for 3.4 million of the 9.3 million people currently affected by train horn noise.

3. Creation of quiet zones:

- The rule provides significant flexibility to communities to create quiet zones, both where there are existing whistle bans and in other communities that heretofore have had no opportunity to do so.

- The Final Rule permits implementation of quiet zones in low-risk locales without requiring the addition of safety improvements.

  ✓ This concept utilizes a risk index approach that estimates expected safety outcomes (that is, the likelihood of a fatal or non-fatal casualty resulting from a collision at a highway-rail crossing).

  ✓ Risk may be averaged over crossings in a proposed quiet zone.

  ✓ Average risk within the proposed quiet zone is then compared with the average nationwide risk at gated crossings where the horn is sounded (the "National Significant Risk Threshold" or "NSRT"). FRA will compute the NSRT annually.

  The effect of this approach is that horns can remain silenced in over half of Pre-Rule Quiet Zones without significant expense; and many New Quiet Zones can be created without significant expense where flashing lights and gates are already in place at the highway-rail grade crossings.

- If the risk index for a proposed New Quiet Zone exceeds the NSRT, then supplementary or alternative safety measures must be used to reduce that risk (to fully compensate for the absence of the train horn or to reduce risk below the NSRT).

- The Final Rule–

  ✓ Retains engineering solutions known as "supplementary safety measures" for use without FRA approval.

  ✓ Retains explicit flexibility for the modification of "supplementary safety measures" to receive credit as "alternative safety measures." For instance,

shorter traffic channelization arrangements can be used with reasonable effectiveness estimates.

✓ Adds a provision that provides risk reduction credit for pre-existing SSMs and pre-existing modified SSMs that were implemented prior to December 18, 2003.

✓ Continues education and enforcement options, including photo enforcement, subject to verification of effectiveness.[3]

- The public authority responsible for traffic control or law enforcement at the highway-rail grade crossing is the only entity that can designate or apply for quiet zone status.

- FRA will provide a web-based tool for communities to use in performing "what if" calculations and preparing submissions necessary to create or retain quiet zones. The tool may be found at http://www.fra.dot.gov.

- In order to ensure proper application of the risk index, the National Highway-Rail Crossing Inventory must be accurate and complete. In the absence of timely filings to the Inventory by the States or Railroads, local authorities may file updated inventory information, and railroads must cooperate in providing railroad-specific data.

- FRA regional personnel will be available to participate in diagnostic teams evaluating options for quiet zones.

- Once a quiet zone is established (including the continuation of Pre-Rule or Intermediate Quiet Zones pending any required improvements), the railroad is barred from routine sounding of the horn at the affected highway-rail grade crossings.

- See below for discussion of **Pre-Rule Quiet Zones** and **New Quiet Zones**.

---

[3]The rule neither approves nor excludes the possibility of relying upon regional education and enforcement programs with alternative verification strategies. FRA is providing funding in support of an Illinois Commerce Commission-sponsored regional program. The law provides authority for use of new techniques when they have been demonstrated to be effective.

Horns may continue to be silenced at Pre-Rule Quiet Zones if–

- The average risk at the crossings is less than the NSRT; or
- The average risk is less than twice the NSRT and no relevant collisions have occurred within the past 5 years; or
- The community undertakes actions to compensate for lack of the train horn as a warning device (or at least to reduce average risk to below the NSRT).

Train horns will not sound in existing whistle ban areas if authorities state their intention to maintain "Pre-Rule Quiet Zones" and do whatever is required (see above) within ***5 years*** of the effective date (June 24, 2005) (***8 years*** if the State agency provides at least some assistance to communities in that State).

A "Pre-Rule Quiet Zone" is a quiet zone that contains one or more consecutive grade crossings subject to a whistle ban that has been actively enforced or observed as of October 9, 1996 and December 18, 2003.

To secure Pre-Rule Quiet Zone status, communities must provide proper notification to FRA and other affected parties by June 3, 2005 and file a plan with FRA by June 24, 2008 (if improvements are required).

New Quiet Zones may be created if–

All public highway-rail grade crossings are equipped with flashing lights and gates; and either–

- ✓ After adjusting for excess risk created by silencing the train horn, the average risk at the crossings is less than the NSRT; or
- ✓ Supplemental Safety Measures are present at each public crossing; or
- ✓ Safety improvements are made that compensate for loss of the train horn as a warning device (or at least to reduce average risk to below the NSRT).

Detailed instructions for establishing or requesting recognition of a quiet zone are provided in the regulation.

4. Length of quiet zones:

- Generally, a quiet zone must be at least ½ mile in length and may include one or more highway-rail grade crossings.
- Pre-Rule Quiet Zones may be retained at the length that existed as of October 9, 1996, even if less than ½ mile. A Pre-Rule Quiet Zone that is greater than ½ mile may be reduced in length to no less than ½ mile and retain its pre-rule status. However, if its length is increased from pre-rule length by the addition of highway-rail grade crossings that are not pre-rule quiet zone crossings, pre-rule status will not be retained.

5. Supplementary and alternative safety measures:

- Supplementary safety measures are engineering improvements that clearly compensate for the absence of the train horn. If employed at every highway-rail grade crossing in the quiet zone, they automatically qualify the quiet zone (subject to reporting requirements). They also may be used to reduce the average risk in the corridor in order to fully compensate for the lack of a train or to below the NSRT.

  - ✓ Temporary closure used with a partial zone;
  - ✓ Permanent closure of a highway-rail grade crossing;
  - ✓ Four-quadrant gates;

- ✓ Gates with traffic channelization arrangements (i.e., non-mountable curb or mountable curb with delineators) at least 100 feet in length on each side the crossing (60 ft. where there is an intersecting roadway);
- ✓ One-way Street with gate across the roadway.

- Alternative safety measures may be applied such that the combination of measures at one or more highway-rail grade crossings reduces the average risk by the required amount across the quiet zone (so-called "corridor approach").

  - ✓ Any modified supplementary safety measure (e.g., barrier gate and median; shorter channelization); or
  - ✓ Education and/or enforcement programs (including photo enforcement) with verification of effectiveness; or
  - ✓ Engineering improvements, other than modified SSMs; or
  - ✓ Combination of the above.

- The rule provides that pre-existing SSMs and pre-existing modified SSMs will be counted towards risk reduction.

6. Recognition of the automated wayside horn:

- The rule authorizes use of the automated wayside horn at any highway-rail grade crossing with flashing lights and gates (inside or outside a quiet zone) as a one-to-one substitute for the train horn.

- Certain technical requirements apply, consistent with the successful demonstrations of this technology.

- The Federal Highway Administration (FHWA) has issued an interim approval for the use of wayside horns as traffic control devices. Communities interested in employing this option should contact FHWA to ensure that they comply with the provisions of the interim approval.

7. Special circumstances:

- A community or railroad that views the provisions of the rule inapplicable to local circumstances may request a waiver from the rule from FRA.

- A railroad or community seeking a waiver must first consult with the other party and seek agreement on the form of relief. If agreement cannot be achieved the party may still request the relief by a waiver, provided the FRA Associate Administrator determines that a joint waiver petition would not be likely to contribute significantly to public safety.

- FRA grants waivers if in the public interest and consistent with the safety of highway and railroad users of the highway-rail grade crossings.

8. Summary of major changes to the Interim Final Rule

- The final rule provides a one-year grace period to comply with New Quiet Zone standards for communities with pre-existing whistle bans that were in effect on December 18, 2003, but were adopted after October 9, 1996. These communities are considered "Intermediate" Quiet Zones under the final rule.

- The final rule addresses quiet zones that prohibit sounding of horns during the evening and/or nighttime hours. These are referred to as Partial Quiet Zones.

- The final rule requires diagnostic team reviews of pedestrian crossings that are located within proposed New Quiet Zones and New Partial Quiet Zones.

- The final rule requires quiet zone communities to retain automatic bells at public highway-rail grade crossings that are subject to pedestrian traffic.

- The final rule extends "recognized State agency" status to State agencies that wish to participate in the quiet zone development process.

- The final rule contains a 60-day comment period on quiet zone applications.

- The final rule requires public authorities to provide notification of their intent to create a New Quiet Zone. During the 60-day period after the Notice of Intent is mailed, comments may be submitted to the public authority.

- The final rule provides quiet zone risk reduction credit for certain ***pre-existing*** SSMs.

- The final rule provides quiet zone risk reduction credit for ***pre-existing*** modified SSMs.

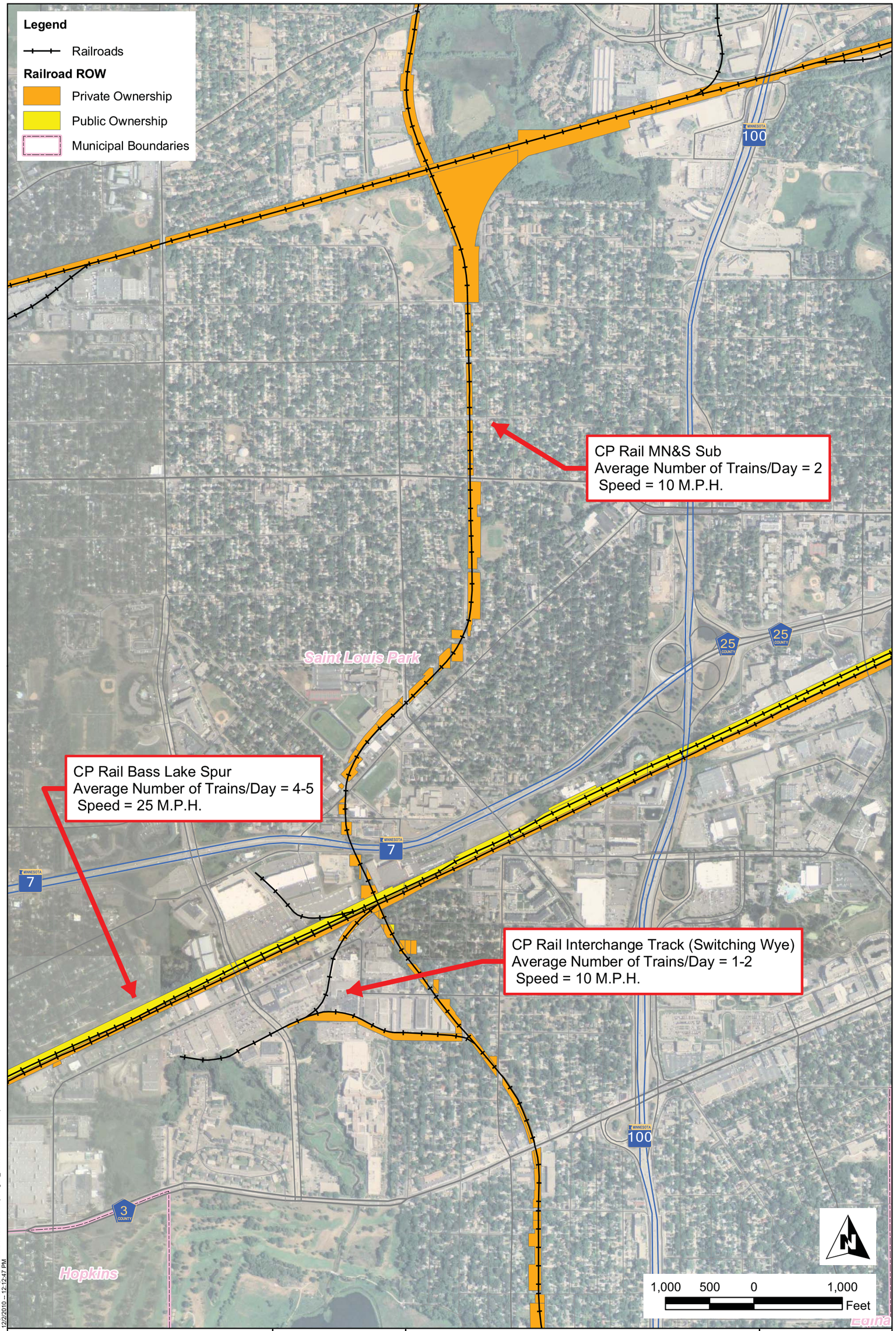
- The final rule contains a new category of ASMs that addresses engineering improvements other than modified SSMs.

Additional information, including the full text of the Final Rule, the Final Environmental Impact Statement, and background documents, are available at http://www.fra.dot.gov.

Disclaimer: This is a summary of the Final Rule for initial briefing purposes only. Entities subject to the rule should refer to the rule text as published in the Federal Register on April 27, 2005.

Attachment D

Existing Railroad Right-of-Way Ownership Map



Map Document: (S:\PTS\SI\lou\114331\GIS\Maps\Fig0X_CurrentTrainROW.mxd)
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SEH

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Project: STLOU 114331
Print Date: 12/01/2010

Map by: SrH
Projection: Hennepin County NAD83 ft
Source: Mn/DOT, Mn/DNR, LMIC,
City of St. Louis Park, and SEH Inc.

RAILROAD ROW OWNERSHIP

RAILROAD FREIGHT RELOCATION STUDY
Saint Louis Park, Minnesota

Attachment E

Twin Cities and Western Railroad Summary of Train Operations Memo (August 2010)

MN&S Freight Rail Study Website - Frequently Asked Questions Section (Existing and Forecast Train Operations)

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August 5, 2010

Memorandum

To: Ms. Katie Walker, Transit Project Manager
Ms. Ia Xiong, Administrative Manager
Housing, Community Works, & Transit
Hennepin County Public Works
417 North Fifth Street, Suite 320
Minneapolis, MN 55401

From: Francis Loetterle, Ph. D., AICP, Director – Transportation Planning
Walt Schuchmann, Vice-President – Operations Planning

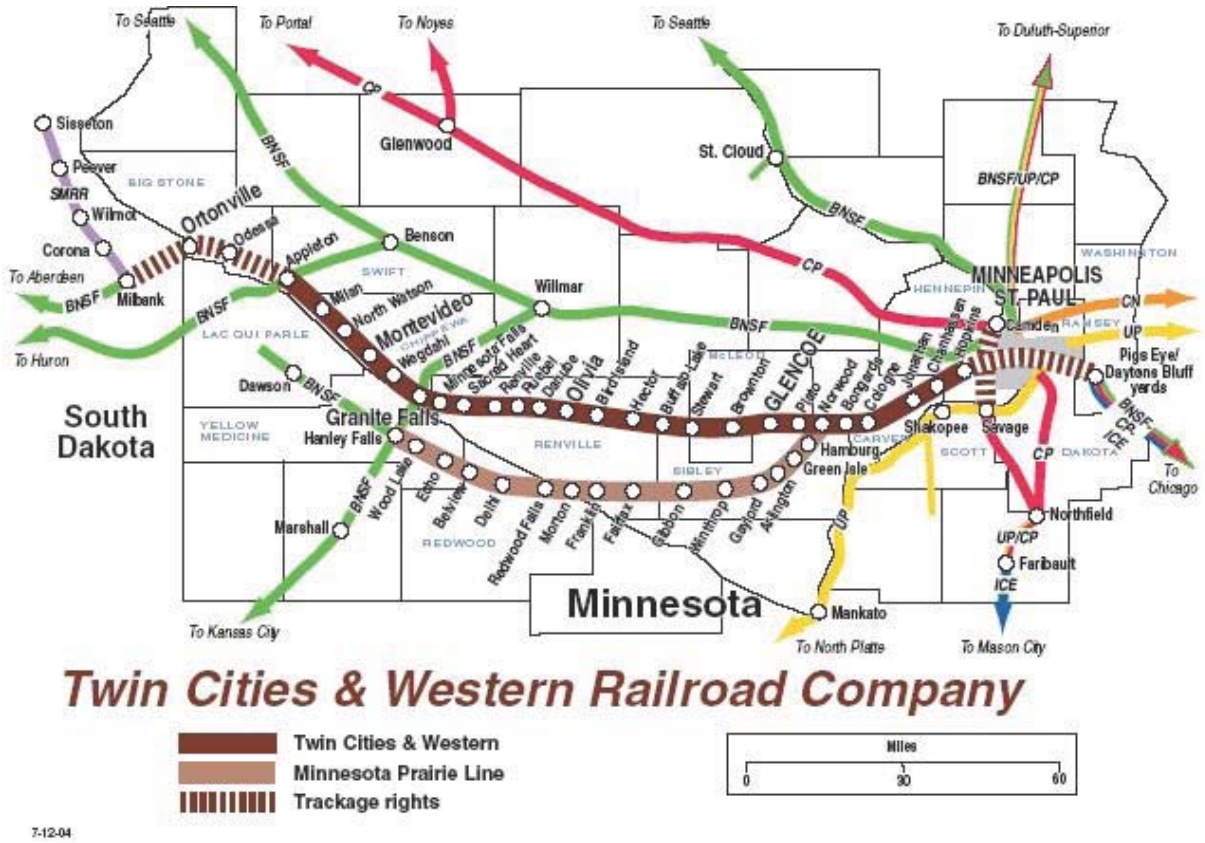
Subject: Twin Cities and Western Railroad
Summary of Train Operations

The Twin Cities and Western Railroad Company (TC&W) is a regional rail system operating 234 miles of railroad between the Twin Cities to the east and Appleton on the west (Figure 1)[1]. TC&W's operating headquarters is at Glencoe. Operating crews are based at Glencoe, Montevideo, Winthrop and Hopkins.

Operations commenced July 27, 1991 over what was formerly known as the "Ortonville Line" operated by the Soo Line (now Canadian Pacific Railway) between Minneapolis/St. Paul, MN and Milbank, SD. Prior to TC&W and Soo Line operation of this line, it was part of the Milwaukee Road's Main line to the Pacific Northwest. This main line was originally built in the 1870's by the Hastings & Dakota Railway.[2]

[1] http://www.aar.org/~/media/AAR/InCongress_RailroadsStates/Minnesota.ashx
[2] http://www.tcwr.net/general-public-2/company-overview/

Figure 1



Source: http://www.tcwr.net/wp-content/uploads/2009/02/tcw-service-map.pdf

TC&W interchanges directly with the following railroads operating in the Minneapolis/St. Paul area including:

- Canadian Pacific Railway
- Union Pacific Railroad
- Minnesota Commercial Railway and
- Progressive Rail Incorporated.

TC & W interchanges carload freight with the following railroads via the Minnesota Commercial Railway:

- BNSF Railway
- CN

Other connections include:

- BNSF Railway at Appleton MN;
- Sisseton Milbank Railroad (SMRR) at Milbank, SD;

- Minnesota Commercial Railway at St. Paul, and
- Progressive Rail (via CPRS) at Lakeville and Bloomington.

TC & W receives unit coal trains directly from BNSF in downtown Minneapolis.

The TC&W owns and operates the Minnesota Prairie Line, Inc. (MPL). MPL is the agent/operator of 94 miles of track between Norwood and Hanley Falls, MN, which is owned by the Minnesota Valley Regional Railroad Authority.[3] TCW and MPL connect at Norwood, MN.

TC&W's traffic base consists largely of coal, grains (corn, wheat, barley), soybeans, sugar, beet pulp pellets, lumber and other forest products, canned vegetables, edible beans, molasses, distillers dried grain (DDGs), fertilizers, crushed rock and agricultural machinery.[4] Principal shippers/receivers on the TC&W include:

- An ethanol plant in Granite Falls;
- A sugar beet plant at Reubel;
- Grain elevators at several locations and
- An ethanol plant in Winthrop (on the MPL).

Operations

TCW operates several crews daily on the western portions of its lines serving customers and consolidating railcars for movement to the Twin Cities.

Six days per week a westbound train departs Hopkins in the evening to take inbound cars from connecting railroads in the Twin Cities to Glencoe. At Glencoe, the inbound cars are exchanged for outbound cars assembled from customers on both TC&W lines and those cars are brought east to Hopkins. Early the next morning, two TC&W crews come on duty at Hopkins and split the previous night's train from Glencoe into two local delivery trains. One of these trains is bound for the Canadian Pacific's St. Paul Yard. The other train is bound for Minnesota Commercial's Main Rail Yard in the Midway and Union Pacific's Western Avenue Yard. The CP connection handles up to about 80 cars per day and the MNCR/UP train handles about 30 cars. Both of these crews proceed east from Hopkins to the Twin Cites, normally traversing the Kenilworth Corridor around 8:00 am. The crews exchange cars with connecting railroads during the day and make their way back to Hopkins, normally passing through the Kenilworth Corridor in the afternoon. The time that these crews return varies significantly but typically occurs between 4 pm and 8 pm. The variation in the return time is affected by how quickly the crews are able to exchange cars with the connecting carriers and upon how much conflicting rail traffic is encountered at the destination yards and on the trips to and from. This pattern may be augmented by extra movements on Sunday when the traffic volume warrants.

In addition to the regular pattern of operations described above, TC&W operates approximately one loaded and one empty ethanol unit train per week and about two loaded and two empty coal

[3] http://www.tcwr.net/general-public-2/company-overview/
[4] Ibid.

trains per month. Ethanol unit trains are typically 80 cars in length. These trains do not run at a fixed time of day but rather are operated at the convenience of the major connecting railroads. These trains all use the Kenilworth Corridor except for the empty coal trains which are delivered to BNSF at Appleton.

Other types of trains may be operated as business becomes available. For example, in recent years TC&W operated a dedicated train of intermodal containers on flatcars between an intermodal grain loading facility at Montevideo and the CP Shoreham Yard. This train carried identity preserved grains and would typically operate through the Kenilworth Corridor at night. Also, TC&W at times delivers loaded cars originated on its lines to a barge terminal at Savage or to a barge terminal at Camden for transloading. This movement occurs or doesn't depending upon the relative prices of grain and grain transportation.

As a smaller regional railroad, it is necessary for TC&W to mesh its operations with those of its much larger connecting railroads, especially CP and UP. TC&W's current operating pattern is based upon the need to deliver outbound cars to connecting railroads in the morning so that they may be switched and incorporated into outbound trains scheduled later in the day. Similarly, inbound cars for TC&W tend to arrive at the connecting yards at night and are switched and available for TCW crews to pick up during first shift the next day. Hence the operation through the Kenilworth Corridor of both TCW's daily freight trains and the ethanol and coal trains is determined by the operating requirements of TC&W's major connections.

Between Interstate County Highway 62 and Lake Street, the TC&W operates on track owned by the CP. Between Lake Street and Cedar Lake Junction, the TC&W operates on track owned by the Hennepin County Regional Rail Authority.

East of Cedar Lake Junction, TC&W uses the tracks of other railroads to reach the interchange yards mentioned above or the Camden barge terminal. At Cedar Lake Junction, eastbound TC&W trains enter the BNSF Wayzata Subdivision. TC&W eastbound trains hold at Cedar Lake Junction or Cedar Lake Parkway (depending upon train length and where the train can hold without blocking any street crossings) until advised over the radio by the BNSF dispatcher that they have permission to enter BNSF trackage and proceed east. BNSF cooperates with TC&W to expedite TC&W's movement but if traffic is heavy on the single-track BNSF line, TC&W crews must wait for it to clear.

To transfer to the CP tracks running north-south through St. Louis Park the TC&W utilizes the steeply graded switchback sidings at 'Skunk Hollow' in the vicinity of Louisiana Avenue. Longer trains must be broken into shorter sections in order to make this transfer. TC&W uses this interchange point to reach the Savage barge terminal. Due to current market conditions, this movement is not currently occurring but could resume if market conditions favoring movement of grain by barge develop. The TC&W also uses this interchange point for locomotive maintenance movements and to interchange with Progressive Rail Incorporated.

Although TC&W does not handle any doublestack container traffic at this time[5], it does have sufficient vertical clearances on its lines to do so.

[5] The identity preserved grain movement used single-stacked containers on flatcars.

FREQUENTLY ASKED QUESTIONS

How many trains are <u>currently</u> operating in the Kenilworth Corridor; what length are these trains and what type of cargo do they carry?

From Twin Cities & Western (TCW) railroad:

Freight traffic can and does vary a lot depending on business and economic decisions made by the railroads as they accommodate customer needs. At this time, the following characterizes traffic in the Kenilworth Corridor, but see question #3 to learn more:

Currently the Twin Cities & Western (TC&W) operates two trains into the Twin Cities from Hopkins six to seven days per week. Both trains work in and out of the Hopkins/Minnetonka/St. Louis Park area. Between the two trains there is an average of 50 - 75 cars and seasonally can exceed 100 cars. They carry grain on the way to St. Paul and return via the same route.

TC&W also runs longer "unit" trains. The number of unit trains varies per week. Some weeks there might be none and some weeks there might be 3, with an average of 5 - 7 unit trains per month, at an average length per train of 80 to 100 cars. These unit trains are carrying ethanol or coal. The ethanol trains return via the same route. The coal trains return via another route, not along the Kenilworth line.

While typical train loads currently traveling on the Kenilworth line carry grain with fewer numbers of trains carrying ethanol and coal, other materials may also be transported based on customer needs.

What are TCW's growth plans?

From Twin Cities & Western (TCW) railroad:

We have been growth oriented since we purchased the rail line in 1991, but our growth depends on the growth of the south central Minnesota economy. Since we are a short line, you do not see "through" train traffic on our line (compared to Seattle-Chicago train traffic that goes over the BNSF through Minnesota, etc.). It is highly unlikely, but not impossible that through traffic would use our line to get from points east of Minnesota to points west of Minnesota – never say never, but not on the horizon now.

We have seen a change in interest in shipping via rail once fuel prices rose a few years ago, so I would think we will see moderate growth going forward. 15 years ago we could

not have foreseen the growth in the ethanol industry, so today we cannot predict beyond 3 years what additional possibilities are out there. With respect to grain, we currently have the right to operate on the MN&S corridor, both north to get to the Camden river terminal in north Minneapolis as well as south to get to the Savage river terminals. The river market is largely dependent on the rates the ocean ships charge to get to Asia from the Pacific Northwest ports compared to the US Gulf ports. In the period 1998-2002, the rates favored shipping to Asia via the US Gulf through the Panama Canal to Asia (we shipped over 6000 cars via the MN&S track), but since 2002 the rates have favored the Pacific Northwest ports. With the expansion of the Panama Canal scheduled for completion in 2013, we may very well see a return of that traffic, but that traffic will traverse the MN&S regardless of whether the re-route occurs or not.

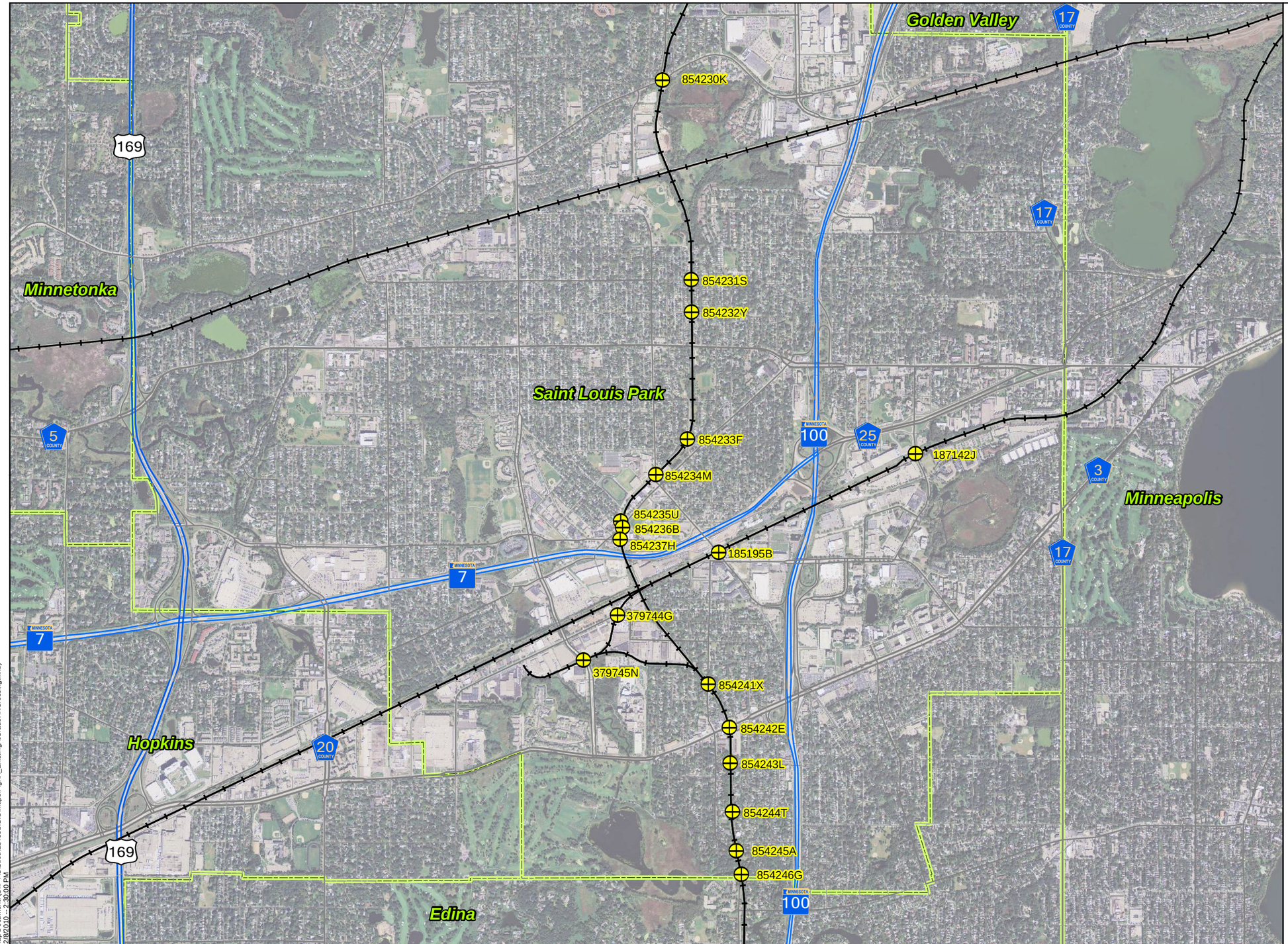
How many trains are <u>currently</u> operating on the MN&S Line; what length are these trains and what type of cargo do they carry?

From Canadian Pacific:

Canadian Pacific is the only company running trains on the MN&S line today. TCW has trackage rights, but is not currently running trains on the MN&S line. The Canadian Pacific (CP) operates one local assignment, round trip, 5 days per week on this property. The length of the train is variable, as a number of the commodities on the line are seasonal in nature. Typically, the size ranges between 10-30 cars per day. Generally, the commodities going through this area include salt (water softening and deicing), plastic pellets, scrap materials (mostly metal), lumber, brick and cement. Due to the downturn in the economy and construction, in particular, volumes over the last two years have been low. Volumes tend to be heaviest in April - October during the building season. Most of the salt moves in the fall, when companies decide to build up their inventories before winter; however, a snowy and icy winter can trigger additional loads if deicing demand gets high. In addition, the line serves a transload/warehouse facility in Bloomington which can take any type of commodity (including food grade), so the commodity mix can change easily depending upon the client using the warehouse.

Attachment F

Existing At-Grade Railroad Crossings Map



Legend

- Railroad Crossing
- Railroads
- Municipal Boundaries
- Interstate Highway
- US Trunk Highway
- Minnesota Trunk Higway
- County State Aid Highway
- Municipal State Aid Street
- County Road
- Township Road
- Municipal Street
- Ramp

N

0 1,000 2,000 4,000 Feet

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.

Map Document: (S:\PT\StStlou\114331\GIS\Maps\FigXX_ExistingAtGradeRRCrossing.mxd)
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Project: STLOU 114331
Print Date: 11/10/2010

Map by: SrH
Projection: Hennepin County NAD83 ft
Source: Mn/DOT, Mn/DNR, LMIC, City of St. Louis Park, and SEH Inc.

RAILROAD FREIGHT RELOCATION STUDY

Saint Louis Park, Minnesota

Existing At Grade RR Crossing

SEH **MEMORANDUM**

TO: City Council Members

FROM: Dave McKenzie, P.E.
Samuel Turrentine, AICP

DATE: February 2, 2011

RE: Technical Memorandum #2 revised
SEH No. STLOU 114331

Based on our review of the completed Hennepin County freight rail studies and through coordination with City staff, a recommendation was presented to Council Members at the December 13, 2010 Study Session Meeting to narrow the range of alternative freight routes based upon impacts identified in the respective studies. It is our opinion that additional review is warranted for several alternatives (see shaded cells in Table 1) to determine if the documented impacts could either be avoided/minimized through modifications/adjustments in design or through possible mitigation efforts (e.g., a freight rate subsidy).

Table 1 – Overview of Screening Recommendation

Primary Studies	Alternatives	SEH Recommendation
Freight Rail Study Evaluation of TCWR Routing Alternatives, Prepared for HCRRA, Prepared by Amfahr Consulting, Nov. 2010.	**WESTERN CONNECTION**	**Retain Alternative to Evaluate Magnitude of Freight Rate Subsidy**
	CHASKA CUT-OFF	Dismiss From Further Consideration
	MIDTOWN CORRIDOR	Dismiss From Further Consideration
	HIGHWAY 169 CONNECTOR	Dismiss From Further Consideration
Kenilworth Corridor: Analysis of Freight Rail / LRT Coexistence, Prepared for HCRRA, Prepared by R. L. Banks & Associates, Inc., Dec. 2010.	**KENILWORTH CORRIDOR**	
	▪ **Scenario 1: All Three Grade Alignments At-Grade**	**Retain Alternative to Determine if the Southwest LRT Alignment can be Adjusted to Avoid/Minimize Potential Impacts**
	▪ **Scenario 2: Trail Relocated**	**Retain Alternative to Determine if the Southwest LRT Alignment can be Adjusted to Avoid/Minimize Potential Impacts**
	▪ Scenario 3: Bicycle Trail on Structure	Dismiss From Further Consideration
	▪ Scenario 4: LRT on Structure	Dismiss From Further Consideration
	▪ Scenario 5: LRT in Tunnel	Dismiss From Further Consideration
	▪ Scenario 6: Freight and LRT Share Use of Track	Dismiss From Further Consideration
	▪ Scenario 7: LRT Single Track	Dismiss From Further Consideration
MN&S Freight Rail Study (Underway).	**MN&S SUB ALIGNMENT**	**Currently Under Study** (findings anticipated in spring 2011)

The intent of this memorandum is to provide some additional insight regarding our screening recommendation by condensing the impacts identified in the respective studies into a series of "one-pagers."

Attachments: One-Pagers (11)
sbt
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Attachment A

One-Pagers

Presented in the Following Order:

- Western Connection Alternative
- Chaska Cut-Off Alternative
- Midtown Corridor Alternative
- Highway 169 Connector Alternative
- Kenilworth Corridor Alternatives
    - Scenario 1: All Three Grade Alignments At-Grade
    - Scenario 2: Trail Relocated
    - Scenario 3: Bicycle Trail on Structure
    - Scenario 4: LRT on Structure
    - Scenario 5: LRT in Tunnel
    - Scenario 6: Freight and LRT Share Use of Track
    - Scenario 7: LRT Single Track

WESTERN CONNECTION ALTERNATIVE

Description	Reroutes all TC&W traffic west through Granite Falls and/or Appleton on the BNSF Railroad tracks.
Conclusion: Alternative needs further study to determine magnitude of subsidy	

Comments	• This alternative would reroute TC&W traffic west to Appleton and back east to the Twin Cities resulting in 122 additional route miles. This route would cause a major disruption to TC&W operations.
	• The TC&W has not shown any interest in pursuing this alternative.
	• The issues are complex and are not easily quantifiable but the some of issues are:
	  • Track upgrade on the west end of both the TC&W and the MPL lines to support the increased traffic.
	  • The BNSF track may need capacity increases. (additional sidings)
	  • The additional route miles cross 3 different BNSF subdivisions and would add 2 to 3 days per car per trip. This would decrease the TC&W car utilization rate by 10 to 25 percent. This means that their car fleet size would be increased by 10 to 25 per cent.
	  • The trackage right fee would need to negotiated with the BNSF which if even possible would be an increase over the existing rates.
	  • If the BNSF would allow TC&W train crews to operate, the issue of the crews being located in the wrong positions and additional crews would be required to operate the additional trains.
	  • This would be a continuing subside that may not a dependable funding source.
	• This alternative has many complex issues that need further study to determine a level of magnitude of any potential subside but it would be substantial. A limited reroute of the coal trains maybe a viable option.

WESTERN CONNECTION ALTERNATIVE

Evaluation Criteria	Description of Impacts
Description	Reroutes all TC&W traffic west through Granite Falls and/or Appleton on the BNSF Railroad tracks.
Freight Railroad	
Route Distance	• 122 additional miles
Trackage Rights	• This alternative requires that private freight rail companies enter into a trackage rights agreement over which public agencies have no control.
New Construction	• None
Freight Operations	• The Western Connection would not be a practical alternative for the majority of TC&W's traffic; most of the traffic either originates or terminates at points to the east or southeast of the Twin Cities.
Ownership & Maintenance Resp.	• No Changes
Sound Engineering	• Grades, curvature, clearances, and speeds are acceptable.
Customer(s)	• TC&W would need to continue using the connection at St. Louis Park and the MN&S route to reach Savage.
At-Grade Crossings	• No increase in the number of at-grade crossings.
Separations	• Not Applicable
Potential Impact to Existing or Planned Transitways	
Transitways	• No Impact
Potential Impact to Existing or Planned Trails	
Trails	• No Impact
Potential for Adverse Impacts Upon Critical Environmental Resources	
Acquisitions/ Relocations	• Not Applicable
Subgrade/ Earthworks	• Not Applicable
Historic Properties	• Not Applicable
Water and Natural Resources/ Groundwater	• Not Applicable
Parkland/Section 4(f)	• Not Applicable
Noise/Vibration	• Not Applicable
Estimate of Total Project Cost Including Contingencies	
Costs	• Undefined

CHASKA CUT-OFF ALTERNATIVE

Description	Reroutes traffic through Chaska on the Union Pacific (UP) Railroad.
Conclusion: Alternative is not viable	

Comments	• Represents a challenging and expensive project to complete.
	
	• This alternative has the potential to provide TC&W with a route to/from the Twin Cities, there are a number of significant drawbacks associated with it:
	  • The long grade between Chaska and Cologne make this an unacceptable operating route.
	
	  • The impact on reintroducing freight rail into downtown Chaska. The City of Chaska has provided comment to this alternative and believes that the costs and impacts are greatly understated.
	
	  • The TC&W has provided comments that this would eliminate a large part of their existing infrastructure and the UP RR track has inadequate capacity to operate efficiently on.
	
	  • The lack of capacity on the UP RR track from Shakopee to St Paul would be major operating obstacle and the location of the UP RR connections in St Paul would require the TC&W to climb back up the hill in St Paul to get to their interchange points.
	
	  • The environmental permitting issues to cross the Minnesota River would be a major hurdle and the chance of obtaining a permit to cross the river and the wildlife area are remote.
	
	• In our opinion, this alternative is not viable.

CHASKA CUT-OFF ALTERNATIVE

Evaluation Criteria	Description of Impacts
Freight Railroad	
Route Distance	• 102.6 miles
Trackage Rights	• This alternative requires a new trackage rights agreement with UP. This would entail adding TC&W trains to an already congested corridor. An economical trackage rights agreement may not be possible.
New Construction	• 10.8 miles of new track
Freight Operations	• While this alternative gives the TC&W access into St. Paul, it does not provide an optimal location and complicates access into the A Yard. Additional storage capacity may be required that is not in any current cost estimates.
Ownership & Maintenance Resp.	• Ownership and maintenance of the new track sections would need to be negotiated.
Sound Engineering	• The new section of track from Chaska to Cologne would be a challenge to maintain a reasonable grade (there is a 200' difference in elevation between Chaska and Carver). There are also speed restrictions on several sections of the UP track.
Customer(s)	• This alternative provides the possibility for a direct connection to the Port of Savage for grain deliveries via UP trackage (subject to a trackage rights agreement). Otherwise, TC&W would continue to reach Savage via the existing St. Louis Park connection. • By restoring service to the route through Chaska, TC&W could serve a new customer (United Sugars) that has traditionally received sugar by rail. However, this alternative results in the loss of one customer along the Cologne to Eden Prairie segment.
At-Grade Crossings	• Total No. of Crossings = 45 • No. of New Crossings = 5 • No. of St. Louis Park Crossings = 0
Separations	• Requires new crossing over Trunk Highway 212 approximately one mile east of Cologne. • Requires construction of a new bridge over a deep creek valley between Carver and Chaska. • Requires new crossing over County Road (CR) 40 immediately west of Chaska. • Requires construction of two principal structures to cross the Minnesota River valley between Chaska and Shakopee.
Potential Impact to Existing or Planned Transitways	
Transitways	• No impact to existing or planned transitways.
Potential Impact to Existing or Planned Trails	
Trails	• This alternative is not anticipated to have an impact on any existing or planned trails.
Potential for Adverse Impacts Upon Critical Environmental Resources	
Acquisitions/ Relocations	• No. of Structures Displaced = 19 • No. of Housing Units Displaced = 25 • Value of Properties = $9.4 million
Subgrade/ Earthworks	• Minor earthwork would be required to restore the 7.65 miles of abandoned right-of-way (from Cologne to Chaska) to a usable condition. Significant earthwork would be required to construct approaches to the TH 212 overpass (east of Cologne), span CR 40 (southwest of Chaska) and to cross the Minnesota River Valley.
Historic Properties	• Impact on historic properties would need to be assessed.
Water and Natural Resources	• Existence of wetlands and other protected areas (Minnesota River Valley).
Parkland/Section 4(f)	• Impact of Minnesota River Valley crossing would need to be assessed.
Noise/Vibration	• Impact of noise/vibration would need to be assessed.
Estimate of Total Project Cost Including Contingencies	
Costs	• Construction $122.0 Million • Right of Way Acquisition $18.0 Million • Total $129.8 Million

MIDTOWN CORRIDOR ALTERNATIVE

Description	Reestablishes freight traffic in the 29th Street (Midtown) corridor.
Conclusion: Alternative is not viable	

Comments	• Represents a challenging and expensive project to complete.
	• While it may be possible to reinstall the abandoned freight rail tracks along the Midtown Corridor between West Lake Street and TH 55/Hiawatha Avenue, there are significant barriers to implementation.
	  • The complex and complicated juncture of roads, freight rail, trail and LRT in the vicinity of the Highway 55 Corridor, makes this alternative very difficult to build.
	  • The need to lower the grade to allow for modern clearance standards in a confined area creates many unknown issues and the cost estimate maybe be low.
	  • The corridor has been identified as a transit corridor for a street car system.
	  • Many of the overhead bridges have been designated as historic or potential historic that may cause issues with permitting.
	  • The CP bridge over the Mississippi River is operational for the limited rail traffic that it currently receives but would need work to allow the TC%W train to operate daily on this line.
	• It is our opinion that this is not a viable option.

MIDTOWN CORRIDOR ALTERNATIVE

Evaluation Criteria	Description of Impacts
Description	Reestablishes freight traffic in the 29th Street (Midtown) corridor.
Freight Railroad	
Route Distance	• 78.0 miles (Cologne to St Paul)
Trackage Rights	• This alternative would require revising the existing Canadian Pacific (CP)/TC&W trackage rights agreement.
New Construction	• 4.4 miles of new track
Freight Operations	• This alternative was used by TC&W prior to 1998 and is considered acceptable with the exception that vertical clearances would need to increase by six feet to comply with current state standards.
Ownership & Maintenance Resp.	• It is assumed that TC&W would be responsible for ownership and maintenance of the newly constructed 4.4 miles of tracks from West Lake Street to TH 55/Hiawatha Avenue.
Sound Engineering	• If it is assumed that sufficient clearance under the Midtown Corridor bridges and a grade-separated connection across TH 55/Hiawatha Avenue can be made, the Midtown Corridor can meet accepted engineering conditions for freight rail operations.
Customer(s)	• TC&W would need to continue using the connection at St. Louis Park and the MN&S route to reach Savage.
At-Grade Crossings	• Total No. of Crossings = 29; No. of New Crossings = 4 (James, Irving, South 21st and Minnehaha Avenues); No. of St. Louis Park Crossings = 2; No. of Crossing Closures = 2 (South 5th and Humboldt Avenues)
Separations	• Requires a grade separated crossing of the TH 55/Hiawatha Avenue & 28th Street Intersection (this represents a significant physical constraint for this alternative). • Requires the reconstruction of the Dean Parkway and E. Calhoun Parkway bridges in the Chain of Lakes to accommodate both freight rail and the Midtown Greenway. • Requires the modification of four recently constructed bridges along the Midtown Corridor to provide adequate overhead clearance. • The condition of the bridge over the Mississippi River is questionable.
Potential Impact to Existing or Planned Transitways	
Transitways	• This alternative requires the reconstruction of the Hiawatha LRT from just south of E. 28th Street to a point north of E. 26th Street. This alternative is also in direct conflict with the proposed Midtown Streetcar, which is identified in the region's TPP as a potential future transitway.
Potential Impact to Existing or Planned Trails	
Trails	• While the majority of the existing Midtown Greenway commuter bicycle trail would remain in place some trail relocation would be necessary. The main impact to the Midtown Greenway commuter bicycle trail is the need to remove and reconstruct the recently opened Sabo Bridge.
Potential for Adverse Impacts Upon Critical Environmental Resources	
Acquisitions/ Relocations	• No. of Structures Displaced = 1 • No. of Housing Units Displaced = 0 • Value of Properties = $2.8 million
Subgrade/ Earthworks	• Excavation of 6 feet of soil along an abandoned freight rail line is highly likely to encounter issues associated with contamination. If such conditions are encountered, disposal would add to project cost. The segment requiring significant construction is from West Lake Street to TH 55/Hiawatha Avenue where the rail bed needs to be lowered through excavation by approximately six feet.
Historic Properties	• Midtown Corridor is on the National Register of Historic Places. It is understood that any changes and/or modifications to the existing corridor must be approved by the State Historic Preservation Office (SHPO).
Water Resources	• No Identified Impacts
Parkland/Section 4(f)	• The land underneath the bridges over Dean Parkway and E. Calhoun Parkway are owned by the Minneapolis Parks and Recreation Board (MPRB) and is classified as parkland subject to federal 4(f) requirements. Any impact to parklands needs to be evaluated closely and coordinated must occur with the MPRB prior to any use of their land for a transportation project.
Noise/Vibration	• Impact of noise/vibration would need to be assessed.
Estimate of Total Project Cost Including Contingencies	
Costs	• Construction: $189.6 Million • Right of Way: $ 6.0 Million • Total: $195.6 million

HIGHWAY 169 CONNECTOR ALTERNATIVE

Description	Reestablishes freight traffic on the BNSF abandoned track from Hopkins to St. Louis Park.
Conclusion: Alternative is not viable	

Comments	• Represents a challenging and expensive project to complete.
	• While it may be possible to reinstall the abandoned freight rail tracks along the TH 169 corridor between Excelsior Boulevard and the BNSF Wayzata Subdivision, there are significant barriers to implementation:
	  • Right-of-way purchases would be significant including purchasing of 65 parcels of land and 34 structures.
	  • The Highway 169 interchange with Excelsior Boulevard would need to reconfigured.
	  • The North Cedar Lake Trail would need to be relocated.
	  • The track ownership and maintenance would need to be determined.
	
	• It is our opinion that this is not a viable alternative.

HIGHWAY 169 CONNECTOR ALTERNATIVE

Evaluation Criteria	Description of Impacts
Description	Reestablishes freight traffic on the BNSF abandoned track from Hopkins to St. Louis Park.
Freight Railroad	
Route Distance	• 81.2 miles (from Cologne to St. Paul)
Trackage Rights	• This alternative would require a revision to the existing BNSF/TC&W trackage rights agreement.
New Construction	• 2.7 miles of new track
Freight Operations	• TC&W's connections to points throughout the Twin Cities terminal area would be very much as they are today. • Upwards of 135+ cars of storage will be lost with this option.
Ownership & Maintenance Resp.	• To implement this alternative TC&W must agree to own and maintain the 2.7 miles of new trackage installed to provide the connection between the CP Bass Lake Spur and the BNSF Wayzata Subdivision.
Sound Engineering	• In general, this alternative can be built to freight industry standards for grades, curves, and clearance.
Customer(s)	• This alternative does not provide for a direct connection to the Port of Savage for grain deliveries. TC&W would reach Savage via the existing St. Louis Park connection or via a new BNSF connection to the MN&S route.
At-Grade Crossings	• Total No. of Crossings = 27 • No. of New Crossings = 6 (2 in Hopkins & 4 in St. Louis Park) • No. of St. Louis Park Crossings = 4
Separations	• Requires reconfiguration of the TH 169/Excelsior Boulevard Interchange. • Requires replacement of the Minnetonka Boulevard Bridge to accommodate rail traffic. • Requires the construction of a new railroad bridge over Minnehaha Creek at a location just north of W. 36th Street in St. Louis Park.
Potential Impact to Existing or Planned Transitways	
Transitways	• This alternative would require a grade separated crossing of freight railroad and Southwest LRT in Hopkins.
Potential Impact to Existing or Planned Trails	
Trails	• This alternative assumes that the North Cedar Lake Trail owned and operated by Three Rivers Park District would be relocated to an undetermined location.
Potential for Adverse Impacts Upon Critical Environmental Resources	
Acquisitions/ Relocations	• No. of Structures Displaced = 34 • No. of Housing Units Displaced = 131 • Value of Properties = $38.0 million • There is also a cell phone tower located on the right-of-way immediately north of the Hwy 7 overpass in St. Louis Park. This cell phone tower would need to be relocated as part of the project.
Subgrade/ Earthworks	• To implement this alternative requires earthwork for the 2.7 miles of abandoned BN line parallel to TH 169. Construction of the line would require that the roadbed be lowered at certain locations to permit rail equipment to pass safely beneath overhead bridges.
Historic Properties	• No Identified Impacts
Water and Natural Resources/ Groundwater	• Impact of bridge over Minnehaha Creek would need to be assessed.
Parkland/Section 4(f)	• No Identified Impacts.
Noise/Vibration	• Impact of noise/vibration would need to be assessed.
Estimate of Total Project Cost Including Contingencies	
Costs	• Construction: $ 49.0 Million • Right of Way : $72.6 Million • Total: $121.6 Million

SCENARIO #1: ALL THREE ALIGNMENTS AT-GRADE (FREIGHT RAIL, LRT AND BICYCLE TRAIL)

Description	Assumes that all three facilities are at-grade and adjacent to each other through the Kenilworth Corridor.
Conclusion: This scenario is not viable but with adjustments to the LRT alignment the impacts maybe minimized.	
Comments	• Scenario 1 would be workable only with acquisition of additional right-of-way. The scenario outlined above assumed the LRT alignment was fixed and the impacts were computed. The assumption is that the townhouse development on the northwest side of the Kenilworth Corridor and Lake Street would be purchased. • There maybe park land impacts that will need to be further studied. • There will need to be design changes in the station to allow for the freight rail track to parallel the LRT tracks. • There may be less impact with adjustments to the freight, LRT, and trail alignments. The objective would be to minimize the additional rght of way purchases that would be necessary. • This should be the subject of additional studies.

SCENARIO #1: ALL THREE ALIGNMENTS AT-GRADE (FREIGHT RAIL, LRT AND BICYCLE TRAIL)

Evaluation Criteria	Description of Impacts
Description	Assumes that all three facilities are at-grade and adjacent to each other through the Kenilworth Corridor.
Freight Railroad (Constructed At-Grade)	
Route Distance	• Same As Present Route
Trackage Rights	• Existing Agreement
New Construction	• Approximately 2.5 miles of new track.
Freight Operations	• Maintains current freight operations.
Ownership & Maintenance Resp.	• No Change
Sound Engineering	• Grades, curvature, clearances, and speeds are acceptable.
Customer(s)	• TC&W would need to continue using the connection at St. Louis Park and the MN&S route to reach Savage.
At-Grade Crossings	• There are four (4) at-grade crossings located between Louisiana Avenue and where TC&W joins the BNSF main track at Cedar Lake Junction. • Current plans call for an at-grade commuter bicycle trail crossing at Wooddale Avenue Station to bring the commuter bicycle trail from the south side of the LRT alignment to the north side.
Separations	• Requires construction of an additional bridge to host the freight rail track at Cedar Isles Channel.
Southwest LRT (Constructed through corridor along the LPA alignment)	
Existing/Planned Transitways	• The LRT alignment can be constructed according to accepted engineering practice. • Requires construction of an additional LRT bridge west of Wooddale Avenue. • Considerable redesign of five (5) Southwest LRT stations will be necessary to ensure that transit patrons experience safe and secure access to the station platforms from both sides of the LRT tracks even when a freight train is passing.
Kenilworth Commuter Bicycle Trail (Remains along existing alignment with adjustments noted in the LPA plans)	
Existing Trails	• Reintroduction of freight service would mean adding an at-grade crossing of the freight tracks and the associated inconvenience to bicyclists of needing to wait for freight trains in addition to LRT trains.
Potential for Adverse Impacts Upon Critical Environmental Resources	
Acquisitions/ Relocations	• Adding the freight track back to the Kenilworth Corridor following the construction of LRT would require the acquisition of a 33-57 housing units and the disruption of an entire townhouse community.
Subgrade/ Earthworks	• No Identified Issues.
Historic Properties	• Implementation of this scenario may generate an adverse impact on Cedar Lake Parkway with LRT elevated and freight rail at-grade. Due to the placement of the freight rail tracks west of the LRT there may be additional impacts to historic properties.
Water and Natural Resources/ Groundwater	• Reconstruction of the freight track would require the construction of an additional bridge over Cedar-Isles Channel but this would not be expected to negatively affect water quality or stream flow. • Implementation of this scenario would not generate additional negative impact on groundwater flow when compared against the current proposal to construct LRT through the Kenilworth Corridor.
Parkland/Section 4(f)	• Placement of the freight rail track 25 feet from the centerline of the LRT track places the freight rail track into Cedar Lake Park which may constitute a constructive use of that 4f property. If it is determined that this is a constructive use, then an evaluation of all reasonable and prudent alternatives must be completed before the project could proceed.
Noise/Vibration	• Impact of noise/vibration would need to be assessed.
Estimate of Total Project Cost Including Contingencies	
Costs	• Construction: $30-$38 Million • Right of way: $21 Million • Total $51-59 million (Preliminary Estimate as Presented at the Special Joint Study Session of the City Council and School Board on November 29, 2010)

SCENARIO #2: FREIGHT AND LRT AT-GRADE; TRAIL RELOCATED

Description	Envisions that the existing commuter bicycle trail is removed from the corridor and that the freight railroad is constructed in the space vacated by the trail.
Conclusion: This scenario is not viable but with adjustments to the LRT alignment the impacts maybe minimized.	
Comments	• Scenario 2 would be workable only with acquisition of additional right-of-way. This scenario assumed that the LRT alignment was fixed, so the freight rail is on the east side of the LRT and requires the acquisition of the condo development on the east side of the Corridor. • There maybe parkland impacts that will need to be further studied. • There will need to be design changes in the station to allow for the freight rail track to parallel the LRT tracks. • There may be less impact with adjustments to the freight, LRT, and trail alignments. The objective would be to minimize the additional rght of way purchases that would be necessary. • • There needs to be additional work to find an acceptable alignment for the trail. The two alternatives in the Banks' study were located on existing streets, which decreases the functionality of the commuter trail. Additional alignments should be studied. This should be the subject of additional studies.

