

**Date:** May 13, 2013

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## Technical Memorandum

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**To:** Ted Matkom, Wisconsin Market President  
Gorman & Company, Inc.  
200 North Main Street  
Oregon, Wisconsin 53575

**From:** Michael May, P.E., PTOE

**cc List:**

**Subject:** Century City Training Center – Traffic Impacts  
3100 West Capitol Drive  
Milwaukee, Wisconsin

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### PART A – INTRODUCTION

The Century City Training Center, located at 3100 West Capitol Drive in the Garden Homes Neighborhood of the City of Milwaukee, is proposed to be a mixed-use project with residential, charter high school, and training center elements. A map of the study area is shown in [Exhibit 1](#). The Century City Training Center conceptual site plan is shown in [Exhibit 2](#).

TADI was retained by Gorman & Company, Inc. to address a number of traffic-related questions raised by the City of Milwaukee pertaining to the operations of the proposed Century City Training Center and other surrounding uses. Issues to be addressed include:

- Internal traffic operations/recommendations for the Century City Training Center, specifically operations/recommendations to accommodate the proposed 100-student Nova Tech Charter School and 10-student/session training center;
- Traffic operations/recommendations for the off-site Hope School currently located east of the proposed Century City Training Center; and
- Traffic operations/recommendations for the SEC warehousing facility located east of the proposed Century City Training Center and north of the off-site Hope School.

This technical memorandum documents the procedures, recommendations and conclusions of the traffic study to aid Gorman & Company, Inc. and the City of Milwaukee in providing safe and efficient operations in and around the study area.

## **PART B – STUDY AREA**

### **B1. Description of Study Area**

The study area under investigation includes 31<sup>st</sup> Street north of Capitol Drive and the east-west alley that runs between the off-site Hope School and SEC warehousing facility. An aerial of the study area is shown in [Exhibit 3](#). Note that the latest available aerials do not show the completion of the off-site Hope School, but do show the general off-site Hope School building location. A copy of the off-site Hope School plan was provided to TADI by the City of Milwaukee and is shown in [Exhibit 4](#).

### **B2. Study Area Roadway Description**

31<sup>st</sup> Street is a two-lane undivided street with auxiliary/parking lanes and a curb-to-curb street width of approximately 44- to 46-feet to the north of Capitol Drive. A speed limit is not currently posted. The Wisconsin Department of Transportation (WisDOT) documented a Year 2007 annual average daily traffic (AADT) volume on 31<sup>st</sup> Street of approximately 3,500 vehicles per day (vpd). 31<sup>st</sup> Street curves towards the east to the north of the study area and becomes Hope Avenue. Milwaukee DPW crews utilize 31<sup>st</sup> Street frequently based on site observations.

An east-west alley runs parallel to Capitol Drive between 31<sup>st</sup> Street on the west and 29<sup>th</sup> Street on the east. The alley is approximately 30-feet wide and services the off-site Hope School and SEC warehouse facility, as well as other users to the east.

### **B3. Multi-Modal Facilities**

Sidewalk is located along the entire east side of 31<sup>st</sup> Street, as well as along the west side of 31<sup>st</sup> Street for the first 230-feet north of Capitol Drive. Dedicated bicycle facilities are not marked or signed within the study area.

Milwaukee County Transit System (MCTS) provides a number of bus transit routes in close proximity to the proposed Century City Training Center development, including:

- Red Line, Capitol Drive (runs east-west along Capitol Drive);
- Route 62, Capitol Drive (runs east-west along Capitol Drive);
- Route 80, 6<sup>th</sup> Street (runs northwest/southeast along Hopkins Street);
- Route 27, 27<sup>th</sup> Street (runs north/south along 27<sup>th</sup> Street); and
- Route 35, 35<sup>th</sup> Street (runs north/south along 35<sup>th</sup> Street).

### **B4. On-Street Parking Restrictions**

Parking restrictions are posted along 31<sup>st</sup> Street as shown superimposed onto the Century City Training Center conceptual site plan in [Exhibit 5](#).

## **PART C – EXISTING TRAFFIC OPERATIONS**

### **C1. Data Collection**

TADI performed site observations along 31<sup>st</sup> Street and along the alley on Thursday, May 9<sup>th</sup> from 7:00am to 9:00am and from 2:40pm to 3:45pm. These times were chosen to coincide with the off-site Hope School start and end times of 7:40am and 3:15pm to capture peak school arrival and dismissal conditions. The weather was sunny and approximately 55-degF during the morning arrival observation, and light drizzle and approximately 50-degF during the afternoon

dismissal observation. The observations were made from an existing driveway located opposite the alley on the west side of the 31<sup>st</sup> Street. This location was chosen due to good visual of the surrounding roadway and building operations.

## **C2. Observations of Existing School Arrival Period**

The following is a chronological list of observations made during the off-site Hope School arrival time period:

- 7:00 – Arrived at site. No parking observed along 31<sup>st</sup> Street or the alley. No activity observed to/from the off-site Hope School or SEC warehouse facility.
- 7:41 – Bus #1 arrives from the north, parks in alley along north side of Hope School.
- 7:42 – Student drop-off in alley.
- 7:43 – Student drop-off in alley.
- 7:44 – Student drop-off in alley.
- 7:45 – Bus #2 arrives from the south, parks in alley along north side of Hope School.
- 7:46 – Two vehicles with student drop-offs in alley.
- 7:47 – Bus #3 arrives from the north, parks in alley along north side of Hope School. Bus #1 leaves after Bus #3 arrives. Student drop-off in alley.
- 7:50 – Student drop-off in alley. Bus #2 leaves.
- 7:53 – Student drop-off in alley.
- 7:54 – Student drop-off in alley.
- 7:58 – Student drop-off in alley. Employee/patron of SEC building parks along east side of 31<sup>st</sup> Street in front of yellow building.
- 8:02 – Bus #3 leaves.
- 7:22 – Employee/patron of SEC building parks along east side of 31<sup>st</sup> Street in front of yellow building.
- 9:00 – Employees/patrons of SEC building (see 7:58 and 8:22) remain parked along east side of 31<sup>st</sup> Street in front of yellow building (see [Exhibit 6](#)).

