PSE

New Era Field Renovation

PDP Appendix

October 2019

CAAICON POPULOUS®

APPENDIX

Option 1A, 1B and 1C

The New Era Field Major Renovation was analyzed, designed, deliberated, went through a series iterations to determine the overall major renovation. There were a total of (3) options for the major renovation; Option 1A, 1B, 1C. Option 1D was the sole minor renovation to address the safety issues and ADA issues the current stadium is experiencing. Below are descriptions of each major renovation option and the progression of the South sideline. The South sideline was the side that had most of the changes. In all (3) options, the current corner club towers and the administration building on the East side are to be demolished replaced with upper seating deck.

Option 1A:

New premium product was suggested by Strategic Advisory mainly suite inventory location was the concern. Populous had designed the suites to the west end zone, the reason for the placement was due to the structural grid of the existing upper decks. The upper decks structural capacity are approaching its life expectancy, precast panels structural tendons are beyond strength and were originally constructed incorrectly. Continual repairs to the upper decks have been occurring over the course of 15 years, structural engineers professional opinion believe the decks need to be replaced by 2023. With Option 1A, the upper decks stadia and columns, both North and South, are to be replaced in kind, keeping the same structural grid, similar to less capacity, and not requiring to reinforce in the foundation. Having the suites on the end zone, Strategic Advisory advised that the sell through rate would be at a lesser rate than compared to the sidelines, which leads to Option 1B.

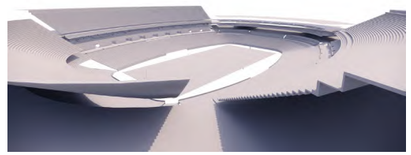
Option 1B:

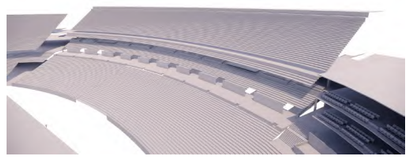
The added suite inventory was located on the south sideline in lieu of the west endzone. Still trying to maintain less reinforcing to the foundation, column footings, an upper deck was not added above the (2) levels of suites and press level on the South Sideline. The South upper deck seating capacity was redistributed 50% to the East End Zone and 50% to the West End Zone for an approx. 15,000 seats in the end zones. Strategic Advisory did not believe this was the best solution, the product is similar to a college style stadium and not a professional stadium, which lead to Option 1C

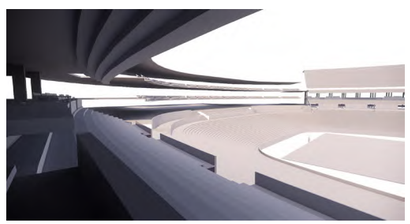
Option 1C:

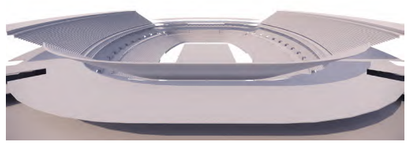
In option 1C, the upper deck inventory was incorporating along with the (3) levels (2) suites & (1) press level. In doing so, the column footings all had to be reinforced, enlarged, and the columns had to be reinforced. Now the end zone upper decks capacity are reduced since half of the fans are relocated to the South side line between the (2) levels of suites and the press level. The North side line elevation remains the same [lower bowl, club level with suites, upper bowl, and an extended party deck at the top]. This was the preferred option by Strategic Advisory due to attracting the highest return on investment.

OPTION 1A









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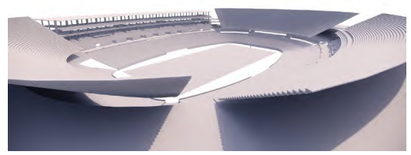
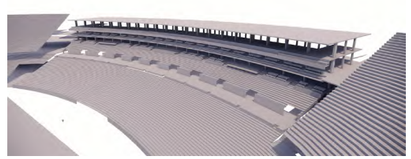
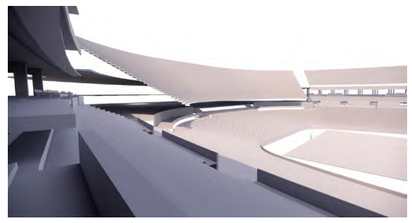
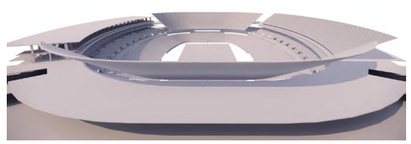
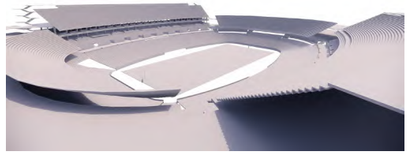


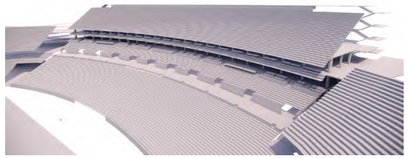


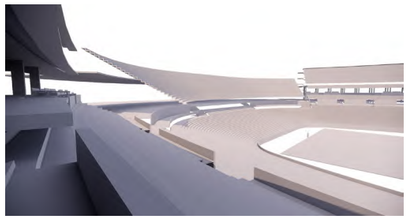




OPTION 1C

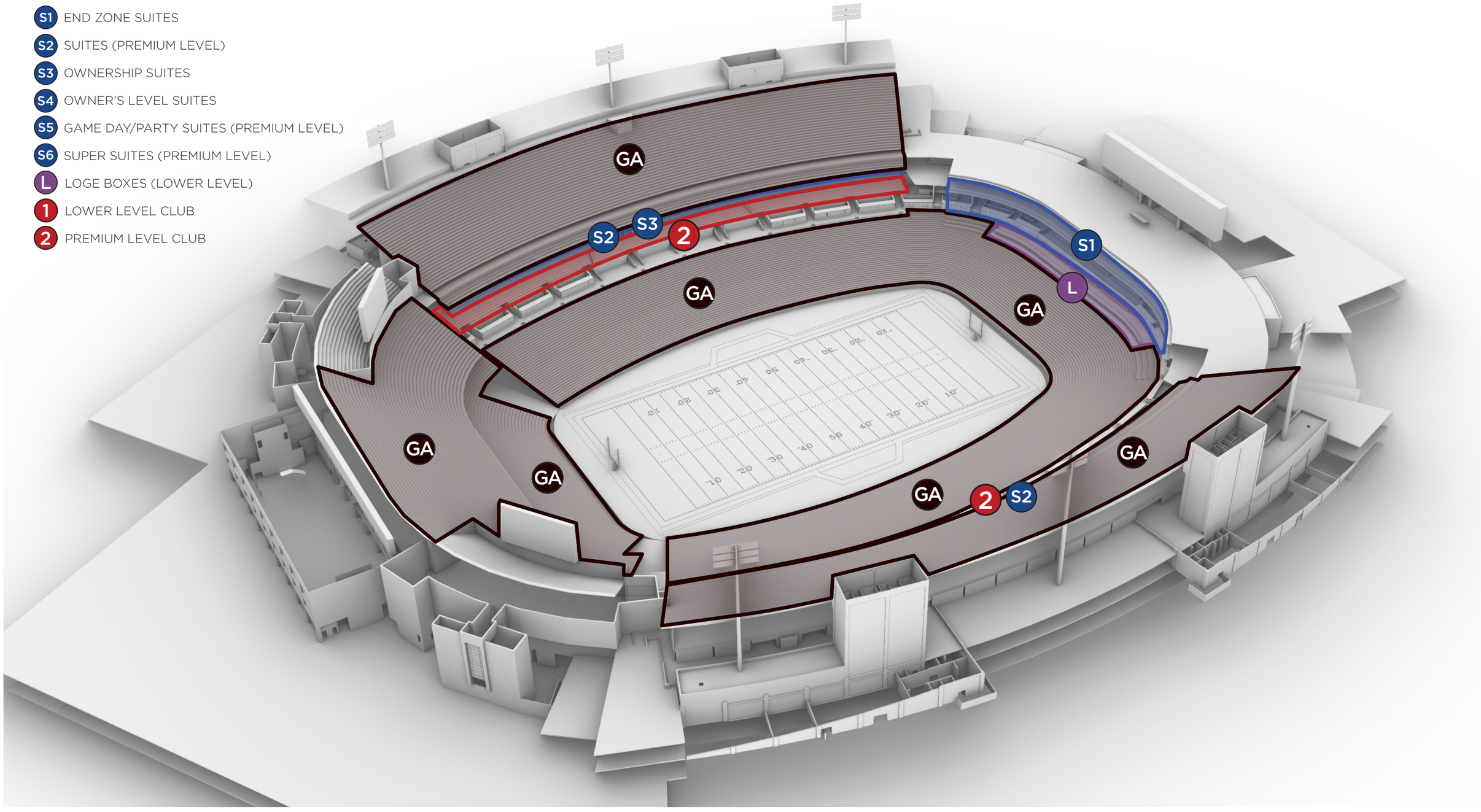




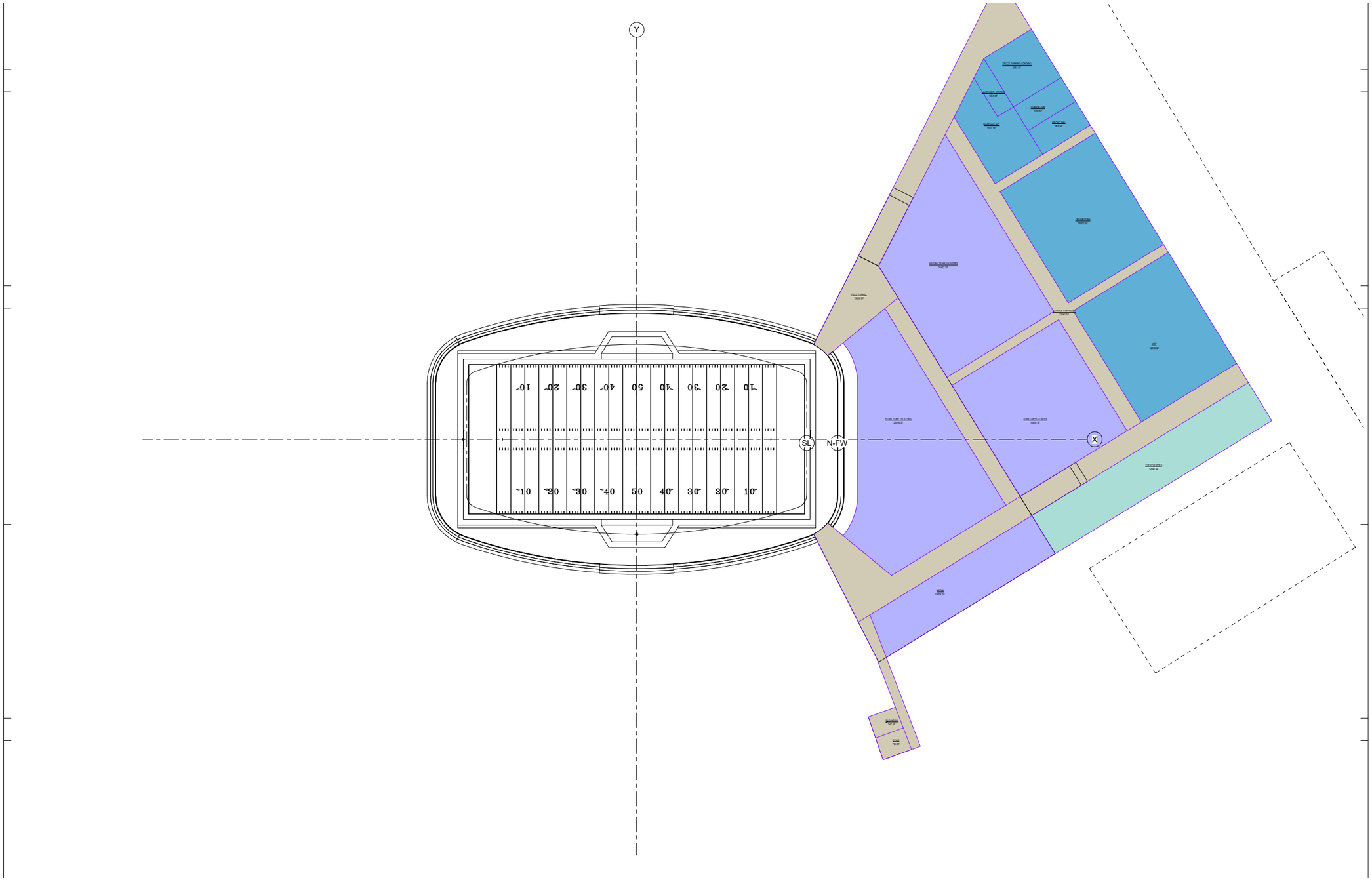


APPENDIX | OPTION 1A

- S1 END ZONE SUITES
- S2 SUITES (PREMIUM LEVEL)
- S3 OWNERSHIP SUITES
- S4 OWNER'S LEVEL SUITES
- S5 GAME DAY/PARTY SUITES (PREMIUM LEVEL)
- S6 SUPER SUITES (PREMIUM LEVEL)
- L LOGE BOXES (LOWER LEVEL)
- 1 LOWER LEVEL CLUB
- 2 PREMIUM LEVEL CLUB



APPENDIX | OPTION 1A



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OPTION 1A - APPROXIMATE BOWL SEAT COUNTS	
LOCATION	Estimated Seat Count
01 - CLUB LOWER NORTH - OPT 1A	1237
01 - CLUB LOWER SOUTH - OPT 1A	1237
01 - GA LOWER EAST - OPT 1A	5297
01 - GA LOWER SIDELINE - EXISTING - OPT 1A	13396
01 - GA LOWER WEST - EDGE - OPT 1A	204
01 - GA LOWER WEST - EXISTING - OPT 1A	5091
02 - CLUB NORTH - OPT 1A	1957
02 - CLUB SOUTH - OPT 1A	1957
03 - GA UPPER EAST - OPT 1A	9196
03 - GA UPPER NORTH 1 - OPT 1A	1415
03 - GA UPPER NORTH 2 - OPT 1A	8383
03 - GA UPPER NORTH 3 - LEDGE - OPT 1A	376
03 - GA UPPER SOUTH 1 - OPT 1A	1415
03 - GA UPPER SOUTH 2 - OPT 1A	8383
Grand total	59543

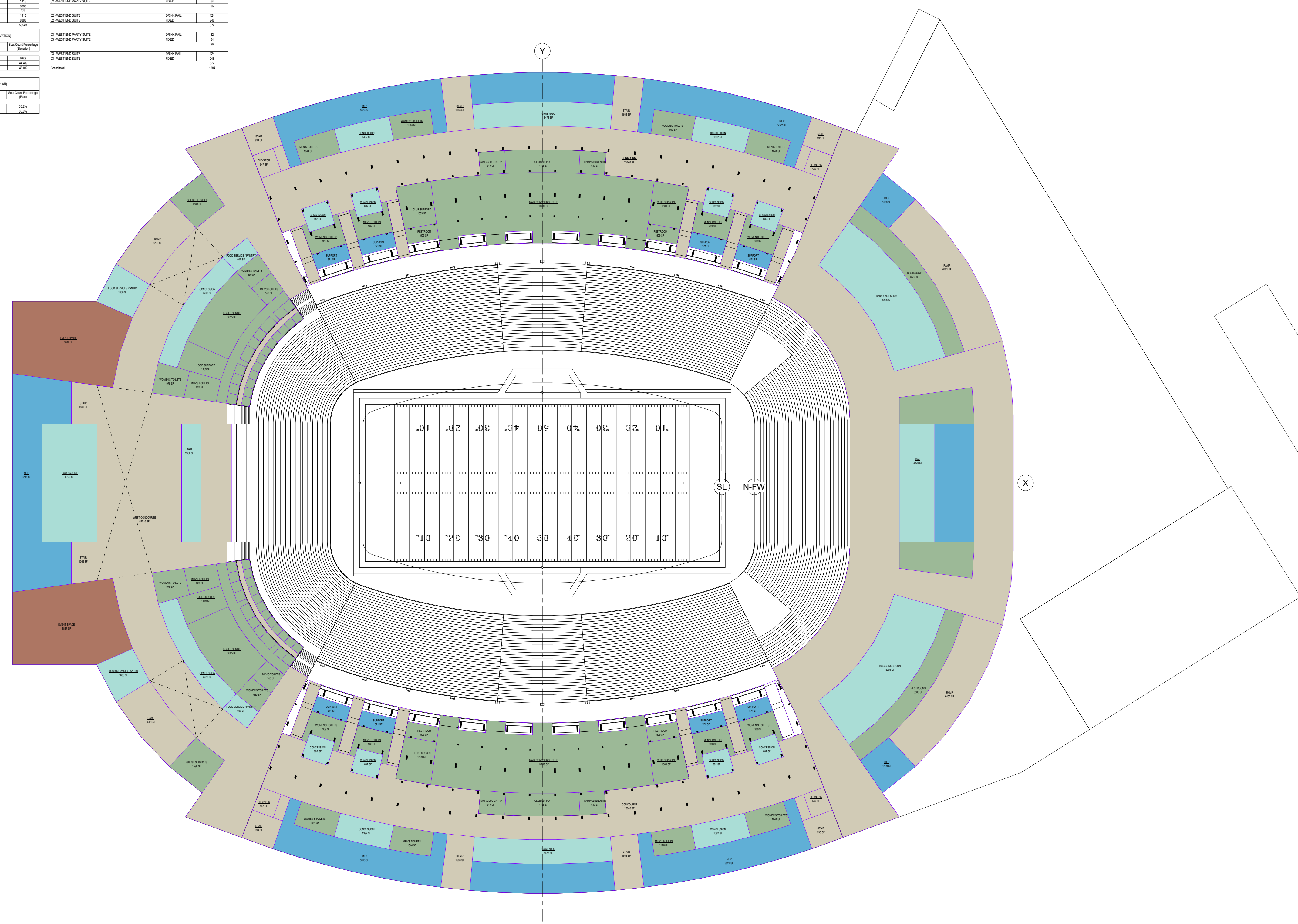
OPTION 1A - SEATING DISTRIBUTION (ELEVATION)		
ELEVATION	Estimated Seat Count	Seat Count Percentage (Elevation)
CLUB	3914	6.6%
LOWER	26461	44.4%
UPPER	29167	49.0%
Grand total	59543	

OPTION 1A - SEATING DISTRIBUTION (PLAN)		
LOCATION	Estimated Seat Count	Seat Count Percentage (Plan)
END ZONE	19788	33.2%
SIDELINE	39755	66.8%
Grand total	59543	

OPTION 1A - SUITE SEAT COUNTS		
SUITE TYPE AND LOCATION	ROW	Seat Count
02 - CLUB LEVEL SUITES NORTH - 1A	DRINK RAIL	118
02 - CLUB LEVEL SUITES NORTH - 1A	FIXED	236
		354
02 - CLUB LEVEL SUITES SOUTH - 1A	DRINK RAIL	93
02 - CLUB LEVEL SUITES SOUTH - 1A	FIXED	201
		294
02 - WEST END PARTY SUITE	DRINK RAIL	32
02 - WEST END PARTY SUITE	FIXED	64
		96
02 - WEST END SUITE	DRINK RAIL	124
02 - WEST END SUITE	FIXED	248
		372
03 - WEST END PARTY SUITE	DRINK RAIL	32
03 - WEST END PARTY SUITE	FIXED	64
		96
03 - WEST END SUITE	DRINK RAIL	124
03 - WEST END SUITE	FIXED	248
		372
Grand total		1584

OPTION 1A - LOGE COUNTS (4-6 PER, NOT INCLUDED IN OVERALL SUITE COUNTES)	
TYPE	Count
LOGE BOX	44

OPTION 1A - SUITE COUNTS	
TYPE	Count
PARTY SUITE	4
SUITE	80



APPENDIX | OPTION 1A

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LOCATION	Estimated Seat Count
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01 - GA LOWER EAST - OPT 1A	5297
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01 - GA LOWER WEST - EDGE - OPT 1A	204
01 - GA LOWER WEST - EXISTING - OPT 1A	5091
02 - CLUB NORTH - OPT 1A	1957
02 - CLUB SOUTH - OPT 1A	1957
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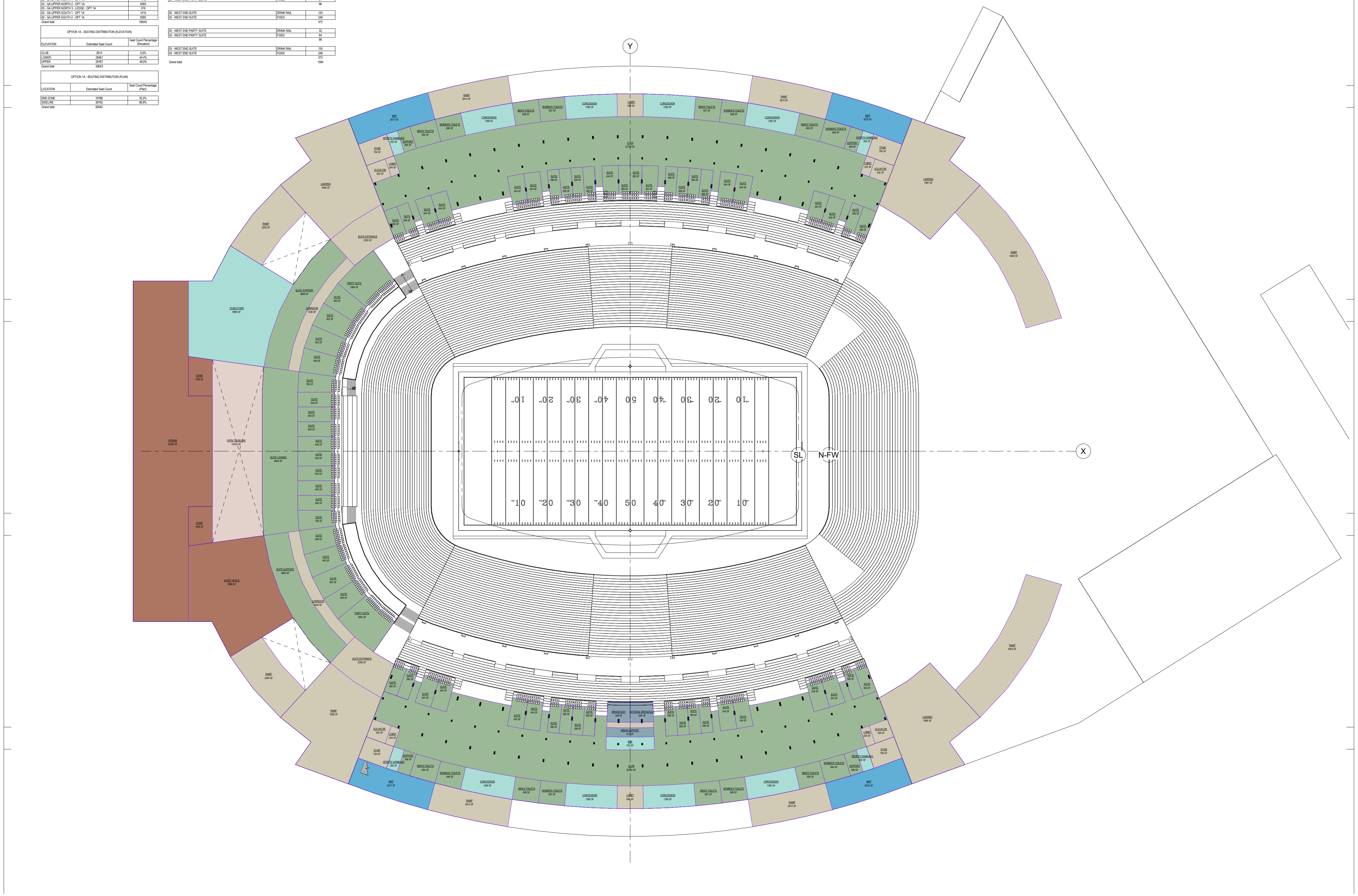

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		372
Grand total		1584

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LOGE BOX	44

OPTION 1A - SUITE COUNTS	
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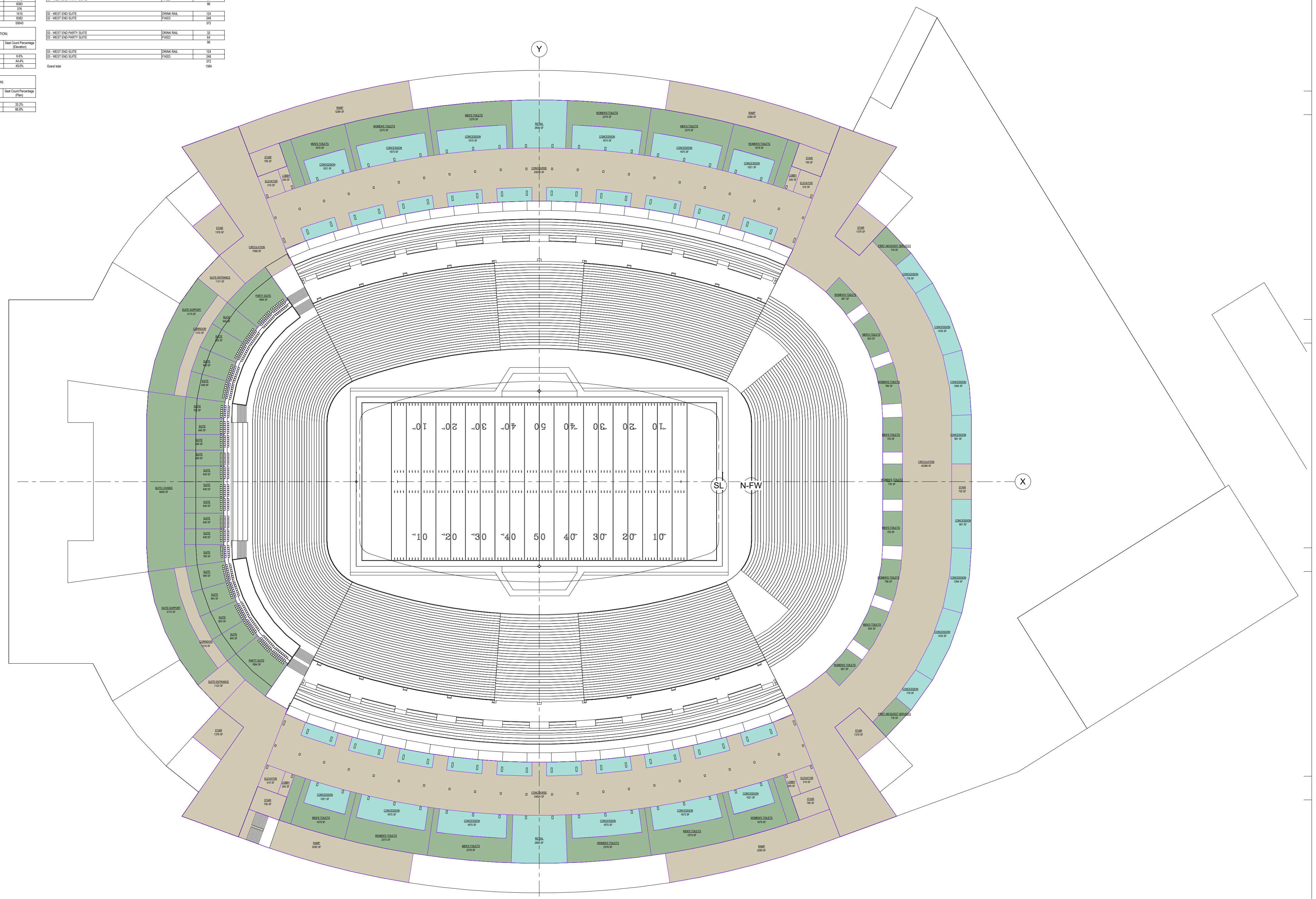
PARTY SUITE	4
SUITE	80



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01 - GA LOWER WEST - EDGE - OPT 1A	204
01 - GA LOWER WEST - EXISTING - OPT 1A	5091
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OPTION 1A - SUITE SEAT COUNTS		
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		294
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02 - WEST END PARTY SUITE	FIXED	64
		96
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02 - WEST END SUITE	FIXED	248
		372
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OPTION 1A - SUITE COUNTS	
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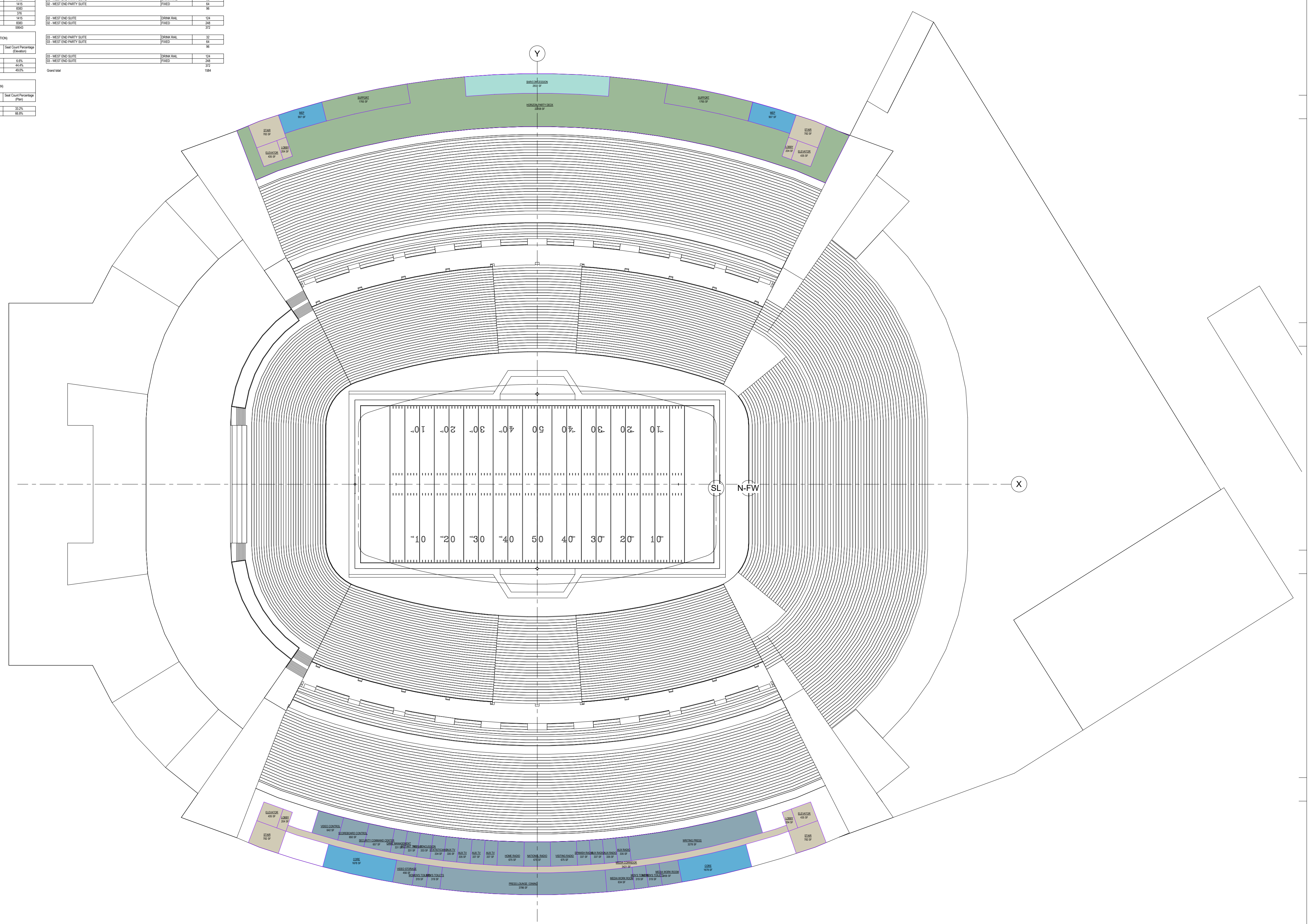

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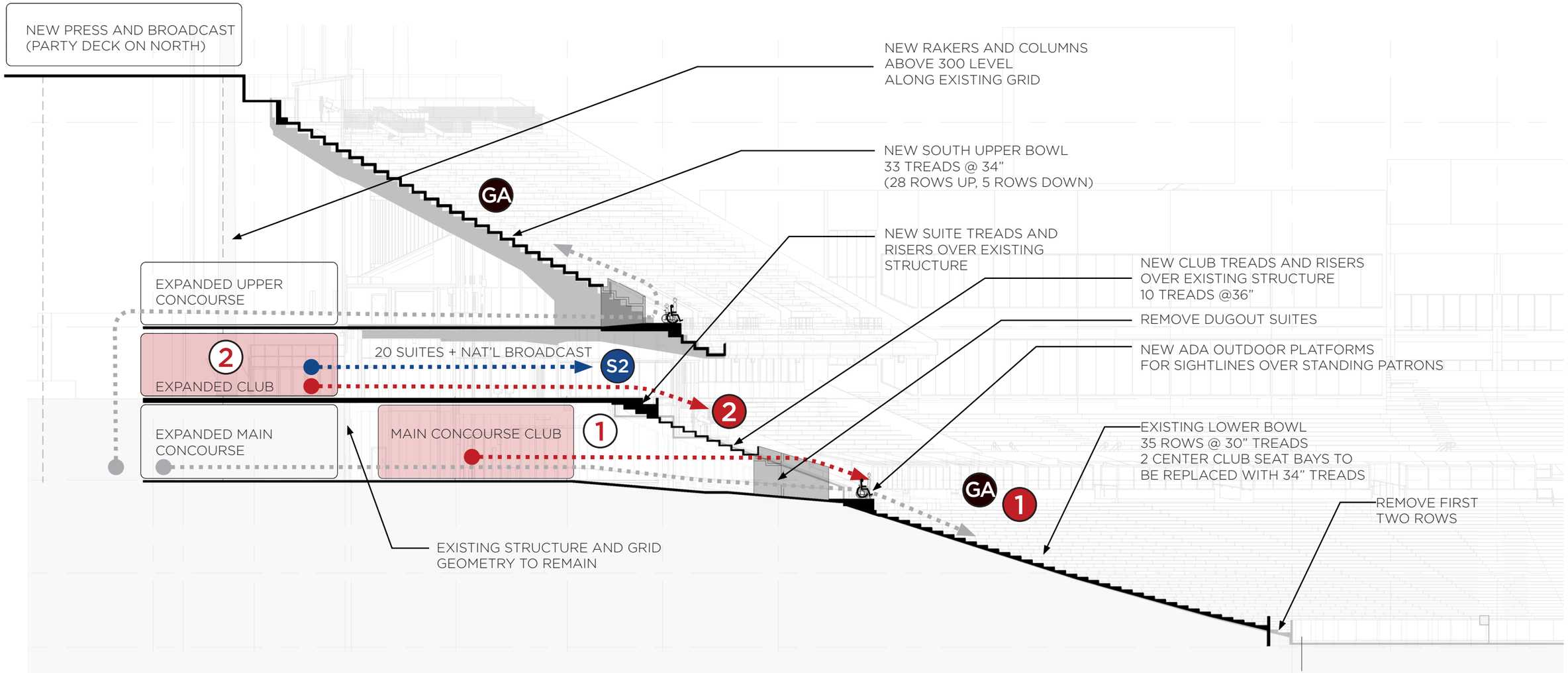
- S1 END ZONE SUITES
- S2 SUITES (PREMIUM LEVEL)
- S3 OWNERSHIP SUITES
- S4 OWNER'S LEVEL SUITES
- S5 GAME DAY/PARTY SUITES (PREMIUM LEVEL)
- S6 SUPER SUITES (PREMIUM LEVEL)

- L LOGE BOXES (LOWER LEVEL)

- 1 LOWER LEVEL CLUB
- 2 PREMIUM LEVEL CLUB



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- S2 SUITES (PREMIUM LEVEL)
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- S4 OWNER'S LEVEL SUITES
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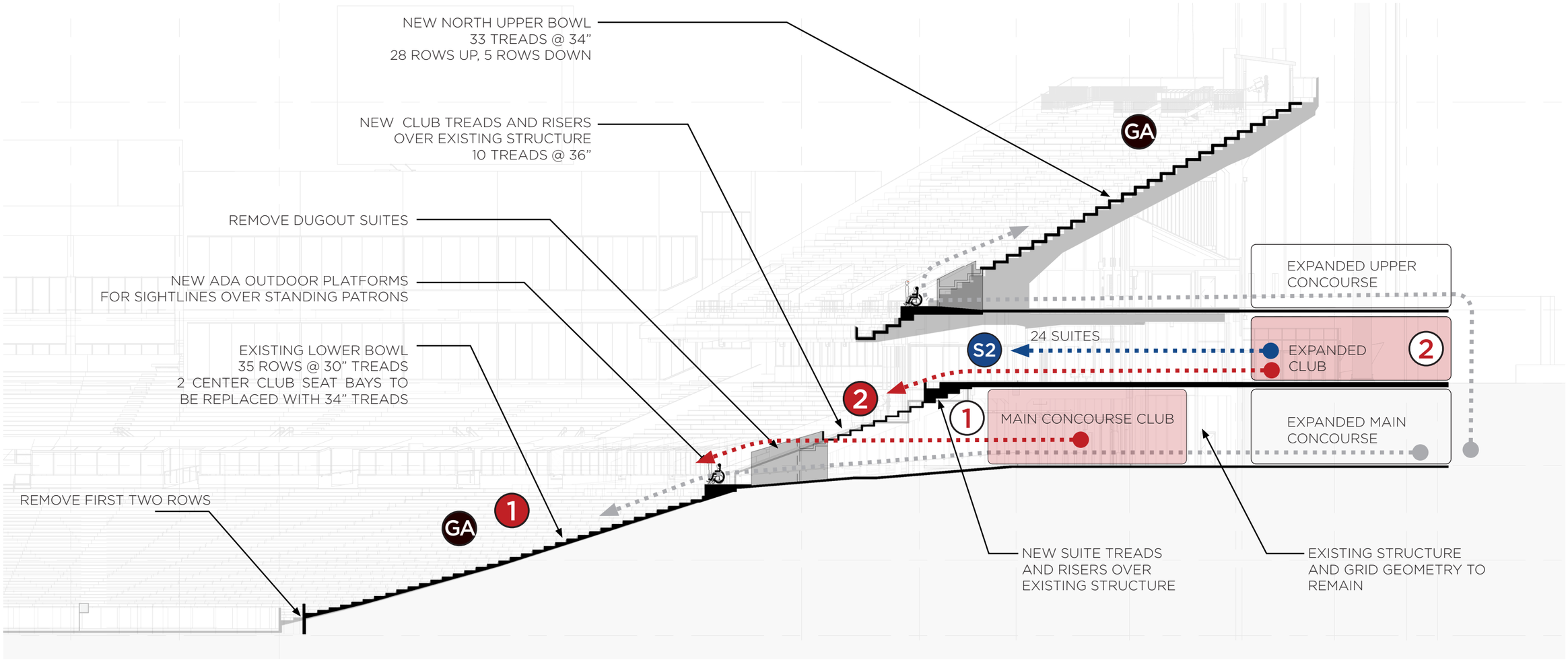
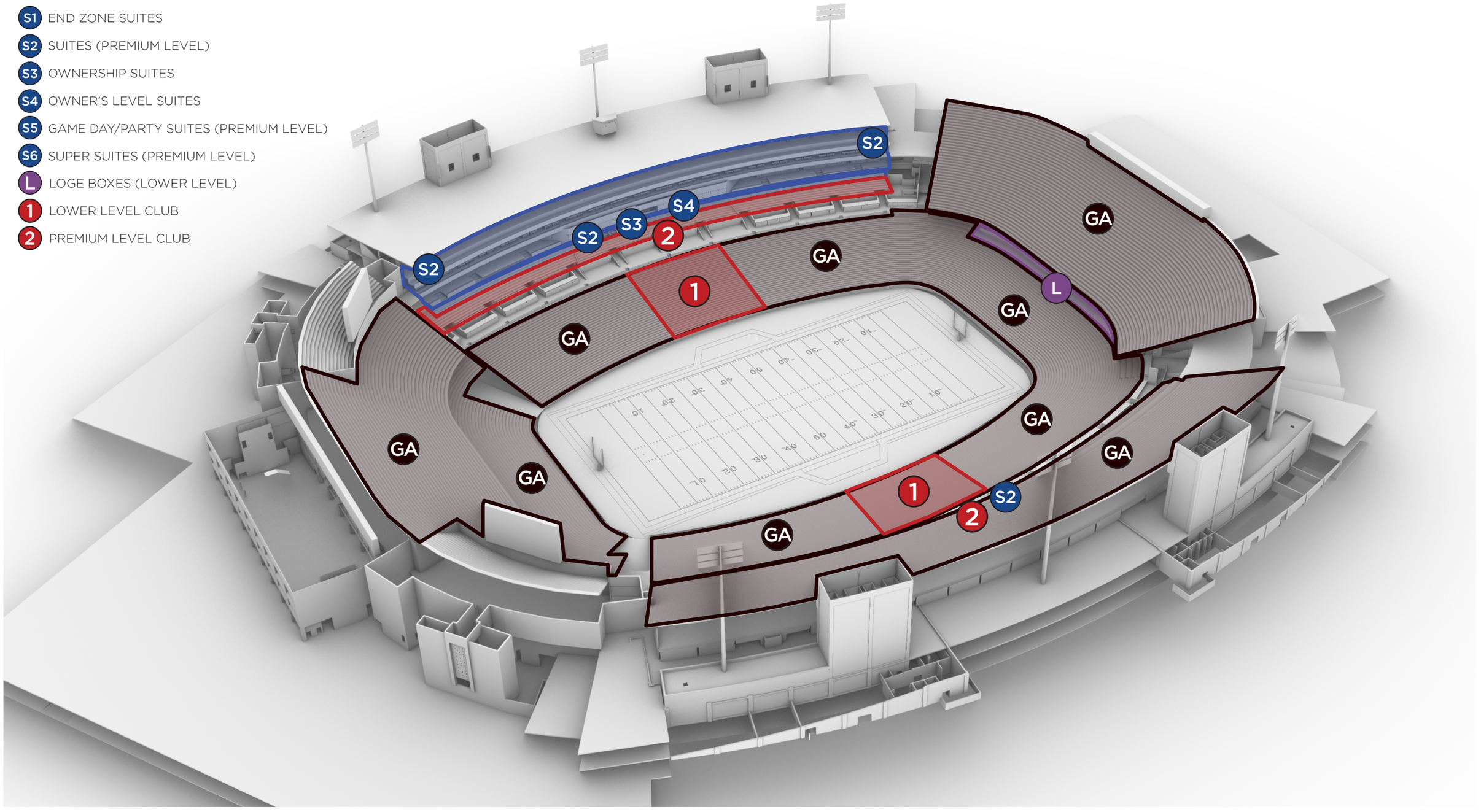
- S6 SUPER SUITES (PREMIUM LEVEL)

- L LOGE BOXES (LOWER LEVEL)
- 1 LOWER LEVEL CLUB
- 2 PREMIUM LEVEL CLUB

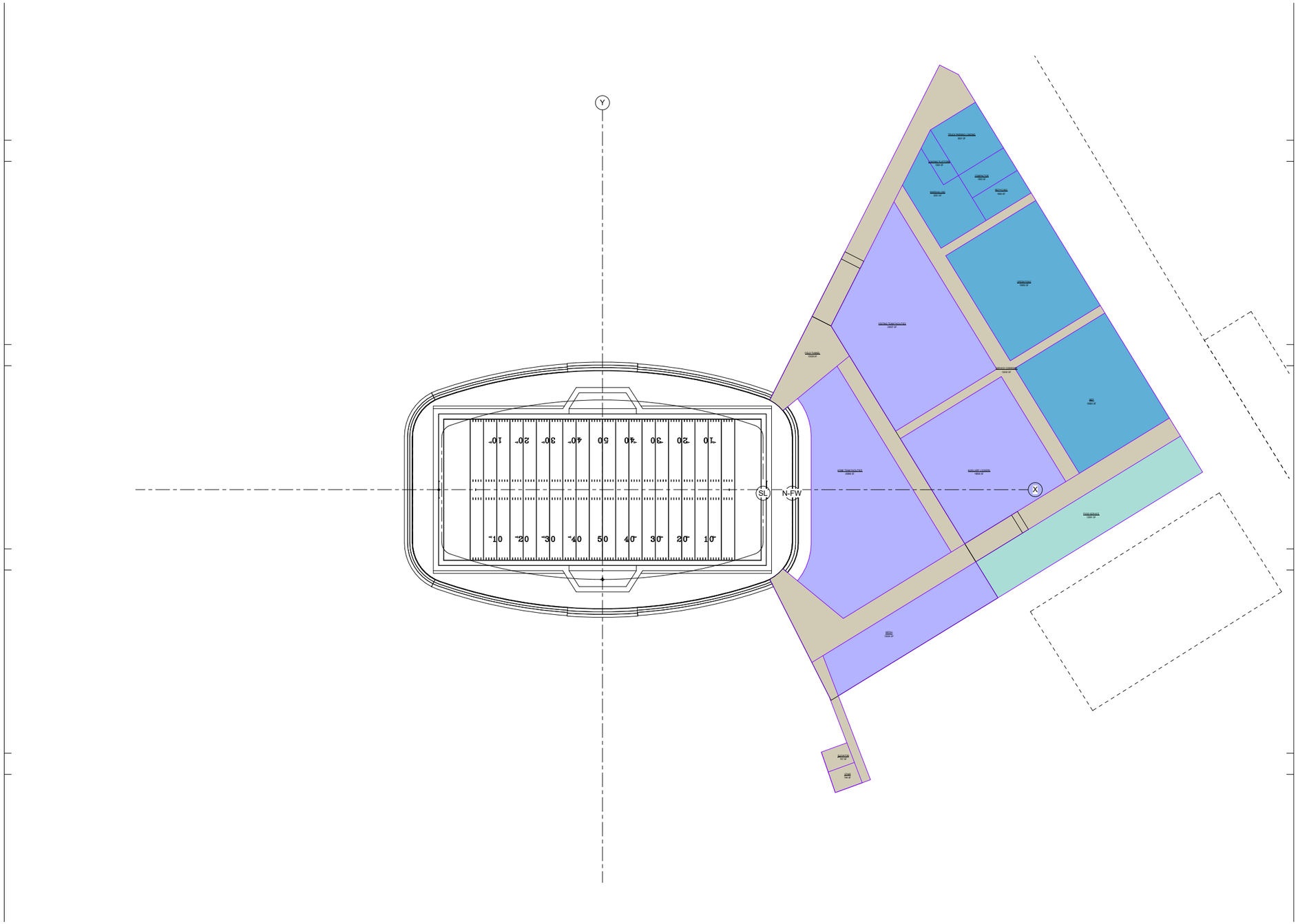


APPENDIX | OPTION 1B

- S1 END ZONE SUITES
- S2 SUITES (PREMIUM LEVEL)
- S3 OWNERSHIP SUITES
- S4 OWNER'S LEVEL SUITES
- S5 GAME DAY/PARTY SUITES (PREMIUM LEVEL)
- S6 SUPER SUITES (PREMIUM LEVEL)
- L LOGE BOXES (LOWER LEVEL)
- 1 LOWER LEVEL CLUB
- 2 PREMIUM LEVEL CLUB



APPENDIX | OPTION 1B



APPENDIX | OPTION 1B

OPTION 1B - APPROXIMATE BOWL SEAT COUNTS	
LOCATION	Estimated Seat Count
01 - CLUB LOWER NORTH - OPT 1B	1237
01 - CLUB LOWER SOUTH - OPT 1B	1237
01 - GA LOWER EAST - OPT 1B	5297
01 - GA LOWER SIDELINE - EXISTING - OPT 1B	13396
01 - GA LOWER WEST - EXISTING - OPT 1B	5091
01 - GA LOWER WEST - LEDGE - OPT 1B	204
02 - CLUB NORTH - OPT 1B	1957
02 - CLUB SOUTH - OPT 1B	1957
03 - GA UPPER EAST - OPT 1B	9770
03 - GA UPPER NORTH 1 - OPT 1B	1415
03 - GA UPPER NORTH 2 - OPT 1B	8420
03 - GA UPPER WEST - OPT 1B	9766
Grand total	59746

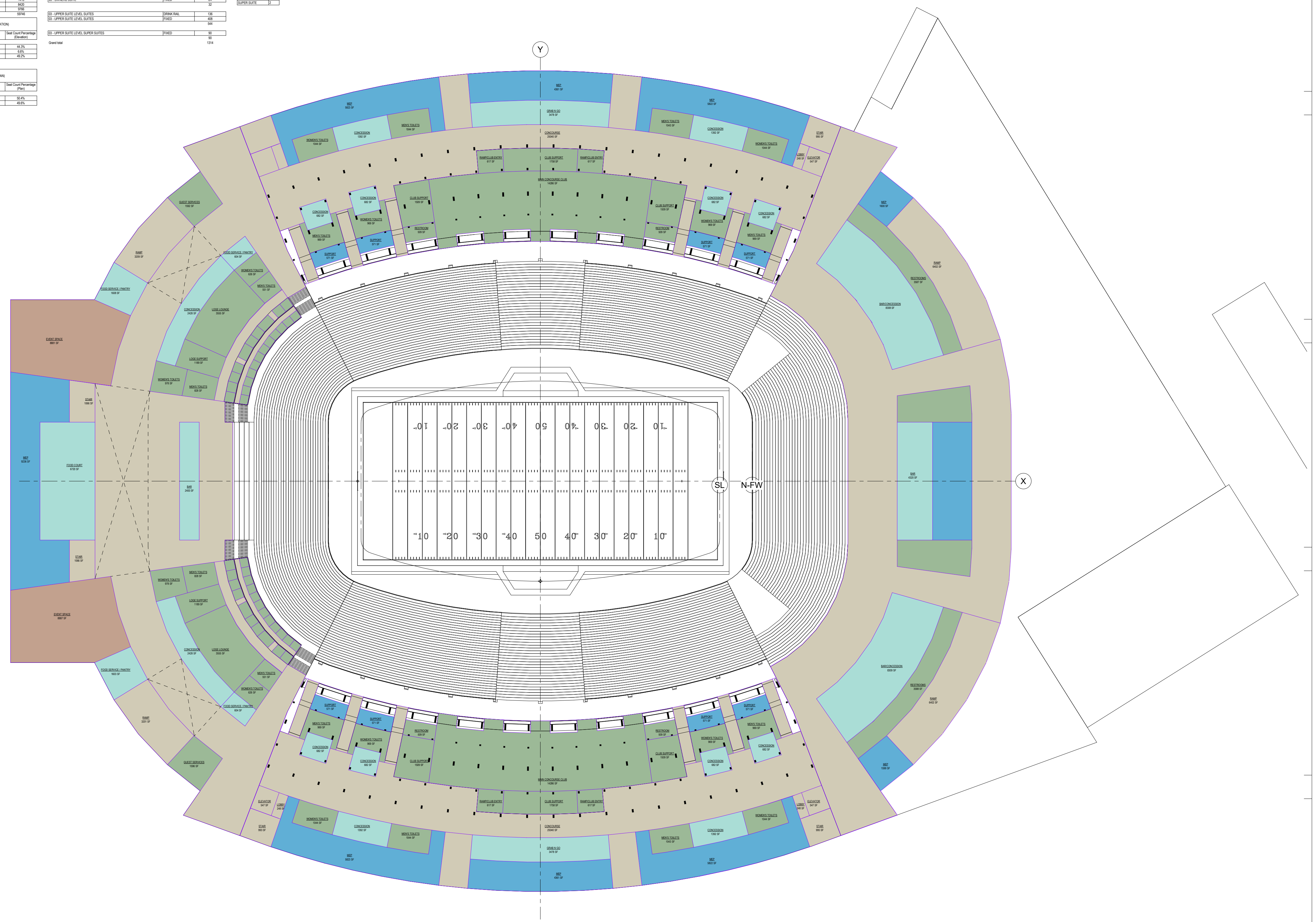
OPTION 1B - SEATING DISTRIBUTION (ELEVATION)		
ELEVATION	Estimated Seat Count	Seat Count Percentage (Elevation)
01 - LOWER	26461	44.3%
02 - CLUB	3914	6.6%
03 - UPPER	29371	49.2%
Grand total	59746	