SCENARIO #2: FREIGHT AND LRT AT-GRADE; TRAIL RELOCATED

Evaluation Criteria	Description of Impacts
Description	Envisions that the existing commuter bicycle trail is removed from the corridor and that the freight railroad is constructed in the space vacated by the trail.
Freight Railroad (Constructed At-Grade)	
Route Distance	• Same As Present Route
Trackage Rights	• Existing Agreement
New Construction	• Approximately 2.5 miles of new track.
Freight Operations	• Maintains current freight operations.
Ownership & Maintenance Resp.	• No Change
Sound Engineering	• Grades, curvature, clearances, and speeds are acceptable.
Customer(s)	• TC&W would need to continue using the connection at St. Louis Park and the MN&S route to reach Savage.
At-Grade Crossings	• There are four (4) at-grade crossings located between Louisiana Avenue and where TC&W joins the BNSF main track at Cedar Lake Junction.
Separations	• Requires construction of an additional bridge for the freight rail track at Cedar Isles Channel.
Southwest LRT (Constructed through corridor along the LPA alignment)	
Existing/Planned Transitways	• The LRT alignment can be constructed according to accepted engineering practice. • Requires construction of an additional LRT bridge west of I-394. • Considerable redesign of five (5) Southwest LRT stations will be necessary to ensure that transit patrons experience safe and secure access to the station platforms from both sides of the LRT tracks even when a freight train is passing.
Kenilworth Commuter Bicycle Trail (Relocated)	
Existing Trails	• Rerouted outside of the corridor, at least between the West Lake St. and 21st St. Stations. Two potential re routes exist, one on each side of the corridor. Neither of these alternatives is desirable from the standpoint of continuing to provide the high quality mobility and riding experience provided by the existing trail. The alternate routes may provide connectivity but are a poor replacement for the high-speed, high quality link provided by the Kenilworth Trail. This link in the commuter bicycle network essentially would disappear.
Potential for Adverse Impacts Upon Critical Environmental Resources	
Acquisitions/ Relocations	• Up to 117 housing units would need to be acquired from a condominium development and other properties on the east side of the corridor.
Subgrade/ Earthworks	• No Identified Issues.
Historic Properties	• Implementation of this scenario may generate an adverse impact on Cedar Lake Parkway with LRT elevated and freight rail at-grade. Due to the placement of the freight rail tracks west of the LRT there may be additional impacts to historic properties.
Water and Natural Resources/ Groundwater	• Reconstruction of the freight track would require the construction of an additional bridge over Cedar-Isles Channel but this would not be expected to affect water quality or stream flow negatively. • The freight alignment would not encroach on the prairie grass restoration project on the north end of the corridor. • Implementation of this scenario would not produce additional negative impact on groundwater flow when compared against the current proposal to construct LRT through the Kenilworth Corridor.
Parkland/Section 4(f)	• Implementation of this scenario would not produce additional negative impact on historic properties when compared against the current proposal to construct LRT through the Kenilworth Corridor.
Noise/Vibration	• Impact of noise/vibration would need to be assessed.
Estimate of Total Project Cost Including Contingencies	
Costs	• Construction: $44 -55 Million • Right of Way: $65 Million • Total$109-120 million (Preliminary Estimate as Presented at the Special Joint Study Session of the City Council and School Board on November 29, 2010)

SCENARIO #3: FREIGHT AND LRT AT-GRADE; BICYCLE TRAIL ON STRUCTURE

Description	Envisions that the existing commuter bicycle trail is removed and placed on an aerial structure through the corridor and that the freight railroad is constructed in the space vacated by the trail.
Conclusion: This is not a viable option	

Comments	• An elevated trail structure is design which would result in operational and safety issues.
	  • The elevated trail would loose its full functionality because of the few access points that would be available.
	  • The confined space of the trail could cause safety concerns.
	  • The location of the structure over the LRT tracks cause s safety issues with the close proximity of the overhead cantanary lines to the trail.
	  • The maintenance cost of the structure would be substantial.
	
	• In our opinion, this is not a viable alternative.

SCENARIO #3: FREIGHT AND LRT AT-GRADE; BICYCLE TRAIL ON STRUCTURE

Evaluation Criteria	Description of Impacts
Description	Envisions that the existing commuter bicycle trail is removed and placed on an aerial structure through the corridor and that the freight railroad is constructed in the space vacated by the trail.
Freight Railroad (Constructed At-Grade)	
Route Distance	• Same As Present Route
Trackage Rights	• Existing Agreement
New Construction	• Approximately 2.5 miles of new track.
Freight Operations	• Maintains current freight operations.
Ownership & Maintenance Resp.	• No Change
Sound Engineering	• Grades, curvature, clearances, and speeds are acceptable.
Customer(s)	• TC&W would need to continue using the connection at St. Louis Park and the MN&S route to reach Savage.
At-Grade Crossings	• There are four (4) at-grade crossings located between Louisiana Avenue and where TC&W joins the BNSF main track at Cedar Lake Junction.
Separations	• It may be necessary to lengthen the West Lake Street Bridge or to remove the slope paving at the eastern abutment to provide sufficient separation between the NB LRT track, which currently also is assumed to be routed through the easternmost bay, and the freight track.
Southwest LRT (Constructed through corridor along the LPA alignment)	
Existing/Planned Transitways	• Situating the freight track on the east side of the LRT tracks through the Kenilworth Corridor, an additional LRT bridge would need to be constructed to allow the freight rail track to cross underneath the LRT tracks and connect with the BNSF Railway track near Penn Avenue. • Considerable redesign of five (5) Southwest LRT stations will be necessary to ensure that transit patrons experience safe and secure access to the station platforms from both sides of the LRT tracks even when a freight train is passing.
Kenilworth Commuter Bicycle Trail (Placed on aerial structure through the corridor, at least between the West Lake St. and 21st St. Stations)	
Existing Trails	• Constructing an aerial structure to host the commuter bicycle trail through the Kenilworth Corridor would not be considered accepted engineering practice because of cost, potential environmental impacts and safety/security issues associated with such a structure. Although the connectivity of the commuter bicycle network would be preserved, the full functionality of the existing trail would not be preserved because residents of the adjacent neighborhoods would no longer enjoy convenient access to the trail and the trail experience would be altered irrevocably.
Potential for Adverse Impacts Upon Critical Environmental Resources	
Acquisitions/ Relocations	• Up to 117 housing units would need to be acquired.
Subgrade/ Earthworks	• No Identified Issues.
Historic Properties	• Implementation of this scenario may generate an adverse impact on Cedar Lake Parkway with LRT elevated and freight rail at-grade. Due to the placement of the freight rail tracks west of the LRT there may be additional impacts to historic properties.
Water and Natural Resources/ Groundwater	• Reconstruction of the freight track would require the construction of an additional bridge over Cedar-Isles Channel but this would not be expected to affect water quality or stream flow negatively. • The freight alignment would not encroach on the prairie grass restoration project on the north end of the corridor. • Implementation of this scenario would not have additional negative impact on groundwater flow when compared against the current proposal to construct LRT through the Kenilworth Corridor.
Parkland/Section 4(f)	• Implementation of this scenario would not produce additional negative impact on historic properties when compared against the current proposal to construct LRT through the Kenilworth Corridor.
Noise/Vibration	• Impact of noise/vibration would need to be assessed.
Estimate of Total Project Cost Including Contingencies	
Costs	• Construction : $71-$88 Million • Right of Way : $0 • Total$71-88 million (Preliminary Estimate as Presented at the Special Joint Study Session of the City Council and School Board on November 29, 2010)

SCENARIO #4: FREIGHT AND BICYCLE TRAIL AT-GRADE; LRT ON STRUCTURE

Description	Envisions that the LRT alignment is constructed on an aerial structure through the corridor and that the existing freight rail track and commuter bicycle trail remain in their current location.
Conclusion: Alternative is not viable	

Comments	• The Alternative of an elevated LRT track is undesirable based on:
	  • Increase construction and maintenance cost.
	  • The visual impact of a LRT grade separation over Lake Street.
	  • The impact to the LRT station design because fo the elevated structure.
	
	• In our opinion this alternative not viable..

SCENARIO #4: FREIGHT AND BICYCLE TRAIL AT-GRADE; LRT ON STRUCTURE

Evaluation Criteria	Description of Impacts
Description	Envisions that the LRT alignment is constructed on an aerial structure through the corridor and that the existing freight rail track and commuter bicycle trail remain in their current location.
Freight Railroad (Constructed At-Grade)	
Route Distance	• Same As Present Route
Trackage Rights	• Existing Agreement
New Construction	• Approximately 2.5 miles of new track.
Freight Operations	• Maintains current freight operations.
Ownership & Maintenance Resp.	• No Change
Sound Engineering	• Grades, curvature, clearances, and speeds are acceptable.
Customer(s)	• TC&W would need to continue using the connection at St. Louis Park and the MN&S route to reach Savage.
At-Grade Crossings	• There are four (4) at-grade crossings located between Louisiana Avenue and where TC&W joins the BNSF main track at Cedar Lake Junction.
Separations	• None
Southwest LRT (Constructed through corridor along the LPA horizontal alignment but placed on aerial structure through the corridor above freight rail.)	
Existing/Planned Transitways	• The construction of an aerial structure through the Kenilworth Corridor presents a significant engineering challenge. An aerial LRT structure would cross the West Lake Street Bridge at an high elevation, be more expensive than other available alternatives, create noise and aesthetic impacts that could not be mitigated, produce other unpredictable environmental impacts and invite continuing maintenance, safety and security problems. • Even with an aerial structure hosting LRT, placing the freight track on the north side of the LRT track still would require an additional LRT bridge west of Wooddale Avenue. • Considerable redesign of five (5) Southwest LRT stations will be necessary to ensure that transit patrons experience safe and secure access to the station platforms from both sides of the LRT tracks even when a freight train is passing.
Kenilworth Commuter Bicycle Trail (Remains along existing alignment with adjustments noted in the LPA plans)	
Existing Trails	• Preserves the commuter bicycle trail through the corridor.
Potential for Adverse Impacts Upon Critical Environmental Resources	
Acquisitions/ Relocations	• Requires no additional right-of-way. To accomplish this, an LRT aerial structure would need to be at full height through those sections of the corridor that were too narrow.
Subgrade/ Earthworks	• No Identified Issues.
Historic Properties	• Implementation of this scenario may generate an adverse impact on Cedar Lake Parkway with LRT elevated and freight rail at-grade. Due to the placement of the freight rail tracks west of the LRT there may be additional impacts to historic properties.
Water and Natural Resources/ Groundwater	• Reconstruction of the freight track would require the construction of an additional bridge over Cedar-Isles Channel if the aerial structure has some back to ground level by this point but this would not be expected to affect water quality or stream flow negatively. • The freight alignment would not encroach on the prairie grass restoration project on the north end of the corridor. • Implementation of this scenario would not produce additional negative impact on groundwater flow when compared against the current proposal to construct LRT through the Kenilworth Corridor.
Parkland/Section 4(f)	• Implementation of this scenario would not produce additional negative impact on historic properties when compared against the current proposal to construct LRT through the Kenilworth Corridor.
Noise/Vibration	• Impact of noise/vibration would need to be assessed.
Estimate of Total Project Cost Including Contingencies	
Costs	• Construction: $112-$139 Million • Right of Way: $0 • Total: $112-139 million (Preliminary Estimate as Presented at the Special Joint Study Session of the City Council and School Board on November 29, 2010)

SCENARIO #5: FREIGHT AND BICYCLE TRAIL AT-GRADE; LRT IN TUNNEL

Description	Envisions that the LRT alignment is constructed in a tunnel through the corridor and that the existing freight rail track and commuter bicycle trail remain in their current location.
Conclusion: Alternative is not viable	

Comments	• Results in characteristics, costs or impacts that would be inconsistent with the application of sound engineering judgment.
	  • Placing LRT in a tunnel adds both complexity and costs to the construction of the Southwest LRT system.
	  • The maintenance costs will increase for the LRT system
	  • The ground water flow could be interrupted affecting the water levels at Cedar Lake and Lake of the Isles.
	  • The construction coordination with the tunnel and maintain a freight railroad will be a major cost component to the budget.
	
	• In our opinion this is not a viable alternative

SCENARIO #5: FREIGHT AND BICYCLE TRAIL AT-GRADE; LRT IN TUNNEL

Evaluation Criteria	Description of Impacts
Description	Envisions that the LRT alignment is constructed in a tunnel through the corridor and that the existing freight rail track and commuter bicycle trail remain in their current location.
Freight Railroad (Constructed At-Grade over LRT Alignment)	
Route Distance	• Same As Present Route
Trackage Rights	• Existing Agreement
New Construction	• Approximately 2.5 miles of new track.
Freight Operations	• Maintains current freight operations.
Ownership & Maintenance Resp.	• No Change
Sound Engineering	• Grades, curvature, clearances, and speeds are acceptable.
Customer(s)	• TC&W would need to continue using the connection at St. Louis Park and the MN&S route to reach Savage.
At-Grade Crossings	• There are four (4) at-grade crossings located between Louisiana Avenue and where TC&W joins the BNSF main track at Cedar Lake Junction.
Separations	• None
Southwest LRT (Constructed through corridor along the LPA horizontal alignment but placed in tunnel through/under the corridor.)	
Existing/Planned Transitways	• The Kenilworth Corridor is not a location that represents a typical application of a tunnel with respect to conventional LRT design purposes. From the standpoint of engineering, constructing a tunnel at this location would not be considered accepted engineering practice because of cost and potential environmental impacts, given the availability of other reasonable alternatives. Another engineering issue with a cut and cover tunnel in this area is that the elevation of the track within the tunnel would be the same as or below the stream bed of the Cedar-Isles Channel, which is clearly undesirable. • Considerable redesign of five (5) Southwest LRT stations will be necessary to ensure that transit patrons experience safe and secure access to the station platforms from both sides of the LRT tracks even when a freight train is passing.
Kenilworth Commuter Bicycle Trail (Remains along existing alignment with adjustments noted in the LPA plans)	
Existing Trails	• Preserves the commuter bicycle trail through the corridor.
Potential for Adverse Impacts Upon Critical Environmental Resources	
Acquisitions/ Relocations	• Requires no additional right-of-way. To accomplish this, an LRT tunnel would need to be at full depth through those sections of the corridor where right-of-way width is restricted. At a minimum, the tunnel would need to extend under Cedar Lake Parkway. But there is the potential that the tunnel may be required the full length of the corridor to prevent right-of-way takings north of Cedar Lake Parkway, particularly in the vicinity of the 21st Street Station.
Subgrade/ Earthworks	• No Identified Issues.
Historic Properties	• Implementation of this scenario would not produce additional negative impacts on historic properties when compared against the current proposal to construct LRT through the Kenilworth Corridor.
Water and Natural Resources/ Groundwater	• A significant impediment to the construction of a cut and cover tunnel through the Kenilworth Corridor is the presence of the Cedar Isles Channel. The floor of a cut and cover tunnel would be at or just below the creek bed. It is difficult to conceive how this channel could be rerouted or closed without significant impact on the Chain of Lakes. • The most compelling concern with respect to tunneling through the Kenilworth Corridor is the potential disruption to the underground hydrologic system that connects Cedar Lake to the Lake of the Isles and is part of the larger Chain of Lakes system. Absent extensive investigation, it is impossible to predict the exact impact of placing a tunnel across the pathway between the two lakes. It is almost certain that the tunnel would be below ground water level, would require extensive pumping to keep dry and potentially could interrupt groundwater flow with unpredictable results to the water levels and water quality of the lake system.
Parkland/Section 4(f)	• Implementation of this scenario would not produce additional negative impact on historic properties when compared against the current proposal to construct LRT through the Kenilworth Corridor.
Noise/Vibration	• Impact of noise/vibration would need to be assessed.
Estimate of Total Project Cost Including Contingencies	
Costs	• Construction: $220 Million • Right of Way: $ 0 • Total : $220 Million (Preliminary Estimate as Presented at the Special Joint Study Session of the City Council and School Board on November 29, 2010)

SCENARIO #6: FREIGHT AND LRT SHARE USE OF TRACK; BICYCLE TRAIL AT-GRADE

Description	Envisions that the LRT track and commuter bicycle trail are constructed as shown in the Conceptual Engineering Drawings and that the freight rail operation shares track with the LRT alignment.
Conclusion: Alternative is not viable	
Comments	• The impact to LRT and freight operations would make this scenario unworkable. Freight operations would be restricted to 4 hours in the middle of the night when LRT was not operating. TC&W could not operate with such a tight restricted window. (This is an FTA/FRA rule because LRT cars and freight cars are not crash compatible.) • The station design would need account for the different clearance standards between LRT and freight rail. • The freight rail operations increase the maintenance for the LRT tracks. • It is our opinion that this is not a viable alternative.

SCENARIO #6: FREIGHT AND LRT SHARE USE OF TRACK; BICYCLE TRAIL AT-GRADE

Evaluation Criteria	Description of Impacts
Description	Envisions that the LRT track and commuter bicycle trail are constructed as shown in the Conceptual Engineering Drawings and that the freight rail operation shares track with the LRT alignment.
Freight Railroad (Shares Track with the LRT Alignment through the Corridor)	
Route Distance	• Same As Present Route
Trackage Rights	• Existing Agreement
New Construction	• Approximately 2.5 miles of new track.
Freight Operations	• Sharing track between the TC&W and the LRT line is an unworkable solution because the freight service would be restricted to a time period insufficient to provide rail freight service and continue as a viable economic enterprise.
Ownership & Maintenance Resp.	• No Change
Sound Engineering	• Grades, curvature, clearances, and speeds are acceptable.
Customer(s)	• TC&W would need to continue using the connection at St. Louis Park and the MN&S route to reach Savage.
At-Grade Crossings	• There are four (4) at-grade crossings located between Louisiana Avenue and where TC&W joins the BNSF main track at Cedar Lake Junction.
Separations	• None
Southwest LRT (Constructed through corridor along the LPA alignment)	
Existing/Planned Transitways	• Transit vehicles, such as the LRT vehicles used in Hiawatha service and the planned Southwest LRT service, could share track with freight operations only by means of an FRA waiver based on strict temporal separation (i.e., most often freight operations are restricted to hours of no passenger service). • The design of the LRT system would need to be modified to accommodate a shared use section. • Even with a shared use section, placing the freight track on the north side of the LRT track would still require an additional LRT bridge west of Wooddale Avenue. • Considerable redesign of five (5) Southwest LRT stations will be necessary to ensure that transit patrons experience safe and secure access to the station platforms from both sides of the LRT tracks even when a freight train is passing.
Kenilworth Commuter Bicycle Trail (Remains along existing alignment with adjustments noted in the LPA plans)	
Existing Trails	• Preserves the commuter bicycle trail through the corridor.
Potential for Adverse Impacts Upon Critical Environmental Resources	
Acquisitions/ Relocations	• Requires no additional right-of-way.
Subgrade/ Earthworks	• No Identified Issues.
Historic Properties	• Implementation of this scenario may generate an adverse impact on Cedar Lake Parkway with LRT elevated and freight rail at-grade. Due to the placement of the freight rail tracks west of the LRT there may be additional impacts to historic properties.
Water and Natural Resources/ Groundwater	• Reconstruction of the freight track may require the construction of an additional bridge over Cedar-Isles Channel depending upon the exact extent of the shared use section but this would not be expected to affect water quality or stream flow negatively. • Implementation of this scenario would not have additional negative impact on groundwater flow when compared against the current proposal to construct LRT through the Kenilworth Corridor.
Parkland/Section 4(f)	• Implementation of this scenario would not produce additional negative impact on historic properties when compared against the current proposal to construct LRT through the Kenilworth Corridor.
Noise/Vibration	• Impact of noise/vibration would need to be assessed.
Estimate of Total Project Cost Including Contingencies	
Costs	• Construction:$35-43 million • Right of Way : $0 • Total: $35-45 Million (Preliminary Estimate as Presented at the Special Joint Study Session of the City Council and School Board on November 29, 2010)

SCENARIO #7: FREIGHT, LRT AND BICYCLE TRAIL AT-GRADE; LRT SINGLE TRACK

Description	Envisions that LRT track and the commuter bicycle trail are constructed as shown in the Conceptual Engineering Drawings with the exception that a portion of the LRT alignment would be constructed as single track through the corridor and that the freight rail track is constructed using the alignment presently anticipated to host a second LRT track where the existing right-of-way is too narrow to accommodate a double track LRT line and single track freight line.
Conclusion: Alternative is not viable	
Comments	• This scenario would provide the only single track LRT corridor in the system making operations complex and it would probably not be acceptable to the system or the Federal Transit Administration (FTA). • The LRT stations would require additional design consideration to accommodate freight rail operations close by. • It is our opinion that this is not a viable alternative.

SCENARIO #7: FREIGHT, LRT AND BICYCLE TRAIL AT-GRADE; LRT SINGLE TRACK

Evaluation Criteria	Description of Impacts
Description	Envisions that LRT track and the commuter bicycle trail are constructed as shown in the Conceptual Engineering Drawings with the exception that a portion of the LRT alignment would be constructed as single track through the corridor and that the freight rail track is constructed using the alignment presently anticipated to host a second LRT track where the existing right-of-way is too narrow to accommodate a double track LRT line and single track freight line.
Freight Railroad (Constructed At-Grade)	
Route Distance	• Same As Present Route
Trackage Rights	• Existing Agreement
New Construction	• Approximately 2.5 miles of new track.
Freight Operations	• Maintains current freight operations.
Ownership & Maintenance Resp.	• No Change
Sound Engineering	• Grades, curvature, clearances, and speeds are acceptable.
Customer(s)	• TC&W would need to continue using the connection at St. Louis Park and the MN&S route to reach Savage.
At-Grade Crossings	• There are four (4) at-grade crossings located between Louisiana Avenue and where TC&W joins the BNSF main track at Cedar Lake Junction.
Separations	• None
Southwest LRT (Constructed through corridor along the LPA alignment but with only one track through the corridor)	
Existing/Planned Transitways	• Inserting a single track segment into the otherwise double-track Southwest Corridor LRT system would create a pinch point that would imperil efficient operations at anticipated headways and forestall operating on closer headways in the future. • Considerable redesign of five (5) Southwest LRT stations will be necessary to ensure that transit patrons experience safe and secure access to the station platforms from both sides of the LRT tracks even when a freight train is passing.
Kenilworth Commuter Bicycle Trail (Remains along existing alignment with adjustments noted in the LPA plans)	
Existing Trails	• Preserves the commuter bicycle trail through the corridor.
Potential for Adverse Impacts Upon Critical Environmental Resources	
Acquisitions/ Relocations	• Requires additional right-of-way. The greater distance required by freight rail means that the minimum right-of-way requirement for the freight rail track, the single LRT line, and the trail would be 82 feet. The ROW width between West Lake Street and Cedar Lake Parkway is 62 feet at its most narrow.
Subgrade/ Earthworks	• No Identified Issues.
Historic Properties	• Implementation of this scenario may generate an adverse impact on Cedar Lake Parkway with LRT elevated and freight rail at-grade. Due to the placement of the freight rail tracks west of the LRT there may be additional impacts to historic properties.
Water and Natural Resources/ Groundwater	• Reconstruction of the freight track may require the construction of an additional bridge over Cedar-Isles Channel, depending upon the exact location of the single track segment but this would not be expected to affect water quality or stream flow negatively. • Implementation of this scenario would not have additional negative impact on groundwater flow when compared against the current proposal to construct LRT through the Kenilworth Corridor.
Parkland/Section 4(f)	• Implementation of this scenario would not have additional negative impact on historic properties when compared against the current proposal to construct LRT through the Kenilworth Corridor.
Noise/Vibration	• Impact of noise/vibration would need to be assessed.
Estimate of Total Project Cost Including Contingencies	
Costs	• Construction: $31-38 million • Right of Way : $0 • Total: $31-38 Million (Preliminary Estimate as Presented at the Special Joint Study Session of the City Council and School Board on November 29, 2010)

SEH **MEMORANDUM**

TO: City Council Members

FROM: Dave McKenzie, P.E.

DATE: February 9, 2011 revised

RE: Technical Memorandum #3
SEH No. STLOU 114331

Based on our review of the completed Hennepin County freight rail studies and through coordination with City staff, a recommendation was presented to Council Members at the December 13, 2010 Study Session Meeting to narrow the range of alternative freight routes based upon impacts identified in the respective studies. This memo contains updated information on the four alternatives that were identified for additional review.

A summary of the four alternatives are in Table 1. Additional details are discussed later in the memo.

Table 1

Alternative	Description	Comment
MN&S Sub Alignment Study	Reroute of freight rail out of Kenilworth Corridor and onto the MN&S in St Louis Park.	Currently Under Study (findings anticipated in spring 2011)
Western Connection	Reroute of all TC&W traffic westerly through Appleton MN and onto the BNSF RR into the Twin Cities	Does not appear feasible
Kenilworth Corridor Scenario 1: All Three Grade Alignments At-Grade	Allow the freight, LRT and the bike trail to coexist at grade in the corridor	Additional right of way is needed and will require cooperation with many agencies outside of St Louis Park to achieve.
Kenilworth Corridor Scenario 2: Trail Relocated	Allow the freight and LRT to coexist in the corridor and relocate the bike trail	Additional right of way is needed and will require cooperation with many agencies outside of St Louis Park to achieve. This is less intrusive than Scenario 1.

MN&S Sub Alignment Study

Hennepin County is currently conducting a Environmental Assessment Worksheet for the MN&S alternative. Results from that analysis will be known in the Spring of 2011. It is expected that impacts and potential mitigation measures will be discussed at the Project Management Team (PMT) meeting on February 24, 2011.

Western Connection

The western connection alternative identified in the Amfahr Study originally suggested only rerouting coal trains out of St Louis Park. In Amfahr's proposal other TC&W trains would continue to travel through St. Louis Park. Transporting coal is only one of four primary components of TC&W trains passing through St. Louis Park. The other three elements are the local mixed-freight trains that operate daily between Glencoe and St. Paul; ethanol trains; and, grain trains.

The SEH suggestion was to explore more fully the possibility that all of TC&W traffic be diverted through this route, not just the coal trains. That is a much more difficult question to answer since much of the TC&W's freight originates or is delivered to eastern markets. To reroute this traffic on the BNSF would add about 120 miles and 2 or 3 days to each train trip. The additional travel time would require TC&W to increase the size of their fleet of train cars, increase their car hire costs, increase their labor costs, and increase power costs. The BNSF would also charge a trackage right fee for use of their track.

Coal Trains

The coal trains that pass through St. Louis Park originate in Wyoming and Montana and bring coal to a sugar plant in Renville, west of the Twin Cities. Currently trains come from Wyoming and Montana travel all the way into Minneapolis using the BNSF tracks before back tracking through the Kenilworth corridor and St. Louis Park west to the sugar plant. The empty coal trains return to Wyoming and Montana without passing through St. Louis Park or Minneapolis. They go directly west from the sugar plant to Appleton MN and interchange back to the BNSF line.

The loaded coals trains do not use the Appleton interchange because of track conditions on the west end of the TC&W. A track rehabilitation project to replace cross ties on the western part of the TC&W could allow for the reroute of the loaded coal trains and eliminate the need for the coal trains to pass through Minneapolis and St. Louis Park. TC&W has estimated that this project would cost about two million dollars.

Non Coal Trains

A reroute of all of TC&W's current trains to the west would mean all TC&W trains would use the BNSF's Wayzata subdivision, the existing east-west tracks which pass through St Louis Park roughly parallel to and south of Cedar Lake Road. The BNSF does not currently have a connection to the MN&S tracks however. Therefore TC&W would not have access to the grain terminals in Savage unless the existing wye in St Louis Park remained in place; or a new interconnection between the BNSF and the MN&S tracks was built. TC&W has not accessed the Savage terminals in recent years but would if market conditions change in the future. They would need to maintain their ability to access the Savage grain terminals.

The other unit train operating in St Louis Park is the unit ethanol train that is destined for markets in the eastern United States. Going west to connect with the BNSF before heading east on the BNSF tracks to reach their destination does not make sense with this train. This route has the negative operational, time and cost consequences noted above for other TC&W trains serving markets to the east.

Conclusion
The TC&W has stated that the Western Connection alternative would devastate their business and would not be workable.

There are many unknown cost variables that cannot be determined precisely at this time but could easily increase TC&W costs by millions of dollars every year. An annual freight rate subsidy would be costly to implement and an on-going expense without any identified source of ongoing funding.

We do not believe that this is a viable alternative except for the possibility of rerouting the coal trains. The City, County and MnDOT should explore with TC&W ways to fund a track rehabilitation project, if the community would like to pursue rerouting of all coal trains away from St Louis Park.

Kenilworth Corridor

Two of the four options for how to accommodate TC&W freight traffic identified for further study involve the Kenilworth corridor. This is the current temporary home for TC&W freight rail traffic. Both of the Kenilworth alternatives explore making it the permanent home for TC&W traffic. One option includes just freight rail and LRT; the other option also accommodates the regional trail. The concept plans and analysis of the Kenilworth alternatives undertaken by SEH builds on the base information from the HDR SWLRT concept plans and the RL Banks study. The analysis of the Kenilworth corridor alternatives is described below.

Corridor Description
The Kenilworth Corridor is currently being used by the CP/TC&W railroads and the Kenilworth bike trail in a shared corridor. The HCRRA owns the right of way. It varies in width from 44 feet to over 150 feet. The narrow portions of the HCRRA right of way have been identified in the past as "pinch points" with regards to accommodating freight rail and light rail in the Kenilworth Corridor. There is a 750' long area just south of the Cedar Lake Channel that is 44' wide, but has an adjacent publicly owned parcel that is 50' wide that is owned by the City of Minneapolis. There is also another narrow parcel from Lake Street to Cedar Lake Parkway (about 2,300') that is 62' wide with development on both sides. These are the two pinch points in the corridor that are of greatest concern. While there may be other spots along the Kenilworth corridor where small encroachments onto publicly owned parcels owned by entities other than HCRRA maybe needed for the freight rail alternatives to work, the two "pinch points" identified above are the most critical areas. There is very little excess right of way adjacent to the east side of the existing corridor. The west side has several parcels that are owned by either Minneapolis Public Works or the Minneapolis Park Board.

RL Banks Study
Hennepin County hired RL Banks to conduct a study in the Fall of 2010 that addressed seven different scenarios. Five have been previously discounted as not feasible. The two remaining scenarios are:

1. LRT, freight rail and the trail all at grade in the corridor;
2. LRT and freight rail at grade in the corridor and the trail relocated to outside of the corridor.

Scenario 1 allowed the freight, LRT and bike trail to coexist on an at grade alignment. This assumption kept the trail in the same location and shifted the freight railroad to the north and west of the LRT. This alignment required the acquisition of most, if not all of the Cedar Lakeshore townhomes development.

The RL Banks' cost estimate for this alternative was about $55 million dollars, including about $21 million for acquisition of right of way.

Scenario 2 allowed for the freight tracks to be relocated onto the existing trail location and the trail relocated onto the street system south of 21st Street. Because of wider setbacks needed for the freight rail, under this scenario, the condominium development on the east side of the Kenilworth corridor, just north of the Mid-town Greenway would need to be acquired. The RL Banks cost estimate of this scenario was approximately $110 million, about double the cost estimate of scenario 1. The higher cost estimate reflects the acquisition of the condominiums on the east side of the corridor.

Design Assumptions

Analyzing the potential to accommodate LRT, freight rail and potentially the regional trail in the Kenilworth corridor requires establishing basic design standards for each of the corridor uses. Minimum spacing and right of way requirements are particularly key factors. This is especially true because the adequacy of the width of the corridor has been a key concern regarding accommodating both freight rail and LRT in the Kenilworth corridor. The question has been, is the Kenilworth corridor wide enough to safely accommodate freight rail, LRT and the regional trail;and if not, how much additional right of way would be needed. The analysis of the fit of these elements within the corridor is complicated by a varying corridor width, curving right of way, location of bridge structures, grades and location of LRT stations among many factors. Based on discussions with Hennepin County, Met Council, their consultants and industry standards basic design assumption were developed. The following minimum spacings standards were used for all alignments:

(1) 25' from edge of right of way to center of freight rail track
(2) 25' from center of freight rail track to center of nearest LRT track
(3) 14' between the centers of the LRT tracks
(4) 12' from center of second LRT track to edge of paved trail
(5) 16' of paved trail
(6) 2' between paved trail and edge of right-of-way.

Essentially these spacing assumptions mean you need a minimum corridor width, without accommodating for any special circumstances, of 84 feet to accommodate LRT, freight rail and the regional trail at grade.

If only LRT and freight rail are accommodated in the corridor, a minimum width of 76 feet is needed.

SEH Analysis

In our analysis we explored 3 potential refinements to the RL Banks' Kenilworth scenarios. They are:

1) The designing the LRT around the existing freight alignment. Essentially leaving the freight track in its existing position.
2) Revise the LRT, freight tracks and the trail alignments to best fit all in the Corridor
3) Revise the LRT and freight track alignments and relocate the trail off of the Corridor.

We also assumed that the revised LRT track alignment would need to match the LRT alignments at the Lake Street bridge and at the I-394 bridge. We also tried to minimize the impact to the proposed station locations.

The SEH refinements are detailed below:

Retaining the Current Rail Alignment. The first concept explored was to leave the freight rail track on the existing alignment, and adjust the LRT and trail alignments around it. The RL Banks analysis had done the reverse. It assumed the proposed LRT alignment as a given and located the freight rail in accommodation of LRT. Our approach, was intended to explore if there was any benefit from designing a corridor alignment starting with the current freight rail alignment as fixed. The current freight rail location is very close to the west right of way line and the Cedar Lake Townhomes in the 62 foot "pinch point" immediately north of the Midtown Greenway connection to Kenilworth. The thought was that starting with the existing freight rail alignment as a given may result in a very efficient use of the limited space at this point in the corridor. This did not turn out to be the case. This approach resulted in the LRT tracks being shifted into the high rise condominium located on the east side of the track, at the Midtown Greenway. This is one of the most intensely developed parcels along the corridor. This was determined to be an unreasonable alignment.

Scenario 1A - The second concept explored assumed the alignments of all three elements in the corridor, the LRT, freight rail and the regional trail were flexible. The alignment of each element could be adjusted to minimize the additional right of way required. The results of the analysis (Scenario 1A) were similar to the results for scenario 1 of the RL Banks study. To accommodate all three corridor components at grade requires extensive right of way acquisition. Roughly half the Cedar Shores Townhome structures would be affected. The design also indicates that the apartment building at 2601 Sunset Boulevard will be impacted. Burnham Road north of Cedar Lake Parkway will also need to be realigned and there is a high potential that partial acquisition from some parcels on the west side of Burnham Road would be needed. Our preliminary estimates is $60 to $65 million dollars. If all of the Cedar Lakeshore townhome development is acquired, the cost estimate would increase by another $13 million dollars.

Scenario 2A - This alignment concept, similar to RL Banks Scenario 2, assumed only the LRT and freight rail are in the corridor. The trail would be relocated outside the corridor. Our analysis (See Appendix A) assumed that the freight railroad stays on the north and west sides of the corridor. The deletion of the trail allows enough space for the freight and LRT tracks to fit in the corridor and meet the minimum design standards if some property is acquired from the Cedar Lakeshore townhomes development. This concept uses the green space between the Cedar Lake Shores town houses and their property line shared with the HCRRA property as part of the setback requirement for the freight rail tracks. The minimum design standards could be met without the acquisition of any Cedar Lake Shore structures.

While technically, the 25' spacing from the edge of right of way to the center line of track can be met by acquiring property from the Cedar Lake Townhomes, the result is a loss of setback area and greenspace for the townhomes. The resulting setback would be as little as 2 feet and would vary from 2 to 24 feet. Most setbacks would be less than 10 feet. The train tracks themselves would move closer for 2/3's of the 13 townhomes adjacent to the property line, most by 12 feet or more.

Currently the freight rail tracks are as close as 25 feet from the Cedar Lake Shores structures already. Today the townhomes are from 25 ft to 57 ft from the center line of the railroad tracks. However the rail location was never intended to be permanent. Under Scenario 2A , alignment the tracks would be mostly closer than they are now; and vary from 27 to 49 feet from the townhomes. SEH believes the Scenario 2A freight track alignment would be uncomfortably close to the townhome structures. (See Appendix B).

Regarding the regional trail, it could remain in the corridor in place from the Penn Street LRT station to just south of the Burnham Road overpass. At that point the HCRRA right of way narrows and the trail would need to leave the Kenilworth corridor unless additional right of way was acquired. The trail could be routed onto the local streets at Burnham road. Additional study would be needed to determine the preferred location of the trail.

Our estimated cost for this scenario would be about $30 million plus right of way which depending upon the Cedar Lakeshore townhome development and the purchase of parcels from the City of Minneapolis and the Minneapolis Park Board, would add between $5 million and $35 million.

Unresolved Issues

There are several issues unrelated to literally the alignment or fit of freight, LRT and the trail in the Kenilworth corridor that would need to be evaluated and resolved before a final determination can be made if freight, LRT and trails can coexist in the Kenilworth Corridor. They include:

1. The environmental impact to parkland property including the Cedar Lake Channel, Cedar Lake Parkway crossing, of adding freight rail into the corridor as a permanent element.
2. Where the LRT tracks will cross the freight rail within the SW corridor.
3. How does the freight rail and LRT impact the Highway 100 bridge design?
4. What is the best location for the relocated trail? Right now the SWLRT plans show the regional trail is on the north side of the LRT west of Wooddale and the south side east of Wooddale.
5. The impact to the draft SW LRT EIS and would it need to be amended.
6. How much of the Cedar Lakeshore townhome development will be acquired.
7. How does the freight rail adjacent to the LRT affect the operation, design and success of the LRT stations
8. How would the freight rail in Kenilworth affect the opportunity to for trolley service on the Midtown Greenway?

Conclusions/Next Steps

A final evaluation of the Kenilworth Corridor issues would need to be done relative to the MN&S sub alignment study. Understanding the impacts and costs, mitigation and actual concept plan proposed for MN&S will be needed to evaluate the relative merits for community of each of the alternative resolutions to the TC&W freight rail question.

The intent of this memorandum is to provide some additional information as SEH has examined the remaining four alternatives. SEH will provide future updates as more information is developed and refined.

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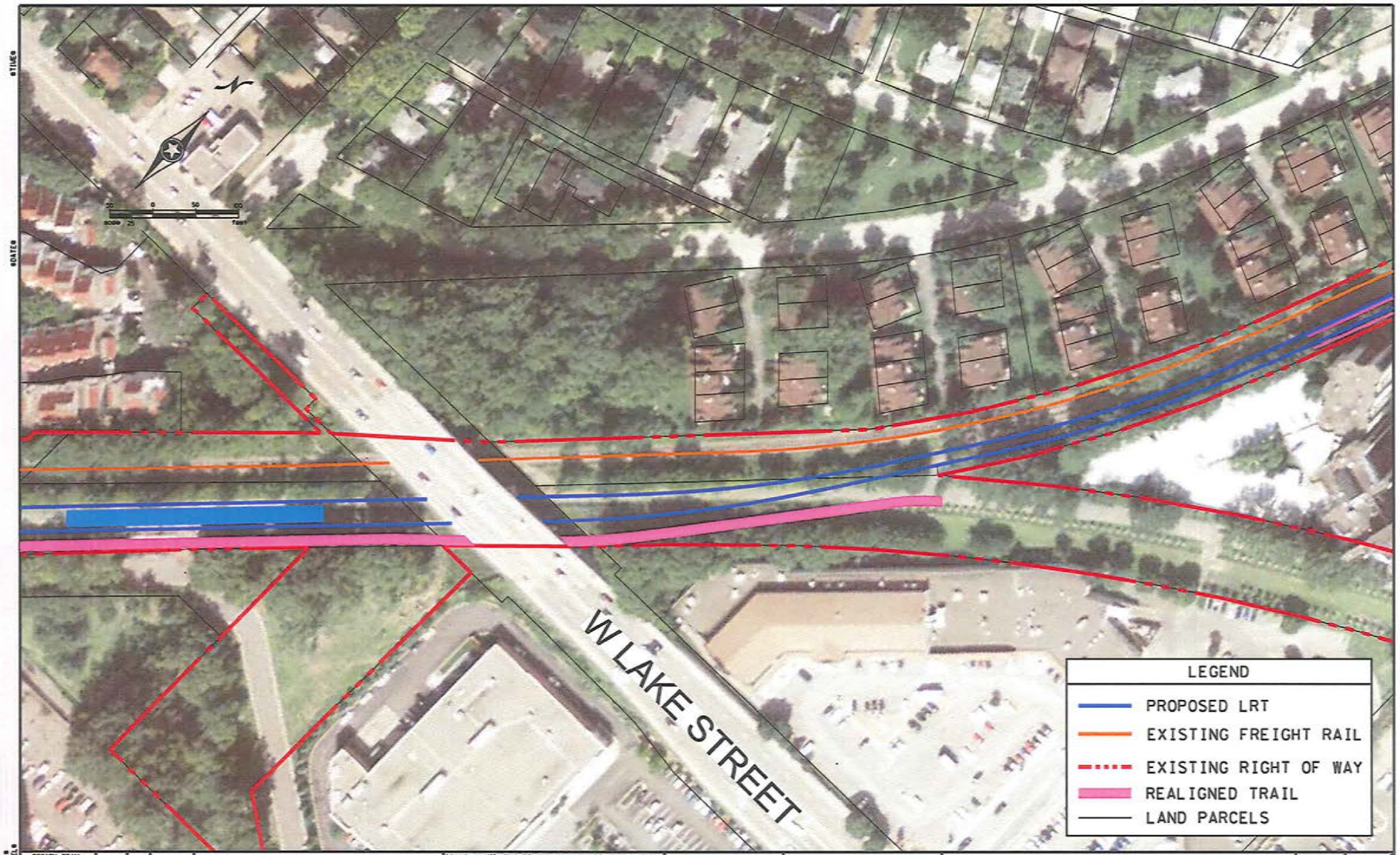
Appendix A

Alignment 2A

Freight Rail and LRT with no trail



DESIGN TEAM	NO.	BY	DATE	REVISIONS
DRAWN BY:				
DESIGNER:				
CHECKED BY:				

I hereby certify that this plan 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.

Certified By _____ Lic. No. _____

Printed Name _____ Date: &DATE&

SEH

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3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

CITY OF ST. LOUIS PARK

KENILWORTH CORRIDOR, SCENARIO 2A
FREIGHT RAIL & LRT (NO TRAIL)

FILE NO. 84539

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Printed Name: _____ Licensed Professional Engineer Date: $DATE$

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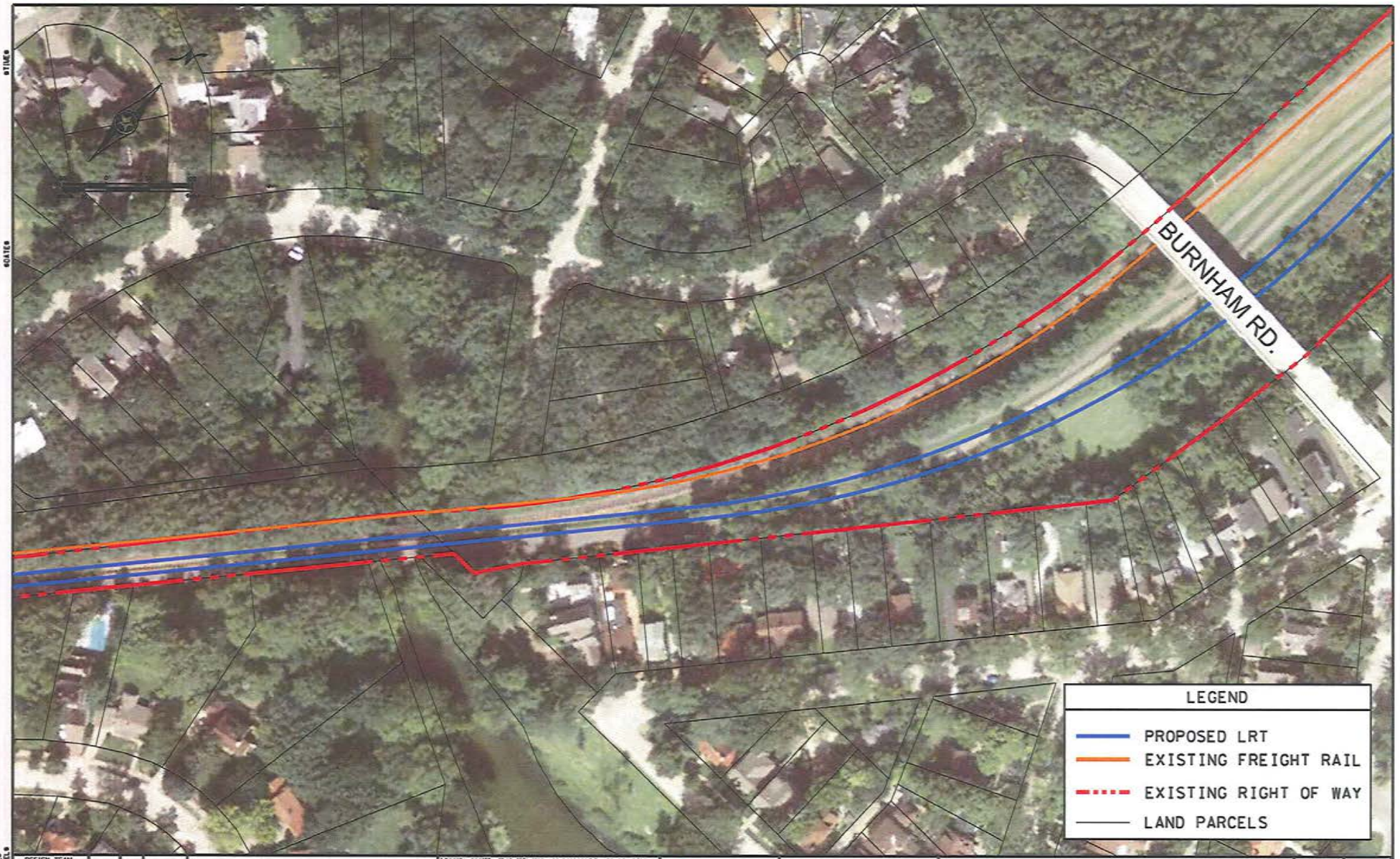
CITY OF ST. LOUIS PARK

KENILWORTH CORRIDOR, SCENARIO 2A
FREIGHT RAIL & LRT (NO TRAIL)

FILE NO. 4433

2/7



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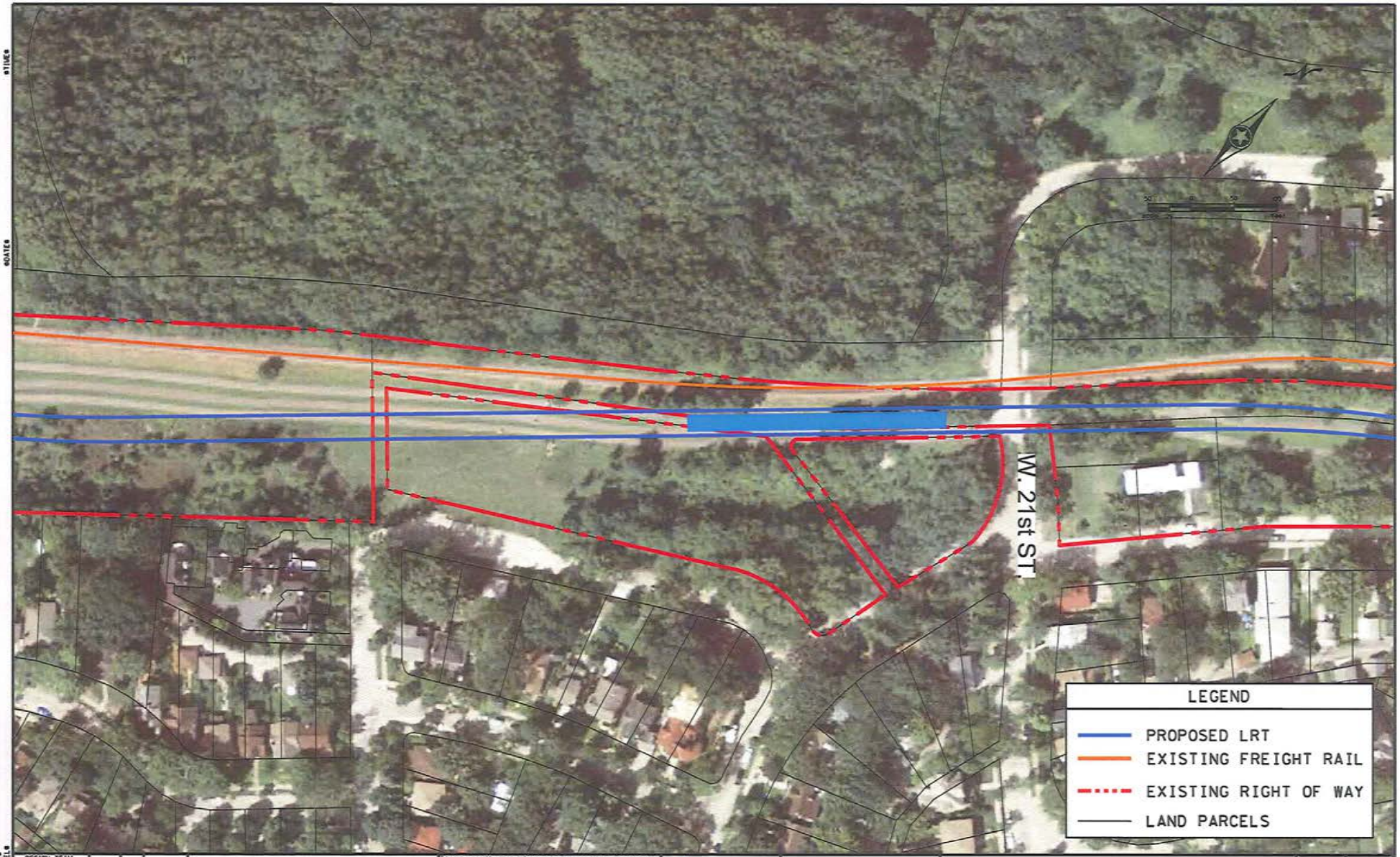
CITY OF ST. LOUIS PARK

KENILWORTH CORRIDOR, SCENARIO 2A
FREIGHT RAIL & LRT (NO TRAIL)

File No. 6433

3/7



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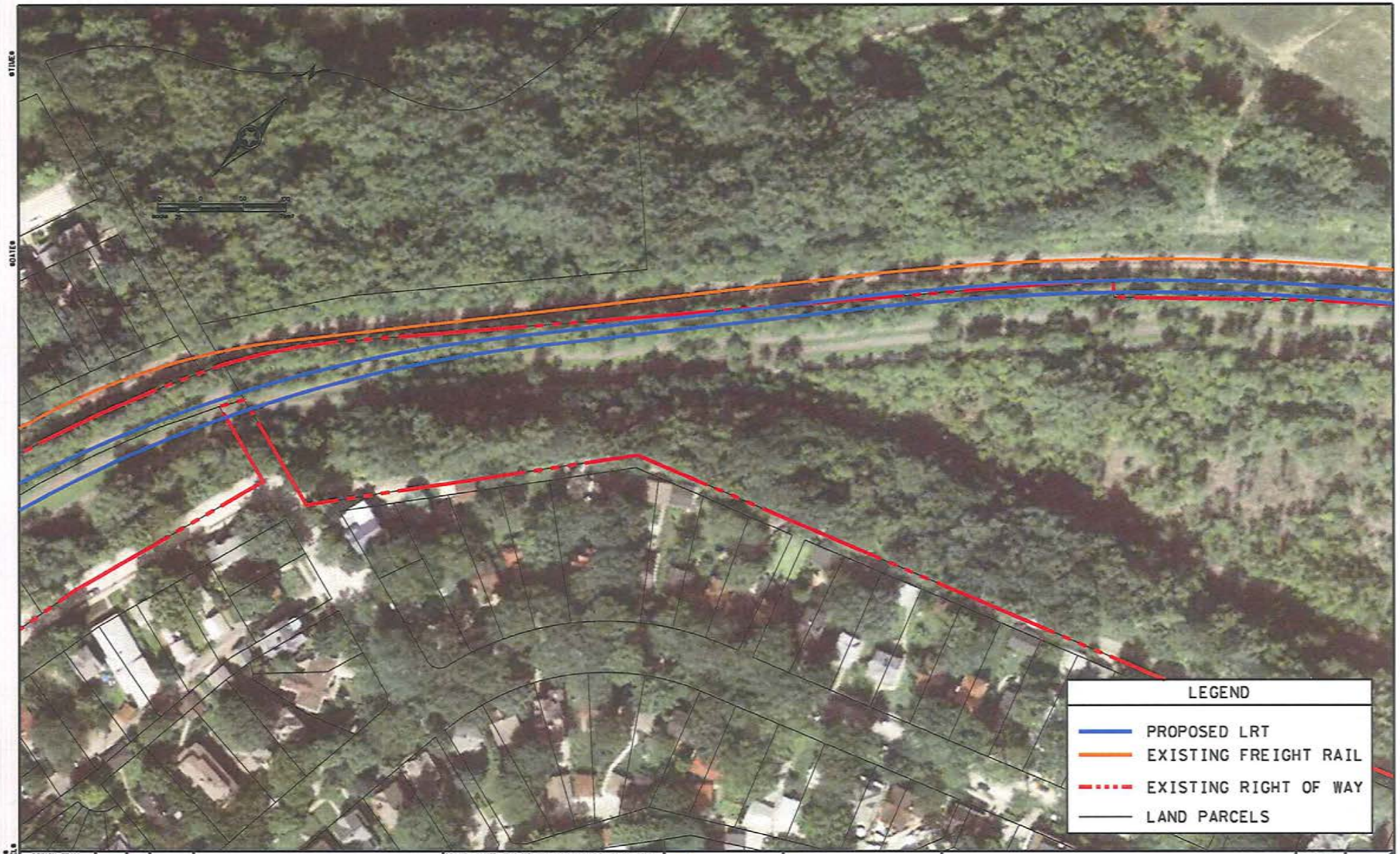
CITY OF ST. LOUIS PARK

