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PLOT DATE      == 6/27/2025
FILE NAME      == N:\2004\04016\04016_08PE\Drawings\Wstm\CADD_Exhibits\IDS\04016_08PE-sht-IDS-01.dgn
PLOT SCALE     == 80,000' / in.
USER NAME      == mfores

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The map shows the intersection of Ravinia Avenue and Costco Parking Lot. The intersection is labeled with 'A' at the top, 'B' at the bottom, 'C' on the left, and 'D' on the right. The map is divided into four quadrants by the intersection lines. In the top-left quadrant (A-C), there are three vertical arrows pointing left, with vehicle counts 5 (30) [42], 100 (156) [155], and 69 (130) [167] from top to bottom. In the top-right quadrant (A-D), there are three horizontal arrows pointing left, with vehicle counts 65 (223) [276], 0 (35) [46], and 8 (11) [14] from top to bottom. In the bottom-left quadrant (C-B), there are three horizontal arrows pointing right, with vehicle counts 5 (230) [273], 0 (29) [35], and 0 (10) [11] from top to bottom. In the bottom-right quadrant (D-B), there are three vertical arrows pointing up, with vehicle counts 0 (3) [4], 167 (203) [219], and 4 (8) [12] from top to bottom. The text '2050 D.H.V: A.M. (P.M.) [Sat MD]' is at the bottom of the map.

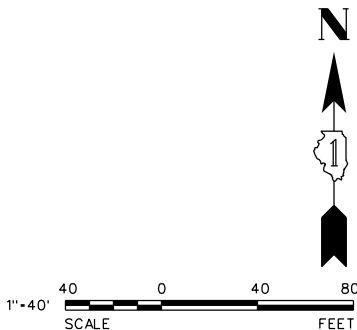


PREFERRED ROUTE:

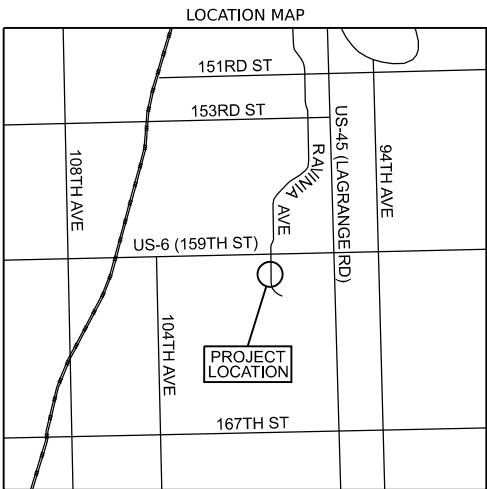
F.A. ROUTE NUMBER: N/A. MARKED ROUTE NUMBER: UNMARKED.
STREET NAME: RAVINIA AVENUE. SRA ROUTE NO.
FUNCTIONAL CLASSIFICATION: LOCAL ROAD. OSOW DESIGN ? NO
EXISTING ADT: N/A VPD. DESIGN YEAR ADT: 1,800 VPD.
PROPOSED DESIGN SPEED: 35 MPH. PROPOSED POSTED SPEED: 30 MPH.

GENERAL NOTES

ARE PROFILES PROVIDED? YES, IF NOT, STATE REASON WHY: _____
TYPE B-6.12 CURB AND GUTTER ON THE OUTSIDE OF THE ROADWAY/SHOULDERS.
TYPE _____ CURB AND GUTTER ON THE APPROACH MEDIAN.
TYPE _____ CURB AND GUTTER ON THE CORNER ISLANDS.
ALL DIMENSIONS ARE E-E, UNLESS OTHERWISE NOTED
THE RIGHT-OF-WAY LIMITS ARE PRELIMINARY.
DESIGN VEHICLE TURNING MOVEMENTS ARE ACCOMMODATE PER AUTOTURN SOFTWARE, VERSION 11.0.1.14.
SCOPE OF WORK: PROPOSED ROUNDABOUT AT THE INTERSECTION OF RAVINIA AVENUE
AND THE COSTCO ENTRANCE
INTERSECTION DESIGN EXCEPTIONS:

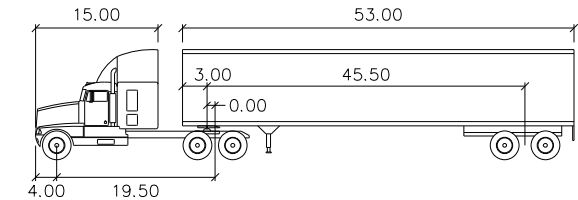
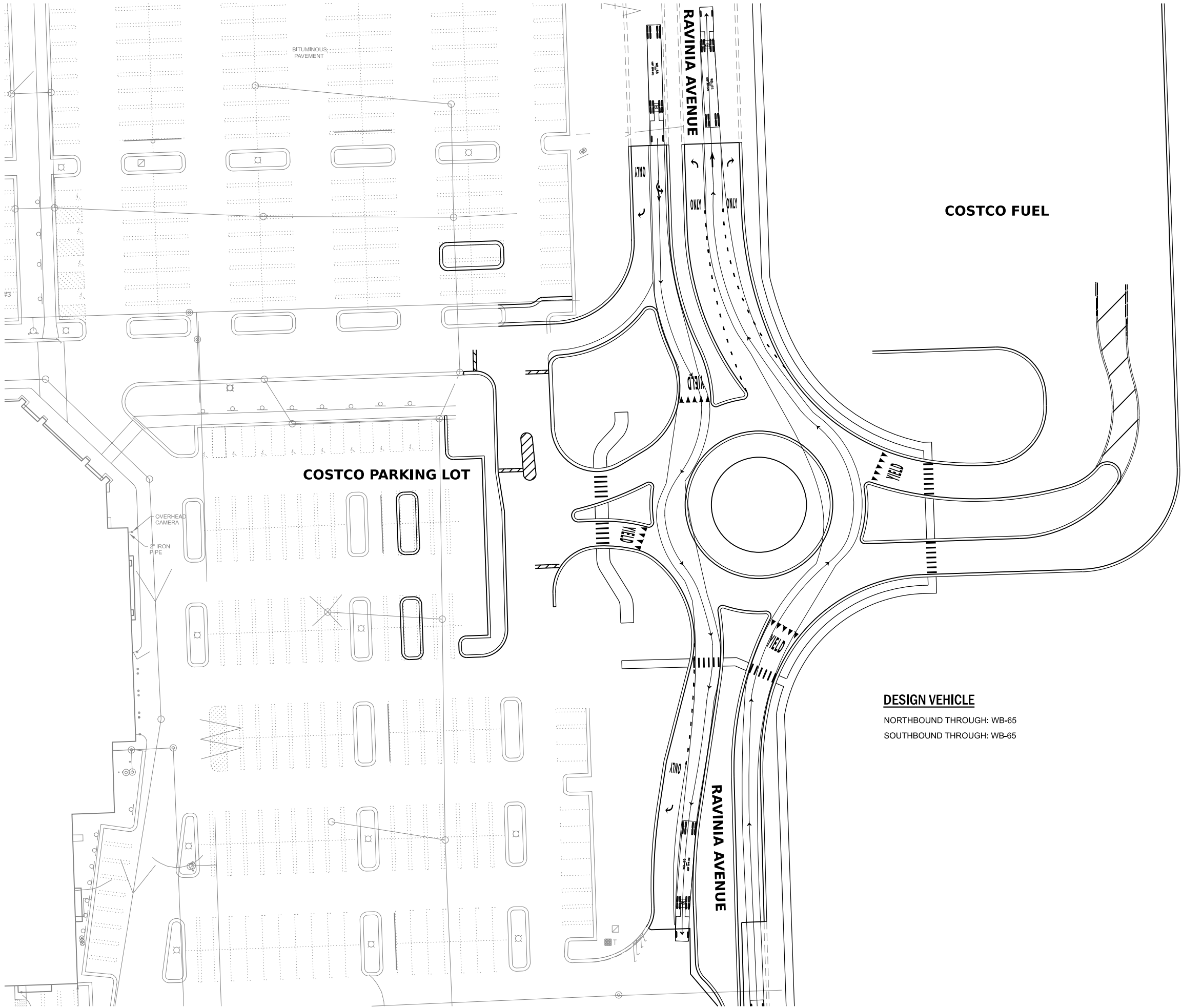