OPTION 1B - SEATING DISTRIBUTION (PLAN)		
LOCATION	Estimated Seat Count	Seat Count Percentage (Plan)
END ZONE	30128	50.4%
SIDELINE	29618	49.6%
Grand total	59746	

OPTION 1B - SUITE SEAT COUNTS		
SUITE TYPE AND LOCATION	ROW	Seat Count
02 - CLUB LEVEL SUITES NORTH - 1B	DRINK RAIL	118
02 - CLUB LEVEL SUITES NORTH - 1B	FIXED	236
		354
02 - CLUB LEVEL SUITES SOUTH - 1B	DRINK RAIL	93
02 - CLUB LEVEL SUITES SOUTH - 1B	FIXED	201
		294
03 - OWNERS SUITE	DRINK RAIL	8
03 - OWNERS SUITE	FIXED	24
		32
03 - UPPER SUITE LEVEL SUITES	DRINK RAIL	136
03 - UPPER SUITE LEVEL SUITES	FIXED	408
		544
03 - UPPER SUITE LEVEL SUPER SUITES	FIXED	90
		90
Grand total		1314

OPTION 1B - LOGE COUNTS (4-6 PER, NOT INCLUDED IN OVERALL SEAT COUNTS)	
TYPE	Count
LOGE BOX	44

OPTION 1B - SUITE COUNTS	
TYPE	Count
OWNERS SUITE	1
PARTY SUITE	2
SUITE	78
SUPER SUITE	2



APPENDIX | OPTION 1B

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LOCATION	Estimated Seat Count
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01 - GA LOWER SIDELINE - EXISTING - OPT 1B	13396
01 - GA LOWER WEST - EXISTING - OPT 1B	5091
01 - GA LOWER WEST - LEDGE - OPT 1B	204
02 - CLUB NORTH - OPT 1B	1957
02 - CLUB SOUTH - OPT 1B	1957
03 - GA UPPER EAST - OPT 1B	9770
03 - GA UPPER NORTH 1 - OPT 1B	1415
03 - GA UPPER NORTH 2 - OPT 1B	8420
03 - GA UPPER WEST - OPT 1B	9766
Grand total	59746

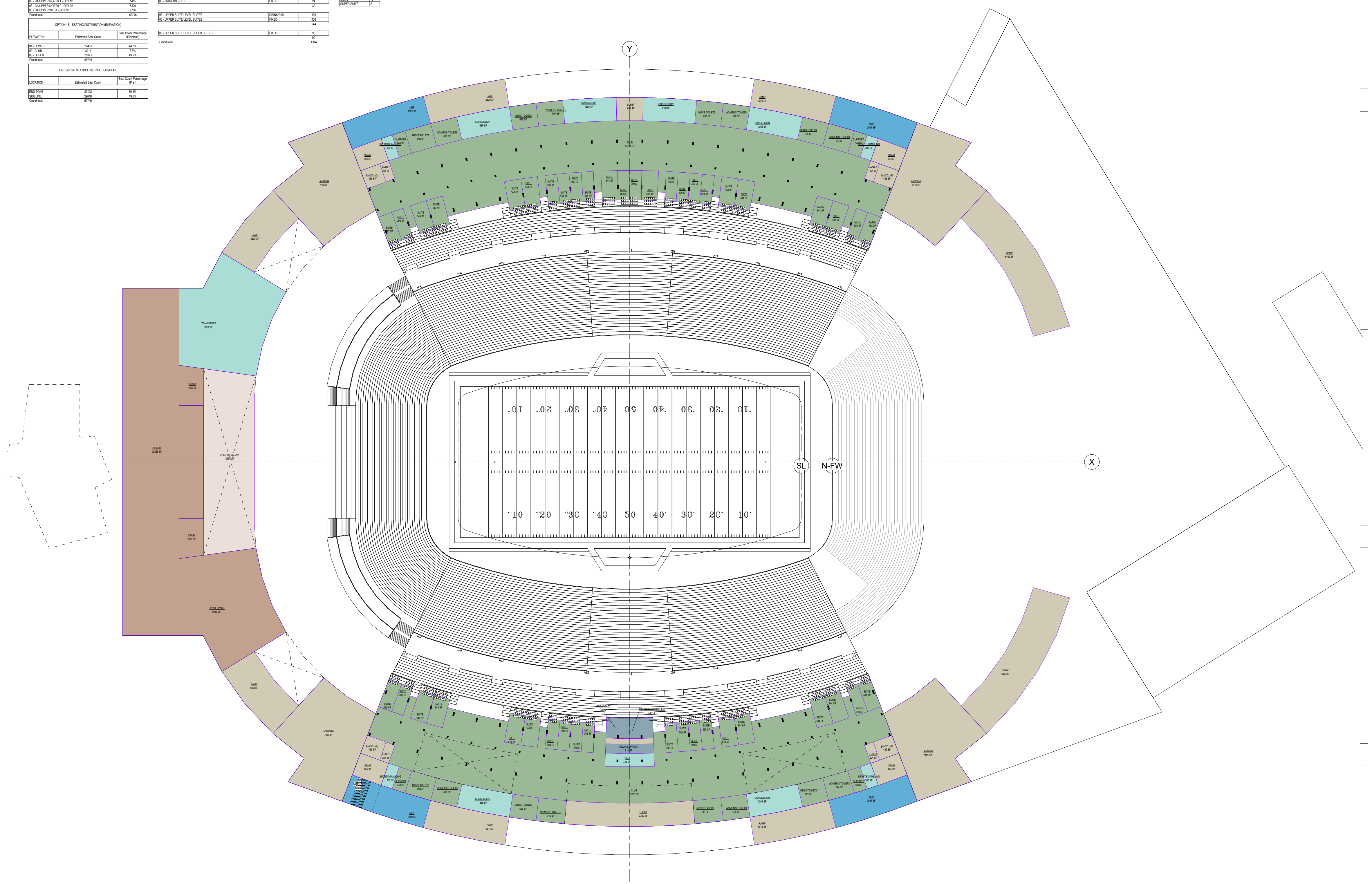
OPTION 1B - SEATING DISTRIBUTION (ELEVATION)		
ELEVATION	Estimated Seat Count	Seat Count Percentage (Elevation)
01 - LOWER	26461	44.3%
02 - CLUB	3914	6.6%
03 - UPPER	29371	49.2%
Grand total	59746	

OPTION 1B - SEATING DISTRIBUTION (PLAN)		
LOCATION	Estimated Seat Count	Seat Count Percentage (Plan)
END ZONE	30128	50.4%
SIDELINE	29618	49.6%
Grand total	59746	

OPTION 1B - SUITE SEAT COUNTS		
SUITE TYPE AND LOCATION	ROW	Seat Count
02 - CLUB LEVEL SUITES NORTH - 1B	DRINK RAIL	118
02 - CLUB LEVEL SUITES NORTH - 1B	FIXED	236
		354
02 - CLUB LEVEL SUITES SOUTH - 1B	DRINK RAIL	93
02 - CLUB LEVEL SUITES SOUTH - 1B	FIXED	201
		294
03 - OWNERS SUITE	DRINK RAIL	8
03 - OWNERS SUITE	FIXED	24
		32
03 - UPPER SUITE LEVEL SUITES	DRINK RAIL	136
03 - UPPER SUITE LEVEL SUITES	FIXED	408
		544
03 - UPPER SUITE LEVEL SUPER SUITES	FIXED	90
		90
Grand total		1314

OPTION 1B - LOGE COUNTS (4-6 PER, NOT INCLUDED IN OVERALL SEAT COUNTS)	
TYPE	Count
LOGE BOX	44

OPTION 1B - SUITE COUNTS	
TYPE	Count
OWNERS SUITE	1
PARTY SUITE	2
SUITE	78
SUPER SUITE	2



OPTION 1B - APPROXIMATE BOWL SEAT COUNTS	
LOCATION	Estimated Seat Count
01 - CLUB LOWER NORTH - OPT 1B	1237
01 - CLUB LOWER SOUTH - OPT 1B	1237
01 - GA LOWER EAST - OPT 1B	5297
01 - GA LOWER SIDELINE - EXISTING - OPT 1B	13396
01 - GA LOWER WEST - EXISTING - OPT 1B	5091
01 - GA LOWER WEST - LEDGE - OPT 1B	204
02 - CLUB NORTH - OPT 1B	1957
02 - CLUB SOUTH - OPT 1B	1957
03 - GA UPPER EAST - OPT 1B	9770
03 - GA UPPER NORTH 1 - OPT 1B	1415
03 - GA UPPER NORTH 2 - OPT 1B	8420
03 - GA UPPER WEST - OPT 1B	9766
Grand total	59746

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03 - UPPER SUITE LEVEL SUITES	FIXED	408
		544
03 - UPPER SUITE LEVEL SUPER SUITES	FIXED	90
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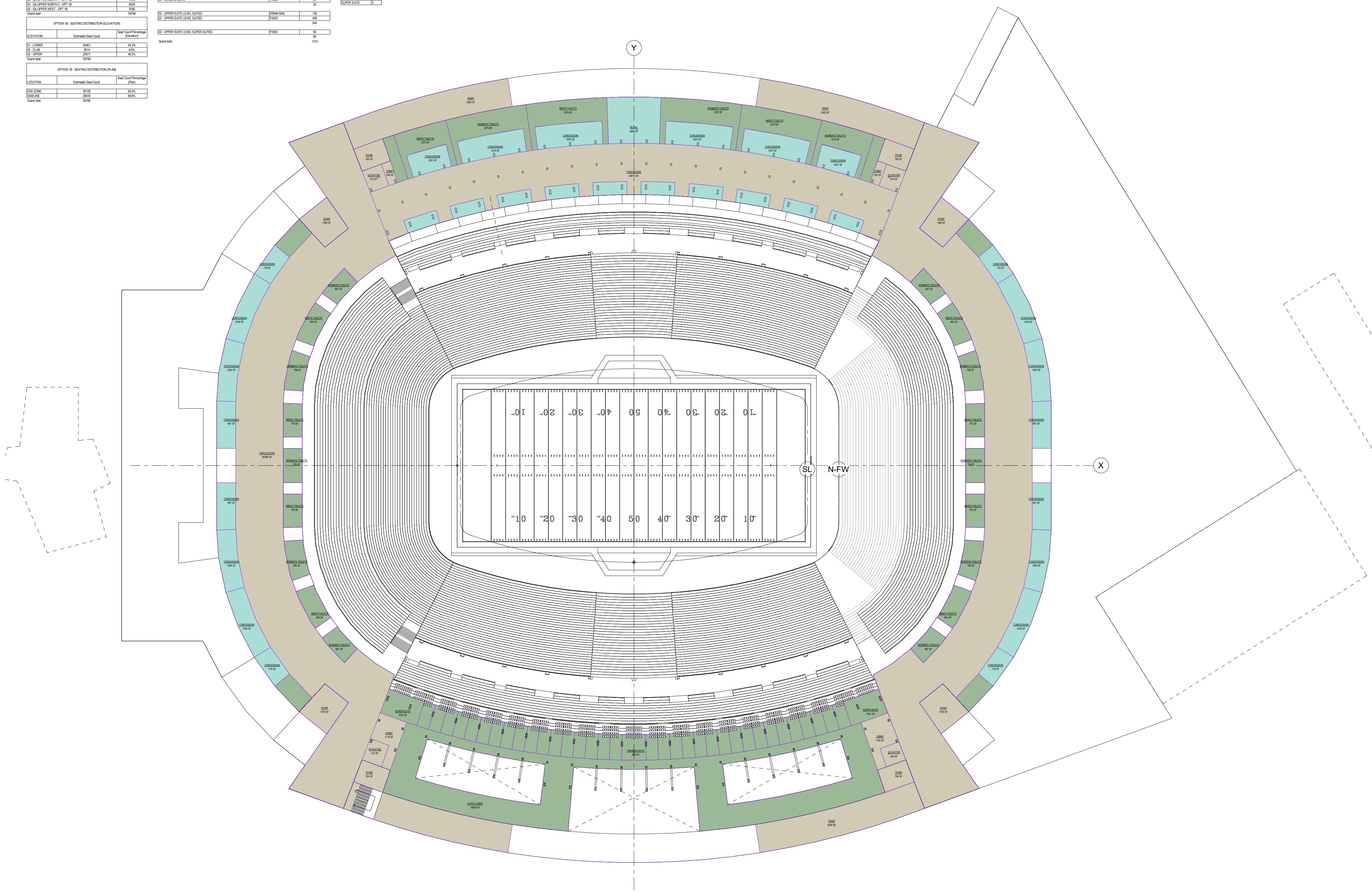

OPTION 1B - APPROXIMATE BOWL SEAT COUNTS	
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01 - GA LOWER WEST - EXISTING - OPT 1B	5091
01 - GA LOWER WEST - LEDGE - OPT 1B	204
02 - CLUB NORTH - OPT 1B	1957
02 - CLUB SOUTH - OPT 1B	1957
03 - GA UPPER EAST - OPT 1B	9770
03 - GA UPPER NORTH 1 - OPT 1B	1415
03 - GA UPPER NORTH 2 - OPT 1B	8420
03 - GA UPPER WEST - OPT 1B	9766
Grand total	59746

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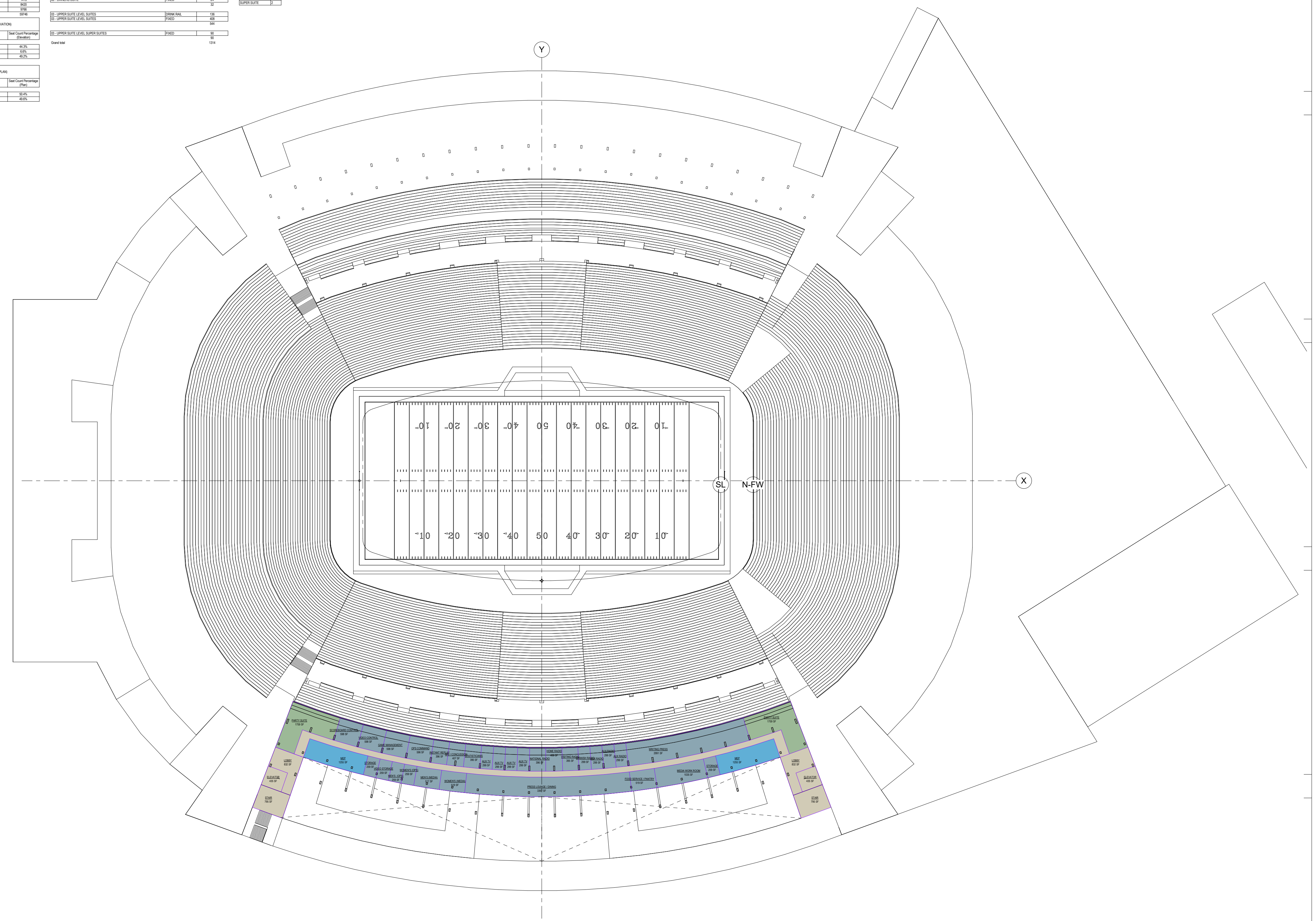
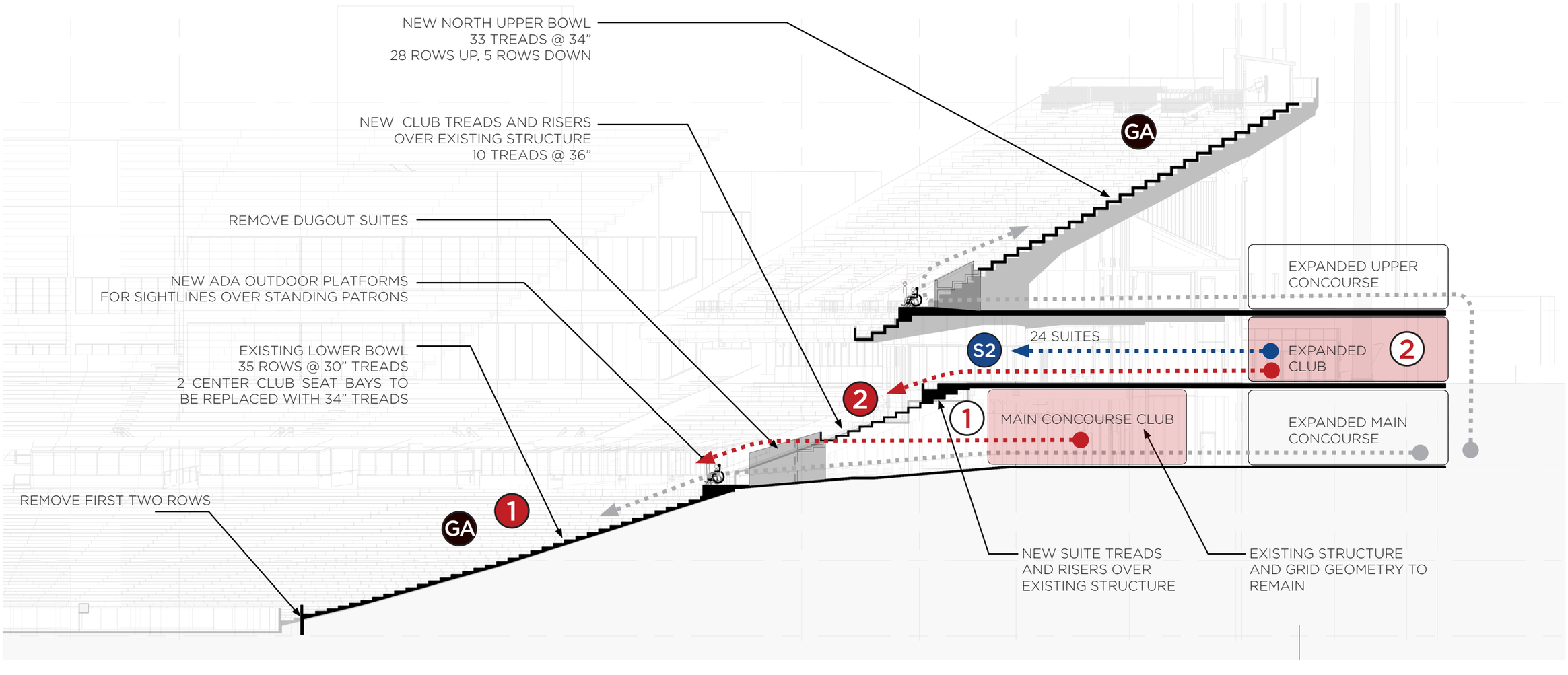


APPENDIX | OPTION 1B

- S1 END ZONE SUITES
- S2 SUITES (PREMIUM LEVEL)
- S3 OWNERSHIP SUITES
- S4 OWNER'S LEVEL SUITES
- S5 GAME DAY/PARTY SUITES (PREMIUM LEVEL)
- S6 SUPER SUITES (PREMIUM LEVEL)

- L LOGE BOXES (LOWER LEVEL)
- 1 LOWER LEVEL CLUB
- 2 PREMIUM LEVEL CLUB



APPENDIX | OPTION 1B

- S1 END ZONE SUITES
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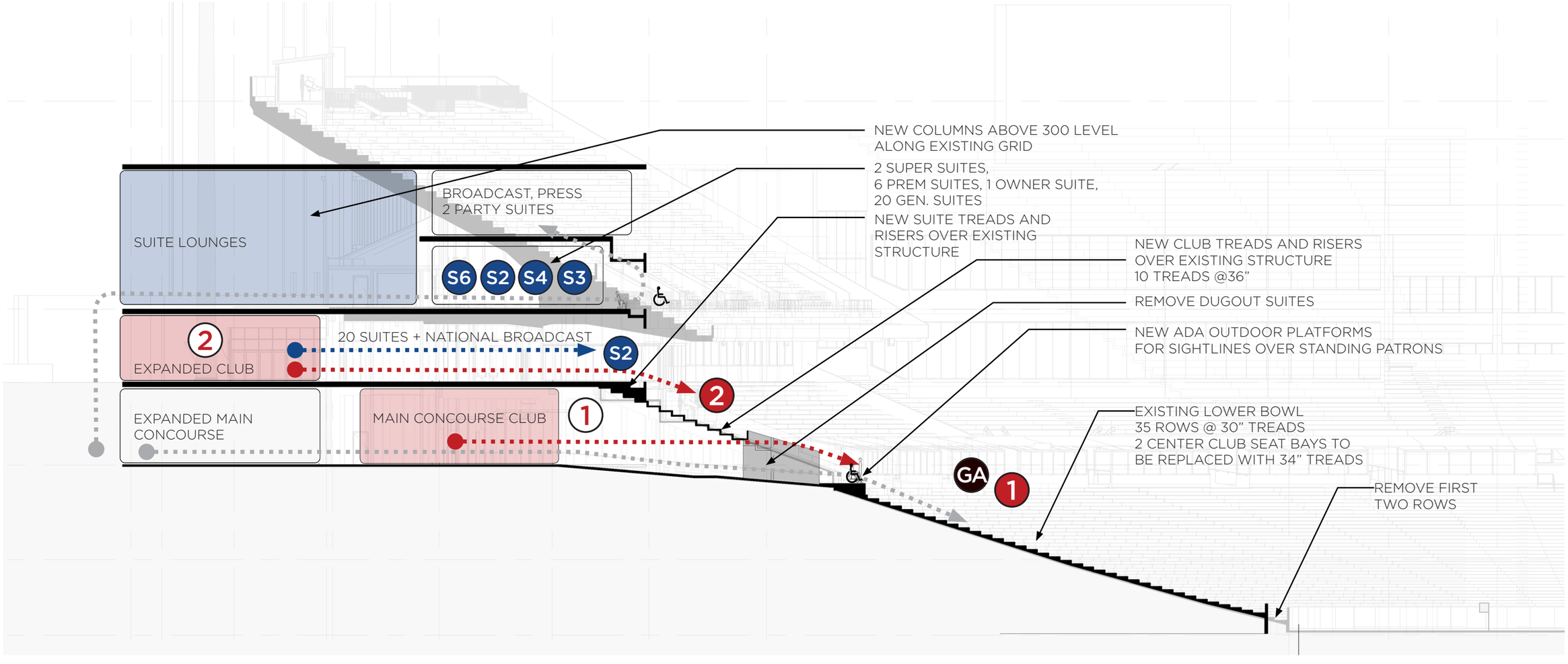

	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW
1		**Item**	**Quantity**	**Unit**	**Unit Cost**	**Frequency of Replacement**	**Existing Condition (2019)**	**Anticipated Replacement Timeframe (2019 Basis)**					**Est. Replacement Cost**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**													
2						**(Years)**	**(Refer to Notes)**	**Annual**	**0 - 2 Years**	**2 - 5 years**	**5 - 10 Years**	**10 - 20 Years**	**FY 2019 Dollars ($)**																																		
4																																															
5	1	**Main Cast-in-Place Frames:**				60	Mixed				X																																				
6	2	1. Concrete Spall Repairs (130 sf/yr)	130	SF	$ 6.50	1	Fair	X					$845	$866	$888	$910	$933	$956	$980	$1,004	$1,030	$1,055	$1,082	$1,109	$1,136	$1,165	$1,194	$1,224	$1,254	$1,286	$1,318	$1,351	$1,385	$1,419													
7	3	2. Concrete Epoxy Crack Injection (60 lf/yr)	60	LF	$ 23.40	1	Poor to Fair	X					$1,404	$1,439	$1,475	$1,512	$1,550	$1,588	$1,628	$1,669	$1,711	$1,753	$1,797	$1,842	$1,888	$1,935	$1,984	$2,033	$2,084	$2,136	$2,190	$2,245	$2,301	$2,358													
8	4	3. Elastomeric Coating (20,200 sf/5 yrs.)	20,200	SF	$ 9.00	5	Fair				X		$181,800				$200,673					$227,043					$256,879					$290,635																
9	5	**Elevated Seating Panels:**				45	Poor				X																																				
10	6	1. Topside Concrete Spall Repairs (120 sf/yr)	120	SF	$ 6.50	1	Fair	X					$780	$800	$819	$840	$861	$882	$905	$927	$950	$974	$998	$1,023	$1,049	$1,075	$1,102	$1,130	$1,158	$1,187	$1,217	$1,247	$1,278	$1,310													
11	7	2. Topside Concrete Crack Injection (190 lf/yr)	190	LF	$ 19.50	1	Fair	X					$3,705	$3,798	$3,893	$3,990	$4,090	$4,192	$4,297	$4,404	$4,514	$4,627	$4,743	$4,861	$4,983	$5,107	$5,235	$5,366	$5,500	$5,638	$5,779	$5,923	$6,071	$6,223													
12	8	3. Underside Concrete Spall Repairs (75 sf/yr)	75	SF	$ 10.40	1	Poor to Fair	X					$780	$800	$819	$840	$861	$882	$905	$927	$950	$974	$998	$1,023	$1,049	$1,075	$1,102	$1,130	$1,158	$1,187	$1,217	$1,247	$1,278	$1,310													
13	9	4. Underside Concrete Crack Injection (115 lf/yr)	115	LF	$ 28.80	1	Fair	X					$3,312	$3,395	$3,480	$3,567	$3,656	$3,747	$3,841	$3,937	$4,035	$4,136	$4,240	$4,346	$4,454	$4,566	$4,680	$4,797	$4,917	$5,040	$5,166	$5,295	$5,427	$5,563													
14	10	5. CIP Concrete Tread Replacement (15 ea/yr)	15	EA	$ 750.00	1	Fair	X					$11,250	$11,531	$11,820	$12,115	$12,418	$12,728	$13,047	$13,373	$13,707	$14,050	$14,401	$14,761	$15,130	$15,508	$15,896	$16,293	$16,701	$17,118	$17,546	$17,985	$18,434	$18,895													
15	11	6. Traffic Coatings (168750 sf/5 yrs)	168,750	SF	$ 7.00	5	Poor to Fair			X			$1,181,250		$1,241,051					$1,404,135					$1,588,650					$1,797,412																	
16	12	7. Silane Sealer (116200 sf/2 yrs)	116,200	SF	$ 6.00	2	Good		X				$697,200	$714,630		$750,808		$788,818		$828,752		$870,707		$914,787		$961,098		$1,009,753		$1,060,872		$1,114,579		$1,171,004													
17	13	8. Fixed Joint Replacement 131106 lf/5 yrs)	131,106	LF	$ 15.00	5	Poor to Fair				X		$1,966,590				$2,170,747					$2,456,001					$2,778,740					$3,143,889																
18	14	9. Expansion Joint Replacement 1080 lf/5 yrs)	1,080	LF	$ 600.00	5	Poor			X			$648,000		$680,805					$770,268					$871,488					$986,009																	
19	15	**On-grade Seating Slabs:**				60	Fair					X																																			
20	16	1. Concrete Spall Repairs (40 sf/yr)	40	SF	$ 6.50	1	Poor to Fair	X					$260	$267	$273	$280	$287	$294	$302	$309	$317	$325	$333	$341	$350	$358	$367	$377	$386	$396	$406	$416	$426	$437													
21	17	2. Concrete Slab Replacement (16 cy/yr)	16	CY	$ 1,040.00	1	Poor to Fair	X					$16,640	$17,056	$17,482	$17,919	$18,367	$18,827	$19,297	$19,780	$20,274	$20,781	$21,301	$21,833	$22,379	$22,938	$23,512	$24,100	$24,702	$25,320	$25,953	$26,602	$27,267	$27,948													
22	18	3. Masonry Repointing (60 lf/yr)	60	LF	$ 187.50	1	Fair	X					$11,250	$11,531	$11,820	$12,115	$12,418	$12,728	$13,047	$13,373	$13,707	$14,050	$14,401	$14,761	$15,130	$15,508	$15,896	$16,293	$16,701	$17,118	$17,546	$17,985	$18,434	$18,895													
23	19	4. Masonry Replacement (20 sf/yr)	20	SF	$ 55.68	1	Fair	X					$1,114	$1,141	$1,170	$1,199	$1,229	$1,260	$1,291	$1,324	$1,357	$1,391	$1,426	$1,461	$1,498	$1,535	$1,573	$1,613	$1,653	$1,694	$1,737	$1,780	$1,825	$1,870													
24	20	**100 Level Concourses:**				60	Fair					X																																			
25	21	1. Masonry Repointing (250 lf/yr)	250	LF	$ 187.50	1	Fair	X					$46,875	$48,047	$49,248	$50,479	$51,741	$53,035	$54,361	$55,720	$57,113	$58,540	$60,004	$61,504	$63,042	$64,618	$66,233	$67,889	$69,586	$71,326	$73,109	$74,937	$76,810	$78,730													
26	22	2. Masonry Replacement (40 sf/yr)	40	SF	$ 55.68	1	Fair	X					$2,227	$2,283	$2,340	$2,398	$2,458	$2,520	$2,583	$2,647	$2,714	$2,781	$2,851	$2,922	$2,995	$3,070	$3,147	$3,226	$3,306	$3,389	$3,474	$3,561	$3,650	$3,741													
27	23	3. Concrete Slab Replacement (640 sf/yr)	640	SF	$ 150.00	1	Poor to Fair	X					$96,000	$98,400	$100,860	$103,382	$105,966	$108,615	$111,331	$114,114	$116,967	$119,891	$122,888	$125,960	$129,109	$132,337	$135,645	$139,037	$142,513	$146,075	$149,727	$153,470	$157,307	$161,240													
28	24	4. Traffic Coating (7600 sf/5 yrs)	7,600	SF	$ 7.00	5	Poor to Fair			X			$53,200		$55,893					$63,238					$71,548					$80,950																	
29	25	5. Fixed Joint Replacement (65 lf/yr)	65	LF	$ 22.50	1	Poor to Fair	X					$1,463	$1,499	$1,537	$1,575	$1,614	$1,655	$1,696	$1,738	$1,782	$1,826	$1,872	$1,919	$1,967	$2,016	$2,066	$2,118	$2,171	$2,225	$2,281	$2,338	$2,396	$2,456													
30	26	**200 Level Concourses**				60	Fair					X																																			
31	27	**300 Level Concourses and Ramps:**				60	Fair					X																																			
32	28	1. Concrete Spall Repairs (5 sf/yr)	5	SF	$ 8.00	1	Fair	X					$40	$41	$42	$43	$44	$45	$46	$48	$49	$50	$51	$52	$54	$55	$57	$58	$59	$61	$62	$64	$66	$67													
33	29	2. Concrete Slab Replacement (535 sf/yr)	535	SF	$ 175.00	1	Fair	X					$93,625	$95,966	$98,365	$100,824	$103,344	$105,928	$108,576	$111,291	$114,073	$116,925	$119,848	$122,844	$125,915	$129,063	$132,290	$135,597	$138,987	$142,462	$146,023	$149,674	$153,415	$157,251													
34	30	3. Traffic Coatings (81200 sf/5 yrs)	81,200	SF	$ 7.00	5	Poor to Fair	X					$568,400	$582,610					$659,170					$745,790					$843,793					$954,674													
35	31	4. Expansion Joint Replacement (216 lf/5 yrs)	216	LF	$ 2,020.00	5	Poor to Fair			X			$436,320	$447,228					$505,997					$572,490					$647,719					$732,835													
36	32	**Suites**				60	Good					X																																			
37	33	1. Masonry Repointing (50 lf/yr)	50	LF	$ 187.50	1	Good	X					$9,375	$9,609	$9,850	$10,096	$10,348	$10,607	$10,872	$11,144	$11,423	$11,708	$12,001	$12,301	$12,608	$12,924	$13,247	$13,578	$13,917	$14,265	$14,622	$14,987	$15,362	$15,746													
38	34	2. Masonry Replacement (10 sf/yr)	10	SF	$ 55.68	1	Good	X					$557	$571	$585	$600	$615	$630	$646	$662	$678	$695	$713	$731	$749	$768	$787	$806	$827	$847	$868	$890	$912	$935													
39	35	Lower Ring Wall Replacement				40	Poor			X			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0													
40	36	Field Light Towers	6		$ 450,000	60	Good					X	$2,700,000											$3,542,634																							
41	37	**Tunnel and Adjacent Rooms**				60	Fair					X																																			
42	38	1. Concrete Spall Repair (15 sf/yr)	15	SF	$ 8.00	1	Fair	X					$120	$123	$126	$129	$132	$136	$139	$143	$146	$150	$154	$157	$161	$165	$170	$174	$178	$183	$187	$192	$197	$202													
43	39	2. Concrete Crack Injection (20 lf/yr)	20	LF	$ 23.40	1	Fair	X					$468	$480	$492	$504	$517	$529	$543	$556	$570	$584	$599	$614	$629	$645	$661	$678	$695	$712	$730	$748	$767	$786													
44	40	3. Traffic Coatings (2000 sf/5 yrs.)	2,000	SF	$ 7.00	5	Good				X		$14,000				$15,453					$17,484					$19,782					$22,381																
45	41	Video Boards - Structural Maintenance	17,175	SF	$ 120	25	Good				X		$2,061,000							$2,449,881																											
48	44	Ticket Booth	1	LS	$ 200,000	50	Good						$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0													
49	45	Entry Gates & Fencing	1	LS	$ 100,000	50	Good					X	$100,000														$141,297																				
50	45.1	Replace current fencing and mesh to meet NFL Safety Standards							X				$500,000			$538,445																															
51	45.2	UPPER LEVEL RAKERS					Poor				X			ONGOING MAINTENANCE			FULL ON REPLACEMENT																														
52	45.3	UPPER LEVEL SEATING STADIA					Poor				X						**EAST**	**WEST**																													
53	45.4																																														
54	46	**SUBTOTALS**												**$2,054,109**	**$2,295,131**	**$1,614,570**	**$2,720,324**	**$1,130,604**	**$1,515,498**	**$5,875,364**	**$368,066**	**$3,948,504**	**$386,700**	**$6,172,068**	**$2,937,962**	**$1,377,531**	**$3,623,542**	**$1,447,269**	**$1,939,965**	**$4,384,907**	**$471,156**	**$5,054,419**	**$495,008**	**$3,365,897**													
55	47																																														
56	48																																														
57	49	**Seating Bowl:**																																													
58	50	**Seating Bowl - Seating - Stadium**																																													
59	51	+B67:B155 Lower Bowl Armchair Seating	21,981	EA	$ 250.00	30	Poor				X		$5,495,250						$3,186,403	$3,266,063																											
60	52	Club Level Armchair Seating	6,878	EA	$ 275.00	30	Fair				X		$1,891,450								$1,152,274	$1,181,081																									
61	53	**Seating Bowl - Seating - Benches w/ backs**											$0																																		
62	54	Lower Bowl Endzones	9,464	EA	$ 185.00	30	Poor				X		$1,750,840										$1,120,612	$1,148,627																							
63	55	Upper Bowl	29,040	EA	$ 185.00	30	Poor			X			$5,372,400				$2,965,062	$3,039,189																													
64	56	Seating Bowl - Sealants (annual inspection - 20% replacement each year)	1	LS	$ 7,500.00	5	Mixed	X					$7,500	$7,688	$7,880	$8,077	$8,279	$8,486	$8,698	$8,915	$9,138	$9,366	$9,601	$9,841	$10,087	$10,339	$10,597	$10,862	$11,134	$11,412	$11,697	$11,990	$12,290	$12,597													
65	57	Seating Bowl - Rails, Guards, etc. (annual inspection - 2% replacement each year)	271	LF	$ 185.00	50	Mixed	X					$50,122	$51,375	$52,659	$53,976	$55,325	$56,708	$58,126	$59,579	$61,068	$62,595	$64,160	$65,764	$67,408	$69,093	$70,821	$72,591	$74,406	$76,266	$78,173	$80,127	$82,130	$84,183													
66	58	Seating Bowl - Expansion Joints (Refer to Structural Section)		LF																																											
67	59	Seating Bowl - Paint (annual inspection - 33% replacement each year)	50,471	SF	$ 2.50	3	Mixed	X					$126,177	$129,332	$132,565	$135,879	$139,276	$142,758	$146,327	$149,985	$153,735	$157,578	$161,518	$165,556	$169,695	$173,937	$178,285	$182,743	$187,311	$191,994	$196,794	$201,714	$206,757	$211,925													
68	60	**Playing Field:**																																													
69	61	Playing Field - Artificial Turf System	97,312	SF	$ 18.00	10	Poor					X	$1,751,616									$2,187,528																									
70	62	Playing Field - Field Equipment	1	LS	$ 40,000	10	Good				X		$40,000					$7,543	$7,731	$7,925	$8,123	$8,326	$8,534					$9,655	$9,897	$10,144	$10,398	$10,658	$10,924														
71	63	Playing Field - Field Wall Pads	5,557		$ 25.00	5	Poor		X				$138,925	$142,398					$161,110					$182,282					$206,235																		
72	64	**Concourse Flooring:**																																													
73	65	**Concrete Slabs-on-Grade(refer to Structural Section)**																																													
74	66	Concrete - Non-Structural (walls, curbs, steps, etc.) (annual inspection - 2% replacement each year)	4	CY	$ 2,500	50	Mixed	X					$9,691	$9,933	$10,181	$10,436	$10,697	$10,964	$11,238	$11,519	$11,807	$12,102	$12,405	$12,715	$13,033	$13,359	$13,693	$14,035	$14,386	$14,746	$15,114	$15,492	$15,879	$16,276													
75	67	Traffic Coatings - Seating Bowl (refer to Structural Section)																																													
76	68	Traffic Coatings - 000 Level			see Structural	3	Good			X																																					
77	69	Traffic Coatings - 100 Level			see Structural	3	Fair			X																																					
78	70	Traffic Coatings - 200 Level			see Structural	3	Poor		X																																						
79	71	Traffic Coatings - 300 Level			see Structural	2	Poor		X																																						
80	72	**Exterior Enclosures:**																																													
81	73	Exterior Enclosures - Concrete Masonry	278,230	SF	$ 38.00	50	Good						$10,572,723																																		
82	74	Exterior Enclosures - Brick Masonry	20,763	SF	$ 49.00	50	Good						$1,017,407																																		
83	75	Exterior Enclosures - Metal Wall Panels	41,527	SF	$ 65.00	30	Good						$2,699,242																																		
84	76	Exterior Enclosures - Insulated Metal Wall Panels	41,527	SF	$ 55.00	30	Good						$2,283,974																																		
85	77	Exterior Enclosures - Insulated Metal Wall Panel Trim (annual inspection - 5% replacement each year)	208	SF	$ 12.80	20	Mixed	X					$2,658	$2,724	$2,792	$2,862	$2,934	$3,007	$3,082	$3,159	$3,238	$3,319	$3,402	$3,487	$3,574	$3,664	$3,755	$3,849	$3,945	$4,044	$4,145	$4,249	$4,355	$4,464													
86	78	Exterior Enclosures - Metal Panel Coaches Booths	12,458	SF	$ 45.00	30	Poor		X				$560,612	$574,627																																	
87	79	Exterior Enclosures - Metal Copings, Soffits, Etc.	22,293	SF	$ 51.00	30	Good						$1,136,943																																		
88	80	Exterior Enclosures - EIFS	20,763	SF	$ 25.00	30	Good						$519,085																																		
89	81	**Exterior Enclosures - Insulation:**																																													
90	82	100 Level Soffits/Ceilings	178,067	SF	$ 3.50	30	Fair				X		$623,234					$117,522	$120,460	$123,472	$126,558	$129,722	$132,965	$817,737																							
91	83	200 Level Soffits/Ceilings	120,659	SF	$ 3.50	30	Fair				X		$422,307					$79,634	$81,624	$83,665	$85,757	$87,900	$90,098	$554,103																							
92	84	300 Level Soffits/Ceilings	120,271	SF	$ 3.50	30	Poor		X				$420,947	$215,736	$221,129																																
93	85	400 Level Ceilings	4,010	SF	$ 3.50	30	Poor		X				$14,033	$7,192	$7,372																																
94	86	200/300 Level Plumbing Chases	708	SF	$ 13.50	30	Poor		X				$9,563	$4,901	$5,024																																
95	87	Tower Plumbing Chases	145	SF	$ 13.50	30	Poor		X				$1,960	$1,005	$1,030																																
96	88	Exterior Enclosures - Coated Spray Insulation (annual inspection - 10% replacement each year)	15,315	SF	$ 5.25	10	Mixed	X					$80,402	$82,412	$84,472	$86,584	$88,749	$90,967	$93,241	$95,573	$97,962	$100,411	$102,921	$105,494	$108,132	$110,835	$113,606	$116,446	$119,357	$122,341	$125,399	$128,534	$131,748	$135,041													
97	89	Exterior Enclosures - Storefront, Curtainwall	2,720	SF	$ 133.00	30	Good				X		$361,760									$451,789																									
98	90	**Exterior Enclosures - Fixed Windows/Glazing:**		SF																																											
99	91	Admin Building - 300 Level	3,184	SF	$ 108.00	30	Poor						$343,872				$379,570																														
100	92	Admin Building - 200 Level	2,189	SF	$ 108.00	30	Poor			X			$236,412					$267,478																													
101	93	Goal Line Club	w/ others	SF	$ 108.00	30	Fair			X					$0	$0	$0	$0																													
102	94	All others		SF	$ 108.00	30	Good						$0																																		
103	95	**Exterior Enclosures - Operable Windows/Glazing:**																																													
104	96	Dugout Suite Windows	28,203	SF	$ 141.00	30	Fair			x			$3,976,623		$4,177,940																																
105	97	Super Suite Windows	505	SF	$ 141.00	30	Good			x			$71,205			$76,680																															
106	98	End Zone Clubs & Writing Press	3,369	SF	$ 141.00	30	Fair			x			$475,029				$524,343																														
107	99	West End & Sideline Suite Windows	w/ above	SF	$ 141.00	30	Fair			x				$0	$0	$0	$0	$0	$0																												
108	100	Pressbox TEPCO Windows	1,489	SF	$ 158.00	30	Fair			x			$235,262					$266,177																													
109	101	Exterior Enclosures - Sealants (annual inspection - 20% replacement each year)	4,743	LF	$ 11.00	5	Mixed	X					$52,175	$53,480	$54,817	$56,187	$57,592	$59,031	$60,507	$62,020	$63,570	$65,160	$66,789	$68,458	$70,170	$71,924	$73,722	$75,565	$77,454	$79,391	$81,376	$83,410	$85,495	$87,633													
110	102	Exterior Enclosures - Paint (annual inspection - 20% replacement each year)	59,799	SF	$ 2.25	5	Mixed	X					$134,547	$137,911	$141,358	$144,892	$148,515	$152,227	$156,033	$159,934	$163,932	$168,031	$172,231	$176,537	$180,951	$185,474	$190,111	$194,864	$199,736	$204,729	$209,847	$215,093	$220,471	$225,982													
111	103	**Roofing - EPDM:**											$0																																		
112	104	200 Level West End Central	w/ others below	SF	$ 21.75	20	Good					X											$0	$0	$0	$0	$0	$0	$0	$0	$0	$0															
113	105	200 Level West End North & South	21,561	SF	$ 21.75	20	Good					X	$468,952												$630,688																						
114	106	300 Level Admin Building	16,101	SF	$ 21.75	20	Good					X	$350,197													$482,750																					
115	107	200 Level Berm Toilet Roofs	5,760	SF	$ 21.75	20	Fair			X			$125,280		$131,622																																
116	108	350 Level Endzone Club Towers	1,598	SF	$ 21.75	20	Fair			X			$34,757			$37,429																															
117	109	400 Level Tower Roofs	22,678	SF	$ 21.75	20	Fair			X			$493,247				$544,452																														
118	110	**Roofing - PVC:**											$0																																		
119	111	100 Level IDF Rooms	596	SF	$ 23.75	20	Good					X	$14,155												$19,037																						
120	112	200 Level Team Store	14,140	SF	$ 23.75	20	Good					X	$335,825												$451,647																						
121	113	300 Level Outboard Concessions & Restrooms	17,319	SF	$ 23.75	20	Good					X	$411,326													$567,018																					
122	114	300 Level East Camera Booths	w/ above	SF	$ 23.75	20	Good					X											$0	$0	$0	$0	$0	$0	$0	$0	$0	$0															
123	115	300 Level West Camera Booths	w/ above	SF	$ 23.75	20	Good					X											$0	$0	$0	$0	$0	$0	$0	$0	$0	$0															
125	117	Entry Gate Canopies		SF	$ 23.75	20	Good					X	$0										$0	$0	$0	$0	$0	$0	$0	$0	$0	$0															
126	118	Generator Enclosures		SF	$ 23.75	20	Fair				X		$0					$0	$0	$0	$0	$0	$0	$0																							
127	119	**Roofing - Metal Panel:**											$0																																		
128	120	Commissary Building	34,250	SF	$ 28.75	30	Good					X	$984,688										$126,048	$129,200	$132,430	$135,740	$139,134	$142,612	$146,177	$149,832	$153,578	$157,417															
129	121	Operations Building	12,471	SF	$ 28.75	30	Good					X	$358,541										$45,896	$47,044	$48,220	$49,425	$50,661	$51,927	$53,226	$54,556	$55,920	$57,318															
130	122	Butler Building	3,405	SF	$ 28.75	30	Fair				X		$97,894					$18,460	$18,921	$19,394	$19,879	$20,376	$20,885	$128,445																							