KENILWORTH CORRIDOR, SCENARIO 2A
FREIGHT RAIL & LRT (NO TRAIL)

FILE NO. 9453

4/7



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CITY OF ST. LOUIS PARK

KENILWORTH CORRIDOR, SCENARIO 2A
FREIGHT RAIL & LRT (NO TRAIL)

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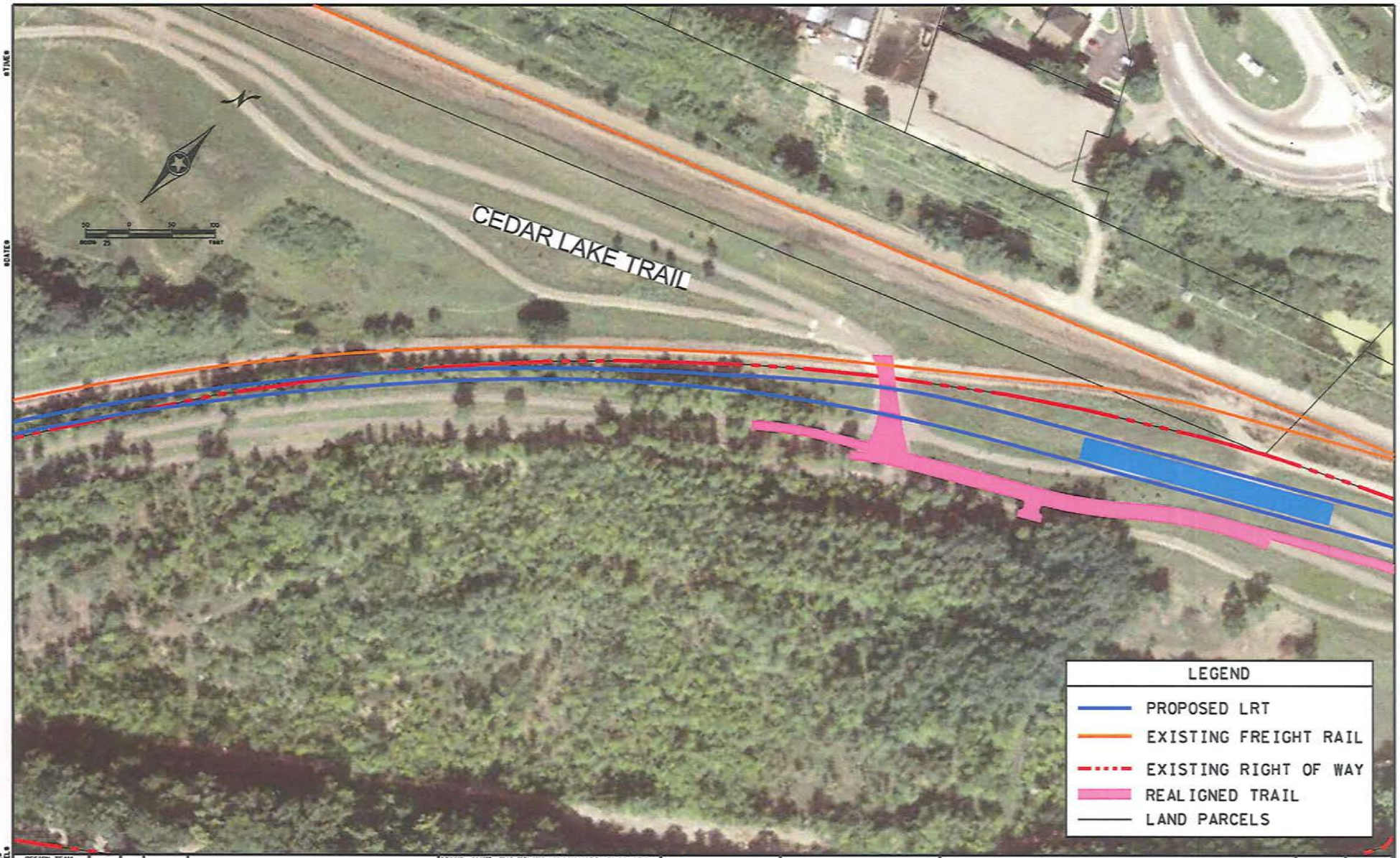

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CITY OF ST. LOUIS PARK

KENILWORTH CORRIDOR, SCENARIO 2A
FREIGHT RAIL & LRT (NO TRAIL)

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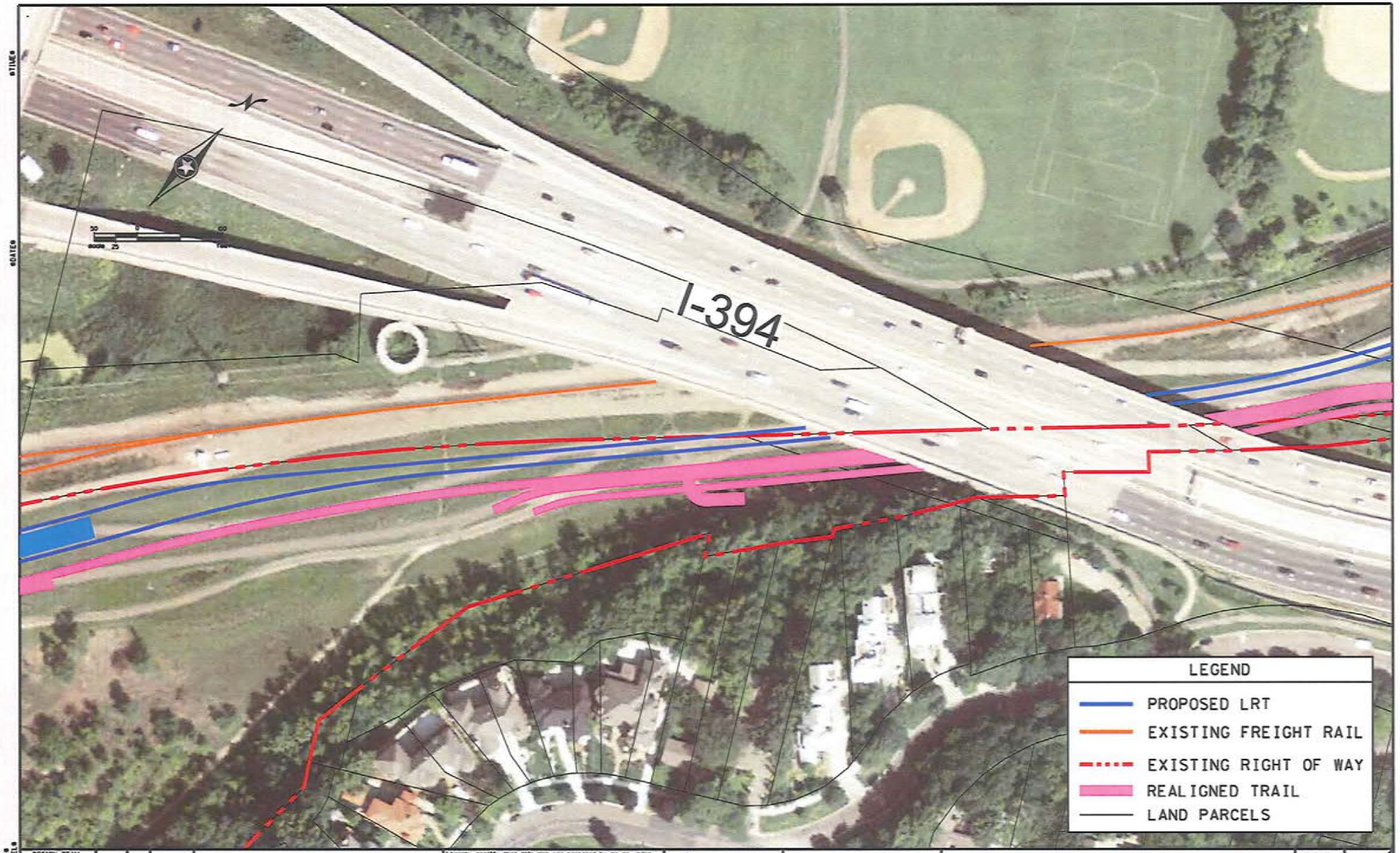

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Licensed Professional Engineer

Printed Name: _____ Date: &DATE&

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CITY OF ST. LOUIS PARK

KENILWORTH CORRIDOR, SCENARIO 2A
FREIGHT RAIL & LRT (NO TRAIL)

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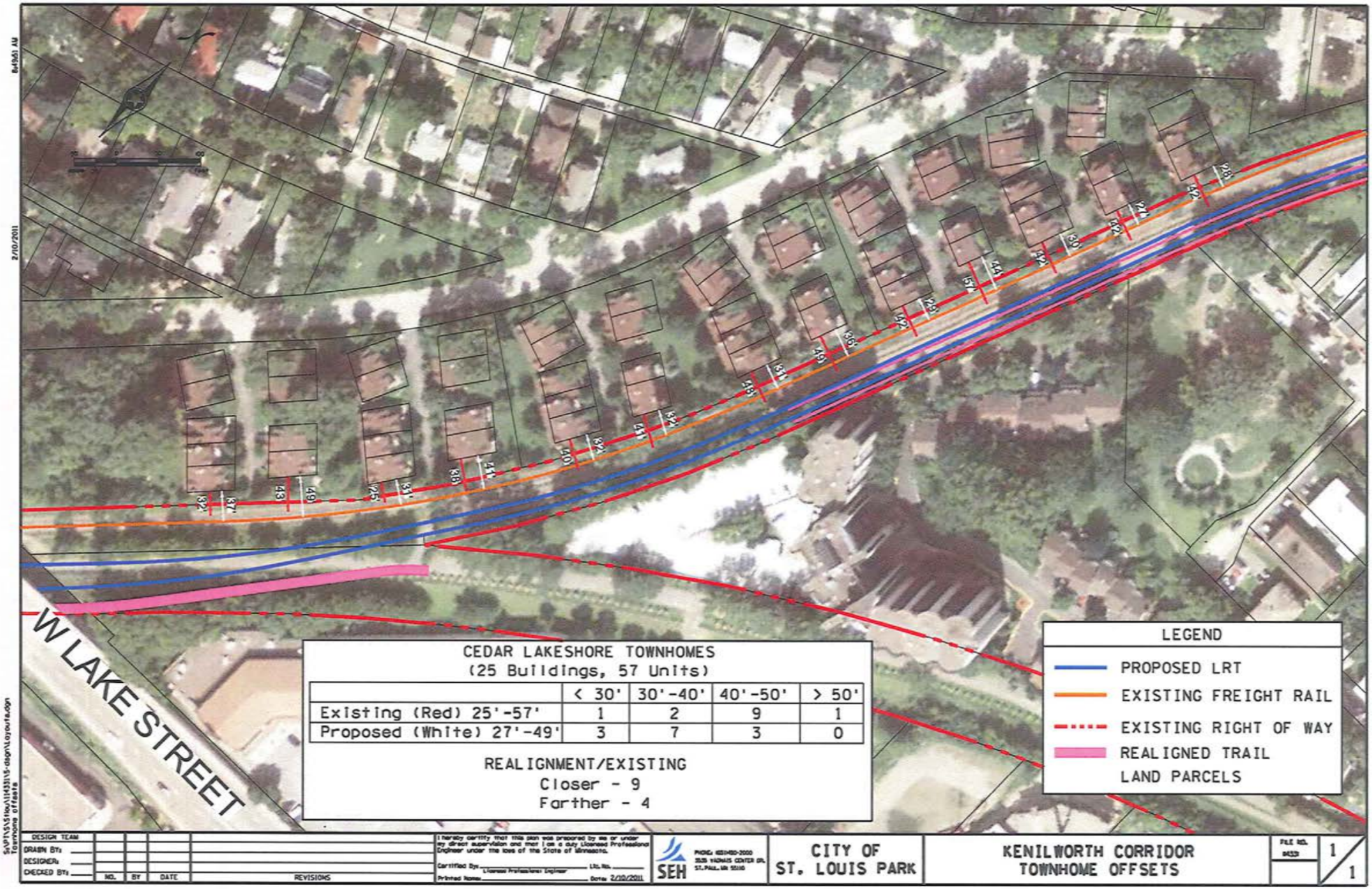
Appendix B

Cedar Lakeshore Townhome Set backs



CEDAR LAKESHORE TOWNHOMES
(25 Buildings, 57 Units)

	< 30'	30'-40'	40'-50'	> 50'
Existing (Red) 25'-57'	1	2	9	1
Proposed (White) 27'-49'	3	7	3	0

REALIGNMENT/EXISTING
Closer - 9
Farther - 4

DESIGN TEAM
DRAWN BY:
DESIGNER:
CHECKED BY:

NO.	BY	DATE	REVISIONS

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Licensed Professional Engineer
Printed Name: _____ Date: 2/10/2011

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CITY OF
ST. LOUIS PARK

KENILWORTH CORRIDOR
TOWNHOME OFFSETS

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St. Louis Park
MINNESOTA

Experience LIFE in the Park

June 15, 2011

Frank Pafko
Director, Office of Environmental Services
Minnesota Department of Transportation
395 John Ireland Boulevard, MS 620
St. Paul, MN 55155-1899

Subject: MN&S Freight Rail Study EAW

Dear Mr. Pafko:

On behalf of the City of St. Louis Park enclosed are materials submitted as comments on the MN&S Freight Rail Study Environmental Assessment Worksheet, proposed by Hennepin County Regional Railroad Authority.

The St. Louis Park City Council approved and authorized submittal of the attached materials by council action at its June 6, 2011 City Council meeting. Enclosed are three documents.

1. Specific comments on the EAW;
2. A list of mitigation measures the City believes are necessary at a minimum to address the potential adverse impacts of the proposed project; and,
3. Tech Memo #4, a comparison of alternative routes for TC&W and a source of technical information for the City's EAW comments and mitigation measures; and,
4. Alternative Route Cost Comparison Table

The comments were prepared after extensive community input, careful technical review and thorough discussion of the EAW and the potential impacts of the proposed project on the City of St. Louis Park. We ask that you carefully consider our comments in your review of the MN&S Freight Rail Study EAW in your role as Responsible Governmental Unit.

Thank you for your attention to this important issue. If you have any questions regarding the materials submitted, please contact Kevin Locke, Community Development Director (952-924-2580).

Sincerely,

Tom Harmening
City Manager

Enclosures:
MN&S EAW Comments
Mitigation Measures
Tech Memo #4
Alternative Route Cost Comparison Table

cc: City Council, School Board, Superintendent Debra Bowers

Comments on MN&S EAW from City of St Louis Park

General Comments:

1) The original goal for the City was to minimize the time, noise and disruption that freight trains have in the City of St Louis Park. The stated purpose of the proposed action is inconsistent with the City's goals as stated in Resolution 10-070 (see attached); and, the purpose of the proposed action ignores the fact that a key purpose for the reroute of freight rail trains off of the Kenilworth alignment is to accommodate SW LRT. : However, SLP has determined that SWLRT and freight rail can both be accommodated within the Kenilworth corridor, with certain modifications, at considerably less expense.
   a) As stated on Page 2, the purpose of the Proposed Action is tied to the State Rail Plan:

      "The purpose of the Proposed Action is to study how to provide the TC&W railway with a relocated connection for operational and available freight movement to St. Paul, while minimizing adverse impacts to the surrounding community, and providing a system that is consistent with the State Rail Plan."

      And yet, there is very little reference in the EAW as to how the MN&S Freight Rail Study fits into the broader system described in the State Rail Plan; nor is there any explanation as to how the proposed reroute of TC&W trains furthers the implementation of the State Rail Plan.
   b) If the MN&S EAW is to be consistent with the State Rail Plan, then the analyses and calculations of impacts in the EAW should be based on projected train activity levels consistent with the State Rail Plan's 2030 planning horizon. The MN&S EAW calculations and projections are based only on existing train traffic levels and make no provision for any increased train activity, even though the State Rail plans projects a 25% overall increase. The MN&S EAW also does not take into account in its calculations, any increased train traffic resulting from the impact of the MN&S track improvements on the overall State Rail system. The improved connectivity and the upgrading of tracks identified in the State Rail plan as part of a potential CP bypass of the bottlenecks like University Junction could result in increased train traffic. The fact that these factors have not been considered could mean that the EAW's calculations under estimate the potential impacts of improvements to the MN&S tracks.
   c) Page 15 details that the proposed action does not include elimination of the wye (Skunk Hollow) track even though it is a major goal of the City.
   d) Another goal of the city was the idea of rerouting coal trains west of the metro area and this is also not a part of the proposed action,

2) There is reference to meeting with the three affected railroads but there is no documentation on those meetings or the official position of the railroad on the design assumptions.
3) There are no track profiles shown in the EAW. There are three major concerns about the lack of information about the profiles:
   a) The City is concerned that the track profiles match the existing road crossings to minimize roadway work or the project would be required to pay for the extensive street work. The Lake/Library area drainage is very sensitive to any grade changes.
   b) The analysis assumes 25 mph for the trains. The profile is a critical component of speed and noise. The grades will not allow a consistent 25 mph speed, how the varying train speeds affect noise and vibrations is not explained.
   c) The grades exceed mainline standards, and the EAW states that the grades over 1 percent are relatively short and match the current track profile. The longer trains may have difficulty with these grades. The City had requested earlier in the study for a speed profile analysis on how the longer trains will be affected by these grades. No speed profile analysis has been provided.
4) The EAW states that the track design will meet current CP standards, but the typical cross sections do not reflect the wider sub grade standard.
5) There is no discussion on how this EAW meshes with the DEIS being conducted for the SW LRT. The primary purpose of any MN&S reroute project is to gain space in the Kenilworth Corridor for the SW LRT tracks. There are inconsistencies in the design factors in these environmental studies such as whether freight rail tracks east of Wooddale remain in place. These two environmental documents should match each other.
6) There is no discussion about ownership and maintenance of the track and other improvements. The CP and TC&W railroads have indicated to the City that they do not want to own the new structures. In addition to the tracks themselves, who and how landscaping and the right of way will be landscaped and maintained should be addressed.
7) The traffic analysis uses inadequate assumptions:
   a) Railroad crossing signals are activated before the train arrives at the crossing and remain down after the train exits the crossing. The time is normally about 30 seconds before the train enters plus 5 seconds after the train exits the crossings. There is no reference in the blockage computations that this time has been accounted for, and it appears this has not been included. This will change the traffic analysis.
   b) The length of the rail car varies by the type and commodity. The EAW used 85 foot length for all cars. Coal cars are 55 to 60 feet long. Ethanol cars are about 60 feet. Grain cars are 65 to 70 feet long. Generally the length of trains is overstated.

c) The peak hour traffic near the high school is not the normal peak hour. Bus schedules are sensitive to time and a train at the school's peak hour would be a major disruption to the bus system.

8) There is no discussion about potential derailments and how emergency personnel would develop an evacuation plan.
9) There is only a 20'6" clearance between the bottom of the new bridge over the Bass Lake Spur track and the Bass Lake Spur tracks; this does not meet the minimum State requirements.
10) Pages 19-21: Remediation of the Golden Auto National Lead site involved extensive processing of a large volume of lead contaminated soils and concrete, much of which has been safely contained on the site. A 10-18 inch impervious cap covers the bulk of the site. Excavation on this site has the potential to encounter areas of contaminated soils and areas of crushed concrete. The construction proposes to pierce the cap. Great care will need to be taken to ensure the integrity of the impervious cap is maintained and any contaminated soils that must be removed are handled properly. Geo-technical challenges may also be encountered due to the significant deposits of crushed concrete on the site. The distribution of contained contaminated soils and crushed concrete is not evenly distributed nor is it of a uniform thickness throughout the site. Further analysis is needed to establish the extent of capped contaminated soils and crushed concrete that will be encountered for construction of footings and foundations, or other earthwork on the Golden Auto National Lead site. The EAW minimizes and does not fully address these potential construction issues.
11) Page 77: In the Louisiana SW LRT station area it is noted the SW DEIS plans a facility for 250 cars – this is not the amount in the DEIS. It also states that this project will provide "optimal developable land" for development in the station area, however there will be property taken property off the tax rolls, and impacted greatly by the proposed rail bridge, leaving land remnants that are not "optimal." There would also be impact on the local road system.

Specific Comments:

12) Page 2: The proposed action statement makes no reference to the SW LRT project.
13) Page 8: Closure of 29th Street is a City decision. The closure is proposed because the proposed track profile would be about 4 feet higher than the existing crossing making it difficult to construct a roadway approach that works. There are no details on how much of 29th Street is proposed to be removed or how the dead end streets resulting from closure of 29th Street's rail crossing will be handled. No cul de sacs or other means for vehicles, including street maintenance vehicles and emergency vehicles, to turn around is provided.
14) Page 12- track grade erroneously stated as .80%; should be .86% - which exceeds TCW's stated acceptable maximum incline. If MNDOT, County or other entity has

agreed or intends to provide compensation to railroad due to operational difficulties, such compensation must be publicly and promptly disclosed.

15) Page 16: No timeline explaining how and when this project will proceed is provided. This uncertainty adversely impacts residents, businesses and property owners within the MN&S area.

16) Page 16: The list of permits is incomplete. There needs to be a series of agreements with the three railroads and Hennepin County as well as between the railroads; these may not easily be achieved. Approvals are also needed from Three Rivers Park District for the trail revisions.

17) Page 20 – There is no discussion of the potential impacts or mitigation regarding the impacts of construction or increased train traffic on vapor intrusion in the MN&S Section.

18) Page 24-25 – Net loss of wetlands, no replacement identified.

19) Page 28- More detail is needed regarding the changes to the floodplain and whether nearby property owners will be affected. What is impact to Sungate West townhomes on Alabama Ave, which I believe are in floodplain?

20) Page 30- 70,400 cubic yards of material will be moved in the MN&S Section of the project area and 14,050 cubic yards will be moved in the BNSF Section. The EAW does not specify how they plan to move such massive amounts of soil, particularly given the lack of road access into the Iron Triangle. What will be the erosion impact?

21) Page32-33 Existing soil and groundwater contamination may limit how stormwater ponds are constructed and where they are located.

22) Page 30 – It should be noted that today the short trains on the MN&S occasionally stop to get food at McDonalds; if this practice were to occur with the longer rerouted TC&W trains, severe traffic congestion and safety issues could occur.

23) Page 39 – Only the St. Louis Park High School and Park Spanish Immersion schools are noted as within close proximity to the MN&S tracks. Metropolitan Open School, Holy Family School and Dakota School are equally as close to the tracks as the Park Spanish Immersion school and should be referenced as well. Also, only the school bus movements at the schools are noted and analyzed. Parents dropping off and picking up children will also be affected by increased train activity on the MN&S tracks.

24) Page 40: 28th and 29th Streets are classified as local streets. The 2011 traffic count for 29th is 190 ADT. The impact on Minnetonka Blvd from closing 29th street is not discussed. This is especially important because it is anticipated that the 27th street access on to Hwy 100 is expected to be closed in the future meaning neighborhood traffic seeking to go south of Hwy 100 will need to access Minnetonka Blvd to access Hwy 100 in addition to traffic diverted to Minnetonka Blvd because 29th Street is closed.

25) Page 40-41; Page 47 – Blockage of intersections by trains will cause diversion of traffic into the Bronx Park, Birchwood, Lenox and Sorenson neighborhoods. These impacts are not considered, nor are the air quality impacts of this delayed and diverted traffic.

26)Page 42 – At-grade crossing times table, shows the length of time single and multiple intersections would be blocked by trains. It shows the time 5 intersections could be blocked by the longest trains (80 and 100 car trains), however it does not show how long 3 intersections could be blocked by these longer trains. This under represents the potential disruption, traffic diversion and delay impacts of rerouting trains to the MN&S; these impacts should be identified and analyzed.

27) Page 54 – References Table 4, it appears it should really reference Table 14.

28) Page 56 - Under represents the potential severity of noise impacts do to coal night trains (long trains) passing through residential neighborhoods. It is assumed that coal trains will be traveling at 25 mph. In reality trains may much more likely be traveling at 10 to 15 mph. The nighttime trains should be considered to be a severe noise event for St. Louis Park's residential areas.

29) Page 57 – Table 15 shows Dakota Park as 510 feet, Roxbury Park as 155 feet and Keystone Park 130 feet from the MN&S tracks. All three of these City Parks are immediately adjacent to the MN&S rail right of way and much closer to the rail tracks than represented in Table 15. This table should be revised and potential impacts on these parks re-evaluated.

30) Page 58 – Implementation of Whistle Quiet Zones at Library Lane and Dakota Avenue will need to accommodate important access ways to the St. Louis Park High School. This will be a design challenge. Costs for these improvements need to be included in the project costs for the MN&S reroute and should not be the responsibility of the City of St. Louis Park or the St. Louis Park School District.

31) Page 48-64 – The noise section does not address noise created by the addition of locomotives needed to pull trains up the interconnect incline, it does not account for noise due to squealing wheels on tight curves, braking as westbound trains go down the interconnect and bells on crossing arms installed per WQZ.

32)Page 64: There were two field locations for the vibration. The nearest site was 60 feet, yet the analysis assumes that there is no impact past 40 feet from the track. The City has heard from the School District and the businesses that they have vibration disruptions now, without the reroute. The vibration analysis does not accurately reflect the existing and proposed rail operations. The field work is based on the existing slow, short trains. No mitigation is proposed despite the potential for significant disruptions at the Lake Street businesses and the High School. The potential for vibration issues on the BNSF area due to trains idling on a new BNSF siding is not addressed.

33)Page 71: The proposed Cedar Lake Trail Bridge over the new Iron triangle track will also be 30 feet above the surrounding ground surface and will have a significant visual impact.

34)Page 72 – It is noted that St. Louis Park residents were represented on the MN&S Study Project Management Team. It should also be noted that many of the neighborhood representatives on the PMT were dissatisfied with the process and felt their mitigation recommendations were disregarded.

35) Page 77: It is stated that the SWLRT DEIS is "currently being prepared" whereas it is under review by the Federal Transit Administration (FTA) at this time.

36) Page 81-83 – Sufficient property should be acquired to create a minimum separation between residential properties and the center line of the MN&S tracks of 50 ft. This could be achieved by acquiring approximately 40 properties on the east side of the MN&S tracks from Minnetonka Blvd North to 27th Street; and, shifting the tracks to the east from its proposed alignment.

37) Page 81: Section 30b deals with right of way and relocations. The EAW comments that only one parcel is required and 13 partial takings. Table 19 understates the impacts.

a) There are two residential units that have been proposed to be taken that are not listed in Table 19.
b) There is extensive construction work in the iron triangle area but there is not access into the construction site. The area is surrounded by wetlands, flood plains, parks, railroads and private developed property. The EAW should provide a construction access plan to this area and provide an evaluation of the environmental impacts of this access.
c) Parcels 108,109 and 110 will have a bridge within 25 feet of their building edges and for parcels 108 and 109 their parking lots and driveways will be impacted.
d) Parcels 97, 98, 100 and 101 are underdeveloped lots used primarily for outdoor storage of construction materials. Table 19 has inaccurate areas of impact.

38) Page 86 – The EAW acknowledges that the MN&S tracks separate the otherwise adjacent Roxbury and Keystone Parks. With increased train traffic on the MN&S, the tracks will become an increasingly severe barrier and pedestrian safety hazard. A pedestrian tunnel or bridge inter-connecting these parks should be provided.

39) Page 87 – Insufficient analysis is provided of the potential extent and impact of a derailment of a train carrying hazardous substances.

40) Page 87 – Crossing gates are needed at all crossings and fencing between the railroad tracks and adjacent properties should occur along the full MN&S route.

41) Page 89 – Property value analysis includes only a portion of the properties along the MN&S tracks. The value of the properties north of Minnetonka should be included in the EAW analysis.

42) Page 90 – Impacts of potential disruption of businesses during construction needs to be more fully addressed, including the possibility of one or more businesses needing to be relocated.

43) Page 90 - Page 93: The proposed improvements will be constructed between City maintained monitoring wells near the Golden Auto site that may be impacted by construction or vibration. There is no reference on how the project will affect these wells and how they will be protected.

44) Page 93: Table 20 estimates that 2 acres of wetlands will be impacted. The City would prefer that the wetland replacement be located within St Louis Park and the EAW should address possible mitigation sites.

45) Page 94: There is a reference to constructing 3 storm water runoff ponds. The City has had difficulty locating drainage facilities in this area because of development and contamination. The EAW does not describe in any detail where these ponds would be located and what properties will be affected.

46) Page 97: Commitment to include welded rail in the project should be an Area, since the CP and BNSF standards for mainline tracks is welded rail.

47) EAW fails to include any analysis of aesthetic impacts of new interconnect and other constructions.

48) EAW fails to include a plan to replace trees and other vegetation after construction is completed, and to maintain same thereafter.

MN&S Mitigation Measures

Track improvements

- Replace and upgrade the MN&S track with 136# seamless tracks reducing noise and vibrations
- Install rail lubricators
- Tie and road bed construction to minimize train vibrations

Mandatory environmental requirements such as wetland, floodplain, hazardous materials handling, wildlife habitat, etc.

Whistle Quiet Zones to upgrade rail crossings safety measures to eliminate the need to blow whistles or horns as trains approach intersections.

Provide fencing and signing along the length of the railroad r-o-w to discourage people intruding unsafely on the MN&S tracks.

Create grade separated frontage road on north side of Hwy 7 by lengthening the MN&S bridge over Hwy 7 to provide space to create a frontage road on the north side.

Build a pedestrian overpass near High School and Dakota Avenue to connect the High School to the Lake Street area and football field.

Create pedestrian and non-vehicle access under MN&S tracks at Dakota Park by building an under pass at 27th St. to connect to the N. Cedar Lake regional trail from the east.

Expansion of MN&S r-o-w in residential area by acquiring homes immediately east of MN&S tracks north of approximately the intersection of MN&S tracks with Brunswick Avenue to 27th Street on the north.

Reroute coal trains west of metro area.

Elimination of sidings as well as through tracks east of Wooddale on Bass Lake spur to eliminate the possibility of cars being stored in this area or trains blocking Wooddale or Beltline.

Completely remove the Oxford industrial area switching wye tracks, abandon the rail r-o-w, and build a southern connection to MN&S.

Funding and construction of Louisiana & Hwy 7 Interchange.

Structure Improvement Program – Create a grant program to provide technical assistance and financial help for property owners to make noise and/or vibration mitigation improvements.

Sound and vibration mitigation improvements for all schools, businesses and homes adjacent to the MN&S line.

Pedestrian bridge over Hwy 7 close to the MN&S bridge to provide access for pedestrians.

Eliminate blind curves in the Lake Street/High School area.

The freight rail should only be rerouted if firm commitments are in place for implementation of SWLRT.

Property owners should be compensated for loss of property value due to rerouting of TCW trains to the MN&S tracks.
Any disruption of businesses due to construction of the MNS improvements must be appropriately mitigated.
Special care must be taken to protect and ensure no damage occurs to monitoring water wells as a result of the MN&S project.
Housing Buyout Program – Create a program to purchase homes on the west side of the MN&S tracks from willing sellers and remove, remodel or resell them.
Provide a pedestrian tunnel or bridge inter-connecting Roxbury and Keystone parks.
Mitigation for noise and vibration impacts on the neighborhoods surrounding the proposed BNSF siding.
Mitigation of blocking and switching activities if these activities are not being relocated to a Glencoe switchyard.
Mitigation of the MN&S tracks and crossings south of Bass Lake Spur including mitigation of the at grade crossings most notably Excelsior blvd.

SEH MEMORANDUM

TO: St Louis Park City Council

FROM: Dave McKenzie, P.E.

DATE: April 18, 2011
Rev 5/31/2011

RE: Tech Memo # 4
Comparison of the MN&S Route and the Kenilworth Route
SEH No. 114331

Introduction

This draft memorandum summarizes background information to assist the City of St. Louis Park with updating its freight rail policy. The memorandum consists of four sections.

1) Background information on Railroad Operations.
2) Comparison of the Kenilworth Corridor and the MN&S Corridor
3) Impacts to the City of St Louis Park
4) Potential Mitigation Measures, if the MN&S corridor is chosen

The analysis and information provided in this report focuses on two potential permanent routes for TC&W trains that pass through St. Louis Park and the Cedar Lake area of Minneapolis as they move between Southwestern Minnesota and rail destinations in Minneapolis and St. Paul. The two potential TC&W routes are highlighted on Map 1, which shows the general study area for this memorandum.

Railroad Operations

There are three railroads operating within the area of study on railroad rights of way and track that are owned by either BNSF or CP railroads. TC&W has rights to operate on at least portions of both rail systems. Today they operate primarily on the CP. Table 1 outlines the existing train operations within St Louis Park by segment of track.

Future Rail Operations

Over the past decade train operations within St Louis Park have been relatively stable. Changes have occurred however the total level of train traffic has changed very little. For the near future total train activity in St. Louis Park is not anticipated to change. Even if TC&W trains are routed onto the MN&S tracks overall train activity is not expected to change. Train traffic on MN&S would be increased and train traffic on the CP's Bass Lake Spur east of Wooddale Avenue would be eliminated.

Projecting future train operation is difficult because many variables are involved. Some of them are:

- World and national economy
- Capacity of the railroad network
- New plants or products being shipped (ethanol, distilled grains, containers)

- New destinations
- Oil prices
- World food supplies
- Capacity of other transportation systems(highways, truck, barges, ships, ports)
- Government policies
- Future of passenger rail system
- Railroad ownership changes
- Railroad Regulations

Making different assumptions for these various factors will produce widely different projections. Even the future rail activity of a regional railroad, like TC&W, is subject to so many factors that it is impractical to attempt to predict future train car volumes. Recent activity is as good a predictor of future activity as any at this time. As a result this memorandum focuses on the impacts associated with the level TC&W train activity occurring today.

It is important to note that even if TC&W's basic freight business were to increase, it would be accommodated by adding cars to the existing trains rather than adding more trains. The existing daily trains have the capacity to pull more cars if the demand for freight transport were to increase. Even today, the precise number of cars in each of the daily trains varies based on market demand.

Unit trains such as ethanol or coal trains are not daily occurrences and due to their size have less capacity to accommodate increased demand by simply adding cars to existing trains. If market conditions increase the need to transport unit train commodities, the increased demand would be handled by adding trains. TC&W currently handles about 10 unit trains per month.

The State Rail Plan projected that total train activity in Minnesota would increase by approximately 25 percent over the next 20 years. However that projection does not mean every rail operation will see a 25% increase. Some will increase, some will stay the same and some will decrease and predicting which railroad in which location will experience an increase is a different and exceedingly difficult question.

As was stated above, if the TC&W were to experience a 25% increase in general freight demand, it would probably mean its two existing trains would increase the number of cars pulled. Unit train demand could increase the number of unit trains by one or two trains per week.

CP RR and BNSF RR projections would be influenced more by world and national activities than TC&W. However the CP daily train on the MN&S is serving only a few customers at this time and is pulling very few cars. If demand increased the CP daily train has capacity to easily triple the numberof cars pulled without adding another train. The MN&S track capacity is a constraint for increases in future train activity both because of the limited places for trains to meet and the slow speed.

Table 1 – Existing Train Operations

Rail Segments of Interest	Description
CP Rail MN&S Sub	**CP Railway** • Operates one local train, round trip, 5 days per week (approximately 10-30 cars).
	TC&W (Trackage Rights) • TC&W is currently not running trains on the MN&S line. • TC&W currently has the right to operate on the MN&S corridor, both north to get to the Camden river terminal in north Minneapolis as well as south to get to the Savage river terminals. • TC&W also has the option of running north on the MN&S Sub to CP's Humboldt yard to get into Minneapolis and St. Paul.
CP Rail Bass Lake Spur	**CP Railway** • N/A
	TC&W (Trackage Rights) • Regular Operations (5 days/week and 6 days/week) o 1 eastbound train (< 80 cars) bound for CP's St. Paul Yard during the AM. o 1 eastbound train (~ 30 cars) bound for Minnesota Commercial's Main Rail Yard in the Midway and Union Pacific's Western Avenue Yard during the AM. o 2 westbound trains bound for Hopkins during the PM. • Longer "Unit" Trains (full trainloads of one commodity) o Ethanol = approximately 1 loaded and 1 empty ethanol unit train per week (typically 80 cars in length). o Coal = approximately 2 loaded coal trains per month (typically 123 cars in length).
CP Rail Interchange Track (Interconnect or Switching Wye)	**CP Railway** • Serves one industrial customer.
	TC&W (Trackage Rights) • TC&W uses this interchange point to reach the Camden river terminal in north Minneapolis (to the north) as well as the Savage river terminals (to the south). Due to current market conditions, this movement is not currently occurring but could resume if market conditions favoring movement of grain by barge develop. • TC&W also has the option of running north on the MN&S Sub to CP's Humboldt yard to get into Minneapolis and St. Paul. • TC&W uses this interchange point for locomotive maintenance movements and to interchange with Progressive Rail Incorporated.
BNSF Wayzata Subdivision	**BNSF Railroad** • BNSF operates approximately 15 trains per day at speeds up to 60 mph • The TC&W and CP have trackage rights beginning at Cedar Lake Junction near I-394 extending into St Paul.

Kenilworth / MN&S Comparison

The analysis of the Kenilworth and MN&S corridors provided below includes:

1. A base line comparison of the characteristics as they exist today; and,
2. A comparison of the two potential permanent routes for TC&W trains.

This comparison of the Kenilworth and MN&S corridors is a compilation of the existing land use and traffic data. It is intended to be a base line statistical comparison of the corridors as they exist today. It is intended to help evaluate the two corridors. Map 1 shows the general study area. There is no attempt to rate or weight the various categories. The comparison should not be considered to be at the level of detail of an EAW. The data used for this memorandum was taken from various sources including the MN&S Study, the SWLRT environmental documentation and City sources.

The MN&S Rail Study and EAW prepared by Hennepin County on the MN&S corridor is out for public comment. Information used from that study is based on the studies and background materials generated during the Project Management Team (PMT) process and meetings held during its study; and the MN&S EAW.

The Alternative TC&W Routes

For comparison purposes the west end of the two alternative TC&W route alignments begin on the CP tracks just east of Minnehaha Creek about 2,800 feet west of Louisiana Avenue. This where the new track needed to connect the CP tracks to MN&S would begin. Cedar Lake Junction, just west of the I-394 bridge over the BNSF tracks approaching downtown Minneapolis serves as the eastern end of both alternative TC&W routes for this analysis. These points provide a Point A to Point B comparison for the two alignments. The two corridors are both about 5 miles long with the MN&S corridor slightly longer.

Kenilworth Route

The Kenilworth alignment would generally follow the existing CP freight track but to accommodate the SWLRT, the track would shift to the north side of the HCRRA right of way just west of Wooddale Avenue and continue shifted to the northwest edge of the right of way until near 21st Street, where it would return to the existing freight track alignment. This is the alignment identified as Alternative 2a in SEH Tech Memo #3. This alternative accommodates both freight rail and LRT in the Kenilworth corridor and requires a partial relocation of the existing regional trail.

MN&S Route

The MN&S alignment creates a new freight track to the south of the existing CP track beginning near Minnehaha Creek. The new track ascends over the existing Bass Lake spur track and LRT track east of Louisiana, curves to the north connecting to the existing MN&S at Hwy 7 and continues north more or less following the existing MN&S alignment. The track shifts slightly to the east near Minnetonka Boulevard. The alignment connects to the BNSF tracks by reconstructing the wye track in the "iron triangle" area east of Dakota Park. The MN&S route also includes constructing a new 12,500' siding on the BNSF right of way. Creating the new CP to MN&S to BNSF interconnections means trains would no longer travel the existing Bass Lake spur track through the Kenilworth Corridor. It was assumed that the Bass Lake Spur to Wooddale from the west and the "Skunk Hollow" wye tracks would remain in place. The existing Bass Lake spur east of Wooddale through the Kenilworth corridor would be removed.

Comparison of the Corridors for Rail Operational Suitability

Trains generally like flat, straight alignments. Neither one of these corridors fit that description. Both routes feature long relatively steep grades and multiple curves.

Grades and Elevations

The net elevation change from Cedar Lake Junction (east terminus of both routes) to Minnehaha Creek (west end of both routes) is about 60 feet. However both routes have hills between these common points that add to the difficulty of operating trains. The proposed MN&S route requires construction of a railroad bridge up and over the existing CP railroad's Bass Lake Spur. This creates the high point on the MN&S route at roughly 93 feet above the Cedar Lake Junction on the east end of the route. The high point on the Kenilworth route is about 71 feet above Cedar Lake Junction. Table 2 and Table 3 illustrate

the elevations of the MN&S and Kenilworth routes respectively. They also show the relative steepness of the grades. The maximum grade on the MN&S is 1.5% and the Kenilworth is .77%. The Kenilworth .77% grade is an existing condition and is the grade between Lake Street and Wooddale Avenue, the high point on the Kenilworth route.

Curves
There are multiple curves on both routes. Generally the curves on the MN&S route are tighter. The new connection between the Bass Lake Spur and the MN&S would be the tightest curve, an 8 degree curve.

Railroad Right of Way
Railroad right-of-way is defined as property owned or controlled by a railroad. The needed right-of-way width is determined by the number of tracks, drainage requirements, embankment width, and available land. Typical railroad right-of-way is 100 feet, but could vary between 20 and 300 feet. Table 4 identifies the existing railroad right-of-way characteristics for the rail segments of interest within the City. Map 2 shows the current railroad ownership.

The MN&S right of way is very irregular and reflects the fact that it was acquired after land had been split into lots. The right of way varies from 34 ft to 145 ft with much of it 66 ft or 100 ft wide.

The Kenilworth with the existing freight rail tracks is 44 ft to 200 ft wide. However adjacent to the HCRRA right of way is right of way owned by other public entities in some cases. The City of Minneapolis and the Minneapolis Park Board own property in the corridor.

At Grade Crossings
Both routes have significant stretches of track uninterrupted by at grade crossings. West of Wooddale Avenue there are no at grade crossings on the east-west CP line in the Study Area. On the MN&S route, from the connection to the BNSF tracks and on the BNSF itself, there are no at grade crossings. The MN&S route has more at grade crossings than the Kenilworth route. Most notably they are concentrated in the Walker to Dakota Avenue stretch of track from Hwy 7 to the High School. The Kenilworth at grade crossings are on higher traffic streets. Dakota and Lake Street are the highest volume streets on the MN&S route with 4500 and 3850 Average Daily Trips (ADT) respectively. The Kenilworth route has two streets with ADT over 10,000; Beltline Blvd with 14,100 ADT and Wooddale Avenue with 11,300 ADT. Tables 6 and 7 provide more details on the road crossings.

Freight Rail Route Alternatives Comparison Tables
A list of specific data comparing the alternative routes is provided in Table 5 and Table 9. Both tables show existing conditions (TC&W trains traveling through Kenilworth); and the future conditions for each corridor. The data is different depending on which alternative is chosen as the permanent route for TC&W trains.

Table 5 shows the existing and future conditions for both full five mile routes. Data in Table 5 covers both the St. Louis Park and the Minneapolis portions of the two alternative corridors. Table 9 data is for only the St. Louis Park portion of each corridor.

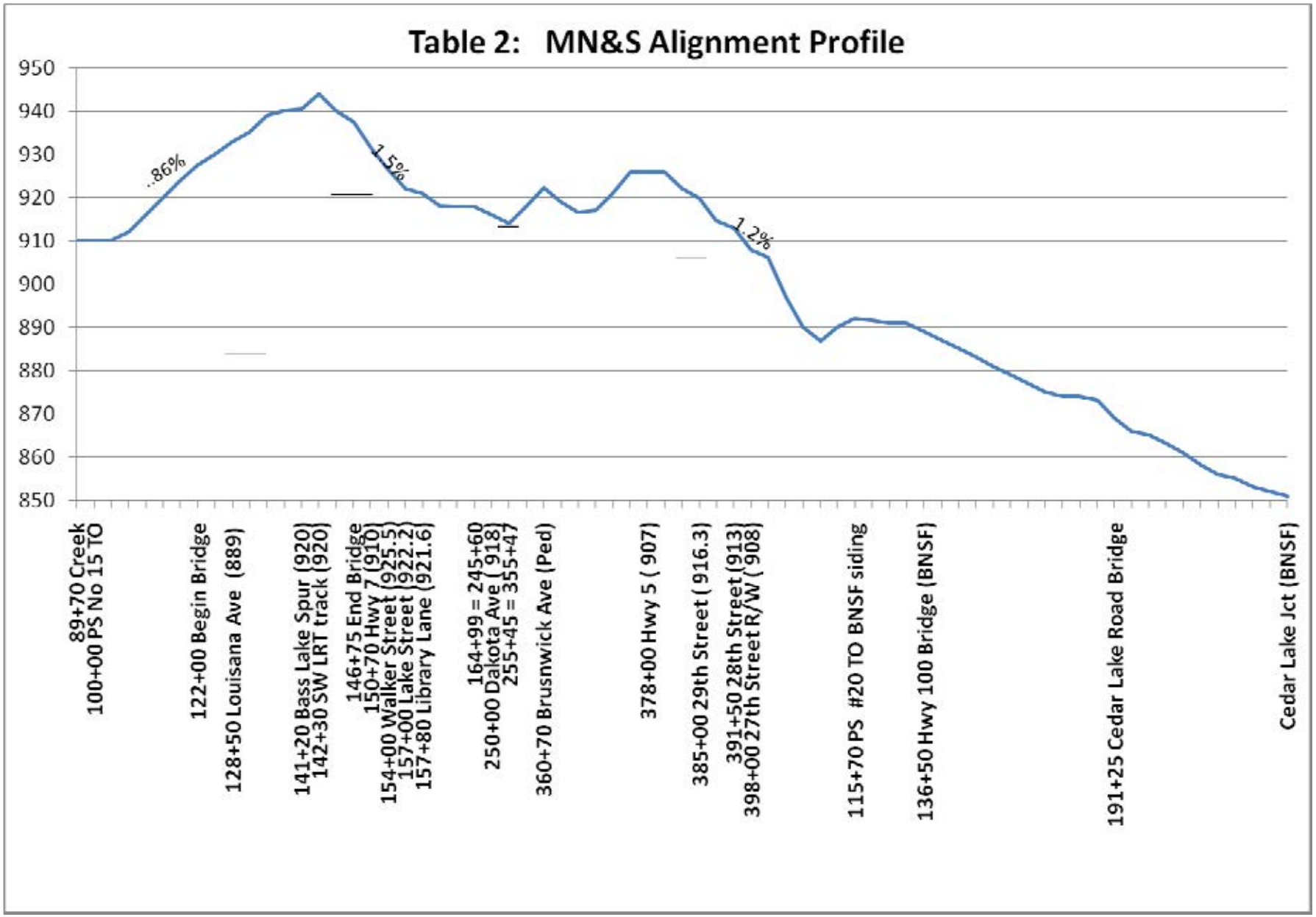


Table 2: MN&S Alignment Profile
950
940
930
920
910
900
890
880
870
860
850
.86%
1.5%
1.2%
89+70 Creek
100+00 PS No 15 TO
122+00 Begin Bridge
128+50 Louisana Ave (889)
141+20 Bass Lake Spur (920)
142+30 SW LRT track (920)
146+75 End Bridge
150+70 Hwy 7 (910)
154+00 Walker Street (925.5)
157+00 Lake Street (922.2)
157+80 Library Lane (921.6)
164+99 = 245+60
250+00 Dakota Ave (918)
255+45 = 355+47
360+70 Brusnwick Ave (Ped)
378+00 Hwy 5 (907)
385+00 29th Street (916.3)
391+50 28th Street (913)
398+00 27th Street R/W (908)
115+70 PS #20 TO BNSF siding
136+50 Hwy 100 Bridge (BNSF)
191+25 Cedar Lake Road Bridge
Cedar Lake Jct (BNSF)

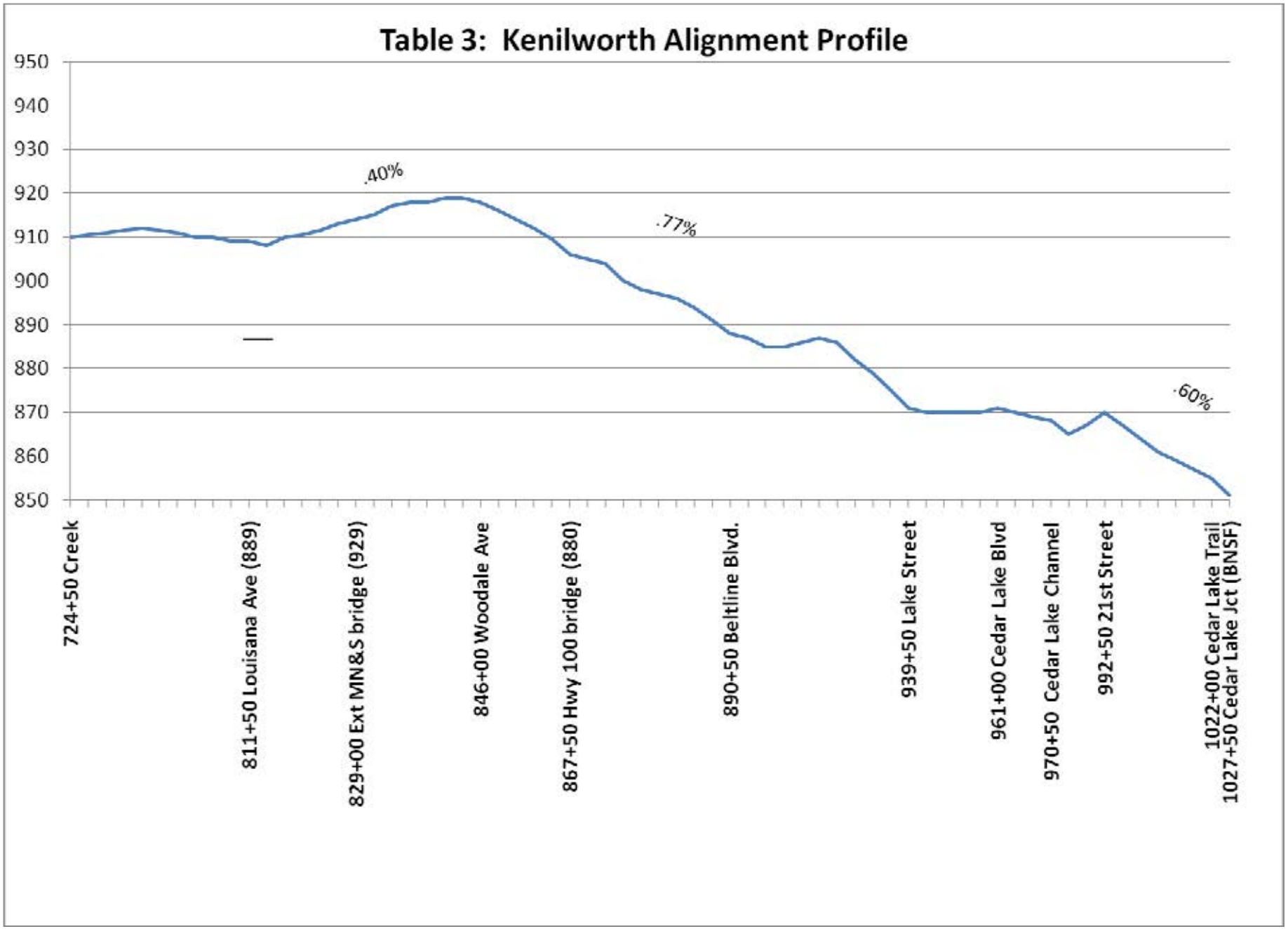


Table 3: Kenilworth Alignment Profile
950
940
930
920
910
900
890
880
870
860
850
.40%
.77%
.60%
724+50 Creek
811+50 Louisana Ave (889)
829+00 Ext MN&S bridge (929)
846+00 Woodale Ave
867+50 Hwy 100 bridge (880)
890+50 Beltline Blvd.
939+50 Lake Street
961+00 Cedar Lake Blvd
970+50 Cedar Lake Channel
992+50 21st Street
1022+00 Cedar Lake Trail
1027+50 Cedar Lake Jct (BNSF)

Table 4 – Existing Railroad Right-of-Way for the Rail Segments of Interest

Rail Segments of Interest		Right-of-Way Description
CP Rail MN&S Sub	**Between CP Rail Bass Lake Spur and BNSF Wayzata Subdivision Mainline**	• North of 27th Street width varies from 280 feet to include triangle shaped parcel formerly used for interconnect to BNSF mainline. • Right-of-way is 66 feet between 27th Street and Minnetonka Blvd, south of Minnetonka Blvd. • Right-of-way consists of several parcels varying in width from 34 feet to 145 feet with a typical width of approximately 100 feet.
	South of CP Rail Bass Lake Spur	• North of 39th Street right-of-way is composed of several parcels varying in width from 80 to 153 feet. • Between 39th Street and Excelsior Blvd, right-of-way width is 66 feet constant. • South of Excelsior, right-of-way varies from 66 to approximately 164 feet.
CP Rail Bass Lake Spur	**East of CP Rail MN&S Sub**	• The right-of-way over this segment is divided into two parallel parcels. • CP owns the south half (about 70 feet), and HCRRA owns the north half of this right-of-way (about 100 feet). • The total right-of-way width varies from 75 feet to 235 feet.
	West of CP Rail MN&S Sub	• The right-of-way over this segment is divided into two parallel parcels. • CP owns the south half (about 70 feet), and HCRRA owns the north half of this right-of-way (about 100 feet). • The total right-of-way width is constant, measuring between 164 and 170 feet over this entire segment.
CP Rail Interchange Track (Interconnect or Switching Wye)		• There are only a few right-of-way parcels owned by the CP over the length of the switching wye. • Much of the segment is located within easements on private property. • The right-of-way that remains varies in width from 31 to 90 feet.
Kenilworth Corridor		• The Kenilworth corridor is owned by HCRRA and varies in width from 44 feet and 200 feet. There are various publicly owned parcels adjoining the HCRRA. • The Kenilworth corridor was purchased by HCRRA from the CNW Railroad for the purposes of transit. The existing corridor has a freight track and trail and has been identified as the preferred SW LRT alignment.
BNSF Railroad		• BNSF right of way varies between 100’ and 150’ wide but does have the Cedar Lake trail on an easement within their property.

