URBAN SYSTEMS ASSOCIATES, INC.
PLANNING & TRAFFIC ENGINEERING, MARKETING & PROJECT SUPPORT
CONSULTANTS TO INDUSTRY AND GOVERNMENT

MEMO

- ATTN:	***Meghan Cedeno- City of San Diego***	***E-Mail: ▼ mcedeno@sandiego.gov***	
FROM:	***Justin P. Schlaefli, PE TE PTOE***	***TOTAL PAGES (Including Cover):***	6 + Attachments
DATE:	***October 1, 2021***	***TIME: 3:51:37 PM***	***JOB NUMBER:***
SUBJECT:	***1832 W Washington – Access and Sight Distance Analysis (Project #658005)***		

Urban Systems Associates, Inc. (USAI) has been retained by I&D Consulting to prepare an access sight distance evaluation for the First Element Fuel Station planned at 1832 W. Washington Street in San Diego, CA.

Project Description:

The project site is located in San Diego, California, along W Washington Street on the northeast corner of W. Washington Street at San Diego Avenue. As shown in the project's preliminary Site Plan included as **Attachment 1**, the proposed project is an addition of hydrogen fuel equipment and two dispensers (four pumps) to an existing gas station. The project is located in the Uptown Community Planning Area. The proposed project requires a Process 2 Neighborhood Use Permit (NUP). The existing station operates under Conditional Use Permit 94-0641. The 0.47-acre project site is located at 1832 West Washington in the CC-3-6 Zone in a 2035 Transit Priority Area, Transit Area Overlay Zone, Multi Family Residential Parking Standards, Transit Priority Area within the Uptown Community Plan area.

Sight Distance Evaluation:

The proposed project plans to provide access to W. Washington Street through two existing driveways as shown in **Attachment 1**. West Washington Street is a 4- lane Major road with a posted speed limit of 45 miles per hour in the northeast-bound direction and 25 miles per hour in the southwest-bound direction. In the southwest-bound direction, approaching the project site, there is a downhill gradient of approximately 6% and a large radius curve just northeast of the project site. On-street parking is provided on the adjacent property to the northeast. Of note is the observed high volume of right turns from W. Washington Street to San Diego Avenue in order to utilize the I-5 northbound on-ramp. An exclusive right turn lane exists to accommodate this movement located just north of the project site from San Diego Avenue. Existing traffic volumes for the intersection of Washington Street and San Diego Avenue is shown below:

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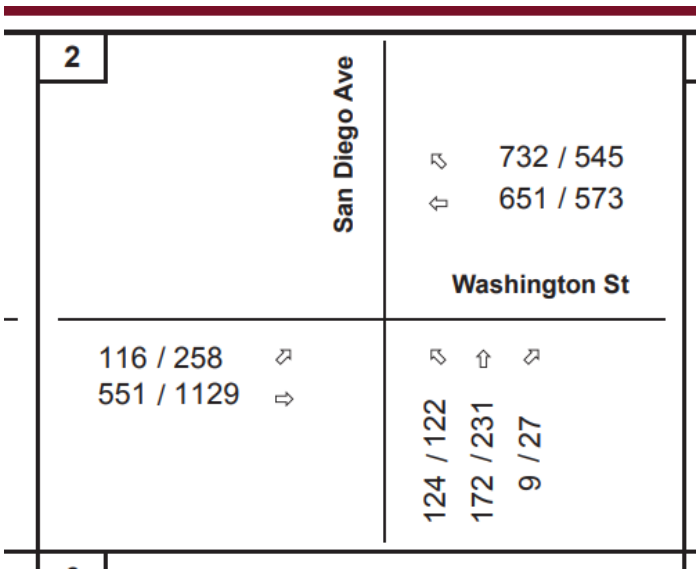

Considering the existing conditions of W. Washington Street, and the proposed project's access points, Urban Systems Associates, Inc. (USAI) proceeded to conduct field observations that included a Radar Speed Survey and a Sight Distance Evaluation at the project site.

A Radar Speed Survey was conducted on August 31, 2020 at a single location along W. Washington Street between San Diego Avenue and India Street. This survey consisted of recording a vehicle sample of 50 vehicles pursuant to requirements of the California Vehicle Code that require the data to be collected with a radar device that meets or exceeds minimal standards of the National Traffic Highway Safety Administration, and which has been calibrated within the previous three (3) years. The data sample consisted of 50 vehicles traveling in the southwest-bound direction.

Please refer to **Attachment 2** for a summary of the Radar Speed Survey results.

As shown in **Attachment 2**, from the recorded sample of 50 vehicles, the 85th percentile speed was calculated at 28 miles per hour. Following the requirements of the California MUTCD, this speed was rounded up to 30 miles per hour for design purposes. After determining the calculated 85th percentile speed, USAI proceeded to evaluate the sight distance for the proposed project's driveways with regards to West Washington Street. The project does not propose to modify the location of the existing driveways with the proposed addition of hydrogen fueling equipment. However, the project would be responsible for reconstructing the driveways to meet current City standards. This sight distance evaluation is being conducted to verify that the existing driveways have adequate sight distance and provide any recommendations.

The *American Association of State Highway and Transportation Officials (AASHTO) A Policy on Geometric Design of Highways and Streets (6th Edition)*, otherwise known as the "*Green Book",* describes sight distance as "the length of the roadway ahead that is visible to the driver", for which sight distance should be the sufficient distance to enable a vehicle that is traveling at or near the design speed of the roadway to stop before reaching a stationary object in its path. Additionally, the sight distance to be provided should be as is described by the "*Green Book*" at least that needed for a below-average driver or vehicle to stop.

The Caltrans, Highway Design Manual (HDM) provides guidance related to sight distance. It should be noted that according to topic 205.3 of the HDM, "corner sight distance requirements are not applied to urban driveways". Nevertheless, it is prudent to investigate sight distance where possible as a best practice. As recommended by Table 405.1B of the HDM and topic 405.1, stopping sight distance is the appropriate standard to apply when determining sight distance for intersections. Stopping sight distance lengths are contained in table 201.1 of the HDM as shown in **Attachment 3**.

The HDM states, "at unsignalized intersections a substantially clear line of sight should be maintained between the driver of a vehicle, bicyclist or pedestrian stopped on the minor road and the driver of an approaching vehicle on the major road that has no stop. Line of sight for all users should be included in right of way, in order to preserve sight lines".

Considering the 85th percentile speed of 28 miles per hour resulting from the Radar Speed Survey, USAI rounded the 85th percentile speed up to 30 miles per hour as a conservative estimate and selected this speed as the stopping sight distance speed. Consequently, a stopping sight distance of 200 feet consistent with HDM guidelines as shown in **Attachment 3,** was selected to conduct sight distance observations. In addition, a sustained downgrade of 6%, ((90 ft -78ft) / (200 ft) = .06 = 6%) was noted in the southwest-bound direction. Therefore, consistent with HDM guidance, an additional 20% was added to the stopping sight distance noted above for a total of 240 feet. It should be noted that this sight distance concerns motor vehicles using the street.

Based on the guidance above, USAI staff proceeded to identify onsite the approximate location of the project driveways, and recorded images from the driveway locations to document the existing sight conditions onsite. USAI measured 240 feet at ground level for each direction along the major street from both of the proposed project driveway locations. The sight distance has been plotted on an aerial plan view as shown in **Attachment 4**. As shown, adequate sight distance exists at both driveways.

An additional driveway accessing the project site is located on San Diego Avenue. Field visits support the conclusion that the driveway on San Diego Avenue has no sight distance obstructions. Unlike W. Washington Street, no curve or hill exists obstructing sight distance. The driveway is located approximately 75' from the intersection at W. Washington and San Diego Avenue with no significant obstructions in the sight triangle as shown in the photograph below. In addition, San Diego Avenue is a one-way street with traffic controlled adjacent to the driveway at a signalized intersection. No significant grade is present impacting sight distance. As shown in the google earth measurement below, approximately 700' of sight distance is present before the street curves south of the project site. This distance should provide adequate stopping sight distance for speeds up to 65 miles per hour.

Driveway with San Diego Avenue

Google Earth Measurement of Available Sight Distance

Bicycle Considerations:

As shown in **Attachment 5**, SANDAG has prepared an Uptown Bikeways Plan which would create a cycle track along the project frontage and adjacent property along West Washington Street and is scheduled for construction in 2021. This plan would also result in enhanced pedestrian crossings and other features designed to protect active transportation users. The current plan would restrict parking along the adjacent frontage. As noted above, this is recommended to improve sight distance. Additionally, the plan would eliminate the southwestern driveway for the existing gas station. Unfortunately, this driveway closure is not feasible due to a variety of considerations further discussed below.

As shown in the site plan (**Attachment 1**), the project site is fairly constrained. The gasoline tanks are in the southwestern portion of the site and are best accessed by the southwest driveway on W. Washington Street and the driveway on San Diego Avenue. As shown in the truck turning exhibits (**Attachment 6**), trucks need both driveways to access the tanks as there is insufficient room onsite to turn around fully. Therefore, after pulling into the driveway on San Diego Avenue, a gasoline delivery truck must use the southwestern driveway on W. Washington street. Use of the northwestern driveway by such a truck is infeasible as the truck would either encroach on the proposed hydrogen equipment or existing parking spaces. Alternatively, if traveling along the street frontage side of the canopy, only nine feet of drive aisle width is available without interfering with vehicles at the gas pumps. A truck delivering gas could not adequately maneuver to utilize the northeastern driveway and must therefore use the southwest driveway on W. Washington Street. Therefore, it is recommended that both driveways on W. Washington Street be maintained.

Per the recommendations of the NACTO, Urban Bikeway Design Guide, it is recommended that signage be added onsite in the event the future cycle track is implemented. The Guide states, "Color, yield lines, and "Yield to Bikes" signage should be used to identify the conflict area and make it clear that the cycle track has priority over entering and exiting traffic".

Conclusion:

Urban Systems Associates, Inc. has reviewed the access and performed a sight distance analysis for the proposed project located at 1832 W. Washington Street along with plans for a future addition of hydrogen fueling equipment and future SANDAG plans for the Uptown Bikeways Plan. Field visits, speed surveys, truck turning templates and sight distance analysis have been completed as discussed above and shown in various attachments to this memo. Based on these reviews and analyses, it is recommended that all existing driveways be retained to support the existing gas station as allowed by existing permits and the Municipal Code. In addition, it is recommended that the Uptown Bikeways Plan be modified to account for the existing driveways. It is recommended that "yield to bikes" signage be added at project driveways to make clear priority and identify potential conflicts. The project does not impact visibility beyond existing conditions. Nevertheless, to improve visibility, it is suggested that the City evaluates on-street parking since these spaces will ultimately be removed with the implementation of the bike facility.

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Attachment 1

Project Site Plan

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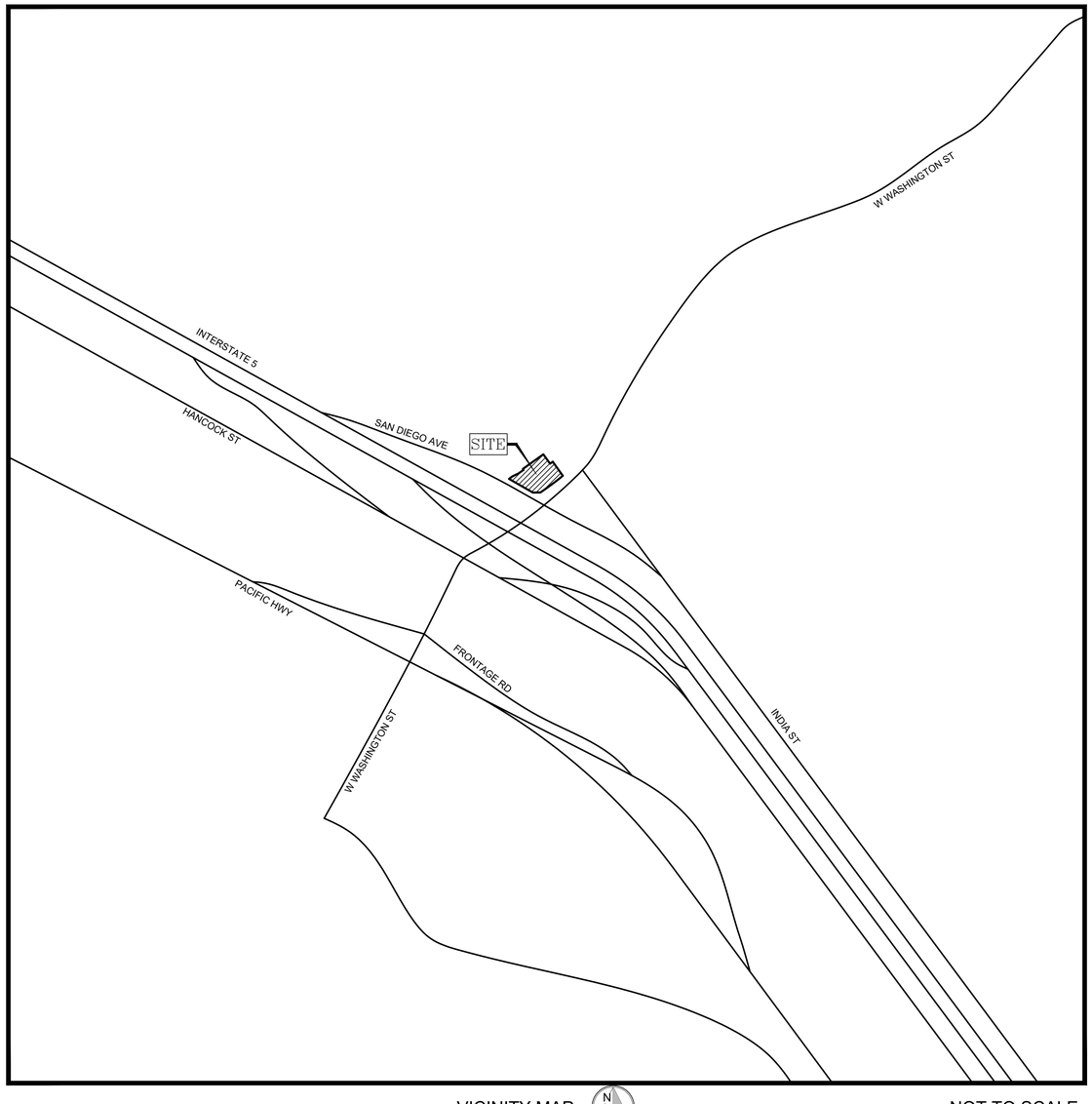
Provided on the following page in 11X17" format.