PREPARED BY: 	V3 Companies 7325 Janes Avenue Woodridge, IL 60517 630.724.9200 phone 630.724.9202 fax www.v3co.com
PROJ. MGR. <u>EIH</u>	PROJ. ENG. <u>MGS</u>



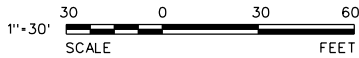
<h1 style="margin: 0;">INTERSECTION DESIGN STUDY</h1>	
<div style="margin-bottom: 10px;"> <div style="display: flex; justify-content: space-between; border-bottom: 1px solid black; padding-bottom: 2px;"> _____ ROUTE _____ _____ RAVINIA AVE _____ </div> <div style="display: flex; align-items: center; justify-content: center;"> _____ ROUTE _____ WITH _____ COSTCO PARKING LOT _____ </div> </div>	<div style="margin-bottom: 10px;"> SEC. NO. <u>XX-XXXX-XX-XX</u> </div> <div style="margin-bottom: 10px;"> SCALE <u>1" = 40'</u> </div> <div style="margin-bottom: 10px;"> S/JN : _____ </div>
<div style="margin-bottom: 10px;"> DESIGNED BY <u>MRF</u> </div> <div style="margin-bottom: 10px;"> SATISFACTORY _____ </div> <div style="margin-bottom: 10px;"> SATISFACTORY _____ </div> <div style="margin-bottom: 10px;"> SATISFACTORY _____ </div> <div style="margin-bottom: 10px;"> APPROVED _____ </div>	<div style="margin-bottom: 10px;"> PROJ. NO. _____ </div> <div style="margin-bottom: 10px;"> COUNTY <u>COOK</u> </div> <div style="margin-bottom: 10px;"> REV. NO. _____ </div> <div style="margin-bottom: 10px;"> DATE <u>6/27/2025</u> </div> <div style="margin-bottom: 10px;"> DISTRICT GEOMETRICS ENGINEER _____ DATE _____ </div> <div style="margin-bottom: 10px;"> DISTRICT PROGRAM DEVELOPMENT ENGINEER _____ DATE _____ </div> <div style="margin-bottom: 10px;"> DISTRICT OPERATIONS ENGINEER _____ DATE _____ </div> <div style="margin-bottom: 10px;"> REGIONAL ENGINEER _____ DATE _____ </div>
<div style="display: flex; justify-content: space-between;"> CADD FILE NAME : [_____] _____ SHEET <u>1</u> OF <u>12</u> </div>	

6/10/2025
N:\2024\04\018\04018\0PE\Drawings\Main\CADD_Ech\18\18\0PE\shds-autolam01.dgn
80,000 / in.
mlbak



DESIGN VEHICLE

NORTHBOUND THROUGH: WB-65
SOUTHBOUND THROUGH: WB-65



INTERSECTION DESIGN STUDY

ROUTE _____ WITH _____
ROUTE _____ COSTCO PARKING LOT

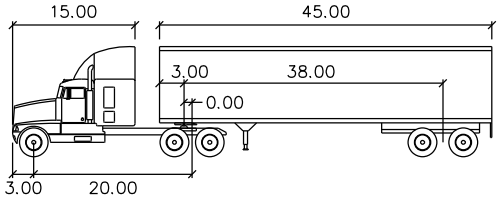
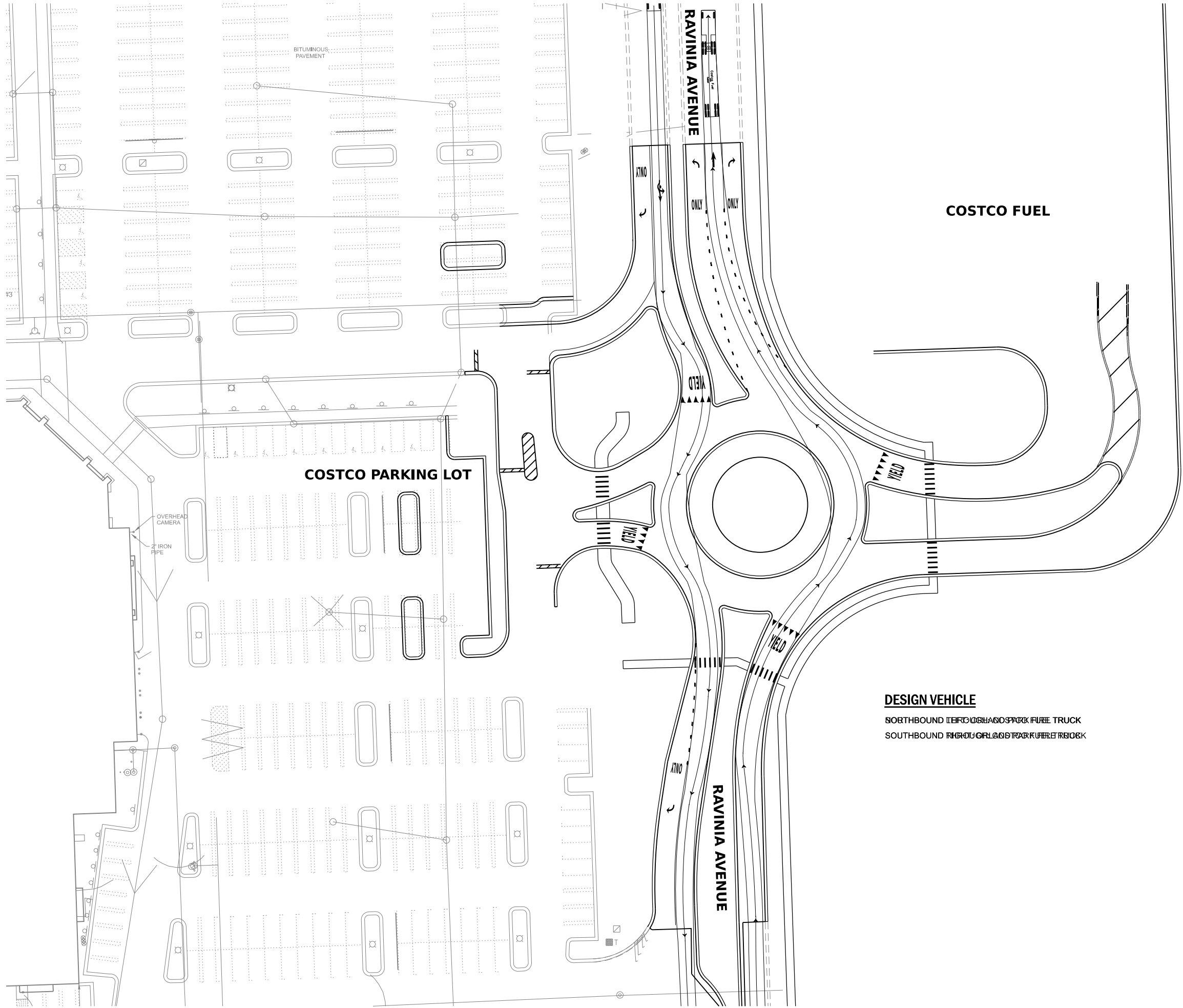
SEC. NO. XX-XXXX-XX-XX