Source: *St. Louis Park Railroad Report*, 1999. SEH, Inc.

Table 5
Freight Rail Route Options – Comparison Table
Entire Route

		Existing Conditions		Conditions if Kenilworth is chosen		Conditions if MN&S is chosen	
		Kenilworth Corridor	**MN&S Corridor**	**Kenilworth Corridor**	**MN&S Corridor**	**Kenilworth Corridor**	**MN&S Corridor**
Train Operations							
# of trains/day - now		4-5	2	4-5	2	0	6-7
# of trains/day - future (2030)		5-6	2-4	5-6	2-4	0	7-10
Train Speed (mph)		10-25	10	10-25	10	10-25	10-25
Track							
Route Length (FT) Minnehaha Creek to Cedar Lake Jct		24,600	N/A	24,600	N/A	N/A	26,400
Track new & upgraded (FT)		0	0	18,800	0	0	27,610
Track Removed (FT)		N/A	N/A	0	0	18,800	0
RR Bridge constructed (FT)		N/A	N/A	240	0	0	3490
RR Bridge rebuilt (FT)		N/A	N/A	280	0	0	245
Track Grade Maximum		0.77%	1.90%	0.77%	1.90%	N/A	1.50%
Track Curvature Maximum (degree)		4	6	4	6	N/A	8
Turnouts (No)		1	5	1	0	0	5
Road Crossings							
# of At-grade Crossings		4	6	4	6	0	5
# of Crossing with ADT < 2,500		1	3	1	3	0	2
# of Crossings with ADT 2,500-9,000		1	3	1	3	0	3
# of Crossing with ADT > 9,000		2	0	2	0	0	0
# of Crossings closed		N/A	N/A	0	0	0	1
# of Crossings with rr signals		3	4	2	4	0	5
# of Crossings s Quiet Zone		2	0	4	0	0	5
Residential Impacts							
Single Family							
# of homes	Home	0	0	0	0	0	0
< 25’	Parcel	0	16	0	16	0	16
# of homes	Home	0	2	0	2	0	0
26’-50’	Parcel	0	69	1	69	1	69
# of homes	Home	13	53	11	53	0	53
51-100’	Parcel	20	30	11	30	7	30
# of homes	Home	35	127	35	127	35	127
101-200’	Parcel	57	148	57	148	57	148
Multi Family							
# of units < 25’	Units	3	0	3	0	0	0
# of units 26’-50’	Units	30	0	52	0	0	0
# of units 51’-100’	Units	154	4	135	4	0	0
# of units 101’-200’	Units	294	96	175	96	60	160
Total Housing Units Affected							
# of units < 25’	Units	3	0	3	0	0	0
# of units 26’-50’	Units	30	2	52	2	0	2
# of units 51’-100’	Units	167	57	63	57	7	53
# of units 101’-200’	Units	329	223	210	223	95	287
Institutional Impacts							
Schools within 1/8 mile (#)		0	5	0	5	0	5
Parks within 1/8 mile (#)		2	7	2	7	2	7
Business Impacts							
# of Industrial Building within 500’		58	66	58	66	58	66
# of Commercial Building within 500’		10	15	10	15	10	15
Right of Way							
# of Residential Property acquired		N/A	N/A	34	0	0	2
# of Business Property Acquired		N/A	N/A	0	0	0	1
# of partial parcel takes		N/A	N/A	0	0	0	12
# of Institutional Property Acquired		N/A	N/A	0	0	0	0
SW LRT Issues							
# of Stations next to frt rail		0	0	6	0	0	4
# of grade separation over frt rail		0	0	1	1	1	1
Costs							
Construction costs				$30,000,000			$71,172,000
Property acquisition				$5 - $40,000,000			$5,500,000
Total				$35 - $70,000,000			$76,672,000

Table 6 – At-Grade Crossing Summary for the Rail Segments of Interest

Rail Segments of Interest		Crossing #	Location	24-Hour Traffic Count	Existing Control	Recent or Planned Improvements
CP Rail MN&S Sub	**North of BNSF Wayzata Subdivision Mainline**	#854230K	Cedar Lake Road	12,207 (2009)	Overhead Flashers	None
	Between CP Rail Bass Lake Spur and BNSF Wayzata Subdivision Mainline	#854231S	W. 28th Street	1,200 (2009)	Stop Signs with Crossbucks	New signals with gates
		#854232Y	W. 29th Street	190 (2011)	Stop Signs with Crossbucks	Close
		#854233F	Brunswick Avenue (North)	N/A (Pedestrians Only)	None	Roadway Crossing Closed 2005. Pedestrian Crossing Constructed 2006.
		#854234M	Dakota Avenue	4,500 (2009)	Flashers and Gates	Gates and New Concrete Surface Constructed 2005.
		#854235U	Library Lane	1958 (2011)	Flashers	Programmed for Gate Installation in 2011/2012.
		#854236B	Lake Street	3,850 (2009)	Overhead Flashers	
		#854237H	Walker Street	2,905 (2009)	Flashers	New signals with gates
	South of CP Rail Bass Lake Spur	#379742T	Brunswick Avenue (South)	N/A (Pedestrians Only)	None	Roadway Crossing Closed 2003. Pedestrian Crossing Constructed 2004.
		#854241X	Alabama Avenue	3,025 (2009)	Flashers	Programmed for Gate Installation in 2011/2012.
		#854242E	Excelsior Boulevard	25,500 (2007)	Overhead Flashers and Gates	None
		#854243L	W. 41st Street	976 (unknown)	Stop Signs with Crossbucks	None
		#854244T	W. 42nd Street	258 (unknown)	Stop Signs with Crossbucks	None
		#854245A	Brookside Avenue North	1,160 (unknown)	Flashing Lights	None
		#854246G	Brookside Avenue South	1,160 (unknown)	Flashing Lights	None
CP Rail Bass Lake Spur	**East of CP Rail MN&S Sub**	#397741L & #185195B	Wooddale Avenue	11,300 (2009)	Overhead Flashers and Gates	None
		#187142J	Beltline/ Ottawa Ave	14,100 (2009)	Overhead Flashers and Gates	None
	West of CP Rail MN&S Sub	None	N/A	N/A	N/A	N/A
CP Rail Interchange Track (Interconnect or Switching Wye)		#379744G	Oxford Street	3,300 (unknown)	Crossbucks	None
		#379745N	Louisiana Avenue	10,500 (2007)	Overhead Flashers	None

Table 7
Railroad Grade Crossing Analysis
St Louis Park MN

Rail Segments of Interest		Crossing #	Location	ADT	Year	Functional Class	# of Trains per day Existing	Existing Exposure	# of Trains per day MN&S reroute	Exposure
CP Rail MN&S Sub	Between CP Rail Bass Lake Spur and BNSF Wayzata Subdivision Mainline	#854231S	W. 28th Street	1,200	2,009	Local	2	2,400	7	8,400
		#854232Y	W. 29th Street	190	2011	Local	2	380	7	1,330
		#854233F	Brunswick		N/A (Pedestrians Only)	None	2	0	7	0
		#854234M	Dakota Avenue	4,500	2009	Major Collector	2	9,000	7	31,500
		#854235U	Library Lane	1,958	2011	Local	2	3,916	7	13,706
		#854236B	Lake Street	3,850	2009	Major Collector	2	7,700	7	26,950
		#854237H	Walker Street	2,950	2009	Local	2	5,900	7	20,650
	North of BNSF Wayzata Subdivision Mainline	#854230K	Cedar Lake Road	12,207	2009	Major Collector	2	24,414	2	24,414
	South of CP Rail Bass Lake Spur	#379742T	Brunswick		N/A (Pedestrians Only)	Local	2	0	2	0
		#854241X	Alabama Avenue	3,025	2009	Local	2	6,050	2	6,050
		#854242E	Excelsior Boulevard	25,500	2007	Major Collector	2	51,000	2	51,000
		#854243L	W. 41st Street	975		Local	2	1,950	2	1,950
		#854244T	W. 42nd Street	258		Local	2	516	2	516
		#854245A	Brookside Avenue North	1,160		Local	2	2,320	2	2,320
		#854246G	Brookside Avenue South	1,160		Local	2	2,320	2	2,320
CP Rail Bass Lake Spur	East of CP Rail MN&S Sub	#397741L /185195B	Wooddale Avenue	11,300	2009	Major Collector	5	56,500	0	0
		#187142J	Beltline Blvd/Ottawa	14,100	2009	Major Collector	5	70,500	0	0
	West of CP Rail MN&S Sub	None								
CP Rail Interchange Track (Interconnect or Switching Wye)		#379744G	Oxford Street	3,300		Local	0.25	825	0.25	825
		#379745N	Louisiana Avenue	9,900	2009	Major Collector	0.25	2,475	0.25	2,475
					City of St Louis Park	Total Exposure		248,166		194,406
Minneapolis										
Minneapolis Kenilworth		#185192F	Cedar Lake Parkway	2650	2008	Major Collector	5	13,250	0	0
		#185190S	21st Street	824	2008	Local	5	4,120	0	0
					City of Minneapolis	Total Exposurre		17,370		0
MN&S Crossings						Total Exposure		265,536		194,406
Kenilworth Crossings						MN&S Exposure		29,296		102,536
						Kenilworth Exposure		144,370		0

Land Use

The land use between the two alignments varies. The MN&S Section passes through a variety of land uses, including primarily industrial and commercial on the south end; residential, parkland, and community uses along the stretch between Highway 7 and 27th Street; and residential/green space on the northern end. The Kenilworth Section passes through primarily industrial and commercial on the west end, transitioning into a mix of multifamily and industrial in the middle and a mix of high density residential, single family and parkland on the northeast end. The MN&S has more single family and school related uses, while the Kenilworth has more parkland and multifamily.

Residential Properties

There are a significant number of residents living along both routes. However residents along the MN&S tend to be closer to the tracks than the residents along the Kenilworth route and the MN&S route is mostly single family homes. Within 50 ft of the center line of the MN&S tracks there are 85 single family lots and 2 single family homes, all of them in St. Louis Park. Along the Kenilworth route there are none that close today. There are 33 multi-family parcels and 13 townhomes within 50 ft of the centerline of railroad tracks in Kenilworth in Minneapolis if the freight rail tracks are re-aligned to accommodate both freight rail and LRT. No multi-family structures are within 50 feet of the center line of the proposed MN&S route, however three garages in the Sungate Townhome complex at the "iron triangle would be.

Institutional Uses

There are no institutional uses identified along the Kenilworth route within 1/8th mile of the freight rail tracks and five along the MN&S. Most notably St. Louis Park High School is located adjacent to the MN&S tracks between Dakota Avenue and Library Lane.

Business Uses

Business uses range from industrial plants, warehouses, big box stores and local retail and restaurants along both corridors. The MN&S corridor businesses are located on the southern end with a concentration around the Lake/Walker area. The MN&S businesses on Oxford Road will be affected by the proposed bridge to connect from the Bass Lake Spur to the MN&S tracks, northbound. Partial easements would be required from all but one parcel in this area.. It appears that one business/property (9600 Oxford Road) will be taken in full since the building would be under the proposed bridge.

Several of the businesses along Lake Street have expressed concerns about existing noise and vibration issues and are concerned that the proposed project will make conditions worse.

The Kenilworth Corridor businesses are located further away from the track and are more industrial in nature. The corridor north of Lake Street is residential and parkland.

Right of Way

The MN&S right of way is very irregular and reflects the fact that it was acquired after land had been split into lots. The right of way varies from 34 ft to 145 ft with much of it 66 ft or 100 ft wide.

The Kenilworth with the existing freight rail tracks is 44 ft to 200 ft wide. However adjacent to the HCRRA right of way is right of way owned by other public entities including the City of Minneapolis and the Minneapolis Park Board.

Impacts to the City of St Louis Park

The SW LRT project is a driving force for the need to address the issue of finding a permanent home TC&W train traffic in the short term. A permanent location for TC&W traffic is needed before the

SWLRT line can be constructed. While separate questions and projects, the freight rail issue and SWLRT project are intertwined and influence one another. The decision between choosing the Kenilworth Corridor and MN&S Corridor has significant impacts to the City, some positive and some negative. Some of the key impacts on St. Louis Park are highlighted below.

SWLRT Project and Station Planning

The existing concept plan for the SWLRT line assumes that freight traffic no longer exists in the Kenilworth corridor. It assumes that the TC&W trains now operating in Kenilworth will be rerouted to the MN&S and that the improvements necessary for that rerouting will have been completed by the time the SWLRT is constructed.

If TC&W trains continue to operate in Kenilworth route design modifications to the SWLRT line would be needed. Key factors include the following:

1. *A new LRT bridge over CP Bass Lake Spur tracks near Wooddale Avenue*. If freight rail and LRT both operate in the Kenilworth corridor, the position of the freight rail and LRT tracks relative to one another needs to be switched to put the freight rail tracks north of the LRT tracks. This would be most easily accomplished by constructing an LRT bridge over the freight tracks near Wooddale Avenue.
2. *Regional Trail*. Freight rail and LRT both in the Kenilworth corridor requires at least partial relocation of the regional trail that exists now in the Kenilworth corridor.
3. *Additional right of way will need to be acquired in the Kenilworth Corridor*. Primarily this means acquisition of property and likely relocation of residents at the Cedar Shores Townhomes. It also means working with the City of Minneapolis and Minneapolis Park Boards regarding the use of property they own in the Kenilworth corridor that has been planned to be used for the SWLRT line and now would also be necessary for freight rail use.
4. *Additional "4f" parkland review issues*. The SWLRT concept plan currently raises environmental review issues due to the traversing of park/parkway properties by the proposed SWLRT tracks and trains. To the extent that these crossings are consider minimal or de minimis intrusions they can be allowed, the addition of freight rail tracks could complicate reaching that finding.

All of the above factors complicate and add costs to the implementation of the SWLRT project. The consequences of that added complexity on the timing, funding, cost and odds of successful implementation of the SWLRT project in the near future are difficult if not impossible to ascertain with any certainty. Potential impacts on the SWLRT project potentially affect St. Louis Park as well since the City supports the implementation of the SWLRT project and believes it is important and beneficial for the community. Clearly any increase in the complexity of the SWLRT project is a hindrance to moving forward successfully. How much of a hindrance and its exact impact is hard to say.

For St. Louis Park itself, the most significant potential impact of TC&W traffic continuing in the Kenilworth corridor is the potential impacts on the Wooddale and Beltline station areas. Kenilworth freight rail would also affect the three stations in Minneapolis.

Freight rail in Kenilworth corridor will affect the operation of the LRT stations as well as development in the area surrounding the stations. It is difficult to quantify the precise impacts freight rail will have on the stations and development. To help understand this issue as it relates to station area planning, we have asked assistance from SRF Consulting Group, who has already been working on LRT station area planning at the Beltline area. Their role is to help identify issues and principles that could help the City evaluate the potential impacts from freight rail on the station areas and to assist in arriving upon planning principles. They have compiled a list of issues assuming freight railroad and LRT share the same corridor. It is worthwhile to note that even if the MN&S route is chosen for TC&W trains, the Blake

Road station in Hopkins and the Louisiana Avenue station in St. Louis Park will need to address issues generated by the presence of freight trains at the LRT stations. The Louisiana Avenue station would have the advantage of grade separation which would simplify the access problems created by the presence of freight trains at LRT stations.

Key issues identified so far stem largely from the barrier to access that at grade freight rail tracks present to pedestrians, people on bikes and vehicles; and, the impact on the character of the area. The impact of the barriers to access is heightened since the level of traffic of all kinds is expected to increase due to the LRT stations. The inclusion of freight rail within the SW LRT corridor would:

1. Creates a barrier for pedestrian, bicycle, and transit access from the north side of the transit corridor
2. Creates increased vehicle queues along Wooddale Avenue and Beltline Boulevard
3. Creates additional design challenges for the possibility of Beltline Boulevard grade separation
4. Will tend to create a more industrial or utilitarian setting than that of an exclusive transit way corridor; thereby making the corridor somewhat less attractive for development
5. Presents increased safety concerns with increased traffic congestion and queues

A total of six future LRT stations are planned along the Kenilworth route, three in St. Louis Park and three more in Minneapolis. The Kenilworth stations are

1. Louisiana Avenue – St. Louis Park
2. Wooddale Avenue – St. Louis Park
3. Beltline Blvd – St. Louis Park
4. West Lake Street – Minneapolis
5. W 21st Street – Minneapolis
6. Penn Avenue – Minneapolis

One station, the Louisiana Avenue Station is along the MN&S route in addition to being along the Kenilworth.

Each of the St. Louis Park stations is located on a major north-south collector or connector street with adjoining trail or sidewalk in order to provide access to the LRT stations from a ½ mile walking radius, potential feeder bus services, “kiss and ride” patrons; and, in the case of the Louisiana and Beltline Stations, “park & ride” patrons. The stations were also chosen and planned to support future development that would in turn support the transit system. The projected ridership for the stations is provided in Table 8.

Table 8

SWLRT Projected Boardings (Alternative 3A)

Station	Daily Boardings	Park & Ride
Blake Road	1,600	Yes
Louisiana Avenue	1,200	Yes
Wooddale Avenue	1,200	Yes
Beltline Road	1,400	Yes
West Lake	2,850	No
21st Street	1,050	Yes
Penn Avenue	600	No

Roadway System

The MN&S EAW addressed impacts to the City roadways, and shows some impact to the intersections of Walker, Library, Lake, and Dakota especially at certain critical times of the day; specifically rush hour and school dismissal. Trains on the MN&S tracks at these times of day will block traffic at these street crossings, creating congestion and delays. The impacts should be relatively short but even a few minutes disruption when school buses are operating their system will be affected.

The two highest volume roads (Beltline and Wooddale) in the study area are cross the Bass Lake spur and are the location of SW LRT stations. With the opening of the LRT stations traffic will increase on these roads and will become difficult to manage. The traffic analysis in the DEIS for SWLRT anticipates that Beltline will not function well without improvements once LRT operating, much less if freight trains are also operating. The SW LRT approved plan does not show a grade separation at Belt Line but it may need to be added to address the traffic issues anticipated at this location. Beltline already has traffic congestion issues under current conditions. The addition of LRT station traffic and retention of freight rail tracks will add to the challenges. The freight rail track across Belt Line makes it a real challenge to construct a grade separation. The SW LRT station planning effort is studying those options.

Pedestrian System

Pedestrians near freight rail tracks are a conflict that sometimes is difficult to measure or control. The closeness of the schools to the MN&S tracks has highlighted the pedestrian issues associated with the MN&S route. The two major regional trails in St Louis Park that are close to freight rail tracks are also areas for concern. In particular the access points to the SWLRT trail at Beltline and Wooddale

are heavily used by pedestrians and bicyclists. Selection of the Kenilworth route would continue train traffic at these busy pad/bike access points. Selection of the MN&S route would remove trains not only from the Beltline and Wooddale trail access points, but from three miles of regional trail right of way.

Primary hubs of pedestrian and bicycle activities in the vicinity of the alternative rail routes include St. Louis Park High School, Central Community Center/Park Spanish Immersion School, Hobart School, the commercial areas along Lake Street and W.36th Street; three future LRT stations and, a series of parks and two regional trails. There is little or no actual pedestrian or bicycle traffic volume information available for any locations near either of the freight rail routes. Clearly four areas with significant pedestrian and biking activity along the routes in St. Louis Park stand out. They are

1. The High School, its football field, adjacent commercial area on Lake Street, and the connection with the Spanish Immersion/Community Center via Dakota Avenue;
2. The regional trail access point and future LRT station location at Beltline Blvd;
3. The regional trail access point and future LRT station location at Wooddale Avenue;
4. The Dakota Park/dog park and Hobart School
5. Both the MN&S and the Kenilworth routes parallel regional trails for extended distances.

In addition much of the MN&S route between Walker Street and Dakota Park passes through a pedestrian scaled retail/service area and residential neighborhoods that are served by a grid system of streets and sidewalks that create a very walkable community.

Despite the heavy use of the regional trails in the study area including the Kenilworth Trail, the record provides some history of safety. Cedar Lake Parkway in Kenilworth corridor is a significant at grade crossing with TC&W trains, a mixture of pedestrians, vehicles and bicyclists use this skewed crossing which is also within a quiet zone. A recent search of the FRA database shows no record of any incidents involving trains and pedestrians or vehicles.

Noise and Vibration

The EAW has concluded that noise will be a major conflict primarily the train horns. Their mitigation plan is to institute a quiet zone. This will reduce the high level but noise will still be apparent.

The vibration tests that were run for the EAW indicated that train vibration with about 40 feet of the tracks needs to be mitigated, even though many residents and business people have indicated that it is bothersome further away. The high school has indicated that some of their equipment has problems with adjustment because of the vibration. There are two homes within that 40-50' impact range. The strips of businesses along Lake Street also are in this range.

Switching Wye

The system of tracks in the Oxford Street industrial area (Skunk Hollow) is the switching/interchange wye which provides access to potential rail customers in the Oxford industrial area and a means for connecting the CP Bass Lake Spur to the MN&S tracks. The wye makes it possible even today for trains on the Bass Lake Spur to connect to the MN&S tracks and proceed south or north. The wye is also being used by CP to access one customer who is located on Oxford Street west of Louisiana Avenue. The wye tracks are not included as part of either alternative TC&W route. The MN&S route would eliminate the need to use the wye to connect from the Bass Lake Spur to the northbound MN&S tracks. It could also be used as an alternative means for connecting from the Bass Lake Spur to the MN&S

southbound tracks. Neither alternative route would eliminate the need to service the lone rail customer in the Oxford Street area.

Train activity on the wye to move trains to the south is minimal because of lack of activity at the Savage ports. This could change depending upon the market conditions. A direct connection to the south would benefit the railroad operations and minimize the switching activity in the Oxford industrial area. In Appendix A, there is a conceptual drawing of a direct south connection.

Table 9
St. Louis Park Only

		Existing Conditions		Conditions if Kenilworth is chosen		Conditions if MN&S is chosen	
		Kenilworth Corridor	**MN&S Corridor**	**Kenilworth Corridor**	**MN&S Corridor**	**Kenilworth Corridor**	**MN&S Corridor**
Train Operations							
# of trains/day - now		4-5	2	4-5	2	0	6-7
# of trains/day - future (2030)		5-6	2-4	5-6	2-4	0	7-10
Train Speed (mph)		10-25	10	10-25	10	10-25	10-25
Track							
Route Length (FT)		24,600	N/A	24,600	N/A	N/A	26,400
Minnehaha Creek to Cedar Lake Jct							
Track new & upgraded (FT)		0	0	18,800	0	0	27,610
Track Removed (FT)		N/A	N/A				
RR Bridge constructed (FT)		180	2450				
RR Bridge rebuilt (FT)		340	395				
Track Grade Maximum		0.77%	1.90%	0.77%	1.90%	N/A	1.50%
Track Curvature Maximum (degree)		4	6	4	6	N/A	8
Turnouts (No)		1	5	1	0	0	5
Road Crossings							
# of At-grade Crossings		2	6	2	6	0	5
# of Crossing with ADT < 2,500		0	3	0	3	0	2
# of Crossings with ADT 2,500-9,000		0	3	0	3	0	3
# of Crossing with ADT > 9,000		2	0	2	0	0	0
# of Crossings closed		N/A	N/A	0	0	0	1
# of Crossings with rr signals		2	4	2	4	0	5
# of Crossings in Quiet Zone		0	0	2	0	0	5
Residential Impacts							
Single Family							
# of homes	Home	0	0	0	0	0	0
< 25’	Parcel	0	16	0	16	0	16
# of homes	Home	0	2	0	2	0	2
26’-50’	Parcel	0	69	0	69	0	69
# of homes	Home	0	53	0	53	0	53
51-100’	Parcel	0	30	0	30	0	30
# of homes	Home	11	127	11	127	0	127
101-200’	Parcel	11	148	11	148	0	148
Multi Family							
# of units < 25’	Units	0	0	0	0	0	0
# of units 26’-50’	Units	0	0	0	0	0	0
# of units 51’-100’	Units	0	4	0	4	0	0
# of units 101’-200’	Units	60	96	216	96	60	160
Total Housing Units Affected							
# of units < 25’	Units	0	0	0	0	0	0
# of units 26’-50’	Units	0	2	0	2	0	2
# of units 51’-100’	Units	0	57	0	57	0	53
# of units 101’-200’	Units	71	223	227	223	71	287
Institutional Impacts							
Schools within 1/8 mile (#)		0	5	0	5	0	5
Parks within 1/8 mile (#)		2	7	2	7	2	7
Business Impacts							
# of Industrial Building within 500’		50	66	50	66	50	66
# of Commercial Building within 500’		10	15	10	15	10	15
Right of Way							
# of Residential Property acquired		0	0	0	0	0	2
# of Business Property Acquired		0	0	0	0	0	1
# of partial parcel takes		0	0	0	0	0	12
# of Institutional Property Acquired		0	0	0	0	0	0
SW LRT Issues							
# of Stations next to frt rail		0	0	3	1	1	1
# of grade separation over frt rail		0	0	1	1	1	1
Costs							
Construction costs				$30,000,000			$71,172,000
Property acquisition				$40,000,000			$5,500,000
Total				$70,000,000			$76,672,000

Mitigation of the MN&S

Railroad traffic brings with it a variety of impacts many of which have been highlighted earlier in this memorandum. At least some of the negative impacts can be ameliorated through mitigation measures. Table 10 below outlines potential mitigation measures that could be considered to address negative rail traffic impacts within the MN&S corridor. It may be appropriate to implement many of the items listed. In some cases a range of potential solutions to a particular impact are listed. In that case implementation of a more comprehensive mitigation item may eliminate the need for one or more of the other items on the list. It is assumed the cost to implement the measures noted below would not be borne by the City of St. Louis Park

A similar table of potential mitigation measures could also be created to address negative impacts associated with permanently routing TC&W freight traffic on the Kenilworth route. However the mitigation focus in this memorandum is on the MN&S route since this is the route evaluated in the MN&S Freight Rail Study and for which an EAW was prepared and the most detailed information is available.

Table 10
MN&S Mitigation Measures

Track improvements • Replace and upgrade the MN&S track with 136# seamless tracks reducing noise and vibrations • Install rail lubricators • Tie and road bed construction to minimize train vibrations
Mandatory environmental requirements such as wetland, floodplain, hazardous materials handling, wildlife habitat, etc.
Whistle Quiet Zones to upgrade rail crossings safety measures to eliminate the need to blow whistles or horns as trains approach intersections.
Provide fencing and signing along the length of the railroad r-o-w to discourage people intruding unsafely on the MN&S tracks.
Create grade separated frontage road on north side of Hwy 7 by lengthening the MN&S bridge over Hwy 7 to provide space to create a frontage road on the north side.
Build a pedestrian overpass near High School and Dakota Avenue to connect the High School to the Lake Street area and football field.
Create pedestrian and non-vehicle access under MN&S tracks at Dakota Park by building an under pass at 27th St. to connect to the N. Cedar Lake regional trail from the east.
Expansion of MN&S r-o-w in residential area by acquiring homes immediately east of MN&S tracks north of approximately the intersection of MN&S tracks with Brunswick Avenue to 27th Street on the north.
Reroute coal trains west of metro area.
Elimination of sidings as well as through tracks east of Wooddale on Bass Lake spur to eliminate the possibility of cars being stored in this area or trains blocking Wooddale or Beltline.
Completely remove the Oxford industrial area switching wye tracks, abandon the rail r-o-w, and build a southern connection to MN&S.
Funding and construction of Louisiana & Hwy 7 Interchange.
Structure Improvement Program – Create a grant program to provide technical assistance and financial help for property owners to make noise and/or vibration mitigation improvements.

Sound and vibration mitigation improvements for all schools, businesses and homes adjacent to the MN&S line.
Pedestrian bridge over Hwy 7 close to the MN&S bridge to provide access for pedestrians.
Eliminate blind curves in the Lake Street/High School area.
The freight rail should only be rerouted if firm commitments are in place for implementation of SWLRT.
Property owners should be compensated for loss of property value due to rerouting of TCW trains to the MN&S tracks.
Any disruption of businesses due to construction of the MNS improvements must be appropriately mitigated.
Special care must be taken to protect and ensure no damage occurs to monitoring water wells as a result of the MN&S project.
Housing Buyout Program – Create a program to purchase homes on the west side of the MN&S tracks from willing sellers and remove, remodel or resell them.
Provide a pedestrian tunnel or bridge inter-connecting Roxbury and Keystone parks.
Mitigation for noise and vibration impacts on the neighborhoods surrounding the proposed BNSF siding
Mitigation of blocking and switching activities if these activities are not being relocated to a Glencoe switchyard.
Mitigation of the MN&S tracks and crossings south of Bass Lake Spur including mitigation at grade crossings most notably Excelsior Blvd.

Appendix

Tech Memo # 4

St Louis Park Freight Railroad Analysis

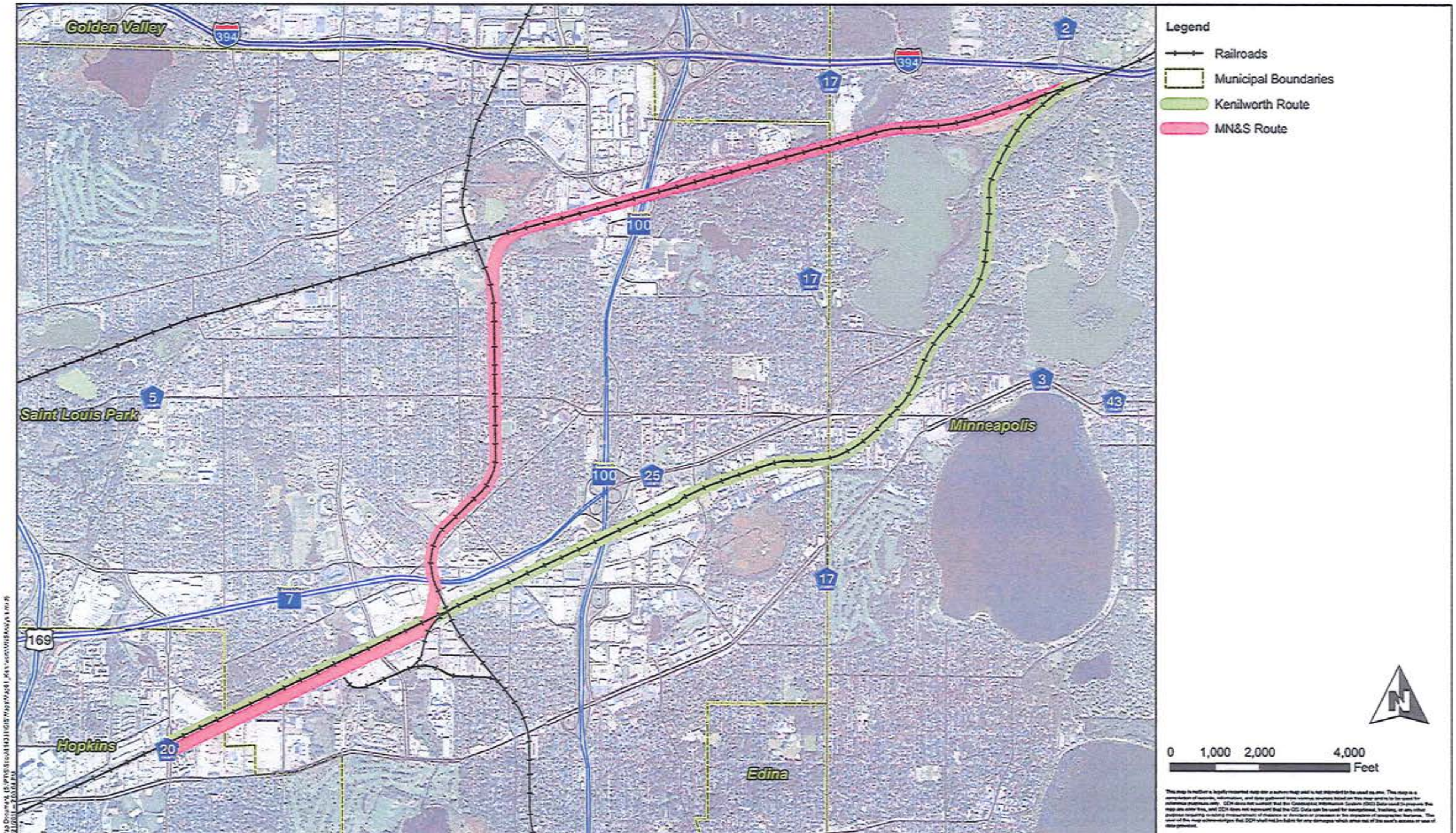
Map 1 Kenilworth and MN&S Analysis Map

Map 2 Railroad Ownership Map

Parcel Data Maps for St Louis Park and Minneapolis

South Wye Connection Concept Layout

Expanded Right of Way Concept Layout



SEH

3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110
PHONE: (651) 490-2000
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www.sehinc.com

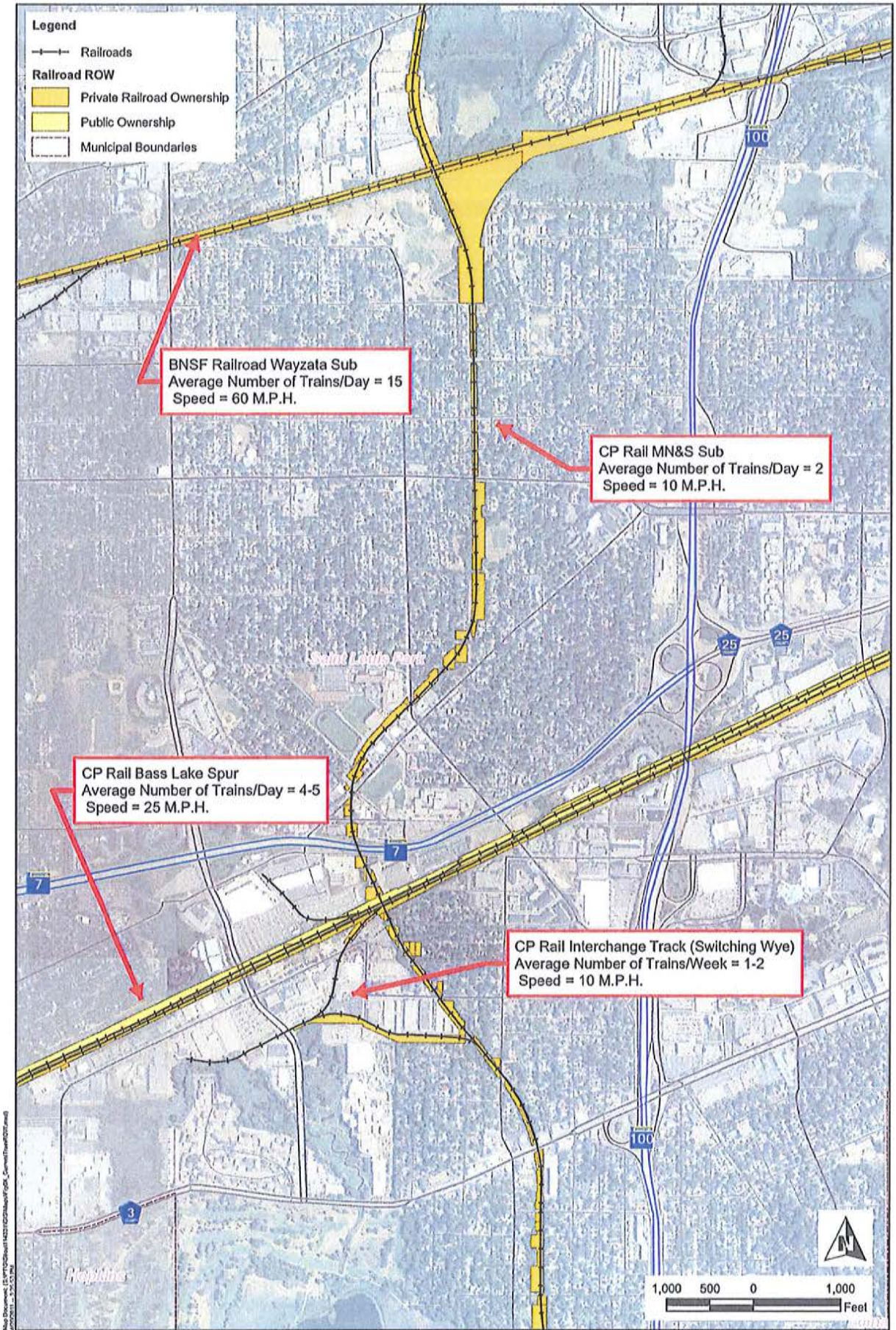
Project: STLOU 114331
Print Date: 04/19/2011

Map by: SHH
Projection: Hennepin County NAD83 ft
Source: MnDOT, MnDNR, LMIC, City of St. Louis Park, and SEH Inc.

RAILROAD FREIGHT RELOCATION STUDY
Saint Louis Park, Minnesota

Kenilworth and MN&S Analysis

Map 1



SEH
3535 VADNAIS CENTER DR
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www.sehinc.com

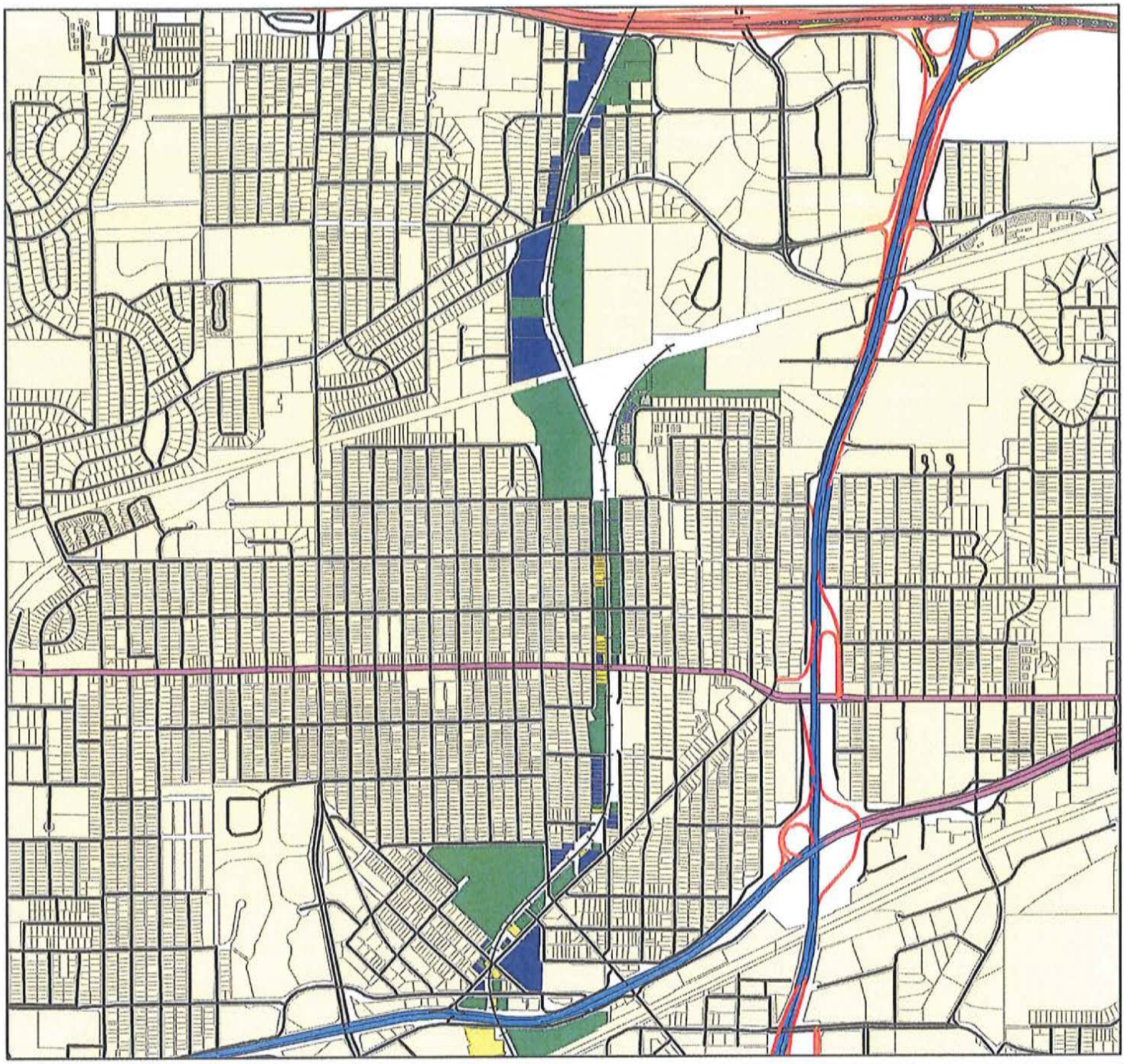
Project: STLOU 114331
Print Date: 04/20/2011

Map by: SH
Projection: Hennepin County NAD83
Source: MnDOT, MnDNR, USGS, City of St. Louis Park, and SEH Inc

RAILROAD ROW OWNERSHIP

RAILROAD FREIGHT RELOCATION STUDY
Saint Louis Park, Minnesota

Map 2



Approximate Location - Parcels Adjacent to MN & S RR

Highway 7 to I-394

3,200 Feet 1 in = 1,667 ft

N

Date: January 5, 2011

Created by: St. Louis Park Community Development Department

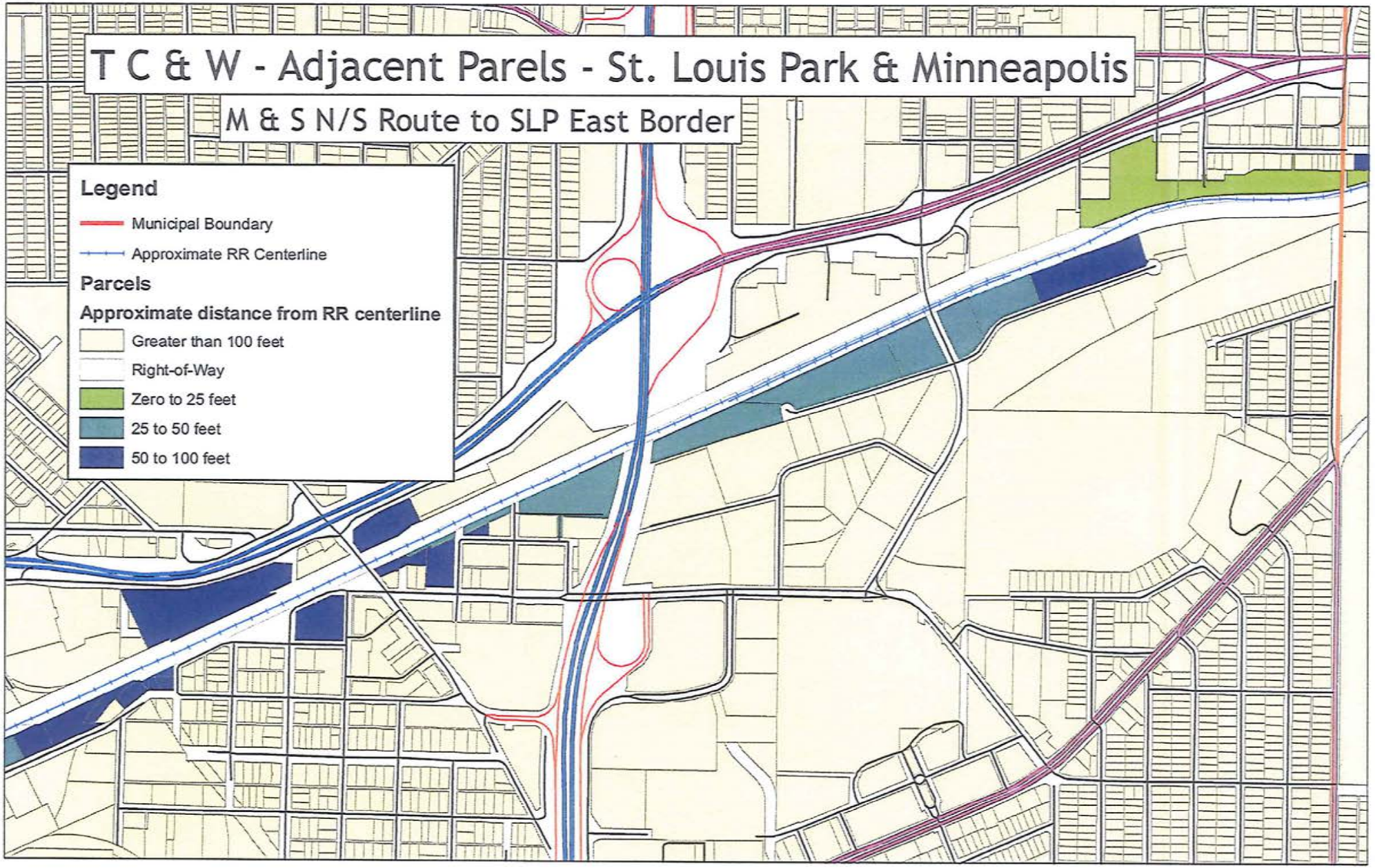
St. Louis Park
MINNESOTA

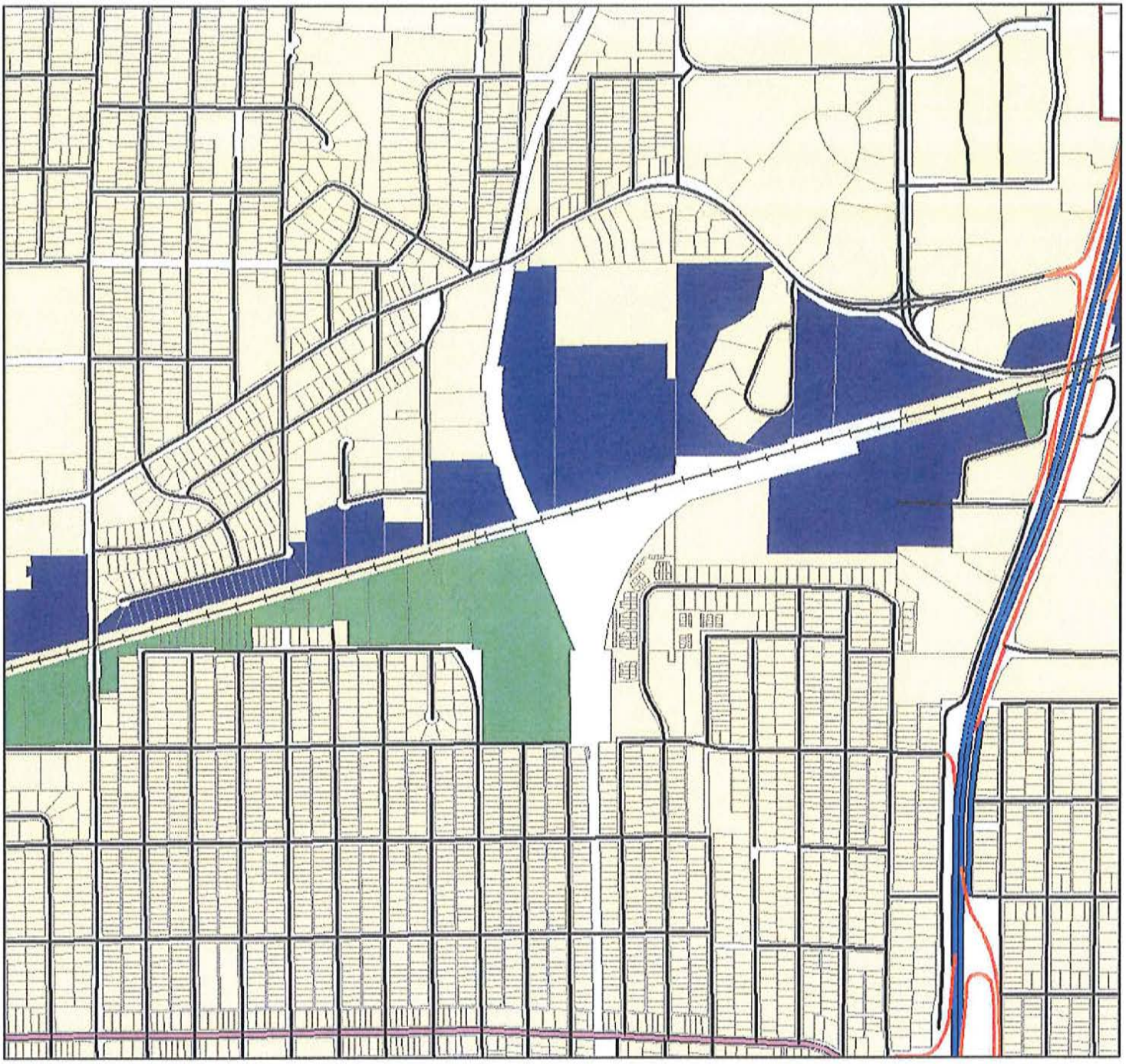
Legend

Approximate RR centerline

Approx. Distance from RR centerline

- Greater than 100 feet
- Zero to 25 feet
- 25 to 50 feet
- 50 to 100 feet


T C & W - Adjacent Parels - St. Louis Park & Minneapolis
M & S N/S Route to SLP East Border
Legend
Municipal Boundary
Approximate RR Centerline
Parcels
Approximate distance from RR centerline
Greater than 100 feet
Right-of-Way
Zero to 25 feet
25 to 50 feet
50 to 100 feet



Approximate Location - Parcels Adjacent to BNSF RR

Louisiana Ave. to Hwy 100

1,900 Feet 1 in = 965 ft

N

Date: December 17, 2010

Created by: St. Louis Park Community Development Department

St. Louis Park
MINNESOTA

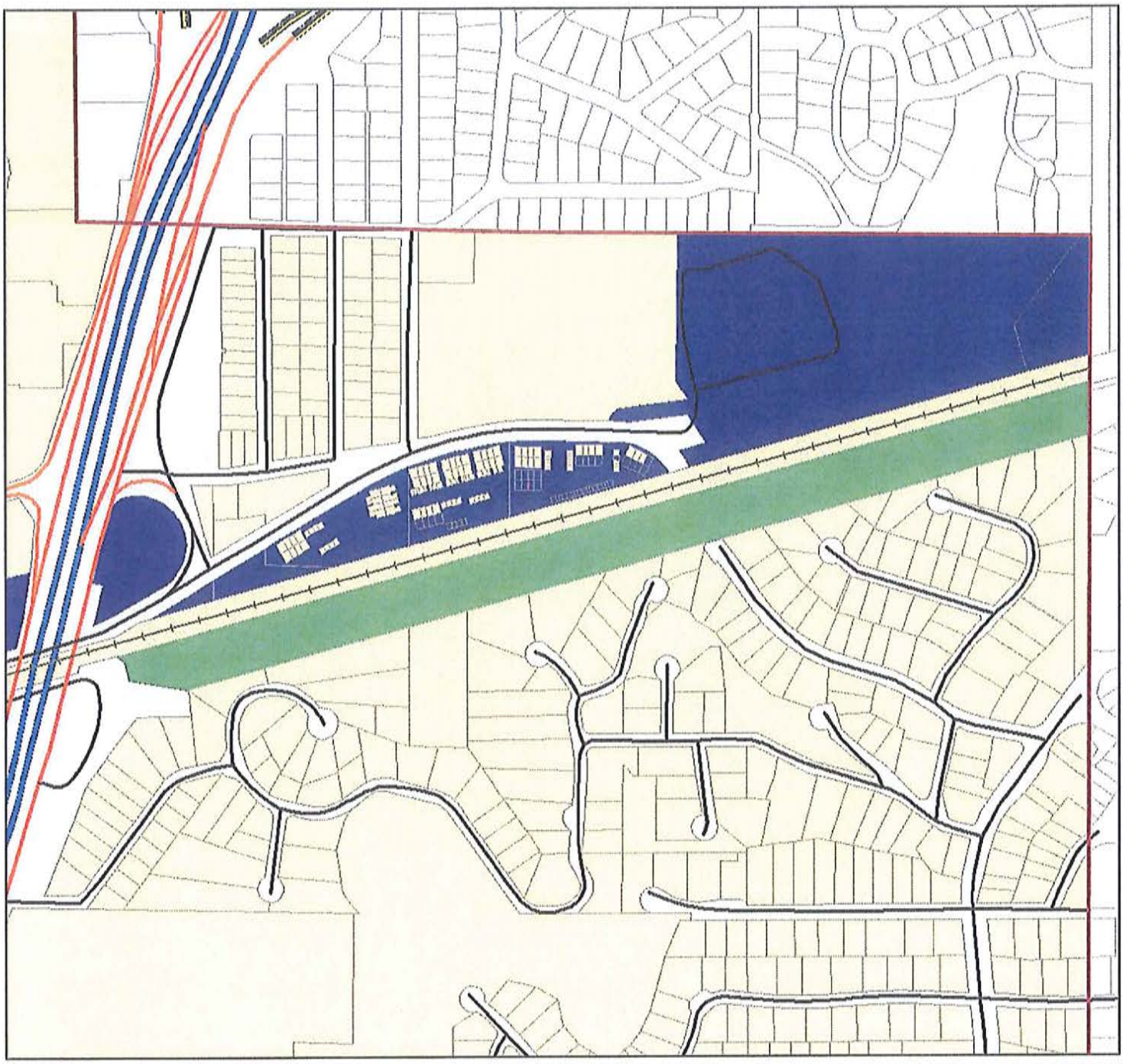
Legend

Approximate BNSF RR Centerline

Parcels

Approx. Distance from RR centerline

- Greater than 100 feet
- Zero to 25 feet
- 25 to 50 feet
- 50 to 100 feet



Approximate Location - Parcels Adjacent to BNSF RR

Hwy 100 to Mpls Border

1,000 Feet

1 in = 542 ft

N

Date: December 17, 2010

Created by: St. Louis Park Community Development Department

St. Louis Park
MINNESOTA

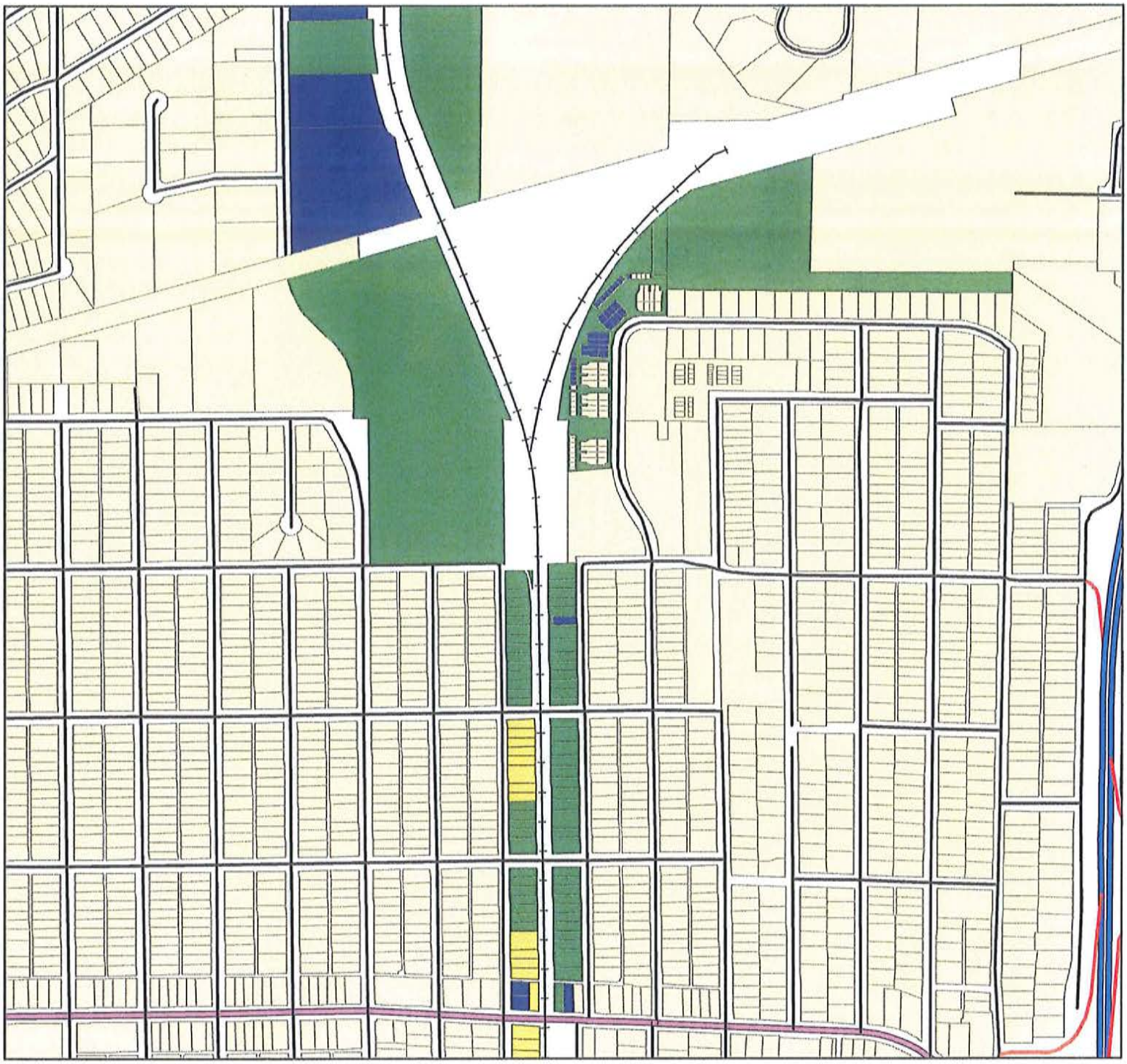
Legend

Approximate BNSF RR Centerline

Parcels

Approx. Distance from RR centerline

- Greater than 100 feet
- Zero to 25 feet
- 25 to 50 feet
- 50 to 100 feet



Approximate Location - Parcels Adjacent to MN & S RR

Minnetonka Blvd. to W. 26th St.