Additionally, the following observations were made:

- A Hope School staff member meets all children for every drop-off at the door.
- The turn-over for student drop-off was approximately 2-minutes from parent arrival to departure.
- “Double parking” in the alley occurred once (see [Exhibit 6](#)).
- 31<sup>st</sup> Street was not used for parking or standing.
- The gate to the parking lot on the west side of Hope School was not opened for use.

- Hope School-related drop-off traffic queued up to, but not into, 31<sup>st</sup> Street during the school arrival period (see [Exhibit 6](#)).
- All student drop-off trips came from 31<sup>st</sup> Street. None came from 29<sup>th</sup> Street.
- The SEC warehouse facility has a gated storage area abutting the alley and sidewalk along 31<sup>st</sup> Street. Westbound motorists in the alley had difficulty seeing around the sight obstruction (see [Exhibit 6](#)).
- No dock use at the SEC warehouse facility.
- There is a frequent volume of Milwaukee DPW traffic along 31<sup>st</sup> Street.

### **C3. Observations of Existing School Departure Period**

The following is a chronological list of observations made during the off-site Hope School departure time period:

- 2:40 – Arrived at site. Bus #1 parked in alley along north side of Hope School. Five employees/patrons of SEC building are parked along east side of 31<sup>st</sup> Street in front of the yellow building. Tractor-trailer was parked wrong-way on the east side of 31<sup>st</sup> Street between the alley and SEC building dock, and was loading/unloading occurring from street, (see [Exhibit 7](#)).
- 2:42 – Tractor-trailer moved to dock area for a few minutes before departing towards to the north.
- 2:43 – Bus #2 arrives from the north, parks in alley along north side of Hope School.
- 2:45 – Vehicle arrives for pick-up, parks in alley along north side of Hope School.
- 2:46 – Vehicle arrives for pick-up, parks in alley along north side of Hope School.
- 2:51 – Bus #3 arrives from the south, parks in alley along north side of Hope School.
- 2:52 – Vehicle arrives for pick-up, parks in alley along north side of Hope School. Vehicles standing/parked now spill back to, but not into, 31<sup>st</sup> Street.
- 2:53 – Vehicle arrives for pick-up, parks on 31<sup>st</sup> Street behind previous vehicle. One vehicle now illegally standing/parked on 31<sup>st</sup> Street (in front of fire hydrant).
- 3:02 – Two vehicles arrive for pick-up, park on 31<sup>st</sup> Street behind previous vehicle. Three vehicles now illegally standing/parked on 31<sup>st</sup> Street.
- 3:04 – First students observed exiting school and entering Bus #3
- 3:09 – Employee/patron of SEC building parks along east side of 31<sup>st</sup> Street in front of yellow building. Six employees/patrons of SEC building are now parked along east side of 31<sup>st</sup> Street in front of yellow building.
- 3:10 – Vehicle arrives for pick-up, parks on 31<sup>st</sup> Street behind previous vehicle. Four vehicles now illegally standing/parked on 31<sup>st</sup> Street.

- 3:13 – Vehicle arrives for pick-up, parks on 31<sup>st</sup> Street behind previous vehicle. Five vehicles now illegally standing/parked on 31<sup>st</sup> Street.
- 3:14 – Two vehicles arrive for pick-up, park on 31<sup>st</sup> Street behind previous vehicle. Seven vehicles now illegally standing/parked on 31<sup>st</sup> Street (see [Exhibit 7](#)).
- 3:15 – Gate to the parking lot on the west side of Hope School opened for student pick-up. Vehicles (except buses) move into the parking lot in a counterclockwise line. Approximately 7- to 8-vehicles can fit in lot at one time from the side door of the school to the gate. One vehicle now illegally standing/parked on 31<sup>st</sup> Street (in front of fire hydrant).
- 3:18 – No more vehicles illegally standing/parked on 31<sup>st</sup> Street.
- 3:20 – No more vehicles in alley, vehicles continue picking-up students in west parking lot.
- 3:21 – Two vehicles arrive for pick-up and are contained within pick-up area in west parking lot.
- 3:24 – West parking lot is clear.
- 3:25 – Two vehicles arrive for pick-up and are contained within pick-up area in west parking lot. One parent arrives by foot from the north to pick-up student at gate to west parking lot (see [Exhibit 7](#)).
- 3:26 – Bus #1 leaves. West parking lot is clear.
- 3:27 – Two vehicles arrive for pick-up and are contained within pick-up area in west parking lot. Bus #2 leaves. West parking lot is clear.
- 3:29 – Two vehicles arrive for pick-up and are contained within pick-up area in west parking lot. Bus #3 leaves. West parking lot is clear.
- 3:31 – West parking lot is clear. Gate to the parking lot on the west side of Hope School closed.
- 3:45 – Six employees/patrons of SEC building remain parked along east side of 31<sup>st</sup> Street in front of yellow building (see [Exhibit 7](#)).

Additionally, the following observations were made:

- A Hope School staff member leads all children from school, whether to bus or waiting parent.
- No “double parking” observed.
- All student pick-up trips came from 31<sup>st</sup> Street. None came from 29<sup>th</sup> Street.
- No alley dock use by SEC warehouse facility.
- A Milwaukee DPW dump truck was observed parking on the west side of 31<sup>st</sup> Street between Capitol Drive and 31<sup>st</sup> Street from 2:58 to 3:07pm.