FEFUEL

HYDROGEN FUELING STATION

1832 W WASHINGTON ST
SAN DIEGO, CA 92103



VICINITY MAP N S NOT TO SCALE

PROJECT INFORMATION

PROJECT DESCRIPTION	EXISTING BUILDING, EXISTING SERVICE STATION, AND OVERALL SITE TO REMAIN AS IS. NEW WORK IS LIMITED TO PROPOSED PROJECT AREA FOR A. HYDROGEN EQUIPMENT B. HYDROGEN FUELING DISPENSERS DISCRETIONARY PERMIT REQUIRED FOR PROJECT: NEIGHBORHOOD USE PERMIT (NUP)
PROJECT ADDRESS	1832 W WASHINGTON ST SAN DIEGO, CA 92103
ASSESSOR PARCEL NUMBER	451-591-27
LEGAL DESCRIPTION	Real property in the City of San Diego, County of San Diego, State of California, described as follows: LOT 1 OF FAYMAN SUBDIVISION, IN THE CITY OF SAN DIEGO, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 5787, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, SEPTEMBER 28, 1966. APN: 451-591-27-00
ZONE	CC-3-6 - COMMUNITY COMMERCIAL
OVERLAY DISTRICT	TRANSIT AREA OVERLAY (TAOZ), AIRPORT APPROACH OVERLAY (AAOZ), TRANSIT PRIORITY AREA (TPA), & AIRPORT INFLUENCE AREA (AIA)
LANDSCAPE AREA	EXISTING: 4,479 SF (22%) PROPOSED: 4,144 SF (20%)
SITE AREA	GROSS SITE AREA: 20,536 SF (0.47 AC) FLOOR AREA: 1,202 SF FAR: 0.06
LAND USE	EXISTING: SERVICE STATION & CONVENIENCE STORE PROPOSED: SERVICE STATION & CONVENIENCE STORE

DRAWING INDEX

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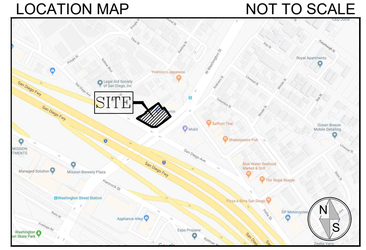
TEL: 559 276-2790 FAX: 559 276-0850 WWW.LARSANDERSEN.COM

LOCATION MAP NOT TO SCALE



PROJECT INFORMATION

FIRST ELEMENT FUEL INC.
Dave Jordaan
Director of Projects and Construction
https://www.firstelementfuel.com/
(714) 720-5472
dave.jordaan@firstelementfuel.com
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Irvine, CA 92617

I&D CONSULTING
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3004 Yale Ave.
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(858) 442-1207

LARS ANDERSEN & ASSOCIATES
Daniel Zoldak
4694 West Jacquelyn Avenue
Fresno, California 93722
DZoldak@larsandersen.com
(559) 276-2790 x117

SITE PLAN NOTES:

REVISION NOTES:

TITLE SHEET

DATE: 03/04/2020
REVISION DATES:

SITE PLANNER DEREK FINNEGAN

FEFUEL

5281 California Avenue,
#260
Irvine, CA 92617

FEF - SAN DIEGO

ADDRESS: 1832 W WASHINGTON ST SAN DIEGO, CA 92103

LA PROJECT NUMBER 19187

NOTES

1. There are no existing hydrants within or abutting the property.
2. There are no transit stops adjacent to the property.

EXISTING C-STORE

EXISTING 6' RETAINING WALL

10.0 REAR SETBACK

S54°26'35"W 109.64'

22.5

N35°34'51"W 30.16'

EXISTING TREE TO BE REMOVED

S54°26'09"W 14.52'

PORTION OF EXISTING FENCE TO BE REMOVED

EXISTING TRASH ENCLOSURE TO REMAIN

9.8

10.1

59.1

13.2

20.2

EXISTING TREE TO BE REMOVED

N35°36'25"W 79.39'

10.0 REAR SETBACK

EXISTING TREE TO REMAIN (TYP.)

(2) EXISTING PARKING STALLS TO BE REMOVED

S37°09'43"E 5.00'

S54°26'35"W 27.50'

S64°44'53"W 27.56'

S54°26'35"W 19.74'

30.0

EXISTING CANOPY

15.0 GAS LINE EASEMENT

SEWER EASEMENT

EXISTING ADA STALL TO REMAIN

14.5

8.6

EXISTING ACCESSIBLE PATH OF TRAVEL

EXISTING AIR & WATER

EXISTING GAS STATION TRANSFORMER TO REMAIN

EXISTING UNDERGROUND STORAGE TANKS

EXISTING FUEL DISPENSERS TO REMAIN

26.2

18.0

EXISTING SIGN

12.0 POWER LINE EASEMENT

10.0 FRONT SETBACK

S60°12'35"E 120.11'

38.2

15.0 GAS LINE EASEMENT

10.0 FRONT SETBACK

N64°51'34"E 58.18'

36.7

N89°11'23"E 33.12'

Δ=42.35°, R=77.50', L=63.41'

34.9

SAN DIEGO AVE

W WASHINGTON ST

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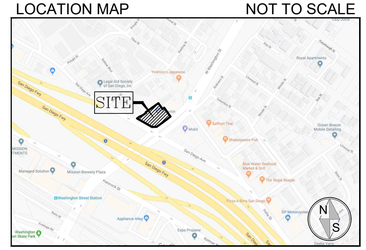
LOCATION MAP NOT TO SCALE



PROJECT INFORMATION

SITE PLAN NOTES:

REVISION NOTES:

EXISTING SITE PLAN

03/04/2020

REVISION DATES:

SITE PLANNER DEREK FINNEGAN

FEFUEL

5281 California Avenue,
#260
Irvine, CA 92617

FEF - SAN DIEGO

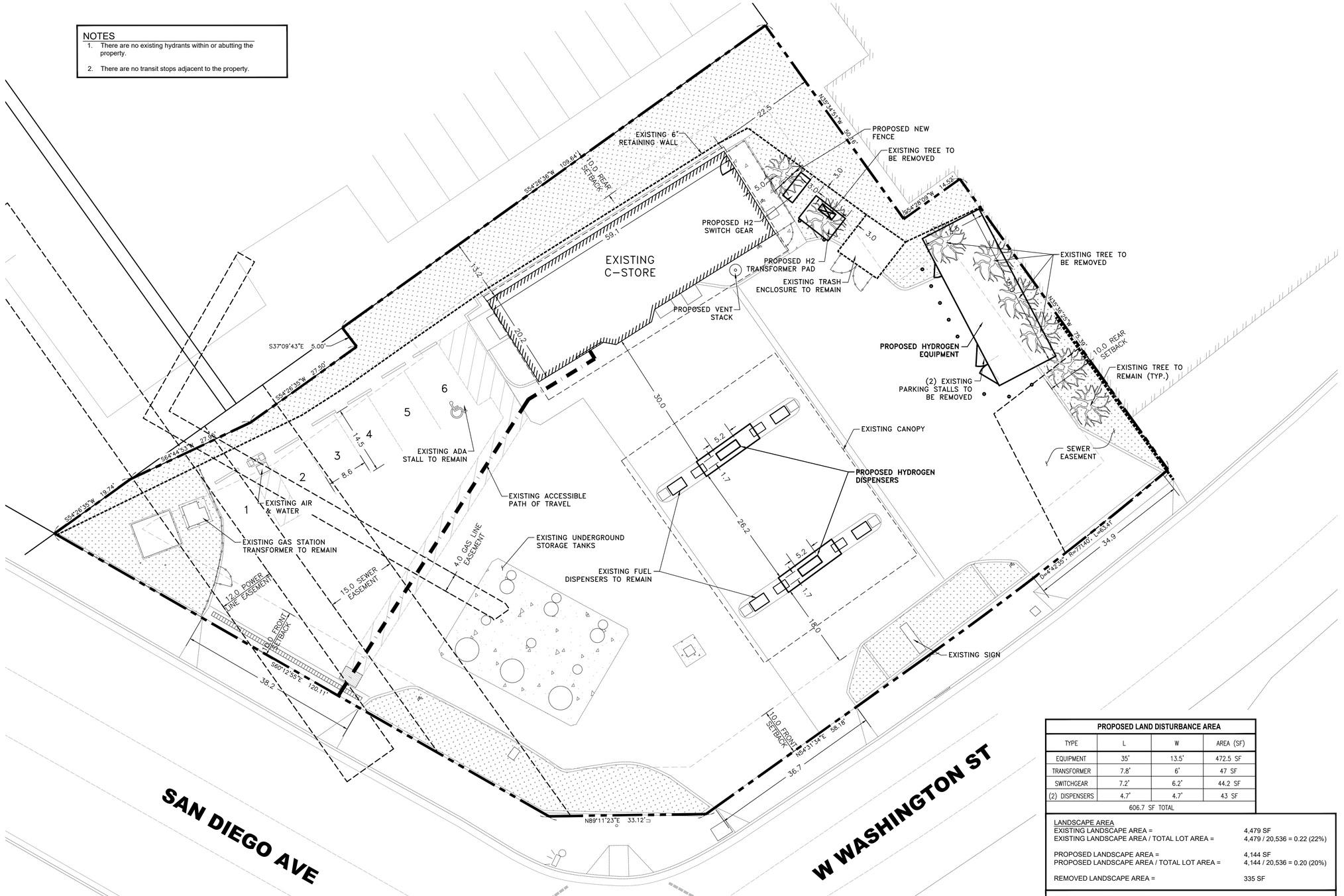
ADDRESS: 1832 W WASHINGTON ST SAN DIEGO, CA 92103

LA PROJECT NUMBER 19187

N W E S

0' 10' 20'
SCALE 1"=10'

NOTES
1. There are no existing hydrants within or abutting the property.
2. There are no transit stops adjacent to the property.



PROPOSED LAND DISTURBANCE AREA			
TYPE	L	W	AREA (SF)
EQUIPMENT	35'	13.5'	472.5 SF
TRANSFORMER	7.8'	6'	47 SF
SWITCHGEAR	7.2'	6.2'	44.2 SF
(2) DISPENSERS	4.7'	4.7'	43 SF
606.7 SF TOTAL			

LANDSCAPE AREA
EXISTING LANDSCAPE AREA = 4,479 SF
EXISTING LANDSCAPE AREA / TOTAL LOT AREA = 4,479 / 20,536 = 0.22 (22%)

PROPOSED LANDSCAPE AREA = 4,144 SF
PROPOSED LANDSCAPE AREA / TOTAL LOT AREA = 4,144 / 20,536 = 0.20 (20%)

REMOVED LANDSCAPE AREA = 335 SF

PERVIOUS / IMPERVIOUS AREA
EXISTING PERVIOUS AREA = 4,479 SF (22%) LOT AREA
EXISTING IMPERVIOUS AREA = 16,057 SF (78%) LOT AREA

PROPOSED PERVIOUS AREA = 4,144 SF (20%) LOT AREA
PROPOSED IMPERVIOUS AREA = 16,392 SF (80%) LOT AREA

NOTE:
EXISTING BUILDING, EXISTING SERVICE STATION AND OVERALL SITE TO REMAIN AS IS.

NEW WORK IS LIMITED TO PROPOSED PROJECT AREA FOR
A. HYDROGEN EQUIPMENT
B. HYDROGEN FUELING DISPENSERS

HYDROGEN DISPENSERS
HYDROGEN DISPENSERS ARE ADA COMPLIANT WITH HOSES, CONTROLS & CARD READERS NO MORE THAN 48" MAX HEIGHT WITH A 30" X 48" CLEAR SPACE, SEE SHEET 4 FOR DISPENSER 3D IMAGE.

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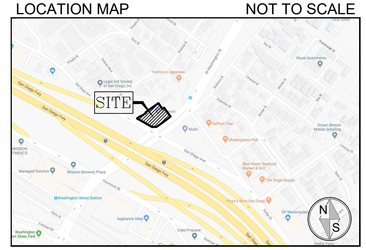
LOCATION MAP NOT TO SCALE



PROJECT INFORMATION

ZONING INFORMATION
JURISDICTION: CITY OF SAN DIEGO
ZONING: CC-3-6 - COMMUNITY COMMERCIAL
451-591-27

SITE AREA
LOT AREA 20,536 SF (0.47 AC)

BUILDING DATA
EXISTING BUILDING AREA 1,202 SF
PROPOSED BUILDING AREA (NO CHANGE) 1,202 SF

SETBACKS	NORTH	EAST	SOUTH	WEST
REQUIRED:	10'	10'	10'	10'
PROVIDED:	13.2'	22.5'	91.6'	68.5'

PARKING SUMMARY

EXISTING PARKING SUMMARY
EXISTING PARKING PROVIDED 8 STALLS

PARKING REQUIRED PER CITY CODE
REQUIRED C-STORE (@ 3/1000 SF GFA + 3 SP
- 15% REDUCTION FOR TRANSIT PRIORITY AREA) 6 STALLS

PROPOSED PARKING SUMMARY
PROPOSED PARKING PROVIDED 6 STALLS

SITE PLAN NOTES:

REVISION NOTES:

PROPOSED SITE PLAN

03/04/2020
REVISION DATES:

SITE PLANNER DEREK FINNEGAN

FEFUEL
5281 California Avenue, #260
Irvine, CA 92617

FEF - SAN DIEGO

ADDRESS: 1832 W WASHINGTON ST SAN DIEGO, CA 92103

LA PROJECT NUMBER 19187

0' 10' 20'
SCALE 1"=10'

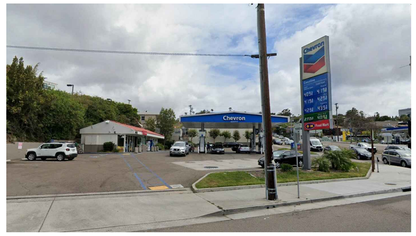


PHOTO 1: VIEW OF THE EXISTING SERVICE STATION LOOKING EAST FROM SAN DIEGO AVE.

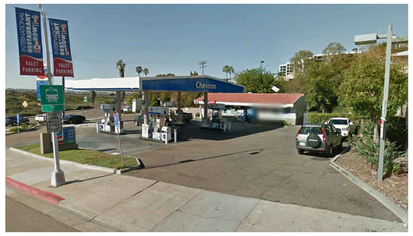


PHOTO 2: VIEW OF THE EXISTING SERVICE STATION LOOKING WEST FROM WASHINGTON ST.

PHOTO 3: PROPOSED EQUIPMENT LOCATION ALONG EAST PROPERTY LINE.