1,200 Feet 1 in = 620 ft

N

Date: January 5, 2011

Created by: St. Louis Park Community Development Department

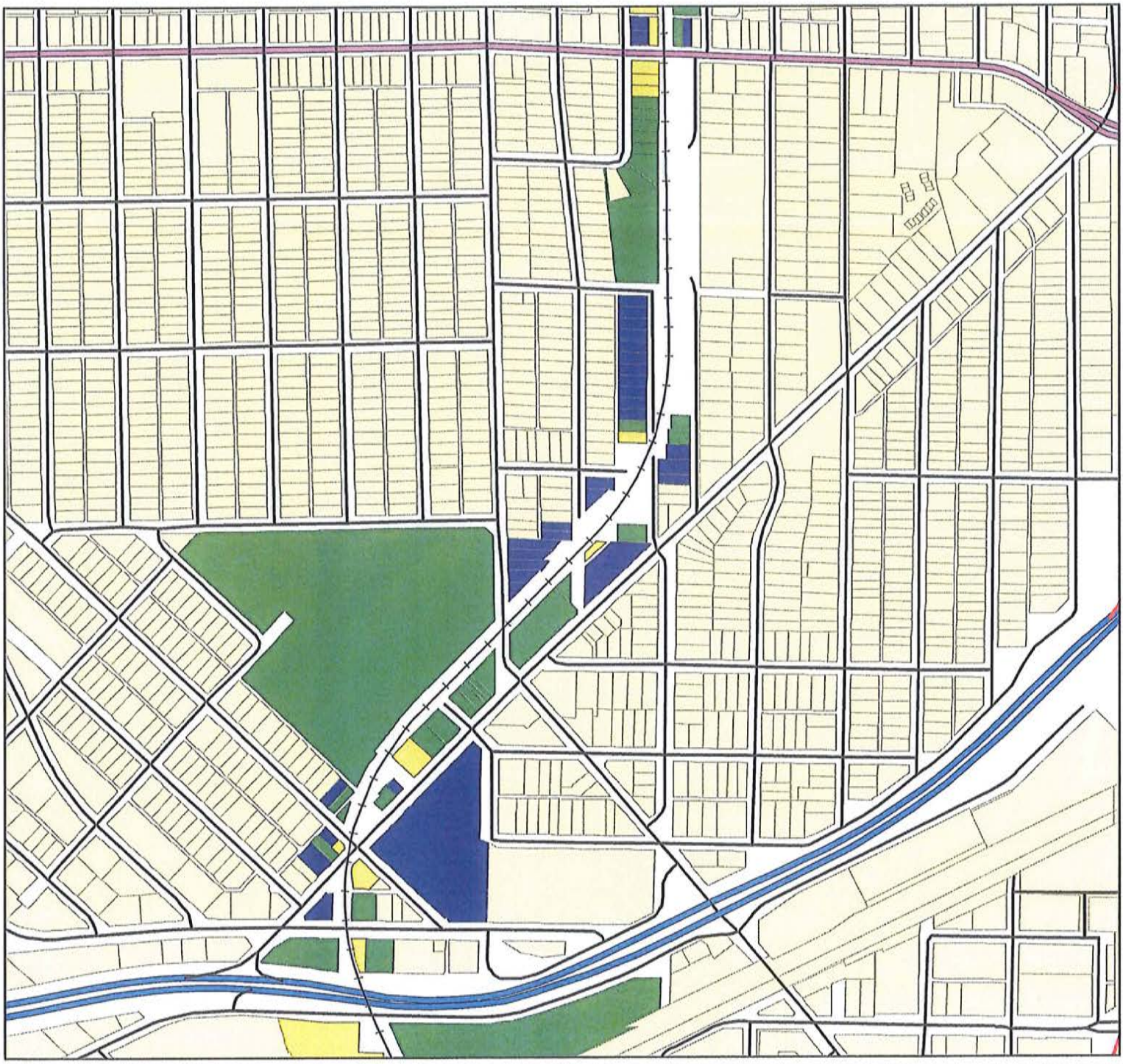
St. Louis Park
MINNESOTA

Legend

Approximate RR centerline

Approx. Distance from RR centerline

- Greater than 100 feet
- Zero to 25 feet
- 25 to 50 feet
- 50 to 100 feet



Approximate Location - Parcels Adjacent to MN & S RR

Highway 7 to Minnetonka Blvd.

1,200 Feet 1 in = 620 ft

N

Date: January 5, 2011

Created by: St. Louis Park Community Development Department

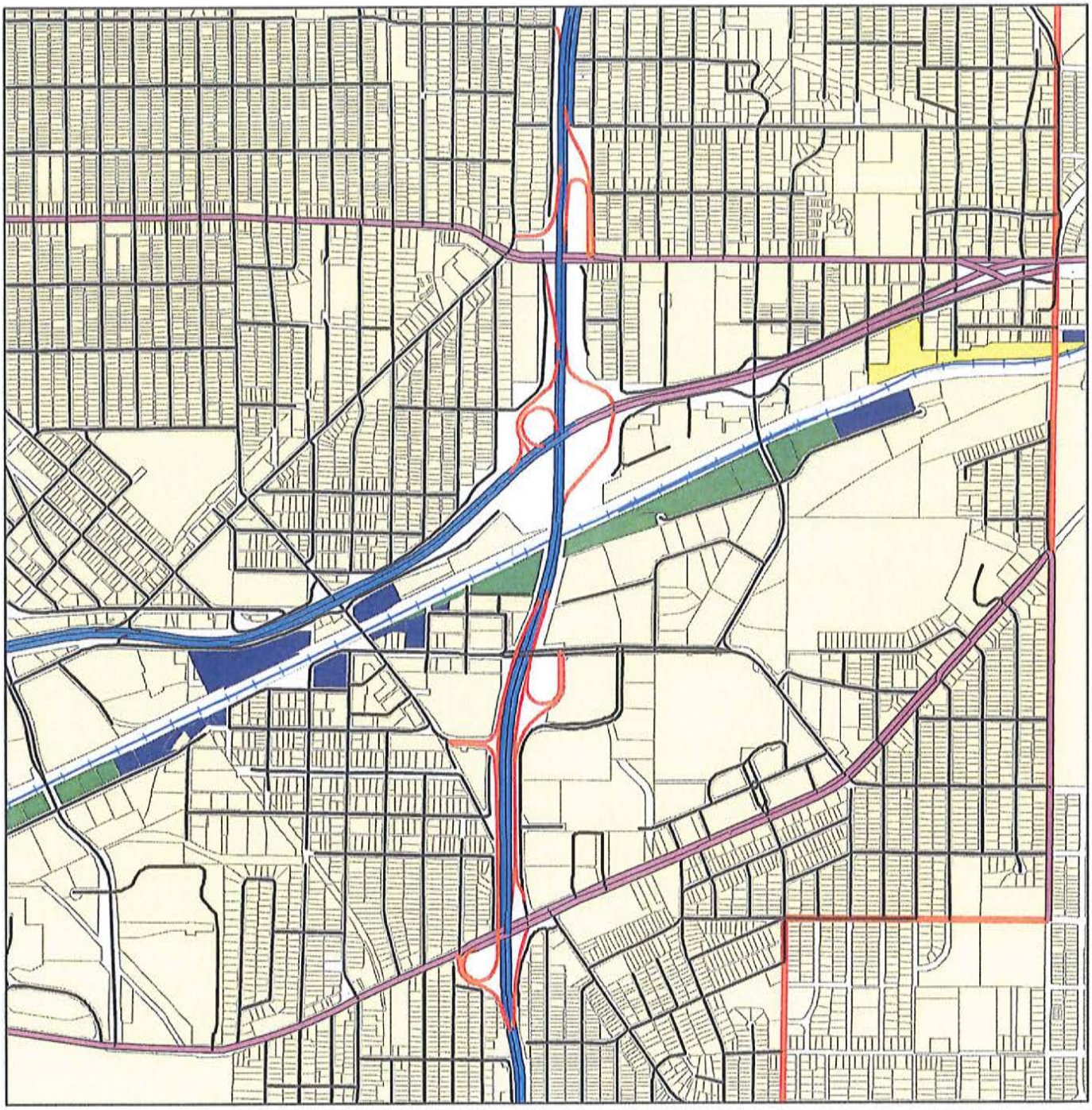
St. Louis Park
MINNESOTA

Legend

Approximate RR centerline

Approx. Distance from RR centerline

- Greater than 100 feet
- Zero to 25 feet
- 25 to 50 feet
- 50 to 100 feet



Approximate Location - Parcels Adjacent to TC & W RR

TC&W RR from Louisiana Ave. to Mpls border

Date: December 17, 2010

Created by: St. Louis Park Community Development Department

St. Louis Park
MINNESOTA

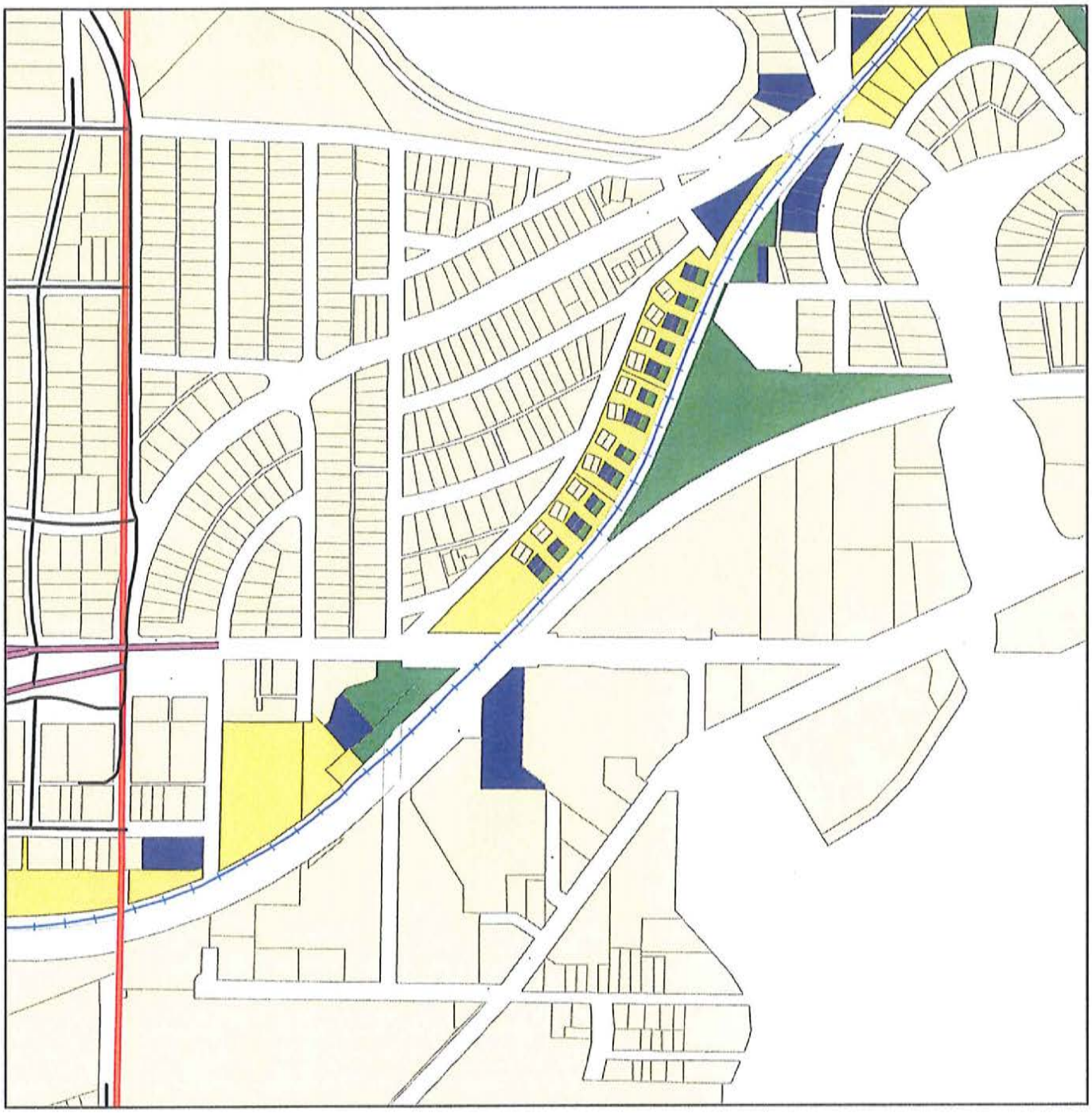
Legend

- Municipal Boundary
- Approximate RR Centerline

Parcels

Approximate distance from RR centerline

- Greater than 100 feet
- Right-of-Way
- Zero to 25 feet
- 25 to 50 feet
- 50 to 100 feet



Approximate Location - Parcels Adjacent to TC & W RR

TC&W RR from Mpls border to Cedar Lk. Rd.

Date: December 17, 2010

Created by: St. Louis Park Community Development Department

St. Louis Park
MINNESOTA

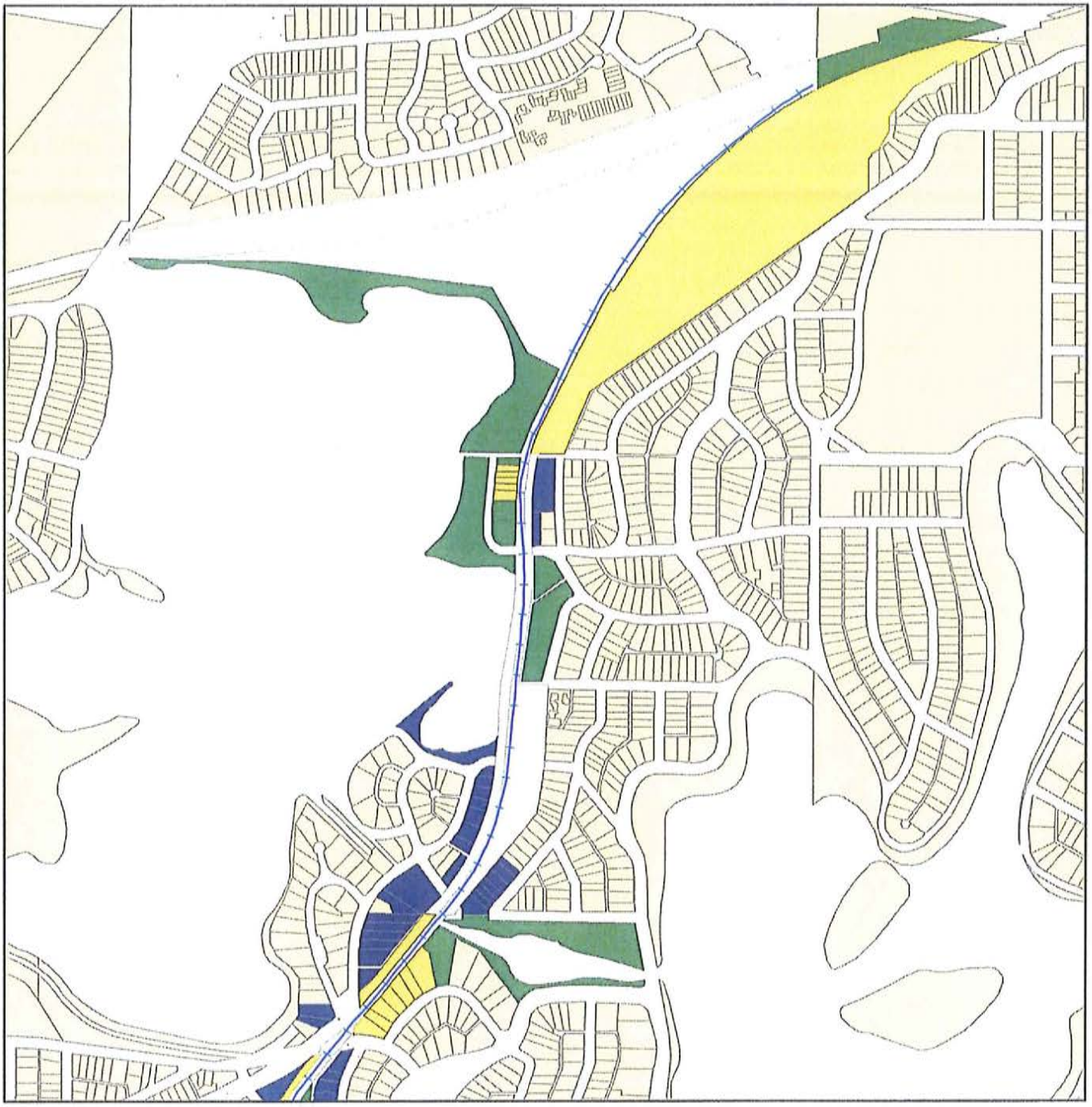
Legend

- Municipal Boundary
- Approximate RR Centerline

Parcels

Approximate distance from RR centerline

- Greater than 100 feet
- Right-of-Way
- Zero to 25 feet
- 25 to 50 feet
- 50 to 100 feet



Approximate Location - Parcels Adjacent to TC & W RR

TC&W RR from Cedar Lk. Rd. to BNSF RR

Date: December 17, 2010

Created by: St. Louis Park Community Development Department

St. Louis Park
MINNESOTA

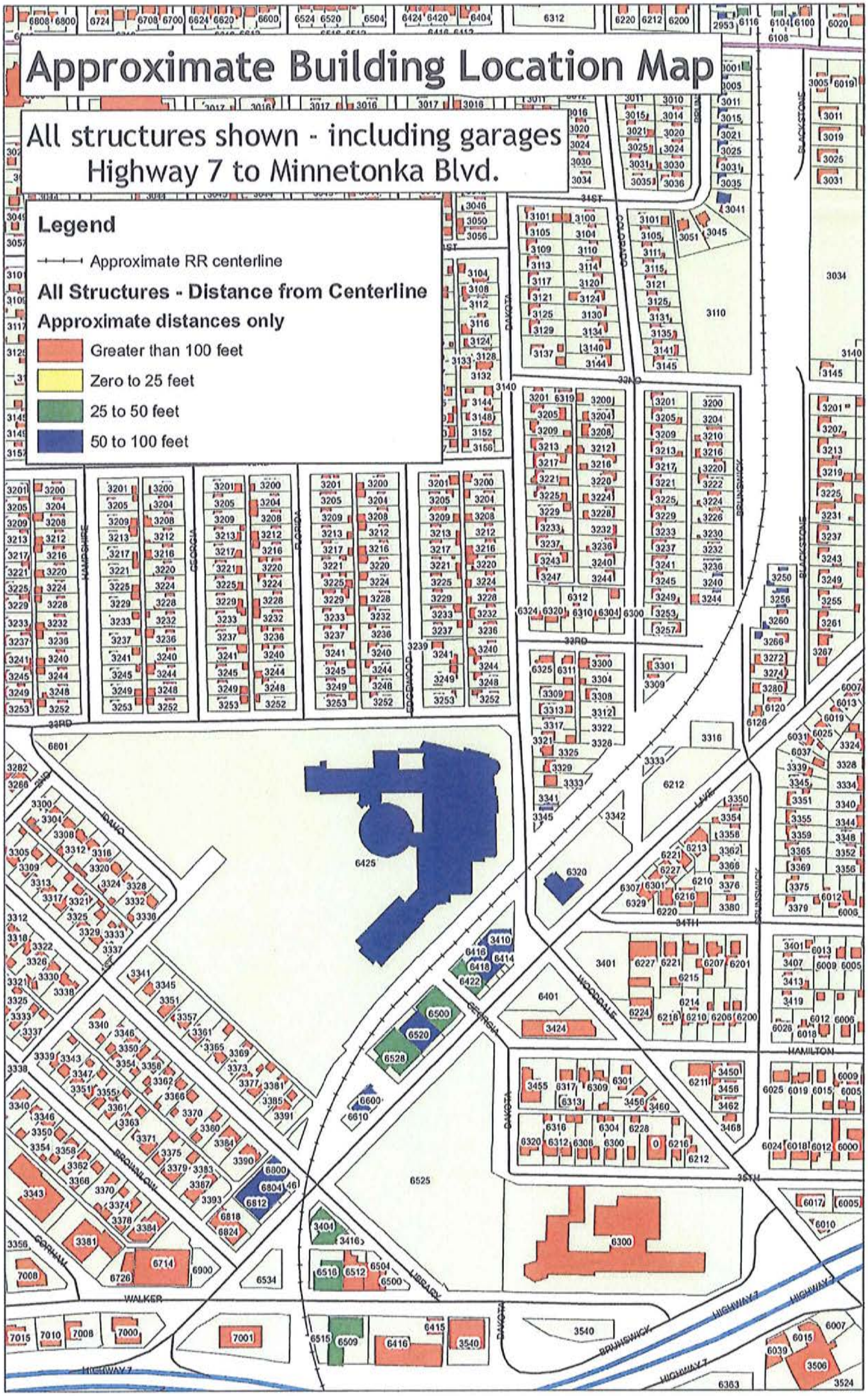
Legend

- Municipal Boundary
- Approximate RR Centerline

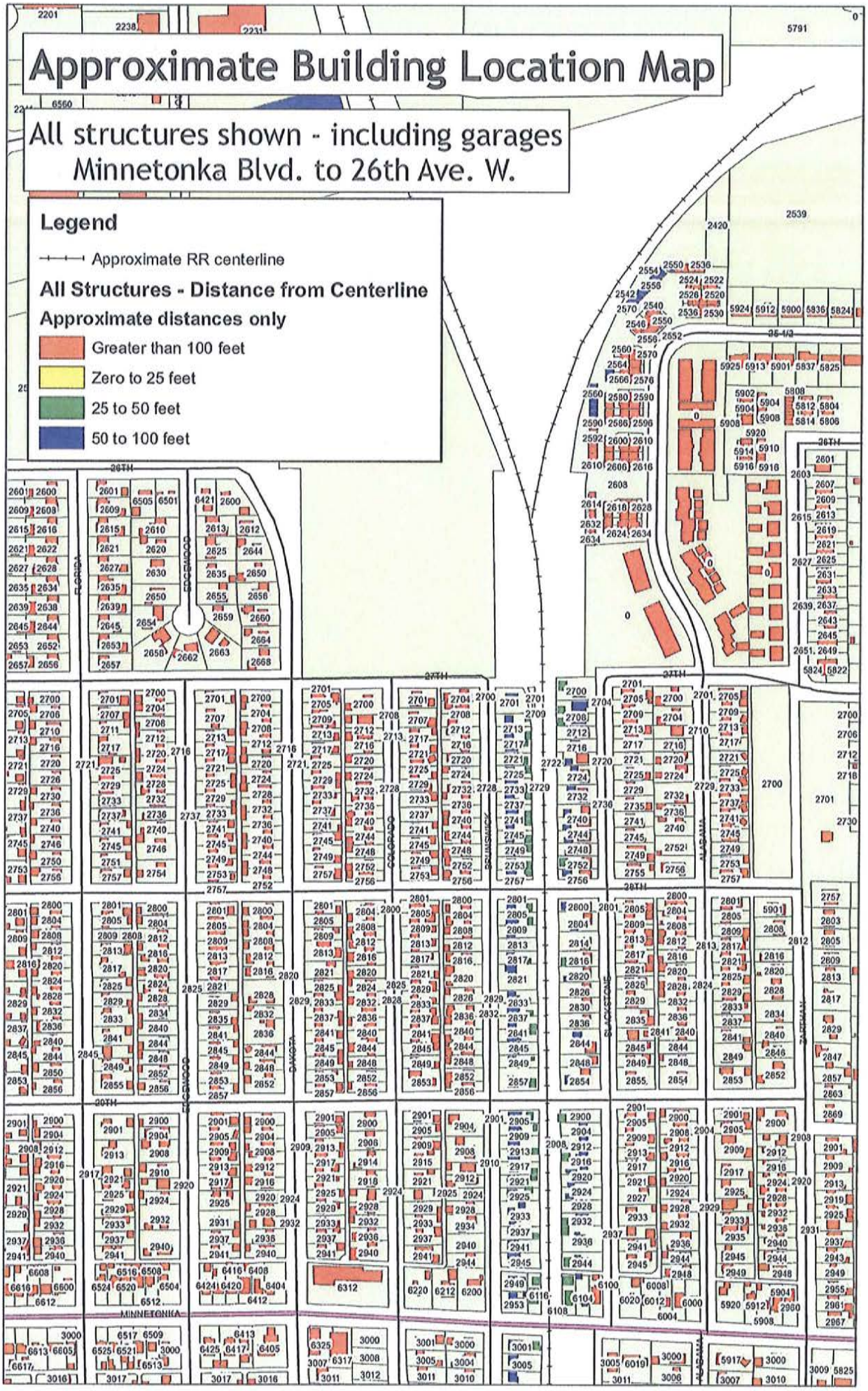
Parcels

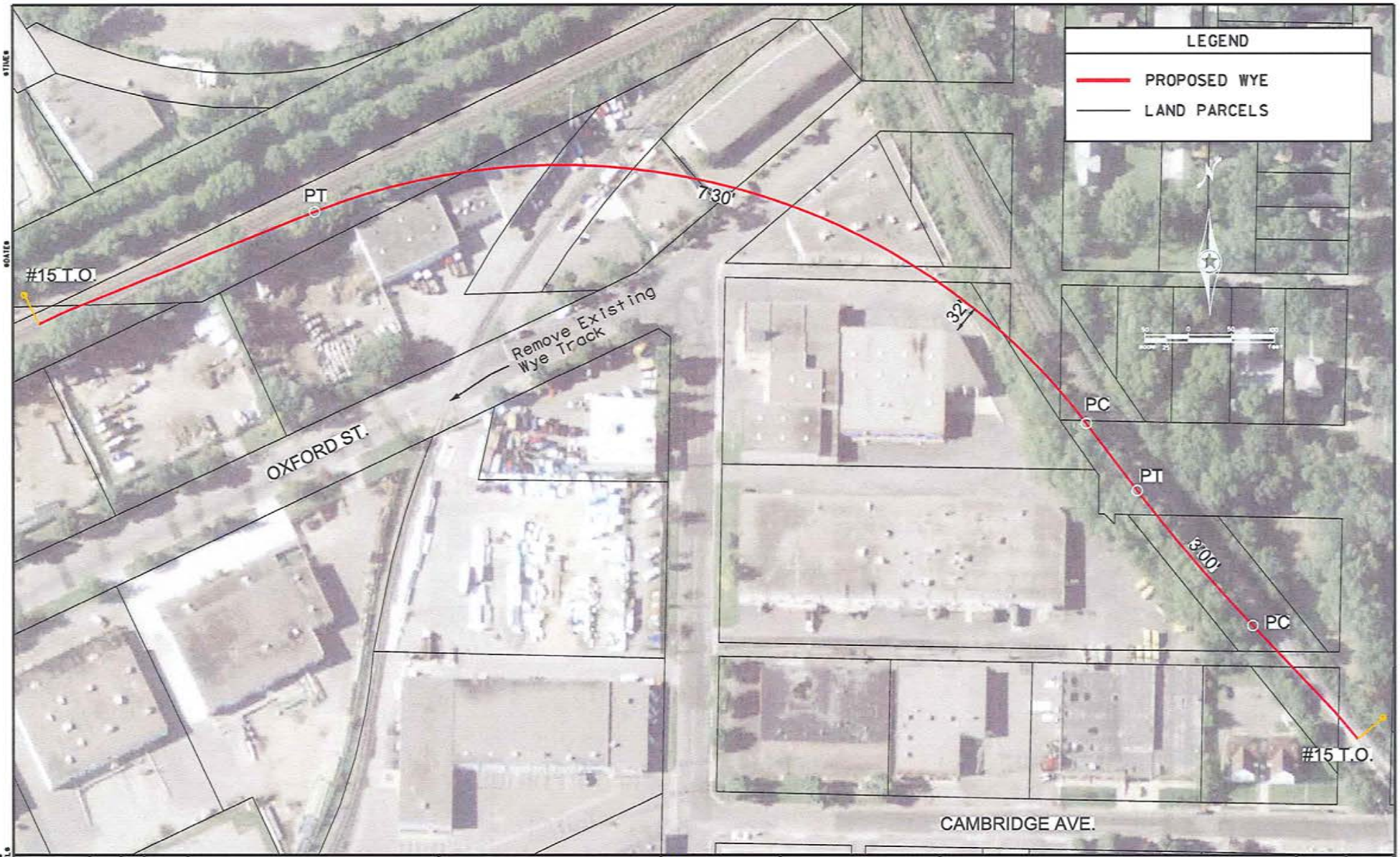
Approximate distance from RR centerline

- Greater than 100 feet
- Right-of-Way
- Zero to 25 feet
- 25 to 50 feet
- 50 to 100 feet



Approximate Building Location Map
All structures shown - including garages
Highway 7 to Minnetonka Blvd.
Legend
Approximate RR centerline
All Structures - Distance from Centerline
Approximate distances only
Greater than 100 feet
Zero to 25 feet
25 to 50 feet
50 to 100 feet
HAMPSHIRE
GEORGIA
FLORIDA
EDGEWOOD
DAKOTA
COLORADO
BRUNSWICK
BLACKSTONE
33RD
34TH
35TH
IDAHO
GEORGIA
WOODDALE
HAMILTON
BROWNLOW
GORHAM
WALKER
LIBRARY
HIGHWAY 7


Approximate Building Location Map
All structures shown - including garages
Minnetonka Blvd. to 26th Ave. W.
Legend
Approximate RR centerline
All Structures - Distance from Centerline
Approximate distances only
Greater than 100 feet
Zero to 25 feet
25 to 50 feet
50 to 100 feet
26TH
27TH
28TH
29TH
30TH
MINNETONKA
FLORIDA
EDGEWOOD
COLORADO
DAKOTA
BRUNSWICK
ALABAMA
BLACKSTONE
HARTMAN



DESIGN TEAM	NO.	BY	DATE	REVISIONS
DRAWN BY:				
DESIGNER:				
CHECKED BY:				

I hereby certify that this plan 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.

Certified By: _____ Lic. No. _____

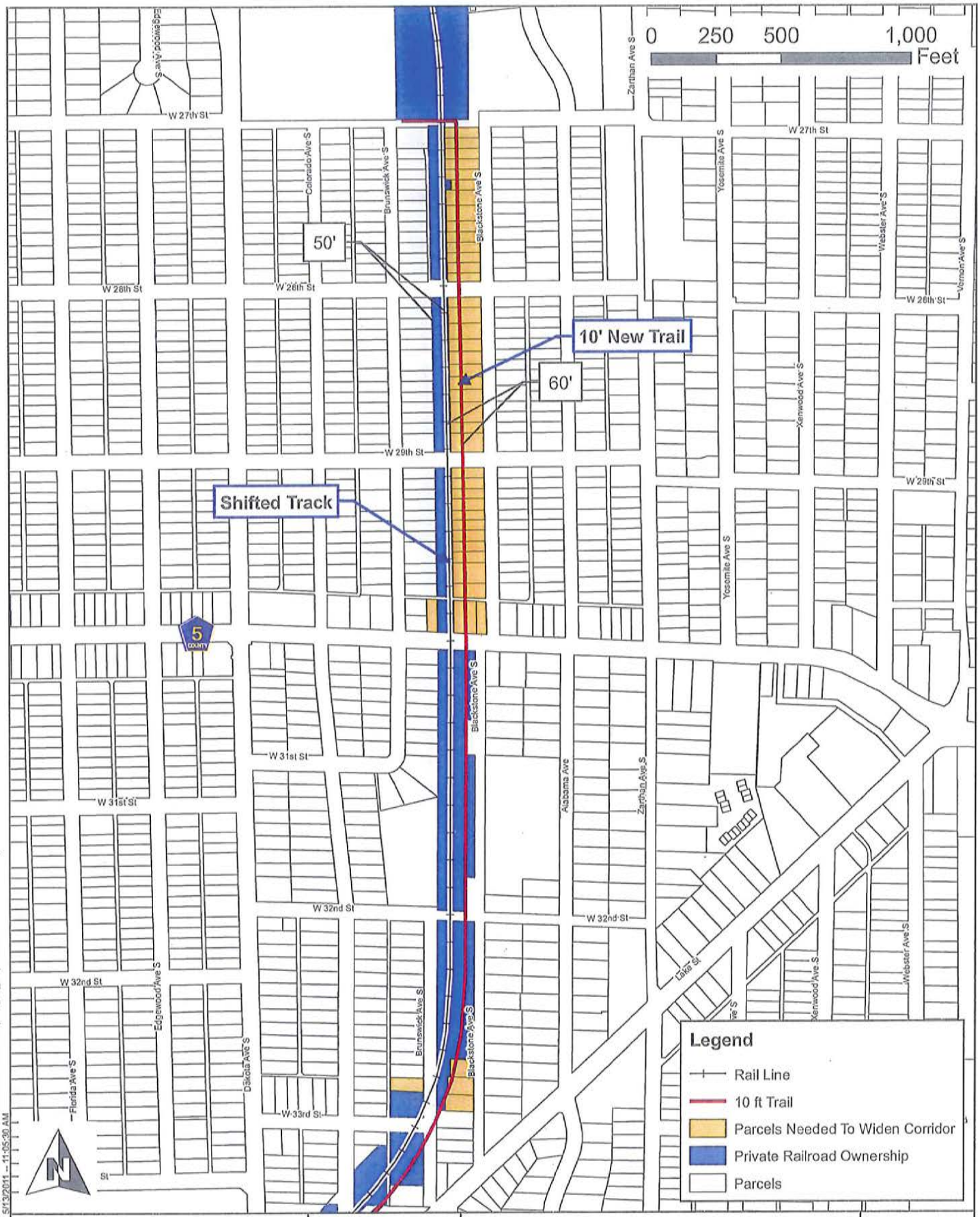
Printed Name: _____ Date: 8/24/15

SEH

CITY OF ST. LOUIS PARK

SOUTH WYE OPTION

FILE NO. 6433



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SEH

3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110
PHONE: (651) 490-2000
FAX: (651) 490-2150
WATTS: 800-325-2055
www.sehinc.com

Project: STLOU 114331
Print Date: 05/13/2011

Map by: SrH
Projection: Hennepin County NAD83 ft
Source: Mn/DOT, Mn/DNR, LMIC, City of St. Louis Park, and SEH Inc.

Expanded RR ROW Concept

Railroad Freight Relocation Study
Saint Louis Park, Minnesota

Figure X

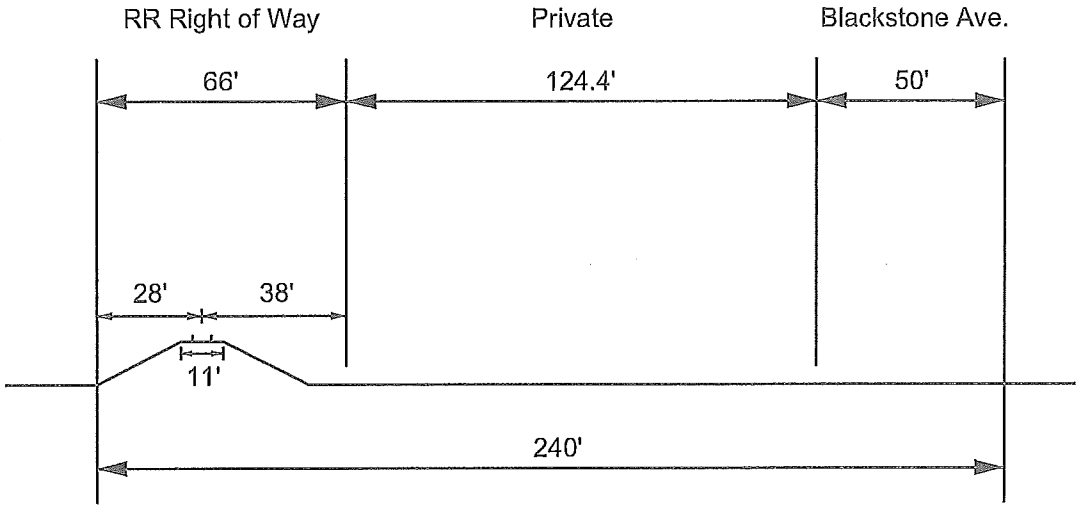
$TIMES

$DATE$

$MODEL$

$FILES

EXISTING



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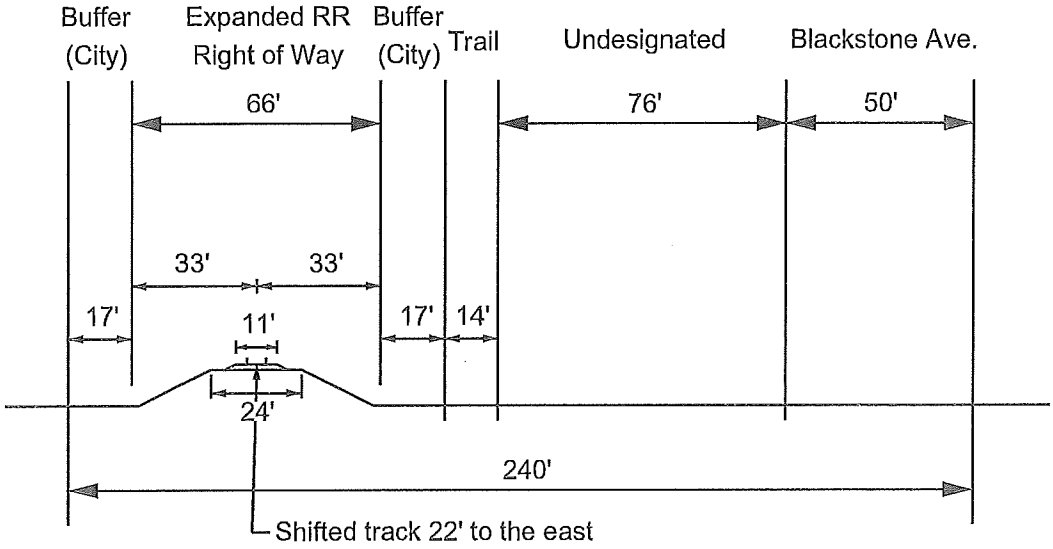
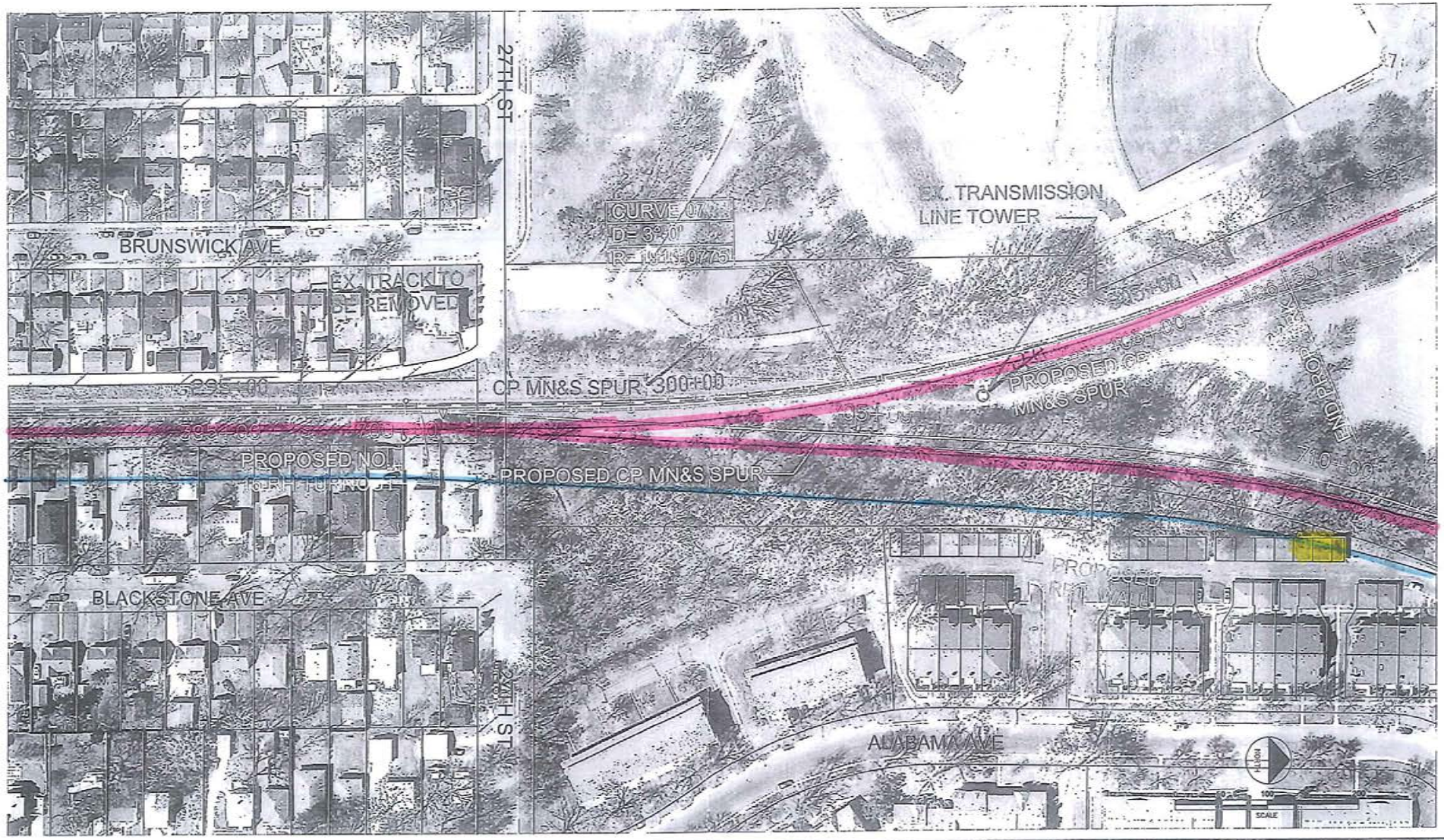


NOT DRAWN TO SCALE

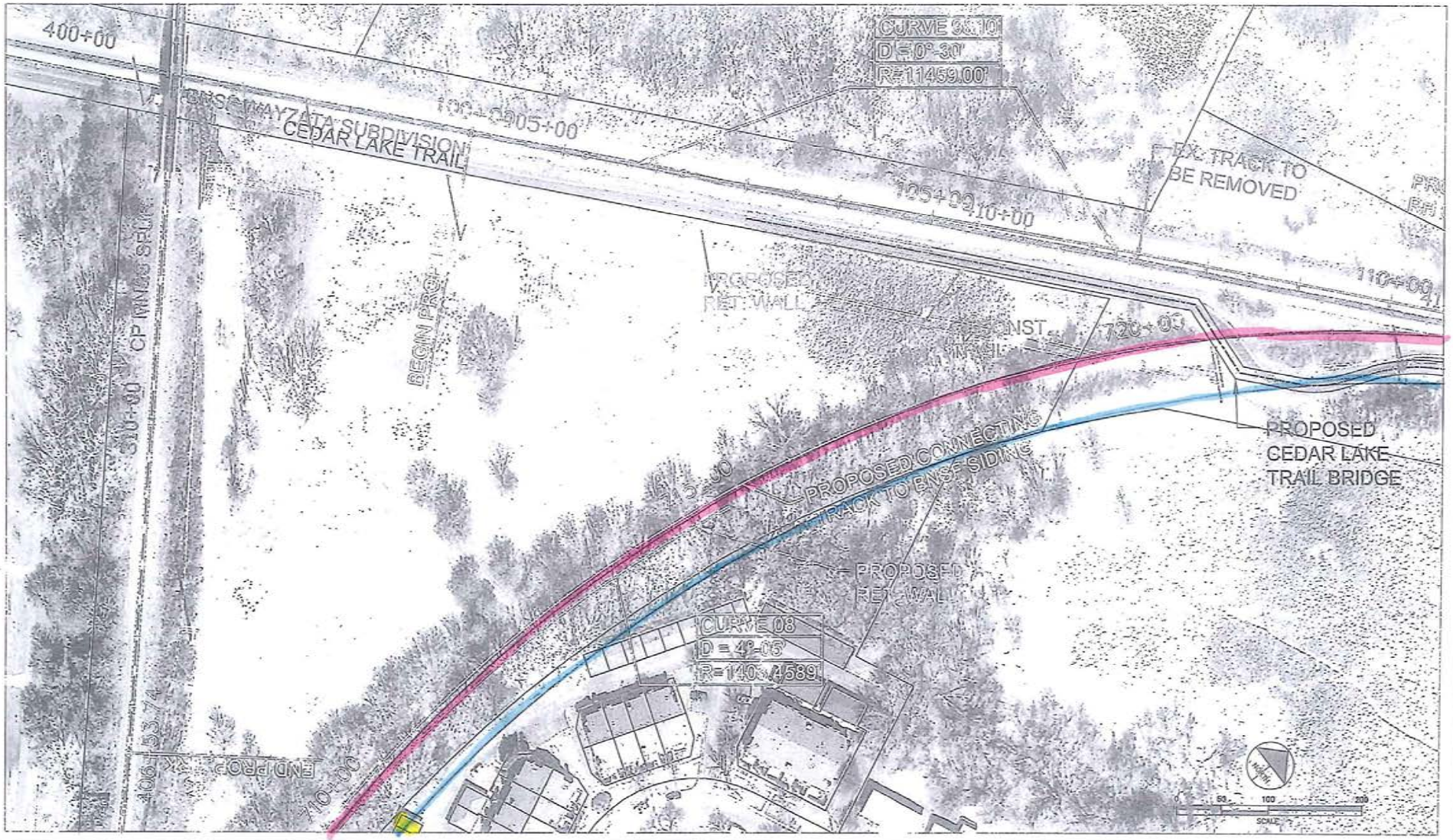
SEH

EXPANDED RR ROW CONCEPT
FREIGHT RAILROAD RELOCATION STUDY
ST. LOUIS PARK, MN



PRELIMINARY DRAFT NOT FOR CONSTRUCTION	Kimley-Horn and Associates, Inc. AECOM	HENNEPIN COUNTY	MINNESOTA DEPT. OF TRANSPORTATION	MN&S FREIGHT RAIL STUDY	TRACK PLAN Track shifted 22' to east 1of2	SHEET 13 OF 31

Mar, 30 2011 09:33 am P:\60161330\000_CAD\000_Civil\Sheets\TRK-SHT-011.dwg By: gurgold



PRELIMINARY DRAFT NOT FOR CONSTRUCTION	Kimley-Horn and Associates, Inc. AECOM	HENNEPIN COUNTY	MINNESOTA DEPT. OF TRANSPORTATION	MN&S FREIGHT RAIL STUDY	TRACK PLAN Track shifted 22' to East 2 of 2	SHEET 14 OF 31

Mar. 30 2011 08:34 am P:\60161330\000_CAD\006_Civil\Sheets\TRK-SHT-012.dwg By: gurgold

Freight Rail Alternatives
Cost Comparison Table

		MNS Base plan	Kenilworth Base plan	MNS - Robust Mitigation	Kenilworth Robust Mitigation
Base		**$ 76,672,000**	**$ 55,000,000**	**$ 76,672,000**	**$ 55,000,000**
	Construction	$ 71,172,000	$ 30,000,000	$ 71,172,000	$ 30,000,000
	property acquisition (1)	$ 5,500,000	$ 25,000,000	$ 5,500,000	$ 25,000,000
mitigation	**Level 1**	**included in base**	**included in base**	**included in base**	**included in base**
a	- track improvements/upgrades	included in base	included in base	included in base	included in base
b	- mandatory environmental req'ts	included in base	included in base	included in base	included in base
c	- WQZ	included in base	included in base	included in base	included in base
d	- Fencing & signage	included in base	included in base	included in base	included in base
e	- Elimination of CP tracks east of Wooddale	included in SWLRT	included in SWLRT	included in SWLRT	included in SWLRT
mitigation	**Level 2**	***not included***	***not included***	**$ 49,125,000**	**$ 25,060,000**
f	- Improvements to reroute coal trains (2)	*not included*	*not included*	$ 2,500,000	$ 2,500,000
g	- Removal of switching wye (3)	*not included*	*not included*	$ 2,500,000	$ 2,500,000
h	- Connection to MN&S south (4)	*not included*	*not included*	$ 7,000,000	$ 7,000,000
i	- rail lubricators	*not included*	NA	$ 45,000	NA
j	- concrete ties (vibration reduction)	*not included*	NA	$ 30,000	NA
k	- grade separated Hwy 7 frontage rd	*not included*	NA	$ 800,000	NA
l	- Create 100 ft min. width corridor in SF area (5)	*not included*	NA	$ 18,000,000	NA
m	- Pedestrian overpass at Dakota avenue (6)	*not included*	NA	$ 2,500,000	NA
n	- Pedestrian underpass to Dakota Park (27th)	*not included*	NA	$ 100,000	NA
o	- Louisiana/Hwy 7 Interchange	*not included*	NA	$ 10,500,000	NA
p	- mitigation for sound and vibration at SLP HS	*not included*	NA	$ 50,000	NA
q	- Pedestrian bridge over Hwy 7 at MN&S (7)	*not included*	NA	$ 5,000,000	NA
r	Roxbury Park underpass			$ 100,000	
s	- grade separated Beltline Blvd (8)				$ 10,560,000
t	- pedestrian overpass at Wooddale avenue (9)				$ 2,500,000
SWLRT Cost Adjustments		**NA**	**to be determined**	**NA**	**to be determined**
	- Relocation of regional trail	NA	to be determined	NA	to be determined
	- Modifications to LRT stations to accommodate freight rail	NA	to be determined	NA	to be determined
	- Crash walls where LRT and freight rail are tightly spaced	NA	to be determined	NA	to be determined
	Grade separation of LRT at Wooddale	NA	to be determined	NA	to be determined
Total cost		**$ 76,672,000**	**$ 55,000,000**	**$ 125,797,000**	**$ 80,060,000**

Notes:

1) Acquisition costs for the Kenilworth alternative estimated to be between $5,000,000 and $40,000,000. Partial acquistion of $20,000,000 is used for purposes of this table.
2) Range of costs for coal train rerouting is $1,500,000 - 2,500,000
3) range of costs for way removal is $1,500,000 to 2,500,000
4) cost estimates for the connection south assume wye removed completely
5) range of costs for widening corridor estimated to be $15-18,000,000
6) Range of costs for ped bridge estimated to be $1,500,000 - 2,500,000
7) Range of costs for ped bridge over Hwy 7 estimated to be $2,500,000 - 5,000,000
8) Range of costs for grade separated crossing at Beltline is $8,640,000 to 10,560,000
9) Range of costs for a ped bridge over the freight rail tracks at Wooddale Avenue estimated to be $1,500,000 -$2,500,000.