	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1		Item	Quantity	Unit	Unit Cost	Frequency of Replacement	Existing Condition (2019)	Anticipated Replacement Timeframe (2019 Basis)					Est. Replacement Cost	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
2						(Years)	(Refer to Notes)	Annual	0 - 2 Years	2 - 5 years	5 - 10 Years	10 - 20 Years	FY 2019 Dollars ($)																					
131	123	**Roofing - Asphalt Shingle:**											$0																					
132	124	Salt Building	2,077	SF	$ 11.25	20	Good					X	$23,366										$2,991	$3,066	$3,143	$3,221	$3,302	$3,384	$3,469	$3,555	$3,644	$3,735		
133	125	Youth Field Garage		SF	$ 11.25	20	Good					X	$0										$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
134	126	**Roofing - Epoxy Coating:**											$0																					
135	127	100 Level Dugout Suites (confirm new roof type)	12,280	SF	$ 30.00	10	Fair			X			$368,400					$416,811										$533,553						
136	128	300 Level Sloped Roofs (confirm new roof type)	-	SF	$ 30.00	10	Good				X							$0	$0	$0	$0	$0	$0	$0										
137	129	Awnings and Fabric Canopies		SF	$ 50.00	10	Poor		X				$0	$0	$0									$0	$0									
138	130	**Expansion Control:**																																
139	131	Expansion Joints - Seating Bowl (refer to Structural Section)	7,275	LF	$ 500.00								$3,637,500																					
140	132	Expansion Joints - Concourses (refer to Structural Section)	4,736	LF	$ 500.00								$2,368,000																					
141	133	Expansion Joint Covers - Exterior Walls/Soffits	716	LF	$ 80.00	10	Fair				X		$57,280					$10,801	$11,071	$11,348	$11,632	$11,922	$12,221					$13,826	$14,172	$14,526	$14,890	$15,262	$15,643	
142	134	Expansion Joint Covers - Interior Walls/Ceilings	500	LF	$ 60.00	20	Good					X	$30,000										$3,840	$3,936	$4,035	$4,136	$4,239	$4,345	$4,454	$4,565	$4,679	$4,796		
143	135	Sealants - Interior (annual inspection - 5% replacement each year)	1	LS	$ 3,500.00	20	Mixed	X					$3,500	$3,588	$3,677	$3,769	$3,863	$3,960	$4,059	$4,160	$4,264	$4,371	$4,480	$4,592	$4,707	$4,825	$4,945	$5,069	$5,196	$5,326	$5,459	$5,595	$5,735	$5,879
144	136	**Partitions:**																																
145	137	Masonry Partitions	471,128	SF	$ 33.00	50	Good					X	$15,547,224										$1,990,176	$2,039,931	$2,090,929	$2,143,202	$2,196,782	$2,251,702	$2,307,994	$2,365,694	$2,424,836	$2,485,457		
146	138	Drywall Partitions (annual inspection - 3% replacement each year)	12,576	SF	$ 12.50	30	Mixed	X					$157,206	$161,136	$165,165	$169,294	$173,526	$177,864	$182,311	$186,869	$191,540	$196,329	$201,237	$206,268	$211,425	$216,710	$222,128	$227,681	$233,373	$239,208	$245,188	$251,317	$257,600	$264,040
147	139	Wall Protection Systems (corner guards) (annual inspection - 5% replacement each year)	19	EA	$ 240.00	20	Mixed	X					$4,518	$4,631	$4,747	$4,865	$4,987	$5,112	$5,239	$5,370	$5,505	$5,642	$5,783	$5,928	$6,076	$6,228	$6,384	$6,543	$6,707	$6,875	$7,047	$7,223	$7,403	$7,588
148	140	**Doors & Hardware:**																																
149	141	Doors - Aluminum Entrances	114	EA	$ 24,000	20	Fair						$2,736,000																					
150	142	Doors - Hollow Metal (annual inspection - avg. 10 doors & frames per year)	10	EA	$ 2,450	30	Mixed	X					$24,500	$25,113	$25,740	$26,384	$27,043	$27,720	$28,412	$29,123	$29,851	$30,597	$31,362	$32,146	$32,950	$33,774	$34,618	$35,483	$36,370	$37,280	$38,212	$39,167	$40,146	$41,150
151	143	Doors - Wood - Admin Building	126	EA	$ 2,300	20	Poor			X			$289,800				$319,885																	
152	144	Doors - Wood - All Others	w/ above	EA	$ 2,150	20	Good					X											$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
153	145	Doors - Sectional Overhead - Admin Bldg	5	EA	$ 10,000	30	Fair					X	$50,000										$6,400	$6,560	$6,724	$6,893	$7,065	$7,241	$7,423	$7,608	$7,798	$7,993		
154	146	Doors - Sectional Overhead - Ops Bldg	5	EA	$ 25,000	30	Good						$125,000																					
155	147	Doors - Coiling (annual inspection - avg. 1 door & frame per year)	1	EA	$ 7,000	20	Mixed	X					$7,000	$7,175	$7,354	$7,538	$7,727	$7,920	$8,118	$8,321	$8,529	$8,742	$8,961	$9,185	$9,414	$9,650	$9,891	$10,138	$10,392	$10,651	$10,918	$11,191	$11,470	$11,757
156	148	Doors - Hardware (annual inspection - avg. 30 doors & frames per year)	30	EA	$ 1,200	20	Mixed	X					$36,000	$36,900	$37,823	$38,768	$39,737	$40,731	$41,749	$42,793	$43,863	$44,959	$46,083	$47,235	$48,416	$49,626	$50,867	$52,139	$53,442	$54,778	$56,148	$57,551	$58,990	$60,465
157	149	**Vertical Circulation:**																																
158	150	Elevators (continue maintenance contract)	16	EA		50	Mixed	X					$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
159	151	Elevator Cab Interiors (Stadium only)	16	EA	$ 50,000	10	Poor		X				$800,000		$840,500										$1,075,911									
160	152	Wheelchair Lifts (continue maintenance contract)	31	EA		50	Mixed	X					$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
161	153	**SUBTOTALS**												**$1,659,254**	**$6,115,846**	**$863,620**	**$5,501,561**	**$5,011,069**	**$4,394,462**	**$4,339,186**	**$2,252,225**	**$4,947,848**	**$4,451,600**	**$5,974,136**	**$5,398,799**	**$4,351,822**	**$3,384,606**	**$4,026,255**	**$3,786,255**	**$3,669,520**	**$3,761,258**	**$3,855,290**	**$1,167,037**	**$1,168,981**
162	154																																	
163	155																																	
164	156	**LOWER 000 FIELD LEVEL:**																																
165	157	Flooring - Sealed Concrete	549	SF	$ 0.75	3	Good			X			$412		$433			$466			$502			$540			$582			$627			$675	
166	158	Flooring - Athletic Flooring	2,568	SF	$ 9.00	3	Good			X			$23,112		$24,282			$26,149			$28,160			$30,325			$32,657			$35,168			$37,872	
167	159	Flooring - Carpet Utility	2,772	SF	$ 3.85	10	Mixed		X		X		$10,672	$5,470	$5,606									$7,001	$7,176									
168	160	Flooring - Resilient Utility	2,956	SF	$ 7.00	10	Good				X		$20,692					$3,902	$3,999	$4,099	$4,202	$4,307	$4,415					$4,995	$5,120	$5,248	$5,379	$5,513	$5,651	$5,792
169	161	Flooring - Tile Utility	387	SF	$ 14.00	20	Good					X	$5,418										$694	$711	$729	$747	$766	$785	$804	$824	$845	$866		
170	162	Base - Rubber Base	3,114	LF	$ 2.75	10	Fair			X			$8,564		$2,249	$2,305	$2,363	$2,422							$2,879	$2,951	$3,025	$3,101						
171	163	Base - Tile Utility	203	LF	$ 14.00	20	Good					X	$2,842										$364	$373	$382	$392	$402	$412	$422	$432	$443	$454		
172	164	Ceiling - Acoustical Utility	9,235	SF	$ 4.25	10	Good				X		$39,249					$7,401	$7,586	$7,776	$7,970	$8,169	$8,374					$9,474	$9,711	$9,954	$10,202	$10,458	$10,719	
173	165	Ceiling - Paint on Exposed Structure	N/A	SF	$ 2.00	5	Good			X				$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
174	166	Walls - Paint	31,359	SF	$ 1.15	3	Fair			X			$36,063		$37,889			$40,802			$43,939			$47,318			$50,956			$54,874			$59,093	
175	167	Walls - Tile Utility	1,143	SF	$ 12.00	20	Good					X	$13,716										$1,756	$1,800	$1,845	$1,891	$1,938	$1,986	$2,036	$2,087	$2,139	$2,193		
176	168	Walls - Wallcovering Graphics	11,917	SF	$ 5.00	10	Good				X		$59,585					$11,236	$11,517	$11,805	$12,100	$12,402	$12,712					$14,383	$14,742	$15,111	$15,489	$15,876	$16,273	
177	169	Toilet Partitions - Phenolic	1	EA	$ 1,150.00	20	Good					X	$1,150											$1,509										
178	170	Toilet Accessories (non-paper dispensing)	78	EA	$ 75.00	20	Good						$5,850																					
179	171	Lockers - Fixed Metal	136	EA	$ 375.00	30	Good						$51,000																					
180	172	Appliances	2	EA	$ 600.00	20	Good					X	$1,200										$154	$157	$161	$165	$170	$174	$178	$183	$187	$192		
181	173	Countertops - Solid Surface	73	LF	$ 200.00	10	Good				X		$14,600					$2,753	$2,822	$2,892	$2,965	$3,039	$3,115					$3,524	$3,612	$3,703	$3,795	$3,890	$3,987	
182	174	Cabinets - Plastic Laminate	28	LF	$ 340.00	10	Good				X		$9,520					$1,795	$1,840	$1,886	$1,933	$1,982	$2,031					$2,298	$2,355	$2,414	$2,475	$2,537	$2,600	
183	175	Signage & Graphics (assumes no change in use)	1	LS	$ 25,000.00	20	Good					X	$25,000										$3,200	$3,280	$3,362	$3,446	$3,532	$3,621	$3,711	$3,804	$3,899	$3,997		
184	176	**SUBTOTALS**												**$5,470**	**$70,459**	**$2,305**	**$2,363**	**$96,926**	**$27,764**	**$28,458**	**$101,770**	**$29,899**	**$36,813**	**$93,014**	**$16,535**	**$9,592**	**$94,026**	**$44,752**	**$42,692**	**$134,428**	**$44,854**	**$45,975**	**$136,870**	**$5,792**
185	177																																	
208	200	**UPPER 000 FIELD LEVEL:**																																
209	201	Flooring - Sealed Concrete	4,308	SF	$ 0.75	3	Fair		X				$3,231	$1,656	$1,697		$1,783	$1,828		$1,920	$1,968		$2,068	$2,120		$2,227	$2,283		$2,398	$2,458		$2,582	$2,647	
210	202	Flooring - Athletic Flooring	4,308	SF	$ 9.00	3	Good			X			$38,770		$40,733			$43,865			$47,238			$50,870			$54,781			$58,993			$63,529	
211	203	Flooring - Carpet Utility	2,154	SF	$ 3.85	10	Fair			X			$8,293		$2,178	$2,233	$2,288	$2,346							$2,788	$2,858	$2,929	$3,003						
212	204	Flooring - Flake	2,154	SF	$ 7.00	20	Good					X	$15,077										$1,930	$1,978	$2,028	$2,078	$2,130	$2,184	$2,238	$2,294	$2,352	$2,410		
213	205	Flooring - Resilient Utility	2,154	SF	$ 7.00	10	Fair			X			$15,077		$3,960	$4,059	$4,161	$4,265							$5,069	$5,196	$5,326	$5,459						
214	206	Flooring - Tile Utility	6,462	SF	$ 14.00	20	Fair				X		$90,464				$16,643	$17,059	$17,485	$17,922	$18,370	$18,829												
215	207	Base - Rubber Base	2,910	LF	$ 2.75	10	Fair			X			$8,003		$2,102	$2,154	$2,208	$2,264							$2,691	$2,758	$2,827	$2,898						
216	208	Base - Flake	970	LF	$ 5.00	20	Good					X	$4,850										$621	$636	$652	$669	$685	$702	$720	$738	$756	$775		
217	209	Base - Tile Utility	970	LF	$ 14.00	20	Fair				X		$13,580				$2,498	$2,561	$2,625	$2,690	$2,758	$2,827												
218	210	Ceiling - Acoustical Utility	12,923	SF	$ 4.25	10	Fair			X			$54,924		$14,426	$14,787	$15,157	$15,535							$18,467	$18,928	$19,402	$19,887						
219	211	Ceiling - Paint on Drywall	6,462	SF	$ 1.25	3	Fair		X				$8,077	$4,140	$4,243		$4,458	$4,569		$4,801	$4,921		$5,170	$5,299		$5,567	$5,706		$5,995	$6,145		$6,456	$6,618	
220	212	Ceiling - Paint on Exposed Structure	2,154	SF	$ 2.00	5	Fair		X				$4,308	$2,208	$2,263				$2,498	$2,560				$2,826	$2,897				$3,197	$3,277				$3,618
221	213	Walls - Paint	40,747	SF	$ 1.15	3	Fair		X				$46,859	$24,015	$24,616		$25,862	$26,508		$27,850	$28,547		$29,992	$30,742		$32,298	$33,105		$34,781	$35,651		$37,456	$38,392	
222	214	Walls - Tile Utility	11,642	SF	$ 12.00	20	Fair				X		$139,704				$25,701	$26,344	$27,002	$27,677	$28,369	$29,079												
223	215	Walls - Wallcovering Graphics	5,821	SF	$ 5.00	10	Fair			X			$29,105		$7,645	$7,836	$8,032	$8,232							$9,786	$10,030	$10,281	$10,538						
224	216	Countertops - Plastic Laminate	50	LF	$ 105.00	10	Fair				X		$5,250				$966	$990	$1,015	$1,040	$1,066	$1,093					$1,236	$1,267	$1,299	$1,331	$1,365	$1,399		
225	217	Countertops - Solid Surface	30	LF	$ 200.00	20	Good					X	$6,000										$768	$787	$807	$827	$848	$869	$891	$913	$936	$959		
226	218	Toilet Partitions - Phenolic	5	EA	$ 1,150.00	20	Good					X	$5,750															$8,328						
227	219	Toilet Partitions - Metal	5	EA	$ 1,350.00	20	Fair				X		$6,750					$7,637																
228	220	Toilet Accessories (non-paper dispensing)	100	EA	$ 75.00	20	Fair				X		$7,500				$1,380	$1,414	$1,450	$1,486	$1,523	$1,561												
229	221	Lockers - Fixed Metal	20	EA	$ 375.00	30	Fair					X	$7,500										$960	$984	$1,009	$1,034	$1,060	$1,086	$1,113	$1,141	$1,170	$1,199		
230	222	Lockers - Fixed Wood	110	EA	$ 675.00	30	Good						$74,250																					
231	223	Appliances	N/A			20	Fair				X						$0	$0	$0	$0	$0	$0												
232	224	Cabinets - Plastic Laminate	20	LF	$ 340.00	10	Fair				X		$6,800					$1,282	$1,314	$1,347	$1,381	$1,415	$1,451					$1,641	$1,682	$1,725	$1,768	$1,812	$1,857	
233	225	Cabinets - Wood Veneer	30	LF	$ 540.00	10	Fair				X		$16,200					$3,055	$3,131	$3,209	$3,290	$3,372	$3,456					$3,910	$4,008	$4,108	$4,211	$4,316	$4,424	
234	226	Signage & Graphics (assumes no change in use)	N/A			20	Poor			X					$0	$0	$0	$0																
235	227	**SUBTOTALS**												**$32,018**	**$103,863**	**$31,069**	**$111,136**	**$169,753**	**$56,520**	**$92,504**	**$139,430**	**$58,176**	**$46,415**	**$96,242**	**$46,193**	**$84,471**	**$142,600**	**$61,772**	**$58,324**	**$118,776**	**$12,557**	**$59,365**	**$117,468**	**$3,618**
236	228																																	
237	229	**100 LEVEL MAIN CONCOURSE:**																																
238	230	Flooring - Sealed Concrete	34,432	SF	$ 0.75	3	Fair		X				$25,824	$13,235	$13,566		$14,252	$14,609		$15,348	$15,732		$16,528	$16,942		$17,799	$18,244		$19,168	$19,647		$20,642	$21,158	
239	231	Flooring - Asphalt	38,201	SF	$ 3.75	20	Poor		X				$143,254	$73,418	$75,253																			
240	232	Flooring - Flake (suite alcoves)	561	SF	$ 7.00	20	Fair		X				$3,927	$2,013	$2,063																			
241	233	Ceiling - Paint on Drywall	12,615	SF	$ 1.25	3	Good			X			$15,769		$16,567			$17,841			$19,213			$20,690			$22,281			$23,994			$25,839	
242	234	Ceiling - Paint on Exposed Structure	44,785	SF	$ 2.00	5	Good			X			$89,570		$31,368	$32,152	$32,956			$35,490	$36,377	$37,287			$40,154	$41,158	$42,187			$45,430	$46,566	$47,730		
243	235	Walls - Paint	91,580	SF	$ 1.15	3	Good			X			$105,317		$110,649			$119,157			$128,319			$138,185			$148,810			$160,252			$172,574	
244	236	Walls - Tile Utility	4,024	SF	$ 12.00	20	Good					X	$48,288										$6,181	$6,336	$6,494	$6,657	$6,823	$6,994	$7,168	$7,348	$7,531	$7,720		
245	237	Walls - Wallcovering Graphics	1,100	SF	$ 5.00	10	Fair				X		$5,500					$1,037	$1,063	$1,090	$1,117	$1,145	$1,173					$1,328	$1,361	$1,395	$1,430	$1,465	$1,502	
246	238	Site Amenities - Trash Containers (2014 vintage)	56	EA	$ 1,500.00	10	Poor		X				$84,000	$43,050	$44,126									$55,108	$56,485									
247	239	Countertops - Solid Surface	150	LF	$ 200.00	20	Fair				X		$30,000				$5,519	$5,657	$5,798	$5,943	$6,092	$6,244												
248	240	Graphics (concourse images)	N/A	SF	$ 5.00	5	Good			X					$0	$0	$0			$0	$0	$0			$0	$0	$0			$0	$0	$0		
249	241	Signage & Graphics (assumes no change in use)	2,814	SF	$ 10.00	20	Good					X	$28,140										$3,602	$3,692	$3,785	$3,879	$3,976	$4,076	$4,177	$4,282	$4,389	$4,499		
250	242	**SUBTOTALS**												**$131,715**	**$293,592**	**$32,152**	**$52,728**	**$158,300**	**$6,862**	**$57,872**	**$206,850**	**$44,676**	**$27,485**	**$240,952**	**$106,918**	**$69,493**	**$242,321**	**$12,397**	**$31,875**	**$262,348**	**$59,916**	**$82,056**	**$221,073**	**$0**
251	243																																	
252	244	**100 LEVEL RESTROOMS:**																																
253	245	Flooring - Flake	13,413	SF	$ 7.00	20	Good					X	$93,891										$12,019	$12,319	$12,627	$12,943	$13,267	$13,598	$13,938	$14,287	$14,644	$15,010		
254	246	Flooring - Tile Utility (4 corner restrooms)	N/A	SF	$ 14.00	20	Fair				X						$0	$0	$0	$0	$0	$0												
255	247	Base - Tile Utility (4 corner restrooms)	N/A	LF	$ 14.00	20	Fair				X						$0	$0	$0	$0	$0	$0												
256	248	Ceiling - Acoustical Utility	14,803	SF	$ 4.25	10	Good				X		$62,913					$11,863	$12,160	$12,464	$12,776	$13,095	$13,422					$15,186	$15,566	$15,955	$16,354	$16,763	$17,182	$17,611
257	249	Ceiling - Paint on Drywall	N/A	SF	$ 1.25	3	Fair			X					$0			$0			$0			$0			$0			$0			$0	$0
258	250	Ceiling - Paint on Exposed Structure	N/A	SF	$ 2.00	5	Good			X					$0	$0	$0			$0	$0	$0			$0	$0	$0			$0	$0	$0		
259	251	Walls - Paint	32,299	SF	$ 1.15	3	Good			X			$37,144		$39,024			$42,025			$45,256			$48,736			$52,483			$56,519			$60,865	$62,386
260	252	Toilet Partitions - Phenolic	222	EA	$ 1,150.00	20	Good					X	$255,300										$32,681	$33,498	$34,335	$35,193	$36,073	$36,975	$37,899	$38,847	$39,818	$40,814		
261	253	Toilet Accessories (non-paper dispensing)	1,013	EA	$ 75.00	20	Good						$75,975																					
262	254	Signage & Graphics (assumes no change in use)	1	LS	$ 5,000.00	20	Good					X	$5,000										$640	$656	$672	$689	$706	$724	$742	$761	$780	$799		
263	255	**SUBTOTALS**												**$0**	**$39,024**	**$0**	**$0**	**$53,888**	**$12,160**	**$12,464**	**$58,032**	**$13,095**	**$58,762**	**$95,209**	**$47,635**	**$48,826**	**$102,530**	**$66,483**	**$68,146**	**$126,368**	**$71,595**	**$73,385**	**$78,046**	**$79,997**
264	256																																	
265	257	**100 LEVEL BERM TOILETS:**																																
266	258	Flooring - Flake	5,010	SF	$ 7.00	20	Good					X	$35,070										$4,489	$4,601	$4,717	$4,834	$4,955	$5,079	$5,206	$5,336	$5,470	$5,606		
267	259	Ceiling - Paint on Exposed Structure	5,010	SF	$ 2.00	5	Good			X			$10,020		$3,509	$3,597	$3,687			$3,970	$4,069	$4,171			$4,492	$4,604	$4,719			$5,082	$5,209	$5,339		
268	260	Walls - Paint	17,387	SF	$ 1.15	3	Good			X			$19,995		$21,007			$22,623			$24,362			$26,235			$28,252			$30,425			$32,764	
269	261	Toilet Partitions - Phenolic	64	EA	$ 1,150.00	20	Good					X	$73,600										$9,421	$9,657	$9,898	$10,146	$10,399	$10,659	$10,926	$11,199	$11,479	$11,766		
270	262	Toilet Accessories (non-paper dispensing)	327	EA	$ 75.00	20	Fair				X		$24,525				$4,512	$4,625	$4,740	$4,859	$4,980	$5,105												
271	263	Signage & Graphics (assumes no change in use)	603		$ 10.00	20	Good					X	$6,030										$772	$791	$811	$831	$852	$873	$895	$918	$940	$964		
272	264	**SUBTOTALS**												**$0**	**$24,516**	**$3,597**	**$8,199**	**$27,247**	**$4,740**	**$8,829**	**$33,412**	**$9,276**	**$14,683**	**$41,285**	**$19,918**	**$20,416**	**$49,179**	**$16,612**	**$17,027**	**$52,960**	**$23,099**	**$23,676**	**$32,764**	**$0**
273	265																																	
274	266	**100 LEVEL CONCESSIONS/FOOD SERVICE:**																																
275	267	Flooring - Sealed Concrete (tinted)	17,317	SF	$ 1.25	3	Poor		X				$21,646	$11,094	$11,371		$11,947	$12,245		$12,865	$13,187		$13,855	$14,201		$14,920	$15,293		$16,067	$16,469		$17,302	$17,735	
276	268	Base - Rubber Base	4,625	LF	$ 2.75	10	Fair			X			$12,719		$3,341	$3,424	$3,510	$3,598							$4,276	$4,383	$4,493	$4,605						
277	269	Ceiling - Acoustical Utility	17,325	SF	$ 4.25	10	Fair			X			$73,631		$19,340	$19,823	$20,319	$20,827							$24,756	$25,375	$26,010	$26,660						
278	270	Walls - Paint	37,002	SF	$ 1.15	3	Good			X			$42,552		$44,707			$48,144			$51,846			$55,832			$60,125			$64,748			$69,727	
279	271	Walls - FRP Paneling	N/A	SF	$ 9.00	10	Good			X					$0	$0	$0	$0							$0	$0	$0	$0						
280	272	Countertops - Stainless Steel	1,405	LF	$ 225.00	40	Good						$316,125																					
281	273	Signage & Graphics (external only - internal by DNC)	1,865		$ 10.00	20	Good					X	$18,650										$2,387	$2,447	$2,508	$2,571	$2,635	$2,701	$2,769	$2,838	$2,909	$2,981		
282	274	**SUBTOTALS**												**$11,094**	**$78,758**	**$23,247**	**$35,775**	**$84,814**	**$0**	**$12,865**	**$65,033**	**$0**	**$16,242**	**$72,480**	**$31,541**	**$47,249**	**$108,556**	**$33,966**	**$18,836**	**$84,055**	**$2,909**	**$20,284**	**$87,462**	**$0**
283	275																																	
284	276	**100 LEVEL BACK-OF-HOUSE:**																																
285	277	Flooring - Sealed Concrete	21,276	SF	$ 0.75	3	Fair			X			$15,957		$16,765			$18,054			$19,442			$20,937			$22,547			$24,280			$26,147	
286	278	Ceiling - Acoustical Utility	3,516	SF	$ 4.25	10	Fair			X			$14,943		$3,925	$4,023	$4,124	$4,227							$5,024	$5,150	$5,279	$5,410						

	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1		Item	Quantity	Unit	Unit Cost	Frequency of Replacement	Existing Condition (2019)	Anticipated Replacement Timeframe (2019 Basis)					Est. Replacement Cost	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
2						(Years)	(Refer to Notes)	Annual	0 - 2 Years	2 - 5 years	5 - 10 Years	10 - 20 Years	FY 2019 Dollars ($)																					
287	279	Walls - Paint	78,595	SF	$ 1.15	3	Fair			X			$90,384		$94,960			$102,261			$110,124			$118,592			$127,711			$137,530			$148,105	
288	280	Signage & Graphics (assumes no change in use)	1		$ 2,000.00	20	Good					X	$2,000										$256	$262	$269	$276	$283	$290	$297	$304	$312	$320		
289	281	**SUBTOTALS**												**$0**	**$115,650**	**$4,023**	**$4,124**	**$124,542**	**$0**	**$0**	**$129,566**	**$0**	**$256**	**$139,791**	**$5,293**	**$5,425**	**$155,819**	**$5,700**	**$297**	**$162,115**	**$312**	**$320**	**$174,253**	**$0**
290	282																																	
291	283	**100 LEVEL ADMIN BUILDING:**																																
292	284	Flooring - Sealed Concrete	4,049	SF	$ 0.75	3	Poor		X				$3,037	$1,556	$1,595		$1,676	$1,718		$1,805	$1,850		$1,944	$1,992		$2,093	$2,145		$2,254	$2,310		$2,427	$2,488	
293	285	Flooring - Flake	8,141	SF	$ 7.00	20	Fair				X		$56,987				$10,484	$10,746	$11,015	$11,290	$11,572	$11,861												
294	286	Flooring - Carpet Utility	N/A	SF	$ 3.85	10	Poor		X					$0	$0									$0	$0									
295	287	Base - Rubber Base	738	LF	$ 2.75	10	Fair			X			$2,030		$533	$546	$560	$574							$682	$699	$717	$735						
296	288	Base - Tile Utility	457	LF	$ 14.00	20	Good					X	$6,398										$819	$839	$860	$882	$904	$927	$950	$974	$998	$1,023		
297	289	Ceiling - Acoustical Utility	5,522	SF	$ 4.25	10	Fair			X			$23,469		$6,164	$6,318	$6,476	$6,638							$7,891	$8,088	$8,290	$8,497						
298	290	Ceiling - Decorative Metal	2,299	SF	$ 40.00	20	Good					X	$91,960										$11,772	$12,066	$12,368	$12,677	$12,994	$13,319	$13,652	$13,993	$14,343	$14,701		
299	291	Ceiling - Paint on Drywall	N/A	SF	$ 1.25	3	Good			X					$0			$0			$0			$0			$0			$0			$0	$0
300	292	Ceiling - Paint on Exposed Structure	3,333	SF	$ 2.00	5	Good			X			$6,666		$2,334	$2,393	$2,453			$2,641	$2,707	$2,775			$2,988	$3,063	$3,140			$3,381	$3,466	$3,552		
301	293	Walls - Paint	14,310	SF	$ 1.15	3	Good			X			$16,457		$17,290			$18,619			$20,051			$21,592			$23,253			$25,041			$26,966	
302	294	Walls - Tile Utility	4,192	SF	$ 12.00	20	Good					X	$50,304										$6,439	$6,600	$6,765	$6,934	$7,108	$7,286	$7,468	$7,654	$7,846	$8,042		
303	295	Walls - FRP Paneling	N/A	SF	$ 9.00	10	Fair				X							$0	$0	$0	$0	$0	$0					$0	$0	$0	$0	$0	$0	$0
304	296	Walls - Wallcovering Graphics	1,808	SF	$ 5.00	10	Good				X		$9,040					$1,705	$1,747	$1,791	$1,836	$1,882	$1,929					$2,182	$2,237	$2,293	$2,350	$2,409	$2,469	
305	297	Toilet Partitions - Phenolic	31	EA	$ 1,150.00	20	Good					X	$35,650										$4,564	$4,678	$4,795	$4,914	$5,037	$5,163	$5,292	$5,425	$5,560	$5,699		
306	298	Toilet Accessories (non-paper dispensing)	169	EA	$ 75.00	20	Good						$12,675																					
307	299	Countertops - Solid Surface	350	LF	$ 200.00	20	Good					X	$70,000										$1,812	$1,857	$1,904	$1,951	$2,000	$2,050	$2,101	$2,154	$2,208	$2,263		
308	300	Cabinets - Plastic Laminate	60	LF	$ 340.00	10	Fair			X			$20,400		$5,358	$5,492	$5,629	$5,770							$6,859	$7,030	$7,206	$7,386						
309	301	Signage & Graphics (assumes no change in use)	1		$ 5,000.00	20	Good					X	$5,000										$640	$656	$672	$689	$706	$724	$742	$761	$780	$799		
310	302	**SUBTOTALS**												**$1,556**	**$33,275**	**$14,750**	**$27,278**	**$45,770**	**$12,762**	**$17,527**	**$38,016**	**$16,518**	**$29,918**	**$50,281**	**$45,784**	**$49,022**	**$73,500**	**$48,269**	**$34,695**	**$63,984**	**$37,549**	**$40,915**	**$31,923**	**$0**
311	303																																	
312	304	**100 LEVEL RETAIL SPACES:**																																
313	305	Flooring - Flake	743	SF	$ 7.00	20	Fair				X		$5,201				$957	$981	$1,005	$1,030	$1,056	$1,083												
314	306	Base - Rubber Base	N/A	LF	$ 2.75	10	Fair			X					$0	$0	$0	$0							$0	$0	$0	$0						
315	307	Ceiling - Paint on Exposed Structure	1,133	SF	$ 2.00	5	Good			X			$2,266		$794	$813	$834			$898	$920	$943			$1,016	$1,041	$1,067			$1,149	$1,178	$1,208		
316	308	Walls - Paint	2,834	SF	$ 1.15	3	Good			X			$3,259		$3,424			$3,687			$3,971			$4,276			$4,605			$4,959			$5,340	
317	309	Walls - Display Wall System	1,974	SF	$ 1,750.00	20	Fair				X		$3,454,500				$635,520	$651,408	$667,693	$684,386	$701,495	$719,033												
318	310	Countertops - Solid Surface	22	LF	$ 200.00	20	Good					X	$4,400										$563	$577	$592	$607	$622	$637	$653	$670	$686	$703		
319	311	Cabinets - Wood Veneer	22	LF	$ 540.00	10	Good				X		$11,880					$2,240	$2,296	$2,354	$2,412	$2,473	$2,535					$2,868	$2,939	$3,013	$3,088	$3,165	$3,244	
320	312	Graphics (Merchandising graphics by DNC)	92	SF	$ 5.00	5	Good			X			$460		$161	$165	$169			$182	$187	$191			$206	$211	$217			$233	$239	$245		
321	313	Signage & Graphics (external only)	50		$ 200.00	20	Good					X	$10,000										$1,280	$1,312	$1,345	$1,379	$1,413	$1,448	$1,485	$1,522	$1,560	$1,599		
322	314	**SUBTOTALS**												**$0**	**$4,379**	**$979**	**$637,480**	**$658,317**	**$670,995**	**$688,850**	**$710,042**	**$723,723**	**$4,378**	**$6,166**	**$3,159**	**$3,238**	**$7,924**	**$4,953**	**$5,077**	**$11,546**	**$6,751**	**$6,920**	**$8,585**	**$0**
323	315																																	
324	316	**200 LEVEL CLUBS - FRONT-OF-HOUSE:**																																
325	317	Flooring - Carpet Premium	22,127	SF	$ 5.50	10	Good				X		$121,699					$22,948	$23,522	$24,110	$24,713	$25,331	$25,964					$29,376	$30,110	$30,863	$31,635	$32,426	$33,236	
326	318	Flooring - Resilient Premium	18,849	SF	$ 8.00	20	Good					X	$150,792										$19,303	$19,785	$20,280	$20,787	$21,307	$21,839	$22,385	$22,945	$23,518	$24,106		
327	319	Flooring - Tile Premium	608	SF	$ 20.00	20	Good					X	$12,160										$1,557	$1,595	$1,635	$1,676	$1,718	$1,761	$1,805	$1,850	$1,897	$1,944		
328	320	Base - Rubber Base	3,316	LF	$ 2.75	10	Good				X		$9,119					$1,720	$1,763	$1,807	$1,852	$1,898	$1,946					$2,201	$2,256	$2,313	$2,370	$2,430	$2,490	
329	321	Base - Wood	212	LF	$ 8.00	20	Good					X	$1,696										$217	$223	$228	$234	$240	$246	$252	$258	$265	$271		
330	322	Ceiling - Acoustical Premium	33,268	SF	$ 8.50	20	Good					X	$282,778										$36,198	$37,103	$38,030	$38,981	$39,956	$40,955	$41,979	$43,028	$44,104	$45,206		
331	323	Ceiling - Decorative Metal	9,724	SF	$ 40.00	20	Good					X	$388,960										$49,790	$51,035	$52,311	$53,619	$54,959	$56,333	$57,741	$59,185	$60,664	$62,181		
332	324	Ceiling - Paint on Drywall	8,317	SF	$ 1.25	3	Good			X			$10,396		$10,923			$11,762			$12,667			$13,641			$14,690			$15,819			$17,035	
333	325	Walls - Paint	15,880	SF	$ 1.15	3	Good			X			$18,262		$19,187			$20,662			$22,250			$23,961			$25,804			$27,788			$29,924	
334	326	Walls - Tile Premium	2,002	SF	$ 18.00	20	Good					X	$36,036										$4,613	$4,728	$4,846	$4,968	$5,092	$5,219	$5,350	$5,483	$5,620	$5,761		
335	327	Walls - Wood Paneling	4,964	SF	$ 45.00	10	Good				X		$223,380					$42,122	$43,175	$44,255	$45,361	$46,495	$47,658					$53,920	$55,268	$56,650	$58,066	$59,518	$61,006	
336	328	Walls - Display Wall System	1,200	SF	$ 1,750.00	20	Good					X	$2,100,000										$268,818	$275,538	$282,427	$289,487	$296,725	$304,143	$311,746	$319,540	$327,528	$335,717		
337	329	Walls - Wallcovering Pattern	1,852	SF	$ 3.50	10	Good				X		$6,482					$1,222	$1,253	$1,284	$1,316	$1,349	$1,383					$1,565	$1,604	$1,644	$1,685	$1,727	$1,770	
338	330	Countertops - Solid Surface	487	LF	$ 200.00	20	Good					X	$97,400										$12,468	$12,780	$13,099	$13,427	$13,762	$14,106	$14,459	$14,821	$15,191	$15,571		
339	331	Cabinets - Wood Veneer	212	LF	$ 540.00	10	Good				X		$114,480					$21,587	$22,127	$22,680	$23,247	$23,828	$24,424					$27,634	$28,324	$29,032	$29,758	$30,502	$31,265	
340	332	Signage & Graphics (assumes no change in use)	2,088		$ 10.00	10	Good				X		$20,880					$3,937	$4,036	$4,137	$4,240	$4,346	$4,455					$5,040	$5,166	$5,295	$5,428	$5,563	$5,702	
341	333	**SUBTOTALS**												**$0**	**$30,109**	**$0**	**$0**	**$125,961**	**$95,876**	**$98,273**	**$135,647**	**$103,248**	**$498,792**	**$440,389**	**$412,857**	**$423,178**	**$474,251**	**$564,337**	**$578,446**	**$636,514**	**$607,730**	**$622,923**	**$182,430**	**$0**
342	334																																	
343	335	**200 LEVEL CLUBS - BACK-OF-HOUSE:**																																
344	336	Flooring - Sealed Concrete	19,519	SF	$ 0.75	3	Fair		X				$14,639	$7,503	$7,690		$8,079	$8,281		$8,701	$8,918		$9,370	$9,604		$10,090	$10,342		$10,866	$11,138		$11,702	$11,994	
345	337	Flooring - Carpet Utility	513	SF	$ 3.85	10	Good				X		$1,975					$372	$382	$391	$401	$411	$421					$477	$489	$501	$513	$526	$539	
346	338	Flooring - Resilient Utility	3,427	SF	$ 7.00	10	Fair			X			$23,989		$6,301	$6,458	$6,620	$6,785							$8,066	$8,267	$8,474	$8,686						
347	339	Flooring - Tile Utility	9,233	SF	$ 14.00	20	Fair			X			$129,262		$33,951	$34,800	$35,670	$36,562																
348	340	Base - Rubber Base	2,167	LF	$ 2.75	10	Fair			X			$5,959		$1,565	$1,604	$1,644	$1,686							$2,004	$2,054	$2,105	$2,158						
349	341	Base - Tile Utility	2,673	LF	$ 14.00	20	Fair			X			$37,422		$9,829	$10,075	$10,327	$10,585																
350	342	Ceiling - Acoustical Utility	22,781	SF	$ 4.25	10	Fair			X			$96,819		$25,430	$26,066	$26,718	$27,386							$32,553	$33,367	$34,201	$35,056						
351	343	Ceiling - Paint on Drywall	3,195	SF	$ 1.25	3	Good			X			$3,994		$4,196			$4,519			$4,866			$5,240			$5,643			$6,077			$6,544	
352	344	Walls - Paint	93,567	SF	$ 1.15	3	Fair		X				$107,602	$55,146	$56,525		$59,386	$60,871		$63,953	$65,551		$68,870	$70,592		$74,165	$76,019		$79,868	$81,865		$86,009	$88,159	
353	345	Walls - Tile Utility	8,715	SF	$ 12.00	20	Fair				X		$104,580				$19,239	$19,720	$20,213	$20,719	$21,237	$21,768												
354	346	Walls - FRP Paneling	2,110	SF	$ 9.00	10	Fair			X			$18,990		$4,988	$5,113	$5,240	$5,371							$6,385	$6,544	$6,708	$6,876						
355	347	Toilet Partitions - Metal	73	EA	$ 1,350.00	20	Fair				X		$98,550				$18,130	$18,583	$19,048	$19,524	$20,012	$20,513												
356	348	Toilet Accessories (non-paper dispensing)	419	EA	$ 75.00	20	Fair				X		$31,425				$5,781	$5,926	$6,074	$6,226	$6,381	$6,541												
357	349	Cubicle Curtains	80	LF	$ 20.00	10	Fair			X			$1,600		$420	$431	$442	$453							$538	$551	$565	$579						
358	350	Appliances	8	EA	$ 1,000.00	20	Fair				X		$8,000				$1,472	$1,509	$1,546	$1,585	$1,625	$1,665												
359	351	Countertops - Plastic Laminate	504	LF	$ 105.00	10	Fair			X			$52,920		$13,900	$14,247	$14,603	$14,969							$17,793	$18,238	$18,694	$19,161						
360	352	Cabinets - Plastic Laminate	216	LF	$ 340.00	10	Fair			X			$73,440		$19,289	$19,772	$20,266	$20,773							$24,692	$25,309	$25,942	$26,591						
361	353	Signage & Graphics (assumes no change in use)	288	EA	$ 10.00	20	Poor			X			$2,880		$756	$775	$795	$815																
362	354	**SUBTOTALS**												**$62,649**	**$184,841**	**$119,341**	**$234,413**	**$245,165**	**$47,263**	**$121,098**	**$128,992**	**$50,897**	**$78,661**	**$85,436**	**$92,030**	**$178,586**	**$188,694**	**$99,583**	**$91,223**	**$99,580**	**$513**	**$98,237**	**$107,237**	**$0**
363	355																																	
364	356	**DUGOUT SUITES:** (62 total - avg. 12 Suites renovated each year)																																
365	357	Flooring - Carpet Premium	1,105	SF	$ 5.50	10	Mixed	X					$6,078	$6,230	$6,386	$6,545	$6,709	$6,877	$7,049	$7,225	$7,405	$7,591	$7,780	$7,975	$8,174	$8,379	$8,588	$8,803	$9,023	$9,248	$9,480	$9,717	$9,959	$10,208
366	358	Flooring - Resilient Premium	1,014	SF	$ 8.00	20	Mixed	X					$8,110	$8,313	$8,521	$8,734	$8,952	$9,176	$9,405	$9,640	$9,881	$10,128	$10,381	$10,641	$10,907	$11,180	$11,459	$11,746	$12,039	$12,340	$12,649	$12,965	$13,289	$13,621
367	359	Flooring - Tile Utility	860	SF	$ 14.00	20	Mixed	X					$12,038	$12,339	$12,647	$12,963	$13,287	$13,620	$13,960	$14,309	$14,667	$15,033	$15,409	$15,794	$16,189	$16,594	$17,009	$17,434	$17,870	$18,317	$18,775	$19,244	$19,725	$20,218
368	360	Base - Rubber Base	888	LF	$ 2.75	10	Mixed	X					$2,442	$2,503	$2,565	$2,629	$2,695	$2,762	$2,831	$2,902	$2,975	$3,049	$3,125	$3,204	$3,284	$3,366	$3,450	$3,536	$3,624	$3,715	$3,808	$3,903	$4,001	$4,101
369	361	Ceiling - Acoustical Premium	2,536	SF	$ 8.50	20	Mixed	X					$21,556	$22,095	$22,647	$23,213	$23,794	$24,389	$24,998	$25,623	$26,264	$26,920	$27,594	$28,283	$28,990	$29,715	$30,458	$31,220	$32,000	$32,800	$33,620	$34,461	$35,322	$36,205
370	362	Ceiling - Paint on Drywall	448	SF	$ 1.25	3	Mixed			X			$559		$588			$633			$682			$734			$790			$851			$917	
371	363	Walls - Paint	7,633	SF	$ 1.15	3	Mixed			X			$8,777		$9,222			$9,931			$10,694			$11,517			$12,402			$13,356			$14,383	
372	364	Toilet Accessories (non-paper dispensing)	21	EA	$ 75.00	20	Mixed	X					$1,550	$1,589	$1,628	$1,669	$1,711	$1,754	$1,798	$1,842	$1,889	$1,936	$1,984	$2,034	$2,085	$2,137	$2,190	$2,245	$2,301	$2,359	$2,417	$2,478	$2,540	$2,603
373	365	Seating - Indoor Theater (2 suites only)	N/A	EA	$ 375.00	30	Mixed	X						$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
374	366	Appliances	10		$ 1,000.00	20	Mixed	X					$10,333	$10,592	$10,856	$11,128	$11,406	$11,691	$11,983	$12,283	$12,590	$12,905	$13,228	$13,558	$13,897	$14,245	$14,601	$14,966	$15,340	$15,723	$16,116	$16,519	$16,932	$17,356
375	367	Countertops - Plastic Laminate	132	LF	$ 105.00	10	Mixed	X					$13,895	$14,242	$14,598	$14,963	$15,337	$15,721	$16,114	$16,517	$16,930	$17,353	$17,787	$18,231	$18,687	$19,154	$19,633	$20,124	$20,627	$21,143	$21,671	$22,213	$22,769	$23,338
376	368	Countertops - Solid Surface	54	LF	$ 200.00	20	Mixed	X					$10,717	$10,985	$11,259	$11,541	$11,829	$12,125	$12,428	$12,739	$13,057	$13,384	$13,718	$14,061	$14,413	$14,773	$15,142	$15,521	$15,909	$16,307	$16,714	$17,132	$17,561	$18,000
377	369	Cabinets - Plastic Laminate	N/A	LF	$ 340.00	10	Mixed	X						$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
378	370	Cabinets - Wood Veneer	54	LF	$ 540.00	10	Mixed	X					$28,935	$29,658	$30,400	$31,160	$31,939	$32,737	$33,556	$34,395	$35,254	$36,136	$37,039	$37,965	$38,914	$39,887	$40,884	$41,907	$42,954	$44,028	$45,129	$46,257	$47,413	$48,599
379	371	Signage & Graphics (interior)	349		$ 10.00	20	Mixed	X					$3,493	$3,580	$3,669	$3,761	$3,855	$3,951	$4,050	$4,151	$4,255	$4,362	$4,471	$4,582	$4,697	$4,814	$4,935	$5,058	$5,185	$5,314	$5,447	$5,583	$5,723	$5,866
380	372	Signage & Graphics (exterior)	331		$ 10.00	20	Mixed	X					$3,307	$3,389	$3,474	$3,561	$3,650	$3,741	$3,835	$3,931	$4,029	$4,130	$4,233	$4,339	$4,447	$4,558	$4,672	$4,789	$4,909	$5,031	$5,157	$5,286	$5,418	$5,554
381	373	**SUBTOTALS**												**$125,514**	**$138,461**	**$131,868**	**$135,164**	**$149,107**	**$142,007**	**$145,557**	**$160,572**	**$152,926**	**$156,749**	**$172,919**	**$164,685**	**$168,802**	**$186,215**	**$177,347**	**$181,781**	**$200,533**	**$190,984**	**$195,758**	**$215,952**	**$205,669**
382	374																																	
383	375	**SUPER SUITES:** (2 total)																																
384	376	Flooring - Resilient Premium	50	SF	$ 8.00	20	Good					X	$400										$51	$52	$54	$55	$57	$58	$59	$61	$62	$64		
385	377	Flooring - Cork	2,893	SF	$ 10.00	10	Fair			X			$28,930		$7,599	$7,789	$7,983	$8,183							$9,727	$9,970	$10,219	$10,475						
386	378	Flooring - Tile Premium	235	SF	$ 20.00	20	Good					X	$4,700										$602	$617	$632	$648	$664	$681	$698	$715	$733	$751		
387	379	Base - Wood	410	LF	$ 8.00	20	Fair				X		$3,280				$603	$619	$634	$650	$666	$683												
388	380	Ceiling - Acoustical Premium	1,813	SF	$ 8.50	20	Good					X	$15,411										$1,973	$2,022	$2,073	$2,124	$2,177	$2,232	$2,288	$2,345	$2,404	$2,464		
389	381	Ceiling - Paint on Drywall	401	SF	$ 1.25	3	Good			X			$501		$527			$567			$611			$658			$708			$763			$821	
390	382	Ceiling - Wood Veneer Metal Panel	972	SF	$ 55.00	20	Good					X	$53,460										$6,843	$7,014	$7,190	$7,370	$7,554	$7,743	$7,936	$8,135	$8,338	$8,546		
391	383	Walls - Paint	4,606	SF	$ 1.15	3	Good			X			$5,297		$5,565			$5,993			$6,454			$6,950			$7,484			$8,060			$8,680	
392	384	Walls - Wood Paneling	475	SF	$ 45.00	10	Good				X		$21,375					$4,031	$4,131	$4,235	$4,341	$4,449	$4,560					$5,160	$5,289	$5,421	$5,556	$5,695	$5,838	
393	385	Walls - Wallcovering Pattern	81	SF	$ 3.50	10	Fair			X			$284		$74	$76	$78	$80							$95	$98	$100	$103						
394	386	Toilet Accessories (non-paper dispensing)	38	EA	$ 75.00	20	Good						$2,850																					
395	387	Seating - Indoor Theater		EA	$ 375.00	30	Good						$0																					
396	388	Appliances	6		$ 1,000.00	20	Good					X	$6,000										$768	$787	$807	$827	$848	$869	$891	$913	$936	$959		
397	389	Countertops - Solid Surface	126	LF	$ 200.00	20	Good					X	$25,200										$3,226	$3,306	$3,389	$3,474	$3,561	$3,650	$3,741	$3,834	$3,930	$4,029		
398	390	Cabinets - Wood Veneer	88	LF	$ 540.00	10	Good				X		$47,520					$8,961	$9,185	$9,414	$9,650	$9,891	$10,138					$11,471	$11,757	$12,051	$12,352	$12,661	$12,978	
399	391	Signage & Graphics (assumes no change in use)	1		$ 10,000.00	20	Good					X	$10,000										$1,280	$1,312	$1,345	$1,379	$1,413	$1,448	$1,485	$1,522	$1,560	$1,599		
400	392	**SUBTOTALS**												**$0**	**$13,765**	**$7,865**	**$8,665**	**$28,433**	**$13,950**	**$14,299**	**$21,721**	**$15,023**	**$29,441**	**$22,719**	**$25,311**	**$25,944**	**$34,785**	**$43,888**	**$34,143**	**$43,819**	**$35,871**	**$36,768**	**$28,316**	**$0**
401	393																																	
402	394	**SIDELINE SUITES:** (34 total - avg. 7 Suites renovated each year)																																
403	395	Flooring - Carpet Premium	1,514	SF	$ 5.50	10	Mixed	X					$8,330	$8,538	$8,751	$8,970	$9,194	$9,424	$9,660	$9,901	$10,149	$10,403	$10,663	$10,929	$11,202	$11,482	$11,769	$12,064	$12,365	$12,674	$12,991	$13,316	$13,649	$13,990
404	396	Flooring - Resilient Premium	554	SF	$ 8.00	20	Mixed	X					$4,434	$4,545	$4,658	$4,775	$4,894	$5,017	$5,142	$5,270	$5,402	$5,537	$5,676	$5,818	$5,963	$6,112	$6,265	$6,422	$6,582	$6,747	$6,915	$7,088	$7,265	$7,447
405	397	Flooring - Tile Premium	131	SF	$ 20.00	20	Mixed	X					$2,627	$2,693	$2,760	$2,829	$2,900	$2,972	$3,047	$3,123	$3,201	$3,281	$3,363	$3,447	$3,533	$3,621	$3,712	$3,805	$3,900	$3,997	$4,097	$4,200	$4,305	$4,412
406	398	Base - Rubber Base	390	LF	$ 2.75	10	Mixed	X					$1,071	$1,098	$1,125	$1,154	$1,182	$1,212	$1,242	$1,273	$1,305	$1,338	$1,371	$1,406	$1,441	$1,477	$1,514	$1,551	$1,590	$1,630	$1,671	$1,712	$1,755	$1,799
407	399	Ceiling - Acoustical Premium	2,200	SF	$ 8.50	20	Mixed	X					$18,701	$19,168	$19,647	$20,138	$20,642	$21,158	$21,687	$22,229	$22,785	$23,354	$23,938	$24,537	$25,150	$25,779	$26,423	$27,084	$27,761	$28,455	$29,166	$29,896	$30,643	$31,409
408	400	Ceiling - Paint on Drywall	N/A	SF	$ 1.25	3	Good			X					$0			$0			$0			$0			$0			$0			$0	
409	401	Walls - Paint	3,117	SF	$ 1.15	3	Good			X			$3,584		$3,766			$4,055			$4,367			$4,703			$5,064			$5,454			$5,873	
410	402	Walls - Tile Premium	N/A	SF	$ 18.00	20	Mixed	X						$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
411	403	Walls - Wallcovering Pattern	N/A	SF	$ 3.50	10	Mixed	X						$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
412	404	Toilet Accessories (non-paper dispensing)	28	EA	$ 75.00	20	Mixed	X					$2,100	$2,153	$2,206	$2,261	$2,318	$2,376	$2,435	$2,496	$2,559	$2,623	$2,688	$2,755	$2,824	$2,895	$2,967	$3,041	$3,117	$3,195	$3,275	$3,357	$3,441	$3,527
413	405	Seating - Indoor Theater	112	EA	$ 375.00	30	Mixed	X					$42,077	$43,129	$44,207	$45,313	$46,445	$47,606	$48,797	$50,017	$51,267	$52,549	$53,862	$55,209	$56,589	$58,004	$59,454	$60,940	$62,464	$64,025	$65,626	$67,267	$68,948	$70,672
414	406	Appliances	21		$ 1,000.00	20	Mixed	X					$21,000	$21,525	$22,063	$22,615	$23,180	$23,760	$24,354	$24,962	$25,586	$26,226	$26,882	$27,554	$28,243	$28,949	$29,672	$30,414	$31,175	$31,954	$32,753	$33,572	$34,411	$35,271
415	407	Countertops - Plastic Laminate	168	LF	$ 105.00	10	Mixed	X					$17,640	$18,081	$18,533	$18,996	$19,471	$19,958	$20,457	$20,968	$21,493	$22,030	$22,581	$23,145	$23,724	$24,317	$24,925	$25,548	$26,187	$26,841	$27,512	$28,200	$28,905	$29,628
416	408	Cabinets - Wood Veneer	140	LF	$ 540.00	10	Mixed	X					$75,600	$77,490	$79,427	$81,413	$83,448	$85,534	$87,673	$89,865	$92,111	$94,414	$96,774	$99,194	$101,674	$104,215	$106,821	$109,491	$112,229	$115,034	$117,910	$120,858	$123,879	$126,976
417	409	Signage & Graphics (exterior)	0		$ 10,000.00	20	Mixed	X					$2,059	$2,110	$2,163	$2,217	$2,273	$2,329	$2,388	$2,447	$2,508	$2,571	$2,635	$2,701	$2,769	$2,838	$2,909	$2,982	$3,056	$3,133	$3,211	$3,291	$3,374	$3,458
418	410	**SUBTOTALS**												**$200,529**	**$209,308**	**$210,681**	**$215,948**	**$225,402**	**$226,880**	**$232,552**	**$242,733**	**$244,325**	**$250,434**	**$261,397**	**$263,112**	**$269,690**	**$281,496**	**$283,343**	**$290,426**	**$303,140**	**$305,129**	**$312,757**	**$326,449**	**$328,590**
419	411																																	
420	412	**WEST END SUITES:** (35 total - avg. 7 Suites renovated each year)																																
421	413	Flooring - Carpet Premium	1,497	SF	$ 5.50	10	Mixed	X					$8,234	$8,439	$8,650	$8,867	$9,088	$9,315	$9,548	$9,787	$10,032	$10,283	$10,540	$10,803	$11,073	$11,350	$11,634	$11,925	$12,223	$12,528	$12,841	$13,162	$13,492	$13,829
422	414	Flooring - Resilient Premium	928	SF	$ 8.00	20	Mixed	X					$7,422	$7,608	$7,798	$7,993	$8,193	$8,398	$8,608	$8,823	$9,043	$9,270	$9,501	$9,739	$9,982	$10,232	$10,488	$10,750	$11,019	$11,294	$11,576	$11,866	$12,162	$12,467
423	415	Flooring - Flake (restrooms)	2,793	SF	$ 7.00	20	Mixed	X					$19,554	$20,043	$20,544	$21,057	$21,584	$22,123	$22,676	$23,243	$23,824	$24,420	$25,031	$25,656	$26,298	$26,955	$27,629	$28,320	$29,028	$29,753	$30,497	$31,260	$32,041	$32,842
424	416	Base - Rubber Base	887	LF	$ 2.75	10	Mixed	X					$2,439	$2,500	$2,563	$2,627	$2,692	$2,760	$2,829	$2,900	$2,972	$3,046	$3,122	$3,201	$3,281	$3,363	$3,447	$3,533	$3,621	$3,712	$3,804	$3,900	$3,997	$4,097