SCALE 1"=30' COUNTY COOK

SJN : _____ PROJ. NO. _____

6/10/2025
N:\2024\04\018\04018\0PE\Drawings\Main\CADD_Ech\NHD\IDS\04018_08PE-shHDS-autolam-02.dgn
80,000 / in.
maladek

PLOT DATE
FILE NAME
PLOT SCALE
USER NAME

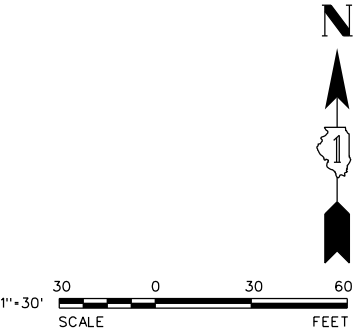


COSTCO FUEL TRUCK

	feet		
Tractor Width	: 8.50	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 26.3°
Tractor Track	: 8.00	Articulating Angle	: 70.0°
Trailer Track	: 8.50		

DESIGN VEHICLE

NORTHBOUND THROUGH LANE
SOUTHBOUND THROUGH LANE



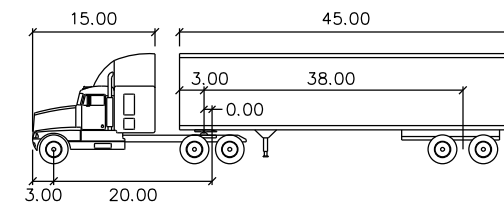
INTERSECTION DESIGN STUDY

ROUTE WITH ROUTE
RAVINIA AVE
COSTCO PARKING LOT

SEC. NO. XX-XXXX-XX-XX

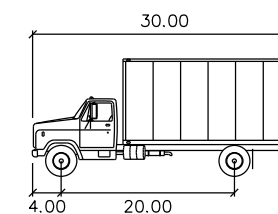
SCALE 1"=30' COUNTY COOK

SJN: PROJ. NO.



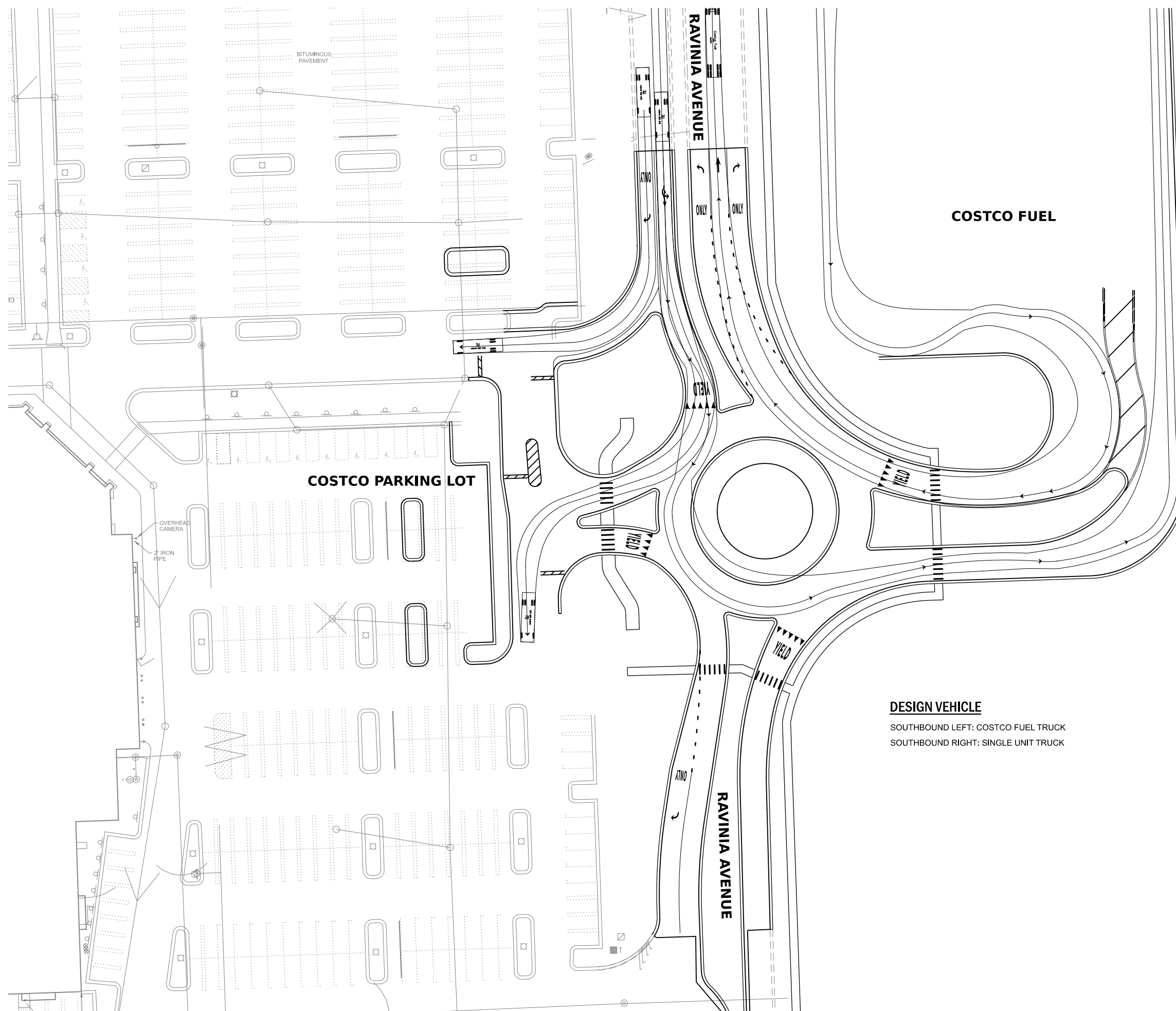
COSTCO FUEL TRUCK

	feet		
Tractor Width	: 8.50	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 26.3°
Tractor Track	: 8.00	Articulating Angle	: 70.0°
Trailer Track	: 8.50		