7:55:30 AM

12/20/2012

ST. LOUIS PARK
HIGH SCHOOL

HARMON ST.

BROWNLOW AVE.

LAKE ST.

W. 35TH ST.

WOODDALE AVE. S.

MINNESOTA 7

WALKER ST.

CLOSED

MINNESOTA 7

24'

N

100 0 100 200

scale 50 feet

LEGEND

BRIDGE

ROADWAY

S:\PT\S\STlouV\11433\V5-dsgn\51-cadd\Civil\North Frontage Road Option.dgn
Default

DESIGN TEAM	NO.	BY	DATE	REVISIONS
DRAWN BY:				
DESIGNER:				
CHECKED BY:				

I hereby certify that this plan 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.

Certified By: _____ Lic. No. _____
Licensed Professional Engineer

Printed Name: _____ Date: 12/20/2012

SEH
PHONE: (651)490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

CITY OF
ST. LOUIS PARK

NORTH FRONTAGE ROAD OPTION

FILE NO.
122893

Minnesota Department of Transportation
395 John Ireland Boulevard
Saint Paul, MN 55155

December 20, 2011

To Whom It May Concern:

RESOLUTION

WHEREAS, a project consisting of track improvements to the existing Canadian Pacific (CP) Bass Lake Spur, CP Minneapolis, Northfield & Southern (MN&S) Spur, and the Burlington Northern Santa Fe (BNSF) Wayzata Subdivision in the City of St. Louis Park was proposed to accommodate the relocation of the Twin Cities and Western (TC&W) freight rail traffic currently operating in the Kenilworth Corridor in Minneapolis (Proposed Freight Project); and

WHEREAS, the Hennepin County Regional Railroad Authority (HCRRA) was the Proposer of the Proposed Freight Project, as the term "Proposer" is defined by Minn. R. 4410.0200, subp. 68 (2011); and

WHEREAS, the Minnesota Department of Transportation (MnDOT) was the Responsible Governmental Unit (RGU) for the Proposed Freight Project pursuant to Minn. R. 4410.0500, subp. 2 (2011), and as the term "RGU" is defined by Minn. R. 4410.0200, subp. 76 (2011) ; and

WHEREAS, MnDOT prepared an Environmental Assessment Worksheet (EAW) for the Proposed Freight Project pursuant to Minn. R. 4410.1400 (2011), and as the term "Environmental Assessment Worksheet" is defined by Minn. Stat. § 116D.04, subd. 1a(c) (2011) and Minn. R. 4410.0200, subp. 17 (2011); and

WHEREAS, MnDOT published notice of the completion of the EAW for the Proposed Freight Project and provided copies of the EAW to the Minnesota Environmental Quality Board and its member agencies, and received and responded to comments on the need for an Environmental Impact Statement (EIS) following publication pursuant to the requirements of Minn. Stat. § 116D.04, subd. 2a(b) (2011), Minn. R. 4410.1500 (2011); Minn. R. 4410.1600 (2011); and

WHEREAS, MnDOT determined that the Proposed Freight Project does not have the potential for significant environmental impact pursuant to Minn. R. 4410.1700 (2011); and

WHEREAS, MnDOT determined that an Environmental Impact Statement (EIS) was not required pursuant to the Minnesota Environmental Protection Act, Minn. Stat. § 116D.01, et seq. (MEPA), and accordingly issued and distributed a Negative Declaration on June 30, 2011, pursuant to Minn. R. 4410.1700 (2011); and

WHEREAS, on December 19, 2011, the HCRRA Board passed a resolution determining that the Proposed Freight Project no longer warrants separate environmental analysis under state law as a standalone project and is no longer being pursued as a standalone project;

NOW THEREFORE, MnDOT hereby vacates the EAW for the Proposed Freight Project; and

NOW THEREFORE, MnDOT hereby vacates its Negative Declaration for the Proposed Freight Project; and

NOW THEREFORE, because the Proposed Freight Project is no longer being pursued as a standalone project by the Proposer, environmental review as a standalone project is no longer required; and

NOW THEREFORE, if any other project is proposed in the future, the need for a new environmental review will be evaluated in accordance with the provisions of the Minnesota Environmental Policy Act.

Frank Pafko

Frank Pafko
Chief Environmental Officer
Minnesota Department of Transportation

CITY OF ST. LOUIS PARK

October 14, 2008

Ms. Katie Walker, AICP
Transit Project Manager
Hennepin County Housing, Community Works & Transit
417 North 5th Street, Suite 320
Minneapolis, MN 55401

RE: Scoping for the Draft Environmental Impact Statement (DEIS) for the Southwest Transitway Project

Dear Ms. Walker,

The City of St. Louis Park supports the work of the HCRRA and the development of LRT within the Southwest corridor at the earliest possible date. Improved transit service in the region and Hennepin County and, especially LRT in the Southwest corridor, is vital to future health and prosperity of our area. We applaud the County's leadership and steadfast commitment to bringing LRT service to Southwest Hennepin County.

A project of this magnitude and importance deserves careful planning and evaluation at each step of the process. We look forward to eagerly participating in the Draft Environmental Impact Statement (DEIS) process for the Southwest Transitway. We expect that a careful analysis of the potential impacts will be prepared; and, that potential mitigating measures (and necessary funding) to address any negative impacts will be identified for the corridor.

For St. Louis Park the potential impacts of the Southwest Transitway Project extend beyond the immediate Southwest Corridor itself. They include impacts associated with the potential relocation of freight rail from the trail corridor south of TH7 to the Canadian Pacific (CP) and Burlington Northern Santa Fe (BNSF) rail alignments which pass through the heart of St. Louis Park's residential areas. While we have issues that we have listed below that concern the proposed transitway itself, we especially ask that you make sure issues associated with the potentially rerouted freight rail are completely and comprehensively addressed.

Rerouted freight rail traffic is a big change with the potential to negatively affect many residents and businesses. It is an important issue that the community has anticipated for many years. In 1997 the City of St. Louis Park initiated the Railroad Task Force to study the impact of freight rail traffic on our community and the impact on our neighborhoods if freight rail would be rerouted from its

5005 Minnetonka Boulevard St. Louis Park, Minnesota 55416-2290
Phone: 952-924-2500 Fax: 952-924-2170 Hearing Impaired: 952-924-2518
Website: www.stlouispark.org

present tracks along Highway 7/25 to the north-south tracks in St. Louis Park. Such diversion would add significant train traffic to our neighborhoods, which include many homes within 50 ft. of the tracks, sometimes even closer. It would also result in a substantial increase of freight rail traffic immediately adjacent to St. Louis Park High School, and would significantly interfere with vehicle traffic on many already-congested streets, including Excelsior Blvd.

The Task Force expressed a strong preference that freight rail traffic not be rerouted through St. Louis Park, but acknowledged that such rerouting maybe necessary. It reached consensus on principles that should guide the relocation. St. Louis Park requests that the DEIS also use these principles to guide its evaluation of the impacts of the freight rail rerouting and the design of mitigating measures. The principles are:

- Rail traffic should run smoothly, entering and leaving St. Louis Park as efficiently and safely as possible;
- No de-coupling or switching of rail cars should take place in St. Louis Park;
- Noise, vibration, and other adverse impacts on adjacent neighborhoods must be minimized to the extent feasible;
- Safety of at-grade rail/street intersections must be improved for pedestrians, motorists and bicyclists;
- Freight rail traffic coming from the west or east must be split, with half diverted north and half south along the CP tracks

Funding must be made available to accomplish these principles, as part of the development of the SWLRT.

The City of St. Louis Park (SLP) submits the following comments and requests several items be included into the Draft Environmental Impact Statement (DEIS) for the Southwest Transitway Project.

Elimination of Current "Bottleneck"

Two of the potential SWLRT routes (# 1A and 3A) would include a short segment (less than ¼ mile) near W. Lake St. where freight trains currently travel, that is currently too narrow to accommodate the SWLRT parallel to the existing freight rail tracks and bike trail. If either of these routes is selected and the narrow "bottleneck" is not widened or other steps are not taken to accommodate all three modes of transportation, the freight rail would have to be diverted elsewhere. Due to the scarcity of north-south tracks within Hennepin County, that diversion could likely be through St. Louis Park, on the Canadian Pacific and Burlington Northern Santa Fe rail alignments.

St. Louis Park recognizes that the costs and regulatory requirements necessary to implement the mitigation measures associated with freight rail diversion (please see below) will be significant. We therefore urge that the DEIS fully explore the feasibility and costs of alternatives that would eliminate the diversion of freight rail traffic through St. Louis Park.

We request consideration of the following alternatives:

- Purchase sufficient right-of-way adjacent to the "bottleneck" near W Lake St. to accommodate SWLRT, freight rail, and the bike trail.
- Reroute or elevate the bike trail to permit SWLRT and freight rail within the "bottleneck" at West Lake Street.

The costs of one or more of these alternatives, if adopted, likely could be significantly cheaper than the costs of mitigation for freight rail relocation, and would eliminate the extensive disruption to St. Louis Park neighborhoods that would be caused by freight rail diversion.

DEIS study requirements – Freight Rail Rerouting

Freight rail relocation would result in a major increase in freight traffic in residential neighborhoods within St. Louis Park, and many impacts need to be evaluated with the DEIS prior to any decision to affect this potential change. St. Louis Park requests that Hennepin County Regional Rail Authority (HCRRA) address and mitigate impacts on neighbors and neighborhoods adjacent to the CP and BNSF railways in the event that the freight rail is rerouted. The following items need to be evaluated as part of the DEIS process:

- Determine the amount of increased rail traffic that would occur from rerouting trains to the north and east.
- Analyze the need for upgraded tracks and railroad bridges to permit trains to safely and efficiently travel through St. Louis Park.
- Assess the noise, vibration, visual and aesthetic impacts on residences and businesses and determine how to mitigate, in consultation with adjacent neighbors and businesses them.
- Evaluate the specific impacts on St. Louis Park High School with regard to traffic, pedestrian crossings, noise impacts, and the disruption to the learning process from additional rail traffic.
- Evaluate all at-grade rail/street intersections to be improved for the safety of pedestrians, motorists and bicyclists, including the need for signalized crossings. Evaluate using the proper railroad protective devices and the increased noise from additional train traffic.
- Evaluate noise walls, landscaped berms, soundproofing insulation and/or other measures to mitigate negative impacts of rail traffic on the many hundreds of homes and the St. Louis Park Senior High School that are located immediately adjacent to the freight rail tracks.

- Determine if there is a need to purchase more property to accommodate and mitigate the impacts of more rail traffic. Consider purchase of adjacent homes within the usual and customary distance to the rail lines, to create a green buffer for other nearby homes and to provide adequate space to construct noise barriers.
- Evaluate the impacts of building two new bridge connections at the Golden Auto site and an additional rail interconnection at the "iron triangle" site (which must be done prior to the rerouting of any rail traffic).
- Consider that Three Rivers Park District is conducting a feasibility study for a north-south bike/walking trail. Any freight rail diversion should be examined for issues concerning mitigation with trail location, construction, and usage, including the safety impacts of these two adjacent uses.
- Consider the extent which freight rail cars contain hazardous substances as they travel through St. Louis Park, and the impact on our community of any potential derailment.
- Assess elimination of the rail "wye" in the Elmwood/Oxford neighborhood, on which trains are backed up, de-coupled and reconfigured. This is a lengthy and noisy process that adversely affects the neighborhood all hours of the day and night.
- Evaluate the possibility of moving the current rail switching and blocking operations (which occur in SLP, Hopkins, and Minnetonka) to Glencoe.

The potential diversion of freight rail traffic through St. Louis Park would not be necessary but for the potential construction of the SWLRT along Route Nos. 1A or 3A and the potential decision by HCRRA to decline to fix the "bottleneck". Absent such decisions, freight rail traffic could continue indefinitely on its present alignment through the Kenilworth corridor. We believe it is critical that funding be made available to evaluate these impacts on St. Louis Park, as part of the development of the SWLRT. Additionally, the costs of these required measures must be considered, and be transparent to the public, as an integral element of the overall costs of Route Nos. 1A and 3A, when the final route is selected.

DEIS Study Requirements – Additional Transit Impacts

There are a number of issues that need additional attention beyond the typical required DEIS items, due to associated transportation issues. To address these issues, St. Louis Park requests that HCRRA address the following items to be evaluated as part of the DEIS process:

- Address the need to grade separate the light rail line and trail at both Beltline Boulevard and Wooddale Avenue.
- Evaluate the impacts of access, circulation and traffic issues in the station areas.
- Determine the need for parking in the station areas, and determine the demand versus supply and the spillover impacts to neighborhoods.

- Determine the need for a circulating feeder bus system to serve the transit stations; and resolve how that will be provided.

Conclusion

The full costs of rerouting freight rail traffic through St. Louis Park must be evaluated as part of route selection for SWLRT. The above suggests the types of improvements which will be necessary, and which require analysis as part of the DEIS process. We expect that these issues would be reviewed as part of this process and it is our request that the DEIS process incorporate all of our concerns as listed above. We additionally request that the DEIS process include at least one meeting within St. Louis Park to discuss these unique issues.

Thank you for your attention to these concerns.

Sincerely,

Nancy Gohman

Nancy Gohman
Deputy City Manager

CC: Mayor Jeff Jacobs
Councilmember John Basill
Councilmember C. Paul Carver
Councilmember Phil Finkelstein
Councilmember Paul Omodt
Councilmember Loran Paprocki
Councilmember Sue Sanger
City Manager Tom Harmening
Jim Brimeyer, PAC Member
Lisa Miller, CAC Member
Bob Tift, CAC Member
Bill James, CAC Member
Shawn Klein, CAC Member

St. Louis Park SWLRT Station Area Planning Principles

SRF is currently assisting the City with the development of high-level SWLRT station area planning principles. In addition, the station areas at Wooddale Avenue and Beltline Boulevard are being studied to understand the implications of the regional trail, Southwest Light Rail Transit (LRT) and freight rail crossings.

The traffic implications for regional trail, LRT and freight rail crossings are illustrated in the attached "Sketch-Up" 3 dimensional figures. Assumptions for each of the scenarios are summarized below.

Beltline Station

1A Existing Conditions with Freight Rail and Trail at grade

- Vehicle queues due to freight rail are calculated based on recent on site traffic counts during the morning (a.m.) peak hour
- This assumes traffic on Beltline Boulevard was blocked for 10 minutes for the freight rail to cross

1B LRT and Trail at grade, no Freight Rail

- Vehicle queues due to LRT are calculated based on recent on site traffic counts during the morning (a.m.) peak hour
- This assumes that traffic on Beltline Boulevard was blocked for 45 seconds for LRT to cross

1C LRT, Freight Rail and Trail at grade

- Vehicles queues are shown for a freight rail crossing, based on recent on site traffic counts during the morning (a.m.) peak hour
- This assumes traffic on Beltline Boulevard was blocked for 10 minutes for the freight rail to cross

1D Grade Separated Trail, LRT and Freight Rail at grade

- Vehicle queues due to LRT are calculated based on recent on site traffic counts during the morning (a.m.) peak hour
- This assumes traffic on Beltline Boulevard was blocked for 10 minutes for the freight rail to cross

1E Grade Separated LRT and Trail, no Freight Rail

- No vehicle queues expected along Beltline Boulevard

1F Grade Separated LRT, Freight Rail and Trail

- No vehicle queues expected along Beltline Boulevard

Wooddale Station

1A Existing Conditions with Freight Rail and Trail at grade

- Vehicle queues due to freight rail are based on actual observations on April 28, 2011 during the morning (a.m.) peak hour
- Traffic on Wooddale Avenue was blocked for 10 minutes for the freight rail to cross

1B LRT and Trail at grade, no Freight Rail

- Vehicle queues due to LRT are calculated based on recent traffic counts during the morning (a.m.) peak hour
- This assumes that traffic on Wooddale Avenue was blocked for 45 seconds for LRT to cross

1C LRT, Freight Rail and Trail at grade

- Vehicles queues are shown for a freight rail crossing, based on actual observations on April 28, 2011 during the morning (a.m.) peak hour
- Traffic on Wooddale Avenue was blocked for 10 minutes for the freight rail to cross

Additional Notes

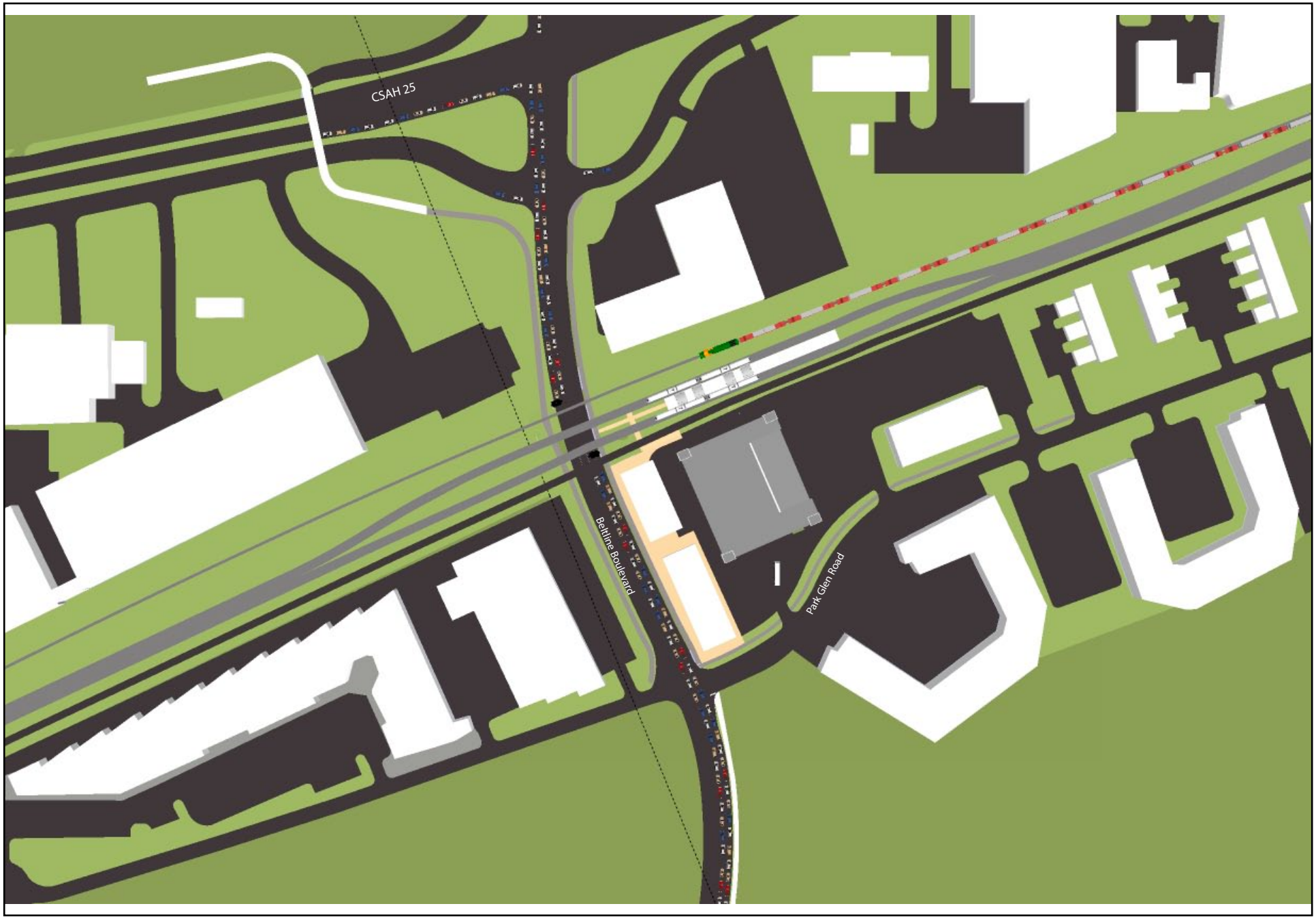
- For freight rail implications at the Beltline station, calculated queues may be longer than actual queues, since vehicles were seen rerouting away from the freight rail crossing during the April observation on Wooddale Avenue.
- All traffic implications related to freight rail assume travel speeds of 10 mph. If freight rail travel speeds increase to 25 mph, delays and queues may decrease.
- All traffic implications related to LRT, freight rail and trail were identified for the morning (a.m.) peak hour. Evening (p.m.) peak hour traffic volumes for Beltline Boulevard and Wooddale Avenue are higher than the morning peak hour. Therefore, delays and queues may be greater during the evening peak hour.

1A Beltline Station Existing Conditions

1A Beltline Station Existing Conditions

1B Beltline Station- LRT and Trail at grade, no Freight Rail

1B Beltline Station- LRT and Trail at grade, no Freight Rail



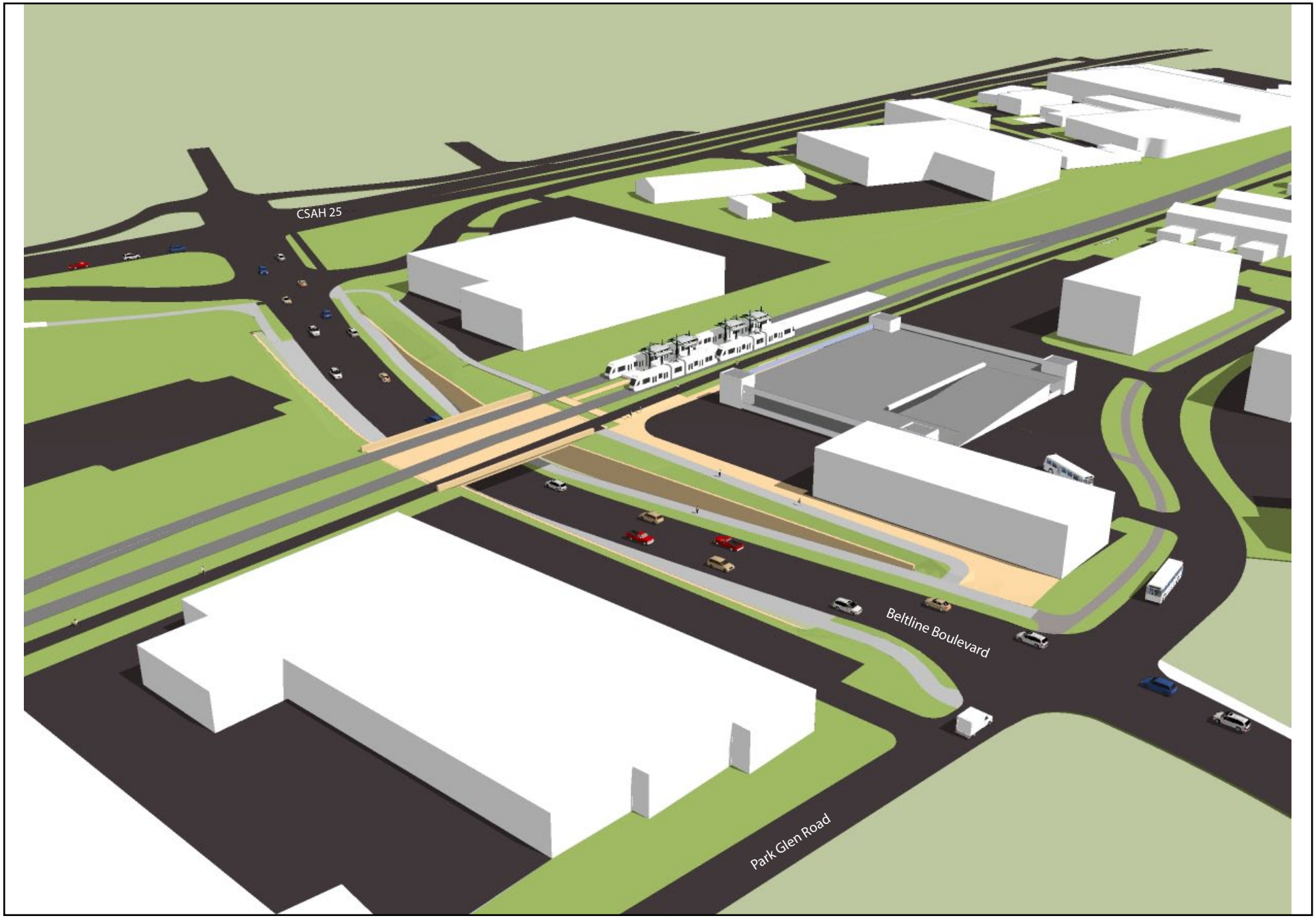
1C Beltline Station- LRT, Freight Rail and Trail at grade

1C Beltline Station- LRT, Freight Rail and Trail at grade

1D Beltline Station- Grade Separated Trail, LRT and Freight Rail at grade

1D Beltline Station- Grade Separated Trail, LRT and Freight Rail at grade

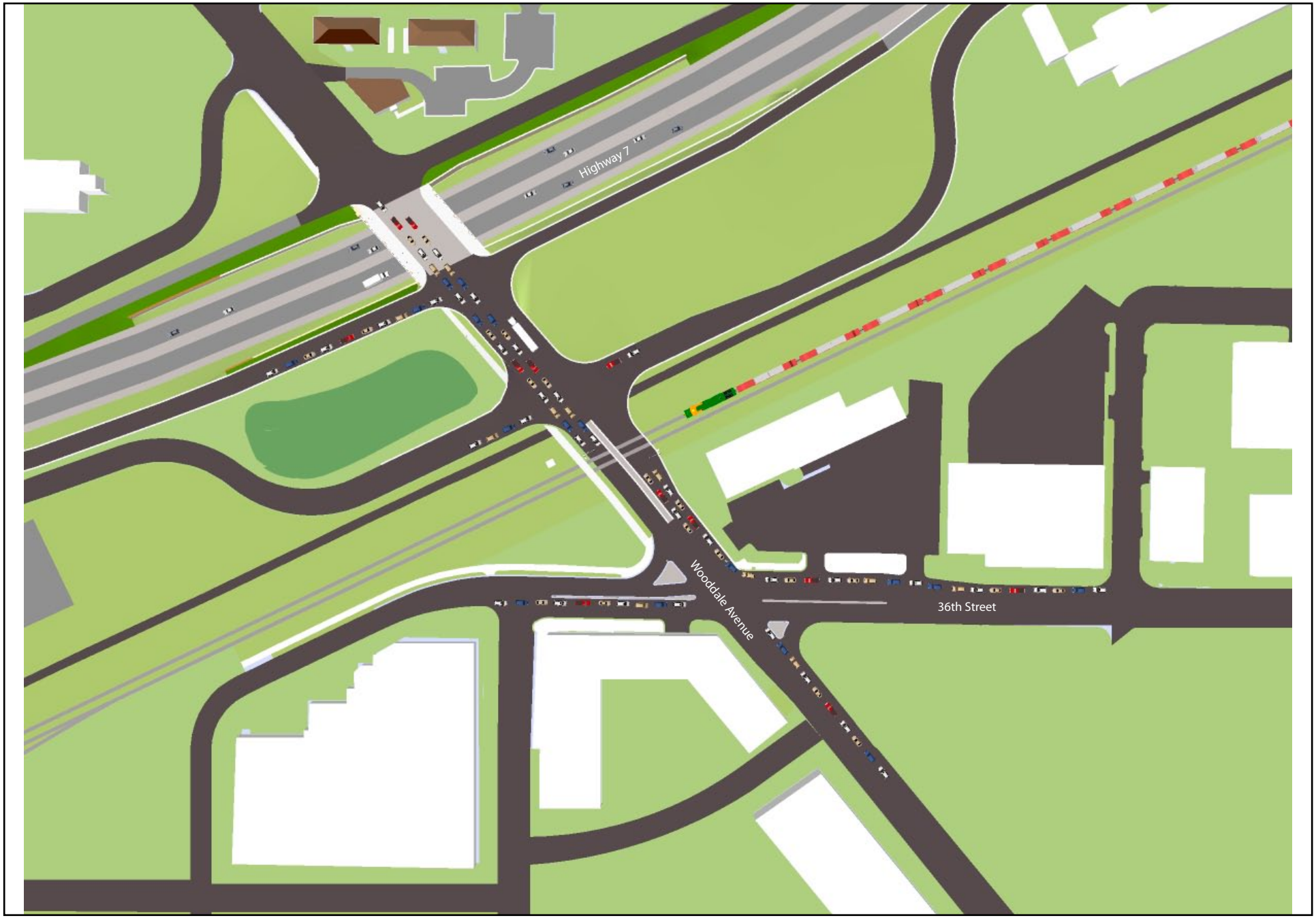
1E Beltline Station- Grade Separated LRT and Trail, no Freight Rail



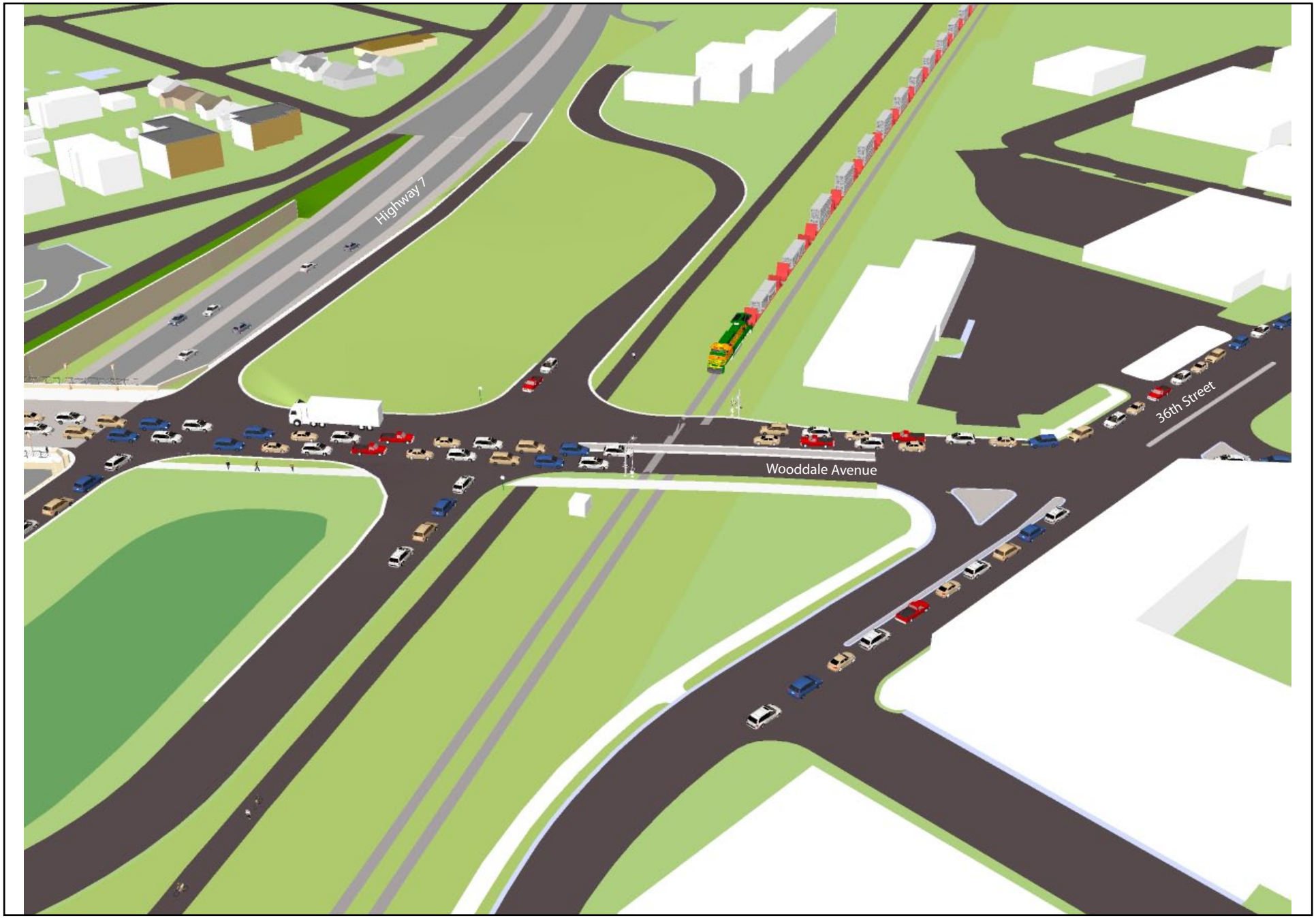
1E Beltline Station- Grade Separated LRT and Trail, no Freight Rail

1F Beltline Station- Grade Separated LRT, Freight Rail and Trail

1F Beltline Station- Grade Separated LRT, Freight Rail and Trail

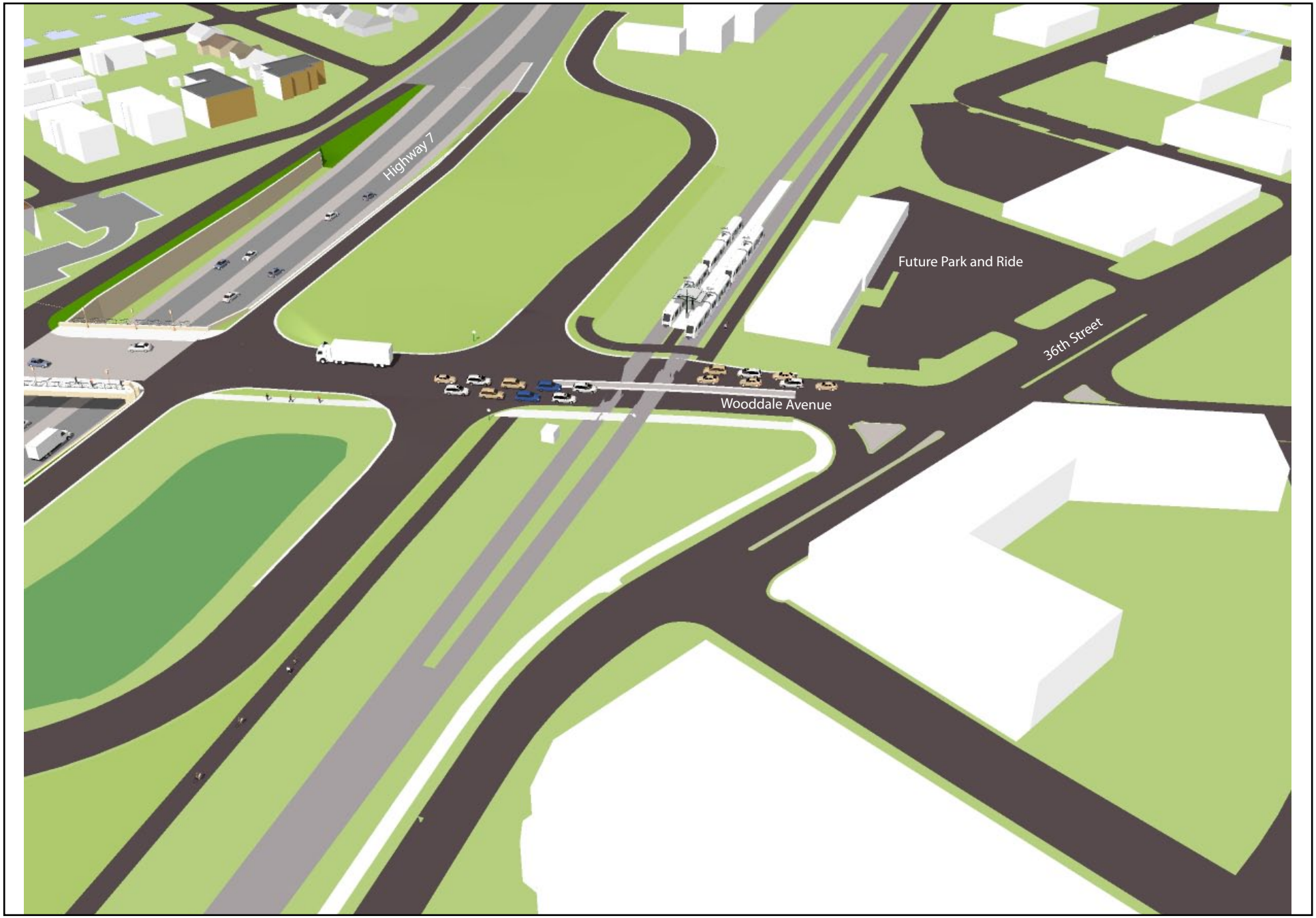


2A Wooddale Station- Existing Conditions



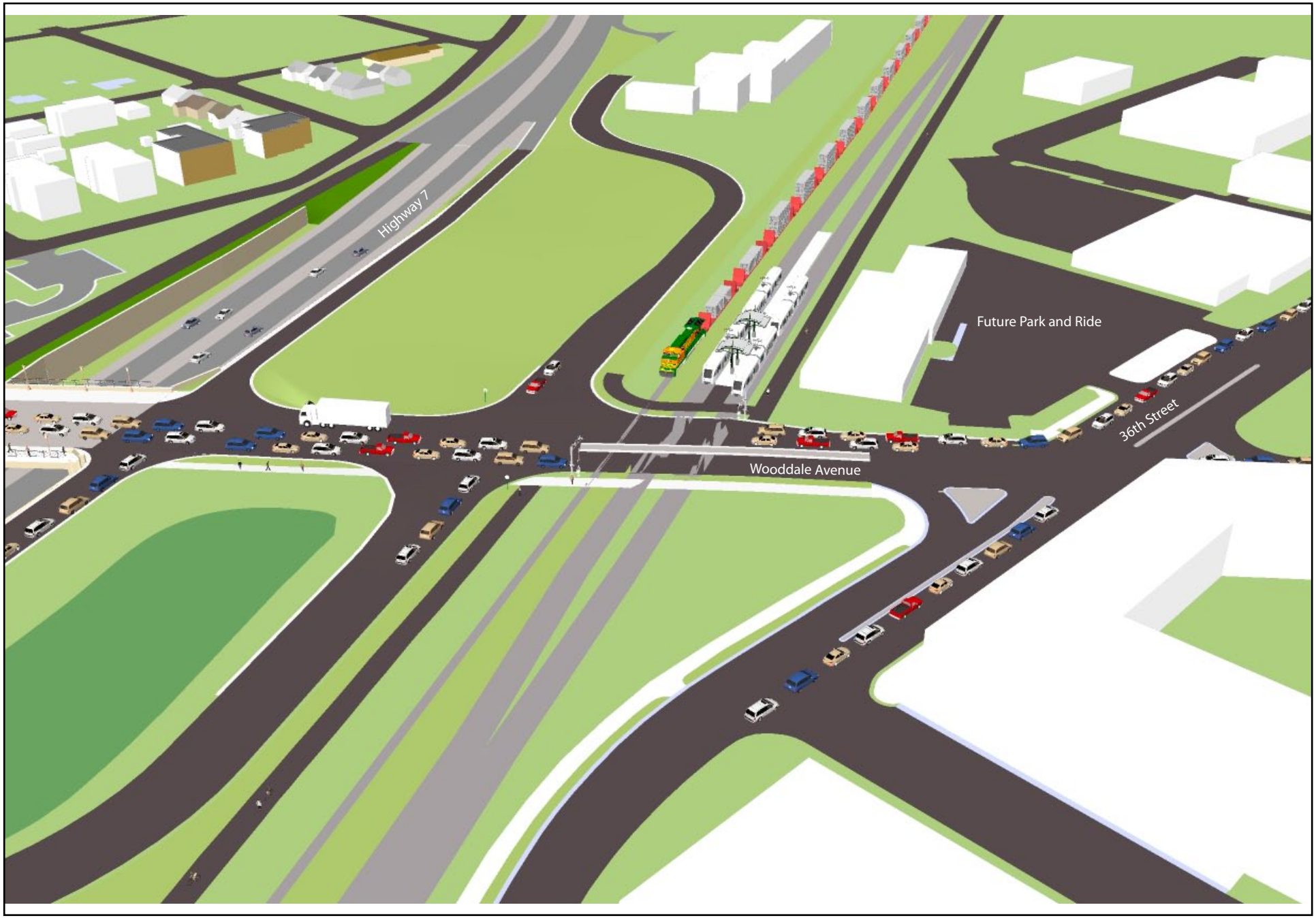
2A Wooddale Station- Existing Conditions

2B Wooddale Station- LRT and Trail at grade, no Freight Rail



2B Wooddale Station- LRT and Trail at grade, no Freight Rail

2C Wooddale Station- LRT, Freight Rail and Trail at grade



2C Wooddale Station- LRT, Freight Rail and Trail at grade

Doc No 4543033 11/06/2008 12:00 PM
Certified filed and or recorded on above date:
Office of the Registrar of Titles
Hennepin County, Minnesota
Michael H. Cunniff, Registrar of Titles

TransID 453672

New cert

Cert
1195585

Deputy 45
Fees
$1.50 AF
$10.50 STATEFEE
$34.00 TDOCFEE
$0.00 TSUR
$46.00 Total

1195585

CONTRACT NO.
141-06
CITY OF ST LOUIS PARK

RAILROAD EASEMENT AGREEMENT

THIS AGREEMENT is made this 20th day of November 2006 by HIGHWAY 7 BUSINESS CENTER LLC, a Minnesota limited liability company ("Grantor"), in favor of CITY OF ST. LOUIS PARK, MINNESOTA, a Minnesota municipal corporation ("Grantee").

Recitals

A. The Grantor, Grantee and the St. Louis Park Economic Development Authority ("Authority") entered into that certain Contract for Private Redevelopment dated as of May 15, 2006 (the "Contract"), providing for the redevelopment of certain property in the City described as follows (hereafter the "Redevelopment Property"):

Lots 1 and 2, Block 1, RER Addition

B. Grantor and Grantee acknowledge that a portion of the Redevelopment Property was acquired with proceeds of an Environmental Response Fund grant from Hennepin County (the "ERF Grant"), pursuant to Minnesota Statutes, Section 383B.81 (the "ERF Act").

C. Pursuant to the Contract and Subdivision 6 of the ERF Act, the Grantor agreed to grant to Grantee an easement on a portion of the Redevelopment Property for railroad right of way purposes, all as further described herein.

Terms of Easement

1. Grant of Easement. For good and valuable consideration, receipt of which is acknowledged by Grantor, Grantor grants and conveys to the Grantee the following easement:

> A perpetual easement for railroad right of way purposes over, under and across a part of the Redevelopment Property, such area being described on Exhibit A hereto (the "Easement Area").

2. Conditions of Easement. (a) Prior to the Use Commencement Date described in paragraph (b) of this Section, Grantor may occupy, improve and use the Easement Area for surface parking in accordance with the terms of the Contract. Grantor may not construct any other improvements during such period without prior written approval of Grantee. Grantor shall maintain the Easement Area during such period at its cost.

(b) Grantee or its assigns must provide 180 days' written notice to Grantor that Grantee or its assigns intends to exercise its rights in the Easement Area. Expiration of such 180-day period is hereinafter referred to as the Use Commencement Date. From and after

the Use Commencement Date, Grantee or its assigns may occupy and use the Easement Area for any railroad or rail transit purposes, specifically including (but not limited to) any rail or transit uses set forth in Subdivision 6 of the ERF Act. At all times after the Use Commencement Date, Grantor's occupation and use of the Easement Area is subject to Grantee's use of the Easement Area for the purposes described in this Agreement. Upon request by Grantee, Grantor at its cost shall remove any improvements constructed prior to the Use Commencement Date that, in Grantee's judgment, interferes with or impairs Grantee's use of the Easement Area for the purposes described in this Agreement. From and after the Use Commencement Date, Grantor shall have no obligation to maintain or pay the costs to maintain the Easement Area, except as Grantor and Grantee may otherwise mutually agree in writing.

3. Assignment. Grantee may at any time assign its rights and obligations under this Agreement to any entity, public or private, with the powers under Minnesota law to own, operate, regulate, or provide financing for railway or transit facilities of any kind, including without limitation Hennepin County and the Hennepin County Regional Railroad Authority.

4. Warranty of Title. The Grantor warrants that it is the owner of the Redevelopment Property and has the right, title and capacity to convey to the Grantee the easement herein.

5. Binding Effect. The terms and conditions of this instrument shall run with the land and be binding on the Grantor, its heirs, successors and assigns.

IN WITNESS WHEREOF, the Grantor has caused this Agreement to be duly executed in its name and behalf and its seal to be hereunto duly affixed and the Grantee has caused this Agreement to be duly executed in its name and behalf as of the date first above written.

7 HWY

HIGHWAY & BUSINESS CENTER LLC

By _____
Paul Hyde, Chief Executive Officer

STATE OF MINNESOTA)
) SS.
COUNTY OF HENNEPIN)

The foregoing instrument was acknowledged before me this 20th day of Nov., 2006, by Paul Hyde, the Chief Executive Officer of Highway 7 Business Center LLC, a Minnesota limited liability company, on behalf of the company.

WILLIAM A DIESEL
Notary Public - Minnesota
Commission No. 31011408
My Commission Expires Jan. 31, 2011

_____
Notary Public

CITY OF ST. LOUIS PARK

By _____
Its Mayor

By _____
City Manager

STATE OF MINNESOTA)
) SS.
COUNTY OF HENNEPIN)

The foregoing instrument was acknowledged before me this 27 day of November, 2006 by Jeff Jacobs and Tom Harmening, the Mayor and City Manager, respectively, of the of the City of St. Louis Park, on behalf of the City.

_____
Notary Public

KRISTINE A. LUEDKE
NOTARY PUBLIC-MINNESOTA
My Commission Expires Jan. 31, 2008

STATE DEED TAX DUE HEREON: NONE

THIS INSTRUMENT DRAFTED BY:
Kennedy & Graven, Chartered
470 U.S. Bank Plaza
200 South Sixth Street
Minneapolis, MN 55402

EXHIBIT A
TO RAILROAD EASEMENT AGREEMENT

Description of Easement Area

That part of Lot 2, Block 1, RER ADDITION, Hennepin County, Minnesota lying easterly of the following described line:

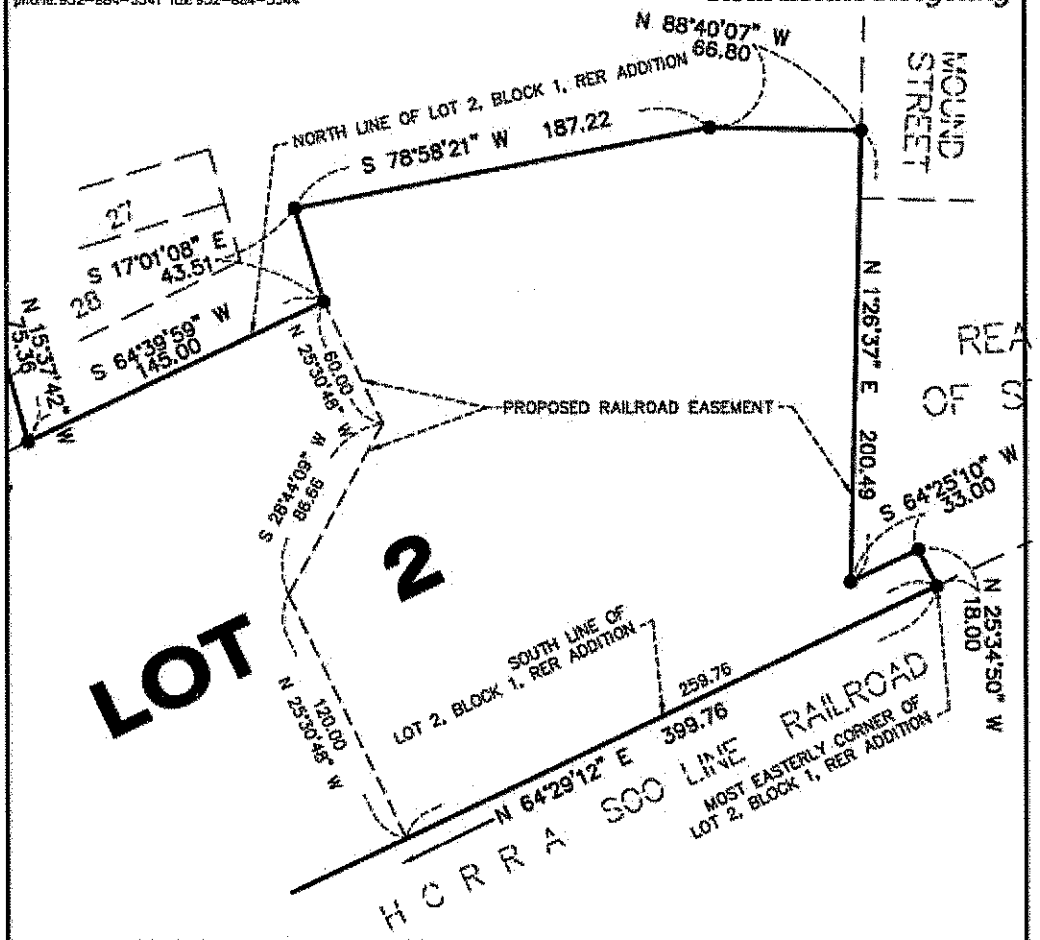
Commencing at the most easterly corner of said Lot 2; thence South 64 degrees 29 minutes 12 seconds West an assumed bearing along the south line of said Lot 2 a distance of 259.76 feet to the point of beginning; thence North 25 degrees 30 minutes 48 seconds West 120.00 feet; thence North 28 degrees 44 minutes 09 seconds East 86.66 feet; thence North 25 degrees 30 minutes 48 seconds West 60.00 feet more or less to the north line of said Lot 2 and there terminating.

HARRY S. JOHNSON
LAND SURVEYORS
9063 Lyndale Ave. So. Bloomington, MN. 55420
phone: 952-884-5341 fax 952-884-5344

Railroad Easement of Survey

for

Real Estate Recycling



PROPOSED RAILROAD EASEMENT DESCRIBED AS:
That part of Lot 2, Block 1, RER ADDITION, Hennepin County , Minnesota lying easterly of the following described line:
Commencing at the most easterly corner of said Lot 2; thence South 64 degrees 29 minutes 12 seconds West on assumed bearing along the south line of said Lot 2 a distance of 258.76 feet to the point of beginning; thence North 25 degrees 30 minutes 46 seconds West 120.00 feet; thence North 28 degrees 44 minutes 09 seconds East 86.66 feet; thence North 25 degrees 30 minutes 46 seconds West 60.00 feet more or less to the north line of said Lot 2 and there terminating.

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 Registered Land Surveyor under the laws of the State of Minnesota.

SCALE: 1" = 60'

Date: October 6, 2008

Thomas E. Hodorff, L.S. MN Reg. No. 23677

JOB NO: 200515403.DWG

SRF Consulting Group, Inc. | Engineers Planners Designers

SRF No. 0127943

MEMORANDUM

TO: Meg McMonigal, AICP, Planning and Zoning Supervisor
City of St. Louis Park

FROM: Marie Cote, PE, Principal

DATE: November 7, 2012

SUBJECT: SOUTHWEST TRANSITWAY DEIS – TRAFFIC ANALYSIS REVIEW

As requested, we have completed a review of the SW LRT DEIS Chapter 6: Transportation Effects (October 2012). This includes the review of additional information related to a new alternative named 3A-1 (co-location), which includes freight trains running parallel to LRT in the Kenilworth corridor. Based on our review, we offer the following comments for your consideration:

Transit Effects

- The transit ridership was prepared using standard, accepted methods available at the time the draft was prepared. Station boardings are provided for each station in Appendix H, but no conclusions can be drawn specific to the reasonableness of those estimates. It is our understanding that the transit ridership will be updated as part of the design phase using newly available information for the FEIS, such as the 2010 Transit On Board Survey.

Effects on Roadways

- The initial comment regarding a single growth factor was not addressed in the revised DEIS. The year 2030 traffic forecasts were developed by applying a growth factor to the existing (year 2010) traffic volumes. The regional model was used to determine growth, but a single 1.12 factor continues to be applied along the entire corridor. Generally, it can be expected that this approach would understate developing area growth and overstate fully developed area growth, but specific roadways may be differently affected. A "risk assessment" approach could be used at intersections with failing or near-failing levels of service to determine the extent to which a higher growth assumption would affect the conclusions of the analysis.

