



TRANSBAY JOINT POWERS AUTHORITY

REQUEST FOR PROPOSALS No. 18-02 TWO-WAY RADIO SYSTEM

QUESTIONS & ANSWERS

The following questions related to the above-referenced RFP were received at the pre-proposal conference on April 23, 2018:

1. ***Q: How many supplemental radios are anticipated to be needed prior to obtaining the specified radios?***

A: Refer to Addendum No. 1 for quantity.

2. ***Q: Will San Francisco Police Department officers carry these radios?***

A: Yes. However, the primary radio users will be the contract security guards and the building maintenance staff. An emergency responder radio communication system, which is separate from the distributed antenna system (DAS), is being installed in the transit center.

3. ***Q: Does TJPA have an FCC license?***

A: No, this is an item of the scope of work.

4. ***Q: Has any testing of radios been conducted in the facility?***

A: No.

5. ***Q: When will the distributed antenna system be installed?***

A: The DAS is currently being installed. Information describing the system is attached.

6. ***Q: Will the radios be operated on all levels of the facility?***

A: Yes, but operations on the two below-grade levels will be limited.

7. ***Q: Are transit operator radios to be covered by the system?***

A: No.

8. ***Q: Are the IP consoles required now or for future operations?***

A: IP consoles will be needed in August 2018.

Attachment

Additional information regarding cellular/UHF/VHF DAS:

TJPA has contracted with Boingo to install a Neutral Host Distributed Antenna System (DAS) in the Salesforce Transit Center. The system will support all current commercial cellular frequencies with the ability to upgrade for future 5G requirements.

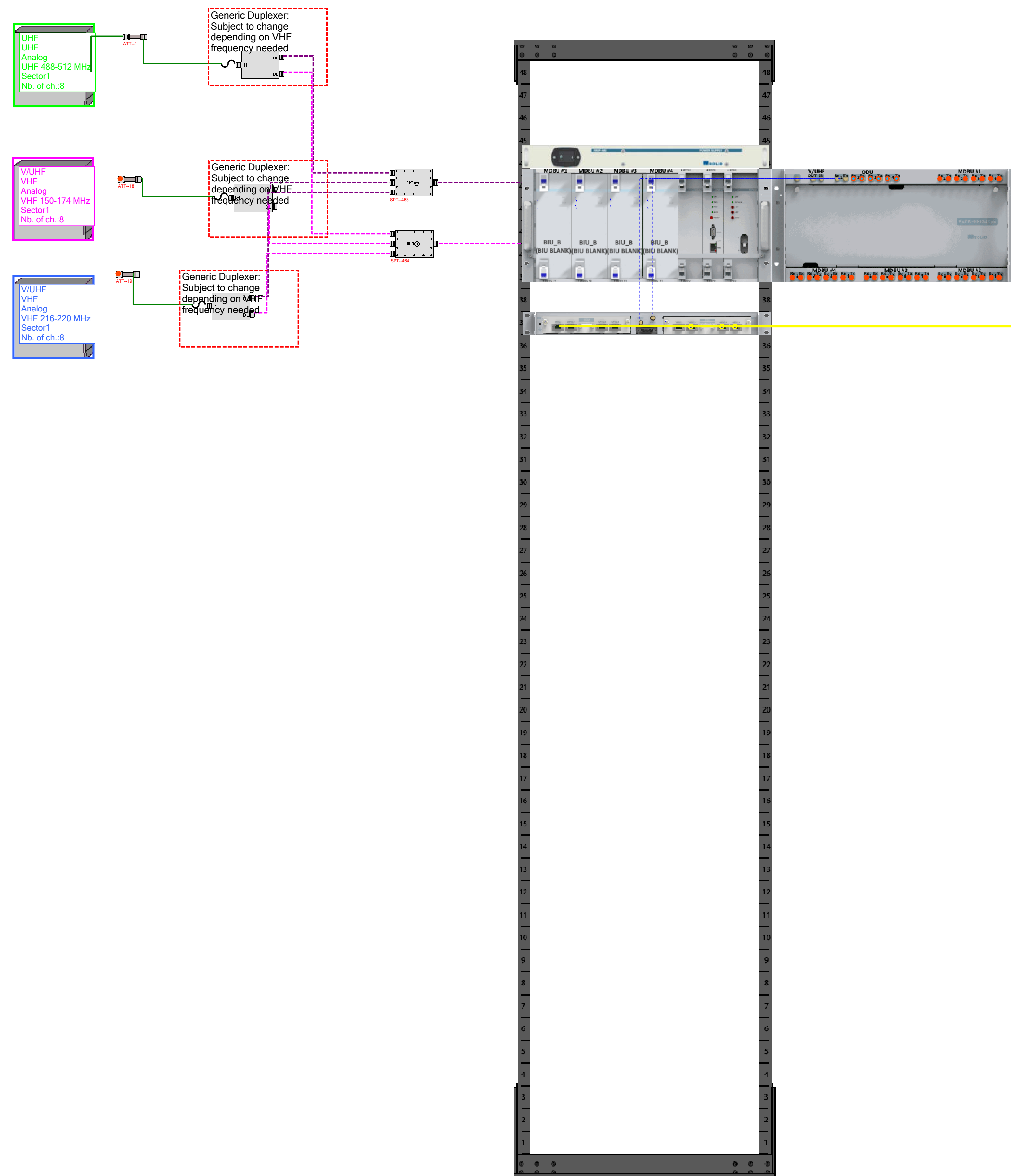
Also supported will be the UHF/VHF systems identified by TJPA for use in the venue.