	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1		**Item**	**Quantity**	**Unit**	**Unit Cost**	**Frequency of Replacement**	**Existing Condition (2019)**	**Anticipated Replacement Timeframe (2019 Basis)**					**Est. Replacement Cost**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**
2						**(Years)**	**(Refer to Notes)**	**Annual**	**0 - 2 Years**	**2 - 5 years**	**5 - 10 Years**	**10 - 20 Years**	**FY 2019 Dollars ($)**																					
425	417	Base - Flake (restrooms)	81	LF	$ 5.00	20	Mixed	X					$403	$413	$423	$434	$445	$456	$467	$479	$491	$503	$516	$529	$542	$556	$569	$584	$598	$613	$629	$644	$660	$677
426	418	Ceiling - Acoustical Premium	1,490	SF	$ 8.50	20	Mixed	X					$12,667	$12,983	$13,308	$13,641	$13,982	$14,331	$14,689	$15,057	$15,433	$15,819	$16,214	$16,620	$17,035	$17,461	$17,898	$18,345	$18,804	$19,274	$19,756	$20,250	$20,756	$21,275
427	419	Ceiling - Paint on Drywall	2,289	SF	$ 1.25	3	Good			X			$2,862		$3,007			$3,238			$3,487			$3,755			$4,044			$4,354			$4,689	
428	420	Walls - Paint	8,708	SF	$ 1.15	3	Good			X			$10,015		$10,522			$11,331			$12,202			$13,140			$14,150			$15,238			$16,410	
429	421	Walls - Tile Premium	322	SF	$ 18.00	20	Mixed	X					$5,803	$5,948	$6,097	$6,249	$6,406	$6,566	$6,730	$6,898	$7,071	$7,247	$7,429	$7,614	$7,805	$8,000	$8,200	$8,405	$8,615	$8,830	$9,051	$9,277	$9,509	$9,747
430	422	Walls - Wallcovering Pattern	N/A	SF	$ 3.50	10	Mixed	X						$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
431	423	Toilet Partitions - Metal	4	EA	$ 1,350.00	20	Mixed	X					$4,860	$4,982	$5,106	$5,234	$5,365	$5,499	$5,636	$5,777	$5,921	$6,069	$6,221	$6,377	$6,536	$6,700	$6,867	$7,039	$7,215	$7,395	$7,580	$7,769	$7,964	$8,163
432	424	Toilet Accessories (non-paper dispensing)	22	EA	$ 75.00	20	Mixed	X					$1,650	$1,691	$1,734	$1,777	$1,821	$1,867	$1,913	$1,961	$2,010	$2,061	$2,112	$2,165	$2,219	$2,275	$2,331	$2,390	$2,449	$2,511	$2,573	$2,638	$2,704	$2,771
433	425	Seating - Indoor Theater	660	EA	$ 375.00	30	Mixed	X					$247,500	$253,688	$260,030	$266,530	$273,194	$280,024	$287,024	$294,200	$301,555	$309,094	$316,821	$324,741	$332,860	$341,181	$349,711	$358,454	$367,415	$376,601	$386,016	$395,666	$405,558	$415,697
434	426	Seating - Indoor Theater (party suites)	17	EA	$ 375.00	30	Mixed	X					$6,300	$6,458	$6,619	$6,784	$6,954	$7,128	$7,306	$7,489	$7,676	$7,868	$8,065	$8,266	$8,473	$8,685	$8,902	$9,124	$9,352	$9,586	$9,826	$10,071	$10,323	$10,581
435	427	Appliances	14		$ 1,000.00	20	Mixed	X					$14,000	$14,350	$14,709	$15,076	$15,453	$15,840	$16,236	$16,642	$17,058	$17,484	$17,921	$18,369	$18,828	$19,299	$19,782	$20,276	$20,783	$21,303	$21,835	$22,381	$22,941	$23,514
436	428	Countertops - Plastic Laminate	70	LF	$ 105.00	10	Mixed	X					$7,350	$7,534	$7,722	$7,915	$8,113	$8,316	$8,524	$8,737	$8,955	$9,179	$9,409	$9,644	$9,885	$10,132	$10,385	$10,645	$10,911	$11,184	$11,463	$11,750	$12,044	$12,345
437	429	Countertops - Solid Surface (restrooms & party suites)	20	LF	$ 200.00	20	Mixed	X					$4,040	$4,141	$4,245	$4,351	$4,459	$4,571	$4,685	$4,802	$4,922	$5,045	$5,172	$5,301	$5,433	$5,569	$5,708	$5,851	$5,997	$6,147	$6,301	$6,459	$6,620	$6,786
438	430	Cabinets - Wood Veneer	70	LF	$ 540.00	10	Mixed	X					$37,800	$38,745	$39,714	$40,706	$41,724	$42,767	$43,836	$44,932	$46,056	$47,207	$48,387	$49,597	$50,837	$52,108	$53,410	$54,746	$56,114	$57,517	$58,955	$60,429	$61,940	$63,488
439	431	Cabinets - Painted Wood (party suites)	8	LF	$ 550.00	10	Mixed	X					$4,620	$4,736	$4,854	$4,975	$5,100	$5,227	$5,358	$5,492	$5,629	$5,770	$5,914	$6,062	$6,213	$6,369	$6,528	$6,691	$6,858	$7,030	$7,206	$7,386	$7,570	$7,760
440	432	Signage & Graphics (exterior)	0		$ 10,000.00	20	Mixed	X					$2,000	$2,050	$2,101	$2,154	$2,208	$2,263	$2,319	$2,377	$2,437	$2,498	$2,560	$2,624	$2,690	$2,757	$2,826	$2,897	$2,969	$3,043	$3,119	$3,197	$3,277	$3,359
441	433	**SUBTOTALS**												**$396,308**	**$419,744**	**$416,371**	**$426,780**	**$452,018**	**$448,386**	**$459,596**	**$486,774**	**$482,863**	**$494,934**	**$524,203**	**$519,990**	**$532,990**	**$564,509**	**$559,973**	**$573,972**	**$607,914**	**$603,029**	**$618,105**	**$654,657**	**$649,397**
442	434																																	
443	435	**BROADCAST PRESSBOX:**																																
444	436	Flooring - Sealed Concrete	N/A	SF	$ 0.75	3	Good			X					$0			$0			$0			$0			$0			$0			$0	
445	437	Flooring - Carpet Utility	4,085	SF	$ 3.85	10	Fair			X			$15,727		$4,131	$4,234	$4,340	$4,448							$5,288	$5,420	$5,556	$5,694						
446	438	Flooring - Flake	N/A	SF	$ 7.00	20	Good					X											$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
447	439	Base - Rubber Base	1,325	LF	$ 2.75	10	Fair			X			$3,644		$957	$981	$1,006	$1,031							$1,225	$1,256	$1,287	$1,319						
448	440	Base - Flake	N/A	LF	$ 5.00	20	Good					X											$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
449	441	Ceiling - Acoustical Utility	4,624	SF	$ 4.25	10	Good				X		$19,652					$3,706	$3,798	$3,893	$3,991	$4,090	$4,193					$4,744	$4,862	$4,984	$5,108	$5,236	$5,367	
450	442	Walls - Paint	9,416	SF	$ 1.15	3	Good			X			$10,828		$11,377			$12,251			$13,193			$14,208			$15,300			$16,477			$17,744	
451	443	Walls - Tile Utility	N/A	SF	$ 12.00	20	Good					X											$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
452	444	Walls - Acoustical Panel	2,206	SF	$ 20.00	10	Fair			X			$44,120		$11,588	$11,878	$12,175	$12,479							$14,834	$15,205	$15,585	$15,975						
453	445	Toilet Accessories (non-paper dispensing)	36	EA	$ 75.00	20	Good						$2,700																					
454	446	Appliances	N/A			20	Good					X											$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
455	447	Countertops - Solid Surface	310	LF	$ 200.00	20	Good					X	$62,000										$7,937	$8,135	$8,338	$8,547	$8,760	$8,979	$9,204	$9,434	$9,670	$9,912		
456	448	Cabinets - Plastic Laminate	18	LF	$ 340.00	10	Fair			X			$6,120		$1,607	$1,648	$1,689	$1,731							$2,058	$2,109	$2,162	$2,216						
457	449	Signage & Graphics (assumes no change in use)	1,299		$ 10.00	20	Good					X	$12,990										$1,663	$1,704	$1,747	$1,791	$1,835	$1,881	$1,928	$1,977	$2,026	$2,077		
458	450	**SUBTOTALS**												**$0**	**$29,660**	**$18,741**	**$19,209**	**$35,647**	**$3,798**	**$3,893**	**$17,184**	**$4,090**	**$13,792**	**$24,047**	**$33,490**	**$34,327**	**$50,486**	**$40,809**	**$15,995**	**$32,871**	**$16,804**	**$17,224**	**$23,111**	**$0**
459	451																																	
460	452	**200 LEVEL ADMIN BUILDING:**																																
461	453	Flooring - Sealed Concrete	793	SF	$ 0.75	3	Fair		X				$595	$305	$312		$328	$336		$353	$362		$381	$390		$410	$420		$441	$452		$475	$487	$499
462	454	Flooring - Carpet Utility	9,574	SF	$ 3.85	10	Fair			X			$36,860		$9,681	$9,924	$10,172	$10,426							$12,393	$12,703	$13,021	$13,346						
463	455	Flooring - Resilient Utility	2,825	SF	$ 7.00	10	Fair			X			$19,775		$5,194	$5,324	$5,457	$5,593							$6,649	$6,815	$6,985	$7,160						
464	456	Flooring - Tile Utility (restrooms)	493	SF	$ 14.00	20	Fair				X		$6,902				$1,270	$1,301	$1,334	$1,367	$1,402	$1,437												
465	457	Base - Rubber Base	3,191	LF	$ 2.75	10	Fair			X			$8,775		$2,305	$2,362	$2,422	$2,482							$2,950	$3,024	$3,100	$3,177						
466	458	Base - Wood	145	LF	$ 8.00	20	Fair				X		$1,160				$213	$219	$224	$230	$236	$241												
467	459	Base - Tile Utility (restrooms)	221	LF	$ 14.00	20	Fair				X		$3,094				$569	$583	$598	$613	$628	$644												
468	460	Ceiling - Acoustical Utility	12,891	SF	$ 4.25	10	Fair			X			$54,787		$14,390	$14,750	$15,119	$15,497							$18,421	$18,881	$19,353	$19,837						
469	461	Ceiling - Paint on Drywall	793	SF	$ 1.25	3	Fair		X				$991	$508	$521		$547	$561		$589	$604		$634	$650		$683	$700		$736	$754		$792	$812	
470	462	Walls - Paint	42,684	SF	$ 1.15	3	Fair		X				$49,087	$25,157	$25,786		$27,091	$27,768		$29,174	$29,904		$31,417	$32,203		$33,833	$34,679		$36,435	$37,346		$39,236	$40,217	
471	463	Toilet Partitions - Metal	8	EA	$ 1,350.00	20	Good					X	$10,800										$1,382	$1,417	$1,452	$1,489	$1,526	$1,564	$1,603	$1,643	$1,684	$1,727		
472	464	Lockers - Fixed Metal	42	EA	$ 375.00	30	Fair					X	$15,750										$2,016	$2,067	$2,118	$2,171	$2,225	$2,281	$2,338	$2,397	$2,456	$2,518		
473	465	Toilet Accessories (non-paper dispensing)	52	EA	$ 75.00	20	Fair				X		$3,900				$717	$735	$754	$773	$792	$812												
474	466	Appliances	N/A			20	Poor		X					$0	$0																			
475	467	Countertops - Plastic Laminate	295	LF	$ 105.00	10	Fair			X			$30,975		$8,136	$8,339	$8,548	$8,761							$10,414	$10,675	$10,942	$11,215						
476	468	Cabinets - Plastic Laminate	466	LF	$ 340.00	10	Fair			X			$158,440		$41,615	$42,656	$43,722	$44,815							$53,271	$54,603	$55,968	$57,367						
477	469	Signage & Graphics (assumes no change in use)	N/A		$ 5,000.00	20	Poor			X					$0	$0	$0	$0																
478	470	**SUBTOTALS**												**$25,970**	**$107,940**	**$83,355**	**$116,175**	**$119,079**	**$2,910**	**$33,100**	**$33,927**	**$3,134**	**$35,831**	**$36,727**	**$107,669**	**$145,287**	**$148,919**	**$115,948**	**$41,553**	**$42,592**	**$4,141**	**$44,748**	**$41,516**	**$499**
479	471																																	
480	472	**300 LEVEL CONCOURSES:**																																
481	473	Flooring - Traffic Coating (see Architectural Building Section Above)																																
482	474	Ceiling - Paint on Drywall	7,531	SF	$ 1.25	3	Good			X			$9,414		$9,890			$10,651			$11,470			$12,351			$13,301			$14,324			$15,425	
483	475	Ceiling - Paint on Exposed Structure	42,675	SF	$ 2.00	5	Good			X			$85,350		$29,890	$30,638	$31,404			$33,818	$34,664	$35,530			$38,262	$39,219	$40,199			$43,290	$44,372	$45,482		
484	476	Walls - Paint	63,083	SF	$ 1.15	3	Good			X			$72,545		$76,218			$82,078			$88,389			$95,186			$102,504			$110,386			$118,874	
485	477	Walls - Tile Utility	4,944	SF	$ 12.00	20	Good					X	$59,328										$7,594	$7,784	$7,979	$8,178	$8,383	$8,592	$8,807	$9,027	$9,253	$9,484		
486	478	Walls - Wallcovering Graphics	7,009	SF	$ 5.00	10	Good				X		$35,046					$6,609	$6,774	$6,943	$7,117	$7,295	$7,477					$8,460	$8,671	$8,888	$9,110	$9,338	$9,571	$9,810
487	479	Site Amenities - Trash Containers (2014 vintage)	48	EA	$ 1,500.00	10	Poor		X				$72,000	$36,900	$37,823									$47,235	$48,416									
488	480	Countertops - Stainless Steel	60	LF	$ 225.00	20	Fair				X		$13,500				$2,484	$2,546	$2,609	$2,675	$2,741	$2,810												
489	481	Graphics (concourse images)	1,500	SF	$ 5.00	5	Good			X			$7,500		$2,627	$2,692	$2,760			$2,972	$3,046	$3,122			$3,362	$3,446	$3,532			$3,804	$3,899	$3,997		
490	482	Signage & Graphics (assumes no change in use)	1		$ 25,000.00	20	Good					X	$25,000										$3,200	$3,280	$3,362	$3,446	$3,532	$3,621	$3,711	$3,804	$3,899	$3,997		
491	483	**SUBTOTALS**												**$36,900**	**$156,447**	**$33,330**	**$36,647**	**$101,883**	**$9,383**	**$46,408**	**$147,427**	**$48,757**	**$18,272**	**$165,837**	**$101,382**	**$54,290**	**$171,453**	**$20,673**	**$21,190**	**$193,524**	**$70,534**	**$72,297**	**$143,870**	**$9,810**
492	484																																	
493	485	**300 LEVEL RESTROOMS:**																																
494	486	Flooring - Flake	13,520	SF	$ 7.00	20	Good					X	$94,640										$12,115	$12,418	$12,728	$13,046	$13,372	$13,707	$14,049	$14,401	$14,761	$15,130		
495	487	Ceiling - Acoustical Utility	13,520	SF	$ 4.25	10	Good				X		$57,460					$10,835	$11,106	$11,384	$11,668	$11,960	$12,259					$13,870	$14,217	$14,572	$14,936	$15,310	$15,692	
496	488	Ceiling - Paint on Drywall	N/A	SF	$ 1.25	3	Fair			X					$0			$0			$0			$0			$0			$0			$0	$0
497	489	Ceiling - Paint on Exposed Structure	N/A	SF	$ 2.00	5	Good			X					$0	$0	$0			$0	$0	$0			$0	$0	$0			$0	$0	$0		
498	490	Toilet Accessories (non-paper dispensing)	989	EA	$ 75.00	20	Good						$74,175																					
499	491	Walls - Paint	35,070	SF	$ 1.15	3	Good			X			$40,331		$42,372			$45,630			$49,139			$52,917			$56,986			$61,368			$66,086	
500	492	Toilet Partitions - Phenolic	201	EA	$ 1,150.00	20	Good					X	$231,150										$29,589	$30,329	$31,087	$31,864	$32,661	$33,477	$34,314	$35,172	$36,052	$36,953		
501	493	Signage & Graphics (assumes no change in use)	N/A		$ 5,000.00	20	Good					X											$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
502	494	Insulation at Roof	23,705	SF	$ 20.00								$474,100	$485,953				$26,820	$27,491	$28,178	$28,882	$29,604	$30,344	$31,103	$31,881	$32,678	$33,495	$34,332	$35,190	$36,070	$36,972	$37,896	$38,843	$39,814
503	495	**SUBTOTALS**												**$485,953**	**$42,372**	**$0**	**$0**	**$83,285**	**$38,597**	**$39,561**	**$89,689**	**$41,564**	**$84,307**	**$126,767**	**$75,696**	**$77,588**	**$136,514**	**$95,386**	**$97,771**	**$161,582**	**$102,720**	**$105,288**	**$120,622**	**$39,814**
504	496																																	
505	497	**300 LEVEL CONCESSIONS:**																																
506	498	Flooring - Traffic Coating (see Architectural Building Section Above)											$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
507	499	Base - Rubber Base	862	LF	$ 2.75	10	Fair			X			$2,371		$623	$638	$654	$671							$797	$817	$837	$858						
508	500	Ceiling - Acoustical Utility	7,571	SF	$ 4.25	10	Fair			X			$32,177		$8,451	$8,663	$8,879	$9,101							$10,819	$11,089	$11,366	$11,650						
509	501	Ceiling - Paint on Drywall	N/A	SF	$ 1.25	3	Good			X					$0			$0			$0			$0			$0			$0			$0	
510	502	Walls - Paint	12,808	SF	$ 1.15	3	Good			X			$14,729		$15,475			$16,665			$17,946			$19,326			$20,812			$22,412			$24,136	
511	503	Walls - FRP Paneling	N/A	SF	$ 9.00	10	Good				X							$0	$0	$0	$0	$0	$0					$0	$0	$0	$0	$0	$0	
512	504	Countertops - Stainless Steel	660	LF	$ 225.00	40	Good						$148,500																					
513	505	Signage & Graphics (external only - internal by DNC)	564		$ 10.00	20	Good					X	$5,640										$722	$740	$759	$777	$797	$817	$837	$858	$880	$902		
514	506	Insulation at Roof	12,809	SF	$ 20.00								$256,180	$262,585				$14,492	$14,855	$15,226	$15,607	$15,997	$16,397	$16,807	$17,227	$17,657	$18,099	$18,551	$19,015	$19,490	$19,978	$20,477	$20,989	$21,514
515	507	**SUBTOTALS**												**$262,585**	**$24,549**	**$9,301**	**$9,533**	**$40,929**	**$14,855**	**$15,226**	**$33,553**	**$15,997**	**$17,119**	**$36,873**	**$29,601**	**$30,341**	**$51,911**	**$31,877**	**$19,852**	**$42,761**	**$20,857**	**$21,379**	**$45,125**	**$21,514**
516	508																																	
517	509	**300 LEVEL BACK-OF-HOUSE:**																																
518	510	Flooring - Sealed Concrete	1,386	SF	$ 0.75	3	Fair			X			$1,040		$1,092			$1,176			$1,267			$1,364			$1,469			$1,582			$1,703	
519	511	Ceiling - Acoustical Utility	1,386	SF	$ 4.25	10	Fair			X			$5,891		$1,547	$1,586	$1,626	$1,666							$1,981	$2,030	$2,081	$2,133						
520	512	Walls - Paint	1,480	SF	$ 1.15	3	Fair			X			$1,702		$1,788			$1,926			$2,074			$2,233			$2,405			$2,590			$2,789	
521	513	Signage & Graphics (assumes no change in use)	234		$ 5.00	20	Good					X	$1,170										$150	$154	$157	$161	$165	$169	$174	$178	$182	$187		
522	514	**SUBTOTALS**												**$0**	**$4,427**	**$1,586**	**$1,626**	**$4,768**	**$0**	**$0**	**$3,340**	**$0**	**$150**	**$3,751**	**$2,138**	**$2,191**	**$6,120**	**$2,302**	**$174**	**$4,350**	**$182**	**$187**	**$4,492**	**$0**
523	515																																	
524	516	**300 LEVEL RETAIL SPACES:**																																
525	517	Flooring - Flake	452	SF	$ 7.00	20	Fair				X		$3,164				$582	$597	$612	$627	$643	$659												
526	518	Base - Rubber Base	N/A	LF	$ 2.75	10	Fair			X					$0	$0	$0	$0							$0	$0	$0	$0						
527	519	Ceiling - Paint on Exposed Structure	452	SF	$ 2.00	5	Good			X			$904		$317	$325	$333			$358	$367	$376			$405	$415	$426			$459	$470	$482		
528	520	Walls - Paint	448	SF	$ 1.15	3	Good			X			$515		$541			$583			$628			$676			$728			$784			$844	
529	521	Walls - Display Wall System	1,332	SF	$ 1,750.00	20	Fair				X		$2,331,000				$428,831	$439,552	$450,541	$461,804	$473,350	$485,183												
530	522	Countertops - Solid Surface	62	LF	$ 200.00	20	Good					X	$12,400										$1,587	$1,627	$1,668	$1,709	$1,752	$1,796	$1,841	$1,887	$1,934	$1,982		
531	523	Cabinets - Plastic Laminate	62	LF	$ 340.00	10	Good				X		$21,080					$3,975	$4,074	$4,176	$4,281	$4,388	$4,497					$5,088	$5,216	$5,346	$5,480	$5,617	$5,757	
532	524	Graphics (Merchandising graphics by DNC)	N/A	SF	$ 5.00	5	Good			X					$0	$0	$0			$0	$0	$0			$0	$0	$0			$0	$0	$0		
533	525	Signage & Graphics (external only)	1		$ 20,000.00	20	Good					X	$20,000										$2,560	$2,624	$2,690	$2,757	$2,826	$2,897	$2,969	$3,043	$3,119	$3,197		
534	526	**SUBTOTALS**												**$0**	**$858**	**$325**	**$429,746**	**$444,707**	**$455,227**	**$466,966**	**$479,268**	**$490,606**	**$8,645**	**$4,927**	**$4,763**	**$4,882**	**$5,732**	**$9,781**	**$10,025**	**$11,518**	**$11,003**	**$11,278**	**$6,601**	**$0**
535	527																																	
536	528	**300 LEVEL ADMIN BUILDING:**																																
537	529	Flooring - Sealed Concrete	1,646	SF	$ 0.75	3	Fair		X				$1,235	$633	$648		$681	$698		$734	$752		$790	$810		$851	$872		$916	$939		$987	$1,011	
538	530	Flooring - Carpet Utility:	7,485	SF	$ 3.85																													
539	531	Injured Player's Lounge	3,743	SF	$ 3.85	10	Poor		X				$14,409	$7,384	$7,569									$9,453	$9,689									
540	532	All other spaces	3,743	SF	$ 3.85	10	Good				X		$14,409					$2,717	$2,785	$2,855	$2,926	$2,999	$3,074					$3,478	$3,565	$3,654	$3,745	$3,839	$3,935	
541	533	Flooring - Resilient Utility	4,639	SF	$ 7.00	10	Good				X		$32,473					$6,123	$6,276	$6,433	$6,594	$6,759	$6,928					$7,838	$8,034	$8,235	$8,441	$8,652	$8,868	
542	534	Base - Rubber Base	3,375	LF	$ 2.75	10	Good				X		$9,281					$1,750	$1,794	$1,839	$1,885	$1,932	$1,980					$2,240	$2,296	$2,354	$2,413	$2,473	$2,535	
543	535	Base - Tile Premium (restrooms)	336	LF	$ 18.00	20	Fair				X		$6,048				$1,113	$1,140	$1,169	$1,198	$1,228	$1,259												
544	536	Ceiling - Acoustical Utility	12,027	SF	$ 4.25	10	Good				X		$51,115					$9,639	$9,880	$10,127	$10,380	$10,639	$10,905					$12,338	$12,647	$12,963	$13,287	$13,619	$13,960	
545	537	Ceiling - Paint on Drywall	1,739	SF	$ 1.25	3	Good			X			$2,174		$2,284			$2,459			$2,649			$2,852			$3,071			$3,308			$3,562	
546	538	Walls - Paint	33,399	SF	$ 1.15	3	Good			X			$38,409		$40,353			$43,456			$46,797			$50,396			$54,271			$58,444			$62,937	
547	539	Walls - Tile Premium (restrooms)	1,344	SF	$ 18.00	20	Fair				X		$24,192				$4,451	$4,562	$4,676	$4,793	$4,913	$5,035												
548	540	Toilet Partitions - Metal	15	EA	$ 1,350.00	20	Fair				X		$20,250				$3,725	$3,819	$3,914	$4,012	$4,112	$4,215												
549	541	Toilet Accessories (non-paper dispensing)	69	EA	$ 75.00	20	Fair				X		$5,175				$952	$976	$1,000	$1,025	$1,051	$1,077												
550	542	Lockers - Fixed Metal	42	EA	$ 375.00	30	Fair					X	$15,750										$2,016	$2,067	$2,118	$2,171	$2,225	$2,281	$2,338	$2,397	$2,456	$2,518		
551	543	Seating - Indoor Theater (Injured Player's Lounge)	N/A	EA	$ 375.00	30	Fair					X											$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
552	544	Appliances	3		$ 1,000.00	20	Good					X	$3,000										$384	$394	$403	$414	$424	$434	$445	$456	$468	$480		
553	545	Countertops - Plastic Laminate	N/A	LF	$ 105.00	10	Fair			X					$0	$0	$0	$0							$0	$0	$0	$0						
554	546	Countertops - Solid Surface	220	LF	$ 200.00	20	Good					X	$44,000										$5,632	$5,773	$5,918	$6,065	$6,217	$6,373	$6,532	$6,695	$6,862	$7,034		
555	547	Cabinets - Plastic Laminate	42	LF	$ 340.00	10	Fair			X			$14,280		$3,751	$3,844	$3,941	$4,039							$4,801	$4,921	$5,044	$5,170						
556	548	Cabinets - Wood Veneer	N/A	LF	$ 540.00	10	Fair			X					$0	$0	$0	$0							$0	$0	$0	$0						
557	549	Signage & Graphics (assumes no change in use)	N/A		$ 5,000.00	20	Good					X											$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
558	550	**SUBTOTALS**												**$8,017**	**$54,605**	**$3,844**	**$14,863**	**$81,379**	**$31,494**	**$33,015**	**$83,286**	**$33,916**	**$31,710**	**$71,744**	**$22,929**	**$14,422**	**$72,125**	**$40,153**	**$36,774**	**$99,445**	**$37,673**	**$39,602**	**$96,809**	**$0**
559	551																																	
560	552	**300 LEVEL GOAL LINE CLUB - FRONT-OF-HOUSE:**																																
561	553	Flooring - Carpet Premium	8,279	SF	$ 5.50	10	Good				X		$45,535					$8,586	$8,801	$9,021	$9,247	$9,478	$9,715					$10,991	$11,266	$11,548	$11,836	$12,132	$12,436	
562	554	Flooring - Resilient Premium	N/A	SF	$ 8.00	20	Good					X											$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
563	555	Flooring - Cork	N/A	SF	$ 10.00	10	Good				X			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

		Item	Quantity	Unit	Unit Cost	Frequency of Replacement (Years)	Existing Condition (2019) (Refer to Notes)	Anticipated Replacement Timeframe (2019 Basis)					Est. Replacement Cost	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
1								Annual	0 - 2 Years	2 - 5 years	5 - 10 Years	10 - 20 Years	FY 2019 Dollars ($)																					
564	556	Flooring - Tile Utility	N/A	SF	$ 14.00	20	Good					X											$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
565	557	Flooring - Tile Premium	100	SF	$ 20.00	20	Good					X	$2,000										$256	$262	$269	$276	$283	$290	$297	$304	$312	$320		
566	558	Base - Rubber Base	363	LF	$ 2.75	10	Good				X		$998					$188	$193	$198	$203	$208	$213					$241	$247	$253	$259	$266	$273		
567	559	Base - Wood	40	LF	$ 8.00	20	Good					X	$320										$41	$42	$43	$44	$45	$46	$48	$49	$50	$51		
568	560	Ceiling - Acoustical Premium	5,795	SF	$ 8.50	20	Good					X	$49,260										$6,306	$6,463	$6,625	$6,791	$6,960	$7,134	$7,313	$7,495	$7,683	$7,875		
569	561	Ceiling - Decorative Metal	1,242	SF	$ 40.00	20	Good					X	$49,674										$6,359	$6,518	$6,681	$6,848	$7,019	$7,194	$7,374	$7,558	$7,747	$7,941		
570	562	Ceiling - Paint on Drywall	1,242	SF	$ 1.25	3	Good			X			$1,552		$1,631							$1,891				$2,037			$2,362			$2,544	
571	563	Ceiling - Paint on Exposed Structure	1,242	SF	$ 2.00	5	Good			X			$2,484		$870	$892	$914				$984	$1,009	$1,034			$1,113	$1,141	$1,170			$1,260	$1,291	$1,324		
572	564	Walls - Paint	2,614	SF	$ 1.15	3	Good			X			$3,006		$3,158			$3,401				$3,662			$3,944					$4,573		$4,925		
573	565	Walls - Display Wall System	436	SF	$ 1,850.00	20	Good					X	$805,860										$103,157	$105,736	$108,379	$111,089	$113,866	$116,713	$119,630	$122,621	$125,687	$128,829		
574	566	Walls - Tile Premium	2,178	SF	$ 18.00	20	Good					X	$39,204										$5,018	$5,144	$5,273	$5,404	$5,539	$5,678	$5,820	$5,965	$6,114	$6,267		
575	567	Walls - Wood Paneling	2,178	SF	$ 45.00	10	Good				X		$98,010					$18,482	$18,944	$19,417	$19,903	$20,400	$20,910					$23,658	$24,249	$24,856	$25,477	$26,114	$26,767	
576	568	Walls - Wallcovering Pattern	871	SF	$ 3.50	10	Good				X		$3,049					$575	$589	$604	$619	$635	$651					$736	$754	$773	$793	$812	$833		
577	569	Seating - Indoor Theater	448	EA	$ 375.00	30	Good						$168,000																					
578	570	Countertops - Plastic Laminate	54	LF	$ 105.00	10	Good				X		$5,712					$1,077	$1,104	$1,132	$1,160	$1,189	$1,219					$1,379	$1,413	$1,449	$1,485	$1,522	$1,560	
579	571	Countertops - Solid Surface	20	SF	$ 200.00	20	Good					X	$108,800										$13,927	$14,276	$14,632	$14,998	$15,373	$15,757	$16,151	$16,555	$16,969	$17,393	$17,828	
580	572	Cabinets - Plastic Laminate	54	LF	$ 340.00	10	Good				X		$18,360					$3,462	$3,549	$3,637	$3,728	$3,822	$3,917					$4,432	$4,543	$4,656	$4,773	$4,892	$5,014	
581	573	Cabinets - Wood Veneer	20	LF	$ 540.00	10	Good				X		$10,800					$2,037	$2,087	$2,140	$2,193	$2,248	$2,304					$2,607	$2,672	$2,739	$2,807	$2,878	$2,950	
582	574	Signage & Graphics (assumes no change in use)	44		$ 10.00	10	Good				X		$436					$82	$84	$86	$88	$91	$93					$105	$108	$110	$113	$116	$119		
583	575	**SUBTOTALS**												**$0**	**$5,659**	**$892**	**$914**	**$39,646**	**$35,351**	**$37,219**	**$43,703**	**$39,103**	**$174,085**	**$144,421**	**$143,015**	**$146,590**	**$156,695**	**$196,961**	**$201,885**	**$215,128**	**$213,397**	**$218,732**	**$57,419**	**$0**
584	576																																	
585	577	**300 LEVEL GOAL LINE CLUB - BACK-OF-HOUSE:**																																
586	578	Flooring - Sealed Concrete	732	SF	$ 0.75	3	Fair			X			$549		$577			$621				$669			$720			$776			$835		$900		
587	579	Flooring - Resilient Utility	555	SF	$ 7.00	10	Fair			X			$3,885		$1,020	$1,046	$1,072	$1,099								$1,306	$1,339	$1,372	$1,407						
588	580	Flooring - Tile Utility (restrooms)	443	SF	$ 14.00	20	Good					X	$6,202										$794	$814	$834	$855	$876	$898	$921	$944	$967	$991		
589	581	Base - Rubber Base	143	LF	$ 2.75	10	Poor			X			$393		$103	$106	$109	$111								$132	$136	$139	$142						
590	582	Base - Tile Utility (restrooms)	84	LF	$ 14.00	20	Good					X	$1,176										$151	$154	$158	$162	$166	$170	$175	$179	$183	$188		
591	583	Ceiling - Acoustical Utility	1,471	SF	$ 4.25	10	Fair			X			$6,250		$1,642	$1,683	$1,725	$1,768								$2,101	$2,154	$2,208	$2,263						
592	584	Ceiling - Paint on Drywall	260	SF	$ 1.25	3	Good			X			$324		$341			$367				$395					$426							
593	585	Walls - Paint	1,968	SF	$ 1.15	3	Good			X			$2,263		$2,378			$2,561				$2,757					$2,970			$3,444			$3,709	$3,801
594	586	Walls - Tile Utility	840	SF	$ 12.00	20	Fair				X		$10,080				$1,854	$1,901	$1,948	$1,997	$2,047	$2,098												
595	587	Walls - FRP Paneling	250	SF	$ 9.00	10	Fair			X			$2,250		$591	$606	$621	$636								$756	$775	$795	$815						
596	588	Toilet Partitions - Phenolic	7	EA	$ 1,150.00	20	Good					X	$8,050										$1,030	$1,056	$1,083	$1,110	$1,137	$1,166	$1,195	$1,225	$1,256	$1,287		
597	589	Toilet Accessories (non-paper dispensing)	40	EA	$ 75.00	20	Good						$3,000																					
598	590	Countertops - Plastic Laminate	70	LF	$ 105.00	10	Fair			X			$7,350		$1,931	$1,979	$2,028	$2,079								$2,471	$2,533	$2,596	$2,661						
599	591	Cabinets - Plastic Laminate	11	LF	$ 340.00	10	Fair			X			$3,570		$938	$961	$985	$1,010								$1,200	$1,230	$1,261	$1,293						
600	592	Signage & Graphics (assumes no change in use)	138		$ 10.00	20	Good					X	$1,384										$177	$182	$186	$191	$196	$200	$205	$211	$216	$221		
601	593	**SUBTOTALS**												**$0**	**$9,520**	**$6,380**	**$8,394**	**$12,153**	**$1,948**	**$1,997**	**$5,869**	**$2,098**	**$2,152**	**$6,321**	**$10,229**	**$10,484**	**$15,179**	**$11,015**	**$2,496**	**$7,331**	**$2,622**	**$2,688**	**$5,140**	**$3,801**
602	594																																	
603	595	**300 LEVEL WRITING PRESS:**											$0																					
604	596	Flooring - Carpet Utility	9,255	SF	$ 3.85	10	Good					X	$35,632					$6,719	$6,887	$7,059	$7,236	$7,417	$7,602					$8,601	$8,816	$9,036	$9,262	$9,494	$9,731		
605	597	Flooring - Tile Utility (restrooms)	489	SF	$ 14.00	20	Fair					X	$6,846				$1,259	$1,291	$1,323	$1,356	$1,390	$1,425												
606	598	Base - Rubber Base	2,316	LF	$ 2.75	10	Good					X	$6,369					$1,201	$1,231	$1,262	$1,293	$1,326	$1,359					$1,537	$1,576	$1,615	$1,656	$1,697	$1,739		
607	599	Base - Tile Utility (restrooms)	185	LF	$ 14.00	20	Fair					X	$2,590				$476	$488	$501	$513	$526	$539												
608	600	Ceiling - Acoustical Utility	8,704	SF	$ 4.25	10	Good					X	$36,992					$6,976	$7,150	$7,329	$7,512	$7,700	$7,892					$8,929	$9,152	$9,381	$9,616	$9,856	$10,103		
609	601	Ceiling - Paint on Drywall	607	SF	$ 1.25	3	Good			X			$759		$797			$858				$924			$996		$1,072	$759		$1,155			$1,243		
610	602	Walls - Paint	16,068	SF	$ 1.15	3	Good			X			$18,478		$19,414			$20,906				$22,514			$24,245		$26,109			$28,117			$30,279	
611	603	Walls - Tile Utility	896	SF	$ 12.00	20	Fair				X		$10,752				$1,978	$2,027	$2,078	$2,130	$2,183	$2,238												
612	604	Toilet Partitions - Phenolic	7	EA	$ 1,150.00	20	Fair				X		$8,050				$1,481	$1,518	$1,556	$1,595	$1,635	$1,676												
613	605	Toilet Accessories (non-paper dispensing)	40	EA	$ 75.00	20	Good						$3,000																					
614	606	Appliances	N/A			20	Good					X											$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
615	607	Countertops - Solid Surface	498	LF	$ 200.00	20	Good					X	$99,600										$12,750	$13,068	$13,395	$13,730	$14,073	$14,425	$14,786	$15,155	$15,534	$15,923		
616	608	Cabinets - Plastic Laminate	N/A	LF	$ 340.00	10	Good				X							$0	$0	$0	$0	$0	$0					$0	$0	$0	$0	$0	$0	$0	$0
617	609	Signage & Graphics (assumes no change in use)	20		$ 10.00	20	Good					X	$200										$26	$26	$27	$28	$28	$29	$30	$30	$31	$32		
618	610	**SUBTOTALS**												**$0**	**$20,211**	**$0**	**$5,195**	**$41,985**	**$20,726**	**$21,244**	**$45,213**	**$22,319**	**$29,628**	**$38,335**	**$13,422**	**$13,758**	**$41,283**	**$33,522**	**$34,360**	**$64,490**	**$36,099**	**$37,001**	**$53,095**	**$0**
619	611																																	
620	612	**350 LEVEL BUSINESS CLASS - FRONT-OF-HOUSE:** (Planned Replacement in 2020)																																
621	613	Flooring - Carpet Premium	8,185	SF	$ 5.50	10	Fair		X				$45,018	$23,071	$23,648										$29,533	$30,272								
622	614	Flooring - Resilient Utility	N/A	SF	$ 7.00	10	Good		X					$0	$0										$0	$0								
623	615	Flooring - Tile Utility	N/A	SF	$ 14.00	20	Good		X					$0	$0																			
624	616	Base - Rubber Base	565	LF	$ 2.75	10	Good		X				$1,554	$796	$816										$1,019	$1,045								
625	617	Ceiling - Acoustical Utility	8,185	SF	$ 4.25	10	Good		X				$34,786	$17,828	$18,274										$22,821	$23,392								
626	618	Ceiling - Paint on Drywall	N/A	SF	$ 1.25	3	Good		X					$0	$0		$0	$0	$0		$0	$0		$0	$0		$0	$0		$0	$0		$0	$0	
627	619	Walls - Paint	5,502	SF	$ 1.15	3	Good		X				$6,327	$3,243	$3,324		$3,492	$3,579		$3,761	$3,855		$4,050	$4,151		$4,361	$4,470		$4,696	$4,814		$5,058	$5,184	
628	620	Walls - Tile Utility	242	SF	$ 12.00	20	Good		X				$2,904	$1,488	$1,526																			
629	621	Walls - Wood Paneling	N/A	SF	$ 45.00	10	Good		X					$0	$0										$0	$0								
630	622	Walls - Wallcovering Graphics	873	SF	$ 5.00	10	Good		X					$4,365	$2,237	$2,293									$2,864	$2,935								
631	623	Seating - Indoor Theater	403	EA	$ 375.00	30	Fair		X				$151,125	$77,452	$79,388																			
632	624	Countertops - Plastic Laminate	N/A	LF	$ 105.00	10	Good		X					$0	$0										$0	$0								
633	625	Cabinets - Plastic Laminate	N/A	LF	$ 340.00	10	Good		X					$0	$0										$0	$0								
634	626	Cabinets - Wood Veneer	N/A	LF	$ 540.00	10	Good		X					$0	$0										$0	$0								
635	627	Signage & Graphics (assumes no change in use)	1		$ 5,000.00	10	Fair		X				$5,000	$2,563	$2,627										$3,280	$3,362								
636	628	**SUBTOTALS**												**$128,678**	**$131,895**	**$0**	**$3,492**	**$3,579**	**$0**	**$3,761**	**$3,855**	**$0**	**$4,050**	**$63,669**	**$61,006**	**$4,361**	**$4,470**	**$0**	**$4,696**	**$4,814**	**$0**	**$5,058**	**$5,184**	**$0**
637	629																																	
638	630	**350 LEVEL BUSINESS CLASS - BACK-OF-HOUSE:** (Planned Replacement in 2020)																																
639	631	Flooring - Sealed Concrete	389	SF	$ 0.75	3	Fair		X				$292	$150	$153		$161	$165		$173	$178		$187	$191		$201	$206		$217	$222		$233	$239	
640	632	Flooring - Resilient Utility	383	SF	$ 7.00	10	Fair		X				$2,681	$1,374	$1,408									$1,759	$1,803									
641	633	Flooring - Tile Utility (restrooms)	579	SF	$ 14.00	20	Fair		X				$8,106	$4,154	$4,258																			
642	634	Base - Rubber Base	300	LF	$ 2.75	10	Poor		X				$825	$423	$433									$541	$555									
643	635	Base - Tile Utility (restrooms)	140	LF	$ 14.00	20	Fair		X				$1,960	$1,005	$1,030																			
644	636	Ceiling - Acoustical Utility	1,518	SF	$ 4.25	10	Fair		X				$6,452	$3,306	$3,389									$4,232	$4,338									
645	637	Ceiling - Paint on Drywall	N/A	SF	$ 1.25	3	Good		X					$0	$0		$0	$0		$0	$0		$0	$0		$0	$0		$0	$0		$0	$0	
646	638	Walls - Paint	10,844	SF	$ 1.15	3	Good		X				$12,471	$6,391	$6,551		$6,883	$7,055		$7,412	$7,597		$7,982	$8,181		$8,595	$8,810		$9,256	$9,488		$9,968	$10,217	
647	639	Walls - Tile Utility (restrooms)	1,780	SF	$ 12.00	20	Fair		X				$21,360	$10,947	$11,221																			
648	640	Walls - FRP Paneling	410	SF	$ 9.00	10	Fair		X				$3,690	$1,891	$1,938									$2,421	$2,481									
649	641	Toilet Partitions - Phenolic	7	EA	$ 1,150.00	20	Good		X				$8,050	$4,126	$4,229																			
650	642	Toilet Accessories (non-paper dispensing)	40	EA	$ 75.00	20	Good		X				$3,000	$1,538	$1,576																			
651	643	Countertops - Plastic Laminate	92	LF	$ 105.00	10	Fair		X				$9,660	$4,951	$5,075									$6,337	$6,496									
652	644	Cabinets - Plastic Laminate	20	LF	$ 340.00	10	Fair		X				$6,800	$3,485	$3,572									$4,461	$4,573									
653	645	Signage & Graphics (assumes no change in use)	120		$ 10.00	20	Poor		X				$1,200	$615	$630																			
654	646	**SUBTOTALS**												**$44,355**	**$45,464**	**$0**	**$7,044**	**$7,220**	**$0**	**$7,585**	**$7,775**	**$0**	**$8,168**	**$28,124**	**$20,246**	**$8,797**	**$9,016**	**$0**	**$9,473**	**$9,710**	**$0**	**$10,201**	**$10,456**	**$0**
655	647																																	
656	648	**350 LEVEL M&T CLUB - FRONT-OF-HOUSE:**																																
657	649	Flooring - Carpet Premium	8,185	SF	$ 5.50	10	Good				X		$45,018					$8,489	$8,701	$8,919	$9,142	$9,370	$9,604					$10,866	$11,138	$11,417	$11,702	$11,995	$12,294		
658	650	Flooring - Tile Utility	N/A	SF	$ 14.00	20	Fair				X						$0	$0	$0	$0	$0	$0												
659	651	Base - Rubber Base	565	LF	$ 2.75	10	Good				X		$1,554					$293	$300	$308	$316	$323	$331					$375	$384	$394	$404	$414	$424		
660	652	Ceiling - Acoustical Utility	8,185	SF	$ 4.25	10	Good				X		$34,786					$6,560	$6,724	$6,892	$7,064	$7,241	$7,422					$8,397	$8,607	$8,822	$9,042	$9,269	$9,500		
661	653	Ceiling - Paint on Drywall	N/A	SF	$ 1.25	3	Good			X					$0			$0			$0				$0					$0					
662	654	Ceiling - Wood	N/A	SF	$ 40.00	20	Good					X											$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
663	655	Walls - Paint	5,502	SF	$ 1.15	3	Good			X			$6,327		$6,648			$7,159			$7,709			$8,302			$8,940			$9,628			$10,368	
664	656	Walls - Tile Utility	242	SF	$ 12.00	20	Fair				X		$2,904				$534	$548	$561	$575	$590	$604												
665	657	Walls - Wallcovering Graphics	873	SF	$ 5.00	10	Good				X		$4,365					$823	$844	$865	$886	$909	$931					$1,054	$1,080	$1,107	$1,135	$1,163	$1,192		
666	658	Seating - Indoor Theater	403	EA	$ 375.00	30	Good						$151,125																					
667	659	Countertops - Solid Surface	N/A	LF	$ 200.00	20	Good					X											$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
668	660	Cabinets - Plastic Laminate	N/A	LF	$ 340.00	10	Good				X							$0	$0	$0	$0	$0	$0					$0	$0	$0	$0	$0	$0		
669	661	Signage & Graphics (assumes no change in use)	N/A		$ 10,000.00	10	Good				X							$0	$0	$0	$0	$0	$0					$0	$0	$0	$0	$0	$0		
670	662	**SUBTOTALS**												**$0**	**$6,648**	**$0**	**$534**	**$23,871**	**$17,130**	**$17,558**	**$25,706**	**$18,447**	**$18,289**	**$8,302**	**$0**	**$0**	**$8,940**	**$20,692**	**$21,209**	**$31,367**	**$22,283**	**$22,840**	**$33,779**	**$0**
671	663																																	
672	664	**350 LEVEL M&T CLUB - BACK-OF-HOUSE:**																																
673	665	Flooring - Sealed Concrete	389	SF	$ 0.75	3	Fair			X			$292		$307			$330				$355			$383			$412			$444			$478	
674	666	Flooring - Resilient Utility	383	SF	$ 7.00	10	Fair			X			$2,681		$704	$722	$740	$758										$901	$924	$947	$971				
675	667	Flooring - Tile Utility (restrooms)	579	SF	$ 14.00	20	Good					X	$8,106										$1,038	$1,064	$1,090	$1,117	$1,145	$1,174	$1,203	$1,233	$1,264	$1,296		
676	668	Base - Rubber Base	300	LF	$ 2.75	10	Poor			X			$825		$217	$222	$228	$233								$277	$284	$291	$299						
677	669	Base - Tile Utility (restrooms)	140	LF	$ 14.00	20	Good					X	$1,960										$251	$257	$264	$270	$277	$284	$291	$298	$306	$313		
678	670	Ceiling - Acoustical Utility	1,518	SF	$ 4.25	10	Fair			X			$6,452		$1,695	$1,737	$1,780	$1,825								$2,169	$2,223	$2,279	$2,336						
679	671	Ceiling - Paint on Drywall	N/A	SF	$ 1.25	3	Good			X					$0			$0				$0			$0		$0							
680	672	Walls - Paint	10,844	SF	$ 1.15	3	Good			X			$12,471		$13,102			$14,109				$15,194			$16,363		$17,621			$18,975			$20,435	
681	673	Walls - Tile Utility (restrooms)	1,780	SF	$ 12.00	20	Fair				X		$21,360				$3,930	$4,028	$4,129	$4,232	$4,338	$4,446												
682	674	Walls - FRP Paneling	410	SF	$ 9.00	10	Fair			X			$3,690		$969	$993	$1,018	$1,044								$1,241	$1,272	$1,303	$1,336						
683	675	Toilet Partitions - Phenolic	7	EA	$ 1,150.00	20	Good					X	$8,050										$1,030	$1,056	$1,083	$1,110	$1,137	$1,166	$1,195	$1,225	$1,256	$1,287		
684	676	Toilet Accessories (non-paper dispensing)	40	EA	$ 75.00	20	Good					X	$3,000										$384	$394	$403	$414	$424	$434	$445	$456	$468	$480		
685	677	Countertops - Plastic Laminate	92	LF	$ 105.00	10	Fair			X			$9,660		$2,537	$2,601	$2,666	$2,732								$3,248	$3,329	$3,412	$3,498						
686	678	Cabinets - Plastic Laminate	20	LF	$ 340.00	10	Fair			X			$6,800		$1,786	$1,831	$1,876	$1,923								$2,286	$2,343	$2,402	$2,462						
687	679	Signage & Graphics (assumes no change in use)	120		$ 10.00	20	Good					X	$1,200										$154	$157	$161	$165	$170	$174	$178	$183	$187	$192		
688	680	**SUBTOTALS**												**$0**	**$21,316**	**$8,106**	**$12,238**	**$26,983**	**$4,129**	**$4,232**	**$19,887**	**$4,446**	**$2,857**	**$19,673**	**$13,124**	**$13,452**	**$31,821**	**$14,133**	**$3,313**	**$22,815**	**$3,481**	**$3,568**	**$20,913**	**$0**
689	681																																	
690	682	**400 LEVEL RESTROOMS & BACK-OF-HOUSE:**																																
691	683	Flooring - Sealed Concrete	249	SF	$ 0.75	3	Fair		X				$187	$96	$98		$103	$106		$111	$114		$120	$123		$129	$132		$139	$142		$149	$153	
692	684	Flooring - Flake	3,261	SF	$ 7.00	20	Poor			X			$22,827		$5,996	$6,146	$6,299	$6,457																
693	685	Base - Flake	576	LF	$ 5.00	20	Poor			X			$2,880		$756	$775	$795	$815																
694	686	Ceiling - Paint on Exposed Structure	3,645	SF	$ 2.00	5	Poor		X				$7,290	$3,736	$3,830						$4,227	$4,333			$4,783	$4,902			$5,411	$5,546				
695	687	Walls - Paint	29,160	SF	$ 1.15	3	Poor		X				$33,534	$17,186	$17,616			$18,970		$19,931	$20,429		$21,463	$22,000		$23,113	$23,691		$24,891	$25,513		$26,805	$27,475	
696	688	Toilet Partitions - Phenolic	40	EA	$ 1,150.00	20	Fair			X			$46,000		$12,082	$12,384	$12,694	$13,011																
697	689	Toilet Accessories (non-paper dispensing)	160	EA	$ 75.00	20	Fair			X			$12,000		$3,152	$3,231	$3,311	$3,394																
698	690	Signage & Graphics (assumes no change in use)	72		$ 10.00	20	Poor			X			$720		$189	$194	$199	$204																
699	691	**SUBTOTALS**												**$21,018**	**$43,719**	**$22,730**	**$41,909**	**$42,956**	**$4,227**	**$24,374**	**$20,543**	**$0**	**$21,583**	**$26,905**	**$4,902**	**$23,242**	**$23,823**	**$0**	**$30,440**	**$31,201**	**$0**	**$26,954**	**$27,628**	**$0**
700	692																																	
701	693	**COMMISSARY BUILDING:**																																
702	694	Flooring - Sealed Concrete	28,608	SF	$ 0.75	3	Fair			X			$21,456		$22,542			$24,275			$26,142			$28,152			$30,317			$32,648			$35,158	
703	695	Flooring - Route out floor cracks and seal	286	SF	$ 2.00	5	Poor		X				$572	$293	$301					$332	$340			$375	$385				$425	$435				