## **PART D – CENTURY CITY TRAINING CENTER**

### **D1. Proposed Development**

The Century City Training Center conceptual site plan is shown in [Exhibit 2](#). The proposed development is proposed to be composed of the following uses:

- Affordable Housing – 43 units;
- Nova Tech Charter School – 100 high school students & 10 faculty/staff; and
- Training Center – 10 students & 2 faculty/staff per session.

Parking for the affordable housing units will be provided via 40 underground stalls with access to 31<sup>st</sup> Street opposite the alley. Parking for the charter school, training center and visitors will be provided via 90 surface stalls with two access points to 31<sup>st</sup> Street – one opposite the SEC warehouse facility dock and one at the north end of the site.

### **D2. Surface Parking Lot Demands**

Residents of the affordable housing component of the Century City Training Center are expected to park underground due to available underground parking. Approximately 90 surface parking stalls are available for students with access to personal vehicles, the faculty/staff of the charter school and training center, and visitors.

Approximately 65-percent of the students to/from the high school and training facility ( $110 \times 65\% = 72$  students) are expected to travel to/from the development by use of mass transit, walking or biking. No school buses will be used. The remaining 35-percent of students ( $110 - 72 = 38$  students) are expected to travel via automobile. With an estimated automobile occupancy rate of 1.5 students/vehicle, a total of 25 automobiles ( $38 / 1.5 = 25$ ) are expected. It is estimated that 10 of the 25 automobiles will be dropping-off/picking-up students while the remaining 15 automobiles will be driven by students who will require parking at the site.

Therefore, ample parking capacity is provided since the parking demand during school operations is expected to be:

- 15 stalls for students;
- 12 stalls for high school and training center faculty/staff; and
- 63 unused stalls for visitors.

As described above, the site must accommodate for 10 pick-up/drop-off vehicles. The drive aisles around the south parking area will serve as a storage space for pick-up/drop-off activity for Nova Tech Charter School.

## **PART E – RECOMMENDATIONS & CONSIDERATIONS**

A diagram illustrating a list of recommendations and considerations is shown in [Exhibit 8](#). The recommendations and considerations are assigned to each of three properties: the Century City Training Center, the off-Site Hope School, and the SEC warehouse facility.

## **E1. Recommendations/Considerations for Century City Training Center**

As shown in [Exhibit 8](#), the following recommendations and considerations are made for the Century City Training Center. Recall that no school buses will be used by Nova Tech Charter School or the training facilities.

- Plan for a counterclockwise drop-off/pick-up area on the north side of the building. Should the estimated drop-off/pick-up volumes be exceeded, prohibit the south parking lot driveway to outbound-only movements during the peak dismissal period. Additional stacking can then be contained on-site through the north parking lot drive aisle.
- Restrict faculty/staff and student parking to the north parking lot, with student parking preferably contained to the northern one-third of the north parking lot. Designate the south parking lot as visitor-only and pick-up/drop-off parking.
- Consider allowing parking along the west side of 31<sup>st</sup> Street between the two surface parking lot driveways. While not necessary for Century City Training Center, the additional parking may help meet the needs of neighboring properties such as SEC.
- Educate parents on the need to arrive no earlier than 15-minutes before school dismissal.
- Consider an on-site pedestrian walkway from the main doors of the proposed building to the north parking lot to provide a defined path for pedestrians. The path would preferably traverse along the west side of the south parking lot to also afford students a means to access waiting pick-up vehicles.

## **E2. Recommendations/Considerations for Off-Site Hope School**

As shown in [Exhibit 8](#), the following recommendations and considerations are made for the off-site Hope School.

- Per the approved Hope School plan, stage school buses along the east side of 31<sup>st</sup> Street between Capitol Drive and the alley. Provide a pedestrian gate along 31<sup>st</sup> Street and marshal students to/from the west school door via a defined walkway from gate to door.
- Open the vehicle gate approximately 20-minutes before school start and use the west parking lot for student drop-off during the morning arrival period. Utilize a counterclockwise line for drop-offs to minimize vehicle-pedestrian conflicts.
- Open the vehicle gate approximately 20-minutes before school ends and use the west parking lot for student pick-up during the afternoon dismissal period. Utilize a counterclockwise line for drop-offs to minimize vehicle-pedestrian conflicts.
- To further accommodate early-arriving parents during the afternoon dismissal period, consider striping and utilizing “rear-in parking only” along the east side of the west parking lot. Rear-in parking means parents who arrive before school ends can back-up into their parking space and, when they have their child(ren), can then proceed forward to exit the lot. This operation provides better visual between motorist and pedestrian and minimizes conflicts upon school dismissal.
- Educate parents on the need to arrive no earlier than 15-minutes before school dismissal.

### **E3. Recommendations/Considerations for SEC Warehouse Facility**

As shown in [Exhibit 8](#), the following recommendations and considerations are made for the off-site SEC warehouse facility.

- Schedule shipment arrivals outside the school arrival and school dismissal periods whenever practical.
- Modify the fenced-in area on the southwest corner of the building to provide for adequate lines of sight towards oncoming vehicles. This modification may be done by stacking materials no higher than 3.5-feet within the fenced area and clearing all brush within the line-of-sight envelope.