The distributed antenna system takes an RF source - such as would transmit from a cell tower or UHF broadcast site - converts the RF source to be transmitted over fiber optic cable throughout the transit center, and then converts the signal back to RF to be transmitted via small antennas closer to the end customer/subscriber at a lower power.

This enables signals that do not travel well through large venues constructed of steel and concrete to reach the cellular and two-way radio users.

The head end equipment is located in the MDF room in the transit center. The equipment chosen to support the transit center DAS is the SOLiD Alliance Platform, using a combination of SOLiD's 5 watt and 20 watt remote units.

The attached 8 sheets show the DAS equipment installation locations in the transit center.



Revision history			
1	3/2/2017	SOLID	Preliminary Design (Not for Construction)
2	4/7/2017	SOLID	Full Ground Coverage, TMob BTS 2100 Updates
3	4/11/2017	SOLID	VHF HE & Pass filter at Roof Park update
11	6/26/2017	SOLID	update Roof level design
13	6/28/2017	SOLID	update roof modeling and sector plan

Project name

REV4_Transbay Transit Center SF

ADDRESS

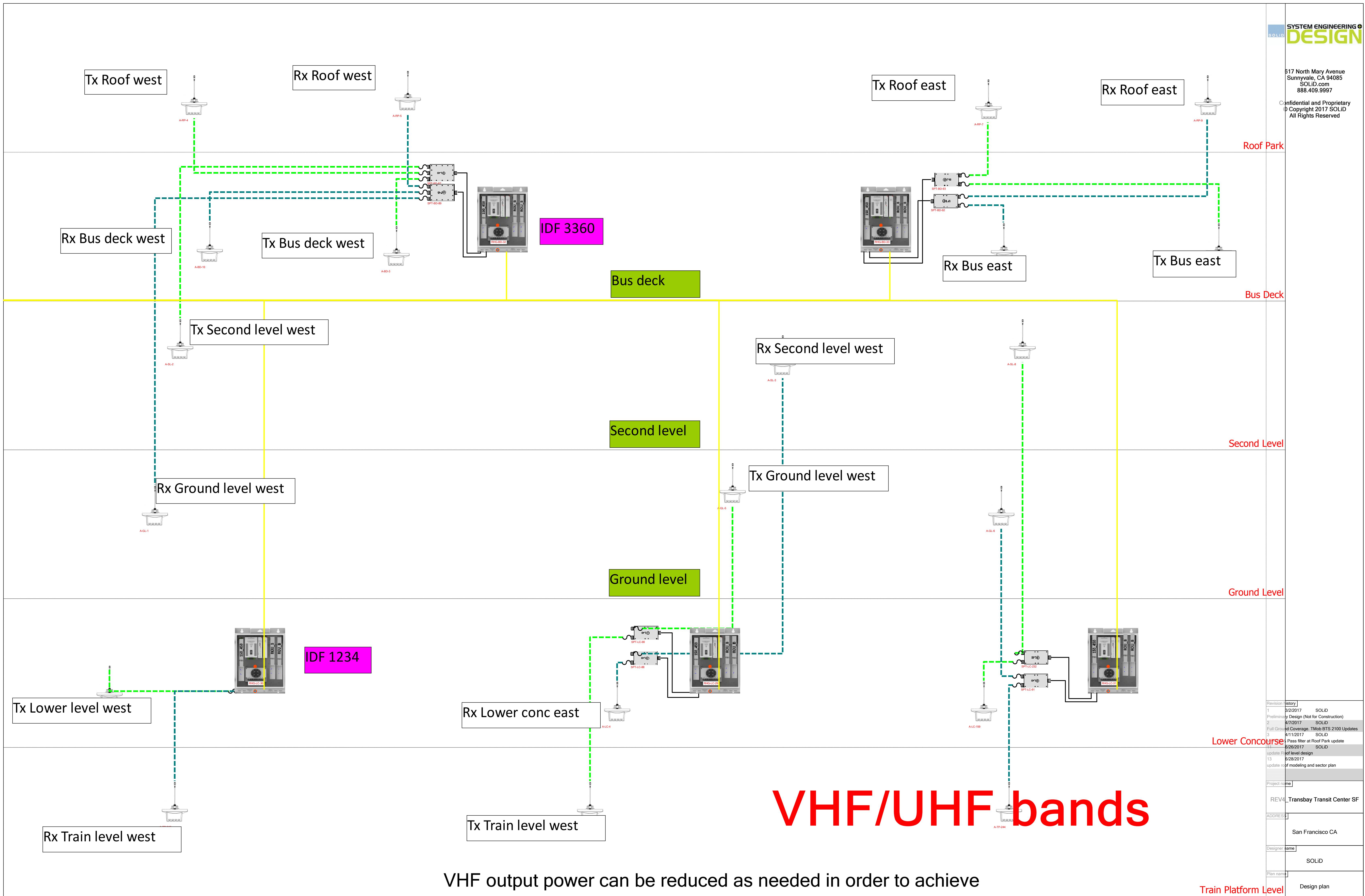
San Francisco CA

Designer name

SOLID

Plan name

Design plan



VHF/UHF bands

VHF output power can be reduced as needed in order to achieve

Revision history	
1	3/2/2017 SOLID Preliminary Design (Not for Construction)
2	4/7/2017 SOLID Full Ground Coverage, T-Mobile BTS 2100 Updates
3	6/11/2017 SOLID Pass filter at Roof Park update
4	8/26/2017 SOLID update Roof level design
5	8/28/2017 update roof modeling and sector plan
Project name	
REV4_Transbay Transit Center SF	
ADDRESS	
San Francisco CA	
Designer name	
SOLID	
Plan name	
Design plan	

ATT Sec 9

ATT Sec 10

ATT Sec 11

TMO Sec 8

TMO Sec 9

SHEET NOTES

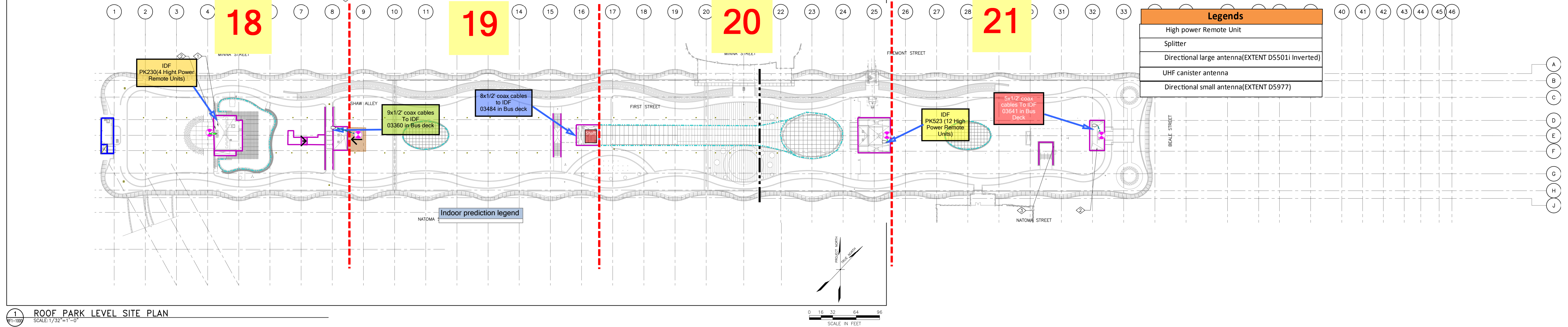
1. ALL RF RELATED PATHWAYS ARE DIAGRAMMATIC IN NATURE AND ARE SHOWN TO INDICATE GENERAL INTENT.