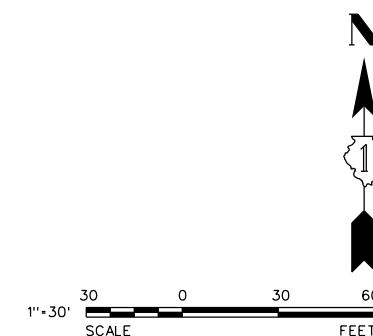
SINGLE UNIT TRUCK

	feet
Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.8



DESIGN VEHICLE

SOUTHBOUND LEFT: COSTCO FUEL TRUCK
SOUTHBOUND RIGHT: SINGLE UNIT TRUCK



INTERSECTION DESIGN STUDY

ROUTE _____ WITH _____
ROUTE _____ COSTCO PARKING LOT

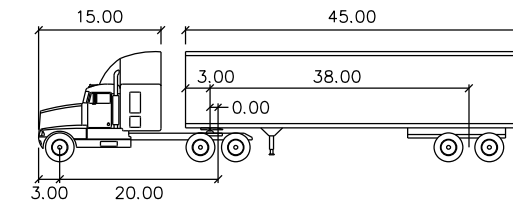
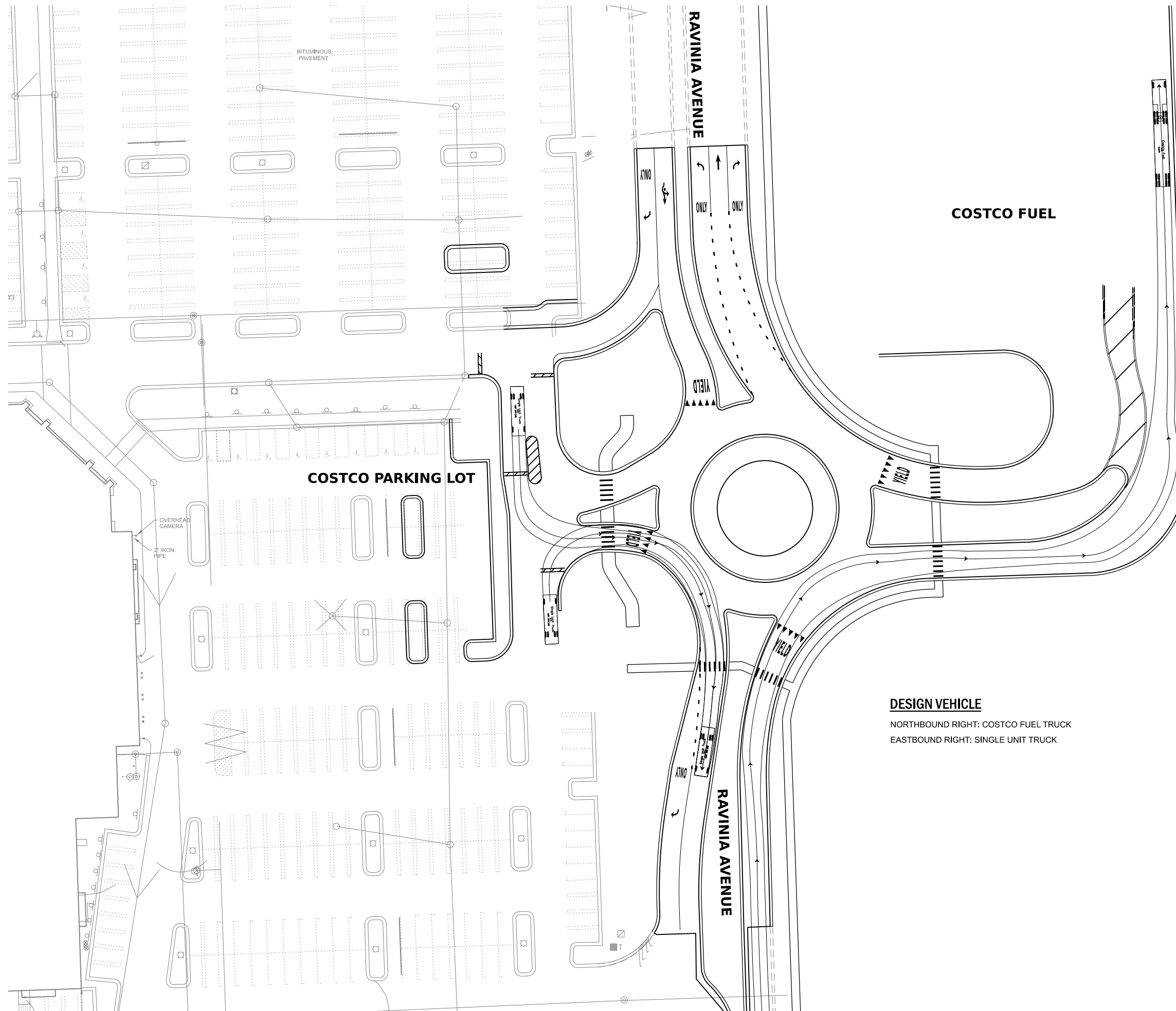
SEC. NO. XX-XXXXX-XX-XX

COUNTY COOK

SJN : _____

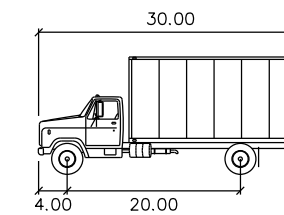
PROJ. NO. _____

PLOT DATE	= 6/10/2025
FILE NAME	= N:\2004\1040
PLOT SCALE	= 60,000 ' / in.
USER NAME	= msladek



COSTCO FUEL TRUCK

	feet		
Tractor Width	: 8.50	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 26.3°
Tractor Track	: 8.00	Articulating Angle	: 70.0°
Trailer Track	: 8.50		