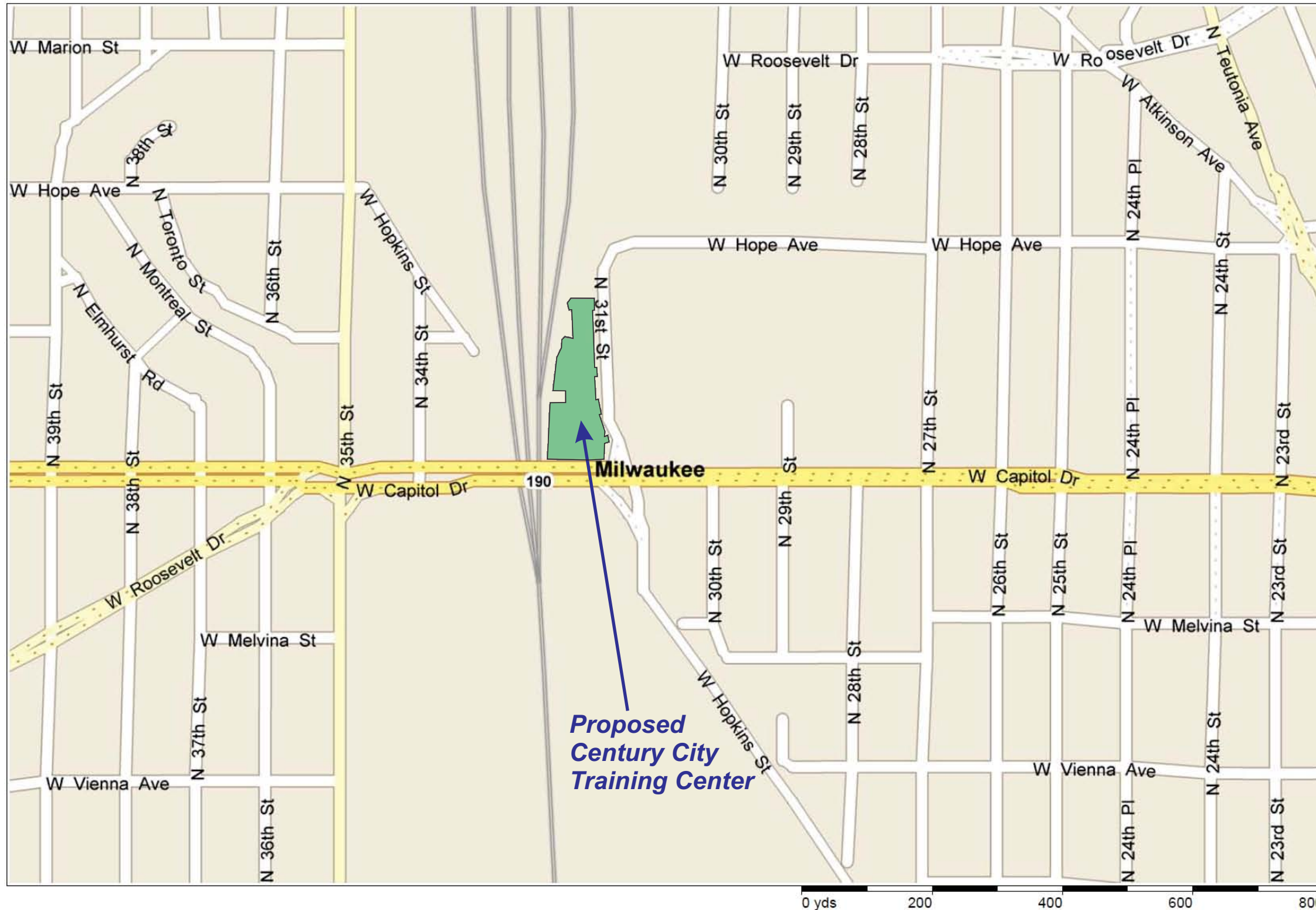
### **PART F – CONCLUSION**

Operations to, from and within the proposed Century City Training Center are expected to operate safely and efficiently with the site plan recommendations and considerations outlined in this technical memorandum. Additionally, ample parking and drop-off/pick-up capacity is provided to prevent adverse operations to 31<sup>st</sup> Street and surrounding properties.

Operational concerns have been raised and confirmed for the off-site Hope School and SEC warehouse facility, which are not caused by or exacerbated by the proposed Century City Training Center. The City of Milwaukee is encourage to work with the off-site Hope School and SEC warehouse facility to implement the recommendations/considerations outlined in this document to improve operations.

Should any questions or comments arise regarding this memorandum, please feel free to contact Michael May, P.E. PTOE (414-807-1912, [mmay@traffic-ad.com](mailto:mmay@traffic-ad.com)) of TADI.