NUMBERED NOTES

(1) 2" CONDUITS WITH WEATHER HEADS TO IDF #81385 ROOM BELOW. ALL PATHWAYS MUST MEET THE REQUIREMENTS OF LEVEL 2 PATHWAY SURVIVABILITY PER NFPA 72.
(2) MOUNT DONOR ANTENNA ON NON PENETRATING ROOF MOUNT

NUMBERED NOTES

(3) 2" CONDUITS WITH WEATHER HEADS TO EAST IDF ROOM # 81641 BELOW. ALL PATHWAYS MUST MEET THE REQUIREMENTS OF LEVEL 2 PATHWAY SURVIVABILITY PER NFPA 72.



Legends	
[Symbol]	High power Remote Unit
[Symbol]	Splitter
[Symbol]	Directional large antenna(EXTENT D55011 Inverted)
[Symbol]	UHF canister antenna
[Symbol]	Directional small antenna(EXTENT D5977)

1 ROOF PARK LEVEL SITE PLAN
SCALE: 1/32" = 1'-0"

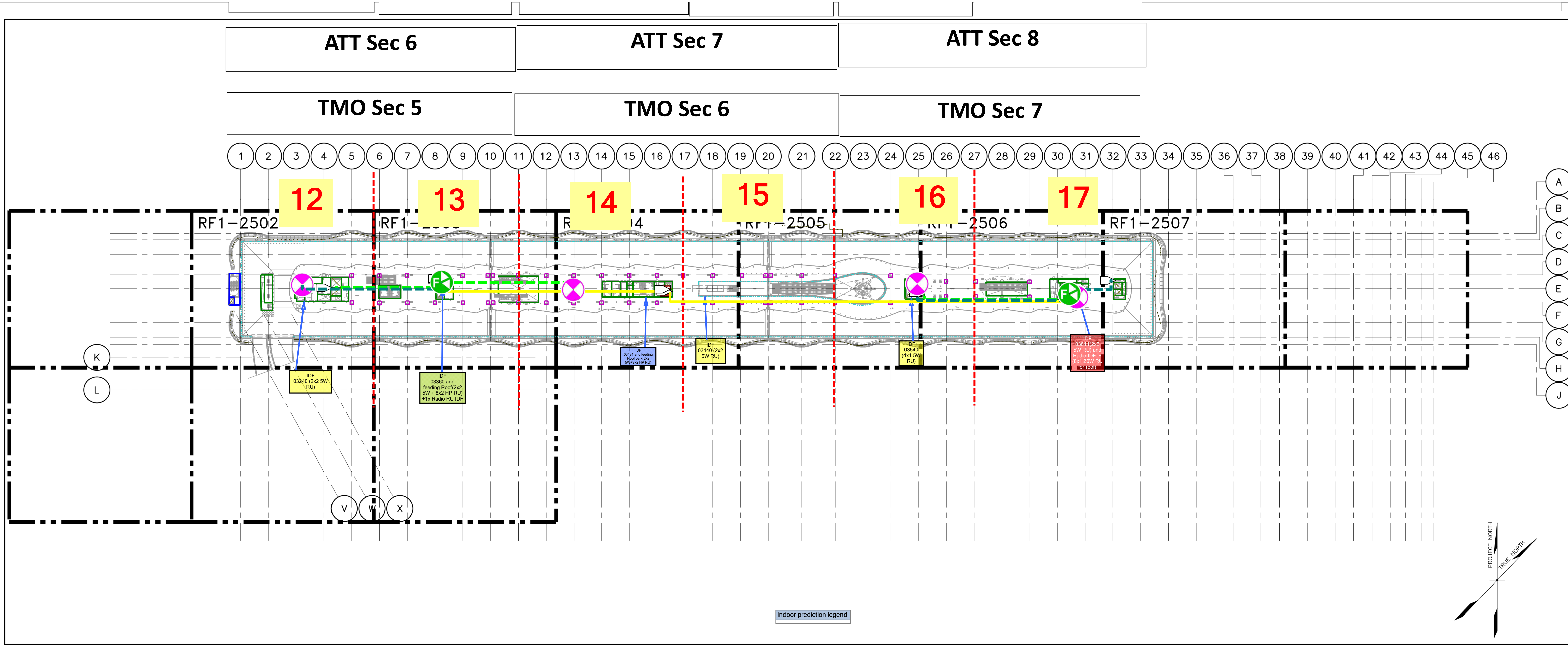
0 16 32 64 96
SCALE IN FEET

Pictograms legend

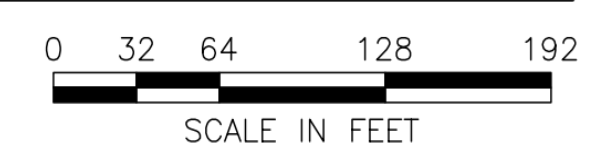
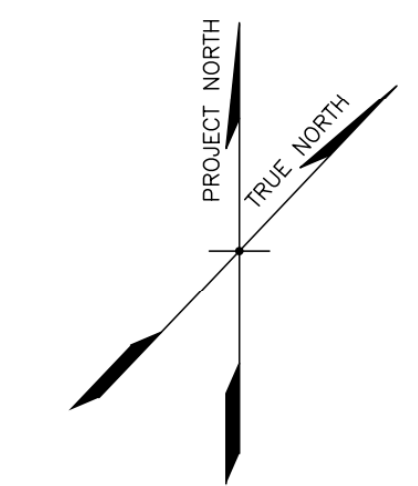
[Symbol]	Antenna
[Symbol]	Via

Revision history			
1	3/2/2017	SOLID	Preliminary Design (Not for Construction)
2	4/7/2017	SOLID	Full Ground Coverage, TMOB BTS 2100 Updates
3	4/11/2017	SOLID	VHF HE & Pass filter at Roof Park update
11	6/26/2017	SOLID	update Roof level design
13	6/28/2017	SOLID	update roof modeling and sector plan

Project name	REV4_Transbay Transit Center SF
ADDRESS	San Francisco CA
Designer name	SOLID
Plan name	Roof Park



Indoor prediction legend



2 BUS DECK LEVEL ORIENTATION PLAN
RF1-200 SCALE: 1/64" = 1'-0"

- Pictograms legend
- Antenna
 - Fiber BDA
 - Repeater
 - Splitter
 - Via

Revision history

1	3/2/2017	SOLID	Preliminary Design (Not for Construction)
2	4/7/2017	SOLID	Full Ground Coverage, T-Mob BTS 2100 Updates
3	4/11/2017	SOLID	VHF HE & Pass filter at Roof Park update
11	6/26/2017	SOLID	update Roof level design
13	6/28/2017	SOLID	update roof modeling and sector plan