- An existing and future intersection operations analysis was completed using the Synchro/SimTraffic software. It is stated that Synchro/SimTraffic does not have the direct capacity to model LRT. The Southwest Transitway DEIS – Traffic Analysis Update in Appendix H also states that each station and the impacts on operations and circulation will be addressed in a detailed analysis as part of the FEIS. It is our understanding that VISSIM will be used to better assess LRT operations in the design phase of the SW LRT.
- The operations analysis completed for year 2017 and 2030 build conditions identified intersections that are expected to operate at an unacceptable level of service. Further analysis of the potential mitigation measures will be addressed in the FEIS.
- The Southwest Transitway DEIS – Traffic Analysis Update in Appendix H includes assumptions related to future LRT and freight trains operating in the Kenilworth corridor. The operations analysis assumes a freight train with 30 cars at 60 feet each, traveling at 10 mph. This results in 150 seconds for a freight train to cross an intersection. According to field observations conducted for the City in 2011, a freight train traveling across Wooddale Avenue and Beltline Boulevard required 10 minutes of vehicular delay during the morning peak hour. The significant difference between the observed delay and assumed delay for a freight train crossing could have a measurable impact on the operations analysis results for 2018 and 2030. In addition, the Southwest Transitway DEIS – Traffic Analysis Update results state that "these queues are not anticipated to impact the signal operations at the high volume intersection of CSAH 25 and Beltline Boulevard". Further analysis of this issue should be addressed as part of the FEIS.
- The At-Grade Queue Analysis in Appendix H includes the details of the queuing impacts related to various freight train lengths. This technical memorandum dated May 31, 2012 was completed after the Southwest Transitway DEIS – Traffic Analysis Update (March 21, 2012). This analysis further evaluated the 30-car train at 10 mph, in addition to a 120-car train at 10 mph. The results of the 2010 and 2030 analysis identified significant queues impacting adjacent intersections along the Wooddale Avenue and Beltline Boulevard corridors for the 30-car and 120-car scenarios. The general note summarizing the analysis states that "a scenario in which a train arrives during this relatively short timeframe is possible, but would likely be a relatively rare occurrence". As previously stated, further analysis of this issue should be addressed as part of the FEIS.
- The Operational Impacts at Intersections section describes the analysis conducted to identify LRT impacts on intersection operations to determine "how well intersections function to move traffic and pedestrians". However, this section is limited to vehicular and freight rail traffic. The Southwest Transitway DEIS – Traffic Analysis Update in Appendix H states that pedestrians were not modeled due to low pedestrian counts. The impacts on pedestrians and bicyclists traveling through the intersections and roadways near the LRT stations should be considered in the FEIS. This should also include impacts on the regional trail at-grade crossing in close proximity to the future LRT alignment.

November, 2009

TCWR Freight Rail Realignment Study

Hennepin County Regional Railroad Authority

11/18/09

With assistance from TKDA

BACKGROUND

Prior to the Hiawatha/TH55 upgrades in South Minneapolis, Canadian Pacific Railway's (CPR) Bass Lake Subdivision (east-west trackage through St. Louis Park and Minneapolis) crossed Hiawatha Avenue at grade (see Exhibit 1). During the design process for the Hiawatha/TH55 project, Mn/DOT and FHWA determined that neither an at-grade freight rail crossing nor a grade separation was viable and the decision was made to sever the freight rail line and relocate freight rail service to St. Paul. An at-grade crossing posed problems due to the high traffic levels on Hiawatha/TH55 and a grade separation was problematic due to limited grades and geometry. An analysis was conducted to determine the preferred route for the relocated freight rail service. The conclusion was that the MNS Sub was the preferred route. Shortly after this was concluded it was discovered that the Golden Auto site over which the freight rail connection would be constructed was a superfund site. Until the Golden Auto site was cleaned up and delisted, a temporary route needed to be found or the federal funding for Hiawatha/TH55 project would be lost.

The main carrier on the Bass Lake Sub from St. Louis Park, through the Midtown Trench along 29th Street, and on to St. Paul is the Twin Cities and Western Railroad (TCWR). TCWR has trackage rights on CPR's Bass Lake Sub and also BNSF Railway (BNSF) track once they got to St. Paul to continue on to the Pigs Eye Yard in St. Paul and to Minnesota Commercial Railway's (MNNR) A Yard. To sever the Midtown Trench tracks at Hiawatha Avenue, an alternate route was needed to get TCWR on to St. Paul where they have connections with BNSF, CPR, MNNR, and Union Pacific Railroad (UP).

Hennepin County Regional Railroad Authority (HCRRA) owns the old CNW line known as the Kenilworth Corridor through the Kenwood area in Minneapolis. To facilitate the connection of TCWR to the east, HCRRA rehabbed the Kenilworth Corridor as a temporary route and facilitated an agreement between BNSF, CPR, and TCWR to provide trackage rights into and through St. Paul. In order to allow trains back on this old CNW line, the neighborhoods were told that this alignment was going to be temporary to preserve it for future transit use. The temporary route was rehabbed and was to be used for 1-6 years until a permanent relocation could be developed. This 1-6 year fix has now become more than a 10 year fix and is currently in the need of another rehab to safely and consistently carry rail traffic into the future.

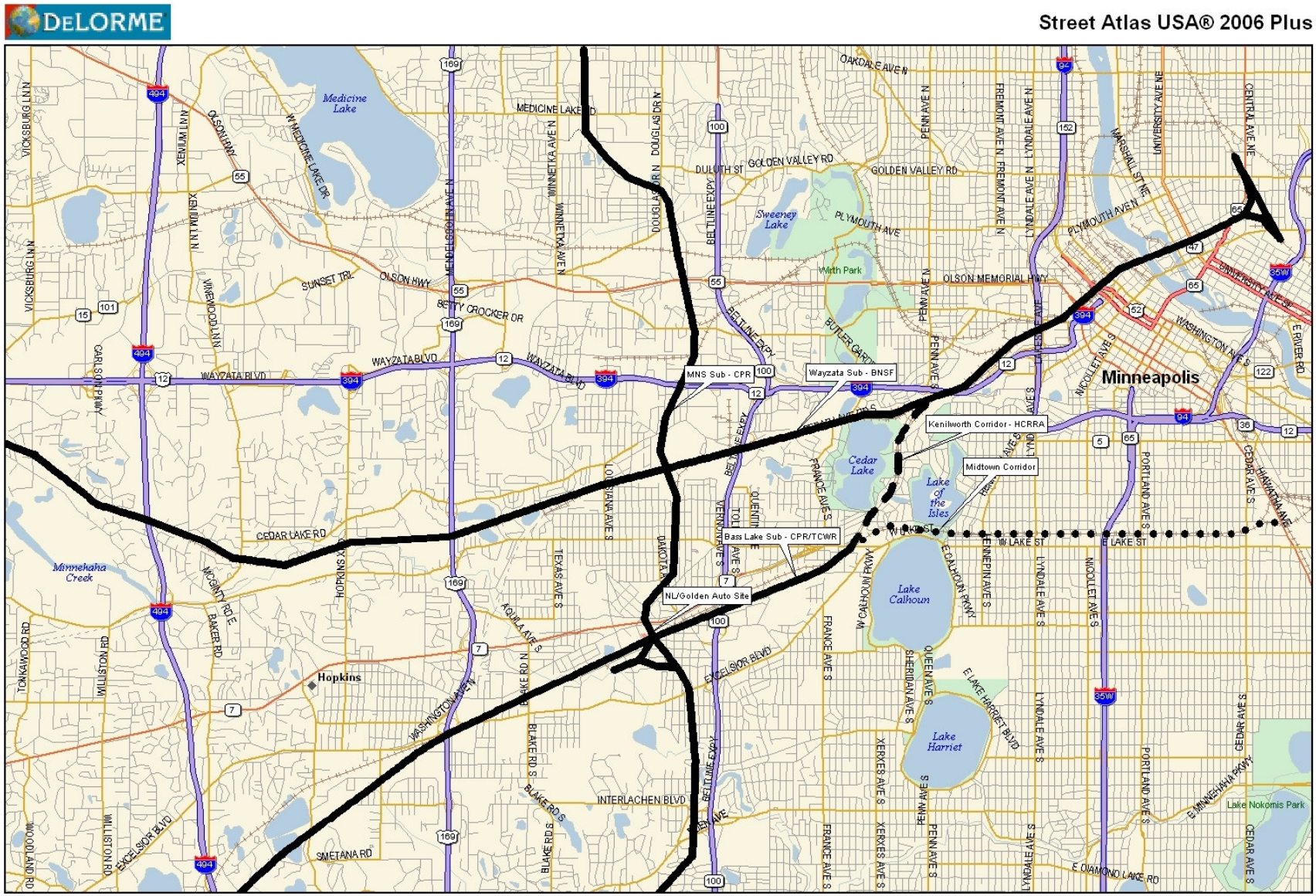
ST. LOUIS PARK RAILROAD REPORT, 1999

Shortly after the decision was made to reroute freight rail traffic on a temporary basis through the Kenilworth Corridor in Minneapolis, a study was conducted to examine the short-term and long-term freight rail options to determine solutions that allow freight to move efficiently and effectively through St. Louis Park while reducing impacts to the greatest extent possible for St. Louis Park. A Neighborhood Task Force was assembled to provide guidance and input during the study.

STUDY PURPOSE

The purpose of the analysis contained in this report is to evaluate all potential options for a permanent location for freight rail operations. To determine a permanent home for freight service consideration must be given to both the short-term and the long-term. Any solution must work for both the short-term as well as the long-term.

EXHIBIT 1


DeLORME
Street Atlas USA® 2006 Plus
Medicine Lake
Sweeney Lake
Wirth Park
Cedar Lake
Lake of the Isles
Lake Calhoun
Lake Harriet
Lake Nokomis Park
Minnehaha Creek
Hopkins
Minneapolis
MNS Sub - CPR
Wayzata Sub - BNSF
Kenilworth Corridor - HCRRA
Midtown Corridor
Bass Lake Sub - CPR/TCWR
NL/Golden Auto Site
MEDICINE LAKE RD
GOLDEN VALLEY RD
OLSON MEMORIAL HWY
WAYZATA BLVD
CEDAR LAKE RD
EXCELSIOR BLVD
INTERLACHEN BLVD
SMETANA RD
W LAKE ST
E LAKE ST
E LAKE HARRIET BLVD
E DIAMOND LAKE RD
HIAWATHA AVE
FRANCE AVE S
PENN AVE S
LYNDALE AVE S
PORTLAND AVE S
CEDAR AVE S
HOPKINS X RD
BLAKE RD S
WASHINGTON AVE S
BELTLINE EXPY

For this report, care has been taken to avoid repeating the information in the St. Louis Park Railroad Study prepared by RLK Associates, Ltd. in March 1999. Most of the information contained in this study is based on the technical data from the St. Louis Park Railroad Study. That data was used as a starting point for background information on potential alignments. However, the railroads, Mn/DOT, the City of St. Louis Park, and Hennepin County have all been interviewed again to get updated information that would affect finding a permanent track alignment for TCWR. Using past and present information, Hennepin County is pursuing feasible alignment scenarios for a permanent home for TCWR freight traffic.

To provide project direction, a discussion group was formed and is composed of staff from Hennepin County, Mn/DOT, Twin Cities and Western (TCW) Rail Company, Minneapolis, and St. Louis Park. The discussion group met periodically during the course of the study to provide input and to review technical materials produced by TKDA.

CHANGES SINCE ST. LOUIS PARK RAILROAD STUDY, 1999

While most information in the St. Louis Park Railroad Study is still pertinent, changes have taken place in the metro area that need to be accounted for while finding a permanent home for TCWR. The current Twins Ballpark (Target Field) is nearly complete as is the Northstar Commuter Rail and Hiawatha Light Rail Transit extension. Additional passenger rail and light rail corridors are also being explored that will terminate at the Minneapolis Transportation Interchange, near the new Target Field site. In addition to all the developments surrounding the Twins Ballpark area, railroad priorities and shipping movements have changed since 2000 when the St. Louis Park Freight Rail Task Force Report was completed.

TWINS BALLPARK SITE (Target Field)

The design of the Twins Ballpark (Target Field) required reconfiguring railroad tracks in the area. With the addition of the Twins Ballpark to the west side of downtown Minneapolis, additional rail complications have been introduced. BNSF's Wayzata Sub runs adjacent to the Twins Ballpark site. This is already a busy section of track for BNSF with up to 15 trains per day traveling through the area. This includes intermodal trains with double-stacked shipping containers that are now able to pass under the Main Street bridge in northeast Minneapolis which was just replaced this year. The inclusion of the Twins Ballpark near BNSF's track required extensive realignment to permit the trackage and ballpark to coexist in the same area. The realignment for the Twins Ballpark works as required, but it hinders future track alignment modifications and limits capacity expansion through the area. On its current right of way, BNSF is relegated to one track through this entire corridor to the northwest of the new Twins Ballpark (Target Field). Adding additional tracks through this area to expand freight rail operations would require significant property acquisitions and reconstruction of bridges. The area to the northwest of the Twins Ballpark (Target Field) is a historic district covering some of the properties that would be required to construct additional tracks through the area.

MINNEAPOLIS TRANSPORTATION INTERCHANGE

As part of the Twins Ballpark (Target Field) site, a two-level intermodal passenger rail hub is being completed at the north corner of the Twin Ballpark. This includes Northstar Commuter Rail at the same level as BNSF's freight tracks and Light Rail Transit (LRT) at the street level above.

The Northstar Commuter Rail station has been built with two tracks for train storage and passenger loading and unloading. This trackage is built at the same level as BNSF's track as the Northstar passenger train will be utilizing BNSF tracks. Located between the Twins Ballpark to the southwest and BNSF's mainline and buildings to the northwest, most usable space through this area has already been utilized.

The LRT station and trackage is out of the way of freight rail through the area. However, this is another factor that impedes expansion of freight or passenger rail through the area. The LRT extension to the Twins Ballpark is built at the same level as 5th Street on a bridge over the Wayzata Sub and Northstar Commuter Rail tracks. If additional freight rail tracks are constructed in the area, the 5th Street LRT bridge would need to be lengthened and LRT service would be suspended during construction.

Combined, the Twins Ballpark (Target Field) and the intermodal station connecting Northstar Commuter Rail and Hiawatha/Central LRT restrict if not preclude the ability to expand BNSF's track through the area. For expansion to be possible, bridges over BNSF's track will need to be lengthened, buildings to the west located within a historic district will need to be taken, or possibly both.

PASSENGER AND LIGHT RAIL PROJECTS

Passenger and light rail projects are currently being considered throughout the Twin Cities Metro area. At full build out the Minneapolis Transportation Interchange (intermodal station) could be served by up to five (5) commuter rail lines, up to four (4) LRT lines, intercity passenger rail service, and high speed rail from Chicago. The implementation of the future vision for an integrated system of rail lines and bus routes converging in downtown Minneapolis at the Minneapolis Transportation Interchange has a significant impact on the ability of freight rail to expand operations through this area.

While the passenger and LRT corridors have varying degrees of potential implementation in the near future, the list does highlight the number of passenger rail projects being looked at in the area. That means there is a strong possibility that the area around the Twins Ballpark, and BNSF's Wayzata Sub specifically, will see additional rail traffic increases that need to be accounted for while looking for a permanent route for TCWR's trains. If all of the projects are built as envisioned by Hennepin County, up to 80 commuter and passenger rail trains per day and 500 LRT trains per day will converge at the Minneapolis Transportation Interchange in addition to any freight rail traffic.

RAIL TRAFFIC

Rail traffic varies from day to day and year to year. Although it's impossible to precisely forecast future rail traffic, we can use current rail traffic as a starting point for analysis. The one bit of traffic that has changed significantly is TCWR's southbound traffic to the port of Savage. Due to market changes in grain, this move by TCWR has not run in the past two years. However, that traffic could turn around during any given harvest season. TCWR purchased the bridge over the Mississippi River in Savage to protect that shipping option and is counting on that market for growth in their future traffic projections.

BNSF and CPR rail traffic has gone up and down through the area, but none of the changes suggest a major change in traffic to the point where current routes aren't needed. If anything, the changes (specifically the addition of passenger rail and double-stack intermodal trains on the Wayzata Sub) will necessitate increases in capacity and infrastructure.

Moving commodities along freight rail lines rather than by semi trucks on the roadway system has a significant effect upon the region's mobility. TCWR reports that an average train load equates to 40 semi trucks on the roadway system. Maintaining freight rail connections as a viable method for transporting goods to, from, and within the Twin Cities region contributes to the healthy economy of this region. As the roadway network continues to become more and more congested, moving commodities by freight rail will become more competitive.

ALTERNATE ROUTE ANALYSIS

After reviewing the history of freight rail operations and discussing the future of freight rail operations with the private freight rail companies, TKDA developed an inventory of all possible routes for long-term permanent freight rail operations. The options for alternative routes were presented in small group meetings with the private freight rail companies. Through this process the following alternatives were identified:

- Kenilworth Corridor
- Midtown Corridor
- MNS Sub
- Chaska Cut-Off
- Former Railroad Alignment – Hwy 169
- Western MN Connection with BNSF

The routing alternatives were then evaluated to determine which one would provide the best long-term permanent home for freight rail. Considerations included impact to freight rail operations (short-term and long-term), impacts to the transportation system, potential property acquisitions/relocations, and construction costs.

KENILWORTH CORRIDOR – EXISTING TEMPORARY ALIGNMENT

The temporary route for TCW routes them along their own track to the west which turns into CPR owned track before turning into HCRRA track between the Midtown Corridor turnoff and the Cedar Lake Junction at BNSF's Wayzata Sub (see Exhibit 2). TCWR runs on the Bass Lake Spur before veering northeast where the old Midtown Corridor started heading straight east along 29th Street. From here TCWR runs on the Kenilworth Corridor up to Cedar Lake Junction where it turns east onto BNSF's Wayzata Sub and heads into downtown through the Twins Ballpark site and on to St. Paul. As stated previously, this route was meant to be a temporary route for TCWR. The line was rebuilt to temporarily allow trains to connect to St. Paul while the National Lead/Golden Auto site was to be cleaned up to accommodate a connection between Bass Lake Sub to MNS Sub for TCWR to run through St. Louis Park. The HCRRA acquired the Kenilworth Corridor to preserve it for future transit use. HCRRA allowed temporary use of the Kenilworth Corridor for TCWR operations to allow the Hiawatha/TH55 Project to move forward with the understanding that freight rail was only a temporary use and would vacate the corridor.

According to State Statute 383B.81, an Environmental Response Fund was created to sufficiently clean up the National Lead/Golden Auto site in St. Louis Park. This property was to be used to build the

EXHIBIT 2

DELORME

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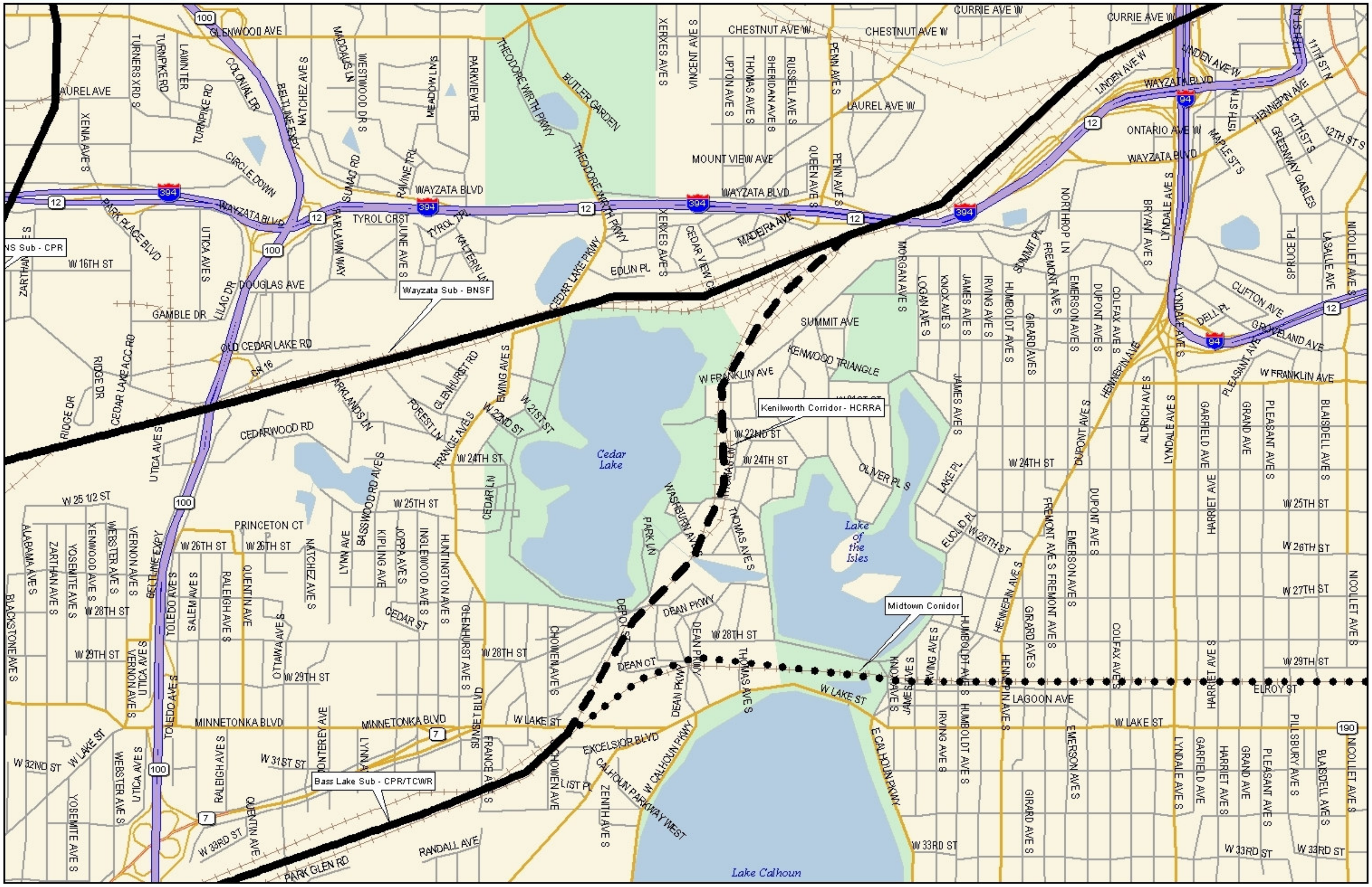


connection between Bass Lake Sub to MNS Sub for TCWR to run through St. Louis Park before making its way east to St. Paul. The funds were to be made available to St. Louis Park if they entered into an agreement with Hennepin County to acquire the contaminated site and to provide a rail right-of-way to replace the 29th Street Corridor. Kenilworth was never to be a permanent alignment and was rehabilitated accordingly. The lifespan of this rehabilitated track is coming to an end and a long-term permanent location for freight rail must be provided.

Mn/DOT is also interested in the relocation of the freight rail through this area. They are interested in knowing whether TCWR will continue to run on this corridor before performing their Hwy 100 widening project under Hwy 7 and the Bass Lake Sub. Mn/DOT acknowledges that if SWLRT is constructed, a new LRT bridge will need to go over Hwy 100. However the necessity to build a freight rail bridge over Hwy 100 is determined by whether or not freight rail continues through the Kenilworth Corridor or if it's relocated elsewhere. Building a freight bridge will add significant costs to the Hwy 100 widening project. They would have to build a longer bridge than currently exists to accommodate a wider Hwy 100.

Building a longer bridge also means a taller depth of structure which inevitably will lead to having to lower Hwy 100 further to get the necessary clearances for vehicular traffic below the freight railroad bridge. And pushing the roadway down creates drainage issues that also need to be accounted for. All of these issues and expenditures would be eliminated if TCWR freight traffic is relocated to the MNS Sub.

During the course of this study, St. Louis Park staff requested an evaluation of freight rail and LRT coexistence in the Kenilworth Corridor. The purpose was to inform elected officials and the public of the implications. Coexistence of the freight rail lines would require acquisitions in excess of $100 million and a potential additional crossing of freight rail and LRT. Based upon this analysis, it was concluded that it is not viable for freight rail and LRT to coexist in the Kenilworth Corridor.

Summary

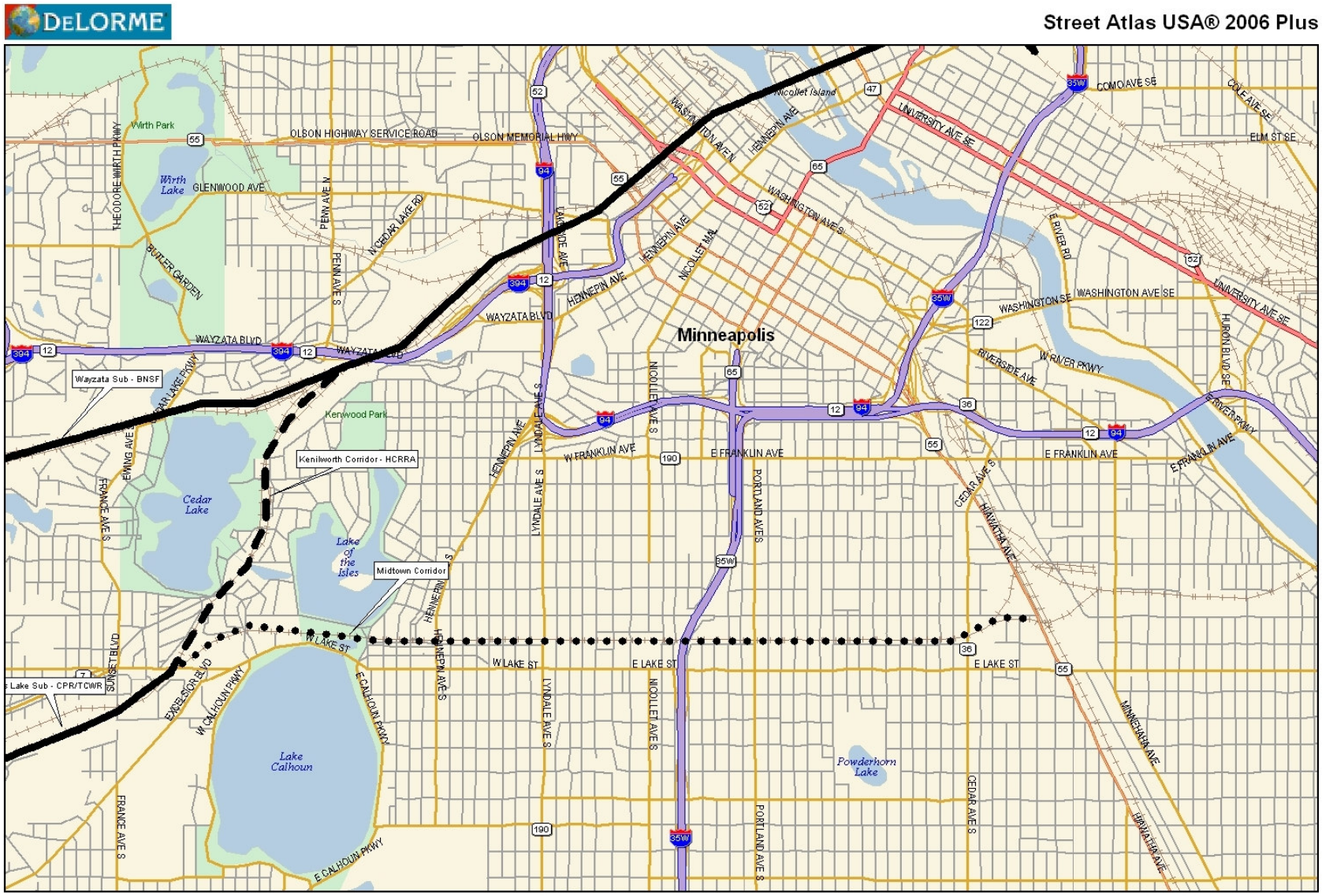
The Kenilworth Corridor has significant constraints for the long-term permanent location for freight rail due to:

- future rail capacity constraints near the Twins Ballpark (Target Field)
- negative impacts to the Hwy 100 project
- traffic management issues related to at-grade crossings of Wooddale Avenue and Beltline Boulevard in St. Louis Park
- funding needed for rehabilitation

MIDTOWN CORRIDOR

Although TCWR was relocated from the Midtown Corridor due to the Hwy 55/Hiawatha Avenue project, it was reevaluated as a potential alignment. The TCWR would follow its current alignment on the Bass Lake Sub through St. Louis Park and onto what is the Midtown Corridor through the trench (see Exhibit 3). It would then approach Hwy 55/Hiawatha Avenue and would be grade-separated as an overpass of the roadway. It would connect to the CPR tracks on the east side of Hwy 55/Hiawatha Avenue that are currently leased and run on by MNNR. This alignment would reinstate freight rail as it existed prior to the Hwy 55/Hiawatha Avenue project and track severing.

EXHIBIT 3


DeLORME
Street Atlas USA® 2006 Plus
Minneapolis
Wayzata Sub - BNSF
Kenilworth Corridor - HCRRA
Midtown Corridor
Lake Sub - CPR/TCWR
Wirth Park
Wirth Lake
Kenwood Park
Cedar Lake
Lake of the Isles
Lake Calhoun
Powderhorn Lake
Nicollet Island
OLSON HIGHWAY SERVICE ROAD
OLSON MEMORIAL HWY
GLENWOOD AVE
WAYZATA BLVD
HENNEPIN AVE
LYNDALE AVE S
NICOLLET AVE S
PORTLAND AVE S
CEDAR AVE S
W LAKE ST
E LAKE ST
W FRANKLIN AVE
E FRANKLIN AVE
WASHINGTON AVE S
WASHINGTON AVE SE
UNIVERSITY AVE SE
COMO AVE SE
ELM ST SE
CEDAR LAKE RD
PENN AVE S
EMMING AVE
FRANCE AVE S
SUNSET BLVD
EXCELSIOR BLVD
W CALHOUN PKWY
E CALHOUN PKWY
THEODORE WIRTH PKWY
BUTLER GARDEN
CEDAR LAKE PARKWAY
W RIVER PKWY
E RIVER PKWY
RIVERSIDE AVE
HURON BLVD SE
CEDAR AVE S
HIAWATHA AVE
MINNEHAHA AVE

Extensive work would be necessary to make the railroad connection from the west side to the east side of Hwy 55/Hiawatha Avenue. The Hiawatha LRT bridge would need to be reconstructed to provide ample clearance for a freight train on a structure underneath it. A new freight rail bridge would need to be built to span Hwy 55/Hiawatha Avenue. Hwy 55/Hiawatha Avenue would need to be lowered to provide clearance underneath the freight rail bridge. The profile change on Hwy 55/Hiawatha Avenue would most certainly affect the Lake Street overpass and approaches to that bridge. The intersection at 26th and 28th Streets would need to be reconfigured and the new Sabo pedestrian bridge north of 28th Street would need to be reconstructed. Roadway and LRT traffic through the area would largely be delayed or stopped for this alternative to be constructed. In addition, this construction would require various permits from federal and state agencies as well as agreements with the private freight rail companies.

The Midtown Corridor was acquired by the HCRRA to preserve it for future transit use. The corridor has been considered for LRT, streetcar, and bus rapid transit (BRT) implementation. The Midtown Corridor is included in the Metropolitan Council's TPP as a future project. Reinstatement of freight rail service would preclude transit use of the corridor.

Summary

The Midtown Corridor has significant constraints for the long-term permanent location for freight rail operations due to:

- the estimated capital costs to reconstruct Hwy 55, the Hiawatha LRT line, and the Sabo pedestrian bridge would exceed $136 million (2008)
- the complexity of engineering to retain vehicle flows on Hwy 55 as well as Lake Street, LRT operations, bicycle and pedestrian movements

MNS SUB ALIGNMENT THROUGH ST. LOUIS PARK

The MNS Subdivision alignment (see Exhibit 4) was the preferred alignment when Hwy 55/Hiawatha Avenue was upgraded and freight rail service in the Midtown Corridor was severed. In 2001, the St. Louis Park Railroad Advisory Task Force developed a position statement that included language agreeing to accept freight rail relocation along the MNS line at such time as the freight rail was displaced from the Kenilworth Corridor by mass transit.

Coming from the west, TCWR would operate on their own tracks before passing onto the CPR owned tracks of the Bass Lake Sub, then heading north on to CPR's MNS Sub through St. Louis Park and then onto BNSF's Wayzata Sub heading east into downtown Minneapolis toward the Twins Ballpark site. For this alignment, a connection between the Bass Lake Sub and the MNS Sub is needed on the south side of St. Louis Park (see Exhibit 5) and a connection between the MNS Sub and Wayzata Sub is needed on the north side (formerly existed and was known as the Iron Triangle; see Exhibit 6). For TCWR's southbound move onto the MNS Sub to the Port of Savage, a new south connection would be made from the Bass Lake Sub to the MNS Sub.

TCWR would be able to operate on this alignment in a very similar fashion to how they currently run through the Kenilworth Corridor. They would have the same connections with other railroads except for the more efficient southbound move onto CPR's MNS Sub. The major change would be the elimination

EXHIBIT 4

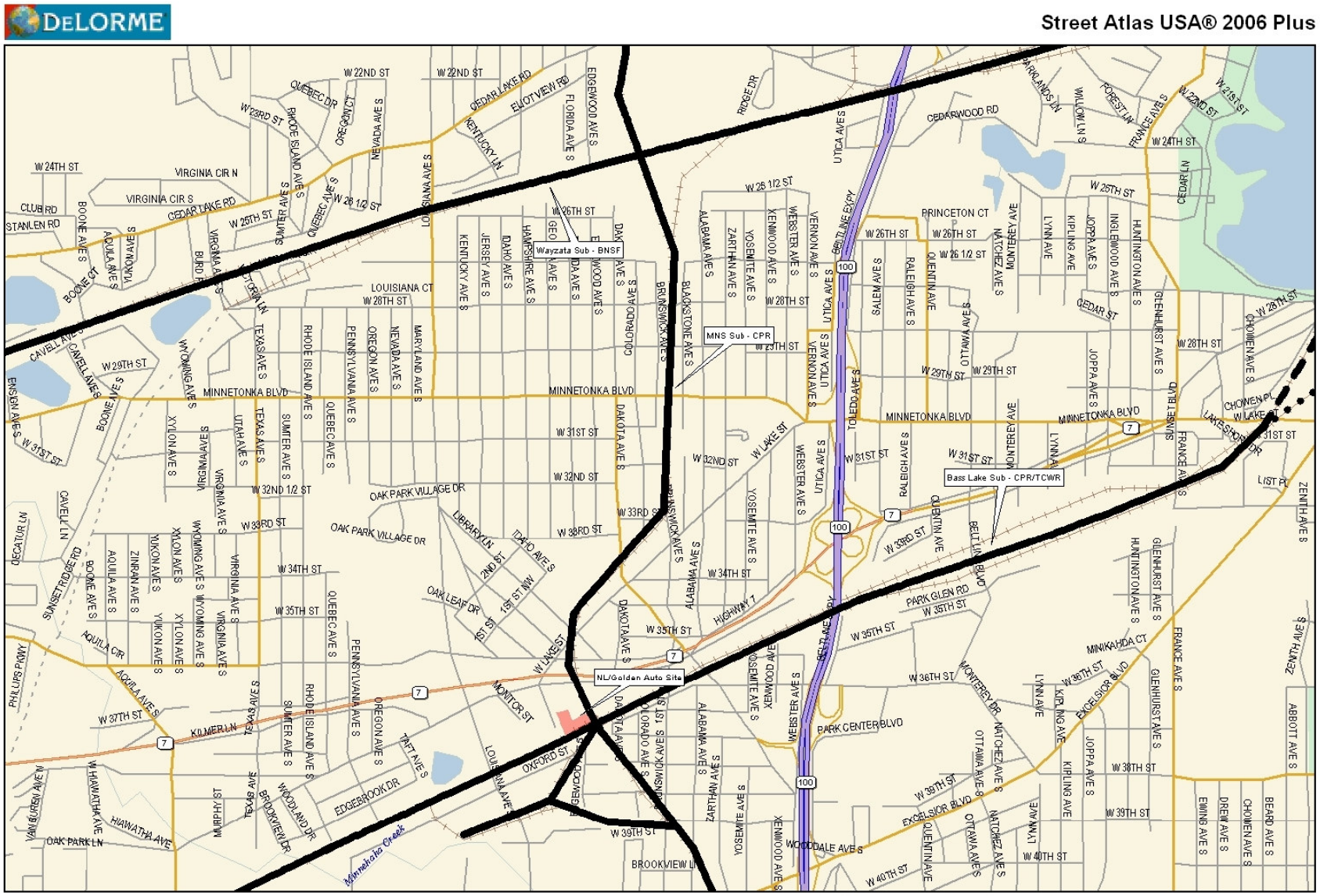

DeLORME
Street Atlas USA® 2006 Plus
Wayzata Sub - BNSF
MNS Sub - CPR
Bass Lake Sub - CPR/TCWR
NL/Golden Auto Site
MINNETONKA BLVD
HIGHWAY 7
W 22ND ST
W 24TH ST
W 25TH ST
W 26TH ST
W 28TH ST
W 29TH ST
W 31ST ST
W 32ND ST
W 33RD ST
W 34TH ST
W 35TH ST
W 36TH ST
W 37TH ST
W 38TH ST
W 39TH ST
W 40TH ST
W LAKE ST
OAK PARK VILLAGE DR
PARK CENTER BLVD
PARK GLEN RD
EXCELSIOR BLVD
CEDAR LAKE RD
OXFORD ST
MONITOR ST
WOODDALE AVE S
Minnehaha Creek

EXHIBIT 5

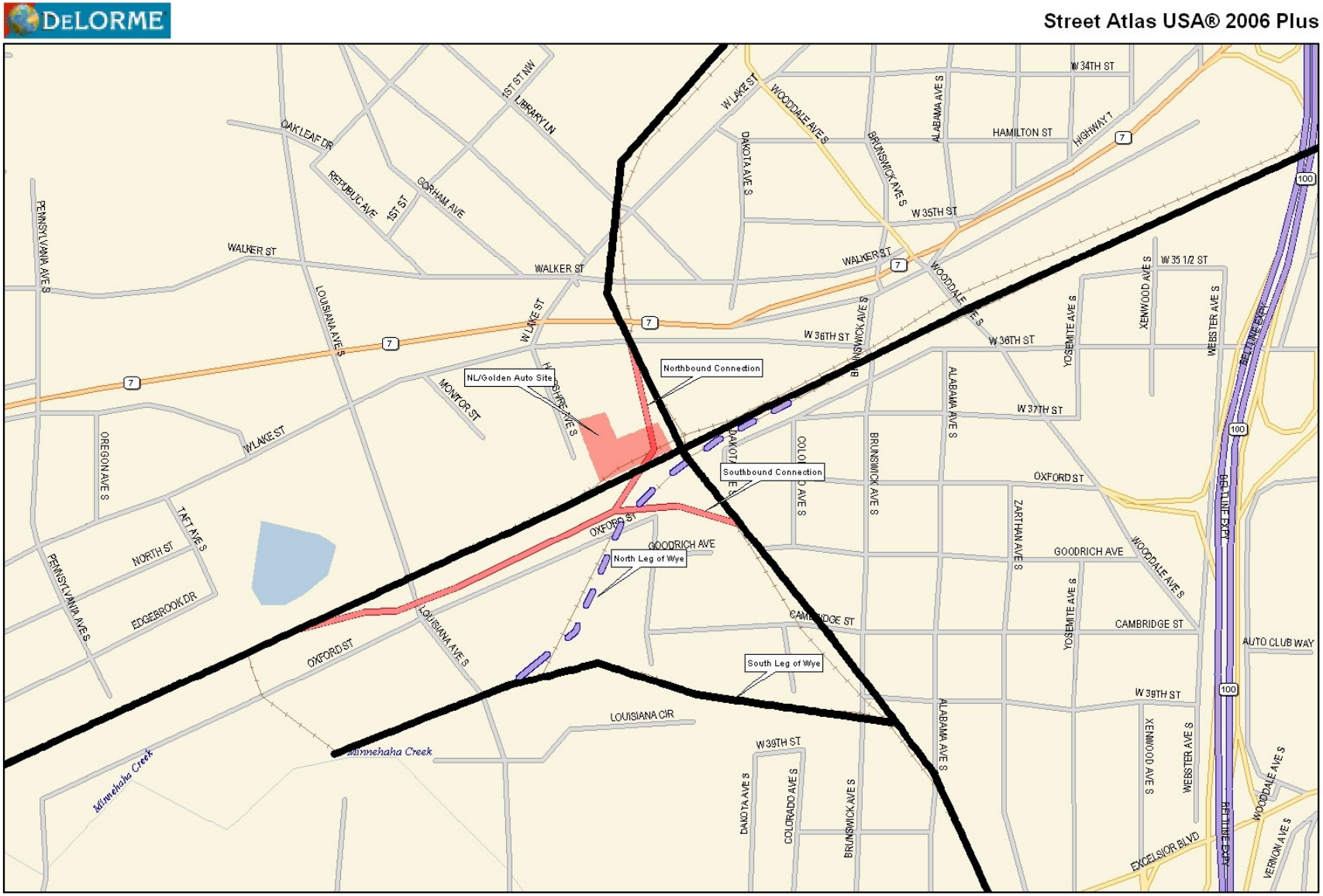
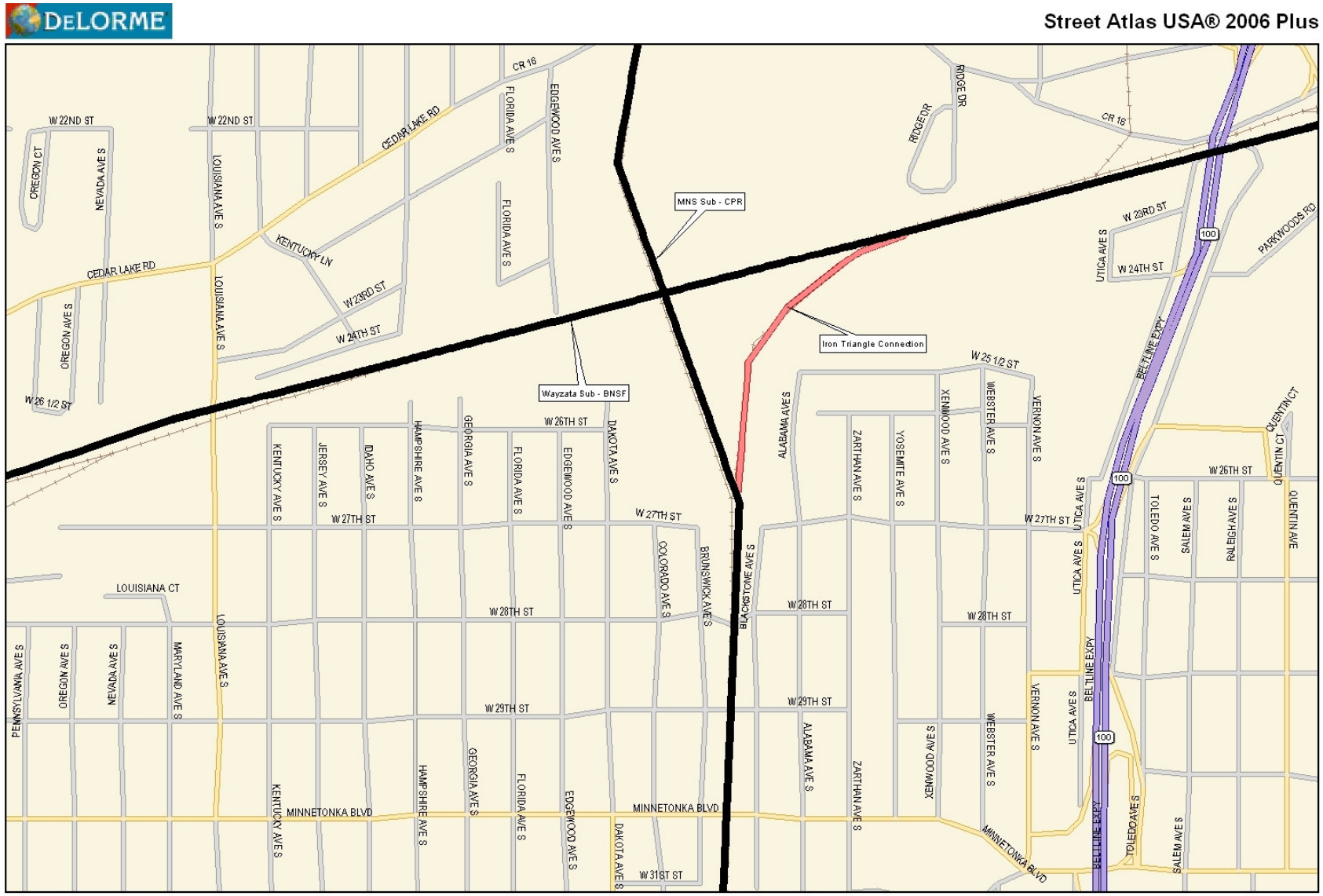

DeLORME
Street Atlas USA® 2006 Plus
Northbound Connection
NL/Golden Auto Site
Southbound Connection
North Leg of Wye
South Leg of Wye
W LAKE ST
WALKER ST
OXFORD ST
GOODRICH AVE
CAMBRIDGE ST
LOUISIANA CIR
W 34TH ST
W 35TH ST
W 35 1/2 ST
W 36TH ST
W 37TH ST
W 39TH ST
HAMILTON ST
HIGHWAY 7
AUTO CLUB WAY
EXCELSIOR BLVD
LOUISIANA AVE S
ALABAMA AVE S
BRUNSWICK AVE S
COLORADO AVE S
DAKOTA AVE S
WOODDALE AVE S
XENWOOD AVE S
WEBSTER AVE S
YOSEMITE AVE S
ZARTHAN AVE S
OREGON AVE S
PENNSYLVANIA AVE S
TAFT AVE S
MONITOR ST
NORTH ST
EDGEBROOK DR
OAK LEAF DR
REPUBLIC AVE
1ST ST
1ST ST NW
LIBRARY LN
GORHAM AVE
Minnehaha Creek
100
7

EXHIBIT 6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NEVADA AVE S
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CEDAR LAKE RD
CR 16
FLORIDA AVE S
EDGEWOOD AVE S
RIDGE DR
KENTUCKY LN
W 23RD ST
W 24TH ST
OREGON AVE S
W 26 1/2 ST
MNS Sub - CPR
Iron Triangle Connection
Wayzata Sub - BNSF
W 25 1/2 ST
UTICA AVE S
PARKWOODS RD
BELTLINE EXPY
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W 27TH ST
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W 29TH ST
W 31ST ST
KENTUCKY AVE S
JERSEY AVE S
IDAHO AVE S
HAMPSHIRE AVE S
GEORGIA AVE S
DAKOTA AVE S
COLORADO AVE S
BRUNSWICK AVE S
BLACKSTONE AVE S
ALABAMA AVE S
ZARTHAN AVE S
YOSEMITE AVE S
XENWOOD AVE S
WEBSTER AVE S
VERNON AVE S
QUENTIN CT
QUENTIN AVE
TOLEDO AVE S
SALEM AVE S
RALEIGH AVE S
LOUISIANA CT
PENNSYLVANIA AVE S
MARYLAND AVE S
MINNETONKA BLVD

of the north connection to the switching wye in the Skunk Hollow area while leaving the south end of the wye in place to serve one customer at the end of the track west of Louisiana Blvd. This would eliminate all blocking operations for the southbound move with the only necessary stoppage of trains being needed for the switch into the one customer west of Louisiana Blvd. This through movement southbound would eliminate the banging cars, screeching wheels, and whistle blowing from the switching operations needed for their current move southbound (which has been slow for a couple of years but could pick up at any time).

CPR currently runs through St. Louis Park on the MNS Sub with two trains per day on jointed track. With this alignment, additional TCWR trains would be running on the MNS Sub. However, due to the condition of the track on the MNS Sub, it would need to be upgraded to welded rail to accommodate TCWR's heavier trains. The welded rail would eliminate the wheel clatter when wheels pass over the rail joints. It would provide a smooth ride and thus eliminate much of the wheel noise associated with the current jointed rail.

Through discussions with TCW staff it was determined that to minimize construction costs, maintenance requirements, and operational requirements for this alignment, a maximum grade of 0.8%, a maximum curvature for the northbound Bass Lake Sub to MNS Sub connection of 8.0 degrees, and a maximum curvature of 9.5 degrees for the southbound connection were chosen. These grades and curves will allow TCWR to run its existing trains using its existing power to accomplish its movements. This alignment is approximately 0.4 miles longer than the route through the Kenilworth Corridor. These grades, curves, and added length will present additional maintenance requirements and great operating costs compared to straight track, but it can be operated on similar to the way it is today.

The MNS Sub will connect with the Wayzata Sub at a point approximately 2.5 miles west of Cedar Lake Junction. Cedar Lake Junction is where the Bass Lake Sub (and the Kenilworth Corridor) connects with BNSF's Wayzata Sub. In the short term TCWR will run as it currently does and continue on east past the Twins Ballpark site and on to St. Paul. However, as mentioned earlier, if additional passenger rail projects continue to compete for track capacity in the area of the Twins Ballpark, TCWR has the option of running north on the MNS Sub to CPR's Humboldt Yard to get into Minneapolis and St. Paul. This route presents flexibility that can be taken advantage of in the future.

In addition to the work involved with the construction of the new alignment, due to the removal of the storage track in the Skunk Hollow area, a new siding would need to be built for TCWR west of the Twin Cities area. TCWR has some locations in mind and would choose a location if this alignment was chosen. The cost of this storage track is included in the cost estimate.

Summary

The MNS Sub has fewer constraints than the other alternatives and is therefore a feasible alignment for the long-term permanent location for freight rail operations:

- provision for short-term operations and flexibility for freight rail expansion in the long-term if rerouting freight trains through Humboldt Yard is necessary
- opportunity to mitigate an existing freight rail corridor to minimize noise and vibration impacts to adjacent uses
- previous findings that the MNS line provides the preferred alternative for freight rail
- greater operating costs and increased maintenance for TCWR due to grade and curve
- funding needed for relocation and mitigation

CHASKA CUT-OFF

The Chaska Cut-Off was a route that existed in the past when the line was under ownership of the Milwaukee Road. The alternate route that was looked at started just east of Cologne and followed Hwy 212 for 4 miles before veering southeast and then turning northeast back into town and paralleling where the current Hwy 212 exists in town. It then turned back southeast, crossed the existing Hwy 212 and cut through the neighborhood southeast of downtown Chaska. After passing the Carver County Courthouse and Mini Park it continues southeast before crossing the Minnesota River and paralleling the bluff to the east until it met UP's tracks in Shakopee.

The new Chaska Cut-Off alternative would cross over Hwy 212 and parallel the highway until it was northeast of downtown. Once out of town, it would swing back to the southeast where it would cross the river and then tie into UP's tracks on the east side of the Minnesota River (see Exhibit 7)

There are a number of issues that need to be accounted for in this alternative. Firstly, there is a need for a railroad bridge over the Minnesota River and therefore a new one would need to be constructed. Secondly, between Hwy 212 and the Minnesota River, a number of small bridges and or embankment would need to be constructed through a wetland area. Mn/DOT is trying to eliminate at-grade crossings from its Trunk Highway system, therefore the crossing of Hwy 212 would need to be a grade separation which would impact the downtown Chaska area.

Summary

The Chaska Cut-Off has significant constraints for the long-term permanent location for freight rail due to:

- major operational deficiencies for TCWR
- lack of ability to interchange with BNSF, MNNR, CPR, UP, and have access to the Port of Savage and the Port of Camden in Minneapolis.
- complicated alignment and connections to existing railroads

FORMER RAILROAD ALIGNMENT ALONG HWY 169 IN ST. LOUIS PARK AND HOPKINS

There exists an old railroad bed that is faintly visible on aerial photographs of St. Louis Park and Hopkins along TH 169 (see Exhibit 8). This was an old BNSF track that has been developed into housing and a pedestrian trail. This alignment would require the removal of 11 residences and one apartment building on the former right of way and would require reconfiguring the grade separation at TH 169 and Excelsior Blvd. Additionally it would create additional traffic issues on Excelsior Blvd due to a new at-grade crossing. The TH 5/Minnetonka Blvd bridge over the old right of way has been replaced and no longer has the clearance underneath to accommodate a train. The existing pedestrian trail would need to be relocated if new track is installed.