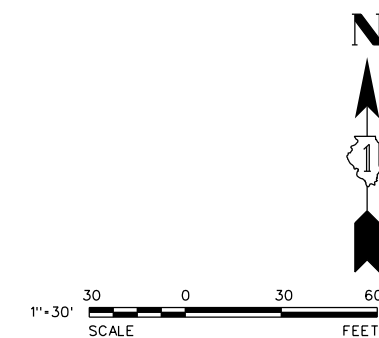


SINGLE UNIT TRUCK

	feet
Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.8

DESIGN VEHICLE

NORTHBOUND RIGHT: COSTCO FUEL TRUCK
EASTBOUND RIGHT: SINGLE UNIT TRUCK



INTERSECTION DESIGN STUDY

____ ROUTE ____ WITH RAVINIA AVE
____ ROUTE ____ COSTCO PARKING LOT

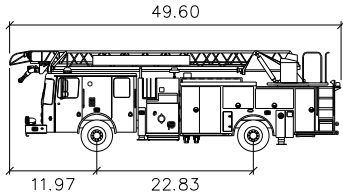
SEC. NO. XX-XXXXX-XX-XX

SCALE 1"=30' COUNTY COOK

SJN : _____ PROJ. NO. _____

6/10/2025
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mlbak

6/10/2025
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80,000 / in.
mlbak



ORLAND PARK FIRE TRUCK

Width : 8.00
Track : 7.79
Lock to Lock Time : 6.0
Steering Angle : 40.0

COSTCO FUEL

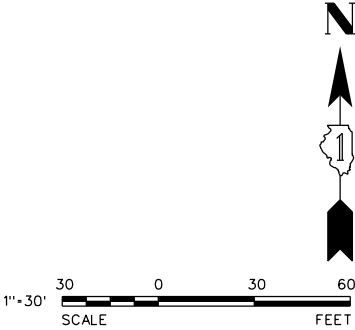
COSTCO PARKING LOT

RAVINIA AVENUE

RAVINIA AVENUE

DESIGN VEHICLE

NORTHBOUND LEFT: ORLAND PARK FIRE TRUCK
NORTHBOUND RIGHT: ORLAND PARK FIRE TRUCK



INTERSECTION DESIGN STUDY

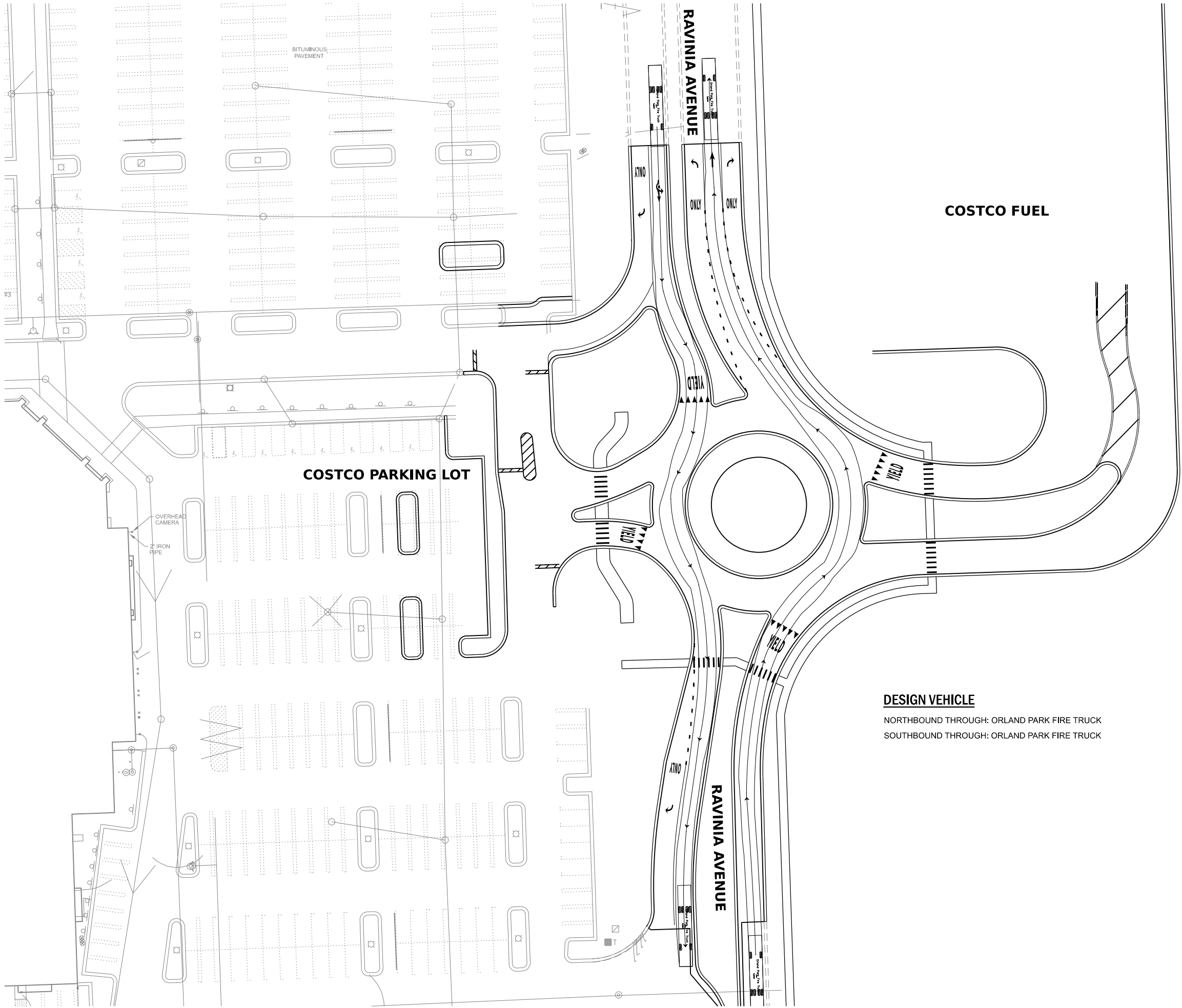
ROUTE RAVINIA AVE
WITH COSTCO PARKING LOT

SEC. NO. XX-XXXX-XX-XX

SCALE 1"=30' COUNTY COOK

SJN: PROJ. NO.