Project name

REV4_Transbay Transit Center SF

ADDRESS

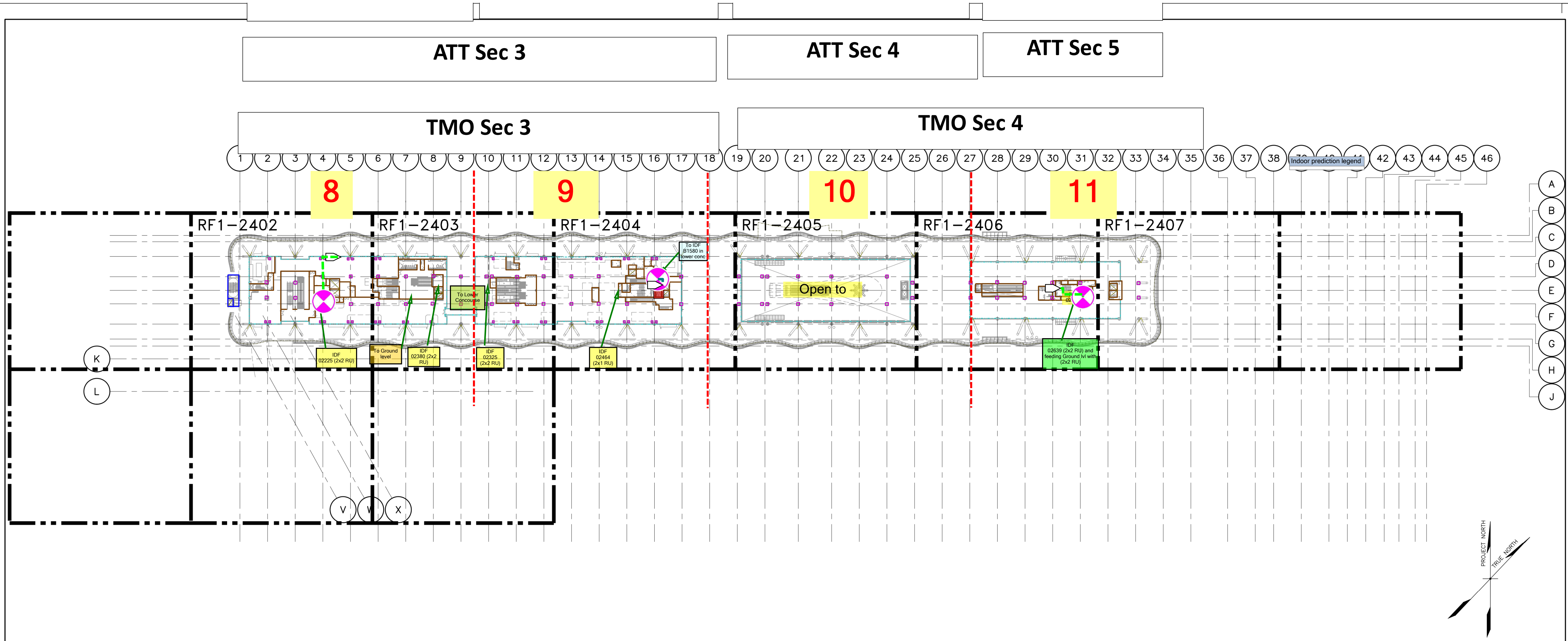
San Francisco CA

Designer name

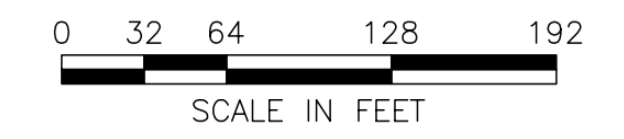
SOLID

Plan name

Bus Deck



1 SECOND LEVEL ORIENTATION PLAN
SCALE: 1/64" = 1'-0"



Pictograms legend

	Antenna
	Via

Revision history

1	3/2/2017	SOLID	Preliminary Design (Not for Construction)
2	4/7/2017	SOLID	Full Ground Coverage, TMOB BTS 2100 Updates
3	4/11/2017	SOLID	VHF HE & Pass filter at Roof Park update
11	6/26/2017	SOLID	update Roof level design
13	6/28/2017	SOLID	update roof modeling and sector plan