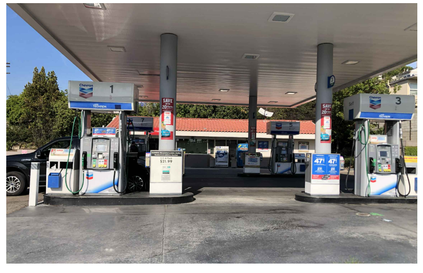
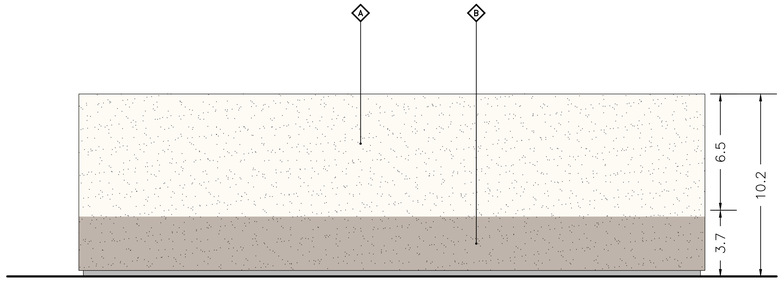
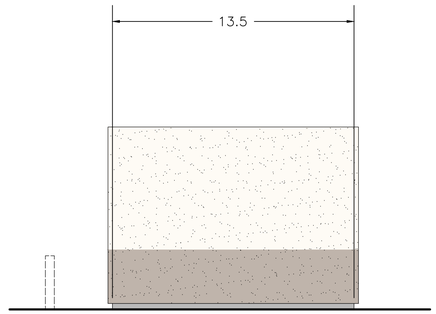


PHOTO 4: PROPOSED DISPENSER LOCATIONS UNDER CANOPY ON MIDDLE POSITIONS.

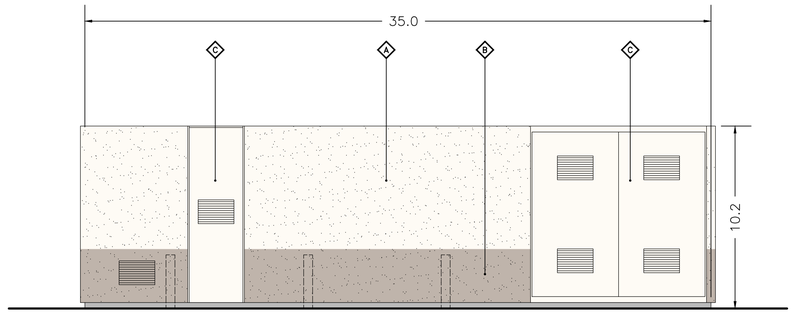
PHOTO 5: PROPOSED VENT STACK LOCATION



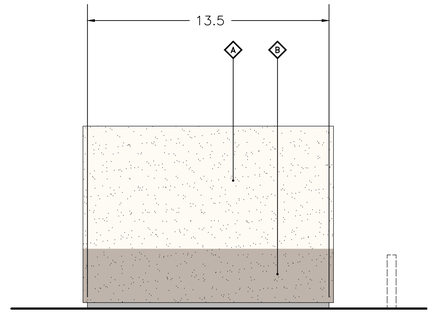
REAR ELEVATION



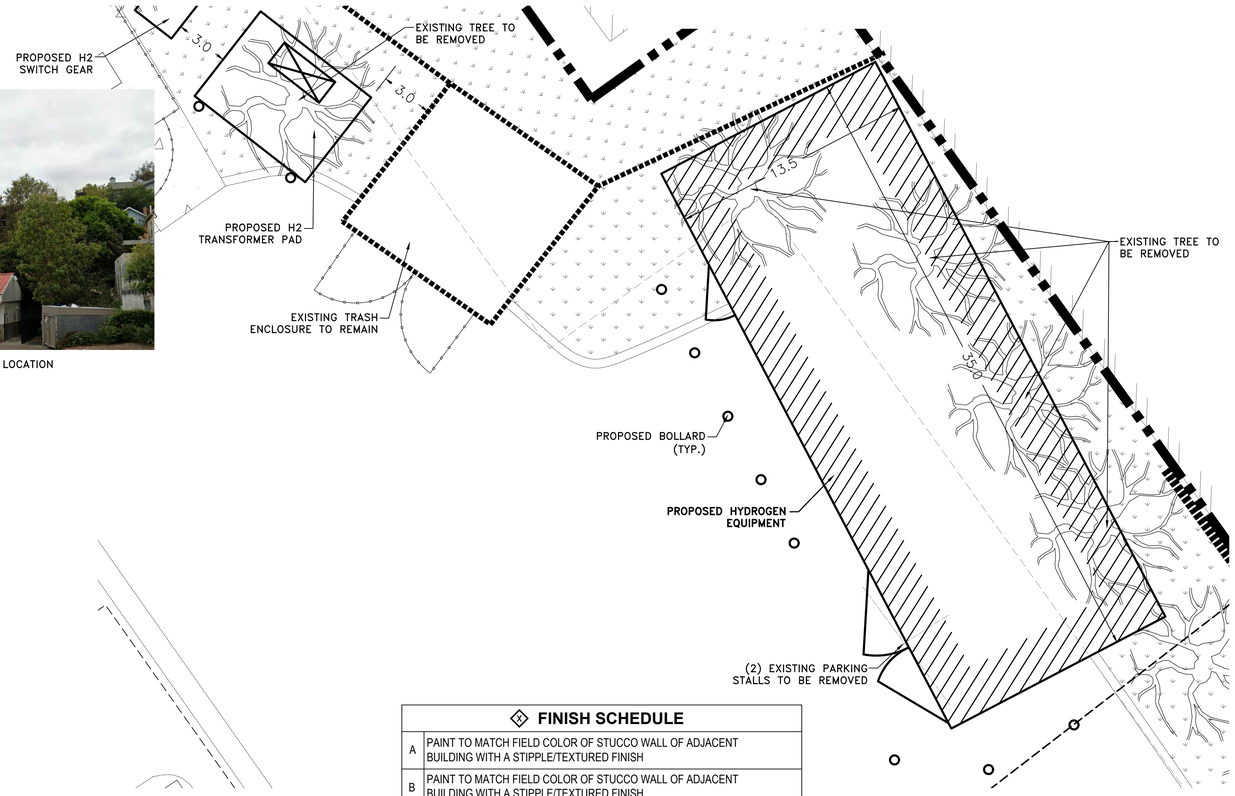
SIDE ELEVATION



FRONT ELEVATION



SIDE ELEVATION



◇ FINISH SCHEDULE	
A	PAINT TO MATCH FIELD COLOR OF STUCCO WALL OF ADJACENT BUILDING WITH A STIPPLE/TEXTURED FINISH
B	PAINT TO MATCH FIELD COLOR OF STUCCO WALL OF ADJACENT BUILDING WITH A STIPPLE/TEXTURED FINISH
C	EXPOSED METAL DOOR, LOUVER & FRAME TO BE PAINTED TO MATCH MATERIAL A

HYDROGEN DISPENSER DESIGN

N.T.S. | 17

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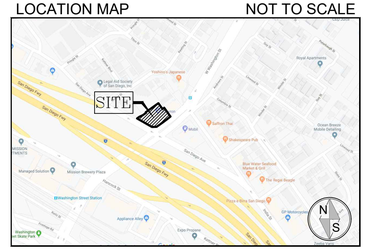
LOCATION MAP NOT TO SCALE



SITE PLAN NOTES:

REVISION NOTES:

ELEVATIONS

03/04/2020

REVISION DATES:

SITE PLANNER DEREK FINNEGAN

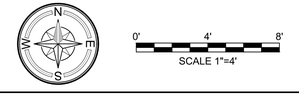
FEFUEL

5281 California Avenue,
#260
Irvine, CA 92617

FEF - SAN DIEGO

ADDRESS: 1832 W WASHINGTON ST SAN DIEGO, CA 92103

LA PROJECT NUMBER 19187



Attachment 2

Radar Speed Survey Results

Speed Survey

Speed Ranges	Number of Vehicles	Percent of Total	Percent Accumulation
10	0	0%	0%
11	3	6%	6%
12	0	0%	6%
13	0	0%	6%
14	1	2%	8%
15	4	8%	16%
16	1	2%	18%
17	2	4%	22%
18	3	6%	28%
19	5	10%	38%
20	3	6%	44%
21	2	4%	48%
22	3	6%	54%
23	3	6%	60%
24	3	6%	66%
25	4	8%	74%
26	2	4%	78%
27	3	6%	84%
28	3	6%	90%
29	1	2%	92%
30	1	2%	94%
31	0	0%	94%
32	0	0%	94%
33	2	4%	98%
34	0	0%	98%
35	1	2%	100%
36	0	0%	100%
37	0	0%	100%
38	0	0%	100%
39	0	0%	100%
40	0	0%	100%
41	0	0%	100%
42	0	0%	100%
43	0	0%	100%
44	0	0%	100%
45	0	0%	100%
46	0	0%	100%
47	0	0%	100%
48	0	0%	100%
49	0	0%	100%
50	0	0%	100%
51	0	0%	100%
52	0	0%	100%
53	0	0%	100%
54	0	0%	100%
55	0	0%	100%
56	0	0%	100%
57	0	0%	100%
58	0	0%	100%
59	0	0%	100%
60	0	0%	100%
61	0	0%	100%
62	0	0%	100%
63	0	0%	100%
64	0	0%	100%
65	0	0%	100%
Total Vehicles	50		

Recorder: Anthony Abalos

Location:

W. Washington St. (India St. to San Diego Ave.)

Approach:

WB

Surface:

Dry

Weather:

Sunny

Date:

8/31/2020

Time:

11:44 A.M. - 12:29 P.M.

Survey Statistics:

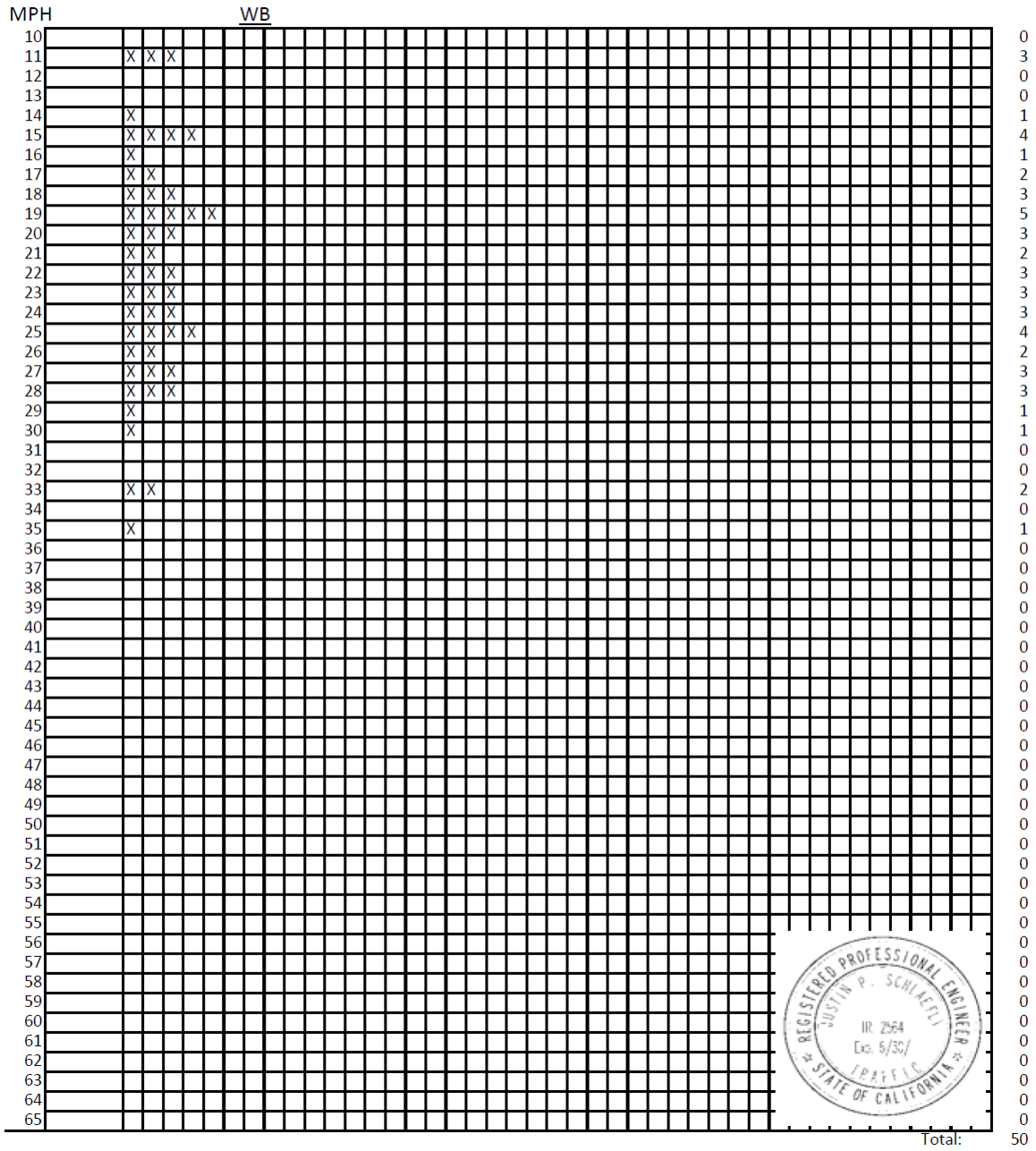
Posted Speed:	25	MPH
Average Speed:	22	MPH
Median Speed: (50th Percentile)	22	MPH
Modal Speed:	19	MPH
85th Percentile Speed:	28	MPH
10 MPH Pace:	18 - 27	MPH
Percent in Pace:	62%	

Comments:

Location: W. Washington St. (India St. to San Diego Ave.) Approach: WB Surface: Dry

Date: 8/31/2020 Time: 11:44 A.M. - 12:29 P.M. Weather: Sunny

Posted Speed: 25 Recorder: Anthony Abalos



Attachment 3

Highway Design Manual Excerpts

Table 201.1

Sight Distance Standards

Design Speed (mph)[1]	Stopping (ft)[2]	Passing (ft)
10	50	---
15	100	---
20	125	800
25	150	950
30	200	1,100
35	250	1,300
40	300	1,500
45	360	1,650
50	430	1,800
55	500	1,950
60	580	2,100
65	660	2,300
70	750	2,500
75	840	2,600
80	930	2,700

Notes:

[1]See Topic 101 for selection of design speed.