PLOT DATE : 6/10/2025
FILE NAME : N:\2024\04\01\04016\ORPE Drawings\Main\CADD_Ech\N\04016_04PE-sh\HDS-autolium-06.dgn
PLOT SCALE : 80,000 / 1 in.
USER NAME : mlabdek



ORLAND PARK FIRE TRUCK

feet

Width : 8.00
Track : 7.79
Lock to Lock Time : 6.0
Steering Angle : 40.0

DESIGN VEHICLE
NORTHBOUND THROUGH: ORLAND PARK FIRE TRUCK
SOUTHBOUND THROUGH: ORLAND PARK FIRE TRUCK

1"=30'
SCALE FEET

INTERSECTION DESIGN STUDY

ROUTE _____ WITH _____
ROUTE _____ COSTCO PARKING LOT

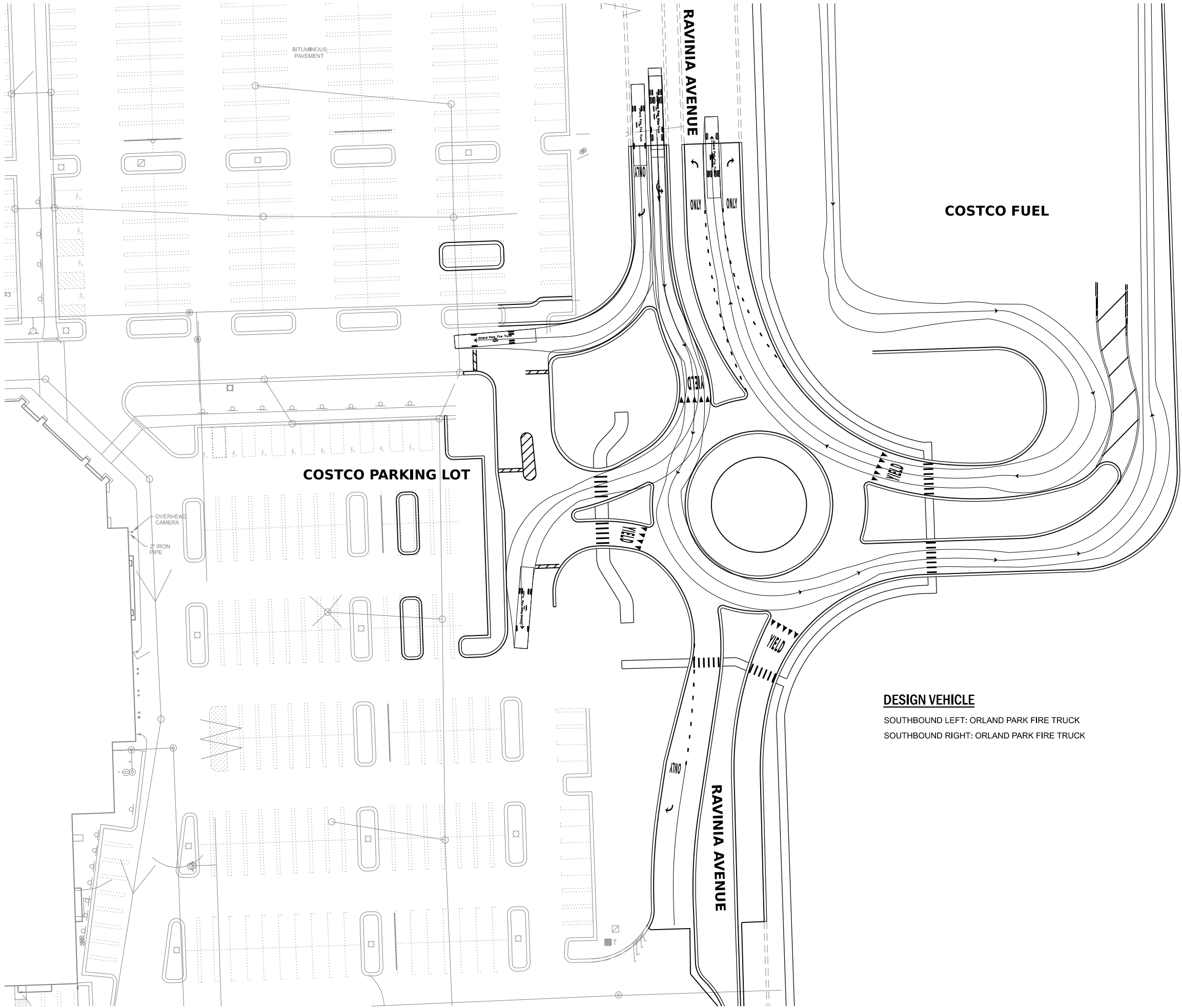
SEC. NO. XX-XXXX-XX-XX

SCALE 1"=30' COUNTY COOK

SJN : _____ PROJ. NO. _____

SHEET 7 OF 12

6/10/2025
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80,000 / in.
mlbak



ORLAND PARK FIRE TRUCK

feet

Width : 8.00
Track : 7.79
Lock to Lock Time : 6.0
Steering Angle : 40.0

DESIGN VEHICLE
SOUTHBOUND LEFT: ORLAND PARK FIRE TRUCK
SOUTHBOUND RIGHT: ORLAND PARK FIRE TRUCK

1

30 0 30 60
1"=30'
SCALE FEET

INTERSECTION DESIGN STUDY

ROUTE

WITH

RAVINIA AVE

COSTCO PARKING LOT

SEC. NO. XX-XXXX-XX-XX

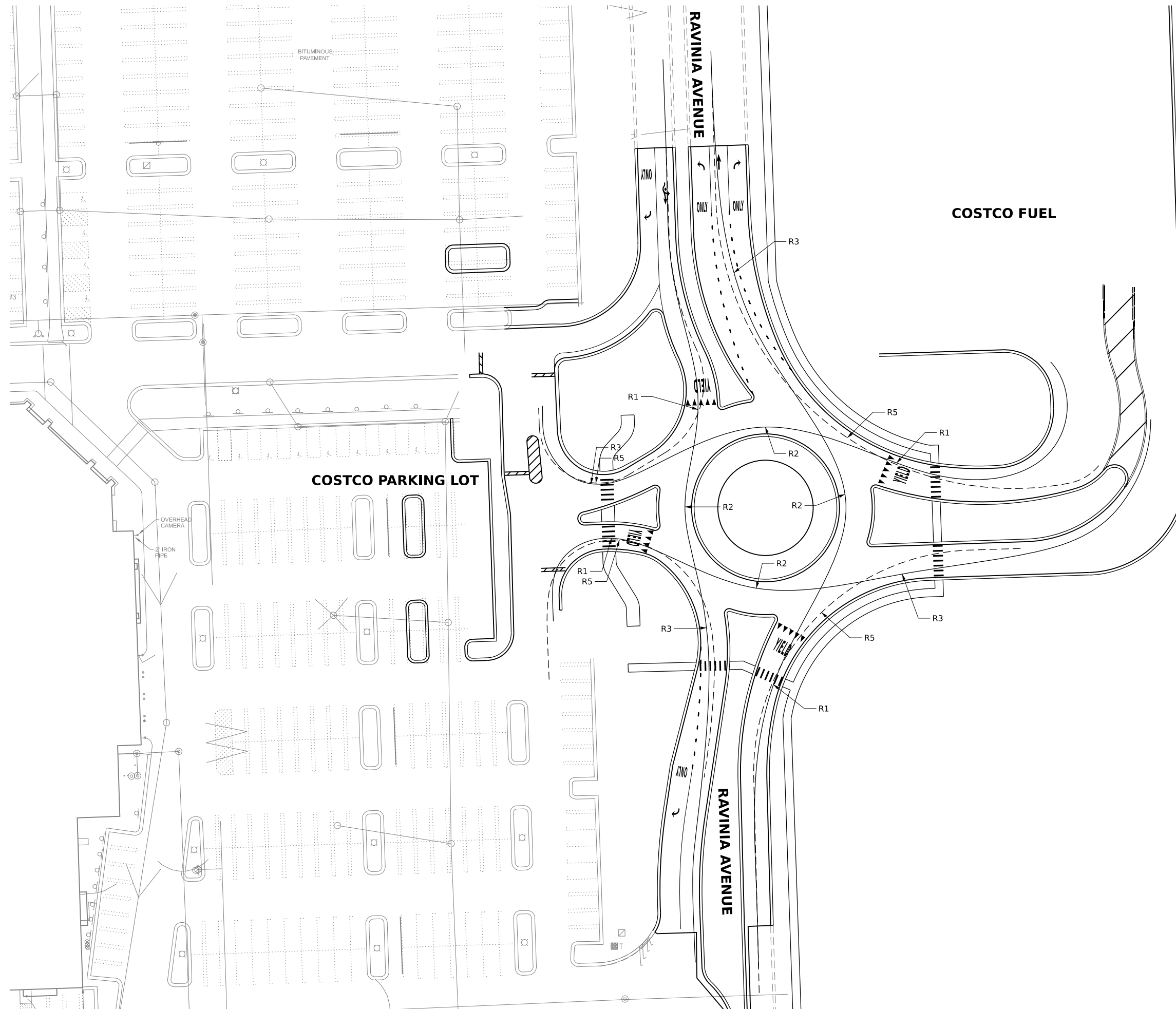
SCALE 1"=30'