	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ
1		**Item**	**Quantity**	**Unit**	**Unit Cost**	**Frequency of Replacement**	**Existing Condition (2019)**	**Anticipated Replacement Timeframe (2019 Basis)**					**Est. Replacement Cost**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**
2						**(Years)**	**(Refer to Notes)**	**Annual**	**0 - 2 Years**	**2 - 5 years**	**5 - 10 Years**	**10 - 20 Years**	**FY 2019 Dollars ($)**																					
704	696	Flooring - Carpet Utility	2,506	SF	$ 3.85	10	Good				X		$9,648					$1,819	$1,865	$1,911	$1,959	$2,008	$2,058					$2,329	$2,387	$2,447	$2,508	$2,571	$2,635	
705	697	Base - Rubber Base	5,140	LF	$ 2.75	10	Fair				X		$14,135					$2,665	$2,732	$2,800	$2,870	$2,942	$3,016					$3,412	$3,497	$3,585	$3,674	$3,766	$3,860	
706	698	Ceiling - Acoustical Utility	9,521	SF	$ 4.25	10	Good				X		$40,464					$7,630	$7,821	$8,017	$8,217	$8,422	$8,633					$9,767	$10,012	$10,262	$10,518	$10,781	$11,051	
707	699	Ceiling - Paint on Exposed Structure	2,084	SF	$ 2.00	5	Good			X			$4,168		$1,460	$1,496	$1,534			$1,651	$1,693	$1,735			$1,868	$1,915	$1,963			$2,114	$2,167	$2,221		
708	700	Walls - Paint	93,208	SF	$ 1.15	3	Mixed		X	X			$107,189		$112,616			$121,275			$130,600			$140,642			$151,456			$163,101			$175,642	
709	701	Toilet Partitions - Phenolic	11	EA	$ 1,150.00	20	Good					X	$12,650										$1,619	$1,660	$1,701	$1,744	$1,787	$1,832	$1,878	$1,925	$1,973	$2,022		
710	702	Toilet Accessories (non-paper dispensing)	91	EA	$ 75.00	20	Good						$6,825																					
711	703	Lockers - Fixed Metal	1,278	EA	$ 375.00	30	Good						$479,250																					
712	704	Appliances	8		$ 1,000.00	20	Fair				X		$8,000				$1,472	$1,509	$1,546	$1,585	$1,625	$1,665												
713	705	Countertops - Solid Surface	143	LF	$ 200.00	20	Good					X	$28,600										$3,661	$3,753	$3,846	$3,943	$4,041	$4,142	$4,246	$4,352	$4,461	$4,572		
714	706	Cabinets - Plastic Laminate	80	LF	$ 340.00	10	Good				X		$27,200					$5,129	$5,257	$5,389	$5,523	$5,662	$5,803					$6,566	$6,730	$6,898	$7,070	$7,247	$7,428	
715	707	Signage & Graphics (interior)	3,728		$ 5.00	20	Good					X	$18,642										$2,386	$2,446	$2,507	$2,570	$2,634	$2,700	$2,767	$2,837	$2,907	$2,980		
716	708	Signage & Graphics (exterior)	7,457		$ 5.00	20	Fair				X		$37,283				$6,859	$7,030	$7,206	$7,386	$7,571	$7,760												
717	709	**SUBTOTALS**												**$293**	**$136,918**	**$1,496**	**$9,864**	**$171,333**	**$26,759**	**$29,080**	**$186,200**	**$30,195**	**$27,177**	**$177,027**	**$10,308**	**$10,171**	**$192,198**	**$30,748**	**$31,941**	**$230,603**	**$35,279**	**$36,161**	**$235,775**	**$0**
718	710																																	
719	711	**OPERATIONS BUILDING:**																																
720	712	Flooring - Sealed Concrete	8,295	SF	$ 0.75	3	Good			X			$6,221		$6,536			$7,039			$7,580			$8,163			$8,790			$9,466			$10,194	
721	713	Flooring - Carpet Utility	2,230	SF	$ 3.85	10	Good				X		$8,586					$1,619	$1,659	$1,701	$1,743	$1,787	$1,832					$2,072	$2,124	$2,177	$2,232	$2,288	$2,345	
722	714	Flooring - Resilient Utility	1,414	SF	$ 7.00	10	Good				X		$9,898					$1,866	$1,913	$1,961	$2,010	$2,060	$2,112					$2,389	$2,449	$2,510	$2,573	$2,637	$2,703	
723	715	Flooring - Tile Utility	171	SF	$ 14.00	20	Good					X	$2,394										$306	$314	$322	$330	$338	$347	$355	$364	$373	$383		
724	716	Base - Rubber Base	102	LF	$ 2.75	10	Good				X		$281					$53	$54	$56	$57	$58	$60					$68	$69	$71	$73	$75	$77	
725	717	Ceiling - Acoustical Utility	1,133	SF	$ 4.25	10	Good				X		$4,815					$908	$931	$954	$978	$1,002	$1,027					$1,162	$1,191	$1,221	$1,252	$1,283	$1,315	
726	718	Ceiling - Paint on Drywall	2,847	SF	$ 1.25	3	Good			X			$3,559		$3,739			$4,026			$4,336			$4,669			$5,028			$5,415			$5,831	
727	719	Walls - Paint	494	SF	$ 1.15	3	Good			X			$568		$597			$643			$692			$745			$803			$864			$931	
728	720	Toilet Partitions - Phenolic	N/A	EA	$ 1,150.00	20	Good					X											$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
729	721	Toilet Accessories (non-paper dispensing)	N/A	EA	$ 75.00	20	Good							$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
730	722	Lockers - Fixed Metal	43	EA	$ 375.00	30	Good						$16,125																					
731	723	Appliances	16		$ 1,000.00	20	Good					X	$16,000										$2,048	$2,099	$2,152	$2,206	$2,261	$2,317	$2,375	$2,435	$2,495	$2,558		
732	724	Countertops - Solid Surface	2	LF	$ 200.00	20	Good					X	$400										$51	$52	$54	$55	$57	$58	$59	$61	$62	$64		
733	725	Cabinets - Plastic Laminate	48	LF	$ 340.00	10	Good				X		$16,320					$3,077	$3,154	$3,233	$3,314	$3,397	$3,482					$3,939	$4,038	$4,139	$4,242	$4,348	$4,457	
734	726	Signage & Graphics (assumes no change in use)	42		$ 10.00	20	Good					X	$420										$54	$55	$56	$58	$59	$61	$62	$64	$66	$67		
735	727	**SUBTOTALS**	**N/A**											**$0**	**$10,872**	**$0**	**$0**	**$19,232**	**$7,712**	**$7,905**	**$20,710**	**$8,305**	**$10,972**	**$16,099**	**$2,584**	**$2,649**	**$17,336**	**$12,414**	**$12,724**	**$28,788**	**$13,368**	**$13,702**	**$27,853**	**$0**
736	728																																	
737	729	**TEAM STORE:**																																
738	730	Flooring - Sealed Concrete	6,324	SF	$ 0.75	3	Poor		X				$4,743	$2,431	$2,492		$2,618	$2,683		$2,819	$2,889		$3,036	$3,112		$3,269	$3,351		$3,521	$3,609		$3,791	$3,886	
739	731	Flooring - Carpet Utility	232	SF	$ 3.85	10	Good				X		$893					$168	$173	$177	$181	$186	$191					$216	$221	$227	$232	$238	$244	
740	732	Flooring - Resilient Utility	60	SF	$ 7.00	10	Fair			X			$420		$110	$113	$116	$119							$141	$145	$148	$152						
741	733	Base - Rubber Base	1,172	LF	$ 2.75	10	Good				X		$3,223					$608	$623	$639	$654	$671	$688					$778	$797	$817	$838	$859	$880	
742	734	Ceiling - Acoustical Utility	174	SF	$ 4.25	10	Good				X		$740					$139	$143	$147	$150	$154	$158					$179	$183	$188	$192	$197	$202	
743	735	Ceiling - Acoustical Premium	4,201	SF	$ 8.50	20	Good					X	$35,709										$4,571	$4,685	$4,802	$4,922	$5,046	$5,172	$5,301	$5,433	$5,569	$5,709		
744	736	Ceiling - Paint on Drywall	2,278	SF	$ 1.25	3	Good			X			$2,848		$2,992			$3,222			$3,469			$3,736			$4,023			$4,333			$4,666	
745	737	Ceiling - Paint on Exposed Structure	2,838	SF	$ 2.00	5	Good			X			$5,676		$1,988	$2,037	$2,088			$2,249	$2,305	$2,363			$2,545	$2,608	$2,673			$2,879	$2,951	$3,025		
746	738	Ceiling - Specialty	392	SF	$ 75.00	20	Good			X			$29,400		$7,722	$7,915	$8,113	$8,316																
747	739	Walls - Paint	12,182	SF	$ 1.15	3	Fair		X				$14,009	$7,180	$7,359		$7,732	$7,925		$8,326	$8,534		$8,967	$9,191		$9,656	$9,897		$10,398	$10,658		$11,198	$11,478	
748	740	Walls - Display Wall System	5,136	SF	$ 1,750.00	10	Fair			X			$8,988,000		$2,360,754	$2,419,773	$2,480,268	$2,542,274							$3,021,965	$3,097,514	$3,174,952	$3,254,326						
749	741	Walls - Wallcovering Graphics	2,206	SF	$ 5.00	10	Good				X		$11,030					$2,080	$2,132	$2,185	$2,240	$2,296	$2,353					$2,662	$2,729	$2,797	$2,867	$2,939	$3,012	
750	742	Toilet Partitions - Phenolic	15	EA	$ 1,150.00	20	Good					X	$17,250										$2,208	$2,263	$2,320	$2,378	$2,437	$2,498	$2,561	$2,625	$2,690	$2,758		
751	743	Toilet Accessories (non-paper dispensing)	91	EA	$ 75.00	20	Good						$6,825																					
752	744	Countertops - Wood	29	LF	$ 170.00	10	Poor		X				$4,930	$2,527	$2,590									$3,234	$3,315									
753	745	Countertops - Solid Surface	N/A	LF	$ 200.00	20	Good					X											$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
754	746	Cabinets - Plastic Laminate	N/A	LF	$ 340.00	10	Good				X							$0	$0	$0	$0	$0	$0					$0	$0	$0	$0	$0	$0	$0
755	747	Graphics (Merchandising graphics by DNC)	N/A	SF	$ 5.00	5	Good			X					$0	$0	$0			$0	$0	$0			$0	$0	$0			$0	$0	$0		
756	748	Signage & Graphics (assumes no change in use)	N/A		$ 20,000.00	10	Good				X							$0	$0	$0	$0	$0	$0					$0	$0	$0	$0	$0	$0	$0
757	749	**SUBTOTALS**												**$12,137**	**$2,386,007**	**$2,429,839**	**$2,500,934**	**$2,567,534**	**$3,070**	**$16,541**	**$20,424**	**$5,669**	**$22,171**	**$26,221**	**$3,035,088**	**$3,120,493**	**$3,202,528**	**$3,265,983**	**$25,711**	**$33,566**	**$15,340**	**$30,713**	**$24,368**	**$0**
758	750																																	
759	751																																	
760	752	**Writing Press & M&T Club**																																
761	753	Boiler - Lockinvar - Model FNB1001 (2015)	1	EA	$ 96,018	30	Good					X	$96,018												$129,134									
762	754	MUA Unit - McQuay - Model SWP055C (1994)	1	EA	$ 110,410	25	Fair			X			$110,410			$118,899																		
763	755	Cooling Tower - Baltimore Air Coil (1994)	1	EA	$ 85,660	25	Fair			X			$85,660				$94,553																	
764	756	12 ea. McQuay Heat Pumps - 3 Ton (1994 & 1999)	12	EA	$ 17,363	20	Fair						$208,354					$235,733																
765	757	3 ea. Daiken Heat Pumps - 3 Ton (2011)	3	EA	$ 17,363	20	Good				X		$52,088							$61,917														
766	758	2 ea. Rooftop DX Units (2011)	2	EA	$ 30,318	25	Good					X	$60,635													$83,587								
767	759	**SUBTOTALS**												**$0**	**$0**	**$118,899**	**$94,553**	**$235,733**	**$0**	**$61,917**	**$0**	**$0**	**$0**	**$0**	**$129,134**	**$83,587**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
768	760																																	
769	761	**Goal Line & Business Class Clubs**																																
770	762	Boiler - Lockinvar - Model FNB1001 (2015)	1	EA	$ 96,018	30	Good					X	$96,018														$135,671							
771	763	MUA Unit - McQuay (1994)	1	EA	$ 110,410	25	Fair			X			$110,410			$118,899																		
772	764	Cooling Tower - Baltimore Air Coil (1994)	1	EA	$ 85,660	25	Fair			X			$85,660				$94,553																	
773	765	12 ea. McQuay Heat Pumps - 3 Ton (1994 & 1999)	12	EA	$ 17,363	20	Fair			X			$208,354					$235,733																
774	766	**SUBTOTALS**												**$0**	**$0**	**$118,899**	**$94,553**	**$235,733**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$135,671**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
775	767																																	
776	768	**West End - Center Mechanical Room**																																
777	769	Make up Air Units - AAON (2) (2015)	1	EA	$ 110,410	25	Good					X	$110,410												$148,489									
778	770	Cooling Tower - Baltimore Air Coil (1994)	1	EA	$ 85,660	25	Fair			X			$85,660			$92,247																		
779	771	Loop Pumps - Bell & Gossett (1994)	2	EA	$ 16,926	30	Good				X		$33,852							$40,239														
780	772	Heat Adder Pumps - Bell & Gossett (1994)	2	EA	$ 13,161	25	Fair			X			$26,321				$29,054																	
781	773	**SUBTOTALS**												**$0**	**$0**	**$92,247**	**$29,054**	**$0**	**$0**	**$40,239**	**$0**	**$0**	**$0**	**$0**	**$148,489**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
782	774																																	
783	775	**Southwest Mechanical Room**																																
784	776	Boiler - Lockinvar - Model FBN1501 (2015)	1	EA	$ 104,447	30	Good					X	$104,447													$143,981								
785	777	Cooling Tower - Baltimore Air Coil (1993)	1	EA	$ 85,660	25	Fair			X			$85,660					$96,916																
786	778	Loop Pumps and Motors (1993)	2	EA	$ 16,926	30	Good				X		$33,852								$41,245													
787	779	General MUA Unit - Reznor (2015)	1	EA	$ 110,410	20	Good					X	$110,410														$156,006							
788	780	**SUBTOTALS**												**$0**	**$0**	**$0**	**$0**	**$96,916**	**$0**	**$0**	**$41,245**	**$0**	**$0**	**$0**	**$0**	**$143,981**	**$156,006**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
789	781																																	
790	782	**Northwest Mechanical Room**																																
791	783	Boiler - Lockinvar - Model FBN1501 (2015)	1	EA	$ 104,447	30	Good					X	$104,447												$140,469									
792	784	Cooling Tower - Baltimore Air Coil (1993)	1	EA	$ 85,660	25	Fair			X			$85,660			$92,247																		
793	785	Loop Pumps and Motors (1993)	2	EA	$ 16,926	30	Good				X		$33,852							$40,239														
794	786	General MUA Unit - Reznor (2015)	1	EA	$ 110,410	20	Good					X	$110,410													$152,201								
795	787	**SUBTOTALS**												**$0**	**$0**	**$92,247**	**$0**	**$0**	**$0**	**$40,239**	**$0**	**$0**	**$0**	**$0**	**$140,469**	**$152,201**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
796	788																																	
797	789	**Northeast Mechanical Room (Pepsi East)**																																
798	790	Boilers (2) - Bryan - Model HECL90-W-FD6 (1999)	2	EA	$ 73,781	30	Good					X	$147,563												$198,456									
799	791	Loop Pumps and Motors - Bell & Gossett/Marathon (1999)	2	EA	$ 16,926	30	Good					X	$33,852												$45,527									
800	792	Cooling Tower - Baltimore Air Coil (1999)	1	EA	$ 316,182	25	Good				X		$316,182							$375,841														
801	793	Make Up Air Unit - McQuay (1999)	1	EA	$ 110,410	20	Good				X		$110,410								$134,523													
802	794	Glycol Heat Adder Pumps & Motors (1999)	2	EA	$ 13,161	25	Good				X		$26,321									$32,872												
803	795	**SUBTOTALS**												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$375,841**	**$134,523**	**$32,872**	**$0**	**$0**	**$243,983**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
804	796																																	
805	797	**Southeast Mechanical Room (Dunn Tire Club)**																																
806	798	Boilers (2) - Bryan - Model HECL90-W-FD6 (1999)	2	EA	$ 73,781	30	Good					X	$147,563												$198,456									
807	799	Loop Pumps and Motors - Bell & Gossett/Marathon (1999)	2	EA	$ 16,926	30	Good					X	$33,852													$46,665								
808	800	Cooling Tower - Baltimore Air Coil (1999)	1	EA	$ 316,182	25	Good				X		$316,182							$375,841														
809	801	Make Up Air Unit - McQuay (1999)	1	EA	$ 110,410	26	Good				X		$110,410								$134,523													
810	802	Glycol Heat Adder Pumps & Motors (1999)	2	EA	$ 13,161	25	Good				X		$26,321									$32,872												
811	803	**SUBTOTALS**												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$375,841**	**$134,523**	**$32,872**	**$0**	**$0**	**$198,456**	**$46,665**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
812	804																																	
813	805	**Northwest Mechanical Room (Pepsi West)**																																
814	806	Make Up Air Unit - McQuay - Model SWP055C (1999)	1	EA	$ 110,410	25	Good				X		$110,410										$141,334											
815	807	**SUBTOTALS**												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$141,334**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
816	808																																	
817	809	**Southeast Mechanical Room (Toyota Club)**																																
818	810	Make Up Air Unit - McQuay (2 ea.) (1999)	2	EA	$ 110,410	25	Good				X		$220,819											$289,734										
819	811	**SUBTOTALS**												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$289,734**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
820	812																																	
821	813	**Misc. Heat Pumps**																																
822	814	West End Suites - 38 ea. Diaken 3 Ton Units (2014)	38	EA	$ 15,179	20	Good					X	$576,794															$835,370						
823	815	Pepsi Club Suites - 21 ea. Diaken 3 Ton Units (2015)	21	EA	$ 15,179	20	Good					X	$318,755														$450,392							
824	816	Dunn Tire Suites - 6 ea. McQuay Units (1999)	6	EA	$ 15,179	20	Fair			X			$91,073			$98,075																		
825	817	Toyota Club Suites - 6 ea. McQuay Units - 3 Ton (1999)	6	EA	$ 15,179	20	Fair			X			$91,073				$100,527																	
826	818	Dugout Suites - 24 ea. Diaken (2015)	24	EA	$ 15,179	20	Good					X	$364,291														$514,734							
827	819	Dugout Suites - 44 ea. McQuay (1999)	44	EA	$ 15,179	20	Fair			X			$667,867		$701,678																			
828	820	Pepsi Club - 13 ea. - 5 Ton Units (2016)	13	EA	$ 16,835	20	Good					X	$218,850															$316,961						
829	821	Pepsi Club - 5 ea. - 3 Ton Units (1999)	5	EA	$ 15,179	20	Fair			X			$75,894						$88,014															
830	822	Dunn Tire Club - 6 ea. - 5 Ton Units (2014)	6	EA	$ 16,835	20	Good					X	$101,008													$139,241								
831	823	Dunn Tire Club - 2 ea. - 3 Ton Units (1999)	2	EA	$ 15,179	20	Fair			X			$30,358			$32,692																		
832	824	Toyota Club - 6 ea. - 5 Ton Units (2014)	6	EA	$ 16,835	20	Good					X	$101,008														$142,722							
833	825	Toyota Club - 2 ea. - 3 Ton Units (1999)	2	EA	$ 15,179	20	Fair			X			$30,358				$33,509																	
834	826	**SUBTOTALS**												**$0**	**$701,678**	**$130,767**	**$134,036**	**$0**	**$88,014**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$139,241**	**$1,107,848**	**$1,152,331**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
835	827																																	
836	828	**Old Administration Building - Boiler Room**																																
837	829	Heating Hot Water Boilers - 2 ea. - Lochinvar (2013)	2	EA	$ 96,018	30	Good					X	$192,037												$258,268									
838	830	Heat Loop Pump & Motor - Paco (2013)	2	EA	$ 16,926	30	Good					X	$33,852													$46,665								
839	831	Chiller - Trane - Serial #U09L05839 (2009)	1	EA	$ 150,164	25	Good					X	$150,164														$212,177							
840	832	Chilled Water Pump/Conden Water Pump (2009)	2	EA	$ 16,926	30	Good					X	$33,852														$47,832							
841	833	Water Tower - Baltimore Air Coil (1972)	1	EA	$ 85,660	25	Poor		X				$85,660			$92,247																		

		Item	Quantity	Unit	Unit Cost	Frequency of Replacement (Years)	Existing Condition (2019) (Refer to Notes)	Anticipated Replacement Timeframe (2019 Basis) Annual	0 - 2 Years	2 - 5 years	5 - 10 Years	10 - 20 Years	Est. Replacement Cost FY 2019 Dollars ($)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
842	834	**SUBTOTALS**												**$0**	**$0**	**$92,247**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$258,268**	**$46,665**	**$260,009**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
843	835																																
844	836	**Old Administration Building - Tunnel Level**																																
845	837	Old Administration Building - Aux Locker Room/Photographers/Interview Room/Green Room - Air Handling Units (2013)	2	EA	$ 22,524	30	Fair					X	$45,047											$60,583									
846	838	Visitors Locker Room - 2 ea. - Trane AHU's (1972)	2	EA	$ 30,318	30	Poor		X				$60,635		$63,705																			
847	839	Visitors Locker Room - 1 ea. - DX Unit (1990)	1	EA	$ 28,218	25	Fair			X			$28,218			$30,387																		
848	840	Home Locker Room - Trane AHU (1972)	1	EA	$ 26,118	30	Poor		X				$26,118		$27,440																			
849	841	Home Locker Room - 1 ea. - DX Unit (1985)	1	EA	$ 24,018	25	Poor		X				$24,018			$25,864																		
850	842	**SUBTOTALS**												**$0**	**$91,145**	**$56,252**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$60,583**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
851	843																																
852	844	**Old Administration Building - 1st Floor**																																
853	845	Sports Bar Level - 5 ea. AHU units (2013)	5	EA	$ 22,113	30	Good				X		$110,565							$131,427														
854	846	**SUBTOTALS**												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$131,427**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
855	847																																
856	848	**Old Administration Building - 2nd Floor**																																
857	849	Office Level - 1 ea. Trane AHU (1972)	1	EA	$ 28,217	30	Poor		X				$28,217		$29,645																			
858	850	IT Server Room - 2 ea. CRAC Units - Stulz (2014)	2	EA	$ 91,995	15	Good					X	$183,989													$253,631							
859	851	**SUBTOTALS**												**$0**	**$29,645**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$253,631**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
860	852																																
861	853	**Old Administration Building - 3rd Floor**																																
862	854	Top Floor - Scoreboard Control - 1 ea. Stulz Unit (2014)	1	EA	$ 115,190	15	Good					X	$115,190												$154,918									
863	855	Top Floor - Scoreboard Control - 1 roof Top Unit (2019)	1	EA	$ 28,218	20	Good					X	$28,218													$38,898								
864	856	Top Floor Southeast Offices - 3 ea. Roof Top Units - Trane (2012)	3	EA	$ 28,218	20	Good					X	$84,653														$119,613							
865	857	Top Floor - Lobby - 1 ea. Roof Top Unit - Trane (2016)	1	EA	$ 28,218	20	Good					X	$28,218															$40,868						
866	858	Top Floor - Game Day Control & Security - 1 ea. Roof Top Unit - Johnson Control (2010)	1	EA	$ 28,218	20	Good					X	$28,218																$41,889					
867	859	Top Floor - Front Offices Northeast - 1 ea. Trane Unit (2012)	1	EA	$ 28,218	25	Good					X	$28,218																	$42,937				
868	860	Top Floor - Injured Players area - 1 ea. Rooftop Unit - York (2010)	1	EA	$ 28,218	20	Good					X	$28,218																		$44,010			
869	861	**SUBTOTALS**												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$154,918**	**$38,898**	**$119,613**	**$40,868**	**$41,889**	**$42,937**	**$44,010**	**$0**	**$0**	**$0**
870	862																																
871	863																																
872	864	Booster Pump System - Bell & Gossett (1999)	1	LS	$ 115,500	35	Good				X		$115,500								$140,726													
873	865	Domestic Hot Water Heater @ SW Mech. (2015)	1	EA	$ 47,250	15	Good					X	$47,250													$65,135							
874	866	Domestic Hot Water Heater @ NW Mech. (1993)	1	EA	$ 47,250	15	Fair			X			$47,250			$50,883																	
875	867	Domestic Hot Water Boilers (4) AJAX @ NE Mech. for Pepsi East (1999)	4	EA	$ 36,750	25	Good				X		$147,000							$174,737													
876	868	Domestic Hot Water Boilers (4) AJAX @ SE Mech. for Dunn Club (1999)	4	EA	$ 36,750	25	Good				X		$147,000								$179,105												
877	869	Domestic Hot Water Boilers (4) AJAX - Model B46 @ NW Mech. for Pepsi West (1999)	4	EA	$ 36,750	25	Good				X		$147,000									$183,583											
878	870	Domestic Hot Water Boilers (4 ea.) AJAX @ SE Mech. for Toyota Club (1999)	4	EA	$ 36,750	25	Good				X		$147,000										$188,172										
879	871	Domestic Hot Water Boilers - 2 ea. - Laars @ Old Admin. (2013)	2	EA	$ 20,250	20	Good					X	$40,500												$54,468								
880	872	**SUBTOTALS**												**$0**	**$0**	**$50,883**	**$0**	**$0**	**$0**	**$174,737**	**$319,831**	**$183,583**	**$188,172**	**$0**	**$54,468**	**$65,135**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
881	873																																
882	874	**Fire Protection**																																
883	875	Wet System	22,840	SF	$ 4.00	40	Mixed			X		X	$91,360											$11,987	$12,287	$12,594	$12,909	$13,232	$13,562	$13,902	$14,249	$14,605	$14,970	
884	876	Dry System	182,641	SF	$ 10.00	30	Good					X	$1,826,410											$239,641	$245,632	$251,773	$258,067	$264,519	$271,132	$277,910	$284,858	$291,979	$299,279	
885	877	Pumps	1	EA	$ 50,000	30	Good					X	$50,000													$68,926								
886	878	Dry Valves	4	EA	$ 6,500	25	Good					X	$26,000														$36,737							
887	879	Heat Tracing	22,840	SF	$ 0.50	10	Fair			X			$11,420		$1,000	$3,075	$3,151	$3,230							$3,840	$3,936	$4,034	$4,135						
888	880	**SUBTOTALS**												**$0**	**$3,000**	**$3,075**	**$3,151**	**$3,230**	**$0**	**$0**	**$0**	**$0**	**$0**	**$251,628**	**$261,758**	**$337,228**	**$311,747**	**$281,885**	**$284,694**	**$291,811**	**$299,107**	**$306,584**	**$314,249**	**$0**
889	881																																
890	882																																
891	883	**Emergency Generators**																																
892	884	East Generator - 230kW (Installed 1999)	1	EA	$ 300,000	30-40	Fair					X	$300,000												$403,467									
893	885	East Generator - 600kW (Installed 2014)	1	EA	$ 600,000	30-40	Good						$600,000																					
894	886	Emergency Panelboards	40	EA	$ 20,000	30	Poor		X				$800,000	$410,000	$420,250																			
895	887	Automatic Transfer Switches (1999)	4	EA	$ 20,000	30	Fair					X	$80,000															$115,864						
896	888	**SUBTOTALS**												**$410,000**	**$420,250**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$403,467**	**$0**	**$0**	**$115,864**	**$0**	**$0**	**$0**	**$0**	**$0**
897	889																																
898	890	**Main Service Switchgear**																																
899	891	Switchgear for NYSEG Feeder B &D (Installed 1972)	1	LS	$ 100,000	30-40	Poor		X				$100,000		$105,063																			
900	892	Switchgear for NYSEG Feeder A &C (Installed 1999)	1	LS	$ 100,000	30-40	Good					X	$100,000														$141,297							
901	893	**SUBTOTALS**												**$0**	**$105,063**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$141,297**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
902	894																																
903	895	**Unit Substation #1**																																
904	896	Transformer (Installed 2014)	1	LS	$ 75,000	30-40	Good						$75,000																					
905	897	Switchgear & Breakers (Installed 2014)	1	LS	$ 150,000	30-40	Good						$150,000																					
906	898	Panelboards - Concessions (Installed 2014)	1	EA	$ 280,000	30	Good						$280,000																					
907	899	Panelboards - Dugout Suites (Installed 1999)	1	EA	$ 400,000	30	Fair					X	$400,000												$537,956									
908	900	Panelboards - Team Store (Installed 2014)	1	EA	$ 150,000	30	Good						$150,000																					
909	901	Panelboards - Distribution Board	1	EA	$ 25,000	30	*						$25,000																					
910	902	Panelboards - Video Board	1	EA	$ 75,000	30	*						$75,000																					
911	903	**SUBTOTALS**												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$537,956**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
912	904																																
913	905	**Unit Substation #2**																																
914	906	Transformer (Installed 2014)	1	LS	$ 75,000	30-40	Good						$75,000																					
915	907	Switchgear & Breakers (Installed 2014)	1	LS	$ 150,000	30-40	Good						$150,000																					
916	908	Panelboards - Concessions (Installed 2014)	1	EA	$ 280,000	30	Good						$280,000																					
917	909	Panelboards - Gen Ltg & Pwr on Lvl 100, 200 & 400 (Installed 1972)	1	EA	$ 350,000	30	Poor		X				$350,000		$367,719																			
918	910	Panelboards - 300 Level	1	EA	$ 145,000	30	*						$145,000		$152,341																			
919	911	**SUBTOTALS**												**$0**	**$520,059**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
920	912																																
921	913	**Unit Substation #3**																																
922	914	Transformer (Installed 1972)	1	LS	$ 65,000	30-40	Poor		X				$65,000			$69,998																		
923	915	Switchgear & Breakers (Installed 1972)	1	LS	$ 125,000	30-40	Poor		X				$125,000			$134,611																		
924	916	Panelboards - Ltg & Power Lvl 200 & 400 (Installed 2014)	1	EA	$ 150,000	30	Good						$150,000																					
925	917	Panelboards - Ltg & Pwr on Lvl 300 (Installed 1972)	1	EA	$ 75,000	30	Poor		X				$75,000			$80,767																		
926	918	Panelboards - 100 Level	1	EA	$ 100,000		*						$100,000			$107,689																		
927	919	**SUBTOTALS**												**$0**	**$0**	**$393,065**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
928	920																																
929	921	**Unit Substation #4**																																
930	922	Transformer (Installed 2014)	1	LS	$ 75,000	30-40	Good																											
931	923	Switchgear & Breakers (Installed 2014)	1	LS	$ 150,000	30-40	Good																											
932	924	Panelboards - Concessions (Installed 2014)	1	EA	$ 280,000	30	Good																											
933	925	Panelboards - Gen Ltg & Pwr on Lvl 100, 200 & 400 (Installed 1972)	1	EA	$ 350,000	30	Poor		X				$350,000		$367,719																			
934	926	Panelboards - 300 Level	1	EA	$ 145,000		*						$145,000		$152,341																			
935	927	**SUBTOTALS**												**$0**	**$520,059**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
936	928																																
937	929	**Unit Substation #6**																																
938	930	Transformer (Installed 2014)	1	LS	$ 75,000	30-40	Good																											
939	931	Switchgear & Breakers (Installed 2014)	1	LS	$ 150,000	30-40	Good																											
940	932	Panelboards - Concessions (Installed 2014)	1	EA	$ 425,000	30	Good																											
941	933	Panelboards - Gen Ltg & Pwr on Lvl 100, 200 & 400 (Installed 1972)	1	EA	$ 350,000	30	Poor		X				$350,000			$376,912																		
942	934	**SUBTOTALS**												**$0**	**$0**	**$376,912**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
943	935																																
944	936	**Unit Substation #7**																																
945	937	Transformer (Installed 1972)	1	LS	$ 75,000	30-40	Poor		X				$75,000		$78,797																			
946	938	Switchgear & Breakers (Installed 1972)	1	LS	$ 150,000	30-40	Poor		X				$150,000		$157,594																			
947	939	Panelboards - Ltg & Power Lvl 200 & 400 (Installed 2014)	1	EA	$ 415,000	30	Good						$415,000																					
948	940	Panelboards - Ltg & Pwr on Lvl 300 (Installed 1972)	1	EA	$ 75,000	30	Poor		X				$75,000		$78,797																			
949	941	Panelboards - Level 100	1	EA	$ 75,000		*						$75,000		$78,797																			
950	942	**SUBTOTALS**												**$0**	**$393,984**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
951	943																																
952	944	**Unit Substation #8**																																
953	945	Transformer (Installed 1999)	1	LS	$ 75,000	30-40	Fair				X		$75,000							$89,151														
954	946	Switchgear & Breakers (Installed 2014)	1	LS	$ 150,000	30-40	Good						$150,000																					
955	947	Panelboards - Concessions (Installed 2014)	1	EA	$ 280,000	30	Good						$280,000																					
956	948	Panelboards - Gen Ltg & Pwr on Lvl 100, 200 & 400 (Installed 1972)	1	EA	$ 350,000	30	Poor		X				$350,000			$376,912																		
957	949	Panelboards - Level 300	1	EA	$ 145,000		*						$145,000			$156,149																		
958	950	**SUBTOTALS**												**$0**	**$0**	**$533,061**	**$0**	**$0**	**$0**	**$89,151**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
959	951																																
960	952	**Unit Substation #9**																																
961	953	Transformer (Installed 2014)	1	LS	$ 150,000	30-40	Good						$150,000																					
962	954	Switchgear & Breakers (Installed 1972)	1	LS	$ 175,000	30-40	Poor		X				$175,000			$188,456																		
963	955	Panelboards - Concessions (Installed 2014)	1	EA	$ 280,000	30	Good						$280,000																					

		Item	Quantity	Unit	Unit Cost	Frequency of Replacement (Years)	Existing Condition (2019) (Refer to Notes)	Anticipated Replacement Timeframe (2019 Basis)				Est. Replacement Cost	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
								Annual	0 - 2 Years	2 - 5 years	5 - 10 Years	10 - 20 Years	FY 2019 Dollars ($)																				
964	956	Panelboards - Dugout Suites (Installed 1999)	1	EA	$ 475,000	30	Fair					X	$475,000											$638,822								
965	957	Panelboards - Admin Bldg (Installed 1972)	1	EA	$ 650,000	30	Poor		X				$650,000			$699,979																
966	958	Switchboard & Panelboards - Operations Bldg (Installed 2014)	1	LS	$ 125,000	30	Good						$125,000																			
967	959	Switchboard & Panelboards - Commissary Bldg (Installed 2014)	1	LS	$ 280,000	30	Good						$280,000																			
968	960	**SUBTOTALS**												**$0**	**$0**	**$888,435**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$638,822**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
969	961																																
970	962	**Unit Substation #10**																															
971	963	Transformer (Installed 1999)	1	LS	$ 75,000	30-40	Fair					X	$75,000											$100,867								
972	964	Switchgear & Breakers (Installed 1999)	1	LS	$ 150,000	30-40	Fair					X	$150,000											$201,733								
973	965	Panelboards - Dugout Suites (Installed 1999)	1	EA	$ 430,000	30	Fair					X	$430,000											$578,302								
974	966	Panelboards - Clubs Level 200 (Installed 1999)	1	EA	$ 300,000	30	Fair					X	$300,000											$403,467								
975	967	SCR - Heat Trace Panels	1	EA	$ 115,000								$115,000											$154,662								
976	968	**SUBTOTALS**												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,439,031**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
977	969																																
978	970	**Unit Substation #11**																															
979	971	Transformer (Installed 1999)	1	LS	$ 75,000	30-40	Fair					X	$75,000												$103,388								
980	972	Switchgear & Breakers (Installed 1999)	1	LS	$ 150,000	30-40	Fair					X	$150,000												$206,777								
981	973	Panelboards - Dugout Suites (Installed 1999)	1	EA	$ 430,000	30	Fair					X	$430,000												$592,760								
982	974	Panelboards - Clubs Level 200 (Installed 1999)	1	EA	$ 300,000	30	Fair					X	$300,000												$413,553								
983	975	SCR - Heat Trace Panels	1	EA	$ 115,000								$115,000												$158,529								
984	976	**SUBTOTALS**												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,475,007**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
985	977																																
986	978	**Unit Substation #12**																															
987	979	Transformer (Installed 1999)	1	LS	$ 75,000	30-40	Fair					X	$75,000													$105,973								
988	980	Switchgear & Breakers (Installed 1999)	1	LS	$ 150,000	30-40	Fair					X	$150,000													$211,946								
989	981	Panelboards - Dugout Suites (Installed 1999)	1	EA	$ 390,000	30	Fair					X	$390,000													$551,060								
990	982	Panelboards - Clubs Level 200 (Installed 1999)	1	EA	$ 115,000	30	Fair					X	$115,000													$162,492								
991	983	Heat Trace	1	EA	$ 65,000								$65,000													$91,843								
992	984	**SUBTOTALS**												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,123,314**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
993	985																																
994	986	**Unit Substation #13**																															
995	987	Transformer (Installed 1999)	1	LS	$ 75,000	30-40	Fair					X	$75,000														$108,622	$150						
996	988	Switchgear & Breakers (Installed 1999)	1	LS	$ 150,000	30-40	Fair					X	$150,000														$217,245							
997	989	Panelboards - Dugout Suites (Installed 1999)	1	EA	$ 390,000	30	Fair					X	$390,000														$564,836							
998	990	Panelboards - Clubs Level 200 (Installed 1999)	1	EA	$ 115,000	30	Fair					X	$115,000														$166,554							
999	991	Heat Trace	1	EA	$ 65,000								$65,000														$94,139							
1000	992	**SUBTOTALS**												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,151,397**	**$150**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
1001	993																																
1002	994	**Lighting & Controls**																															
1003	995	Lighting & Controls - Level 100 & 300 (Installed 2014)	20,319	SF	$ 30	30	Good						$609,570																				
1004	996	Lighting & Controls - Sideline Clubs Level 200 (Installed 2018)	10,686	SF	$ 30	30	Good						$320,580																				
1005	997	Lighting& Controls - West Suites Level 200 (Installed 2004)	26,091	SF	$ 30	30	Fair				X		$782,730					$177,117	$181,545	$186,084	$190,736	$195,505											
1006	998	Lighting & Controls - Endzone Clubs Level (Installed 2018)	35,744	SF	$ 30	30	Good						$1,072,320																				
1007	999	Lighting & Controls - Admin. Bldg	41,225	SF	$ 30	30	Poor		X				$1,236,750	$633,834	$649,680																		
1008	1000	Parking Lot Lighting excluding Employee Parking	1	EA	$ 35,000	30	Good						$35,000																				
1009	1001	Employee Parking Lot Lighting	1	EA	$ 35,000	30	Poor		X				$35,000	$17,938	$18,386																		
1010	1002	Sports Lighting (Installed in 2018)	1	LS		30	Good						$0																				
1011	1003	Sports Lighting Controls (Needs DMX)	1	LS	$ 500,000	20	Poor		X				$500,000	$256,250	$262,656																		
1012	1004	**SUBTOTALS**												**$908,022**	**$930,722**	**$0**	**$0**	**$177,117**	**$181,545**	**$186,084**	**$190,736**	**$195,505**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
1013	1005																																
1017	1009	**Food & Beverage**																															
1018	1010	Commissary	1	LS	$ 664,960	10 - 15	Mixed					X	$664,960									$85,120	$87,248	$89,430	$91,665	$93,957	$96,306	$98,714	$101,181	$103,711	$106,304	$108,961	
1019	1011	Suite Kitchens (100 Level, four total)	4	EA	$ 127,708	10 - 15	Poor		X				$510,833	$523,604										$687,014								
1020	1012	Suite Kitchens (200 Level, three total)	3	EA	$ 136,192	10 - 15	Poor		X				$408,577		$429,261										$563,228								
1021	1013	Clubs: Side Line Clubs (four total): FOH	4	EA	$ 73,763	10 - 15	Good					X	$295,053									$377,692										
1023	1015	Goal Line Club: FOH	1	EA	$ 192,160	10 - 15	Good					X	$192,160										$252,130										
1024	1016	Goal Line Club: BOH	1	EA	$ 61,249	10 - 15	Poor		X				$61,249	$31,390	$32,175									$82,373								
1025	1017	M&T Club: FOH	1	EA	$ 227,038	10 - 15	Good					X	$227,038										$297,893										
1026	1018	M&T Club: BOH	1	EA	$ 295,992	10 - 15	Poor		X				$295,992	$151,696	$155,488									$398,077								
1027	1019	Business Class Club	1	EA	$ 269,011	10 - 15	Poor		X				$269,011	$137,868	$141,315										$370,835								
1028	1020	Concession Stands: Duffs	3	EA	$ 122,479	10 - 15	Good					X	$367,438											$494,164								
1029	1021	Concession Stands: Dog House	12	EA	$ 277,948	10 - 15	Good					X	$3,335,375												$4,597,851								
1030	1022	Concession Stands: Grill	9	EA	$ 261,568	10 - 15	Good					X	$2,354,109										$3,088,795										
1031	1023	Concession Stands: Lloyd's	4	EA	$ 145,488	10 - 15	Good					X	$581,951											$782,659									
1032	1024	Concession Stands: Pizza	9	EA	$ 224,997	10 - 15	Good					X	$2,024,977												$2,791,453								
1033	1025	Concession Stands: 716 Beef	4	EA	$ 106,758	10 - 15	Good					X	$427,030										$560,301										
1034	1026	Concession Stands: Tim Hortons	5	EA	$ 182,949	10 - 15	Good					X	$914,746											$1,230,232									
1035	1027	Brew Pub	1	EA	$ 700,181	10 - 15	Good					X	$700,181												$965,207								
1036	1028	Vendor Commissaries	8	EA	$ 509,936	10 - 15	Mixed					X	$4,079,492									$5,222,094										
1037	1029	Portable Carts		EA		10 - 15	Good					X	$0										$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
1038	1030	**SUBTOTALS**												**$844,558**	**$758,239**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$5,684,907**	**$4,286,367**	**$3,763,948**	**$9,380,240**	**$93,957**	**$96,306**	**$98,714**	**$101,181**	**$103,711**	**$106,304**	**$108,961**	**$0**
1039	1031																																
1040	1032	**Technology**																															
1041	1033	Communication Infrastructure	1,048,314	SF	$ 2.00	15	Good					X	$2,096,628										$275,096	$281,973	$289,022	$296,248	$303,654	$311,246	$319,027	$327,002	$335,177	$343,557	
1042	1034	Information Technology (IT) Systems	1,048,314	SF	$ 5.00	5-7	Poor		X				$5,241,570	$2,686,305	$2,753,462				$2,026,205	$2,076,860	$2,128,781			$2,349,776	$2,408,521	$2,468,734				$2,725,020	$2,793,146	$2,862,974	
1043	1035	Wireless Communications (DAS, WiFi)	1,048,314	SF	$ 3.00	10	Fair			X			$3,144,942			$3,386,759									$4,335,337								
1044	1036	Security Systems	1,048,314	SF	$ 3.00	10	Good			X			$3,144,942				$3,471,428								$1,083,834								
1045	1037	Large Format Video Displays	4	EA	$ 50,000	7-10	Good				X		$200,000							$237,737							$296,901							
1046	116	Scoreboard Enclosures	32,896	SF	$ 23.75	20	Good					X	$781,280												$1,077,003								
1047	1038	Video Production Systems	1	LS	$ 15,000,000	7-10	Good				X		$15,000,000						$17,395,401								$21,724,472						
1048	1039	Broadcast Cabling Systems (Headend)	1	LS	$ 5,000,000	15	Fair				X		$5,000,000								$6,092,014												
1049	1040	Distributed Television System	1,048,314	SF	$ 2.00	7-10	Mixed		X				$2,096,628	$1,074,522	$1,101,385							$654,600	$670,965	$687,739	$704,933				$797,567	$817,506	$837,944	$858,892	
1050	1041	Distributed Televisions throughout Building (1100)	1,100	EA	$ 2,500	4-7	Poor		X				$2,750,000	$1,409,375	$1,444,609				$797,289	$817,221	$837,652	$858,593				$1,942,839	$1,991,410						
1051	1042	Bowl Audio and Public Address	1,048,314	SF	$ 6.50	10	Poor		X				$6,814,041	$3,492,196	$3,579,501									$8,940,612									
1052	1043	Distributed Audio and Public Address	1,048,314	SF	$ 6.50	10	Mixed		X				$6,814,041	$3,492,196	$3,579,501									$8,940,612									
1053	1044	Premium Suites (EACH TECH/AV)	79,908	SF	$ 20	5	Mixed		X				$1,598,159	$819,056	$839,533				$1,853,374					$2,096,922			$2,372,475					$2,684,238	
1054	1045	Game Clock System (controllers only- displays line 150)	1	LS	$ 10,000	7-10	Good				X		$10,000						$2,899	$2,972	$3,046	$3,122					$3,621	$3,711	$3,804	$3,899			
1055	1046	**SUBTOTALS**												**$12,973,650**	**$13,297,991**	**$3,386,759**	**$3,471,428**	**$0**	**$22,071,168**	**$3,134,790**	**$9,061,494**	**$1,516,316**	**$670,965**	**$20,940,982**	**$3,336,682**	**$9,193,718**	**$4,707,821**	**$24,023,157**	**$2,984,333**	**$1,120,398**	**$3,873,428**	**$3,966,267**	**$4,065,423**	**$2,684,238**
1056	1047																																
1057	1048	**Exterior**											$5																				
1058	1049	Hardscape - Asphalt Parking Lots (scheduled - see Bills Operations Staff)	175,167	SF	$ 8.00	20	Mixed	X					$1,401,340																		$2,296,258	$2,353,665	
1059	1050	Hardscape - Stall Striping (annual inspection - avg. 200 stalls per year)	200	EA	$ 20.00	5	Mixed	X					$4,000	$4,100	$4,203	$4,308	$4,415	$4,526	$4,639	$4,755	$4,874	$4,995	$5,120	$5,248	$5,380	$5,514	$5,652	$5,793	$5,938	$6,086	$6,239	$6,395	$6,554	$6,718
1060	1051	Hardscape - Asphalt Drives	316,000	SF	$ 8.00	20	Fair					X	$2,528,000										$323,605	$331,696	$339,988	$348,488	$357,200	$366,130	$375,283	$384,665	$394,282	$404,139		
1061	1052	Hardscape - Concrete Drives		SF	$ 22.00	40	Fair					X											$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
1062	1053	Hardscape - Concrete Sidewalks	158,034	SF	$ 8.00	40	Fair					X	$1,264,272										$161,838	$165,883	$170,031	$174,281	$178,638	$183,104	$187,682	$192,374	$197,183	$202,113		
1063	1054	Hardscape - Stairs	12,000	SF	$ 40.00	40	Fair					X	$480,000										$61,444	$62,980	$64,555	$66,169	$67,823	$69,518	$71,256	$73,038	$74,864	$76,735		
1064	1055	Hardscape - Railings	1,600	LF	$ 180.00	40	Good						$288,000																				
1065	1056	Hardscape - Artificial Turf (Team Store Plaza)		SF		10	Fair			X			$0		$0	$0	$0	$0							$0	$0	$0	$0						
1066	1057	Hardscape - Donor Pavers		SF		40	Good						$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
1067	1058	Hardscape - Crushed Stone (annual inspection - replace 10% each year)	39	CY	$ 60.00	20	Mixed	X					$2,313	$2,370	$2,430	$2,490	$2,553	$2,617	$2,682	$2,749	$2,818	$2,888	$2,960	$3,034	$3,110	$3,188	$3,268	$3,349	$3,433	$3,519	$3,607	$3,697	$3,790	$3,884
1068	1059	Fencing - Stadium Perimeter	2,542	LF	$ 25.00	40	Good						$63,550																				
1069	1060	Fencing - Perimeter Gates	14	EA	$ 3,000.00	40	Good						$42,000																				
1070	1061	Fencing - Other	N/A	LF		40	Fair					X											$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
1071	1062	Entry Gates - Canopy	9,800	SF	$ 10.00	40	Good						$98,000																				
1072	1063	Entry Gates - Gates	7	EA	$ 3,000.00	40	Good						$21,000																				
1073	1064	Entry Gates - Gate Hardware	7	EA	$ 200.00	20	Poor		X				$1,400	$718	$735																		
1074	1065	Entry Gates - Magnetometers	42	EA	$ 6,500.00	10	Fair			X			$273,000		$286,821									$367,155									
1075	1066	Site Amenities - Box Office Trailer		EA		20	Good					X	$0										$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
1076	1067	Site Amenities - Warming Huts		EA		20	Good					X	$0										$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
1077	1068	Site Amenities - Primary Guard Shack	1	EA	$ 200,000	40	Fair			X			$200,000			$215,378																	
1078	1069	Site Amenities - Guard Shacks		EA		40	Poor			X			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
1079	1070	Site Amenities - Salt Building	1			40	Good						$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
1080	1071	Site Amenities - Butler Building	1		$ 500,000	40	Fair				X		$500,000										$624,431										
1081	1072	Site Amenities - Youth Field Buildings				40	Good						$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
1082	1073	Site Amenities - Cleaning Crew Trailer Compound		EA		20	Poor		X				$0	$0	$0																		
1083	1074	Site Amenities - Vehicle Control		EA		20	Fair				X		$0					$0	$0	$0	$0	$0	$0										
1084	1075	Site Amenities - Boulders	440	EA		500	Good						$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
1085	1076	Site Amenities - Bollards	70	EA	$ 750	40	Good						$52,500																				
1086	1077	Site Amenities - Trash Containers (2014 vintage)	100	EA	$ 1,500.00	10	Poor		X				$150,000	$76,875	$78,797																		
1087	1079	Plant Materials - Trees	208	EA	$ 1,000.00	20	Fair			X			$208,000		$72,843	$74,664	$76,531																	
1088	1080	Plant Materials - Shrubs (annual inspection - replace 20% each year)	60	EA	$ 175.00	5	Mixed	X					$10,500	$10,763	$11,032	$11,307	$11,590	$11,880	$12,177	$12,481	$12,793	$13,113	$13,441	$13,777	$14,121	$14,474	$14,836	$15,207	$15,587	$15,977	$16,376	$16,786	$17,205	$17,636
1089	1081	Plant Materials - Plants (annual inspection - replace 20% each year)	34	EA	$ 35.00	5	Mixed	X					$1,190	$1,220	$1,250	$1,281	$1,314	$1,346	$1,380	$1,415	$1,450	$1,486	$1,523	$1,561	$1,600	$1,640	$1,681	$1,723	$1,767	$1,811	$1,856	$1,902	$1,950	$1,999
1090	1082	Plant Materials - Lawn (annual inspection - replace 20% each year)	16,600	SF	$ 0.55	5	Poor	X					$9,130	$9,358	$9,592	$9,832	$10,078	$10,330	$10,588	$10,853	$11,124	$11,402	$11,687	$11,979	$12,279	$12,586	$12,900	$13,223	$13,554	$13,892	$14,240	$14,596	$14,961	$15,335
1091	1083	**SUBTOTALS**												**$105,403**	**$467,703**	**$319,261**	**$106,480**	**$30,698**	**$31,466**	**$32,252**	**$33,058**	**$658,316**	**$581,619**	**$596,159**	**$978,218**	**$626,340**	**$641,999**	**$658,049**	**$674,500**	**$691,362**	**$708,646**	**$726,362**	**$2,340,718**	**$2,399,236**
1092	1084																																
1093	1085	**OVERALL TOTALS** *Allocations to specific years determined by CAA ICON, following their review of Populous report*												**$20,900,000**	**$31,600,000**	**$12,700,000**	**$17,300,000**	**$13,400,000**	**$30,700,000**	**$17,700,000**	**$16,500,000**	**$14,200,000**	**$14,400,000**	**$41,900,000**	**$26,600,000**	**$33,400,000**	**$22,900,000**	**$39,000,000**	**$12,500,000**	**$14,500,000**	**$11,900,000**	**$17,000,000**	**$11,900,000**	**$11,000,000**
1094														2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040

	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW
1		**Item**	**Quantity**	**Unit**	**Unit Cost**	**Frequency of Replacement**	**Existing Condition (2019)**	**Anticipated Replacement Timeframe (2019 Basis)**					**Est. Replacement Cost**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**													
2						**(Years)**	**(Refer to Notes)**	**Annual**	**0 - 2 Years**	**2 - 5 years**	**5 - 10 Years**	**10 - 20 Years**	**FY 2019 Dollars ($)**																																						
1095																																															
1096																																															

NEW ERA FIELD FACILITY CONDITION ASSESSMENT

Orchard Park, New York

FEBRUARY 8, 2019

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EXECUTIVE SUMMARY

A VERY BRIEF HISTORY OF NEW ERA FIELD

Since its opening in 1973 as the home of the NFL's Buffalo Bills, New Era Field has grown and changed along with the continuous development of the NFL as a football league. As a backdrop for describing the current facility conditions, we present the following brief history of New Era Field, borrowed from the Buffalo Bills.