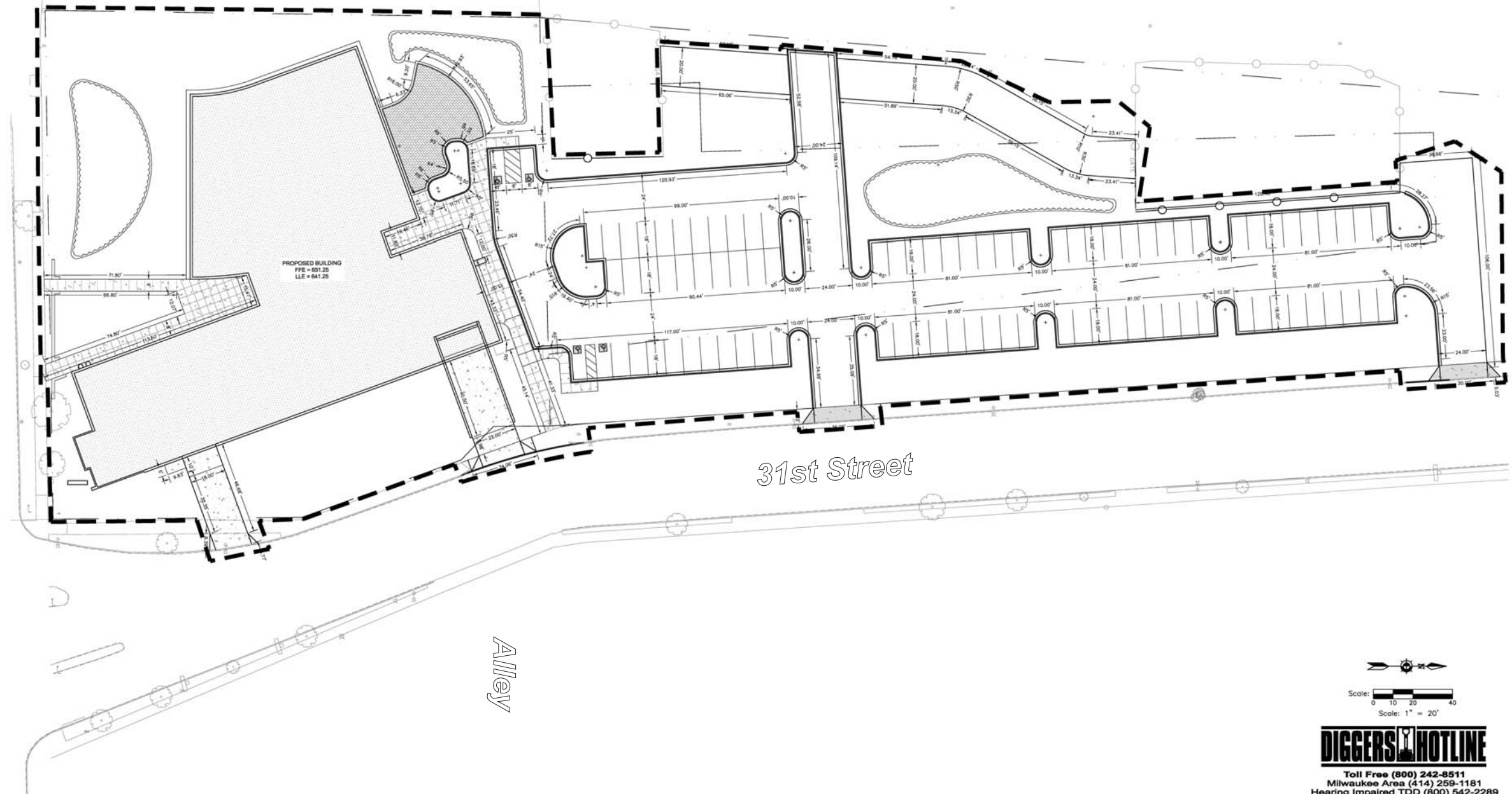




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Capitol Drive



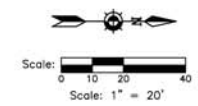
**KORB TREDO ARCHITECTS**  
**KAPUR & ASSOCIATES, INC.**  
 ARCHITECTS & ENGINEERS  
 7711 N. PORT WASHINGTON ROAD  
 MILWAUKEE, WISCONSIN 53217  
 TEL: 414.384.4117  
 WWW.KAPURENGINEERS.COM

**PROJECT:**  
3100 West Capitol Drive  
Milwaukee, WI 53218

**OWNER:**  
Century City Training Center S, LLC  
4251 N. 27th St., 9th Floor  
Milwaukee, WI 53218

**ARCHITECT:**  
KORB TREDO ARCHITECTS  
790 N. MILWAUKEE STREET  
SUITE 210  
MILWAUKEE, WI 53202

**CONSTRUCTION MANAGER:**

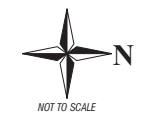


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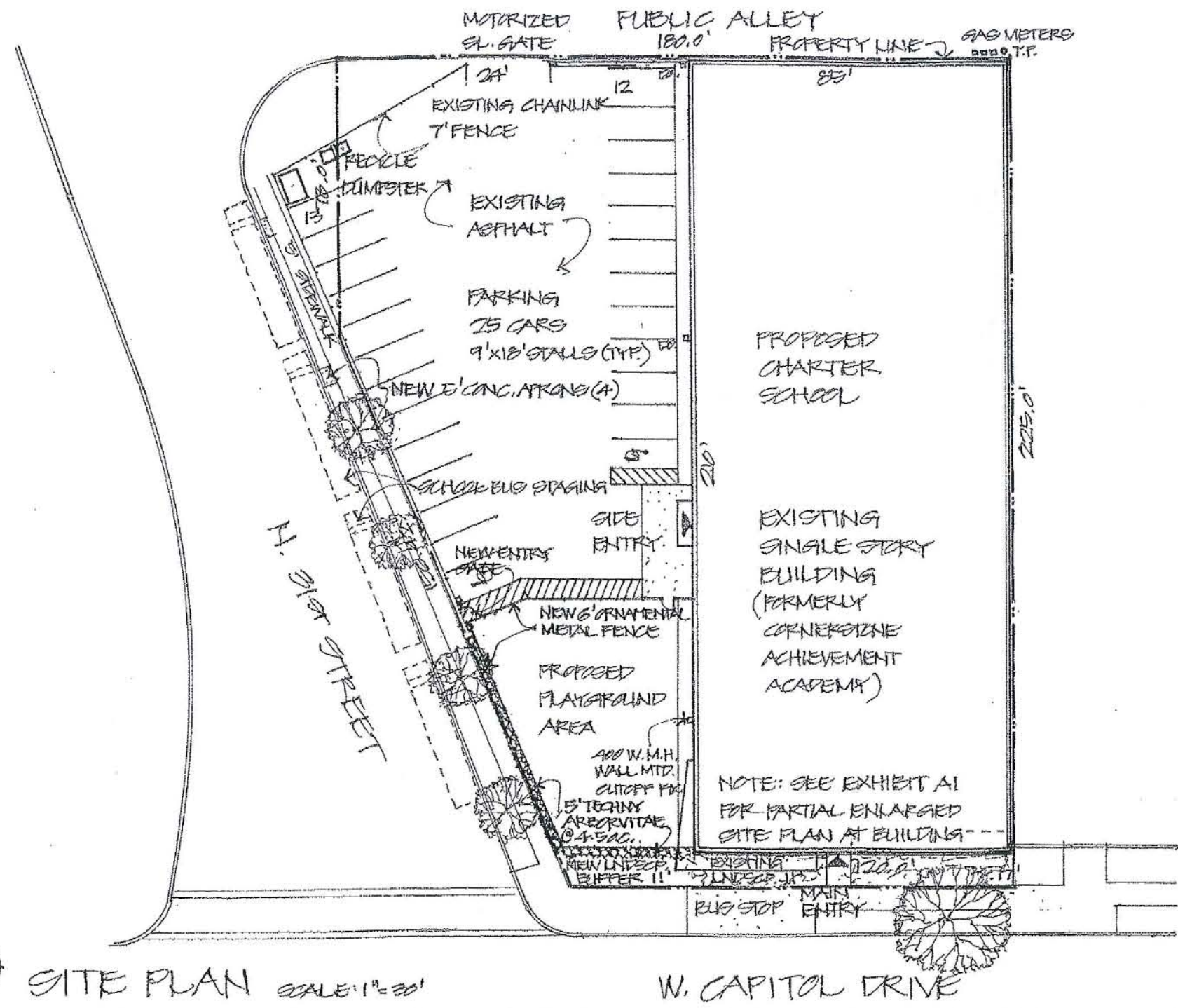
REVISION	DATE