[2]For sustained downgrades, refer to underlined standard in Index 201.3

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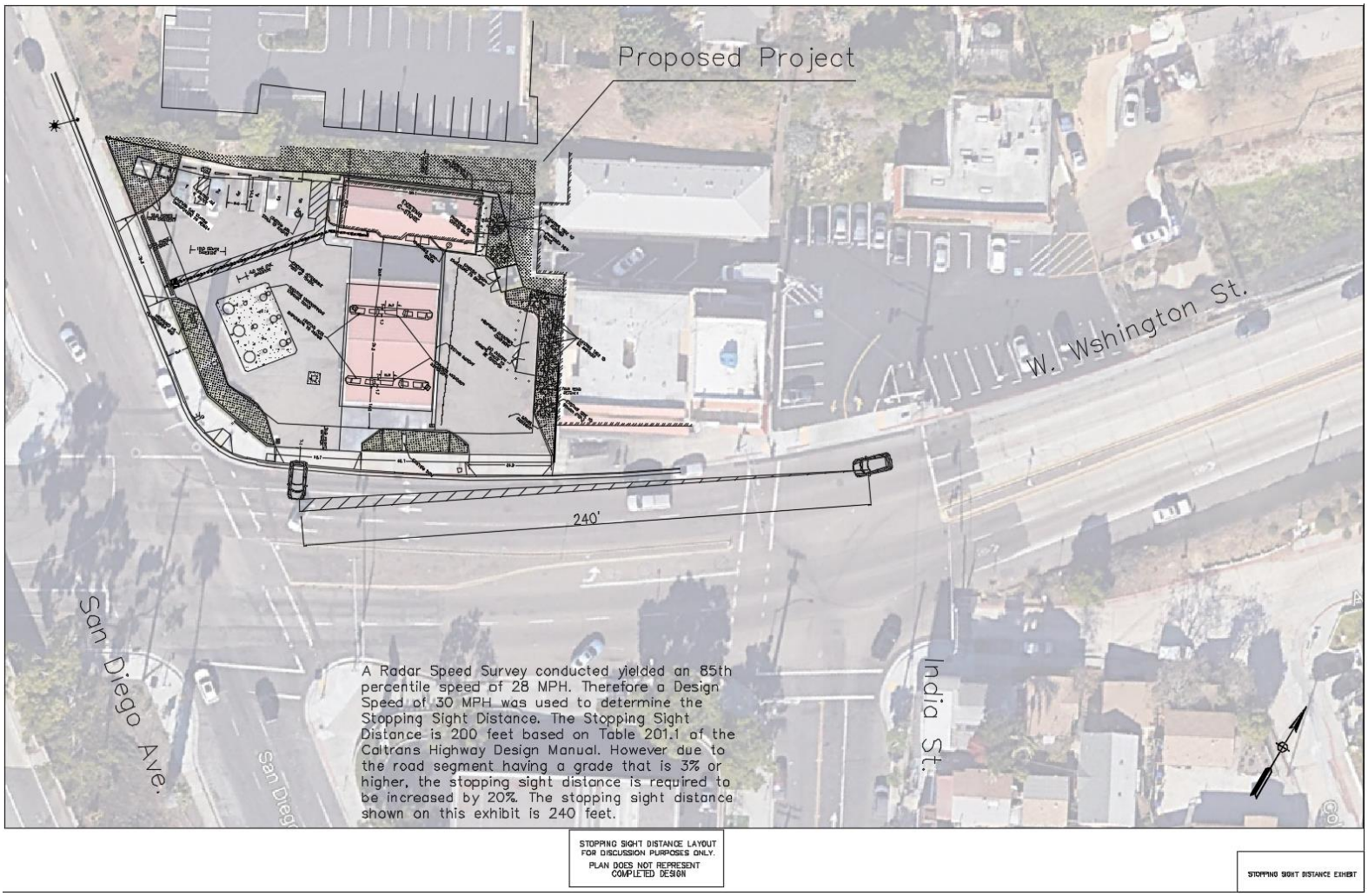
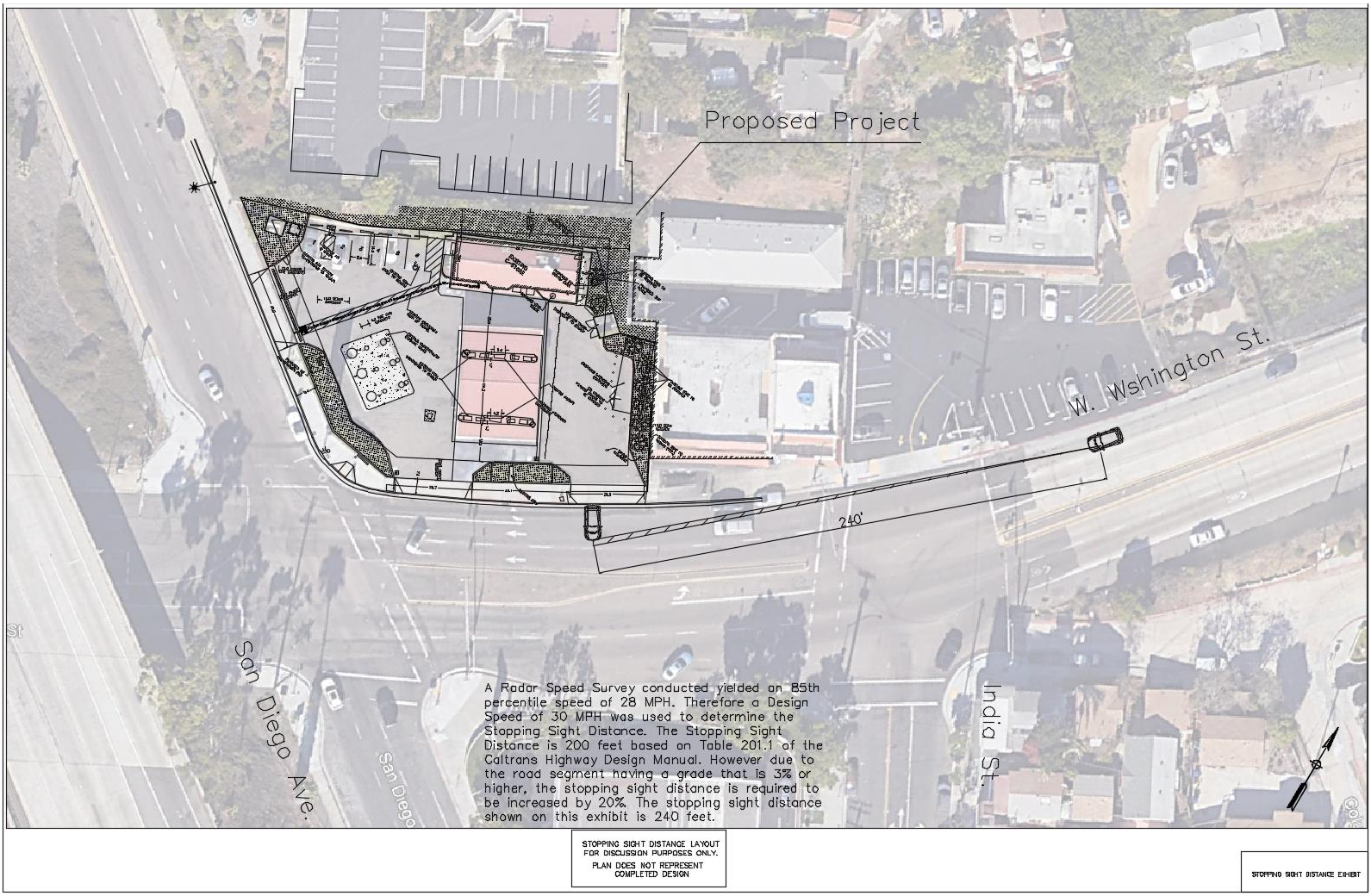
Attachment 4

Stopping Sight Distance Exhibit




Proposed Project
W. Wshington St.
240'
San Diego Ave.
India St.
A Radar Speed Survey conducted yielded an 85th percentile speed of 28 MPH. Therefore a Design Speed of 30 MPH was used to determine the Stopping Sight Distance. The Stopping Sight Distance is 200 feet based on Table 201.1 of the Caltrans Highway Design Manual. However due to the road segment having a grade that is 3% or higher, the stopping sight distance is required to be increased by 20%. The stopping sight distance shown on this exhibit is 240 feet.
STOPPING SIGHT DISTANCE LAYOUT FOR DISCUSSION PURPOSES ONLY. PLAN DOES NOT REPRESENT COMPLETED DESIGN
STOPPING SIGHT DISTANCE EXHIBIT

Attachment 5

SANDAG Uptown Bikeways Plan

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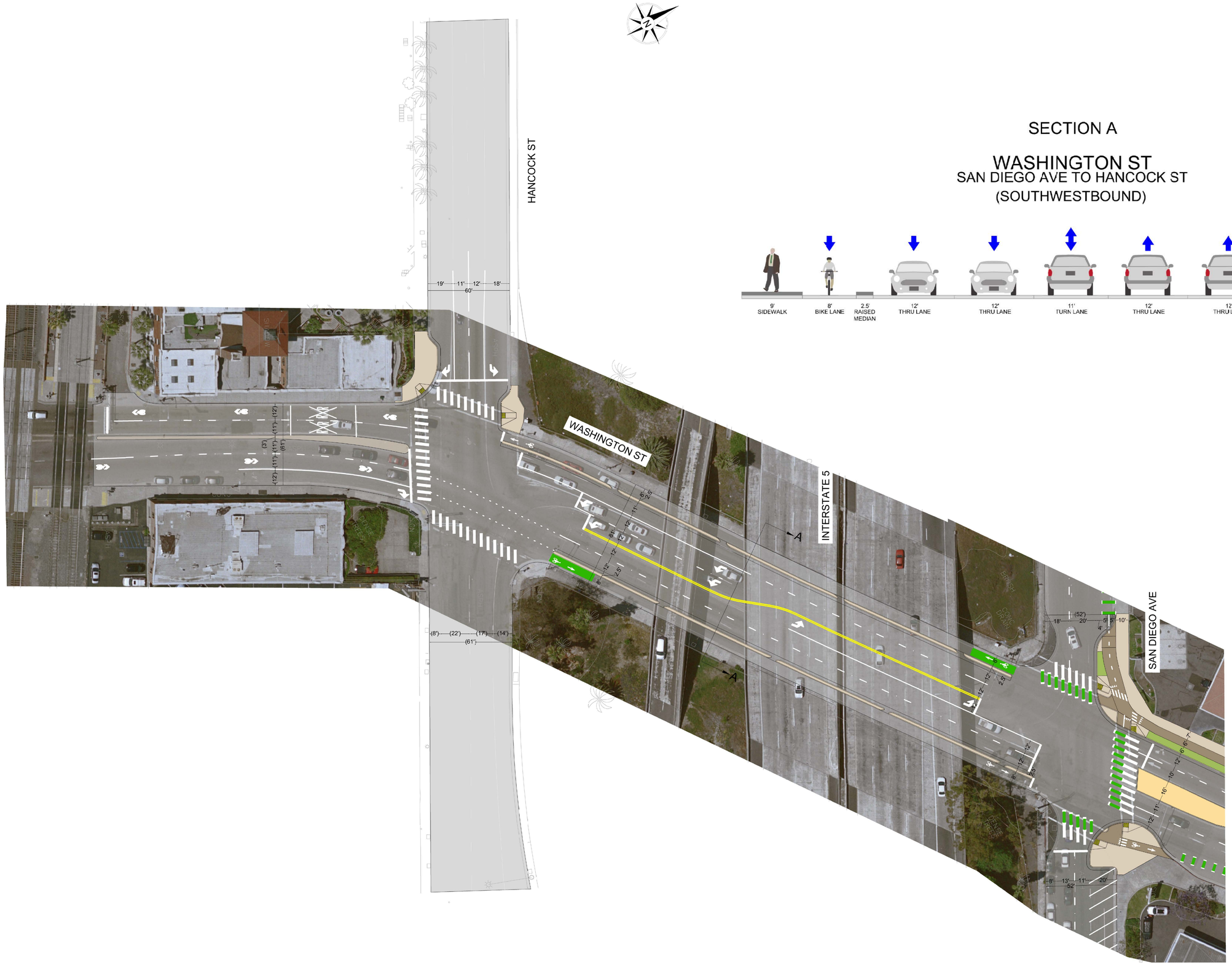
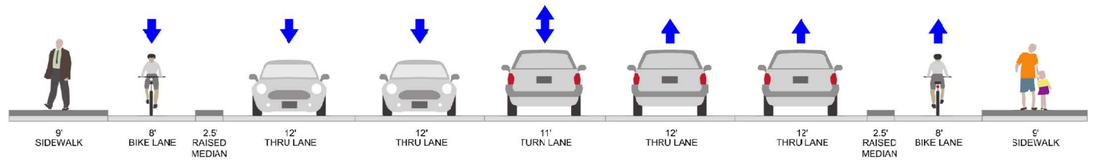
Provided on the following pages in 11X17" format.



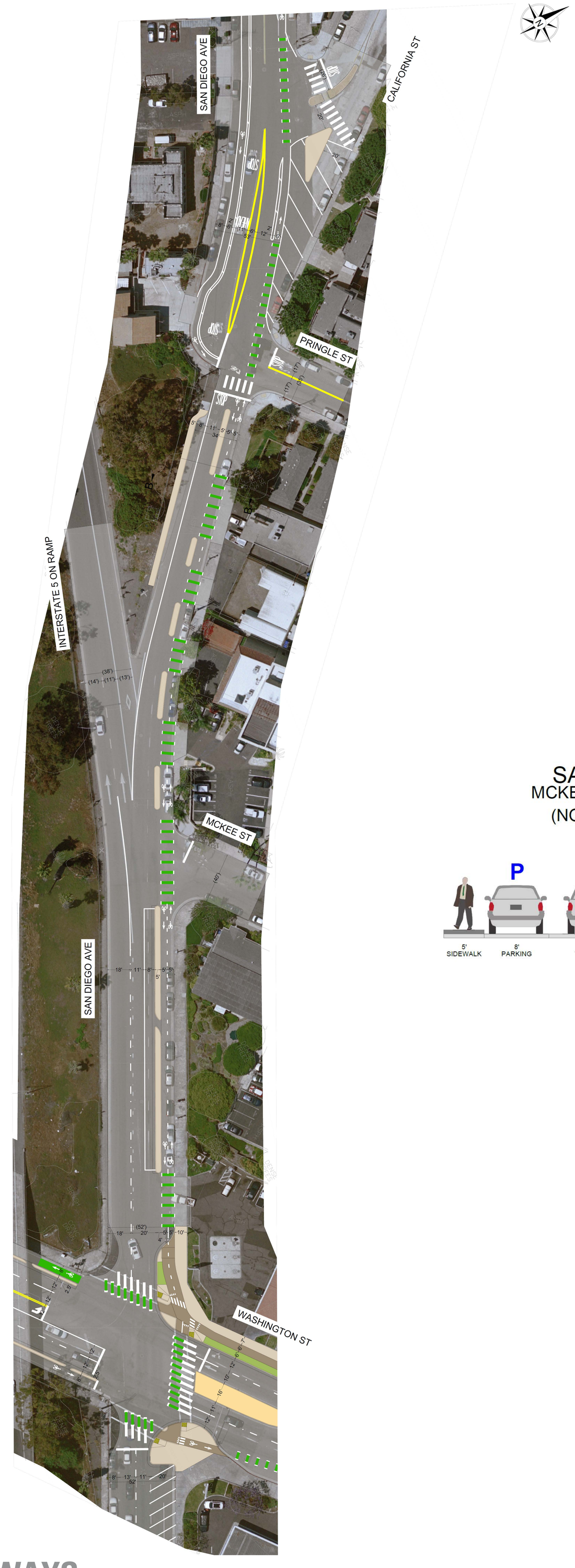
SECTION A

WASHINGTON ST
SAN DIEGO AVE TO HANCOCK ST
(SOUTHWESTBOUND)