Rich Stadium: Aerial view from 1973.

HOME FIELD HISTORY

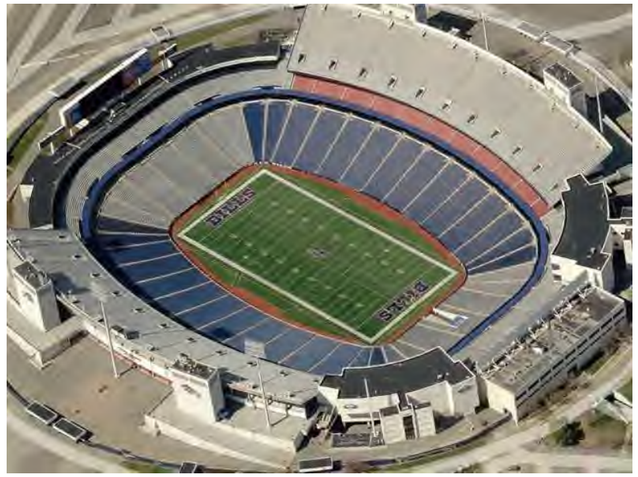
When the Buffalo Bills began play in 1960, their home venue was War Memorial Stadium. Built in 1936, the "Rockpile" was a 36,500-seat facility located in Buffalo at Jefferson and Best streets. In 1965, the open air, natural grass facility was expanded by adding an upper deck to increase capacity to 46,206.

Years of extreme weather and the popularity of the Bills led to the creation of a larger facility. A 113-acre tract of land approximately 30 minutes from downtown Buffalo was selected and groundbreaking ceremonies were conducted in Orchard Park on April 4, 1972 for the new football complex.

To form the lower level of the stadium, more than 370,000 feet of shale were removed – putting the field 50 feet below ground level. Construction was completed in slightly over 14 months and on August 17, 1973, the stadium was officially opened as the Bills played host to the Washington Redskins.

Since the stadium's original construction, the facility has seen many changes. In 1984, the stadium's capacity was increased to 80,290 with the addition of 16 executive suites on the top floor of the administration building. Eight years later, 24 more suites were constructed in the west end zone and shared restrooms were added to the original suites. The Red Zone and Goal Line indoor clubs were added in 1994, offering fans a comfortable atmosphere as each of the two blocks of 500 seats are enclosed in glass. Also in 1994, 14 new suites were added, bringing the grand total to 88 luxury boxes. The 1994 expansion project also brought the team the largest JumboTron in the United States. This, at the time, mammoth videoboard measured 31.5 feet high by 41.5 feet wide. Some of the capabilities of the videoboard include full-color instant replays, live action shots, crowd shots, out-of-town highlights, animations and various in-stadium shots from cameras exclusive to videoboard usage. In addition, a black and white Daktronics Scoreboard matrix system designed to complement the Sony JumboTron was installed.

In 1999 crews completed a seven-month stadium overhaul that included constructing 76 brand-new dugout suites and two new enclosed club sections each containing 500 seats above the initial Red Zone and Goal Line clubs. Fans in the dugout suites watch the action just 40 rows from the field. In addition, the Bills replaced 6,800 seats in the sideline club sections with revolutionary contoured heated seats, the first of their kind in North America. Improvements also included four new restroom towers, upgraded stadium lighting and a state-of- the-art sound system.



Ralph Wilson Stadium: Aerial view taken after the 1999 Improvements Project, showing the added second levels to the Endzone Clubs, changes to the types of seating offered, the added, Restroom Towers, and added Dugout Suites.

In 2007, the Bills introduced a new Mitsubishi high definition LED video display scoreboard measuring 33.5 feet by 82.8 feet in the west end zone. The accompanied new HD Digital Screen Controller allowed for simultaneous display of up to three multiple images (or one full screen image). This installation was only the second true high definition display in the NFL, largely as a result of the integral HD Processor used to produce the necessary lines of resolution (1080), to accurately depict an HD image. In addition, the Bills installed over 1,000 feet of Mitsubishi Diamond Vision LED Ribbon Boards on the fascia of the bowl seating areas. The traditional scoring system is encompassed within this state-of–the-art display along with dynamic sponsor ads, player/team statistics and fan prompts.

In 2011, the team installed a new playing surface, A-Turf Titan. It is the top synthetic turf system available and is noted as the industry's top performing system by providing the perfect balance of traction, foot release and unparalleled durability.

In 2013, a $130 million construction project was unveiled that includes renovations and improvements to the stadium complex. Improvements included new technology implementation, a new west end plaza that is inclusive of a new team store and enhanced gate entries, renovated and expanded concessions, restrooms and training facility additions. Construction began in May 2013 and was largely completed at the start of the 2014 season. Subsequent improvements included renovations to the ground level sideline clubs and two of the indoor club spaces, the third was repurposed to house the relocated writing press and the fourth is planned to be refurbished this offseason.

Ralph Wilson Stadium: New entrance facilities constructed during the 2014 Improvements Project.

A HISTORY TO BUILD UPON

New Era Field has been home to a rich history of classic football moments too numerous to list here. They do include three AFC Championships won at home, capping the 1990, 1990, and 1993 seasons. Names such as Kelly, Reed, Smith, and Thomas fill the highlight reels. Providing a sound and inviting stadium where these moments can be built upon is ultimately one goal of the Bills.

1992 AFC Wild Card: The Comeback.

New Era Field has also been home to memorable moments in fields other than football, exemplifying the potential for alternative event revenue generation.

2008 Winter Classic: The first NHL Winter Classic was held at New Era Field.

Concerts: The Rolling Stones have performed four times at New Era Field.

A NEW CHAPTER IN BUFFALO BILLS HISTORY

In 2014, Buffalo's founder and Hall of Fame owner Ralph C. Wilson Jr. passed away at the age of 95, leaving behind a rich legacy. Determined for the Buffalo Bills to remain at home in Western New York, Terry and Kim Pegula purchased the franchise. As the team's second owners, the Pegulas have made a significant impact on the Buffalo Bills and the entire community.

New Era Field: A re-christening in 2016.

Under their leadership, the Bills' home field has undergone a monumental change. On August 18, 2016, the Buffalo Bills revealed that New Era Cap had taken over naming rights to the stadium and that the team now plays at New Era Field—marking a new chapter in Bills history.

MOVING FORWARD

Looking at a long-term future for the Buffalo Bills in Western New York, this Facility Assessment Report is intended as one early step toward ensuring the franchise's continued success on and off the field. This Report evaluates the existing facility's condition at New Era Field including the Stadium proper, it's surrounding Gate Entrances, the Bills Store, the Commissary, and the Operations Building. The Report recommends actions necessary to maintain these facilities as they are currently programmed over the next twenty years. It is not intended to address operational issues or other potential program improvements that will be made in separate reports.

New Era Field: Current aerial view of the campus.

The Facility Assessment Report has been prepared by a team of architects, engineers, and program managers experienced in the industry and specifically with New Era Field. We are providing evaluations of the building structures, enclosures, and finishes, as well as facility mechanical, electrical, plumbing, food service, and technology systems. Evaluations are based upon direct observations of the facility, interviews with facility staff, and research through relevant documents. The information provided is based upon the best information available to our team, and is intended to serve as a starting point for future feasibility studies and improvement programs.

Worth specific note is a separate study currently being finalized by DiDonato Associates on behalf of Erie County. We encourage the reader to become familiar with the detailed condition assessment of stadium structures found in this *Condition Study Update* to be released in 2019. As the level of detail in the separate report is significant, this Report will only include summary information on related topics.

In general, New Era Field is being marginally well cared for by the Bills staff through an annual Capital Expenditures program funded by Erie County. Working within the constraints of a now 46-year old facility and with limited funds, the Bills have kept the stadium in presentable condition. Several significant challenges are faced by the Bills and Erie County in continuing to do so, however. Those challenges are spelled out in this Report and will continue to accelerate as the building ages and repairs are limited by available funding levels that are insufficient to adequately remedy the observed deteriorations. If not addressed in the timeframe noted in the capital expense matrix, in most cases, the deteriorated condition will rapidly accelerate or the serviceability will be rapidly decreased including the increasingly possible failure of the noted component or equipment.

A significant portion of the annual Capital Expenditures funds are used to repair deterioration damage exposed to the exterior throughout the facility. The aging stadium structure presents a number of difficult conditions due to building movement, salt intrusion, and problems/deficiencies in the original construction work. Repairs cannot always be planned. Unanticipated structural repairs have at times used up an entire year's budget, leaving all planned work to wait for future years. The deferral of preventative repairs and improvements is a leading cause in the continuing overall decline of the stadium condition as is the lack of wearing slabs over waterproofing on concourses and deficiencies in portions of the original stadium's structure.

Many mechanical, electrical, and service equipment items have been replaced over the years through Improvement Projects funded by the State and County. Today, there still exist isolated pockets of older equipment including: rooftop units, air handlers, and electrical substations and switchgear dating back to 1972 – nearing the end of their useful life. Many of the elevators in the facility are of similar age. With effective maintenance, this equipment continues to operate sufficiently, however, the potential for a major unplanned cost impact and/or interruption of service from an unrecoverable equipment failure event grows larger every day. There is a high level of budget and game day operational risk in not replacing the 46 year old equipment.

RECOMMENDATIONS

Specific recommendations are provided within each section of the Report and within the Capital Expense Matrix. As part of a broader assessment of business development, the Bills were recently presented with the following "Top 15 List" of conditions requiring either near-term attention resulting from continued deterioration or triggered by significant renovations.

1. Poor condition of the primary Upper Bowl concrete frames and precast concrete seating treads and risers will necessitate the replacement of the Upper Bowl and its supporting structure within the 20 year planning period.
2. The aging condition of all elevators will eventually lead to their necessary replacement within the twenty year planning period.
3. The condition of the existing seating stock (seats and benches) will require a major replacement in the near future. Self-rising replacement seats will be limited to those that provide a narrow envelope to maintain code required exit widths due to the abnormally narrow 30" typical tread depth throughout the stadium.
4. There are currently no accessible seating/wheelchair positions provided anywhere in the Club Seating Bowl.
5. There are currently no seating/wheelchair positions providing accessible sightlines over standing patrons below within any of the premium suites.
6. There is currently no accessible route to the Sideline Suites and their toilet rooms are not accessible.
7. There are three electrical substations in the stadium with equipment dating back to 1972 that will require replacement along with their distribution feeds.
8. Concession stands have limited menu offerings due to space restrictions inside stands. Concourse congestion and queue lines restricts their access further contributing to their limited sales (ranked 20th in revenue and 29th in customer satisfaction per 2017 NFL annual report). Alcohol sales account for about 80% of concessions revenues, thus food sales is even comparatively lower than these figures suggest.
9. Lack of space within the 100 Main Level Concourse severely limits game-day operations and the patron experience.
10. Failing expansion joints throughout the stadium require a better long-term solution.
11. Failing traffic coating at the 100 & 300 Level Concourses above occupied spaces require a better long-term solution.
12. Water intrusion through failed joints and cracks in the seating bowl damages building interiors.
13. Plumbing exposed to repeated freezing will not be resolved without the addition of heaters, heat tracing, and enclosed chases with insulation. Condition currently requires frequent drain downs during the season (labor intensive).
14. The converged data network (LAN/WAN) has only 5-7 years remaining life of its normal replacement cycle before it becomes obsolete and needs to be replaced.
15. The IPTV and CATV systems are not consolidated and currently do not support revenue generating and notification features throughout the facility.

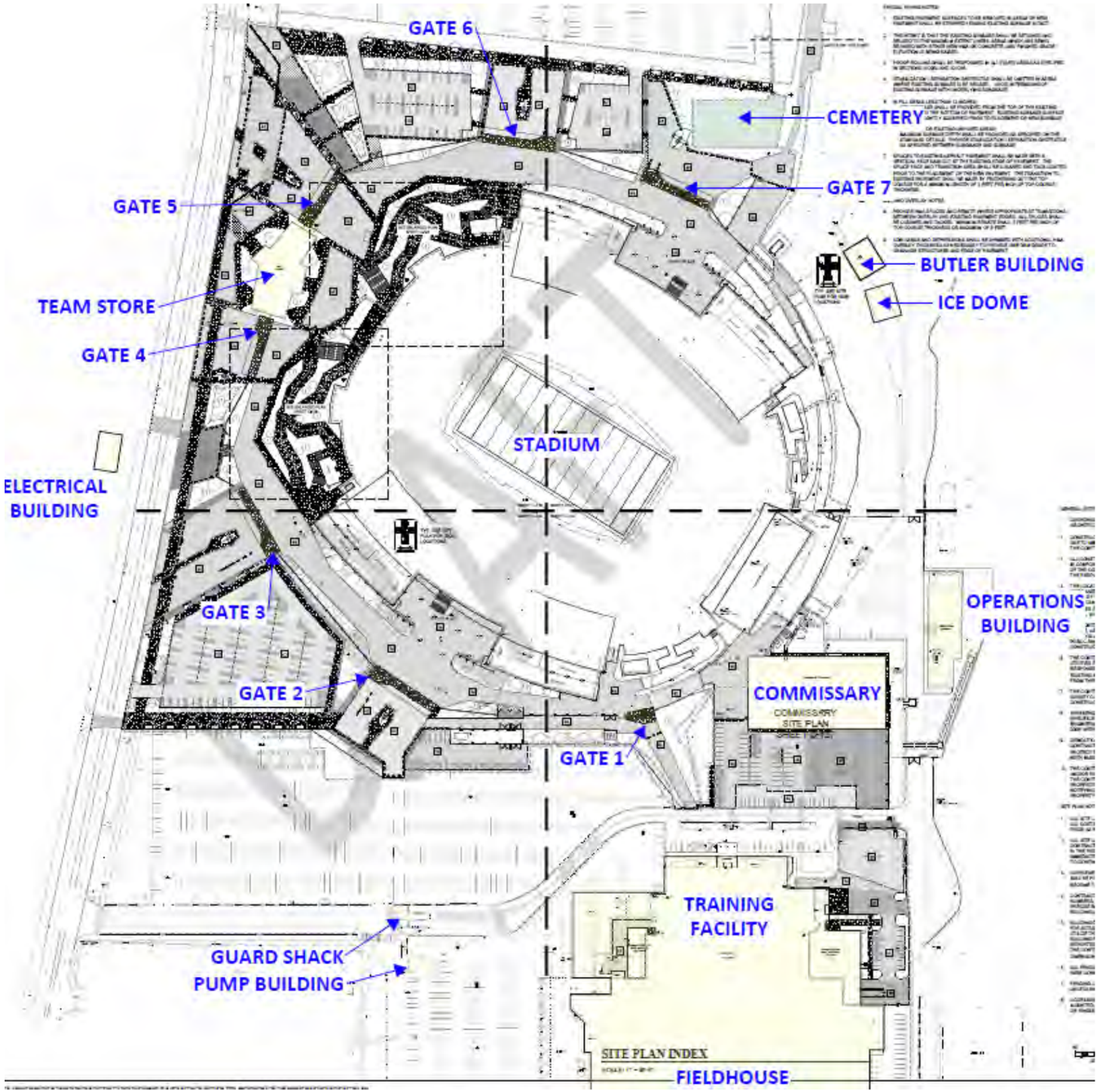
Repairs, maintenance and replacements of components highlighted within this report should be prioritized by the Bills, and most likely accomplished in a phased manner over several years and when possible integrated with renovations implemented for business purposes. Please note that this report does not address the status of any remaining hazardous materials within the facility. Several reports have been commissioned by the Bills or Erie County over the years. These or new relevant studies should be considered as any renovation project is undertaken.

CAPITAL EXPENSE MATRIX

A spreadsheet identifying anticipated required maintenance and repairs over the next twenty years is included in the report for capital expense planning purposes. Specific building components are itemized along with their planned frequency of repairs and/or replacement, the state of their existing condition, and the timeframe of their recommended initial repair/replacement. For some components, the planned repairs are listed as anticipated annual quantities necessary to maintain their serviceability. The estimated associated capital costs will be estimated by CAA ICON's cost estimator, Gilbane.

PARKING LOT MAP

SITE MAP


GATE 6
CEMETERY
GATE 7
GATE 5
BUTLER BUILDING
TEAM STORE
ICE DOME
GATE 4
STADIUM
ELECTRICAL BUILDING
GATE 3
OPERATIONS BUILDING
GATE 2
COMMISSARY
COMMISSARY SITE PLAN
GATE 1
TRAINING FACILITY
GUARD SHACK
PUMP BUILDING
SITE PLAN INDEX
FIELDHOUSE

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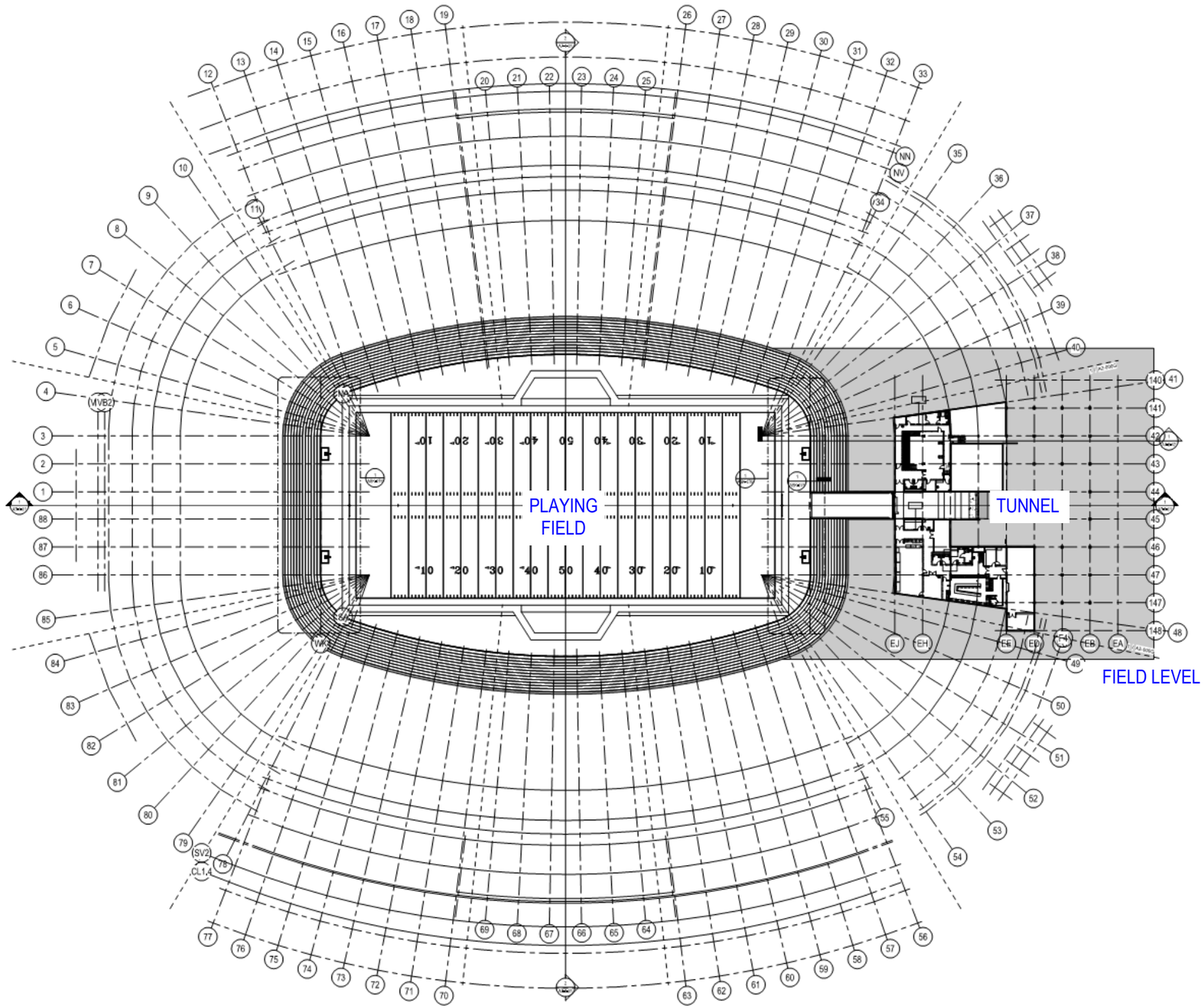

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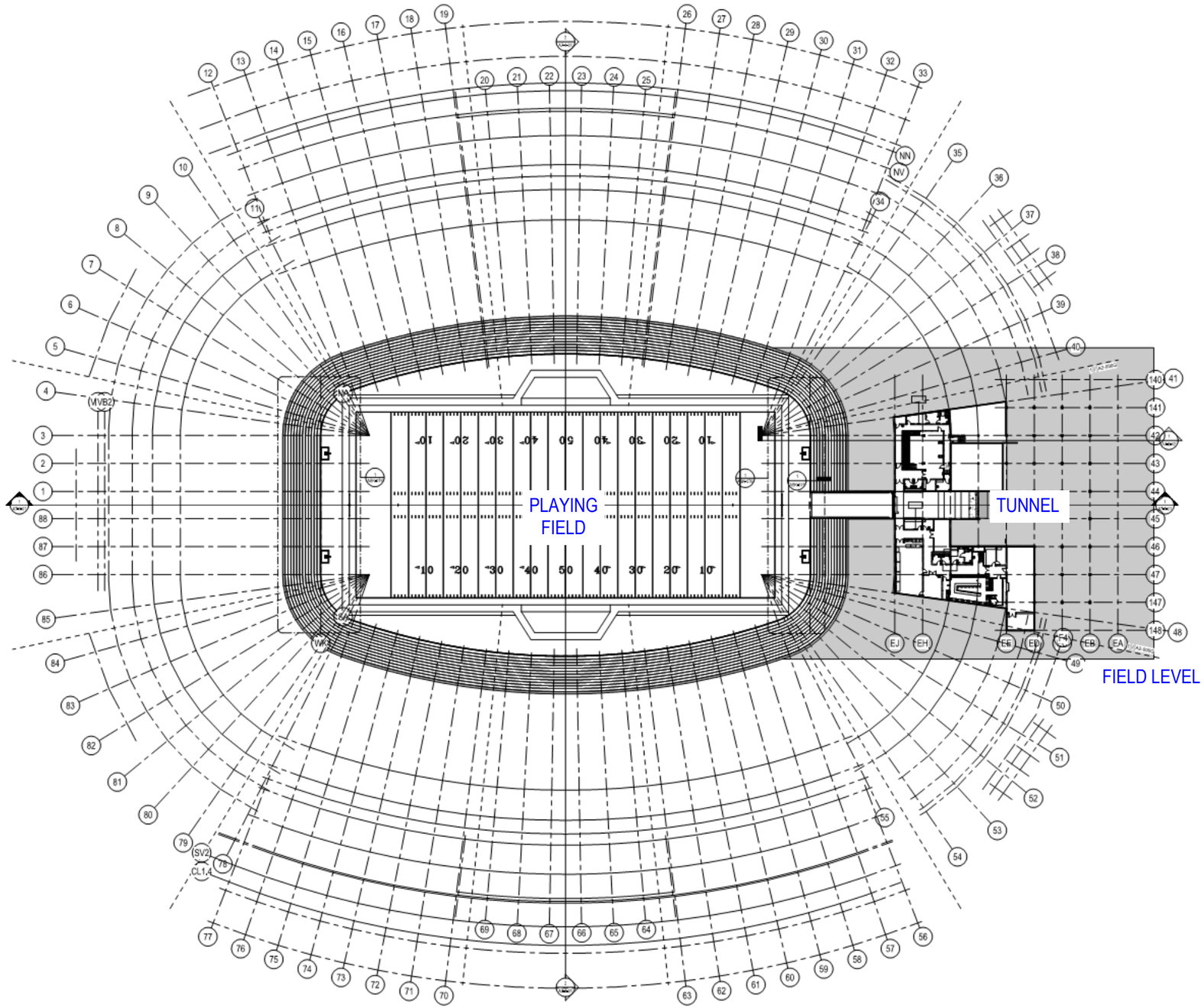

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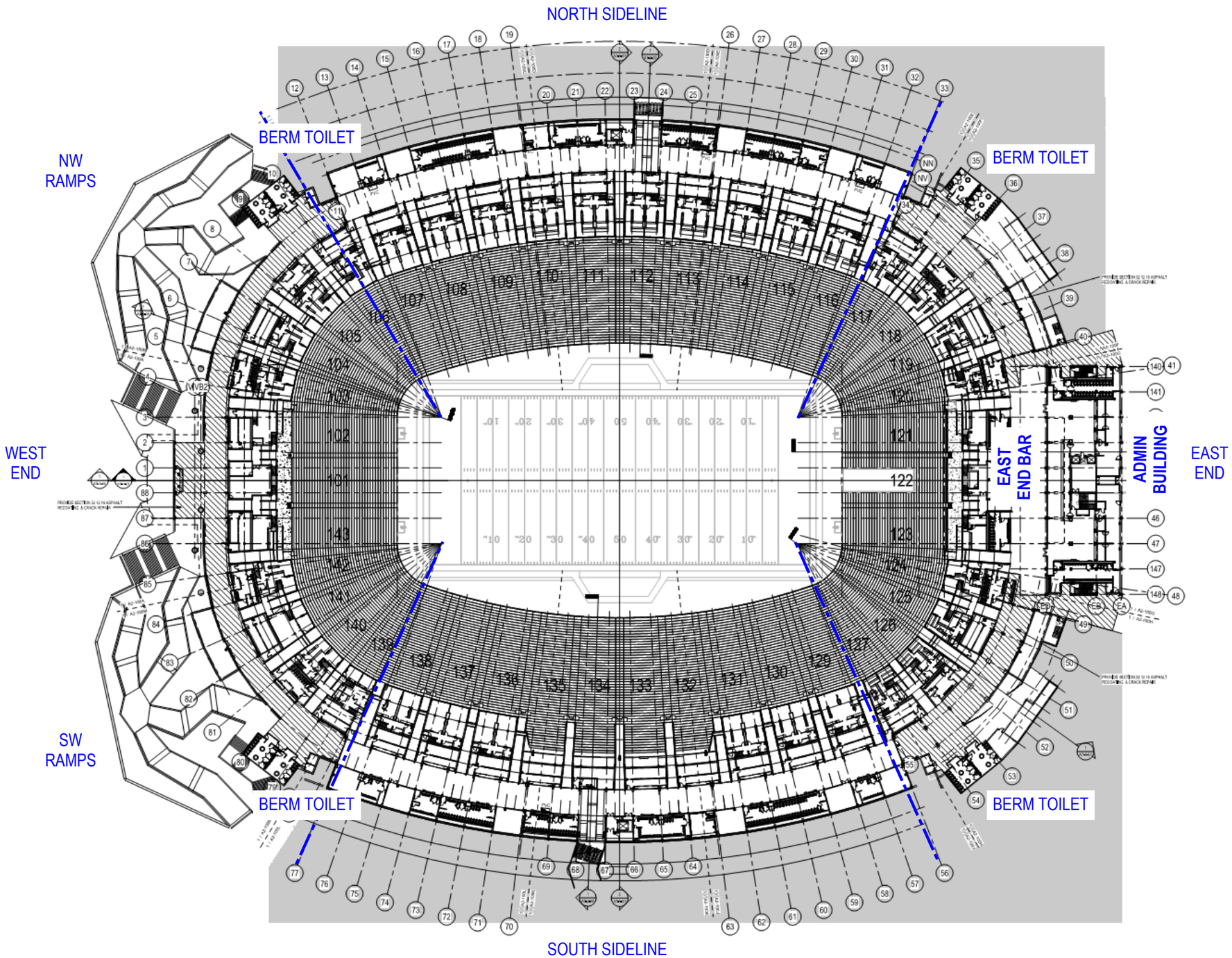
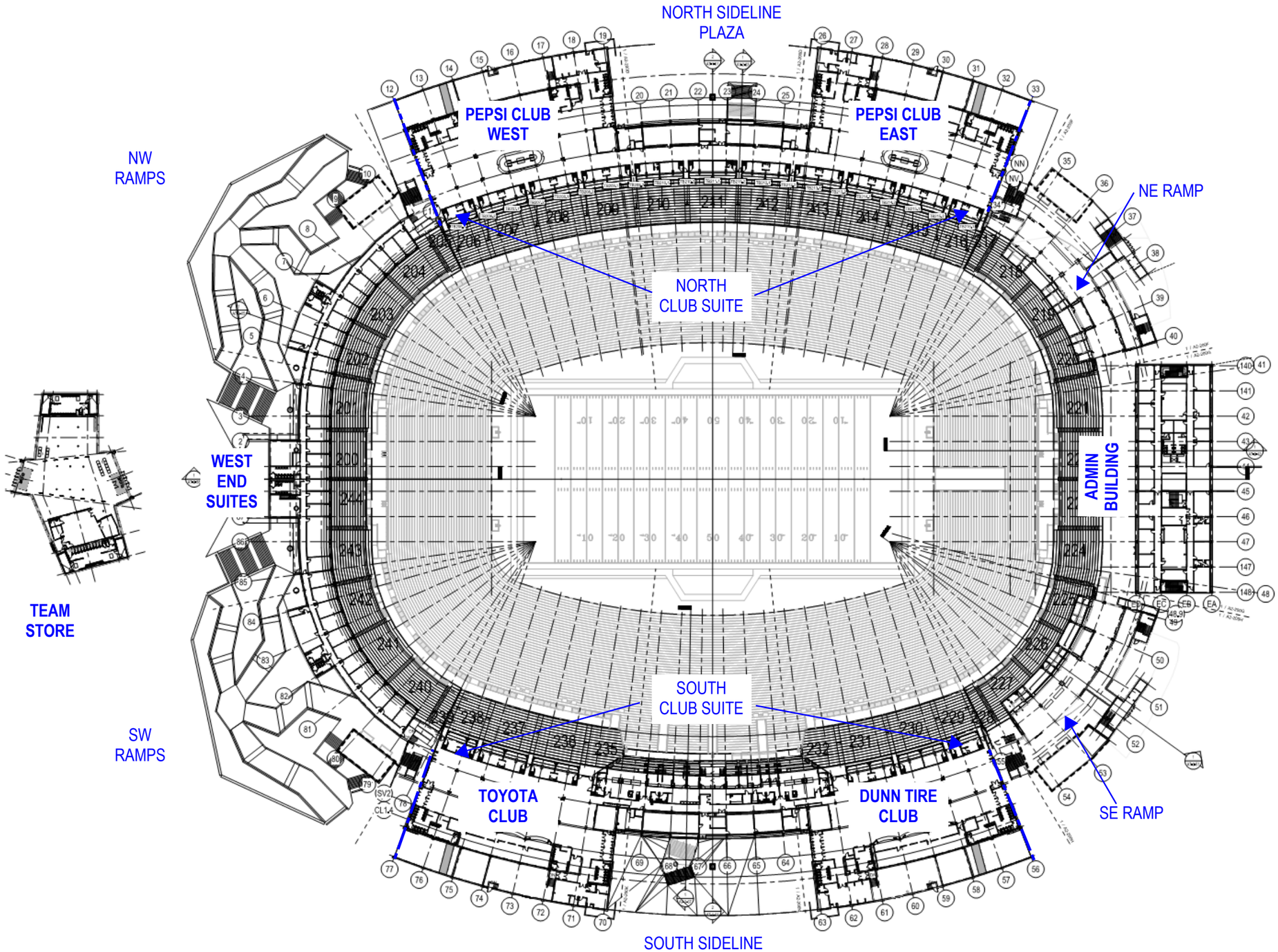
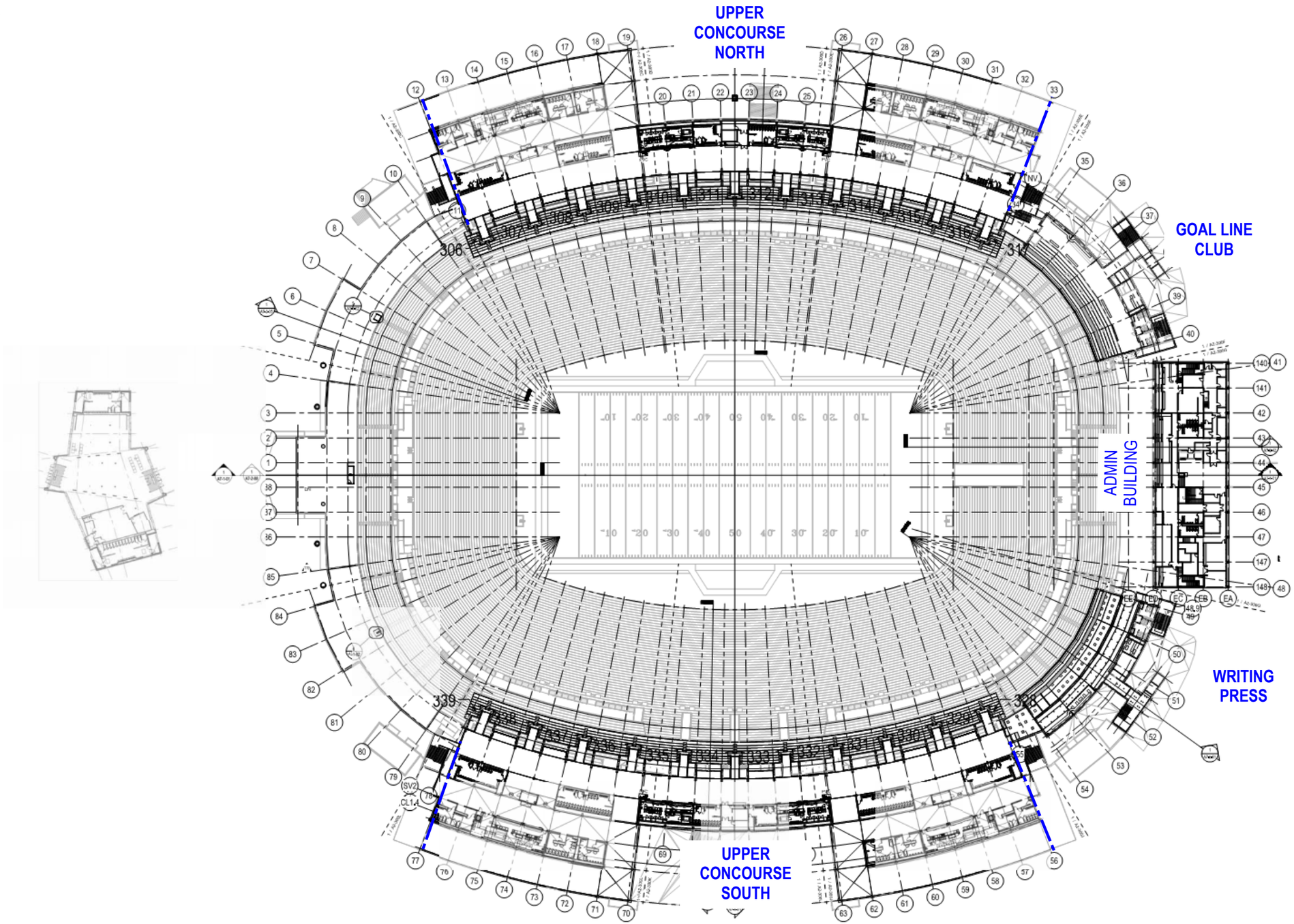

NORTH SIDELINE
BERM TOILET
BERM TOILET
NW RAMPS
WEST END
EAST END BAR
ADMIN BUILDING
EAST END
SW RAMPS
BERM TOILET
BERM TOILET
SOUTH SIDELINE

200 LEVEL


NORTH SIDELINE PLAZA
PEPSI CLUB WEST
PEPSI CLUB EAST
NW RAMPS
NE RAMP
NORTH CLUB SUITE
WEST END SUITES
ADMIN BUILDING
TEAM STORE
SW RAMPS
SOUTH CLUB SUITE
TOYOTA CLUB
DUNN TIRE CLUB
SE RAMP
SOUTH SIDELINE PLAZA

300 LEVEL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CONCOURSE
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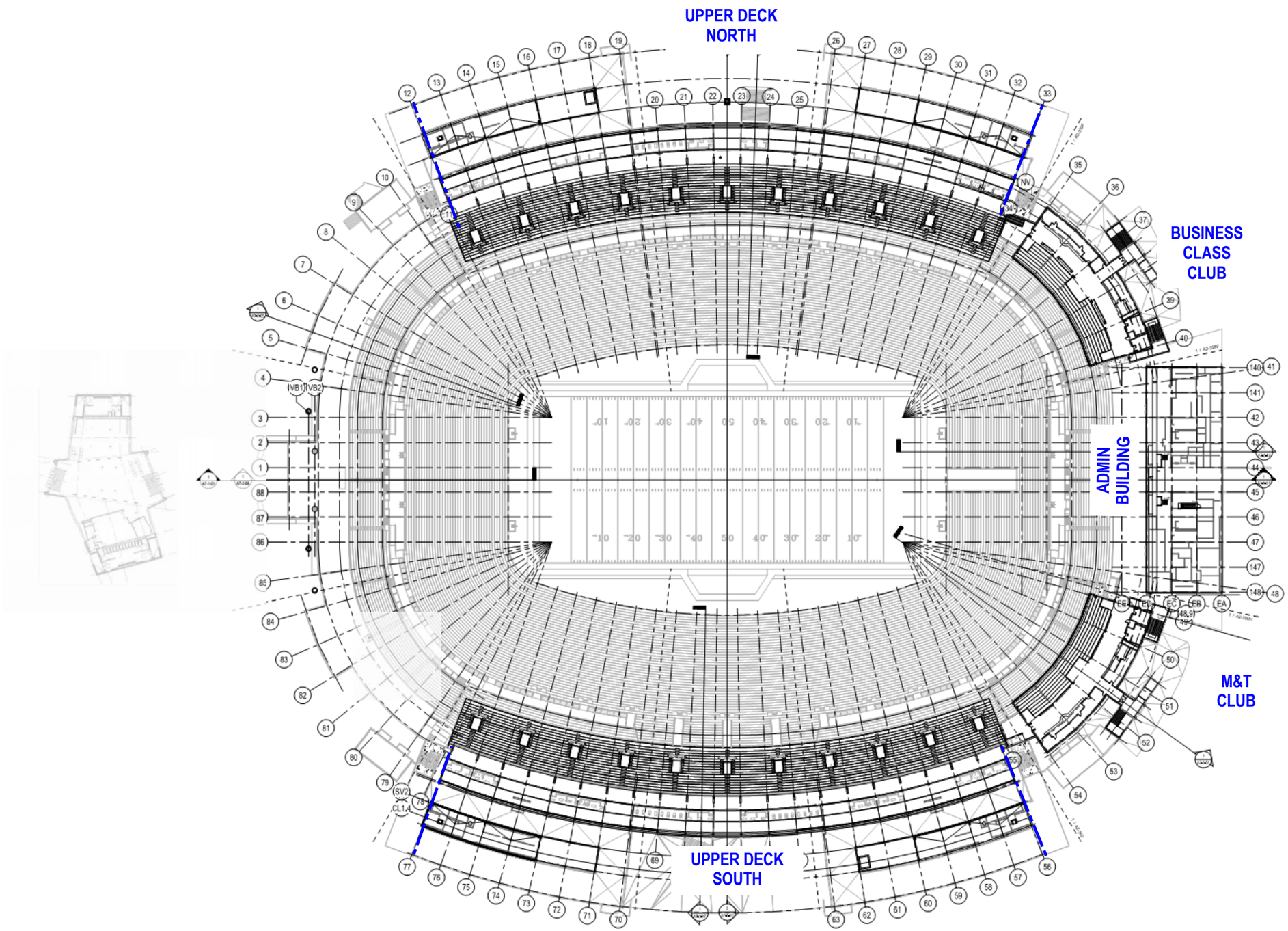
350 LEVEL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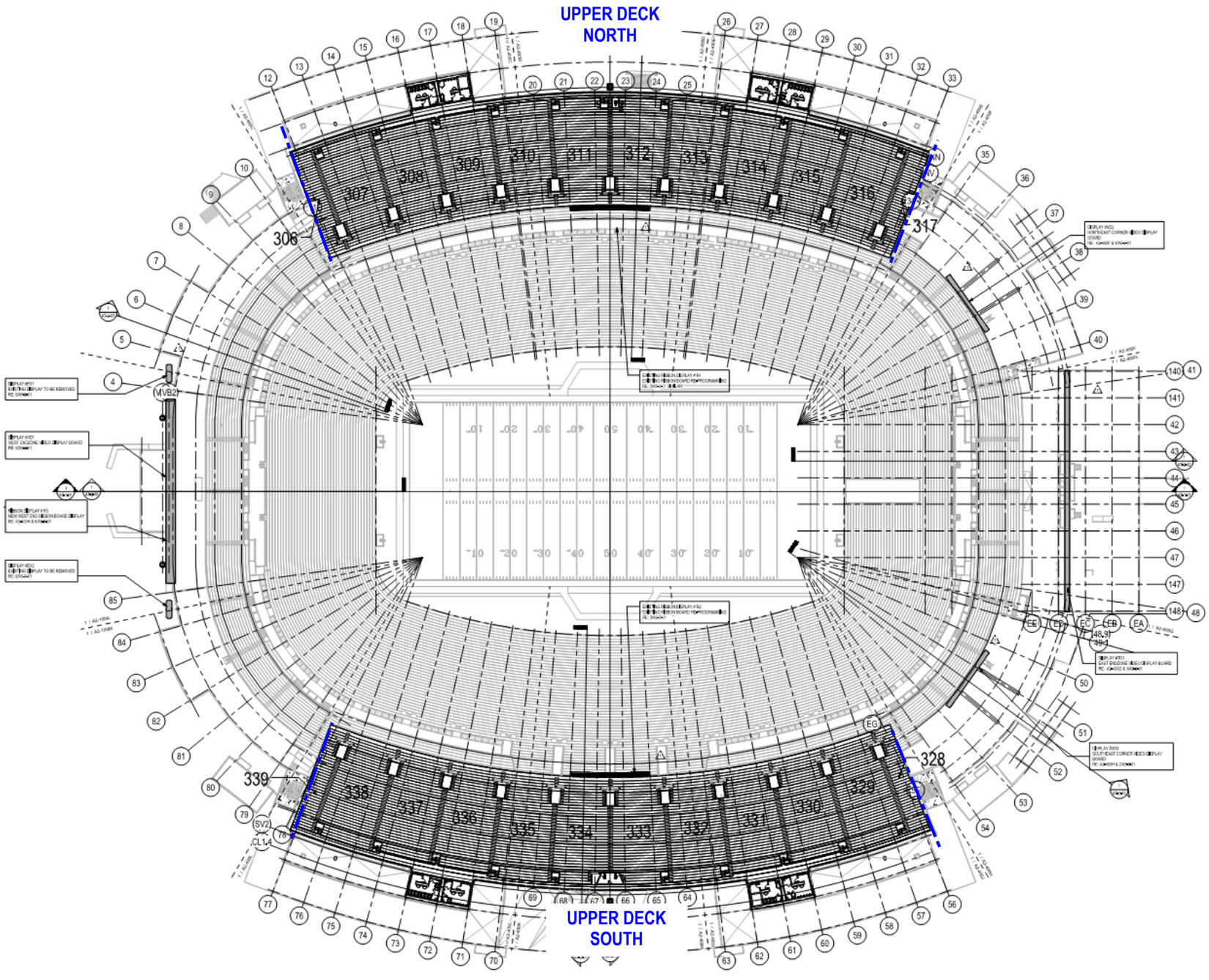
BUSINESS
CLASS
CLUB
ADMIN
BUILDING
M&T
CLUB
UPPER DECK
SOUTH

400 LEVEL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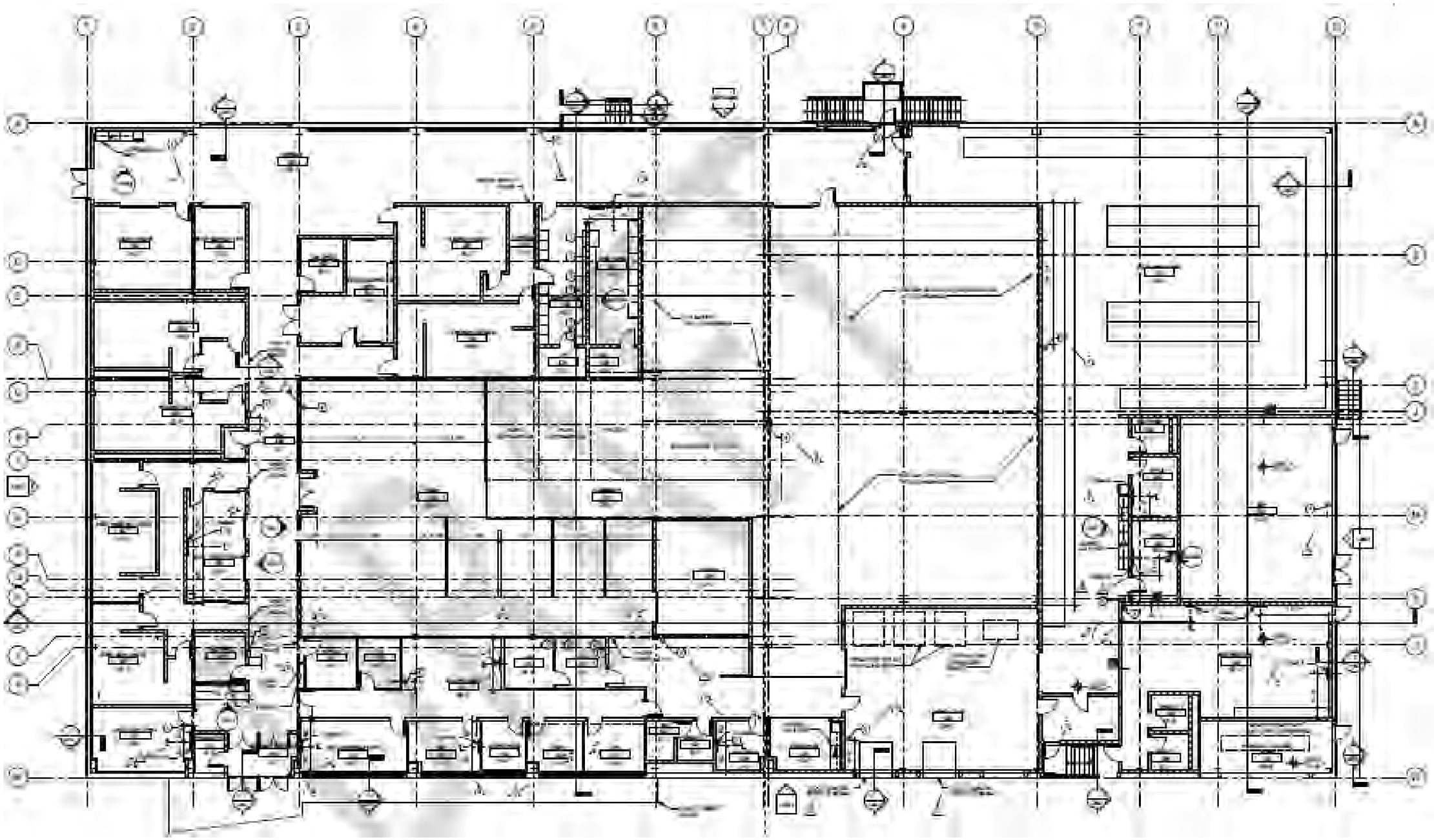
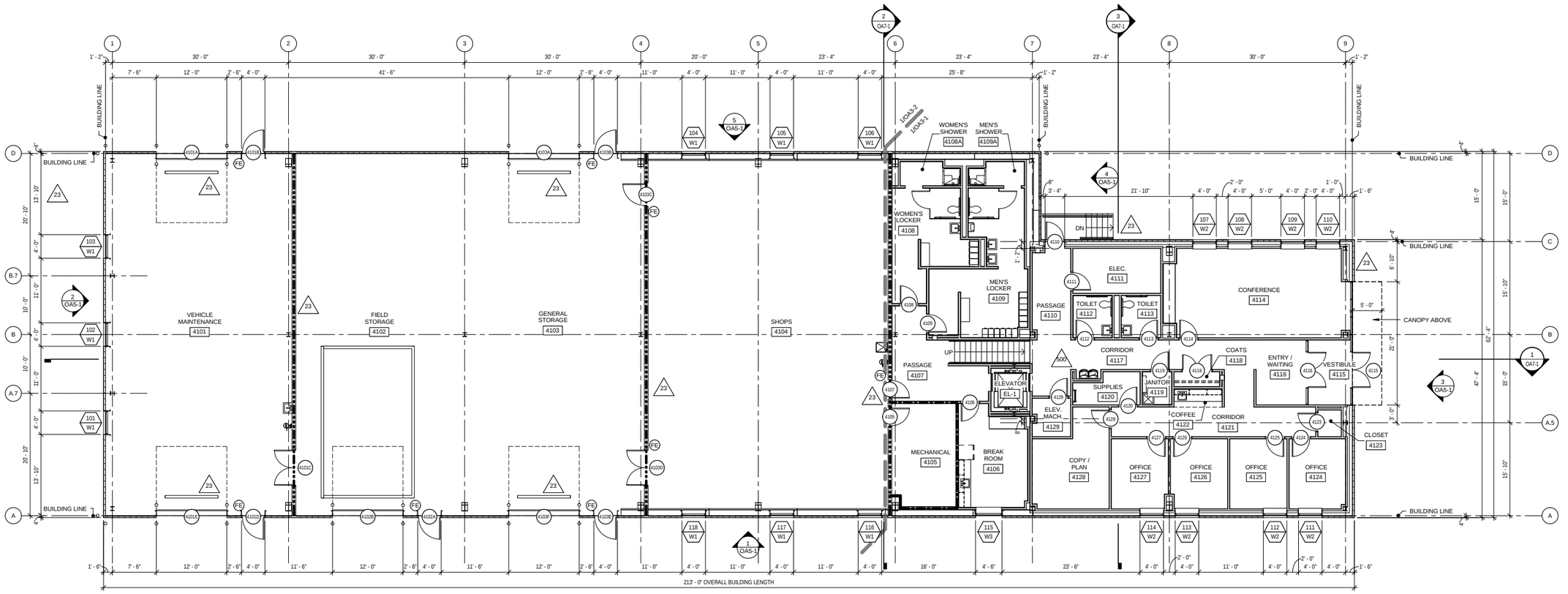
COMMISSARY BUILDING



OPERATIONS BUILDING



BUILDING STRUCTURAL SYSTEM OBSERVATIONS

MAIN CAST-IN-PLACE FRAMES

The main structural frames that support the upper seating bowl consist of cast-in-place concrete raker beams and columns that support precast concrete seating panels. Several structural assessments have been performed since 1990, including significant studies in 1998, 2003, 2009/10 and 2015/16 (appended in 2018). Since 2006, these frames and precast seating panels have been inspected annually to remove potentially loose or spalling debris, and these inspections are used as the basis for the next year's maintenance contract.