COUNTY COOK

SJN :

PROJ. NO. :

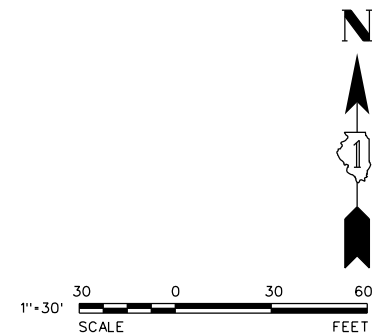
SHEET 8 OF 12



FASTEST PATH (IN FEET)				
APPROACH	NB RAVINIA	EB COSTCO	SB RAVINIA	WB COSTCO
R1	175	44	126	120
	25 MPH	15 MPH	22 MPH	22 MPH
R2	57	112	84	81
	16 MPH	21 MPH	19 MPH	19 MPH
R3	229	***	245	35
	28 MPH	33 MPH	29 MPH	14 MPH
R4	49	49	49	49
	15 MPH	15 MPH	15 MPH	15 MPH
R5	135	60	36	181
	23 MPH	17 MPH	14 MPH	26 MPH
*** NOTE: R3 SPEED DETERMINED BY NCHRP 1043 EQUATION 9.7				

LEGEND

——— THROUGH FASTEST PATH
 — — — RIGHT-TURN FASTEST PATH
 NOTE: LEFT-TURN FASTEST PATH RADIUS (R4)
 IS 5' LARGER THAN CENTER ISLAND
 FACE OF CURB RADIUS.



INTERSECTION DESIGN STUDY

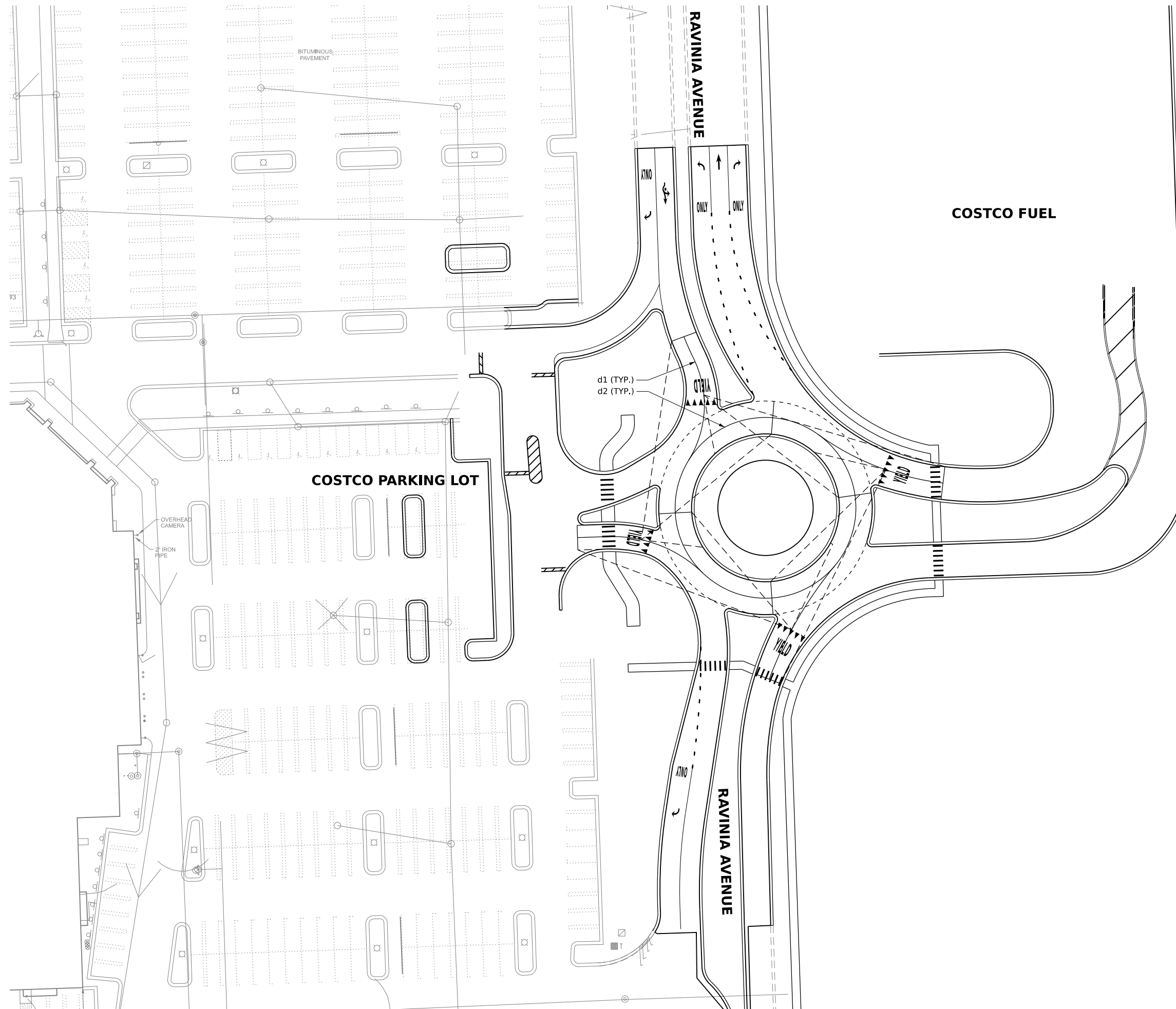
ROUTE _____ WITH _____
ROUTE _____ COSTCO PARKING LOT