CONCEPTUAL LAYOUT

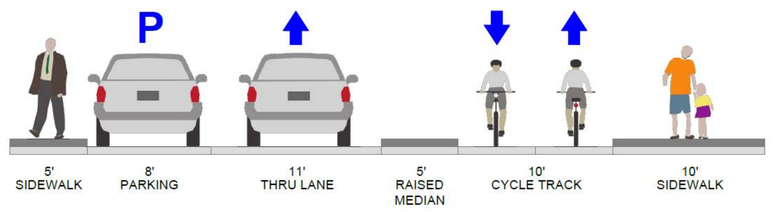
SAN DIEGO AVENUE – CALIFORNIA STREET TO WASHINGTON STREET



SECTION B

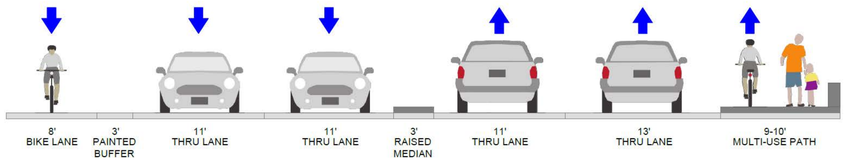
SAN DIEGO AVE
MCKEE ST TO PRINGLE ST

(NORTHWESTBOUND)



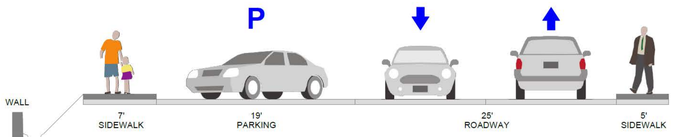
SECTION D

WASHINGTON ST
INDIA ST TO IBIS ST
(NORTHEASTBOUND)

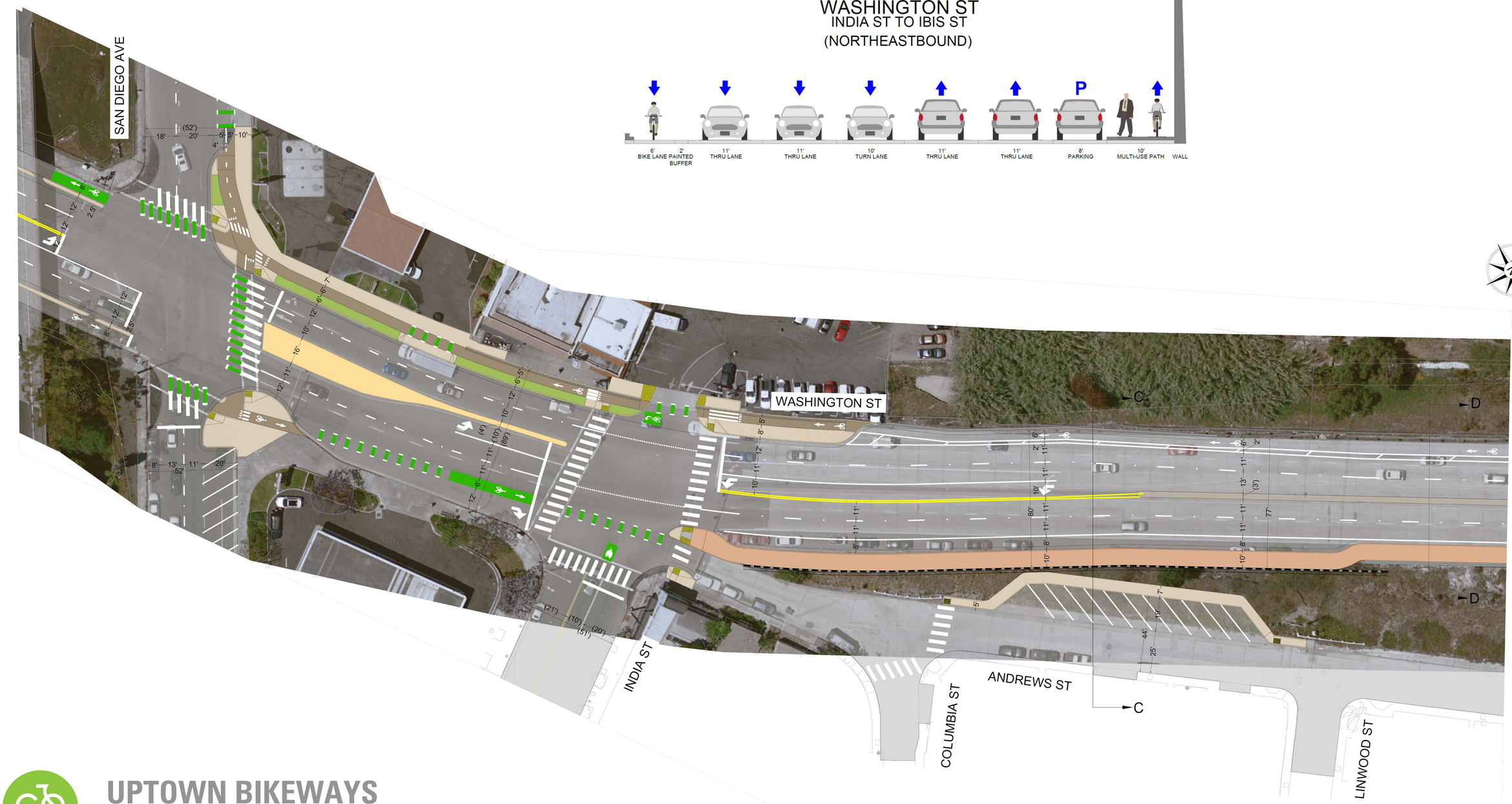


SECTION C

ANDREWS ST
COLUMBIA ST TO LINWOOD ST
(NORTHEASTBOUND)



WASHINGTON ST
INDIA ST TO IBIS ST
(NORTHEASTBOUND)



Attachment 6

Truck Turning Exhibits

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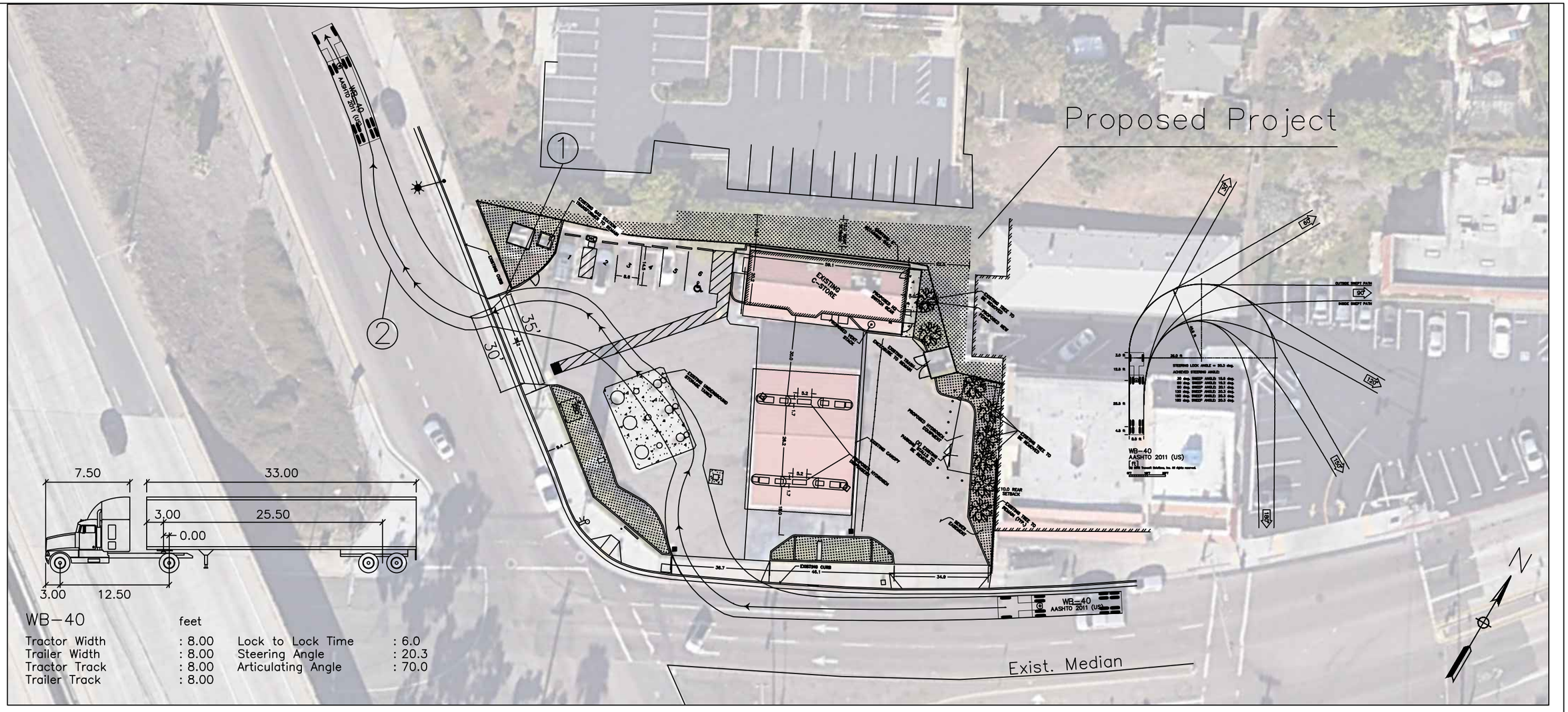


WB–40 feet

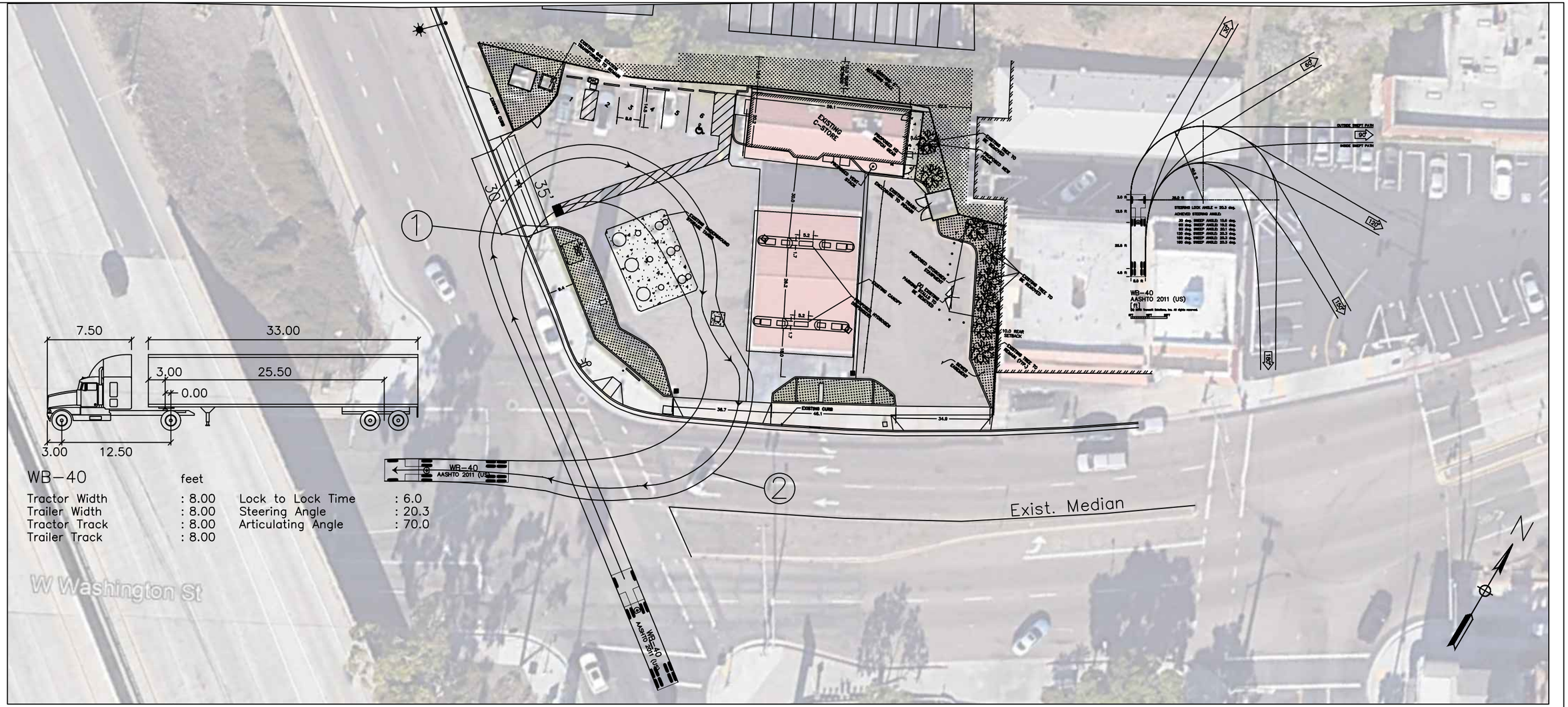
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.00	Steering Angle	: 20.3
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.00		

LOCATION	ISSUE
1	TRUCK UNABLE TO CLEAR 35' AND 30' DRIVEWAY
2	TRUCK FORCED TO TURN INTO SECOND LANE

TRUCK TURNING TEMPLATE LAYOUT FOR DISCUSSION PURPOSES ONLY.
PLAN DOES NOT REPRESENT COMPLETED DESIGN

1832 WASHINGTON ST.

G:\Shared drives\Projects\001520–1832 W Washington\Truck Turning Template\030921–1832 W Washington St–Truck Turning Template.dwg Mar 09, 2021 AAbalos



WB–40 feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.00	Steering Angle	: 20.3
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.00		

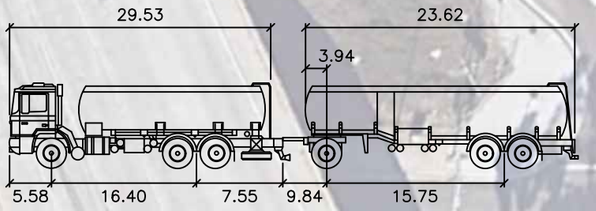
LOCATION	ISSUE
1	TRUCK CAN CLEAR 35' DRWY. BUT HITS CURB
2	TRUCK FORCED TO TURN INTO THIRD LANE