These frames exhibit extensive deterioration consistent with cast-in-place concrete structures exposed to a harsh environment for more than 40 years. In particular, longitudinal cracking along the upper deck rakers and extensive cracking of re-entrant corners at the precast concrete seating panel bearing connections are a significant concern. Recent structural analysis has also indicated significant flexural and shear overstressing at the lower cantilevers. Rehabilitation consisting of exterior post-tensioning and steel plate reinforcing was completed in June-July 2018.

Short Term recommendations are to continue annual inspections, maintenance and potentially the installation of additional protective systems until full replacement can occur. Any long-term plan for the facility should strongly consider a full demolition and replacement of the upper seating level.

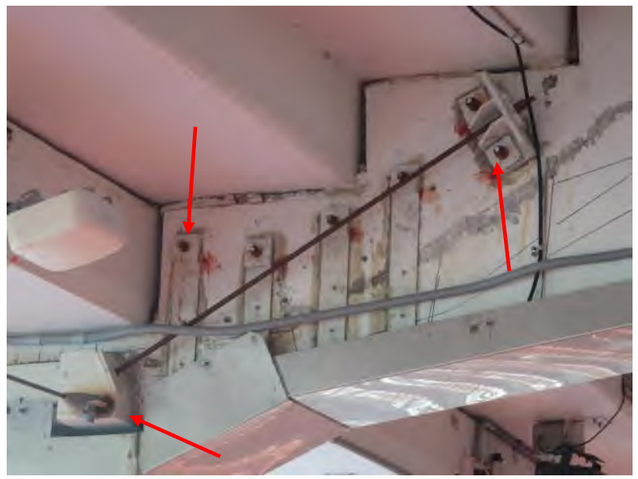
Typical Upper Deck Frames: General configuration showing upper cantilever and light tower damper attachment.

Typical Area of Upper Deck Frames: Typical leakage through deck joints (Pre-2014) – leakage currently occurring primarily at expansion joints since 2014 repairs/improvements.

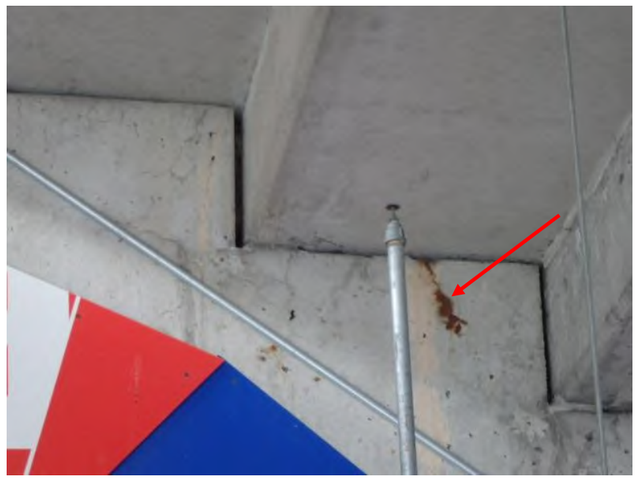
Typical Upper Deck Frames (pre-2014): Typical re-entrant corner cracking, longitudinal cracking along primary reinforcing and localized spall.

Upper Deck Frame - Front Cantilever: Cracking following primary reinforcing.

East End Zone Frame: Typical expansion joint assembly – Teflon pads require periodic maintenance.



Cast-in-Place Concrete Frame: Arrow indicates previous lower cantilever PT Repair and supplemental reinforcement.



Cast-in-Place Concrete Frame: Arrow indicates previous overhead concrete repair by epoxy injection applications.

Rear Cantilever of Upper Deck Frames - South: Previous steel repair, typical map cracking, viscous damper anchorage.

Cast-in-Place Concrete Frame: Arrow indicates failing protective vertical sealants.

Cast-in-Place Concrete Frame: Arrow indicates previous overhead concrete repairs.

STRUCTURAL OBSERVATIONS

ELEVATED SEATING PANELS

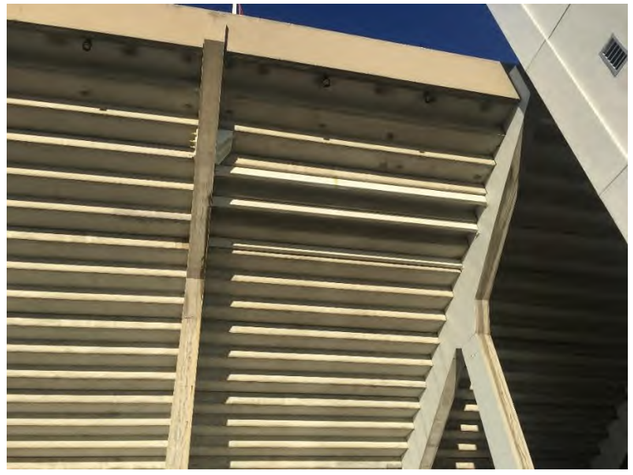
The elevated seating level panels consist of precast, prestressed concrete seating units spanning between cast-in-place concrete frames (see previous section). These panels have undergone extensive repairs over the last 25+ years, including spall repairs along the underside of the panels and at bearing connections.

Spalls and subsequent repairs have decreased the load-carrying capacity of the panels. Many panels have been reinforced with secondary framing in the form of structural steel tubes spanning between frames.

Damage at bearing connections is likely due to corrosion from high chlorides in combination with inadequate cover and is caused by leaks in the sealed construction joints between the ends of the precast panels. Supplemental steel support members and bearing assemblies have been installed in several locations.

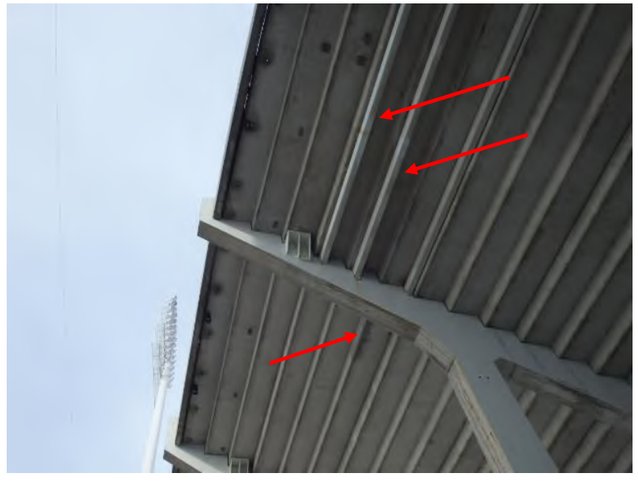
Expansion joints leak excessively even after multiple replacements/reconstructions. Fixed joints resealed within the last few years have exceeded the end of useful service life and begun to fail in multiple locations.

Based on the current condition of the panels and the extent of previous repairs, significantly escalated maintenance costs are expected. Current recommendation is to replace all elevated panels in the next 5-8 years. Deference of maintenance programs will increase future restoration costs.



Upper Deck Seating Panels: Typical configuration of upper deck precast concrete seating panels.

Underside of Elevated Seating Panel: Typical spalled seating panel at nosing exposing corroded PT strand.



Elevated Seating Panel: Arrow indicates concrete repair on precast beam and supplemental box tubing installed on underside of precast beam.

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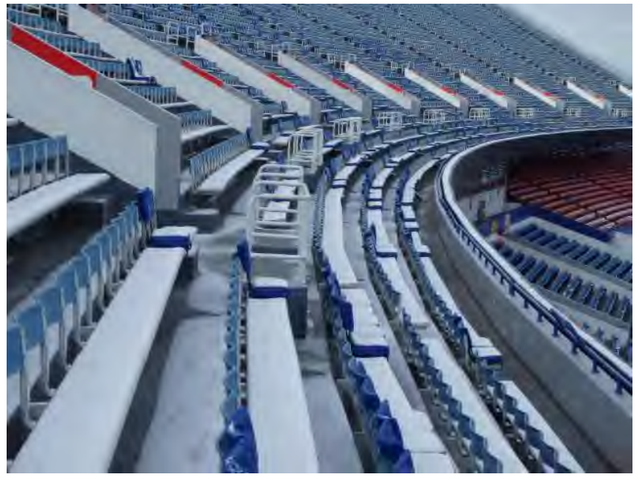
Upper Deck Seating Panels: Typical spall repairs to lower corners and supplemental steel supports where excessive debonding of PT strands exist.

Upper Deck Seating Panel: *Typical elevated seating panel expansion joint.*

200 Level Seating Panels: *General joint configuration and deterioration of extended PT strands observed during joint reconstruction.*



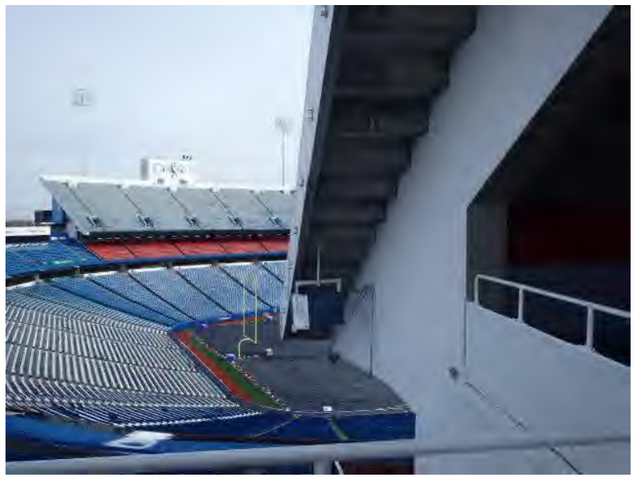
Typical Upper Level Seating Area: *Lower 11 rows are waterproofed with urethane membrane in fair condition.*

Upper Deck Seating Panels: *Typical cast-in-place concrete tread.*

Upper Deck Seating Panels: *Typical fixed construction joint in elevated seating panels.*

Typical Upper Level Seating Area: *Expansion joints above rakers are either waterproofed coated with reinforcement scrim or older applications do not have reinforcement over the sealant joint.*

Typical Upper Level Seating Area: *Underside of rakers have received metal gutters for leakage and drainage control over seating areas.*



Typical Upper Level Seating Area: *Leaking conditions on underside surfaces of Upper Level Seating areas, typical at points of leakage.*

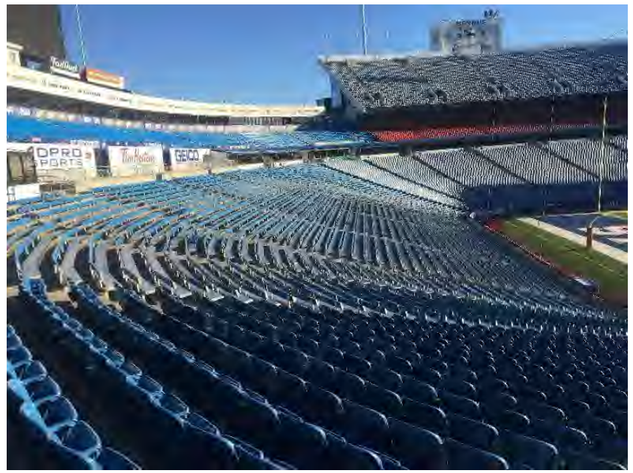
ON-GRADE SEATING SLAB

The lower seating bowl consists primarily of cast-in-place concrete, on-grade seating tiers. The lower seating bowl is in generally good condition, considering age and environmental exposure. Expected shrinkage cracking is present and distributed throughout the lower bowl.

Extensive cracking was observed in the front row around the entire perimeter of the field.

Two, 2" wide expansion joints were installed in the lower bowl in the west end zone in 2009 to alleviate expansion in the slab. These joints closed to approximately ½" to ¾" within a year. This appears to indicate either expansion due to temperature changes, or a tendency of the bowl to slide down the slope toward the field. The latter may also help to explain the movement of the field wall (see next section).

Short term recommendations include continued crack repairs, tread spall repairs/replacements, and maintenance of coatings and sealants. Reconstruction of the first two rows in conjunction with reconstruction of the lower ring wall will need to be performed in next major renovation of the lower bowl. In addition, resurfacing or reconstruction of the lower bowl seating slab is also recommended as part of a major renovation of the lower bowl.

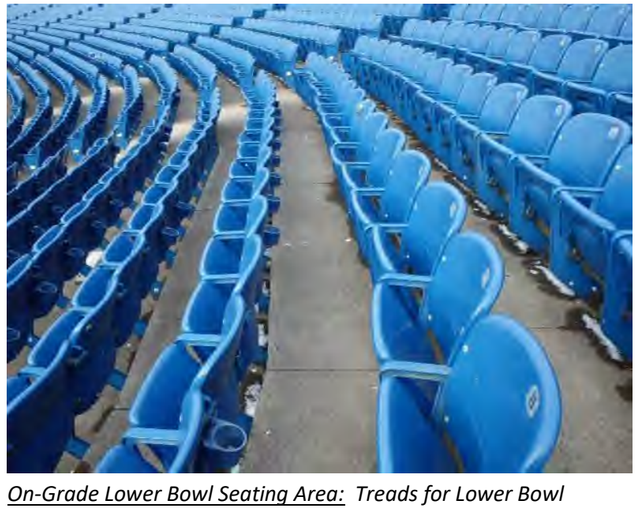


Lower Bowl: Typical configuration of on-grade seating

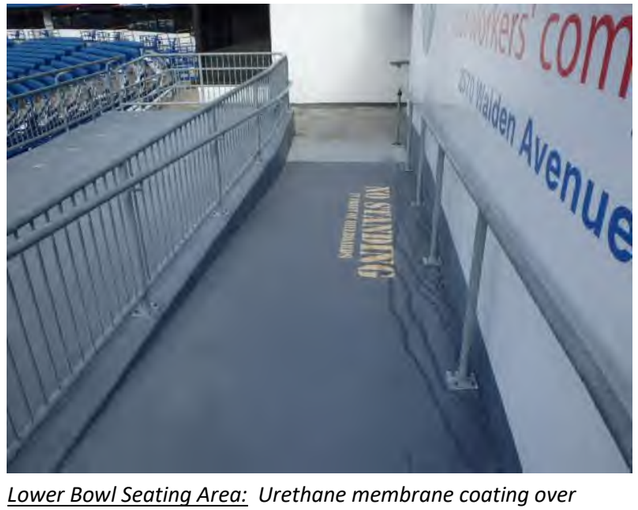
Lower Bowl Seating Slab: *Typical condition of on-grade seating slab – note vertical shrinkage crack.*

Lower Bowl – West Endzone: *Endzone expansion joint along dugout suite and general condition of on-grade seating slab.*

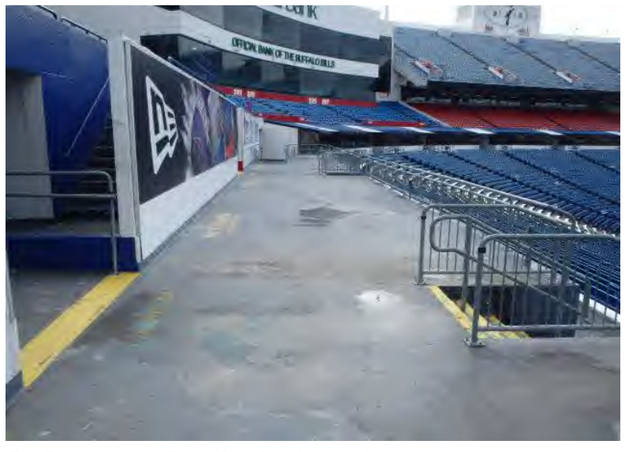
Lower Bowl Seating: *Typical cracking of front row of on-grade seating slabs related to rotation of lower ringwall.*



On-Grade Lower Bowl Seating Area: *Treads for Lower Bowl seating. Sawcut joints are visible in the treads, with sealant in fair to poor condition.*



Lower Bowl Seating Area: *Urethane membrane coating over accessible ramp to Lower Seating area. This area is over occupied space.*



On-Grade Lower Bowl Seating Area: *Urethane membrane protective system over area for patrons requiring accessible seating. This area is over occupied space.*

On-Grade Lower Bowl Seating Area: *Close-up view of sawcut joints.*

STRUCTURAL OBSERVATIONS

200 LEVEL CONCOURSES

Floor framing at the 200 Level concourse is comprised of reinforced CMU block panels (Celedex planks) supported by cast-in-place concrete beams and girders. These panels have experienced long-term deflection resulting in low areas and ponding water where exposed to the elements. Localized leaking is occurring through the slab from these ponding locations.

Most panels are no longer accessible for inspection from multiple renovations that have occurred over the life of the Stadium and could not be evaluated during this assessment. Visible portions of columns and beams did not indicate areas of spalling concrete or significant cracking.

Coatings and expansion joint locations have had significant maintenance. Coatings indicate wear, tearing, abrasion, etc. very typical for this type of structural protective application, environmental exposure and service life. Coatings are in need of either recoat or replacement.

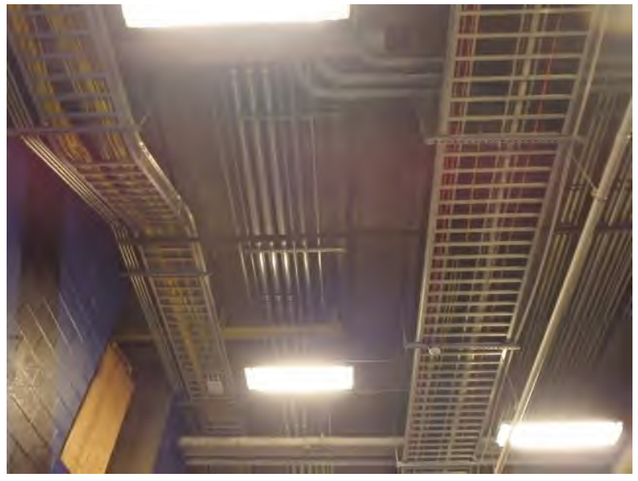
Expansion joint locations are coated with roofing membrane product that is slip resistant. Leaks were occurring at multiple locations.

Short term recommendations include continued maintenance of joints and coating systems. Long term recommendations include full reconstruction of expansion joints, including joint block-out reprofiling to accept new profile glands, new protective plates and reprofiling of concrete topping to eliminate localize ponding due to long term deflection of the concourse floor panels. Alternatively, the installation of supplementary drains with ice-melt systems can be installed to mitigate ponding.

Upper Deck Vomitory Bridge: Typical "cmu-block plank" construction of concourses and suspended vomitories.

Underside of 200 Level Concourse: Structural elements are inaccessible.

200 Level Concourse: Recently renovated suite space no access to structural elements.



200 Level Concourse: View from 200 Level Concourse of congested mechanical/electrical on underside of 300 Level Concourse.

STRUCTURAL OBSERVATIONS

300 LEVEL CONCOURSES

Floor framing at the 300 Level concourse is comprised of reinforced CMU block panels (Celedex planks) supported by cast-in-place concrete beams and girders. These panels have experienced long-term deflection resulting in low areas and ponding water where exposed to the elements. Localized leaking is occurring through the slab from these ponding locations.

Expansion joints have been reconstructed and had gutters installed below them to prevent damage to the suites and clubs below. Visible portions of columns did not indicate areas of spalling concrete. Repairs of cracks have been completed in the past. Visible portions of the soffit of the beams and edges of the rakers indicated a number of previously repaired spalled concrete locations.

Coatings and expansion joint locations have had significant maintenance. Coatings indicate wear, tearing, abrasion, etc. very typical for this type of structural protective application, environmental exposure and service life. Coatings are in need of either recoat or replacement.

Expansion joint locations were coated over with roofing membrane product that was slip resistant. The coatings appeared to have been applied within a one-year time frame. Leaks were occurring at multiple locations.

Short term recommendations include continued maintenance of joints and coating systems. Long term recommendations include full reconstruction of expansion joints, including joint block-out reprofiling to accept new profile glands, new protective plates and reprofiling of concrete topping to eliminate localize ponding due to long term deflection of the concourse floor panels. Alternatively, the installation of supplementary drains with ice-melt systems can be installed to mitigate ponding.

300 Level Concourse: *Overall view of concourse – note traffic coating.*

300 Level Concourse: *Typical expansion joint and floor drain – note roofing material over joint.*

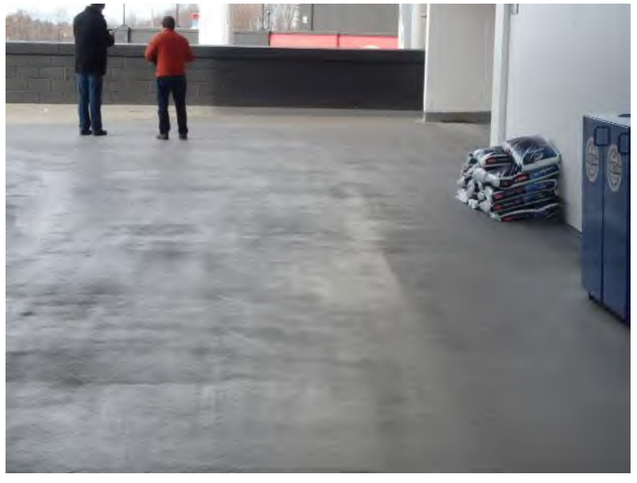
300 Level Concourse: *Typical plow damage to traffic coating.*

300 Level Concourse: *Typical view of 300 Level Concourse with protective urethane coating.*

300 Level Concourse: Typical view of 300 Level Concourse with protective urethane coating over non-uniform finished concrete slab.

300 Level Concourse: Typical expansion joints with coated metal covers throughout the 300 Level Concourse.

300 Level Concourse: Typical expansion joints with coated metal covers throughout the 300 Level Concourse.



300 Level Concourse: Typical view of 300 Level Concourse with protective urethane coating.

300 Level Concourse: Typical isolated repairs to coatings and around drain penetrations through the 300 Level Concourse slab.

300 Level Concourse: Typical deterioration of the protective urethane membrane on the 300 Level Concourse slab.

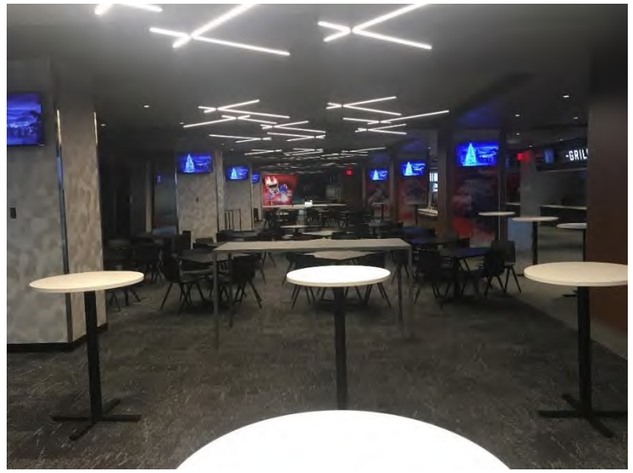
STRUCTURAL OBSERVATIONS

SUITES

Sideline Clubs were renovated in 2018 and are in like new condition.

Dugout suites originally constructed in 1999 continue to experience leakage through the roof structure primarily along the interface with the original upper ring wall panels.

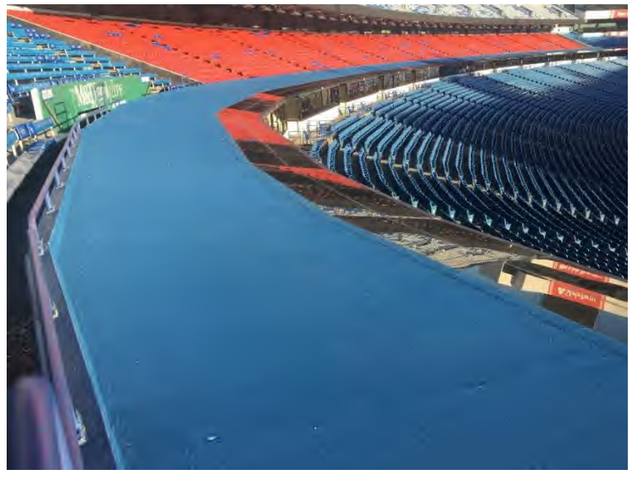
Additional study is required to understand the cause and recommend a course of action.



200 Level Clubs: Renovated in 2018. No access the floor or roof construction.

Suites: View of Level 100 Concourse outside of suites.

Dugout Suites: Typical exterior elevation of Dugout Suites.



Dugout Suites: Interface of suite roof with upper ringwall – site of continuing localized leakage issues.

Suites: View of exterior enclosure system of Club area.

STRUCTURAL OBSERVATIONS

LOWER RING WALL

The field wall consists of a cantilevered, cast-in-place concrete wall. The wall is out of plumb in most locations, leaning toward the field, and has multiple mechanical and electrical attachments through-out the perimeter.

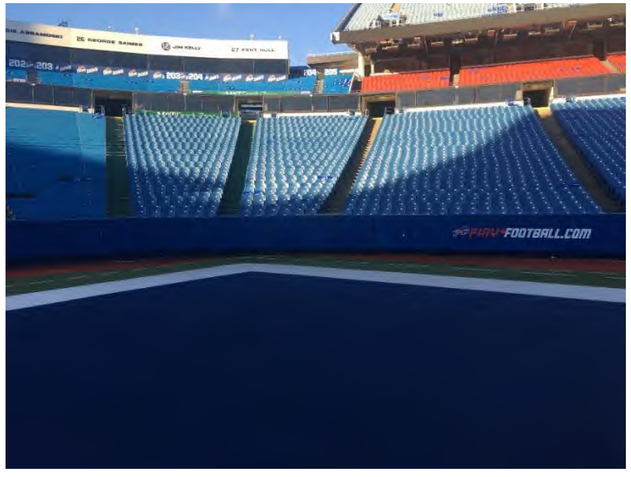
Expansion joints cut into the on-grade lower seating bowl in 2009 may have allowed movement of the seating bowl downward into the ring wall.

The field drainage system includes buried leader pipes connected to a larger storm water system located at the base of the wall. The field drainage system is expected to be reworked in 2019 when the field is replaced.

The lower ring wall is recommended to be replaced at the next major renovation of the Stadium.

Lower Ringwall: Rotation of ringwall toward field with cracking of front row of on-grade seating slab.

Lower Ring Wall: View of leaning, out-of-plumb Lower Ring Wall. This view indicates the Field Drainage System that is located below-grade along the perimeter of the Lower Ring Wall.



Lower Ringwall: Typical configuration of ringwall.

Lower Ring Wall: View of leaning, out-of-plumb Lower Ring Wall.

Lower Ring Wall: View of leaning, out-of-plumb Lower Ring Wall. This view shows the typical mechanical and electrical attachment on the ring wall.

STRUCTURAL OBSERVATIONS

FIELD LIGHT TOWERS

The field light towers consist of six freestanding towers connected at the base by a large base plate connection into a cast-in-place concrete foundation.

A previous assessment found that the field light towers were experiencing fatigue of their anchorages due to failure of the grout supporting the pole base plates. The base plates were re-grouted and new tensioning rods were anchored into place and post-tensioned to supplement the capacity of the original foundation system. Viscous dampers were also installed from the poles to the main frames near the top of the upper deck of the stadium. A subsequent study determined that approximately 50% of the dampers have reached the end of their service life and no longer provide support for the light towers. If left uncorrected, fatiguing of the original anchorages will continue.

Any retrofit of the upper seating bowl will require reattachment of viscous dampers to prevent fatigue damage of the original anchorage.

Typical Field Light Tower: Note viscous dampers at top of upper deck.

Typical Field Light Tower: Viscous dampers bracing light tower at top of upper deck – one of two dampers have failed in most locations.

Typical Field Light Tower: Retrofit post-tensioned anchorage of light tower bases.

STRUCTURAL OBSERVATIONS

TUNNEL AND ADJACENT ROOMS

The tunnel level consists of cast-in-place exterior perimeter concrete walls and structured, cast-in-place concrete lid. The portion of the tunnel lid between the Administration Building and the east end of the stadium was reinforced with a bonded overlay in the 1990's to repair damage to the cast-in-place concrete joist system due to overloading from supply trucks.

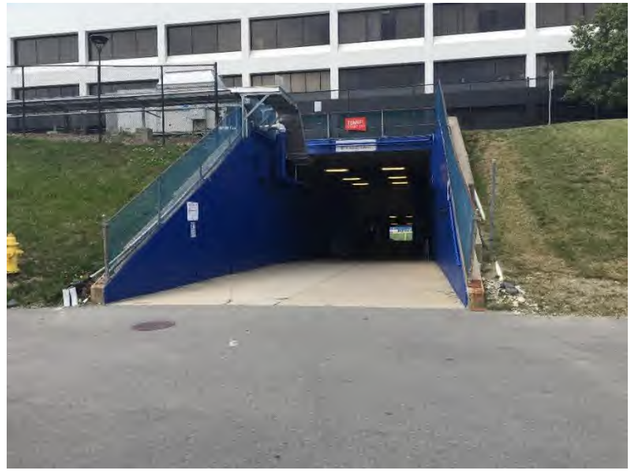
Leakage has been occurring at the NW corner of the below grade structure affecting the team treatment rooms. Numerous attempts to repair have had varying degrees of success.

The tunnel structure carrying the roadway on the east side of the Administration Building has been repeatedly repaired over the years and currently cannot support standard highway loading – posted at 2 tons. Only passenger vehicles and small service vehicles (golf carts) can utilize the bridge portion of the tunnel.

Short term recommendations included continued inspection and maintenance of the supporting concrete one-way joist structure, traffic coatings/waterproofing membranes and supporting walls. The traffic coating on the bonded overlay between the stadium and Admin Building requires recoating or full replacement and should include waterproofing below grade along the north edge to seal the construction joint between the top slab and the wall.

Reconstruction of the roadway portion of the tunnel at east of the Administration Building is recommended in any future major renovation of the Stadium.

Field Access Tunnel: Roadway above tunnel – note 2 ton posting.



Field Access Tunnel: Entrance to tunnel field access.

Field Access Tunnel: Bonded Overlay and Traffic-Coated area of tunnel and rooms between Admin Building and Stadium.

Field Access Tunnel: Extensive repairs to field tunnel access under perimeter roadway.

Room Adjacent to Tunnel: Leakage containment at north end of tunnel over team medical offices.

STRUCTURAL OBSERVATIONS

VIDEO BOARDS

Video boards in the NE and SE quadrants are in like new condition. The video board on the roof of the old Administration Building has been upgraded, and the supporting structure is in good condition. The sideline ribbon boards were replaced in 2018 and are in like new condition.

The main scoreboard structure is in good condition however two pieces of horizontal angle are missing at the top of the board that were intended to support the roof deck. No signs of excessive deflection or inadequate structural performance is present.

No structural work is anticipated.

Main Scoreboard: Non-code compliant access ladder to main scoreboard.

Main Scoreboard: Missing perimeter angle at top of main scoreboard.

Main Scoreboard: Renovated in 2014 to full video removing fixed signage.

East end videoboards: Constructed/renovated in 2014.

STRUCTURAL OBSERVATIONS

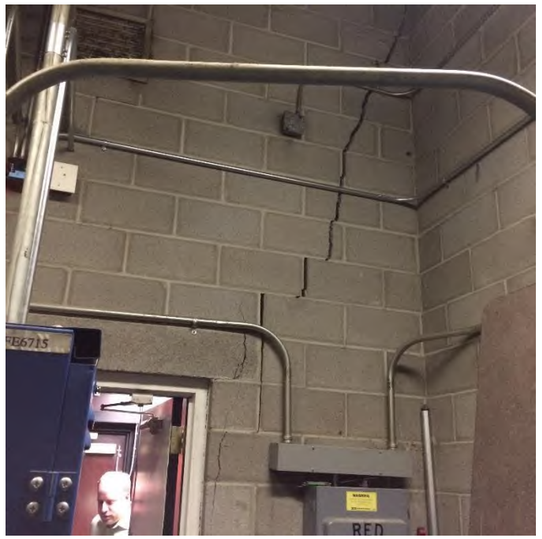
ADMINISTRATION BUILDING

A large crack in the CMU wall of the elevator machine room in home locker room was found after the 2014 renovations. The wall is non-load bearing and there was no apparent cause for this condition. The crack was sealed and appears to be stable at this time.

Cracking in CMU walls was observed in the Coaches room and adjacent locker room wall. Portions were hidden by locker room finishes. Cracks appear to have been caused or exacerbated by settlement of the floor slab.

No other structural issues noted with the Admin Building.

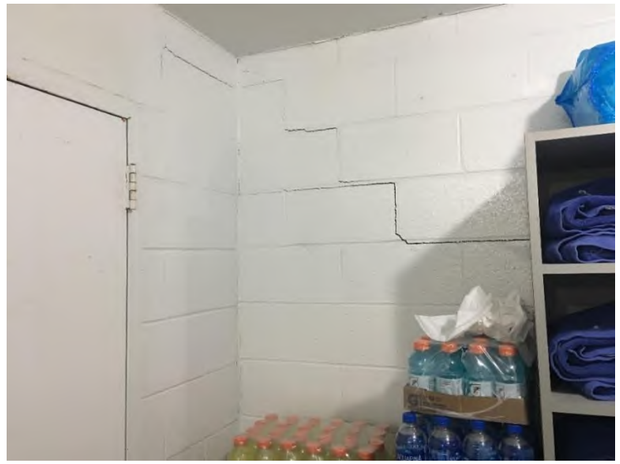
Short and long-term recommendations include continued monitoring and repairs of CMU walls that are experiencing settlement.



Admin Building Elevator Machine Room: Crack observed in 2014 in CMU wall.

Admin Building: West elevation of Admin Building.

Bills Game Day Locker Room: Differential settlement of floor slab – note separation of joint along column.



Bills Game Day Locker Room: Crack in CMU wall due to settlement of slab-on-grade.

STRUCTURAL OBSERVATIONS

BILLS STORE, TICKET BOOTH AND GATES

All Ticket booths, entrance gates and the Bills Store were constructed during the 2014 Lease projects and are in very good condition.

No structural work is currently anticipated.

Bills Store: *Constructed in 2014.*

Typical Entrance Gate: *Constructed in 2014.*

ARCHITECTURAL BUILDING OBSERVATIONS

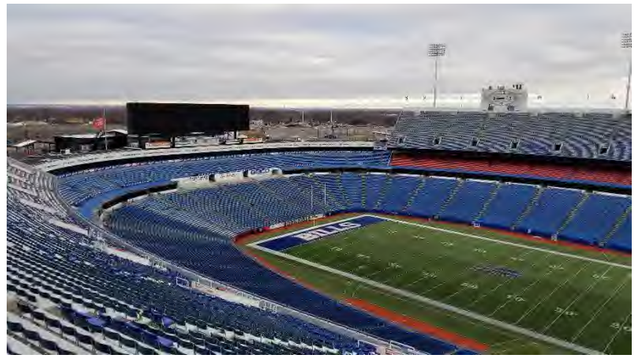
SEATING BOWL & SEATING

The entire seating bowl structure dates back to the original 1972 construction. Most of the seating dates back to at least 1999, and some date back to 1972. Both bowl and seats are perhaps beyond their useful lifetimes. Please refer to the Structural section of the Report for a detailed description of the seating bowl structure and on-going repairs. Refer also to sections on ADA & Code Compliance for the lack of sufficient accessible seating in the facility.

The seating experience for patrons is one that is very familiar to Bills fans. The bowl is actually very intimate, which is a good thing for sightlines. People are kept close to the action, and have a great view of the field. Some would say that the narrow 30" tread depth helps keep patrons warm on cold Buffalo nights, also. But, the 30" tread depth is substandard in comparison to most American outdoor facilities that provide 33" to 36" deep treads. The 30" tread depth also restricts the placement of most premium seating products into the bowl, due to Code requirements for minimum clear egress widths. Seating replacements currently must be one-for-one without changes to seating types or layouts. Any future changes to the 30" tread depth (through reconstruction) would reduce seat counts and negatively impact sightlines for seating areas above.

The current seating manifest breaks down as shown below:

• Suite Seating (# 119 - all types)	2,807
• Side Line Club Seating (outdoor)	6,878
• End Zone Club Seating (indoor)	1,388
• Lower Bowl Sideline Seating	14,953
• Lower Bowl Corner Seating	8,397
• Lower Bowl Endzone Seating	15,201
• North Upper Bowl Seating	10,993
• South Upper Bowl Seating	10,941
TOTAL	71,558



Stadium Seating Bowl: All seating treads within the entire bowl are only 30" in depth, creating a very constricted seating envelop.

Other than deterioration of the concrete seating bowl itself, major issues within the bowl include degradation of traffic coatings, sealants and expansion joints, all of which are repaired on a yearly basis. Traffic coatings are typically replaced every three years. Deterioration of these items leads to water damage in spaces below, including many premium spaces (Dugout Suites, Super Suites, Sideline Suites, and Sideline Clubs).

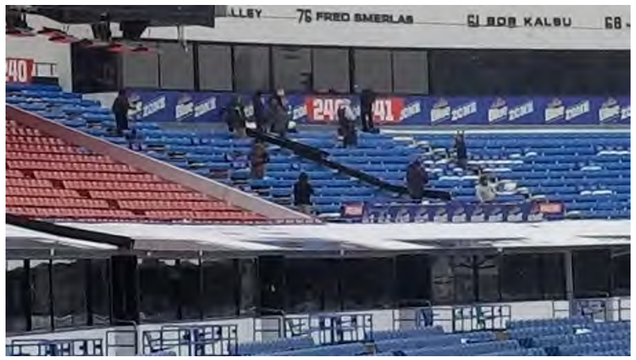
Dugout Suites: Water leaking into the Suites through the seating bowl damages spray thermal insulation and ceilings.

100 Level Vomitories: Ponding water above is often drained with holes drilled through front row treads. Water drips and causes ice.

100 Level Vomitories: Dislodged backer rods from joints in bowl structure overhead.

Outside Dugout Suite 141A: Water leaks from the seating bowl above have stained wall and are causing paint finish to peel.

Snow removal operations at New Era Field are very labor intensive. Depending upon the game schedule and when the snowfall occurs, either teams of staff or teams of volunteers shovel snow in any given seating section toward the center of the section. From there it is dumped into a half-round plastic slide that carries the snow to a lower level where it is then shoveled again into a vehicle to cart it away. Although the operation is labor intensive, most stadia in northern climates are cleared of snow in a similar manner. The Bills supplement the removal at times with the application of salt brine directly to the bowl. This helps to make any snow remaining in the bowl unsuitable for use as projectiles (snowballs).



Snow Removal: *Snow removal operations are labor intensive.*

Snow removal: *Plastic half-round chutes are used to pass snow down to lower levels.*

Snow removal: *Snow is shoveled a second time into vehicles.*

Salt Brine Tank: *Salt brine is used to melt snow in seating bowl.*

Other issues are encountered at the 400 Level accessible platform seating.

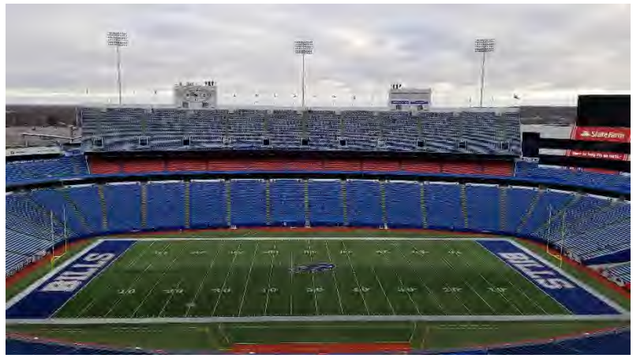
400 Level Platform: *Storage space for Ops and Guest Services is limited.*

400 Level South Camera Booth: *Metal soffit and fascia is damaged, perhaps from high intensity winds.*

400 Level Platform: *Birds tend to congregate at these top row locations, leaving droppings in surrounding areas.*

STADIUM SEATING

Stadium seating is of limited types and is all very old. Some products are no longer made, and the availability of replacement parts is becoming a problem for the Bills. Outdoor seating is in fair to poor shape generally throughout the bowl.



Stadium Seating Bowl: Seating replacement part availability is becoming an issue due to the age of the existing stock.

Lower Bowl Seating: Stadium armchair seating with plastic backs and seats dating to 1999 is provided on the Lower Bowl sidelines and corners.

Lower Bowl Swing Seats: Seats that fold away for wheelchairs were added at the bottom of Lower Bowl aisles in 1999.

Lower Bowl Seating: Bench seating with backs dating to 1972 are provided in both Lower Bowl endzones.

Lower Bowl Seating: The Blue Zone bench seating is of a different style, but also dates back to 1972.

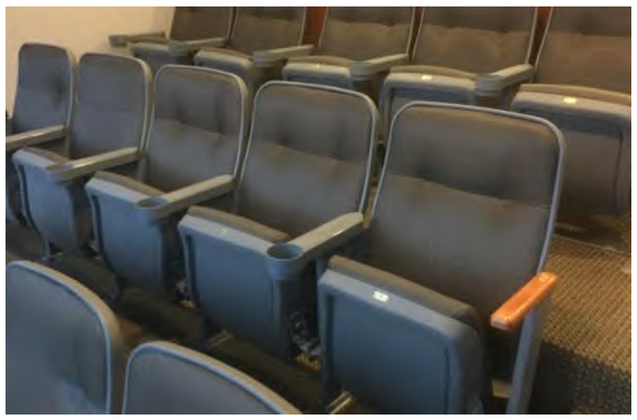
Upper Bowl Seating: All seating in the Upper Bowl consists of metal benches with backs from the original 1972 construction.

Side Line Club Seating: Stadium seating dates back to 1999. The seats had direct heating added at one point, but it fell into disrepair. Club seats are now provided with overhead radiant heat.

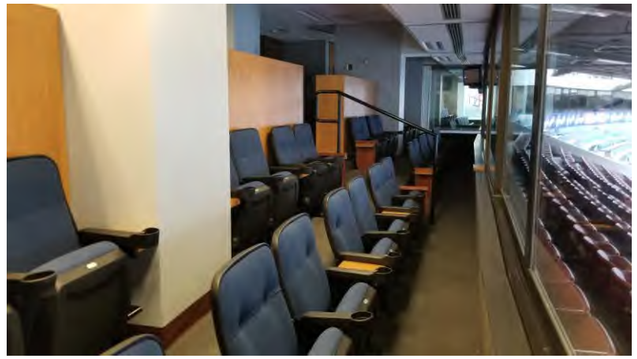
Suite seating is of varied types also. Most of the Dugout Suites have been renovated to remove their seating tiers. They are now provided with furniture arrangements including loose chairs. This furniture is generally in good condition.

Dugout Suite Seating: Seating consist of loose chairs and furniture. Most dates from within the last four years.

Other Suites have seating stock that dates back further in time. The West End Suite seating is from 1992, and the Side Line Suites have seating that dates back as far as 1999.



West End Suite Seating: Theater seating is original to these Suites from 1992.

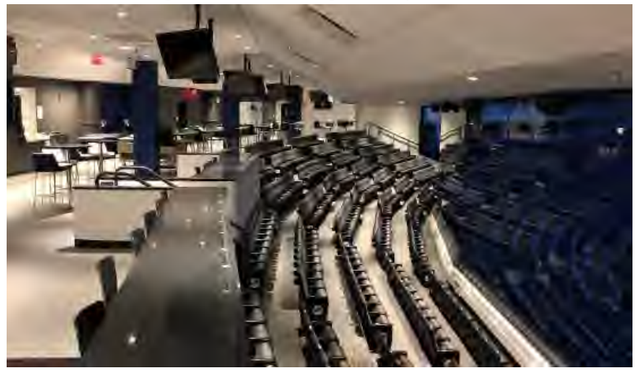


Side Line Suite Seating: Theater seating varies, but most are original to these Suites from 1999.

There are three indoor Clubs with seats having views to the playing field. Two were renovated recently (M&T and Goal Line). Their theater seating was completely replaced at that time. The Business Class Club is slated for a similar renovation in 2019.

Business Class Club Seating: Theater seating is scheduled for replacement in 2019.

M&T Club Seating: Theater seating was replaced in 2017.



Goal Line Club Seating: Theater seating was replaced in 2017.

RECOMMENDATIONS

Seating bowl repairs will necessarily continue on an annual and as-needed basis. Regular inspection is necessary. Outdoor seating should not be replaced until concrete repairs to the seating decks are also made. Better solutions to the water damage problems will unfortunately require much more drastic measures.

- Continue the periodic inspection and repair program.
- Consider coating the entire seating bowl with an MMA flooring material and rebuilding all expansion joints with greater allowance for movement. Coordinate with for seat replacement.

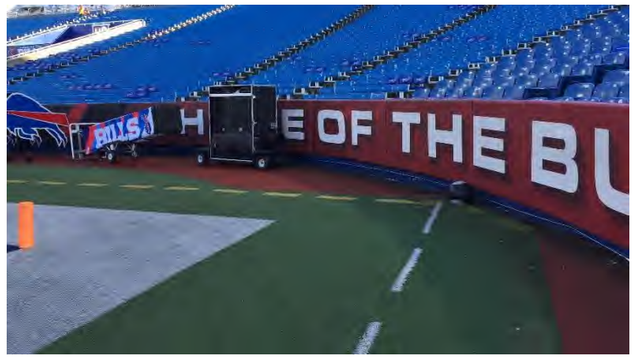
- Consider adding subroofs overhead in all occupied spaces beneath the seating bowl. Coordinate with major interior renovations.
- Consider adding textured MMA flooring surfaces in vomitories that serve as snow dumps.
- Consider alternative snow removal equipment, such as that used at TCF Stadium in Minnesota. *https://www.youtube.com/watch?v=TgcwAttevqI*

PLAYING FIELD

The playing field is an artificial turf product that is scheduled to be replaced in 2019 (typically with a 10-year frequency). A synthetic warning track also surrounds the field area immediately adjacent to the field wall. The field wall is protected with padding in the endzones and corners. Space around the field of play is generally limited.

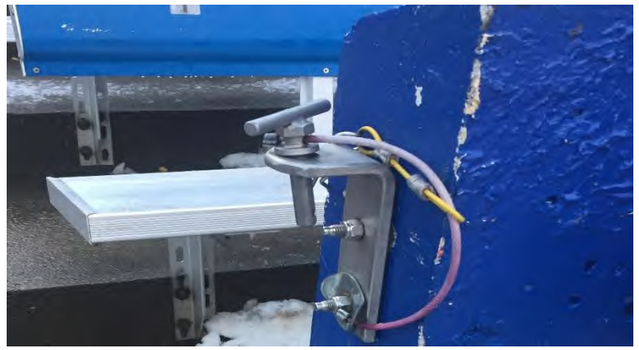
The field wall itself is in poor condition structurally. Please refer to the Structural section of this Report.

Field Sidelines: There is less than 50-0" from the sideline to the field wall at the 50-yard line.



Field Corners: There is typically less than 19'-0" diagonally from the corner of the end zone to the field wall.

Field Access/Egress: Temporary wood stair units were recently replaced with metal units. Railings are not provided on both sides and do not have extensions.



Field Wall Gates: Paint damage consistent at all gate locations. Gates newly replaced and are in decent condition.

Field Drainage: Substantial buildup of turf granules at and within drainage areas. Noticeably used for paint disposal in past.

First Row – Section 102: Concrete spalling.

First Row: Water/ice buildup on first row. Some field wall drainage issues with proper sloping to scuppers. Substantial ponding on 2 row on North Sideline.

First Row: Signage partially removed where gates were widened.

Field Goal Posts: Poles recently replaced in 2017/18 offseason.

Rubber Perimeter surface: Substantial damage, ware and tare to Mondo.

South Sideline: Number of abandoned raceways not properly capped.

South Sideline Pads: Several pads were loose and or not mounted to the wall. Vinyl last replaced in 2014. Netting guide wires replaced prior to 2018 season.

Communication boxes: Rusting and damage noticed a 15-20% of connection boxes.

Field Tunnel: Field equipment storage for camera platforms and goal posts housed within tunnel. Installed 2018.

RECOMMENDATIONS

There exist many other problem items related to the field wall as shown in the photos above. Should the field wall be replaced at some point in the future, other issues to be addressed at the same time might include:

- Ponding water in the front rows.
- Replace or reinstall field access gates.
- Add a greater number of field wall gates to help facilitate egress from on-field seating events (concerts).
- Add rails to the metal aisle step units.
- Relocate (and rewire) electrical and signal cabling that is currently placed along the bottom of the wall.
- Replace the synthetic warning track surface.
- Replace the wall padding.
- Consider upgrades to the on-field power and data provisions supporting game or concert activities.
- Consider bringing a standpipe down to the level of the playing field.

CONCRETE WALLS AND SLABS

Instances of cracked or uneven walls and slabs can be found throughout the stadium, especially at the 100 Level where on-grade conditions exacerbate problems. The potential for shifting soil conditions below existing slabs exists. Refer to the Structural section of this report. But, impact loads from service vehicles and snow removal operations also cause many problems throughout the building.

Observations are grouped below by building area.

100 MAIN LEVEL

100 Level Concourse: Liquid debris seeps into cracks and may not make its way to a drain.

100 Level Concourse: Area drains are frequently used as ice dumps, causing icy areas (depending upon time of use).

100 Level Restroom Alcoves: Floor surfaces are typically uneven and damaged, with work traffic coatings.

East End Zone Ramps: Asphalt ramps are frequently damaged where water collects and where vehicles make turns.

100 Level Concourse: Many differing pavement surfaces leave uneven joints and poor water drainage throughout the concourse.

Monumental Stairs: Stair landings exhibit significant spalling due to application of salt.

100 Level Typical Concessions / Pantries: Uneven floor surfaces hold liquids and do not slope to a drain.

Concession 136.05: Uneven floor surfaces trap water against a grease interceptor.

Concession 107.05: Uneven floor surfaces trap water against a grease interceptor.

Corner MEP Spaces: Spaces still have dirt floors (exposed shale).

300 Level Concourses: In front of each Tower, water ponds between doorways at restrooms and elevators.

200 CLUB LEVEL / ON-GRADE PLAZA AREAS

200 Level Ramp & Stair Landings: Slabs are uneven and do not slope to drains. Typical at all four corners of stadium.

West End Ramps: Walls and slabs are deteriorating.

200 Level Concourse: At all four corners, concrete surface drainage troughs tend to collect trash.

200 Level Concourse: At NE & SE corners, concrete surface drainage troughs are unsightly and not well protected.

Concession 330.06: Slabs outside this door slope water toward the door bringing salt and debris inside.

West End Suite Ramps: Deterioration of walls and connection to rails.

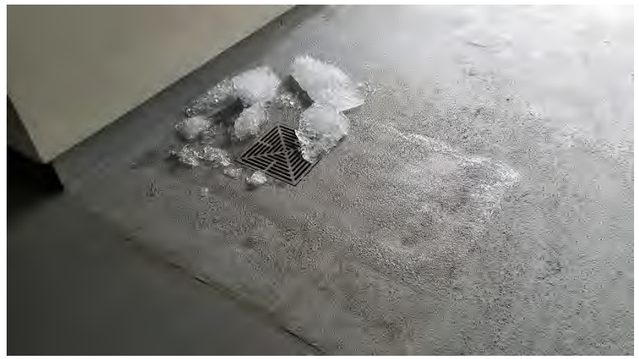
West End Ramps: Underside of ramps exhibit rusting steel and peeling paint.

Storage 244.01: 1" Gap between floor without sealant or firestopping.

300 UPPER LEVEL

Vendor 329.10: Slabs outside this door slope water toward the door bringing salt and debris inside. Same in Janitor 329.09.

300 Level Stair Landings: Slabs do not slope toward drains.



300 Level Concourse: Area drains are frequently used as ice dumps, contributing to traffic coating damage.

Corner stairs to 300 level: Deterioration of walls and connection to rails.