COMM NO: 13018  
 SCALE: AS NOTED  
 PHASE: CPO Submittal  
 DATE: April 2013

SITE GEOMETRIC PLAN  
**C103**  
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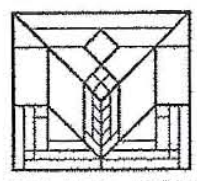






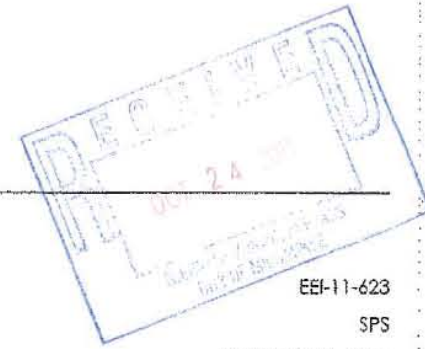
SITE PLAN SCALE: 1" = 30'

W. CAPITOL DRIVE



STEPHEN PERRY SMITH  
ARCHITECTS, INC.  
10850 WEST PARK PLACE SUITE 420  
MILWAUKEE, WISCONSIN, 53224  
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HOPE CHRISTIAN SCHOOL: CAPITOL  
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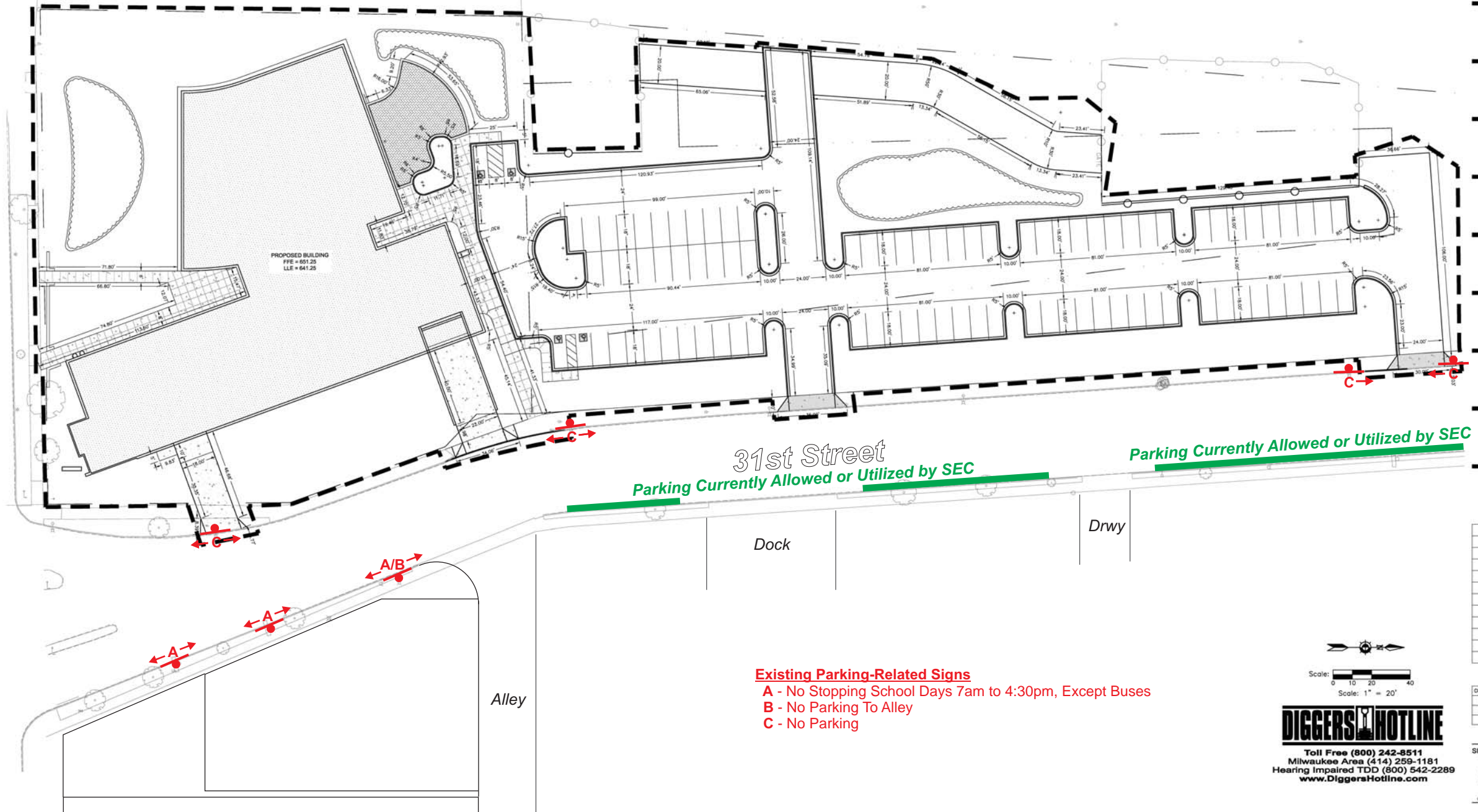