TRUCK TURNING TEMPLATE LAYOUT FOR DISCUSSION PURPOSES ONLY.
PLAN DOES NOT REPRESENT COMPLETED DESIGN

1832 WASHINGTON ST.

G:\Shared drives\Projects\001520–1832 W Washington\Truck Turning Template\030921–1832 W Washington St–Truck Turning Template.dwg Mar 09, 2021 AAbalos

Proposed Project



LWA
feet

First Unit Width	: 8.20	Lock to Lock Time	: 6.0
Trailer Width	: 8.20	Steering Angle	: 41.8
First Unit Track	: 7.22	Articulating Angle	: 90.0
Trailer Track	: 7.22		

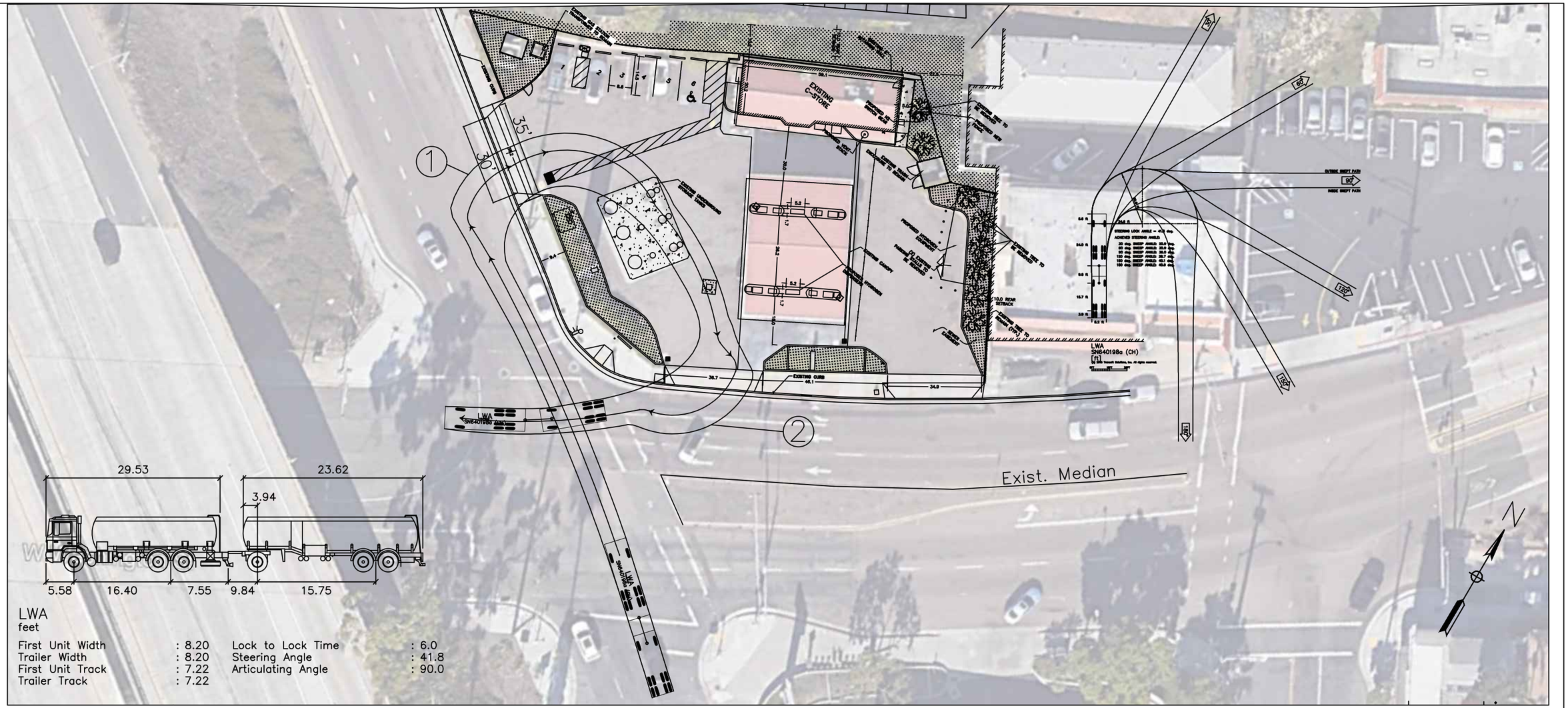
Exist. Median

LOCATION	ISSUE
1	TRUCK UNABLE TO CLEAR 35' AND 30' DRWY.
2	TRUCK FORCED TO TURN INTO SECOND LANE

TRUCK TURNING TEMPLATE LAYOUT
FOR DISCUSSION PURPOSES ONLY.
PLAN DOES NOT REPRESENT
COMPLETED DESIGN

1832 WASHINGTON ST.

G:\Shared drives\Projects\001520-1832 W Washington\Truck Turning Template\030921-1832 W Washington St-Truck Turning Template.dwg Mar 09, 2021 AAbalos



LWA
feet

First Unit Width	: 8.20	Lock to Lock Time	: 6.0
Trailer Width	: 8.20	Steering Angle	: 41.8
First Unit Track	: 7.22	Articulating Angle	: 90.0
Trailer Track	: 7.22		

LOCATION	ISSUE
1	TRUCK UNABLE TO CLEAR 35' AND 30' DRWY.
2	TRUCK FORCED TO TURN INTO SECOND LANE

TRUCK TURNING TEMPLATE LAYOUT
FOR DISCUSSION PURPOSES ONLY.
PLAN DOES NOT REPRESENT
COMPLETED DESIGN

1832 WASHINGTON ST.

G:\Shared drives\Projects\001520-1832 W Washington\Truck Turning Template\030921-1832 W Washington St-Truck Turning Template.dwg Mar 09, 2021 AAbalos

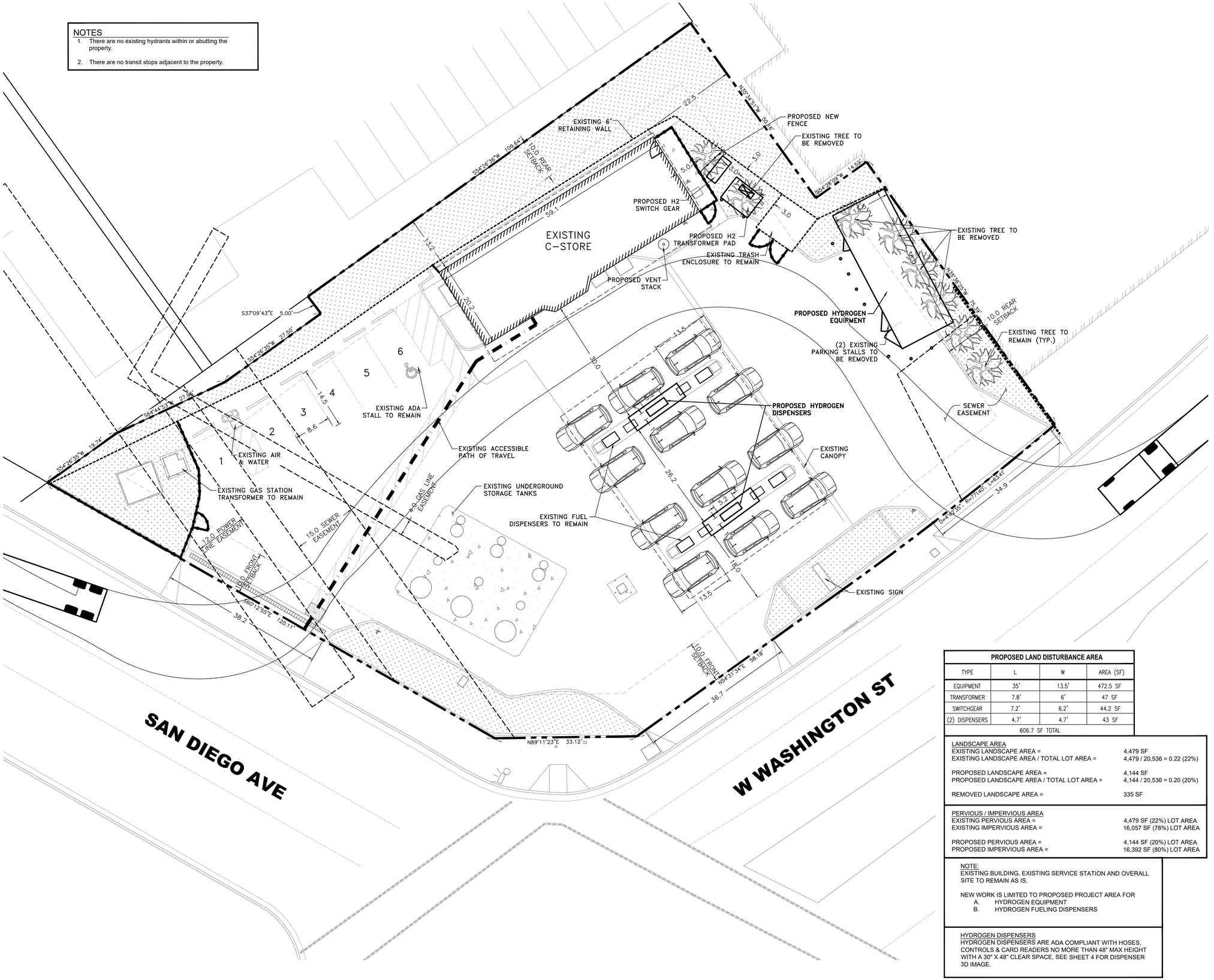
Hydrogen Delivery Truck Proposed Path of Travel for Refilling Hydrogen Storage Tanks

Page is left intentionally blank. Please see the following exhibit for the Hydrogen Delivery Truck Proposed Path of Travel.

8451 Miralani Drive, Suite A • San Diego, CA 92126 • (858) 560-4911

NOTES

1. There are no existing hydrants within or abutting the property.
2. There are no transit stops adjacent to the property.



PROPOSED LAND DISTURBANCE AREA			
TYPE	L	W	AREA (SF)
EQUIPMENT	35'	13.5'	472.5 SF
TRANSFORMER	7.8'	6'	47 SF
SWITCHGEAR	7.2'	6.2'	44.2 SF
(2) DISPENSERS	4.7'	4.7'	43 SF
606.7 SF TOTAL			

LANDSCAPE AREA

EXISTING LANDSCAPE AREA =	4,479 SF
EXISTING LANDSCAPE AREA / TOTAL LOT AREA =	4,479 / 20,536 = 0.22 (22%)
PROPOSED LANDSCAPE AREA =	4,144 SF
PROPOSED LANDSCAPE AREA / TOTAL LOT AREA =	4,144 / 20,536 = 0.20 (20%)
REMOVED LANDSCAPE AREA =	335 SF

PERVIOUS / IMPERVIOUS AREA

EXISTING PERVIOUS AREA =	4,479 SF (22%) LOT AREA
EXISTING IMPERVIOUS AREA =	16,057 SF (78%) LOT AREA
PROPOSED PERVIOUS AREA =	4,144 SF (20%) LOT AREA
PROPOSED IMPERVIOUS AREA =	16,392 SF (80%) LOT AREA

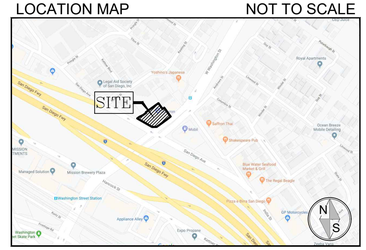
NOTE:
EXISTING BUILDING, EXISTING SERVICE STATION AND OVERALL SITE TO REMAIN AS IS.

NEW WORK IS LIMITED TO PROPOSED PROJECT AREA FOR
A. HYDROGEN EQUIPMENT
B. HYDROGEN FUELING DISPENSERS

HYDROGEN DISPENSERS
HYDROGEN DISPENSERS ARE ADA COMPLIANT WITH HOSES, CONTROLS & CARD READERS NO MORE THAN 48" MAX HEIGHT WITH A 30" X 48" CLEAR SPACE, SEE SHEET 4 FOR DISPENSER 3D IMAGE.

LARS ANDERSEN & ASSOCIATES, INC.
CIVIL ENGINEERS - LAND SURVEYORS - PLANNERS
4694 WEST JACQUELYN AVENUE – FRESNO CALIFORNIA 93722
TEL: 559 276-2790 FAX: 559 276-0850 WWW.LARSANDERSEN.COM

LOCATION MAP NOT TO SCALE



PROJECT INFORMATION

ZONING INFORMATION

JURISDICTION:	451-591-27 CITY OF SAN DIEGO
ZONING:	CC-3-6 - COMMUNITY COMMERCIAL

SITE AREA

LOT AREA	20,536 SF (0.47 AC)

BUILDING DATA

EXISTING BUILDING AREA	1,202 SF
PROPOSED BUILDING AREA (NO CHANGE)	1,202 SF

SETBACKS	NORTH	EAST	SOUTH	WEST
REQUIRED:	10'	10'	10'	10'
PROVIDED:	13.2'	22.5'	91.6'	68.5'

PARKING SUMMARY

EXISTING PARKING SUMMARY

EXISTING PARKING PROVIDED	8 STALLS

PARKING REQUIRED PER CITY CODE

REQUIRED C-STORE (@ 3/1000 SF GFA + 3 SP - 15% REDUCTION FOR TRANSIT PRIORITY AREA)	6 STALLS

PROPOSED PARKING SUMMARY

PROPOSED PARKING PROVIDED	6 STALLS

SITE PLAN NOTES:

REVISION NOTES:

PROPOSED SITE PLAN

4/23/2020

REVISION DATES:

SITE PLANNER DEREK FINNEGAN

FEFUEL

5281 California Avenue,
#260
Irvine, CA 92617

FEF - SAN DIEGO

ADDRESS: 1832 W WASHINGTON ST SAN DIEGO, CA 92103

LA PROJECT NUMBER 19187

N W E S

0' 10' 20'
SCALE 1"=10'