Project name

REV4_Transbay Transit Center SF

ADDRESS

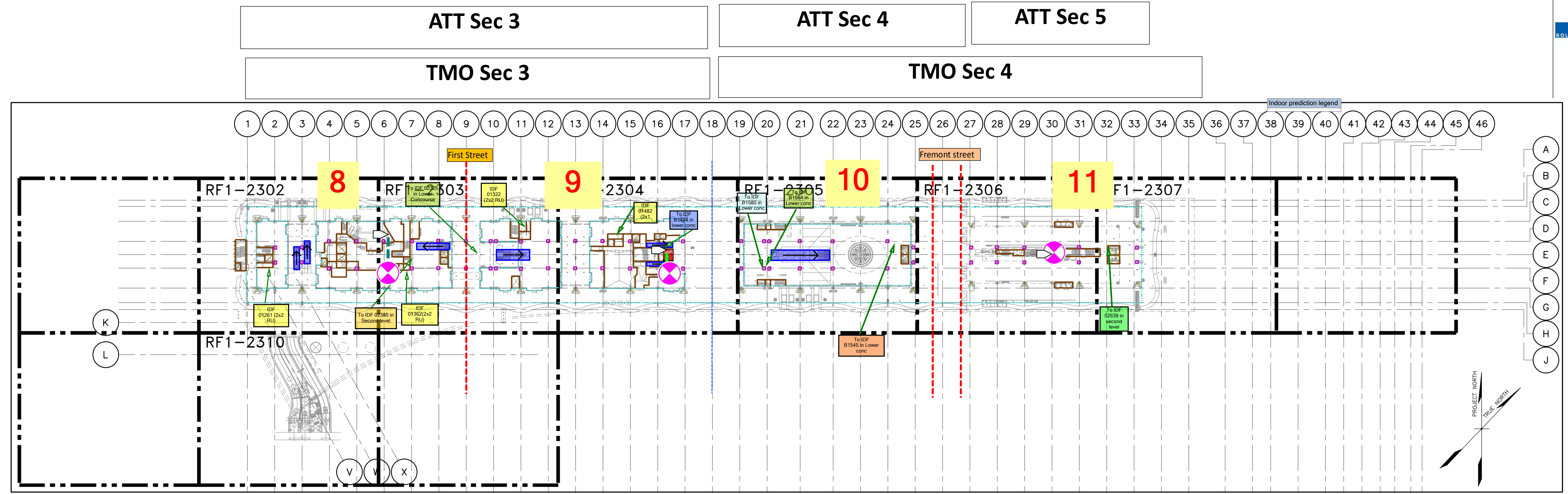
San Francisco CA

Designer name

SOLID

Plan name

Second Level



3 GROUND LEVEL ORIENTATION PLAN
RF1-2000 SCALE: 1/64" = 1'-0"

0 32 64 128 200
SCALE IN FEET

Pictograms legend
Antenna
Via

Revision history		
1	3/2/2017	SOLID Preliminary Design (Not for Construction)
2	4/7/2017	SOLID Full Ground Coverage, TMOB BTS 2100 Updates
3	4/11/2017	SOLID VHF HE & Pass filter at Roof Park update
11	6/26/2017	SOLID update Roof level design
13	6/28/2017	update roof modeling and sector plan