Summary

The Former Railroad Alignment Along Hwy 169 has significant constraints for the long-term permanent location for freight rail due to:

- the number and type of property acquisitions/displacements required
- potential impacts to the transportation system for both roads and trails
  construction costs of $120 million (2008)

EXHIBIT 7

DeLORME

Street Atlas USA® 2006 Plus

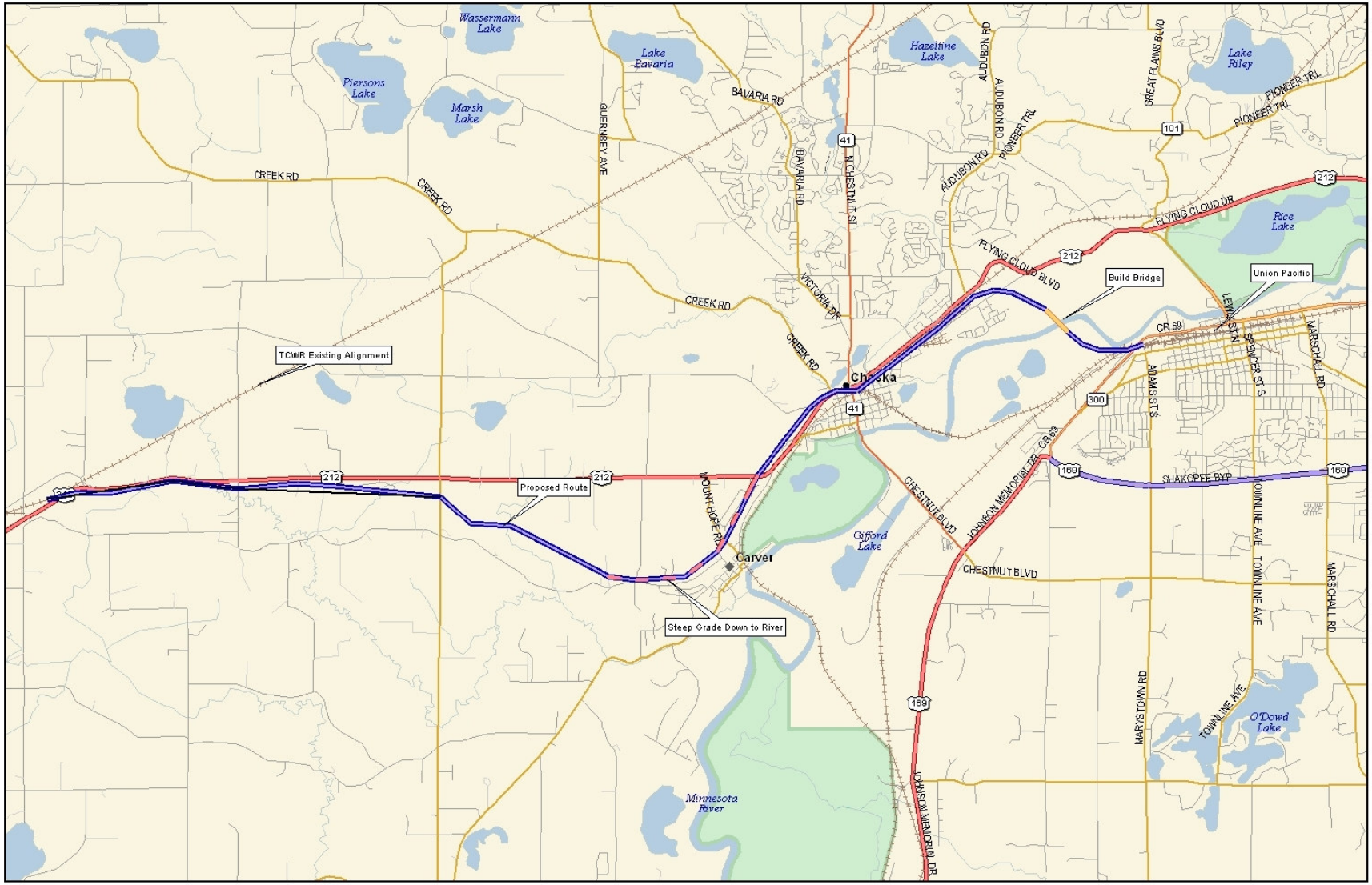
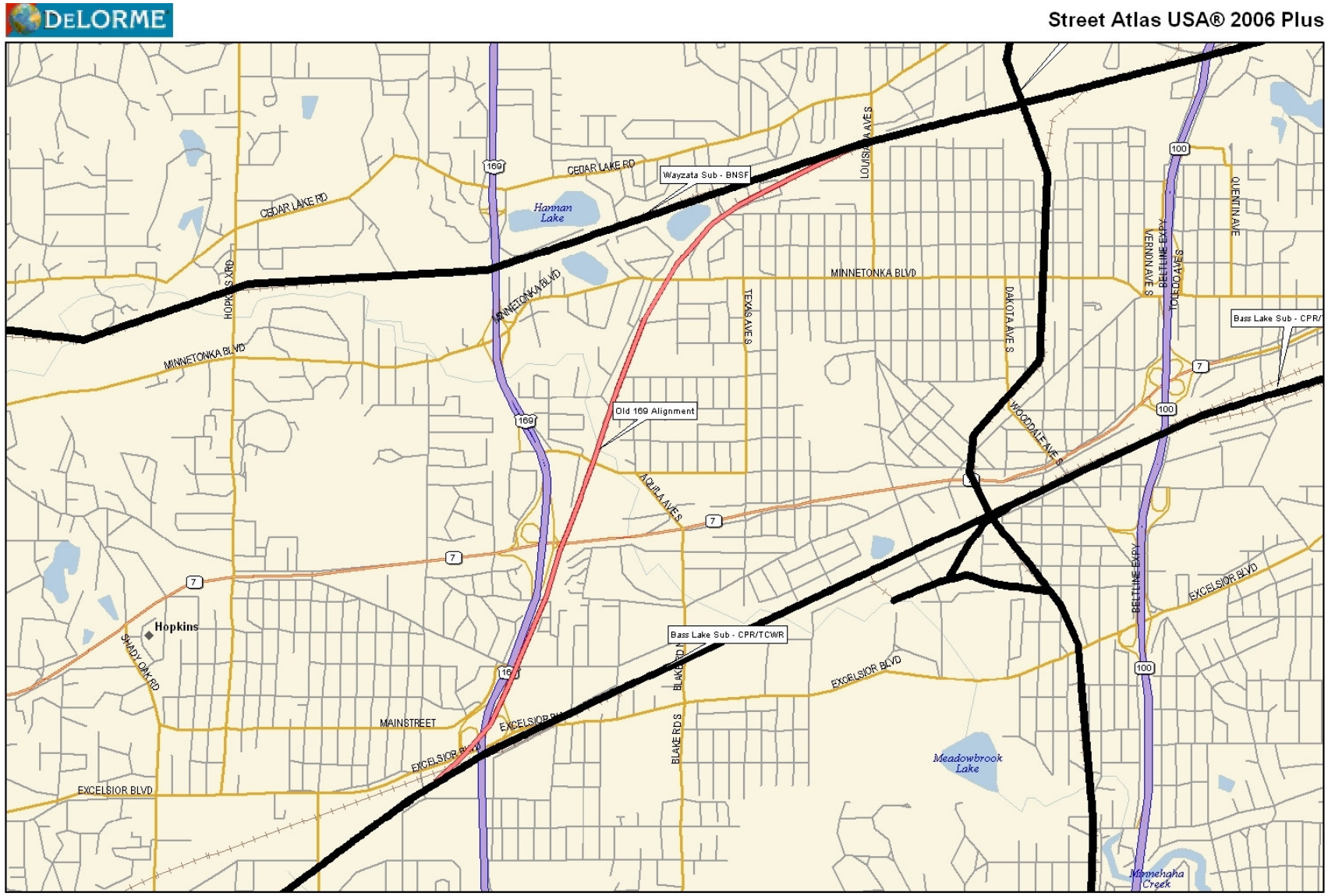


EXHIBIT 8


DeLORME
Street Atlas USA® 2006 Plus
CEDAR LAKE RD
Wayzata Sub - BNSF
Hannan Lake
MINNETONKA BLVD
Old 169 Alignment
Bass Lake Sub - CPR/TCWR
Hopkins
MAINSTREET
EXCELSIOR BLVD
Meadowbrook Lake
Minnehaha Creek
LOUISIANA AVE S
TEXAS AVE S
DAKOTA AVE S
VERNON AVE S
QUENTIN AVE
WOODDALE AVE S
AQUILA AVE S
BELTLINE EXPY
BLAKE RD S
SHADY OAK RD
HOPKINS XRD
169
100
7

WESTERN MN CONNECTION WITH BNSF

TCWR connects with BNSF in Appleton, MN on the west end of its system (see Exhibit 9). It is feasible that TCWR could run all of its rail traffic out the west end of its system and back to the cities via BNSF. However, that severely limits TCWR's competitive advantage of being able to connect with BNSF and CPR essentially holding them to BNSF rates. TCWR was purchased from CPR with the intention of being able to serve the river terminals at Camden and Savage and interchange with CPR, MNNR and UP.

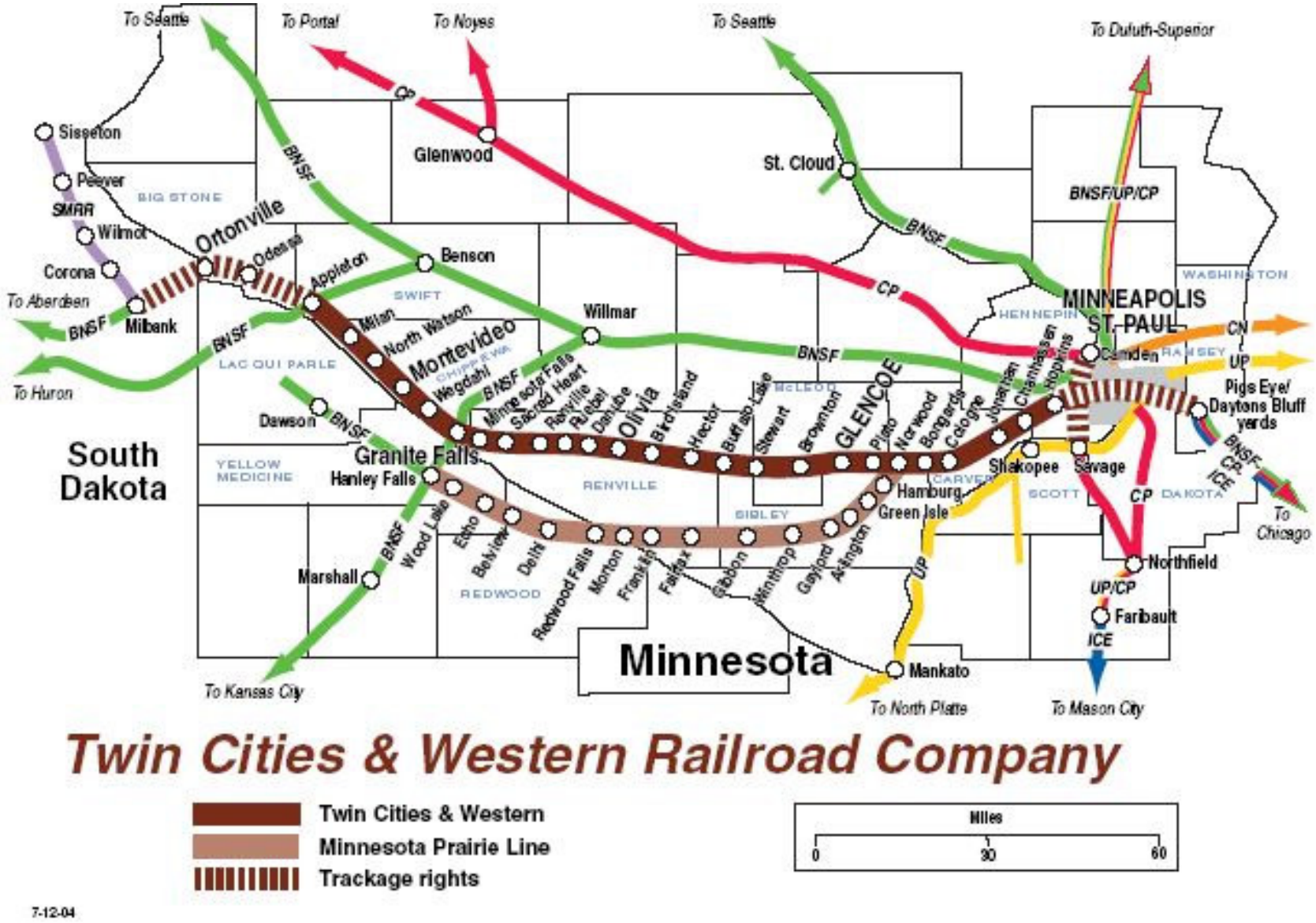
Running all of their traffic to the west also complicates traffic that they currently run on the Minnesota Prairie Line (MPLI) just south of TCWR's mainline in central Minnesota. They would need to run all of their traffic east to Norwood before running the locomotive power around them and pulling them out to the west before heading back east again. This essentially doubles the miles they are hauled on their system and adds additional time getting to the Twin Cities markets. Their short turnaround times of rail cars to the Twin Cities market is a big competitive advantage that would no longer exist for them.

At the moment, the track west of Granite Falls isn't in good enough condition to be able to handle the heavy coal train and ethanol traffic that would need to come in and go out to the west. That stretch of track would have to be upgraded to accommodate the heavier loads it would be hauling.

Summary

The Western MN Connection with BNSF creates operating inefficiencies for TCWR.

EXHIBIT 9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BNSF
Wilmot
Ortonville
Odessa
Appleton
Benson
Corona
To Aberdeen
SWIFT
Willmar
CP
WASHINGTON
HENNEPIN
MINNEAPOLIS
ST. PAUL
BNSF
Milbank
BNSF
Milan
North Watson
Montevideo
Wegdahl
BNSF
LAC QUI PARLE
CHIPPEWA
BNSF
Minnesota Falls
Sacred Heart
Renville
Rubel
Danube
Olivia
Brictsland
Hector
Buffalo Lake
Stewart
Brownton
GLENCOE
Plato
Norwood
Bongards
Cologne
Jonathan
Chanhassen
Hopkins
Camden
RAMSEY
CN
UP
Pigs Eye/
Daytons Bluff
yards
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BNSF
Dawson
BNSF
South
Dakota
YELLOW
MEDICINE
Granite Falls
Hanley Falls
RENVILLE
Shakopee
Savage
CARVER
SCOTT
DAKOTA
CP
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CP
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Chicago
Hamburg
Green Isle
SIBLEY
BNSF
Wood Lake
Echo
Belview
Delhi
Redwood Falls
Morton
Franklin
Fairfax
Gibbon
Winthrop
Gaylord
Arlington
UP
Marshall
REDWOOD
Northfield
UP/CP
Faribault
ICE
Minnesota
Mankato
To Kansas City
To North Platte
To Mason City
Twin Cities & Western Railroad Company
Twin Cities & Western
Minnesota Prairie Line
Trackage rights
Miles
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30
60
7-12-04

SUMMARY OF POTENTIAL ALIGNMENTS

KENILWORTH CORRIDOR

Benefits

- Current alignment used by freight rail today

Considerations

- Alignment was intended to be temporary, past its planned lifespan
- Potential future transit use of the corridor
- Requires construction of a freight rail bridge over Hwy 100 in St. Louis Park, increasing costs and creating environmental issues for that project
- Compounds future congestion issues in the Target Field area
- Limits freight rail expansion through the Minneapolis Transportation Interchange area

MIDTOWN CORRIDOR

Benefits

- Former freight rail alignment used prior to Hwy 55/Hiawatha Avenue reconstruction

Considerations

- Significant construction impacts including reconstruction of the new Hiawatha LRT bridge, construction of a new freight rail bridge, lowering of Hwy 55/Hiawatha Avenue and reconstruction of the new Sabo pedestrian bridge north of 28th Street
- Construction is highly complex and would require numerous permits from federal and state agencies as well as agreements from the private freight rail companies

MNS SUB ALIGNMENT through St. Louis Park

Benefits

- Was the planned permanent alignment for freight rail when the Midtown Corridor connection was severed
- Would allow TCWR the same connections they have today
- Track upgrades would eliminate wheel noise
- Would eliminate the need for blocking operations for the southbound move
- Allows for future flexibility to make northern connections and bypass the Minneapolis Transportation Interchange should that area become too congested
- St. Louis Park received Environmental Response funds to clean up the National Lead/Golden Auto site in order to reserve property for the freight connection
- Removes at-grade freight rail crossing at Wooddale Avenue, Beltline Boulevard, and Cedar Lake Parkway

Considerations

- Commercial/Industrial property in St. Louis Park would be needed to build connection
- Requires the closure of 29th Street railroad crossing
- Would require a new siding to be built for TCWR west of the Twin Cities
- Retains future congestion issues in the Target Field area while on BNSF's Wayzata Sub
- Limits freight rail expansion through the Minneapolis Transportation Interchange area

CHASKA CUT-OFF

Benefits

- Takes rail traffic out of Minneapolis Transportation Interchange area

Considerations

- Requires construction of a railroad bridge over the Minnesota River and a number of small bridges or embankment through a wetland area.
- Does not allow access to the Port of Camden or the ability to interchange with lines other than UP
- TCWR is unwilling to accept the major operating deficiencies that this route would create.
- Requires property acquisitions/displacements in Chaska.
- Requires a new rail bridge over the river

FORMER RAILROAD ALIGNMENT along Hwy 169

Benefits

- Relatively flat grade through area

Considerations

- Requires the removal of new housing developments and a pedestrian trail that have replaced the track.
- Requires reconfiguring the grade separation at Hwy 169 and Excelsior Blvd., creating a new at-grade crossing at Excelsior Blvd.
- Requires replacing the Hwy 5/Minnetonka Blvd. bridge to allow clearance underneath to accommodate trains.

WESTERN MN CONNECTION with BNSF

Benefits

- Takes rail traffic out of Minneapolis Transportation Interchange area

Considerations

- Limits TCWR's competitive advantage of being able to connect with BNSF and CPR
- Complicates traffic that TCWR currently runs on the Minnesota Prairie Line, doubling the miles that are hauled on the system and adding additional time to get to Twin Cities Markets
- Requires upgraded track west of Granite Falls

COST ESTIMATES

The costs estimates associated with the alternatives can be seen in Exhibit 10. These costs are planning level estimates only. The Kenilworth Corridor and MNS Sub routes used in the St. Louis Park Railroad Study served as the basis for the cost estimates. Cost estimates for the Midtown Corridor, Chaska Cut-Off, Old Railroad Alignment along Hwy 169 and the Western Connection were developed by TKDA as part of this study.

The rehab costs associated with Kenilworth Corridor include upgrading it to a condition in which it can be considered a permanent home for TCWR and CPR, including new track and structures from Louisiana Avenue in St. Louis Park to Cedar Lake Junction. The TH 100 freight railroad bridge is also included in the costs of the Kenilworth Corridor option. The estimated cost was provided by Mn/DOT and is said to include the bridge and the additional costs for the TH 100 project that are associated with constructing the freight railroad bridge. These are Mn/DOT's costs, but are included due to being an additional alignment cost. If the MNS Sub alignment is chosen, Mn/DOT has committed to use funds intended for the freight rail bridge for rail relocation and mitigation in St. Louis Park.

The MNS Corridor's estimate was meant to provide an estimate of what was needed to perform only the construction as it was discussed with TCWR. Costs associated with noise or other mitigation were not included in the estimates, aside from the 30% contingency.

EXHIBIT 10

	Alignment	Cost*
1	Kenilworth Corridor - Existing Alignment	$20,000,000 - $120,000,000^
2	Midtown Corridor	$136,000,000
3	MNS Sub Alignment through St. Louis Park	$48,000,000
4	Chaska Cut-Off	$105,000,000
5	Old Railroad Alignment along Hwy 169	$120,000,000
6	Western MN Connection with BNSF	$60,000,000

*costs include 30% contingency to account for unknown factors and mitigation of issues
^$120,000,000 includes property takings associated with a shared Kenilworth Corridor according to analysis performed by HDR and SWLRT Group.

NEXT STEPS

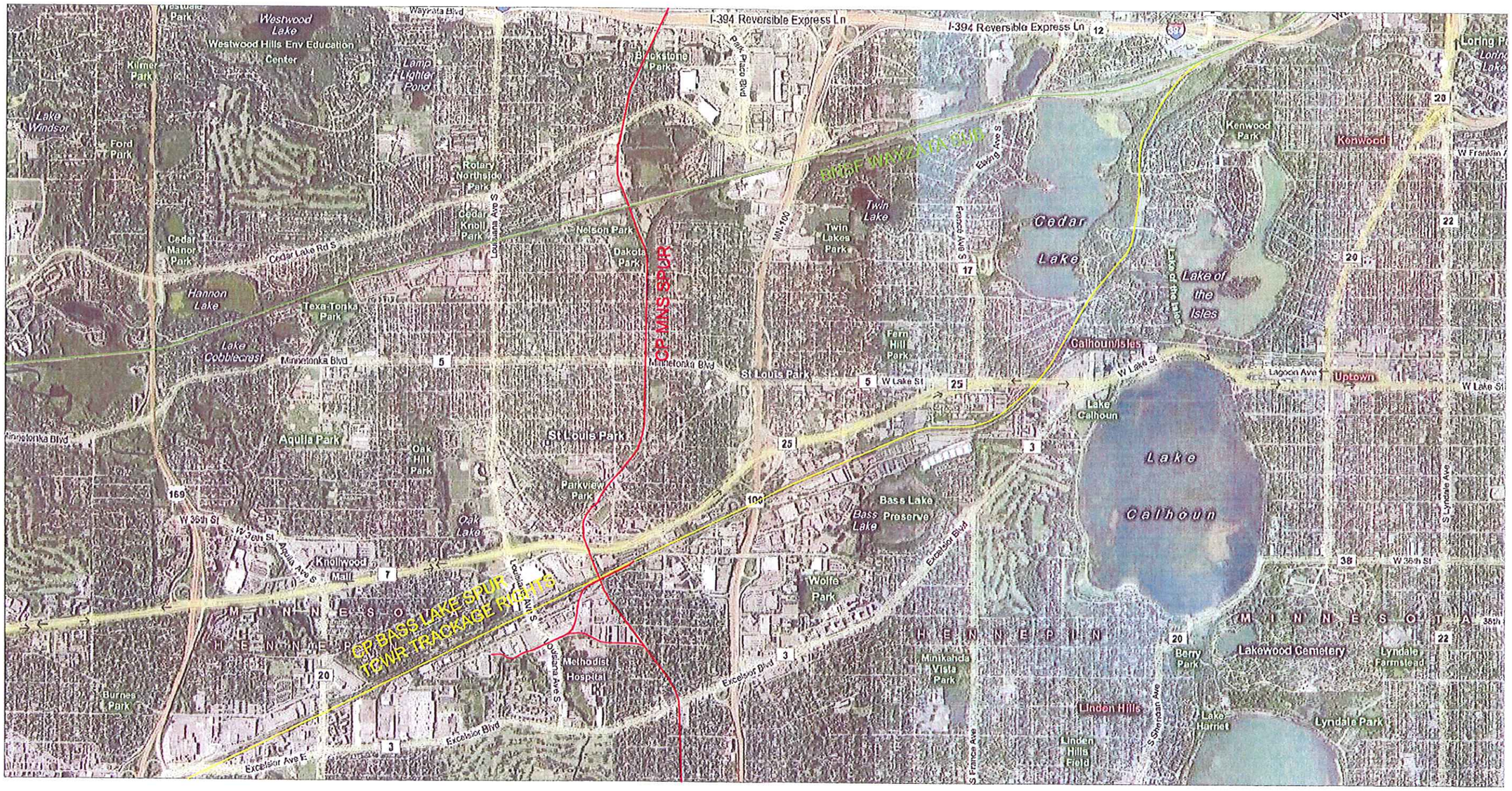
The discussion group will forward this report to Mn/DOT, with a recommendation for a preferred freight rail alignment, for inclusion in the Statewide Freight Rail Study Plan. Additional engineering work and public outreach will need to be done on the preferred alignment to determine impacts in need of mitigation and to identify mitigation options. Hennepin County will work with the discussion group to identify funding options for further study of the preferred alignment and for future construction and mitigation costs.

Going forward, in early 2010, the preferred alignment will be chosen and an environmental analysis and preliminary engineering will be performed. Once public involvement and impact mitigation is compete, final design can commence with construction to begin shortly thereafter.

RECOMMENDATION

The Hennepin County Staff would like to recommend to the Hennepin County Regional Railroad Authority to conduct the environmental and preliminary engineering analysis for the preferred option along the MNS Sub through St. Louis Park.

7/27/2009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Lamp Lighter Pond
Kilmer Park
Lake Windsor
Ford Park
Wayzata Blvd
I-394 Reversible Express Ln
Brookside Park
Rotary Northside Park
Cedar Knoll Park
Louisiana Ave S
Nelson Park
Dakota Park
BNSF WAYZATA SUB
CP MN SUB
Twin Lake
Twin Lakes Park
MN 100
Elaine Ave S
France Ave S
Cedar Lake
Lake of the Isles
Kenwood Park
Kenwood
Loring Park
Cedar Manor Park
Cedar Lake Rd S
Hannon Lake
Texa-Tonka Park
Lake Cobblecrest
Minnetonka Blvd
Fern Hill Park
St Louis Park
Calhoun Isles
W Lake St
Lagoon Ave
Uptown
Lake Calhoun
Aquila Park
Oak Hill Park
Parkview Park
Oak Lake
W 36th St
Knollwood Mall
Bass Lake
Bass Lake Preserve
Excelsior Blvd
Wolfe Park
CP BASS LAKE SPUR
TCWR TRACKAGE RIGHTS
Methodist Hospital
Minikahda Vista Park
Berry Park
Lakewood Cemetery
Lyndale Farmstead
Burnes Park
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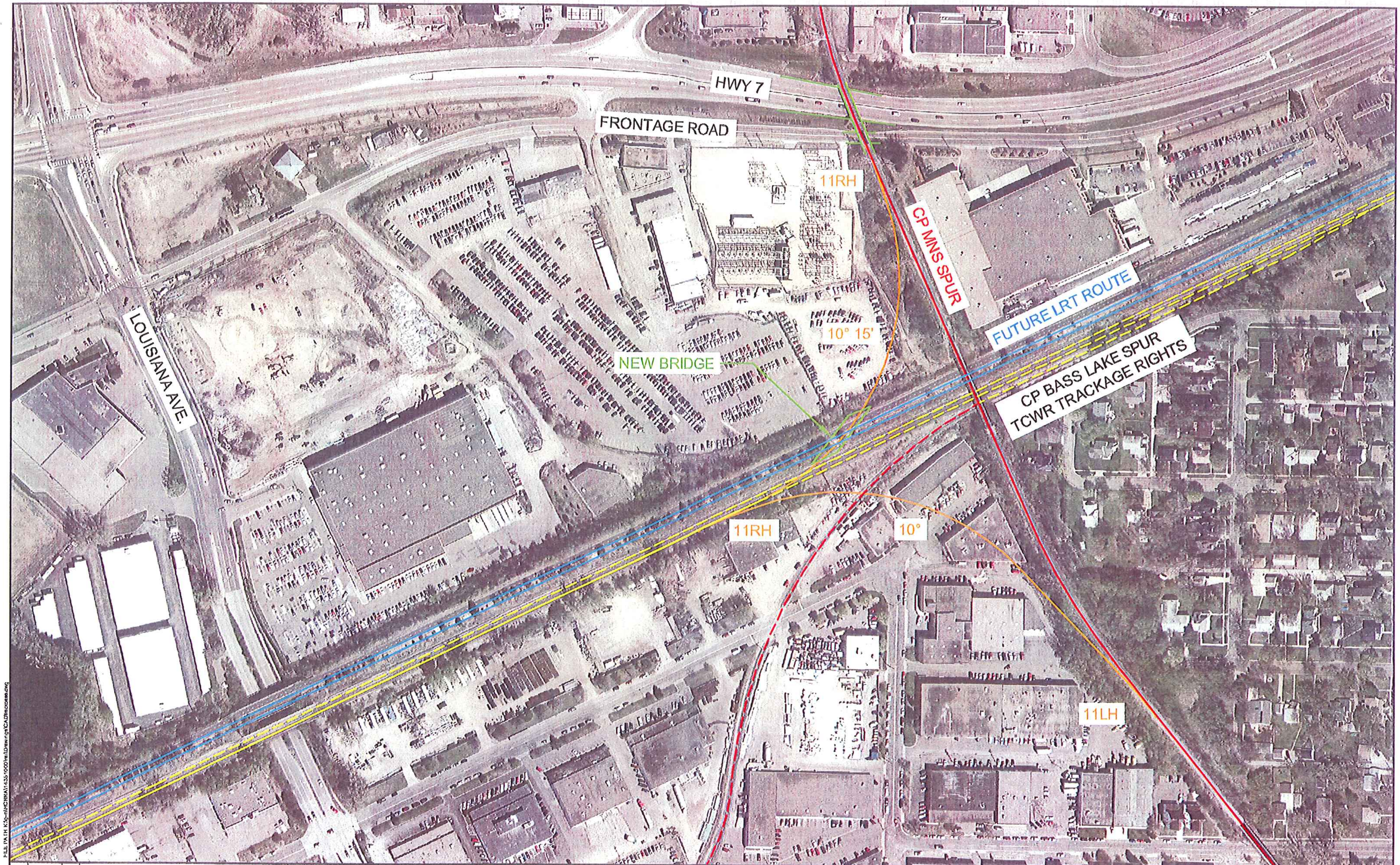
HENNEPIN



NO.	DATE	BY	DESCRIPTION OF REVISIONS

TKDA
ENGINEERS · ARCHITECTS · PLANNERS

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HENNEPIN COUNTY REGIONAL RAILROAD AUTHORITY
HENNEPIN COUNTY FREIGHT RAIL STUDY
ST. LOUIS PARK, MN

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TCWR - CP CONNECTION

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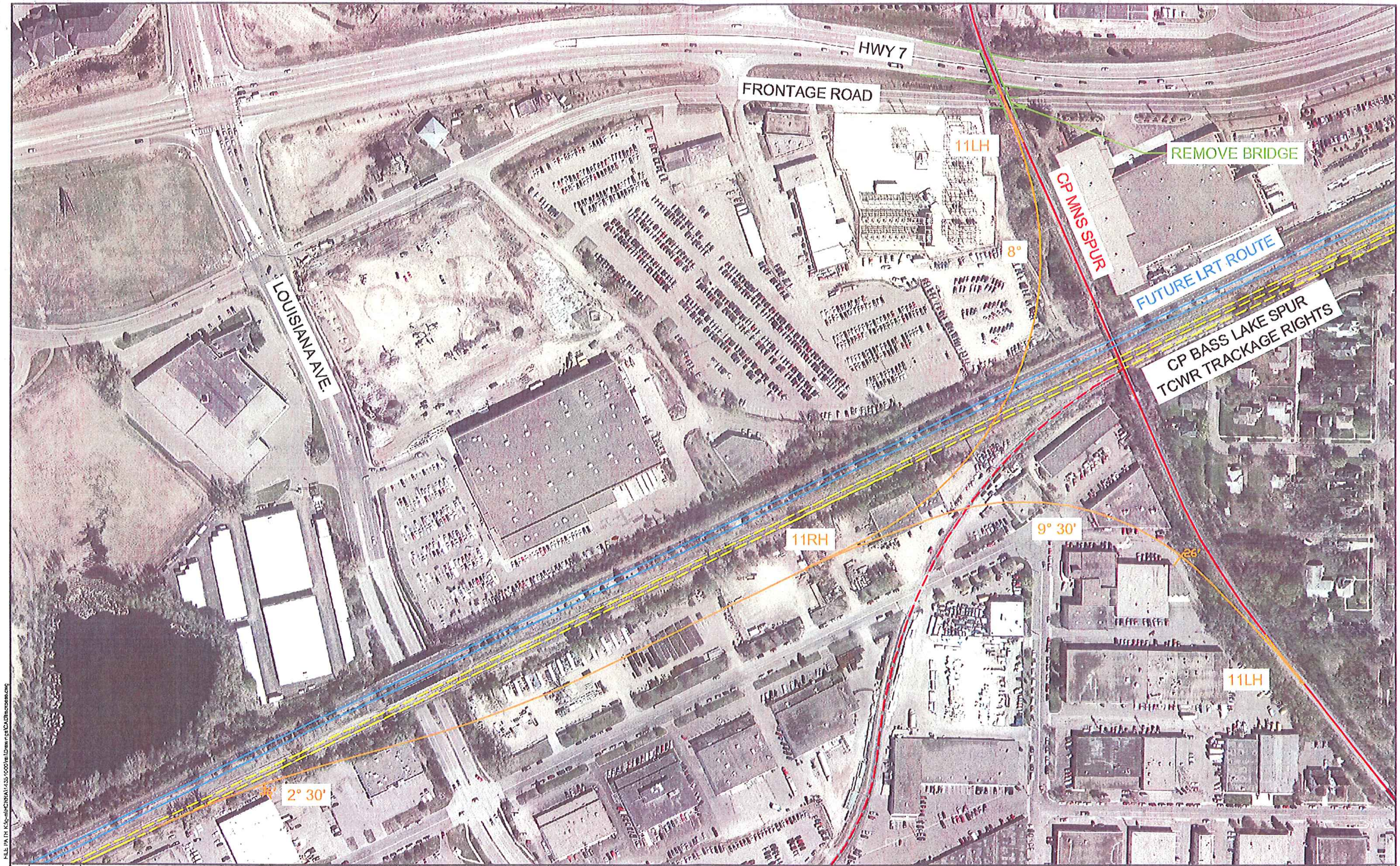

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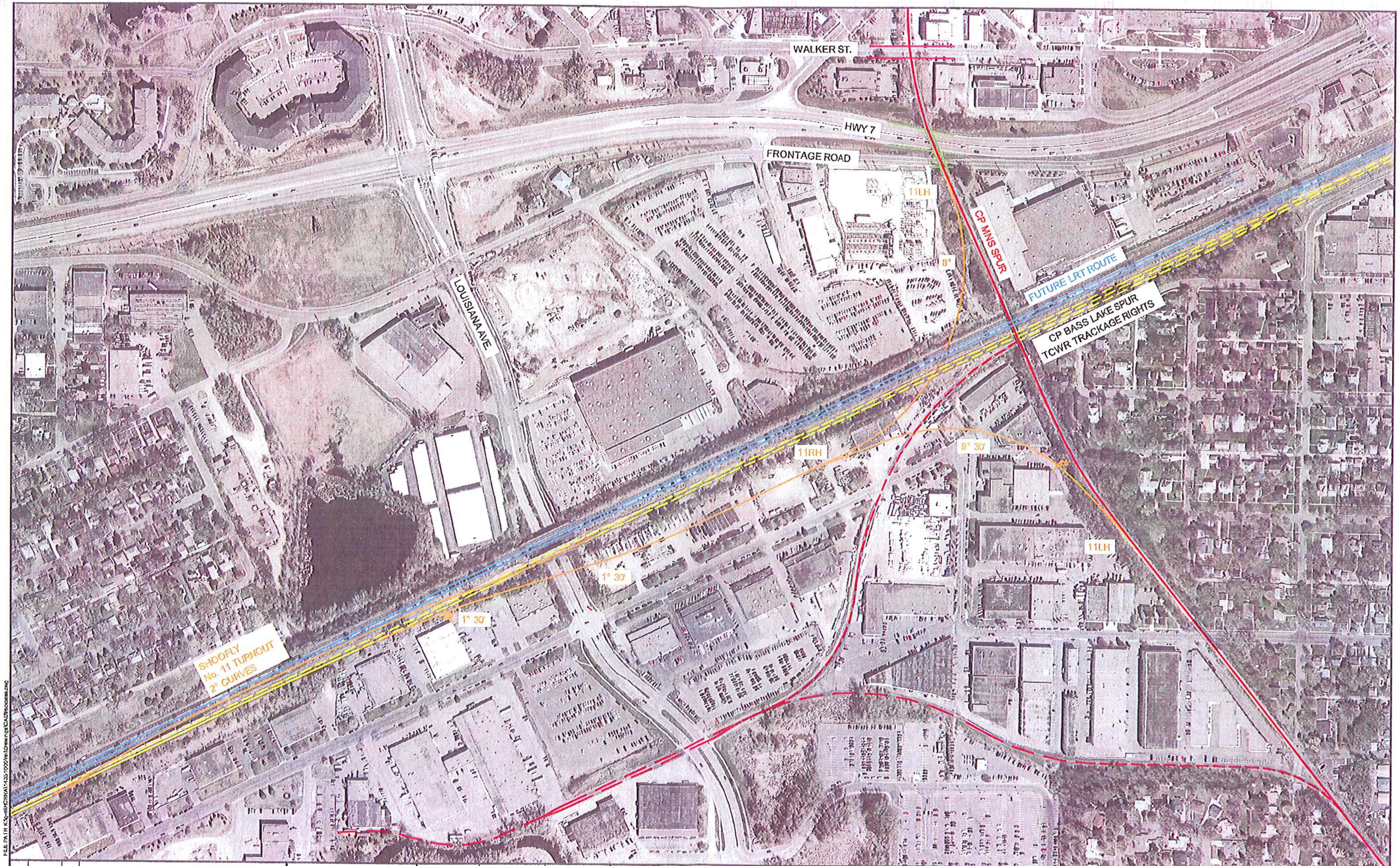

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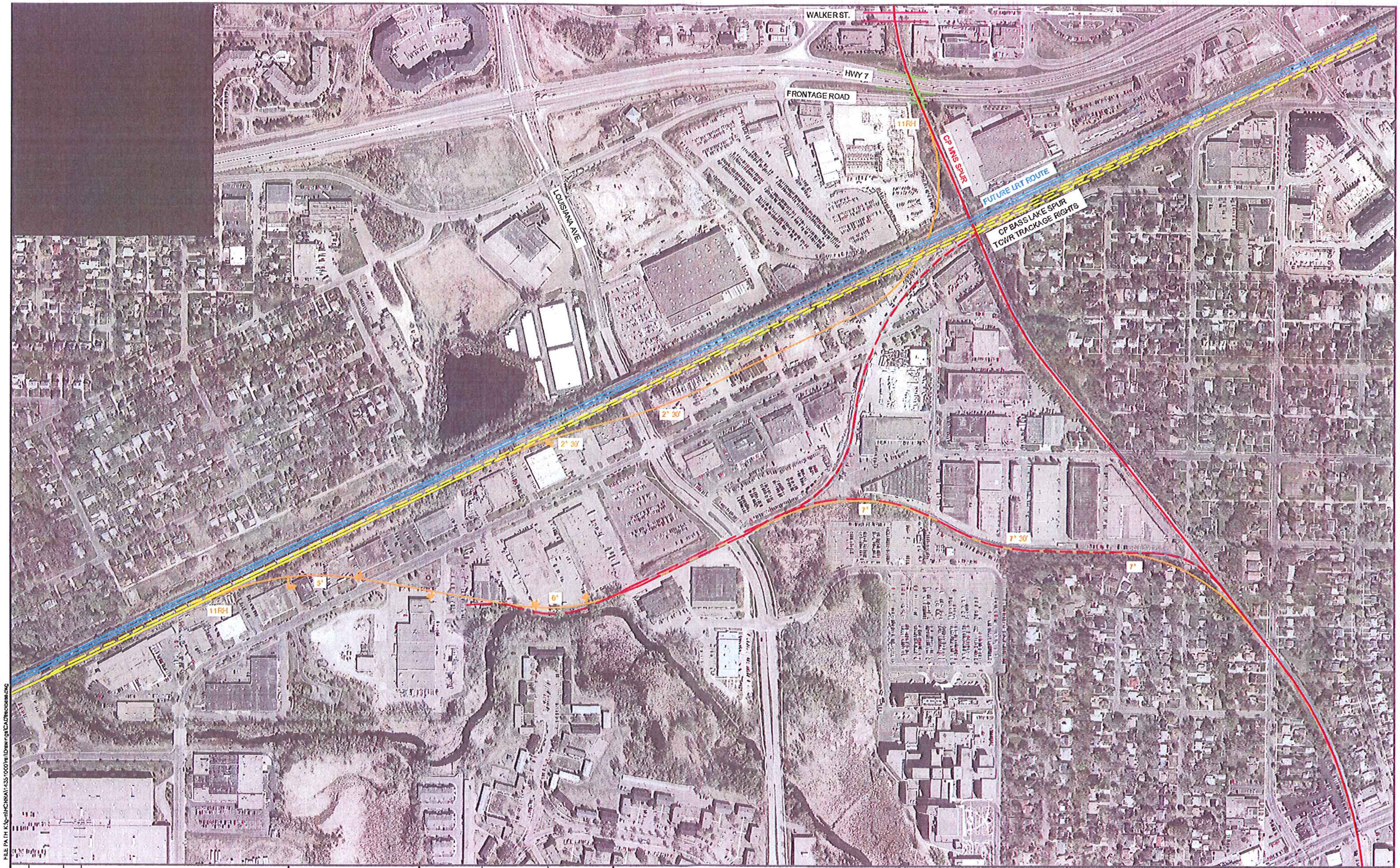

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CONCEPTUAL LAYOUT
TCWR - CP CONNECTION

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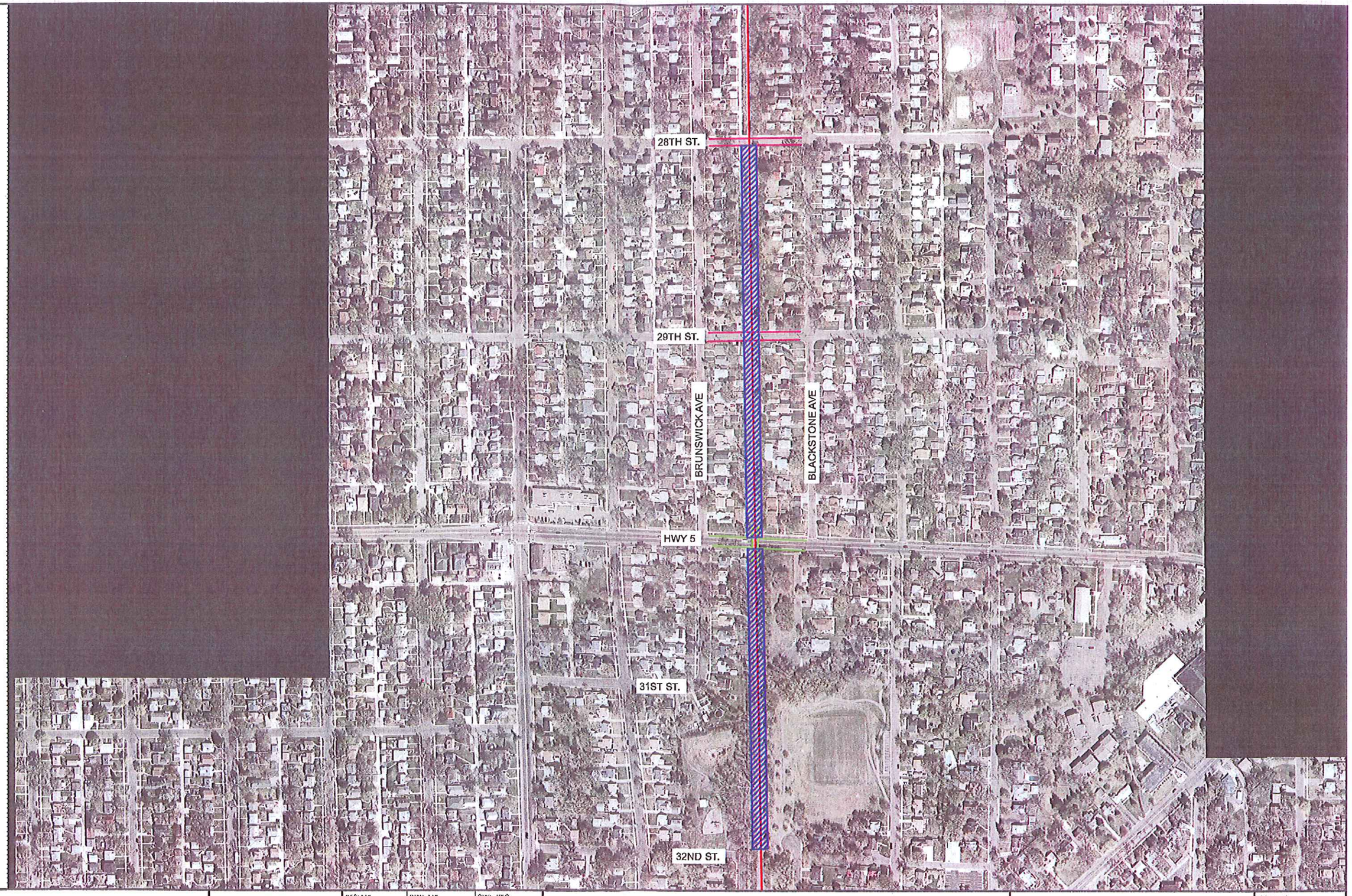

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HENNEPIN COUNTY REGIONAL RAILROAD AUTHORITY
HENNEPIN COUNTY FREIGHT RAIL STUDY
ST. LOUIS PARK, MN

CONCEPTUAL LAYOUT
MTKA BLVD BRIDGE

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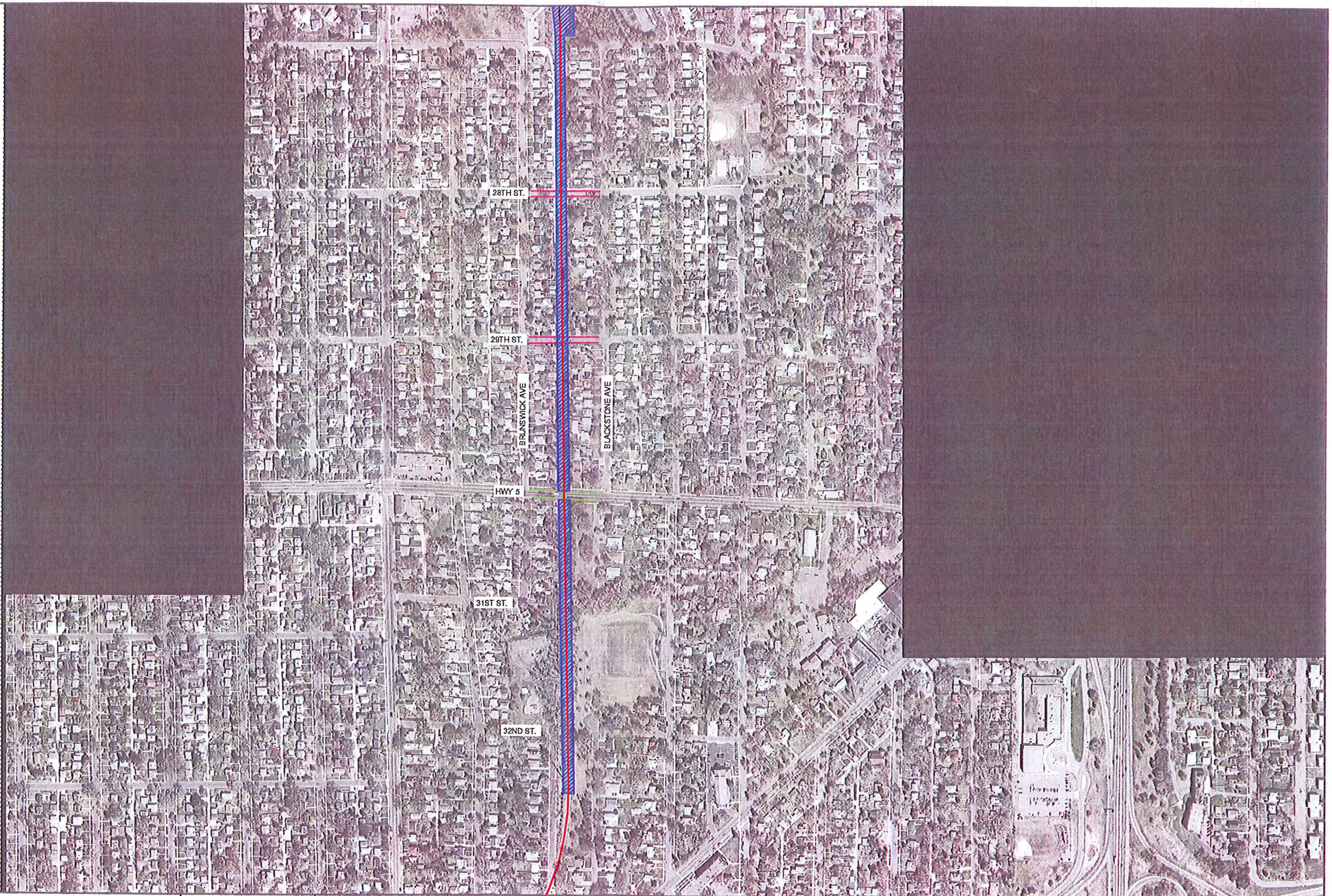

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TKDA
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HENNEPIN COUNTY REGIONAL RAILROAD AUTHORITY
HENNEPIN COUNTY FREIGHT RAIL STUDY
ST. LOUIS PARK, MN

CONCEPTUAL LAYOUT
MTKA BLVD BRIDGE

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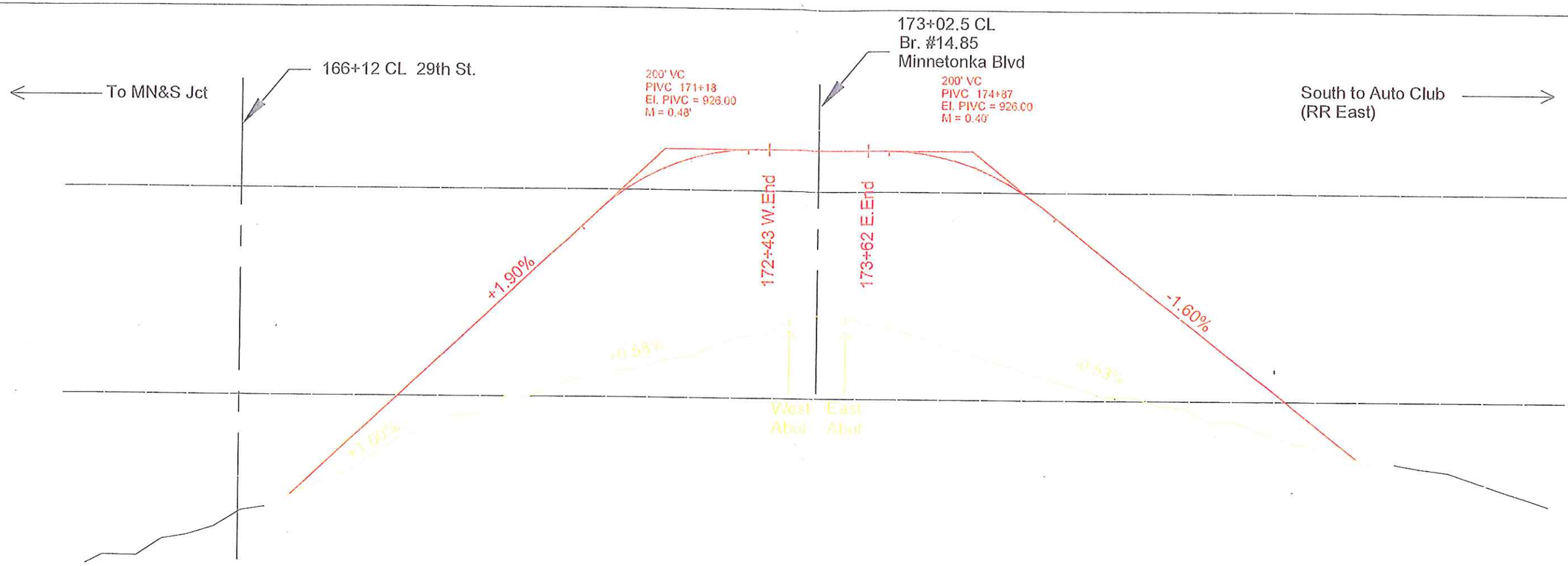

Red - Proposed Top/Tie

Yellow - Existing Top/Tie

Information from survey done by Sunde Surveying, Spring, 2007

TOP/TIE PROFILE

BRIDGE MN&S 14.85
St. Louis Park, MN

Jan. 30, 2008
July 7, 2008 revise east grade

RTS

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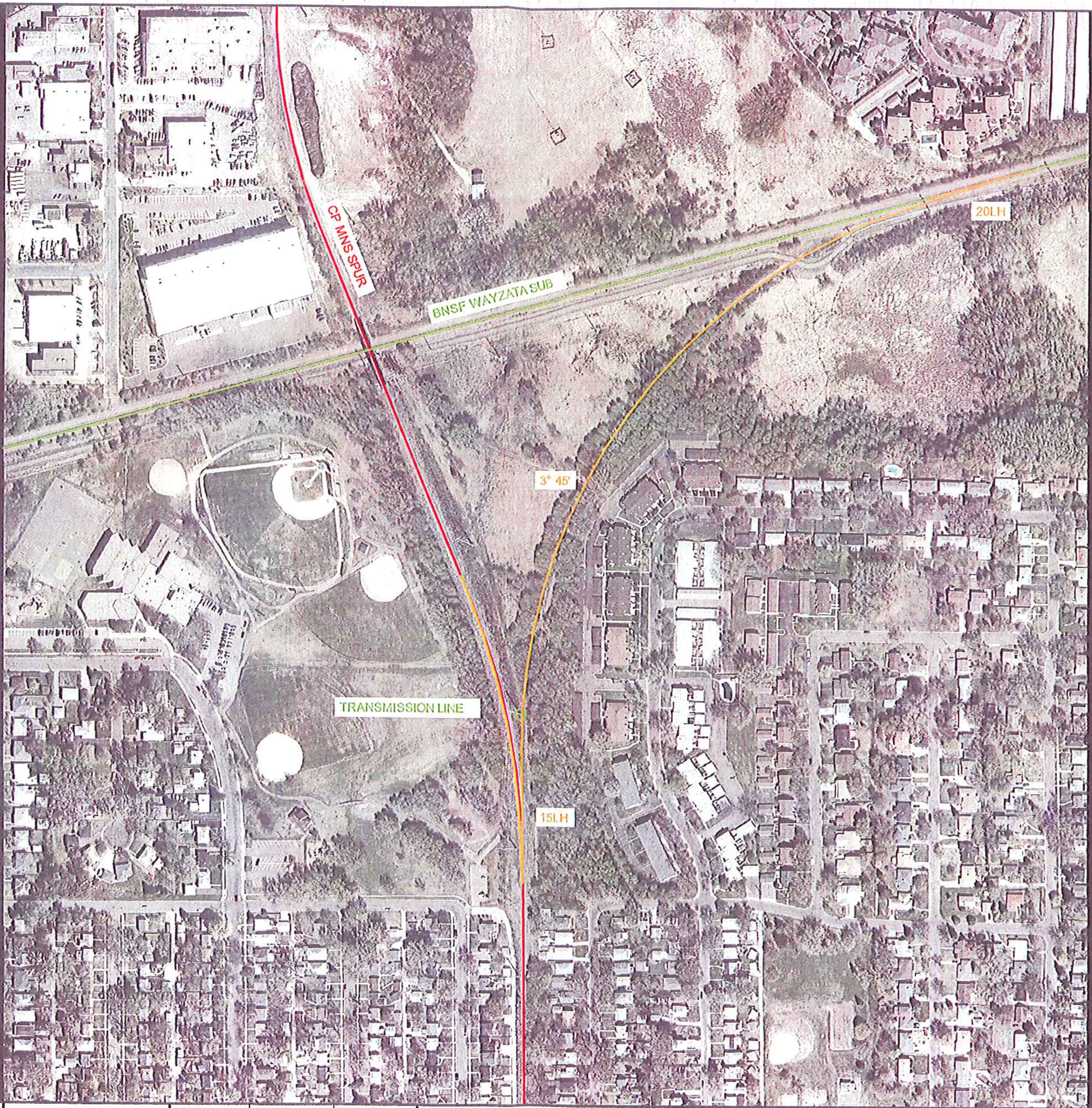

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CONCEPTUAL LAYOUT
BNSF - CP CONNECTION

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