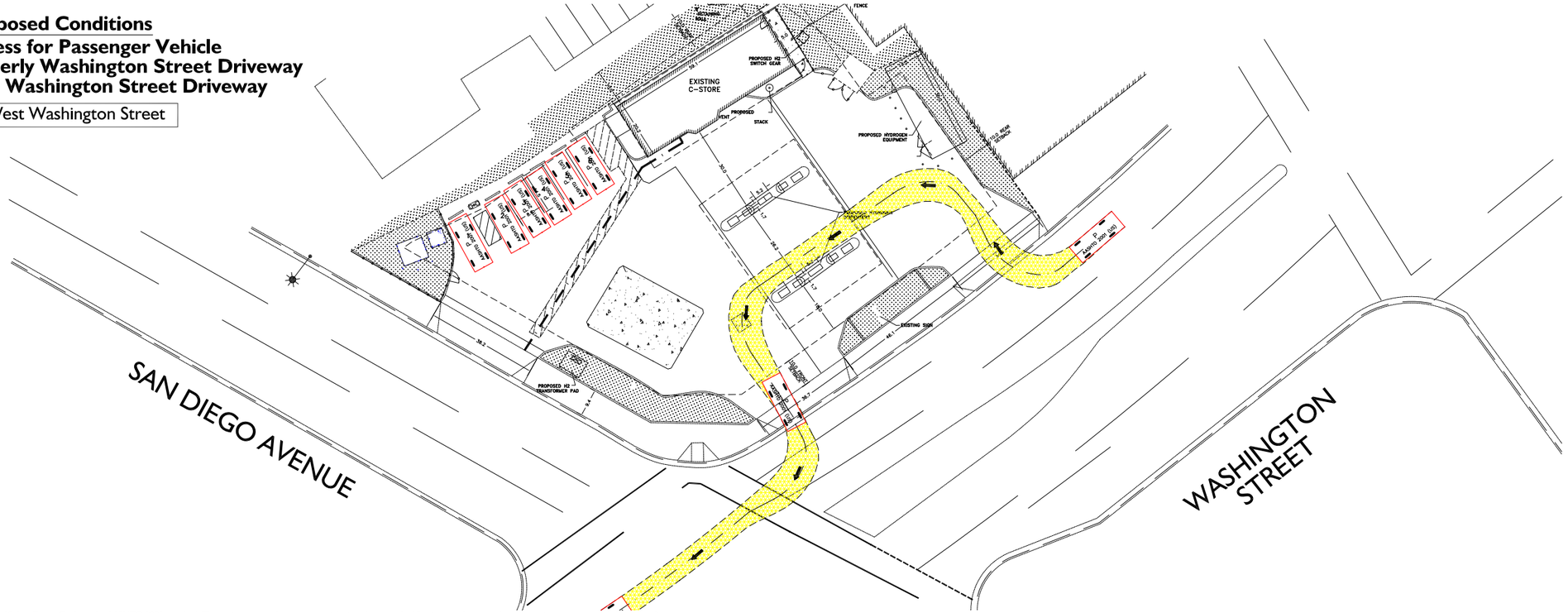
SHEET 1 OF 1

Vehicle Circulation Exhibits

Page is left intentionally blank. Please see the following four (4) exhibits for the Vehicle Circulation.

Proposed Conditions
Project Access for Passenger Vehicle Entering From Northerly Washington Street Driveway Exiting Southerly Washington Street Driveway

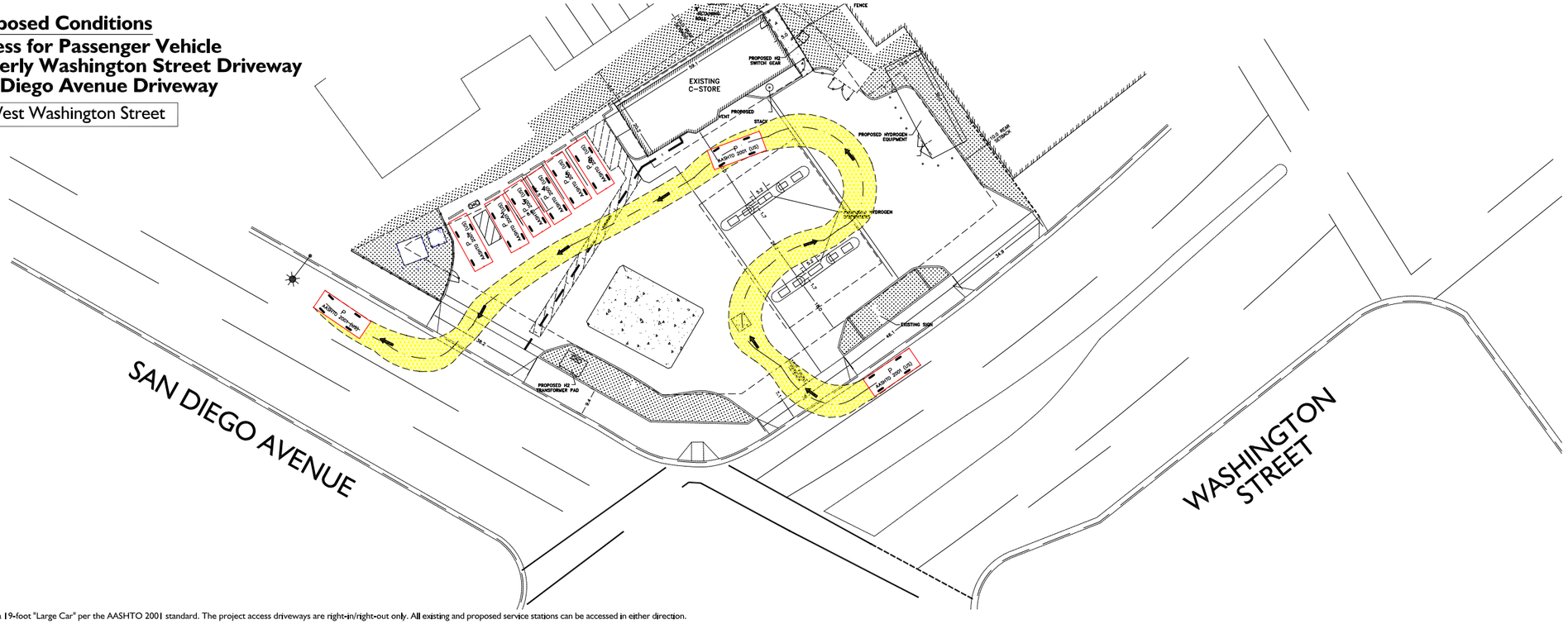
1832 West Washington Street



NOTE: The vehicle used for the turning template is a 19-foot "Large Car" per the AASHTO 2001 standard. The project access driveways are right-in/right-out only. All existing and proposed service stations can be accessed in either direction.

Proposed Conditions
Project Access for Passenger Vehicle Entering From Southerly Washington Street Driveway Exiting San Diego Avenue Driveway

1832 West Washington Street



NOTE: The vehicle used for the turning template is a 19-foot "Large Car" per the AASHTO 2001 standard. The project access driveways are right-in/right-out only. All existing and proposed service stations can be accessed in either direction.

EXHIBIT C: PROJECT ACCESS AND CIRCULATION PLAN WITH HYDROGEN FUELING STATION

LOCATION
CHEVRON GAS STATION
1832 WEST WASHINGTON STREET, SAN DIEGO, CA 92103

RK engineering group, inc.

REVISIONS

REV	DATE	DESCRIPTION	BY, APP'd

DATE: July 9, 2020
DESIGNED BY MT
APPROVED BY --

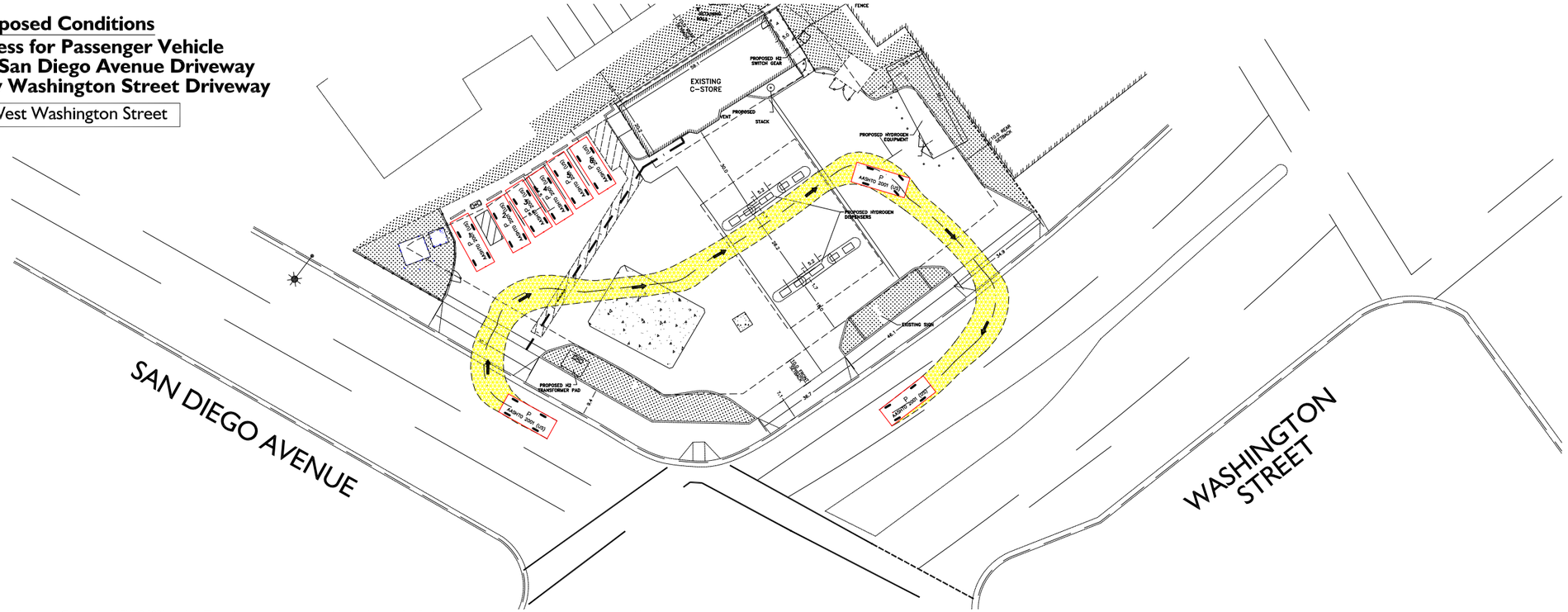
TOTAL CIRCULATION SHEETS - 4

CIRCULATION PLANS

E-1

Proposed Conditions
Project Access for Passenger Vehicle Entering From San Diego Avenue Driveway Exiting Northerly Washington Street Driveway

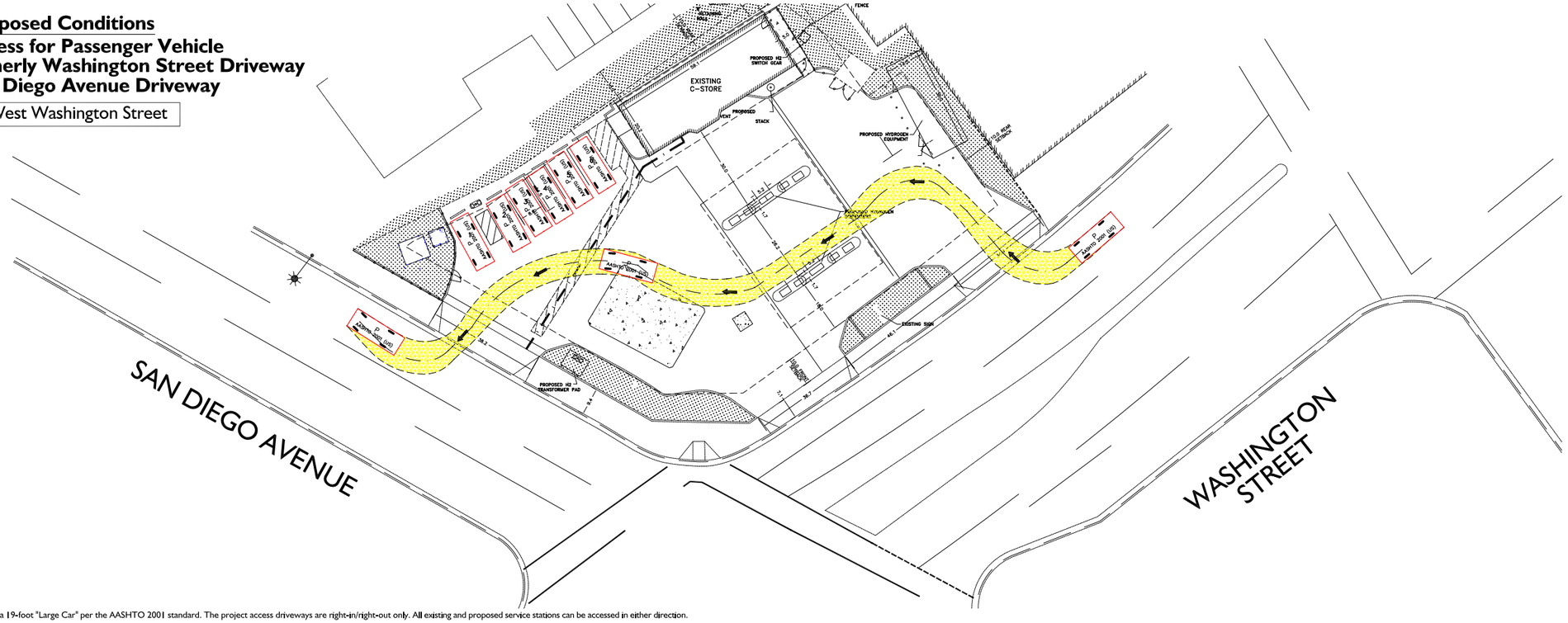
1832 West Washington Street



NOTE: The vehicle used for the turning template is a 19-foot "Large Car" per the AASHTO 2001 standard. The project access driveways are right-in/right-out only. All existing and proposed service stations can be accessed in either direction.

Proposed Conditions
Project Access for Passenger Vehicle Entering From Northerly Washington Street Driveway Exiting San Diego Avenue Driveway

1832 West Washington Street



NOTE: The vehicle used for the turning template is a 19-foot "Large Car" per the AASHTO 2001 standard. The project access driveways are right-in/right-out only. All existing and proposed service stations can be accessed in either direction.

EXHIBIT D: PROJECT ACCESS AND CIRCULATION PLAN WITH HYDROGEN FUELING STATION

LOCATION
CHEVRON GAS STATION
1832 WEST WASHINGTON STREET, SAN DIEGO, CA 92103

RK engineering group, inc.