EEI-11-623  
SPS  
OCTOBER 19, 2011

EXHIBIT A0



Capitol Drive



31st Street  
Parking Currently Allowed or Utilized by SEC

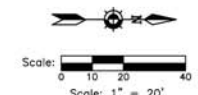
Parking Currently Allowed or Utilized by SEC

Dock

Drwy

Alley

- Existing Parking-Related Signs**
- A - No Stopping School Days 7am to 4:30pm, Except Buses
  - B - No Parking To Alley
  - C - No Parking



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COMM NO:	13018
SCALE:	AS NOTED
PHASE:	DPD Submittal
DATE:	April 2013

SITE GEOMETRIC PLAN  
**C103**  
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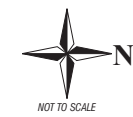
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WWW.KORBTREDOARCHITECTS.COM

**PROJECT:**  
3100 West Capitol Drive  
Milwaukee, WI 53218

**OWNER:**  
Century City Training Center II, LLC  
4201 N 27th St, 2nd Floor  
Milwaukee, WI 53218

**ARCHITECT:**  
KORBTREDO ARCHITECTS  
7711 N. PORT WASHINGTON STREET  
SUITE 210  
MILWAUKEE, WI 53218

**CONSTRUCTION MANAGER:**





SEC Morning Employee/Patron Parking



Maximum Morning Queue In Alley



One Incidence of Alley Double Parking



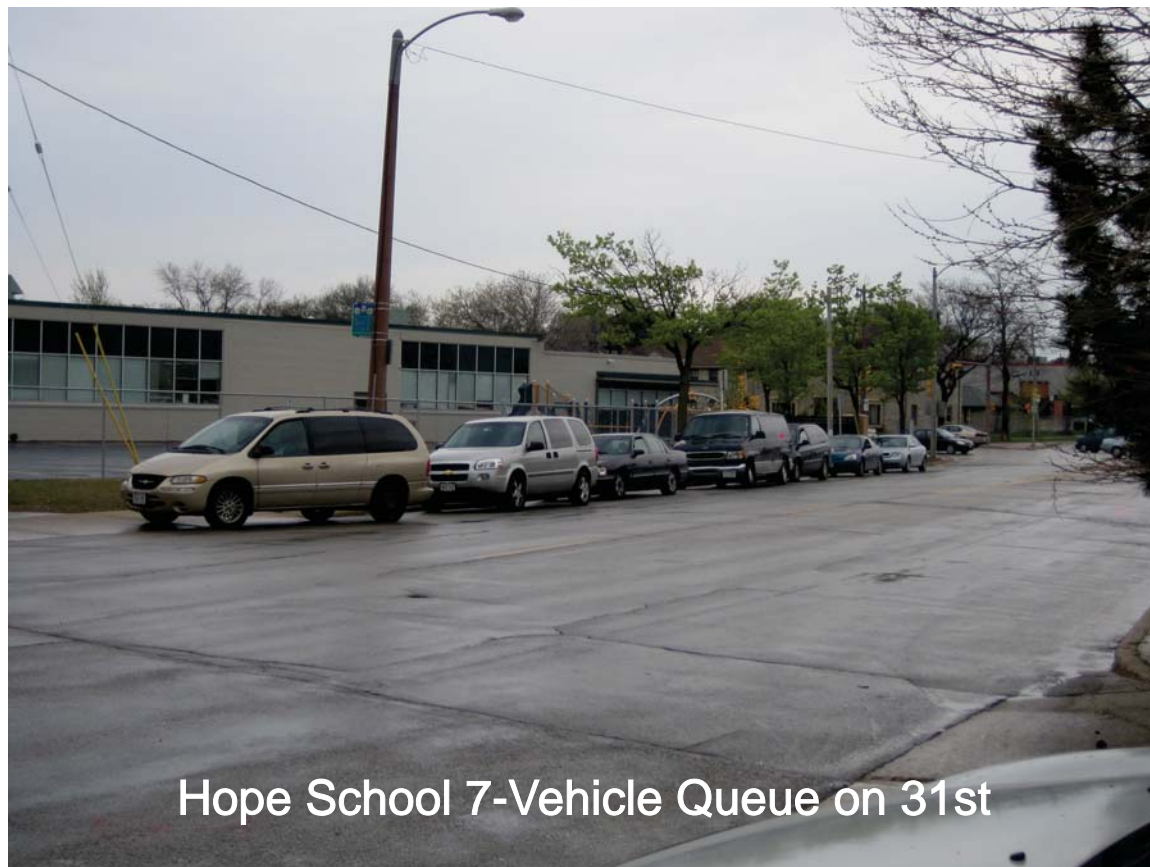
SEC Storage Area Sight Obstruction



SEC Truck: Wrong Way, Loading from Street



Parent Pick-Up by Foot at Gate in Alley



Hope School 7-Vehicle Queue on 31st



SEC Afternoon Employee/Patron Parking

**Century City Training Center:**

- Plan counterclockwise pick-up area on north side of building. If not ample for dismissal period, prohibit south driveway to outbound only and stack additional in north lot drive aisle.
- Student & Faculty/Staff parking: North lot only.
- Visitor Parking: South lot.
- Consider allowing parking on west side of 31st Street between two parking lot driveways.
- Consider educating parents on need to arrive no earlier than 15 min before dismissal.
- Consider walkway along west side of south parking lot, leading from door to north parking lot.