SEC. NO. XX-XXXXX-XX-XX

SCALE 1"=30' COUNTY COOK

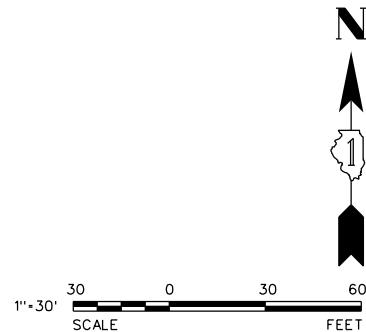
SJN : _____ PROJ. NO. _____

PLOT DATE	= 6/10/2025
FILE NAME	= N:20041040
PLOT SCALE	= 60,000' / ln.
USER NAME	= msladek



INTERSECTION SIGHT DISTANCE			
APPROACH		SPEED (MPH)	DISTANCE (FT)
NORTHBOUND	d1	21	155
	d2	16	114
EASTBOUND	d1	18	133
	d2	16	114
SOUTHBOUND	d1	21	152
	d2	16	114
WESTBOUND	d1	20	150
	d2	16	114

d1 = ENTERING STREAM DISTANCE, d2 = CIRCULATING STREAM DISTANCE



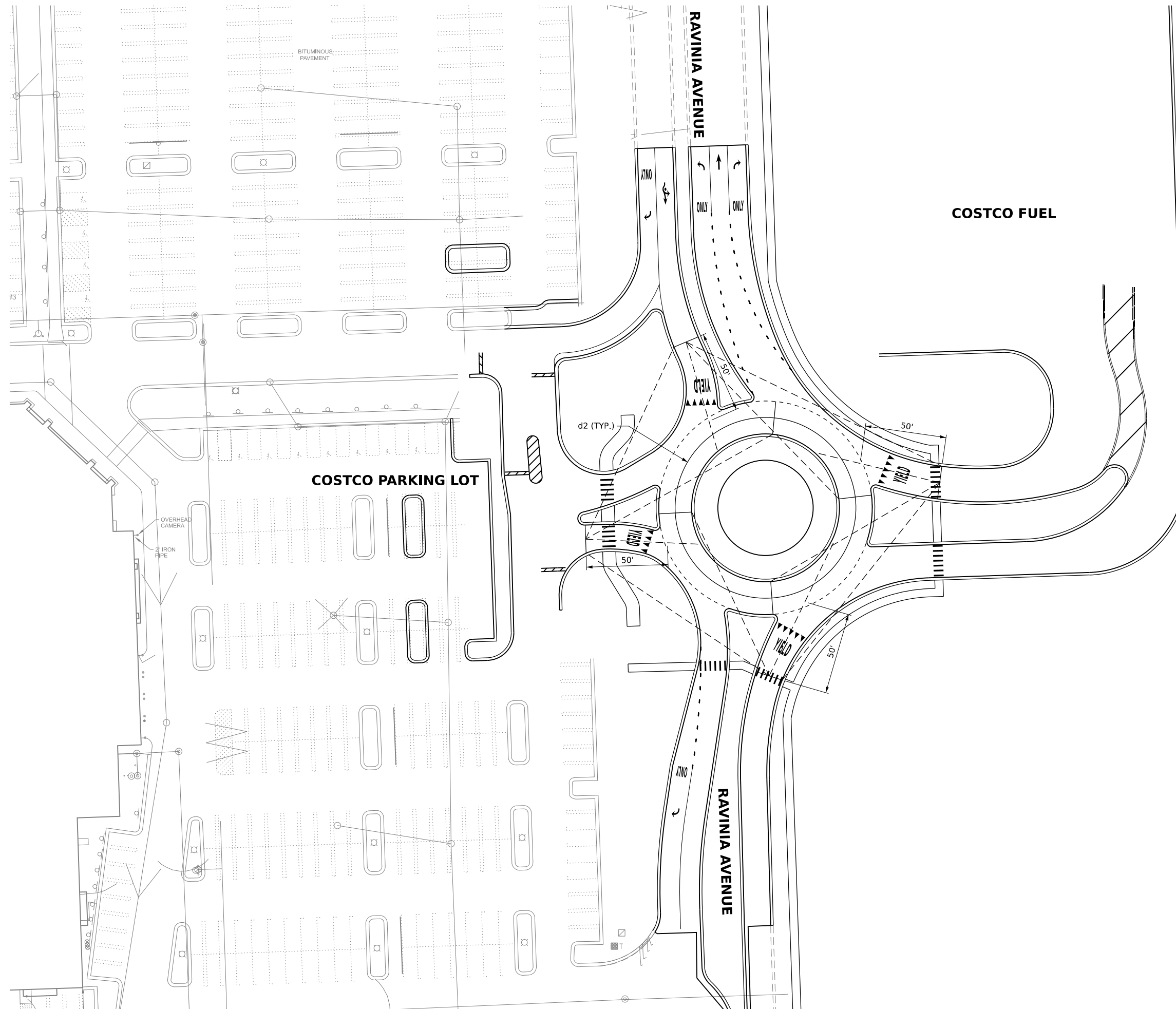
INTERSECTION DESIGN STUDY

ROUTE _____ WITH _____
ROUTE _____ COSTCO PARKING LOT

SEC. NO. XX-XXXXX-XX-XX

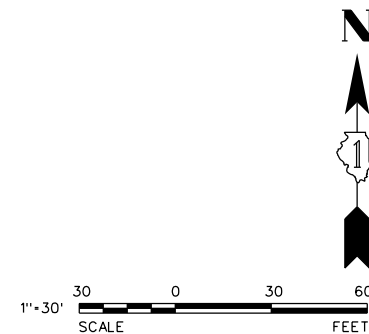
SCALE 1"=30' COUNTY COOK

SJN: _____ PROJ. NO. _____



ADVANCE INTERSECTION SIGHT DISTANCE			
APPROACH		SPEED (MPH)	DISTANCE (FT)
NORTHBOUND	d2	16	114
EASTBOUND	d2	16	114
SOUTHBOUND	d2	16	114
WESTBOUND	d2	16	114
d2 = CIRCULATING STREAM DISTANCE			

d2 = CIRCULATING STREAM DISTANCE



INTERSECTION DESIGN STUDY

ROUTE WITH RAVINIA AVE
ROUTE COSTCO PARKING LOT

SEC. NO. XX-XXXXX-XX-XX

SCALE 1"=30' COUNTY COOK
 SJN : _____ PROJ. NO. _____