REVISIONS

REV	DATE	DESCRIPTION	BY, APP'd

DATE: July 9, 2020
DESIGNED BY MT
APPROVED BY --

TOTAL CIRCULATION SHEETS - 4

CIRCULATION PLANS

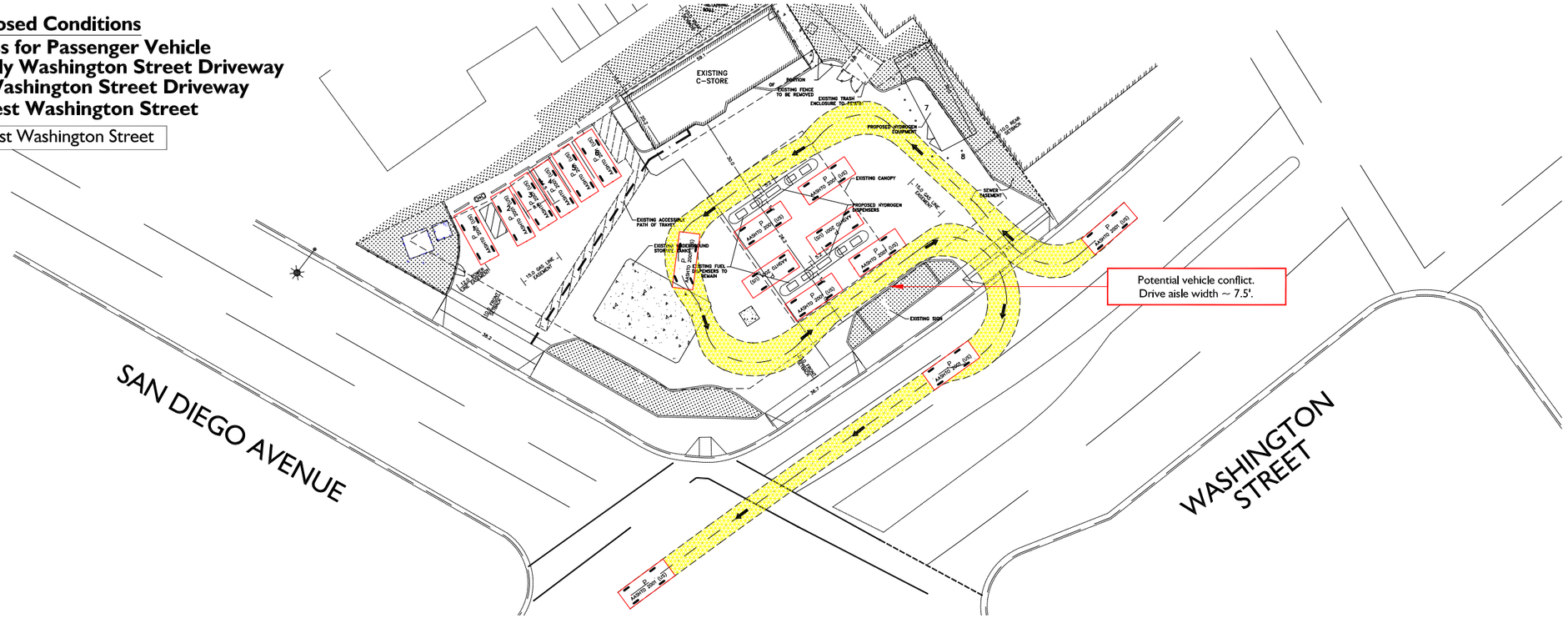
E-2

Vehicle Circulation Exhibits with Use of Western Washing Street Driveway

Page is left intentionally blank. Please see the following four (4) exhibits for the Vehicle Circulation.

Proposed Conditions
Project Access for Passenger Vehicle
Entering From Easterly Washington Street Driveway
Exiting Easterly Washington Street Driveway
Towards West Washington Street

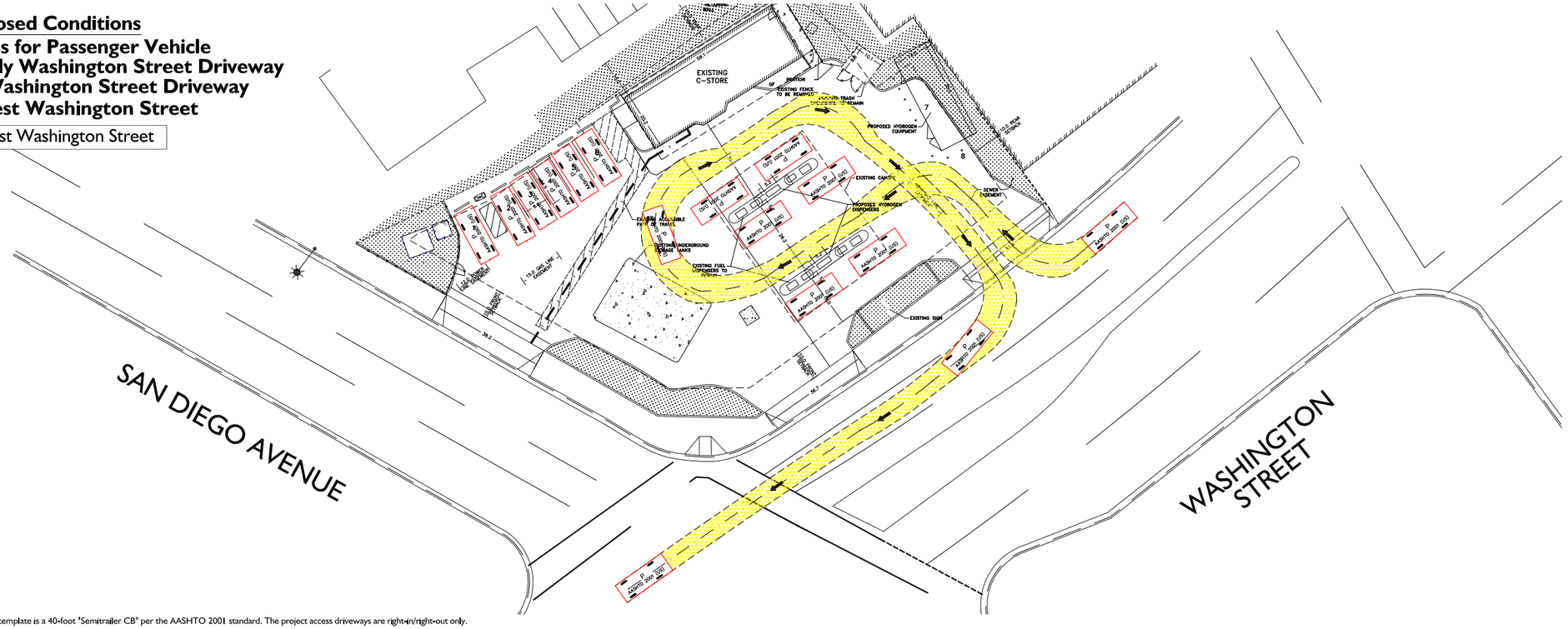
1832 West Washington Street



NOTE: The vehicle used for the Gasoline Truck turning template is a 40-foot "Semitrailer CB" per the AASHTO 2001 standard. The project access driveways are right-in/right-out only.

Proposed Conditions
Project Access for Passenger Vehicle
Entering From Easterly Washington Street Driveway
Exiting Easterly Washington Street Driveway
Towards West Washington Street

1832 West Washington Street



NOTE: The vehicle used for the Gasoline Truck turning template is a 40-foot "Semitrailer CB" per the AASHTO 2001 standard. The project access driveways are right-in/right-out only.

EXHIBIT E: PROJECT ACCESS AND CIRCULATION PLAN WITH HYDROGEN FUELING STATION

LOCATION
CHEVRON GAS STATION
1832 WEST WASHINGTON STREET, SAN DIEGO, CA 92103

RK engineering group, inc.

REVISIONS

REV	DATE	DESCRIPTION	BY APP'd

DATE: July 20, 2020
DESIGNED BY MT
APPROVED BY --

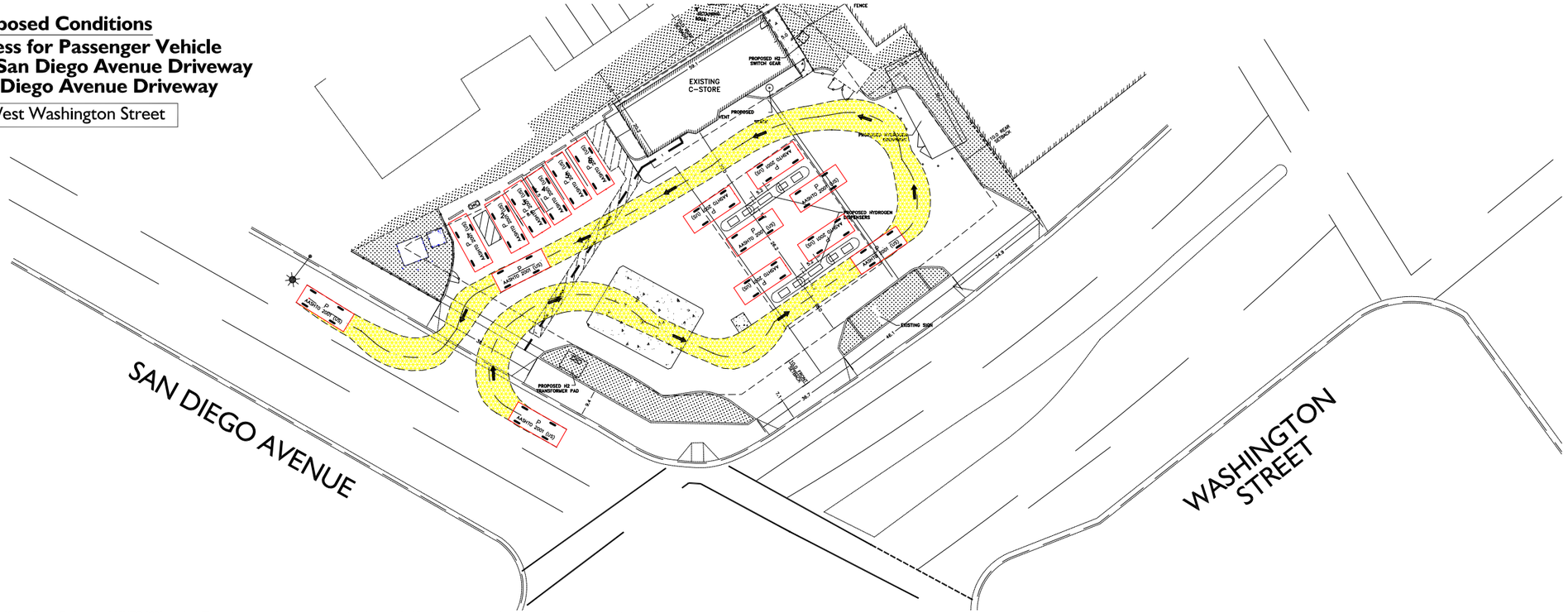
TOTAL CIRCULATION SHEETS - 2

CIRCULATION PLANS

E-1

Proposed Conditions
Project Access for Passenger Vehicle Entering From San Diego Avenue Driveway Exiting San Diego Avenue Driveway

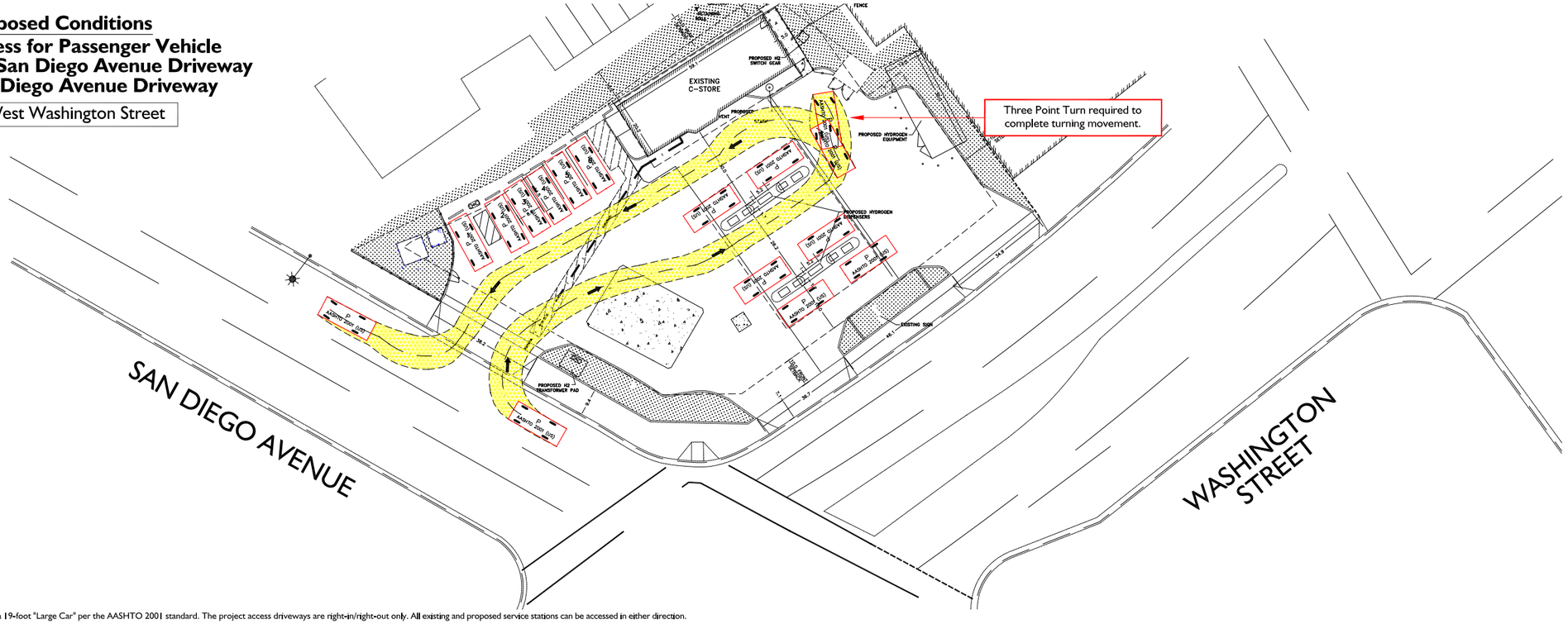
1832 West Washington Street



NOTE: The vehicle used for the turning template is a 19-foot "Large Car" per the AASHTO 2001 standard. The project access driveways are right-in/right-out only. All existing and proposed service stations can be accessed in either direction.

Proposed Conditions
Project Access for Passenger Vehicle Entering From San Diego Avenue Driveway Exiting San Diego Avenue Driveway

1832 West Washington Street



NOTE: The vehicle used for the turning template is a 19-foot "Large Car" per the AASHTO 2001 standard. The project access driveways are right-in/right-out only. All existing and proposed service stations can be accessed in either direction.

EXHIBIT F: PROJECT ACCESS AND CIRCULATION PLAN WITH HYDROGEN FUELING STATION

LOCATION
CHEVRON GAS STATION
1832 WEST WASHINGTON STREET, SAN DIEGO, CA 92103

RK engineering group, inc.

REVISIONS

REV	DATE	DESCRIPTION	BY, APP'd

DATE: July 20, 2020
DESIGNED BY MT
APPROVED BY --

TOTAL CIRCULATION SHEETS - 2

CIRCULATION PLANS

E-2