**Off-Site Hope School:**

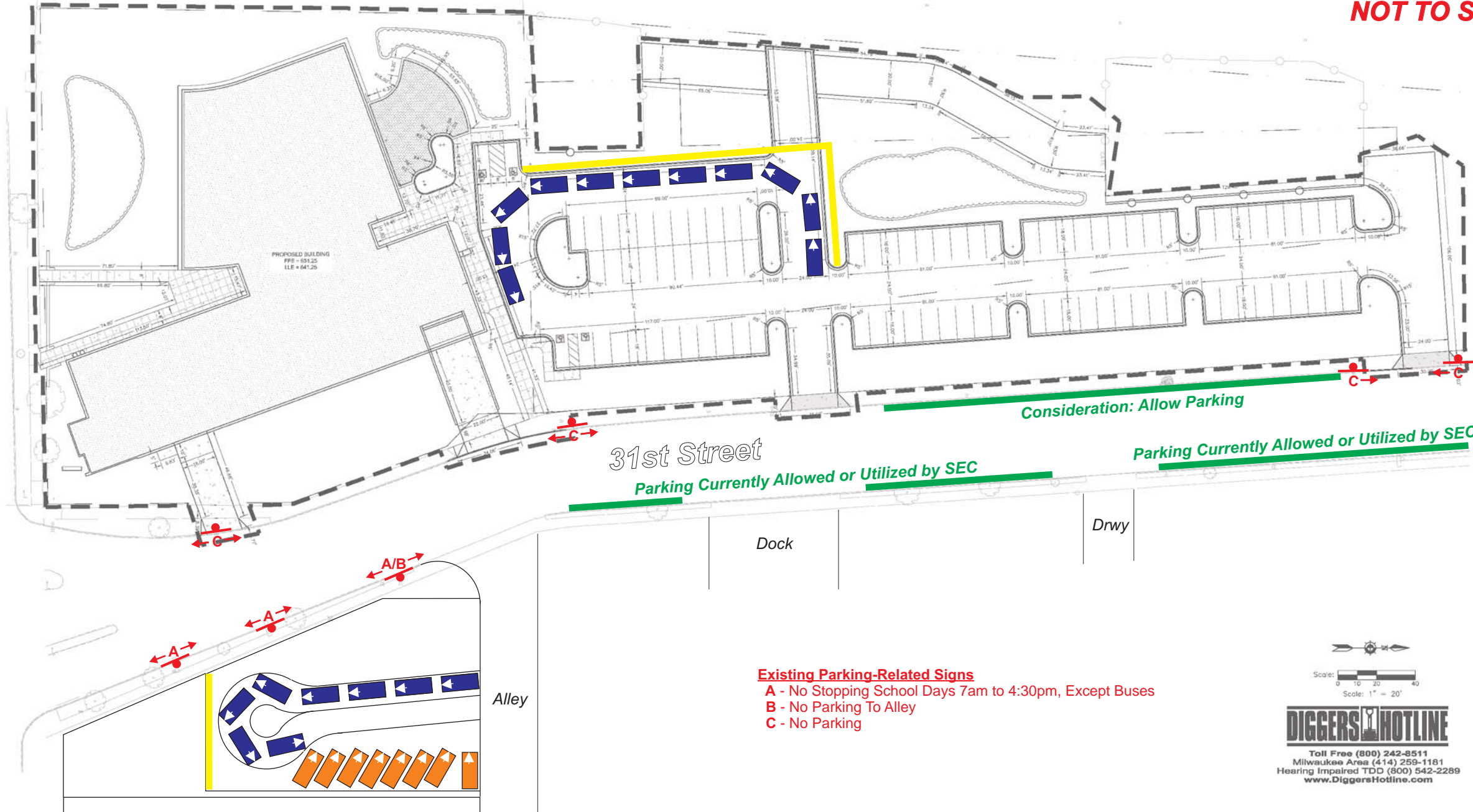
- Stage school buses along 31st Street. Provide pedestrian gate along 31st and marshal students to west door via defined walkway.
- Open parking lot gate 20 mins before school starts and 20 min before school ends. Utilize counterclockwise pick-up area in lot west of building.
- Restripe/Sign along west side of building for "rear-in parking only".
- Consider educating parents on need to arrive no earlier than 15 min before dismissal.

**SEC Warehouse Facility:**

- Schedule shipment arrivals outside the school arrival & dismissal periods, as practical.
- Modify fenced-in area on SW corner of building to provide for adequate lines of sight towards oncoming vehicles. This modification may be done by stacking materials no higher than 3.5-feet within the fenced area and clearing all brush within the line-of-sight envelope.

**CONCEPT ONLY  
NOT TO SCALE**

Capitol Drive



**Existing Parking-Related Signs**  
**A** - No Stopping School Days 7am to 4:30pm, Except Buses  
**B** - No Parking To Alley  
**C** - No Parking

Consideration: Allow Parking

Parking Currently Allowed or Utilized by SEC

31st Street  
 Parking Currently Allowed or Utilized by SEC

Scale: 1" = 20'



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COMMAND: 10019  
 SCALE: AS NOTED  
 PHASE: DPO Submittal  
 DATE: April 2013

SITE GEOMETRIC PLAN  
**C103**  
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