Project name

REV4_Transbay Transit Center SF

ADDRESS

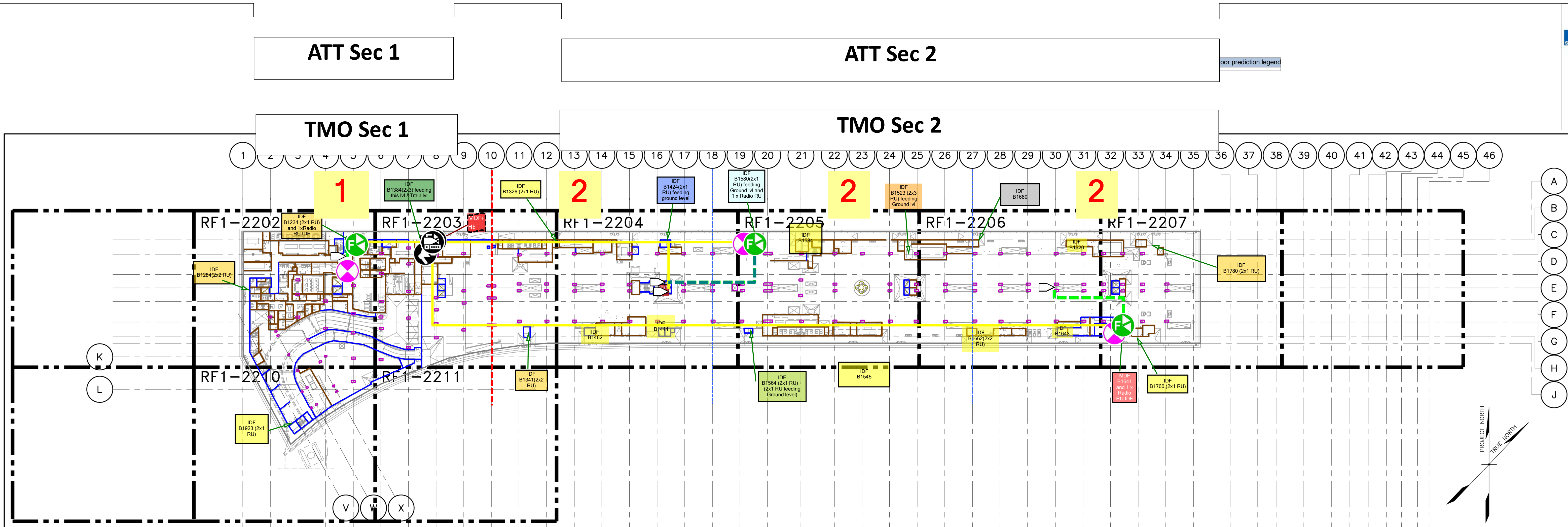
San Francisco CA

Designer name

SOLID

Plan name

Ground Level



2 LOWER CONCOURSE LEVEL ORIENTATION PLAN
RF1-2000 SCALE: 1/64" = 1'-0"



Pictograms legend	
	Antenna
	Fiber BDA
	Fiber BDA Hub
	Miscellaneous
	Repeater
	Splitter
	Via

Revision history			
1	3/2/2017	SOLID	Preliminary Design (Not for Construction)
2	4/7/2017	SOLID	Full Ground Coverage, TMOB BTS 2100 Updates
3	4/11/2017	SOLID	VHF HE & Pass filter at Roof Park update
11	6/26/2017	SOLID	update Roof level design
13	6/28/2017	SOLID	update roof modeling and sector plan

Project name	REV4_Transbay Transit Center SF
ADDRESS	San Francisco CA
Designer name	SOLID
Plan name	Lower Concourse

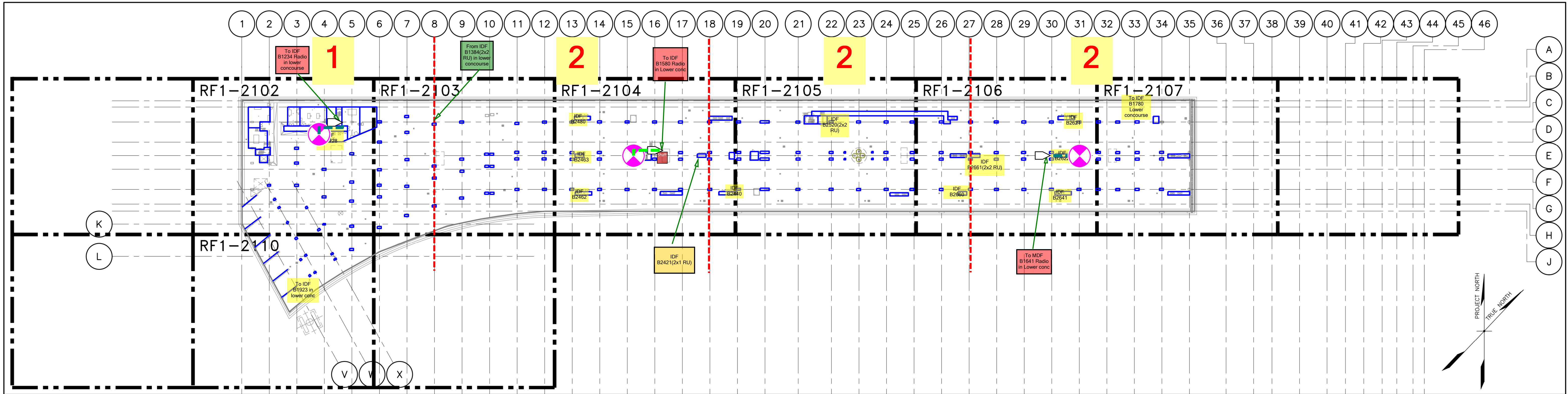
ATT Sec 1

ATT Sec 2

TMO Sec 1

TMO Sec 2

indoor prediction legend



1 TRAIN PLATFORM LEVEL ORIENTATION PLAN
RF1-2000 SCALE: 1/64" = 1'-0"



Pictograms legend

- Antenna
- Via

Revision history			
1	3/2/2017	SOLID	Preliminary Design (Not for Construction)
2	4/7/2017	SOLID	Full Ground Coverage, TMOB BTS 2100 Updates
3	4/11/2017	SOLID	VHF HE & Pass filter at Roof Park update
11	6/26/2017	SOLID	update Roof level design
13	6/28/2017	SOLID	update roof modeling and sector plan

Project name

REV4_Transbay Transit Center SF

ADDRESS

San Francisco CA

Designer name

SOLID

Plan name

Train Platform Level