RECOMMENDATIONS

Recommendations will vary depending upon the overall scope of work to be undertaken in future construction projects. Most items presented in this section can be addressed through on-going maintenance and repairs. Other more intensive remedies might include:

- Develop a periodic review program to identify slab conditions that might constitute tripping hazards. Implement repairs to existing slabs as indicated to eliminate the hazards.
- Replacing large areas of the 100 Level Concourse slabs-on-grade could affect positive impacts on drainage patterns, the extent of open cracks, the extent of floor material changes, and unevenness in floor surfaces. Floor replacements should be considered together with other improvements that might occur below-grade in the concourse. Refer to Plumbing and Electrical sections of this Report.
- Consideration to the development of a supplemental drainage program should be made. The goal should be to eliminate low spots in slabs that contribute to water damage or slippery winter conditions by changing slab slopes and/or adding storm drains.
- West End ramps and supporting walls will need to be replaced at some point in the future. Refer to Structural section of this Report. Replacements should be considered when other work in the same area may be undertaken.
- Consideration to the development of a pipe rail replacement program should be made. Refer to Code section of this Report, also.

TRAFFIC COATINGS

Traffic coatings are used in isolated and large areas around the stadium. Typically, the coatings are used for one of two purposes: 1) to provide a waterproof membrane over spaces below where there is no roof, and 2) to treat floor surfaces that have become slippery or damaged for one reason or another. Traffic coatings are primarily a polyurethane formula, excellent for slip resistance, good for movement, and under normal conditions, providing a service life of 4-5 years. Unfortunately, much of the stadium does not experience “normal” use conditions.

Snow removal operations are the main culprit with damage to traffic coatings. Please refer to the Seating Bowl section for a description of snow removal processes in the bowl. The damage to traffic coatings happens at the bottom end of the bowl snow removal process. Snow is typically shoveled from vomitories to a location where a cart or plow can carry or push the snow to its next transfer point. Shoveling and plowing attacks the traffic coating, eventually gouging or tearing it. From one small point, the damage can quickly spread with each plow movement. Then salt and water travel through gaps in the coating and into spaces below. Salt attacks the concrete beneath the coating, of course.

The Bills have tried rubber edged plow blades, and are experimenting with large rotating brushes to move snow. But, large volumes of snow eventually require the use of a plow.

In a newer facility, concourse areas subject to snow removal would typically be designed with a sandwich slab; a concrete topping slab exposed on top takes the brunt of the snow removal impacts. An insulated waterproof membrane is protected below the topping slab, and serves as a roof for spaces below. This is not an option at New Era Field, as the 1972 structure was not designed for such loads.

The amount of water damage experienced due to failed coatings is significant. The entire 300 Level Concourse serves as a roof to the 200 Level spaces below. Yet, the traffic coating damage leaves most of these 200 Level spaces open to water damage. The 300 Level traffic coatings were last replaced in 2015 (and prior to that in 2009). Please refer to the Water Damage section of this Report.

100 Level East Concourse: Traffic coatings are damaged by snow removal, and allow water to leak into spaces below. The topping slab and traffic coating were replaced most recently in 2018.

300 Level Ramp Landings: Traffic coatings become damaged from snow removal processes at all four upper ramp landings.

300 Level Concourse: Typical coating damage at concourse drains. Edges of drains are where coating edges are easily attacked.

Outside Women's 331.04: Traffic coating has worn off of slab edge angle leading to rusting of the angle.

300 Level Ramp Landing: Joints in the slab have opened up and been sealed. Joints occur above enclosed space. Sealants fail.

Vomitory 131.01: Traffic coating damaged by snow removal operations.

Corner Stair Landings: Traffic coatings protecting Retail spaces below are old and worn.

RECOMMENDATIONS

Without significant renovations that allow for the insertion of new waterproof "roof" features, the current practice of monitoring and continually repairing polyurethane coatings may remain the Bill's best option. Other coating materials, such as MMA, are excellent for consolidating slab surfaces, providing color, and providing slip resistance. But, MMA's will crack with their substrates, and because of this cannot be relied upon to provide a waterproof film.

- Consider replacing the polyurethane coatings with MMA coatings – ONLY where the coatings are applied at slab-on-grade areas.
- When future renovations allow, consider placing metal subroofs overhead in spaces that require water protection. Then, apply an MMA topping to the top slab surfaces.

EXTERIOR ENCLOSURES

The stadium presents a wide variety of exterior enclosure materials and finishes. New materials were added and others consolidated during the 2014 renovation. The most prevalent systems are listed below.

- Painted concrete (CIP and precast)
- Painted concrete masonry
- Unpainted brick masonry
- Coated metal panels
- Coated metal copings, fascias, soffits, and flashings
- Exterior insulation finish systems (EIFS)
- Aluminum storefront, windows, and curtainwall
- EPDM roofing
- PVC roofing
- Thermal insulation / Coated spray insulation (protected)
- Sealants between various materials

Following the 2014 renovation, most materials remain in good condition. Regular inspection and maintenance will contribute to the lifespan of these materials. Please refer to the Expansion Control section of this Report for additional information on joints.

The windows on the 3rd floor of the Admin Building (west side – facing field) were replaced in 2017.

The completeness of the building's thermal insulation envelop is very mixed. Newer buildings like the Commissary, Team Store, and Operations Building are well insulated. Older portions of the stadium contain areas lacking any exterior insulation at all. This is most prevalent at single withe masonry structures enclosing concourse restrooms, concessions, and pantries. Several uninsulated vertical plumbing chases also have exterior exposures.

Presented below are specific problems observed.

300 Level Concourse: Missing grille near Gridline 19.

Upper Deck Exteriors: Overspray from salt brine applications often end up coating the exterior walls and roofs below.

Damaged EIFS: Damage to pilaster outside of east entrance to Dunn Tire Club. View is from above.

300 Level Stair Landings: Open joints at base of EIFS walls.

Broadcast Pressbox: Tepco window cables corrode and break from leaking salty water.

100 Level Vomitories: Many wall penetrations through vomitory walls are not closed. Raceway allows raccoons into building.

Dugout Suites: Movement between skylight framing and drywall construction is apparent in many suites. Few leaks observed.

Dugout Suites: Suite windows reportedly leak in many locations. Observed leaks pond water in window tracks.

South 50-Yard Line Plaza: Paint on flashing is peeling above monumental stair.

Removed Signage: Many areas show the age of finishes where signage has been relocated.

West End Camera Booths: No snow clips or ice prevention. Exposed, uncapped fascia at standing seam roofs.

100 Level Concourse: Birds peck at exposed underslab insulation.

RECOMMENDATIONS

Regular inspection and maintenance will contribute to the lifespan of these materials. A few recommendations appear below that are intended to help resolve current issues. Refer to the Expansion Control section of this Report, also.

- Conduct a detailed facility review to identify and close any existing openings, penetrations, gaps, or joints in the exterior enclosures. Make this part of a yearly inspection.
- Review salt brine application procedures to determine if there is a means to avoid overspray onto other materials including siding and roofing. Long term exposure to salt can damage unsealed concrete, metal coatings, roofing, and sealants.
- To help protect against bird damage, perform test applications of newer options for coating the spray insulation overhead in the 100 Level Concourses. Newer products include insulation coatings (durable surfaces), paint additives (taste repellent), repellent sprays, and optical/smell repellant gels.

ROOFING

There are many isolated roof areas through the facility. Newer roofs are typically PVC. Older roofs are typically EPDM. The Commissary, Operations Building, and Butler Buildings have insulated metal panel roofs. The Salt Building has an asphalt shingle roof. All have received repairs over time.

Traffic coating on trafficable surfaces provides the actual "roof" membrane in many locations within the stadium. Similarly, the roofing above the Dugout Suites is a painted membrane directly on the concrete roof planks. Please refer to the Traffic Coating section in this Report.

Below is a summary of existing roof areas and the date of their most recent replacements or major repairs (not including the Training Facility or Fieldhouse):

2018	West End Roof N & S sections replaced
2017	Salt Building was constructed
2016	300 Level Sloped Roofs recoated
2015	Admin Building Roof replaced
2015	East Camera Booth Roofs replaced
2014	Improvements Project included new roofs at:
	100 Level IDF Rooms
	West End Roof center section
	300 Level Outboard Concessions & Restrooms
	New Scoreboard Enclosures
	Team Store
	Commissary
	Operations Building
	Entry Gate Canopies
2011	West End Camera Booth Roof replaced
2011	New generator and enclosure installed
2011	Annex Butler Building constructed
2003	Sideline Suite roof repairs
1999	Improvements Project included new roofs at:
	Dugout Suites
	Berm Toilets
	End Zone Club Towers (with stair towers)

There are a few other roof areas likely part of the original stadium construction from 1972. But, these have been kept in service with periodic repairs. Most of these roof areas are limited in size, and are partially protected by adjacent building structures (overhead). Those in protected areas may not require replacement due to the extent to which they are sheltered. These roof areas include:

100 Level Concession and Restroom Roofs
200 Level Sideline Suite Roofs
200 Level Pressbox Roof
400 Level Restroom Tower Roofs

Dugout Suites: Blue roof coating is original from 1999, and is repaired periodically.

Berm Toilets: Roofing is original from 1999.

End Zone Towers: Roofing is original from 1999.

Generator Enclosure: Roofing is original from 2011.

West End Roof: Roofing was replaced in 2018 at north and south ends.

<u>300 Level Concourse Sloped Roofs:</u> Sloped roofing above 300 Level spaces was re-coated in 2016.

<u>West end suite entrance awnings:</u> Structural supports and mounts damaged, rusted or completely dislodged.

<u>Butler Building:</u> Butler Building was constructed in 2011.

<u>Salt Building:</u> Building was constructed in 2017 and has an asphalt shingle roof.

<u>RECOMMENDATIONS</u>

Roof areas that date back to the 1999 Improvements Project have clearly reached the end of their anticipated lifespan. Other areas can be maintained through the Bill's regular inspection and repair program.

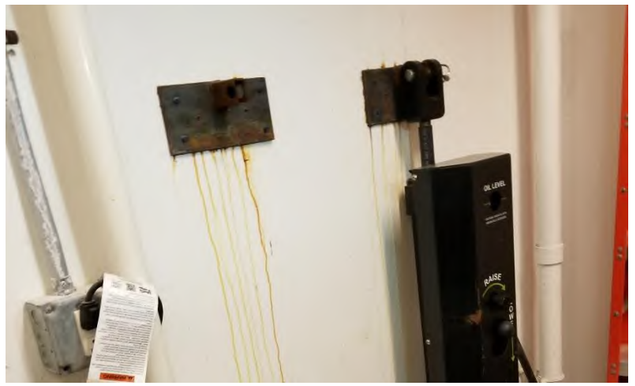
- Develop a roof replacement program for the Dugout Suites, Berm Toilets, and End Zone Club Towers. Consider scheduling this work together with any other rooftop equipment replacements being undertaken.
- Periodically review anchorage conditions of all awnings around the facility for structural integrity of the framing and condition of awning fabric.

<u>WATER DAMAGE</u>

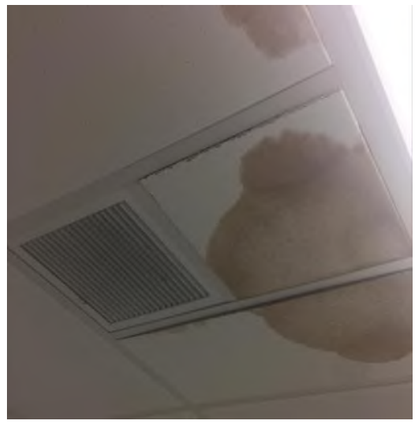
Water damage is found throughout most of the stadium, and in a few accessory buildings. It is for this reason that we present a separate section in this Report to simply show how pervasive the damage is. The Bills are quick to fix leaks and repair damage in areas visited by the public. Priorities often leave leaks and repairs in back-of-house spaces to wait. The photos that follow are representative of a multitude of water damaged locations through the stadium. Their causes are not always clear. But, the resolutions may frequently lie in catching up with deferred maintenance at major building components like traffic coating, expansion joints, roofing, and sealants. Please refer to other applicable sections in this Report.

<u>Field Tunnel:</u> Newly repaired roof structure and roadway above tunnel continues to leak. Repairs 2018.

<u>Storage 021.02</u>: Water damage to duct from leak overhead.



Storage 021.02: Water damage at connections penetrating foundation wall.

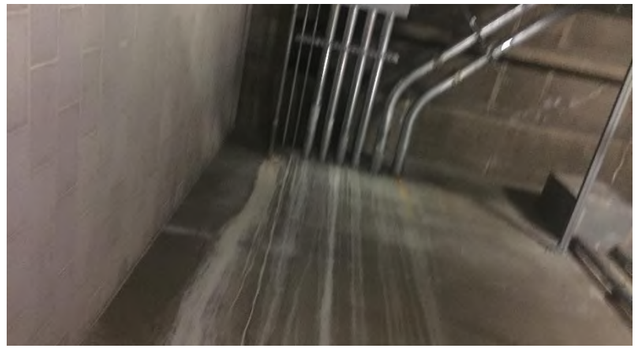


Corridor 021.07: Water damage at ceiling.

Toilet 021.21: Water damage at ceiling.

Toilet 023.07: Water damage at ceiling in NW corner of room.

Boiler Room 023.17: Water leaks from above are corroding connectors and staining floor.

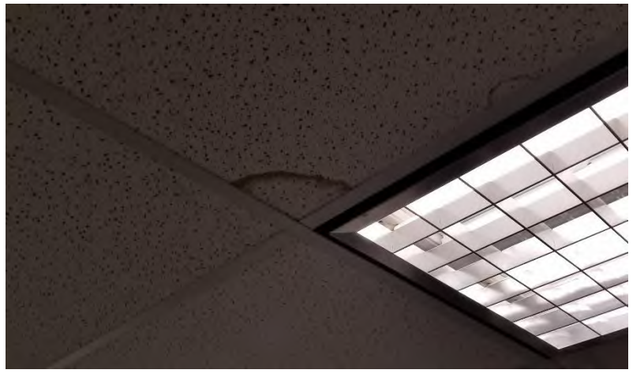


Transformer Vault 023.18: Multiple locations where water staining was present from bowl above. No active water.

Corridor 023.19: Water damage overhead to drywall partition.

Visiting Locker 023.21: Water damage at ceiling, east wall.

Chain Crew Toilet 023.22: Water damage at ceiling.



Ops Crew Office 023.24: Water damage at ceiling.

Home Team Locker Mechanical Room: Water damage at ceiling.

Typical Concessions: Water sits in light fixtures.

Office 023.27: Water damage at ceiling.

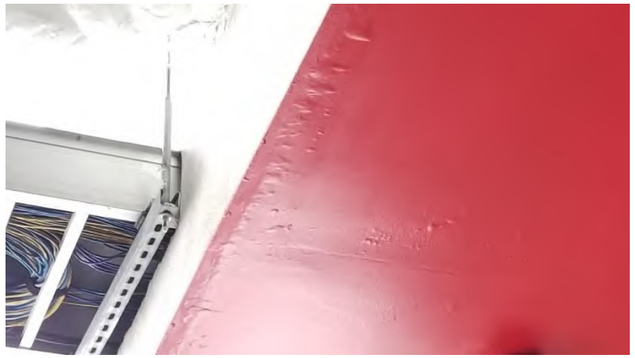
100 Level Pantries: Exhaust hoods exhibit a history of water intrusion

Dugout Suites: +/- 25% of all Dugout Suites exhibit some degree of water damage from leaks in the seating bowl above.

Official's Locker 023.28: Water damage at ceiling.

Typical Concessions: Water enters space at corners of overhead doors.

Dugout Suites: Joint between skylight framing and concrete bowl structure allows water into some suites below.



100 Level Concourse: Soffit near gridline 77 exhibits minor water intrusion from above.

Outside Men's 121.05: Water drains into room under door.

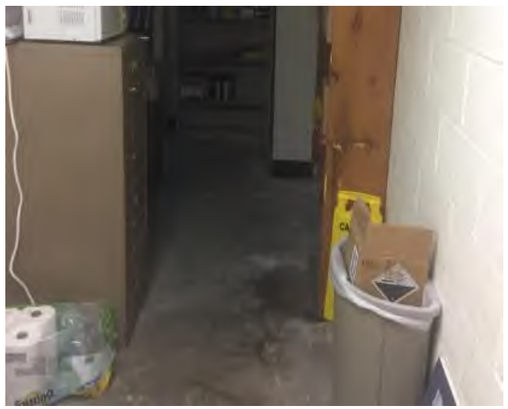
Mech 209.09: Water leaking from ramp above.

Electrical 101.03: Water leak from seating bowl above.

Machine Room 134.08: Precast planks at 200 level floor with water staining and potential cracking.

Holding 213.14: Water stains and damaged ceiling tile.

Mech 119.06: Water leaking through foundation retaining wall



Storage 202.01: Water on floor for roof leak.

Mech 214.06: Plastic placed to catch falling insulation created by water damage from ramp above.

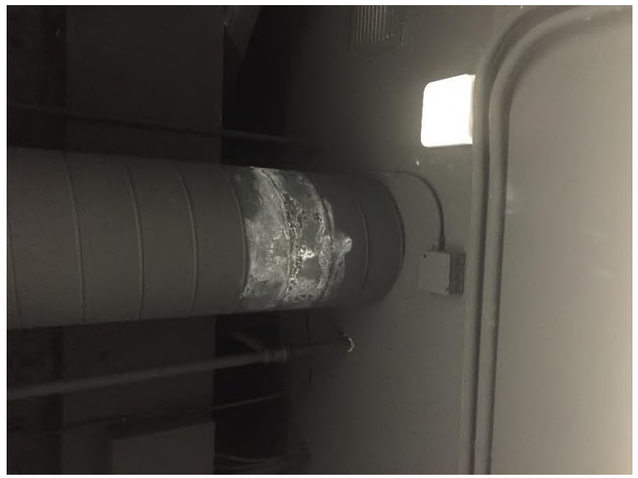
Janitor 229.05: *Ceiling tiles not replaced after leak repair.*

200 Level Corner Retail Stands: *Water enters space at floor line and cracks in masonry walls. Typical at four corners of stadium.*

IDF 233.10: *Drywall damage from water leak above.*

Mech 237.06: *Water on floor from water heater overflow.*

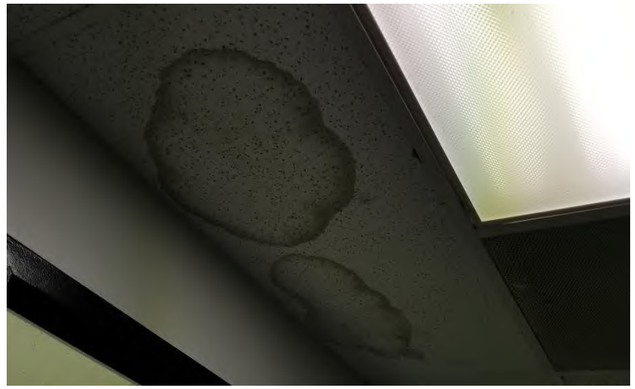
Mech 237.06: *Trash can positioned to catch water from roof leak.*



200 Level NFL Broadcast Booth: *Water damage from leaks at 300 level above.*

200 Level Sideline Super Suites: Water damage along expansion joints above. Both Suites experience substantial water damage to finishes.

300 Level Concessions and Vendors: Water enters space at door thresholds. Slabs outside slope toward door.



Admin Second Floor Building: Multiple areas of water intrusion apparent throughout the 2nd floor ceilings. Many are old leaks.

Closet 321.05: Water damage at ceiling.

Office 321.07: Water damage at ceiling.

Gate 1 Booth: Pavement has been regraded and trench drains added in front of booth entrances, but substantial water damage has already occurred.

Pump Building: Water sedimentation and efflorescence on block.

Pump Building: Roof leak overhead.

RECOMMENDATIONS

The resolutions to observed water damage may frequently lie in catching up with deferred maintenance at major building components like traffic coating, expansion joints, roofing, and sealants. Please refer to other applicable sections in this Report. Otherwise, continuing with the Bill's practice of finding leaks and prioritizing their repairs will need to continue.

EXPANSION CONTROL

Building expansion joints and their maintenance are discussed thoroughly in the Structural section of the Report. This section addresses the Architectural impact of failed expansion joints and damage due to the lack of expansion joints. Ultimately, failed and missing joints lead to water intrusion.

The primary stadium expansion joints occur along grid lines 19, 26, 63, and 70. They run through construction at the 100 Level, up through the 200 and 300 Levels, and through the Upper Seating Bowl above. These four joints affect the most in terms of protecting interior spaces. Minor building expansion joints also occur along grid lines 4 and 85 through the West End Suites, and near grid lines 41 and 48 through the 100 Level Concourse.

Although crossing through little above-grade construction, there effectively are expansion joints occurring along grid lines 12, 33, 56, and 77. The side line structures above the 100 Level stop at these four locations. There are minor impacts to the spaces below at the 100 Level, however.

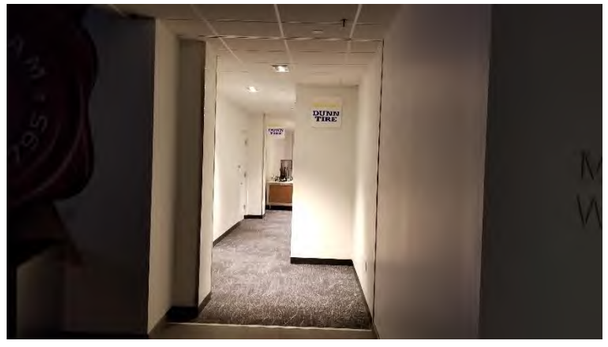
The condition of building expansion joints through the seating bowl is discussed in detail in the Structural section of the Report.

FAILED EXPANSION JOINTS

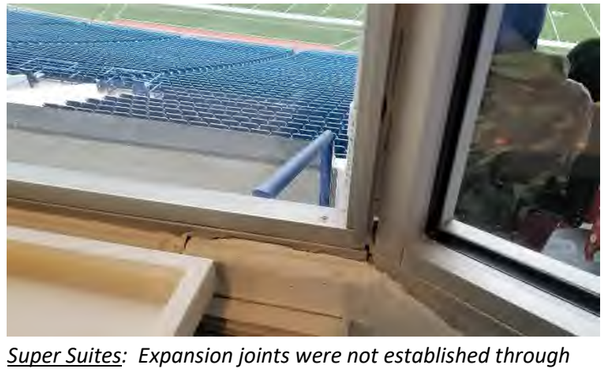
There is a long history at New Era Field of water intrusion occurring along the four major building expansion joints.

300 Level Concourse: Expansion joints across concourse have failed causing water damage in the Club spaces below. Several repairs have been attempted with marginal success. These joints are also subjected to salt intrusion and physical damage from snow removal operations. Conditions occur at Gridlines 19, 26, 63, and 70. Substantial collection pan infrastructure was built as part of the Sideline Club renovation project in 2017 however leaks are still prevalent in these locations.

Super Suites: Failed expansion joints above Suites at Gridlines 63 and 70 frequently leak into suites below causing material damage.



Corridor 231.17: Expansion joints at Grids 19, 26, 63, and 70 have not been cut through all partitions. See wall at left above that has started to exhibit drywall cracking from movement.



Super Suites: Expansion joints were not established through window system at Grids 63 and 70, leading to water intrusion and air infiltration.

100 Level East End Concourse: Expansion joints in concourse floor frequently leak into 000 Field Level spaces below at grid lines 41 and 48.

MISSING EXPANSION JOINTS

From the time of original construction at the stadium, several locations in the stadium were not provided with building expansion joints where movement can be expected. In these locations there are frequently visible signs of damage to floors, partitions, and ceilings. Some examples are provided below.

Ramp Landings: Expansion joints were not established through walls at Grids 12, 33, 56, and 77, leading to cracks in the corner shown and water intrusion in the spaces below.

Concession 332.03: Walls were built over a building expansion joints at gridlines 19, 26, 63, and 70 resulting in failed floor joints and cracked partitions.

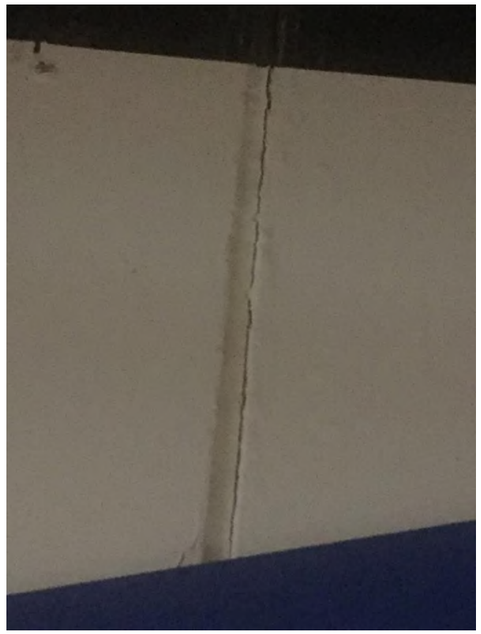
300 Level End Zone Stair: An expansion joint has not been established along gridline 56, between the Concourse structure and the End Zone Tower added in 1999. The sealant joint has failed with minor water intrusion below. The potential for similar damage to occur exists at grid line 33.

300 Level Concourse: Movement in walls adjacent to Gridline 77 is evidenced by cracks and spalling. The ramp wall in the foreground is effectively pulling on the wall exhibiting cracks because there is no expansion joint provided in the corner. The potential for similar conditions to develop exists at grid lines 12, 33, and 56.

FAILED SEALANT JOINTS

Expansion control maintenance also extends to smaller joints throughout the stadium, as most joints are intended to relieve expansion and contraction at smaller scales.

Outside Door 124.08: Zip-strip was never removed and sealed at joint in floor adjacent to grid line 48.



100 Level Concourse: Expansion joints between paired concrete columns were recently repaired, but show signs of sealant failures.

Field Level Drywall Ceilings: Joints between ceilings and walls have failed in several areas at the Field Level indicating movement in the adjacent structure.

100 Level Suite Alcoves: Floor joints below traffic coatings have failed in many locations.

100 Level Concessions and Restrooms: Sealant joints in walls at locations where newer partitions meet older partitions have failed in several locations.

Commissary: Sealant joints between interior drywall partitions and exterior masonry partitions were never sealed.

200 Level Corner Retail Stands: Sealant joints between masonry walls and the concrete stair structure above have failed, allowing water into the interior.

RECOMMENDATIONS

Sealant joint examination and repair is always a part of any annual maintenance budget. Developing a program that anticipates replacement of a predetermined quantity of joints each year can support better average joint conditions and improve upon water tightness. The Bills have such a program, but the anticipated level of joint replacements may need to be increased to keep up with observed problem.

- Refer to the Structural portion of this Report for recommendations at seating bowl expansion joints.

- Consider the installation of a metal gutter system and drain lines beneath each of the primary building expansion joints.
- Conduct a review of sealant joints throughout the building to determine which tend to fail more frequently. Consider alternative joint materials for those exhibiting the greatest movement. Adjust the quantity of joint replacements anticipated in each year's maintenance budget.
- Undertake a crash repair program to bring existing sealant joints into good repair all through the building.

MASONRY

Most concourses, restrooms, concessions, and many back-of-house spaces are enclosed with concrete masonry walls and partitions. Conditions of cracking and open joints are prevalent in many older or heavily used portions of the stadium. Most CMU walls remain in serviceable condition. The Bills periodically fund block replacement or repointing through the Capital Expenditures. The photos that follow are examples only.

Game-Day Locker Room Entrance: Impacts have damaged corners of masonry walls.

Drying Area 021.24: Movement between structure and masonry walls.

Telephone 021.41: Movement between structure and masonry walls.

Concession 136.05: Movement between structure and masonry walls.

Mechanical 209.09: Control joints not proper sealed in many of the MEP spaces below the ramps. Daylight visible in some locations.

Mechanical 209.09: Many block penetrations throughout all concourses and mechanical rooms are not properly sealed.

Suite 240A: Block cracking and separating at corner.

Elevator Lobby 331.05: Masonry exhibits cracking and movement in several directions.

Concession 332.02: Movement at expansion joint has cracked masonry wall.

Concession 334.04: Movement between structure and masonry walls.

Commissary Main Corridor: Shrinkage cracks in the floor slab have propagated up into the masonry.

RECOMMENDATIONS

Routine inspections and repairs are indicated. Refer also to sections in the Report concerning Expansion Control.

- Review outside corner conditions subject to impacts for the potential addition of corner guards.
- Review conditions exhibiting movement between the masonry walls and building structure to identify any conditions that may be worsening. Address as conditions indicate.

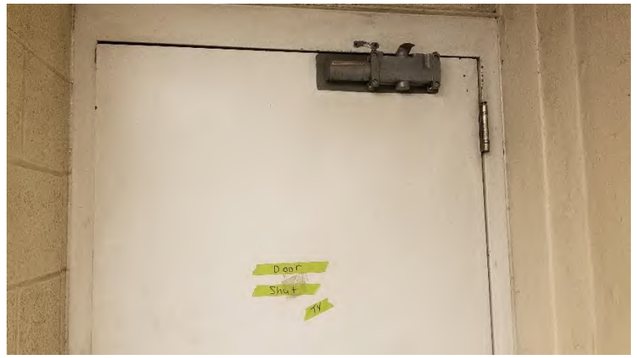
DOORS AND DOOR HARDWARE

Many stadium doors were replaced during the 2014 renovation project. And, the keying system for most of the building was replaced at that time. However, there remain a substantial number of older hollow metal doors and frames exhibiting varying degrees of deterioration. The Bills repair or replace several doors each year. There remain a few doors and other lockable building elements that are not on the 2014 keying system. Finally, normal wear and tear is taking a toll on doors and hardware throughout the stadium.

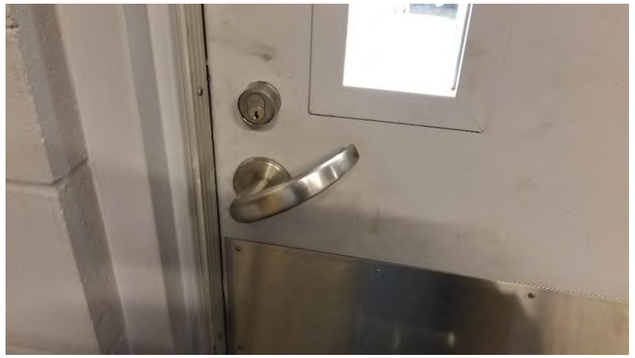
DAMAGE ISSUES

In many cases repairs and adjustments may be sufficient to address observed conditions. Other elements require replacement.

Many Locations: Older door frames exhibit sever rusting at floor



100 Level Pantries: Doors closers are not functional or are missing

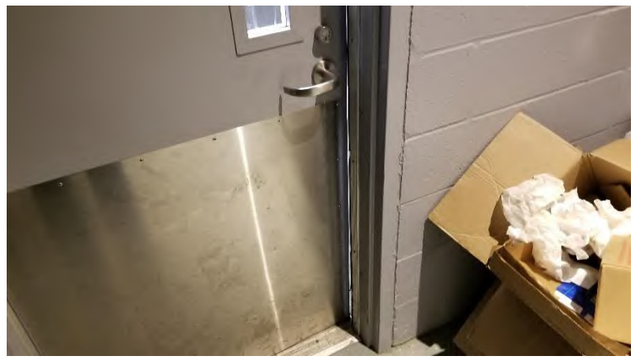


Concession 104.05: Lockset handle does not turn.

Concession 139.06: Bottom bar on overhead door is rusting

West End Camera Booths: Overhead coil shroud missing.

East End Bar: Sectional door bottom panels damaged from impacts.



Typical Concession: Weather stripping is damaged at concession doors.

West End Camera Booths: Door closer broken.

East End Bar: Damaged weather stripping at sectional door.

Freight Elevator Lobbies: Doors to lobbies are often damaged.

Elevator Lobby 331.05: Lockset is damaged and cannot be opened from within the Lobby.

Pump House: *Doors show signs of internal rusting.*

DOOR HARDWARE & KEYING ISSUES

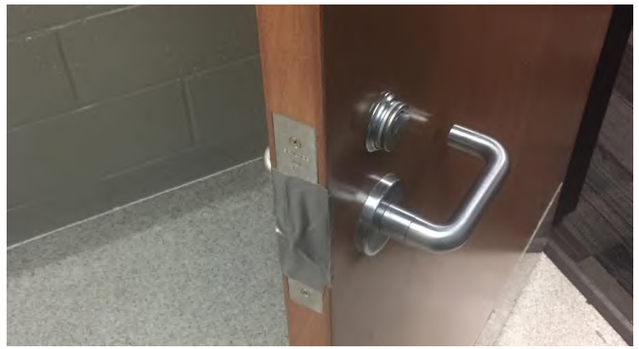
Changes in the type of hardware sets provided may address several conditions noted below. The Bills should also consider if any remaining doors not on the stadium keying system should be re-keyed.

Visitor's Locker Room 023.31: *Exit doors are locked from the corridor side and do not function if locked while occupied.*

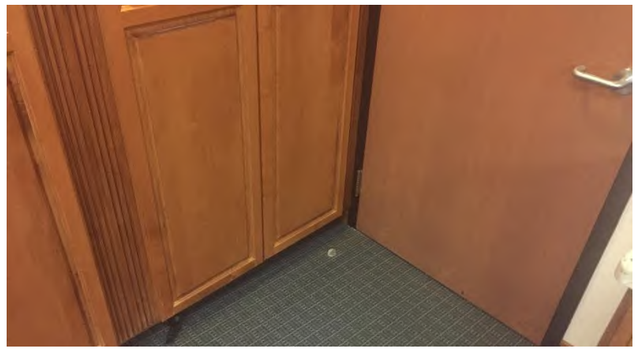
Storage 012.14: *Former handball court. Door lacks code compliant hardware.*

100 Level Concessions: *High-use doors often do not close and latch, exhibiting a need for closer adjustments or latch adjustments.*

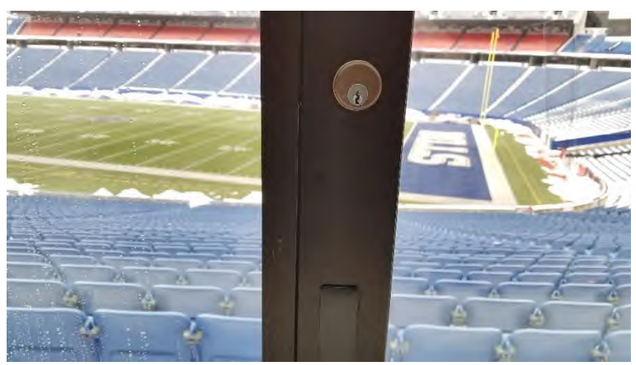
Janitor Closets: *Closet doors often have classroom lockets, but should be outfitted with storage locksets.*



West End Support Spaces (restrooms, janitors): *Hardware either does not work or locksets need to be updated to facilitate appropriate access to proper keys. 3-4 instances.*



West End Suites: *20% of un-renovated suites have millwork installed behind doors which prevent the door from opening 90 degrees.*



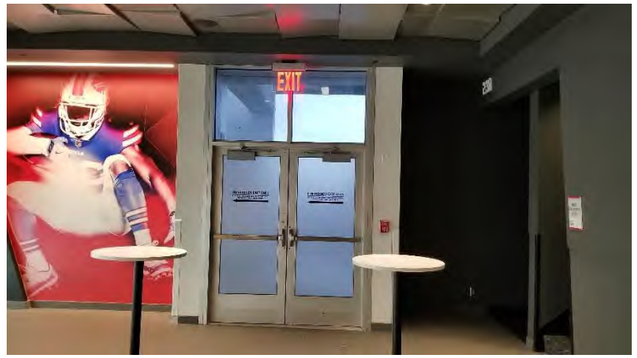
Dugout Suite Windows: *Window locks are not keyed on the same system as the rest of the building.*

OPERATIONAL CONCERNS

Adjustments to selected hardware may improve observed conditions.

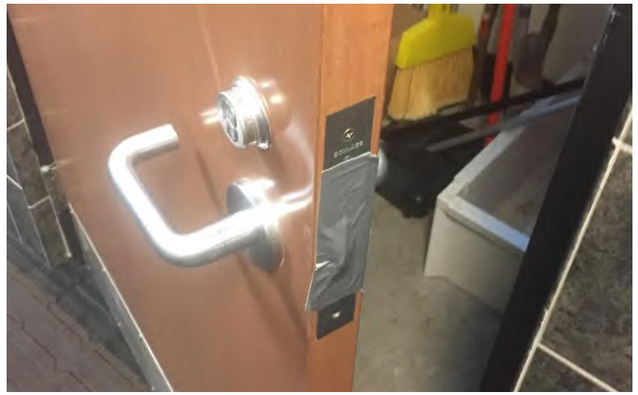
Typical Concession: Overhead doors often do not seal to countertop, allowing warm air to escape space.

Guest Services 333.03: Overhead door bottom bar allows heat to escape this small space.



Sideline Clubs: Bills would like hardware changed so that staff does not need to be posted at secondary exit doors.

Sideline Clubs: Bills would like better crowd control solutions to primary Sideline Club Entrances.



Key Control: Keying certain sets of door hardware to allow for their use by the proper groups of staff may indicate the need for updates, or for changes in practices. Taping locks can become a life safety issue at doors located in fire-rated wall construction.

RECOMMENDATIONS

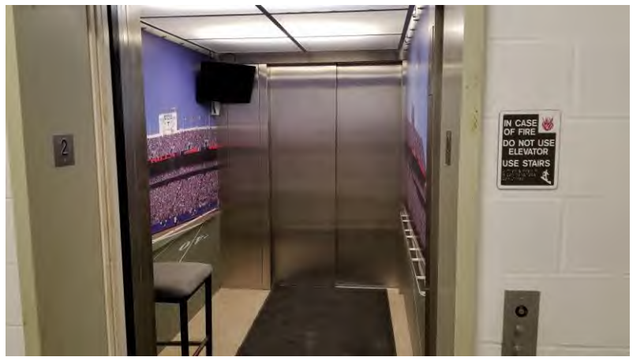
Many recommended actions should appropriate wait for other construction project scopes to be developed in the same areas.

- A program can be implemented to identify and replace older hollow metal doors and frames within the building.
- A program can be implemented to identify and replace door locks that are currently not part of the stadium keying system.
- A program can be implemented to identify specific doors exhibiting excessive wear and tear. Consideration should be given to modifying the hardware provided at these doors.
- Operational concerns with crowd control should be examined with the Bills to determine if specific hardware and control revisions are warranted. For example, the Sideline Club exit door issues described above can be handled with the addition of delayed release panic devices and alarms. Such revisions require coordination with the fire alarm system and the security access control system.

ELEVATORS AND LIFTS

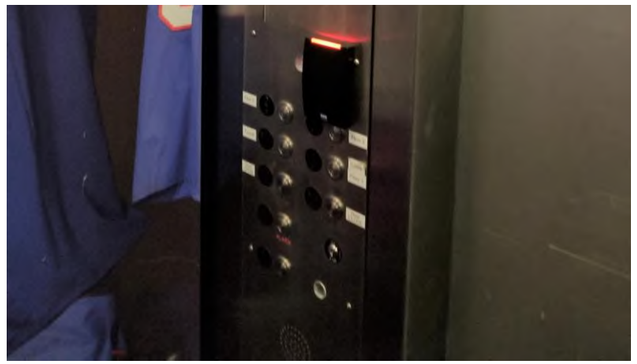
Most of the elevators and lifts within the facility are aging. Several may be past their useful life. The Bills have a maintenance contract for all of the elevators and lifts on site. They spend approximately $40,000 each year on the contract, which covers most repairs. That figure can be expected to increase over time, but is not that impactful to the operating budget. The risk lies in the sudden potential cost of a future elevator replacement.

Freight Elevators: Finishes in both elevator cabs are worn and damaged. Jambs exhibit a few impact spots.



Elevators: Finishes inside most stadium elevator cabs are out of date

Club Elevators: Floor numbering for all Club Elevators is not aligned with building level numbering.



Admin Elevators: Floor numbering for is not aligned with building level numbering. Tags provided to label stops.

Admin Elevators: Hoistway openings at the 2nd Floor of the Admin Building sit within an unprotected egress corridor.

RECOMMENDATIONS

Minor cosmetic repairs can be made to doors and frames to improve their appearance. Other recommendations include:

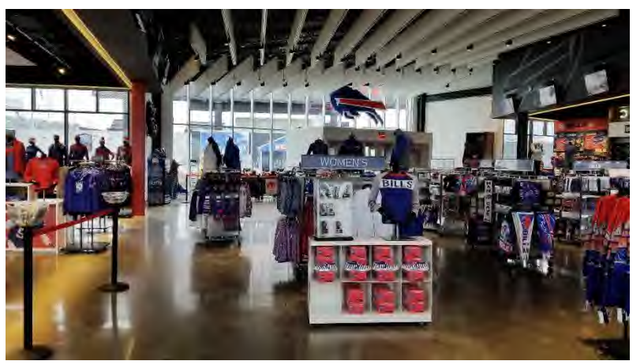
- A program can be implemented to update all elevator cab interiors with new flooring, ceilings, and wall finishes.
- As a part of cab upgrades, the floor numbering tags inside and outside of the cabs can be replaced as needed to correspond to the overall floor numbering system. Additional graphics can be added inside the cabs to supplement wayfinding.
- Whenever renovations of the 2nd Floor of the Admin Building are undertaken, the elevator hoistway openings should be provided with operable smoke curtains (like those installed at the 3rd Floor).
- Consideration should be given to establishing a rainy day fund to cover the costs of replacing an elevator should that become necessary in the future.

TEAM STORE

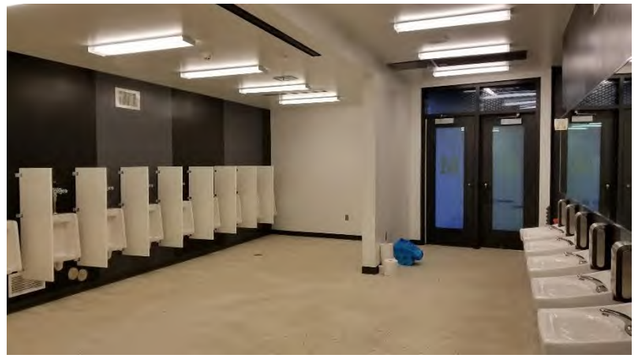
The Bills Store, constructed in 2014, is located along Abbott Road and is open year-round. It presents itself as the front door to the stadium. The Store building houses retail and storage space, a Guest Services Booth, and two large restrooms at each end of the building. Both the retail and restroom spaces are alternatively open either to the exterior or to the interior side of the perimeter fence line as the game-day schedule dictates.

Bills Store Entrance: In addition to being the year-round retail store, the entrance plaza is home to pre-game activities.

Bills Store Entrance: The pedestrian entrance is surrounded by a security boulder line.



Retail Space: View of the central retail space.



Restrooms: Restrooms are alternatively open to the street or to the stadium. There is no direct connection to the retail space.

Operationally, the Bills and DNC have noted a few issues that they would like to address. The large restrooms are not opened to the public on non-game days as originally intended due to the inability to monitor the use of these spaces. The keying of restroom door locks requires that Bills staff be present to lock and unlock the doors – as opposed to DNC staff. DNC would like to either have access to the restrooms from inside the retail space, or alternatively add a single toilet room inside the store.

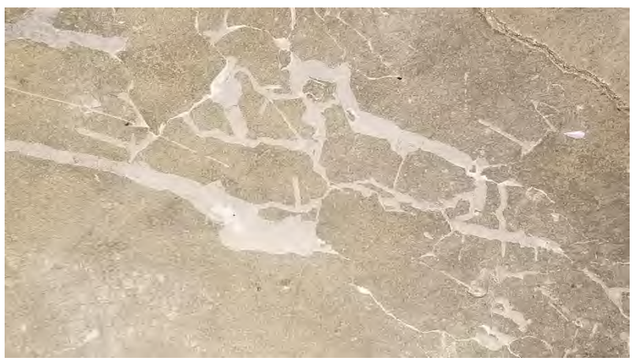
Although over 6,500 square feet in area, the size of the store is insufficient to handle crowds from the stadium side during games. Queues are set up outside the store and patrons are metered into the retail space.

Both the Bills and DNC would like additional lighting around the building and better signage to identify both the store and its parking lot from a distance.

Staff access to the Guest Services windows is only available through the secure retail warehouse area, requiring retail staff to let guest services staff into their own space.

Guest Services Window: The former ticket window area was changed into a guest Services Booth outside the stadium. In 2016.

Most of the finishes inside the Bills Store are nearly five years old and holding up well with only one exception. The clear floor sealer in the retail space is separating from the concrete in places.

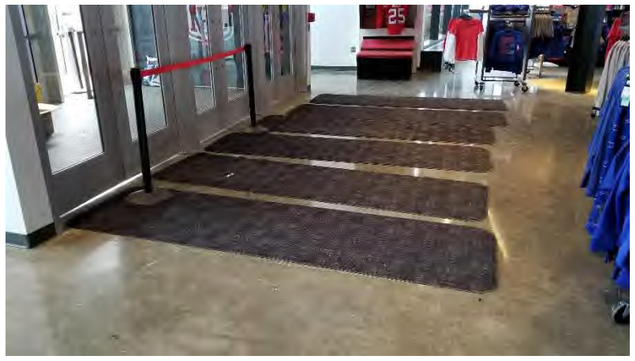


Team Store Retail Area: Clear sealer on floor is peeling in areas. DNC reports this started after a vendor worked in the space.

Team Store Retail Area: Clear sealer on floor can be slippery when wet. Staff noted issues during winter games.

Electrical Room: Electrical Room being used for additional storage space.

Warehouse Flooring: The tinted sealer coating is damaged in several areas.

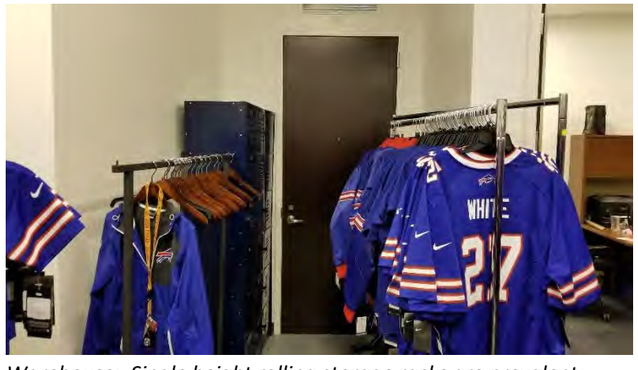


Team Store Retail Area: Clear sealer on floor can be slippery when wet. Staff noted issues during winter games.

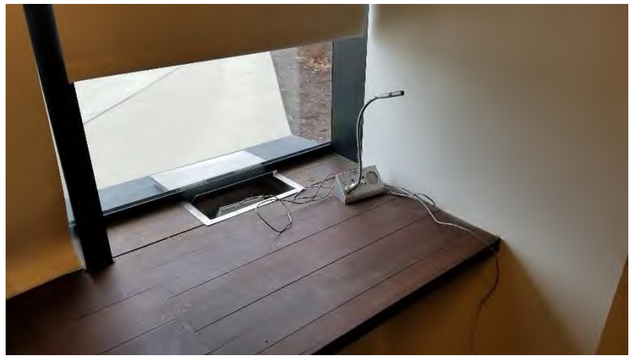
The high level of gloss on the clear sealer in the retail is good for cleaning purposes and looks nice, but the amount of snow and water tracked into the spaces from the stadium leaves it very slippery at times.

The retail warehouse appears to be smaller than needed. But, the space is lacking shelving and racks that could allow for more efficient use of the high space. Floor space is also taken up with office and break facilities, which further reduces the available storage area. The floor coating inside the storage room is failing due to material handling inside the room.

Warehouse: Make-shift office and break room space inside the warehouse.



Warehouse: Single height rolling storage racks are prevalent.



Guest Services: Wood countertop joints are opening up due to thermal movement and water damage. Communication system was never installed as intended. Both the Bills and DNC report that access to this space is awkward because representatives of both companies must be present to accommodate access.

RECOMMENDATIONS

Recommendations range from simple measures to full construction projects.

- Consider placing removable walk-off mats in the stadium-side queue line area outside of the entrance doors to help reduce the amount of snow and water tracked into the building.
- Obtain new storage racks and shelving that allow for more efficient use of the warehouse space for storage.

- Replace the Guest Services window counter with black SSM and complete the installation of the communication devices.
- Alternatively, determine if completely different Guest Services facilities are warranted elsewhere along Abbott Drive.
- Periodically replace the clear retail floor sealer.
- Consider a small construction project to reconfigure the area including the current Restroom TS214, Office TS213, and Guest Services TS212. The goal would be to create a small access corridor from the retail space to both the restroom and Guest Services, with any remaining space to be used for an Office alcove inside the warehouse.

COMMISSARY BUILDING

The Commissary Building was constructed in 2014. It is over 4 years old at this point, and is exhibiting signs of normal wear and tear for a building of that age. Most of the items presented below constitute either required on-going maintenance, or are areas damaged doe to impacts of one type or another. However, we do present one category of observations that all specifically relate to movement in the building structure.

BUILDING MOVEMENT

The items presented below exhibit signs of the building undergoing movement as evidenced by the damage shown in the photos. The Bills report that most of these items appeared shortly after the building opened in 2014. Accordingly, it is likely that most movement is a result of initial shrinkage in the building slabs-on-grade.

Retail Warehouse 3039: Masonry cracked at structure.

Men's Locker 3009: Slab movement at base of Column V1.

Slab-on-Grade Cracking: Old shrinkage cracks are present in many SOG areas within the building. Joints should be sealed.

Slab-on-Grade Cracking: Shrinkage cracks have damaged masonry partition above. Joints should be sealed.

Slab-on-Grade Cracking: Shrinkage cracks have carried through food preparation areas. Joints should be sealed.

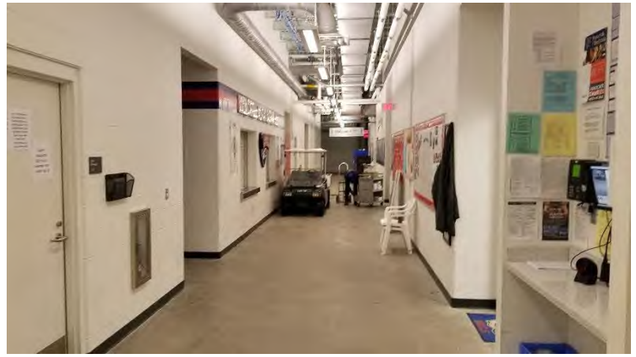
High-Bay Area: Impact damage to overhead door hood.

OPERATIONAL ISSUES

Reported operational issues may highlight items that might become part of a future renovation project.

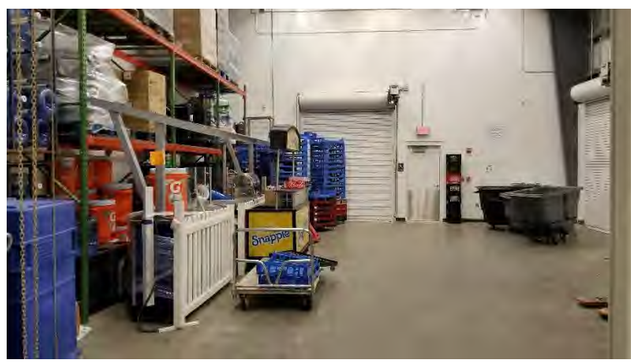
Dock Area: Bills report that dock area becomes congested when deliveries are scheduled when occupied by Broadcast Trucks.

Meeting Room 3044: Bills report that this room is too small when multiple networks work the same game.



Game-Day Corridor: Bills report this corridor becomes very crowded on game-days.

Event Staff Lockers: Accessible accommodations are limited and tend to block other lockers.



Loading Dock: Loading dock is being used for storage.

MISCELLANEOUS IMPACT DAMAGE

Normal building use often includes accidents of a small nature that leave damaged building elements exposed to view and to the weather. Appropriate repairs should be undertaken to maintain the integrity of the building over time.

Dock Area: Wall damage near dumpsters.

Rear Dock Area: Walls have been damaged by forklifts and snow plows.

Mechanical Room 3041: Damaged exterior weather stripping on doors.

Ice Factory: Ice chutes are damaged from impacts.

NORMAL WEAR AND TEAR

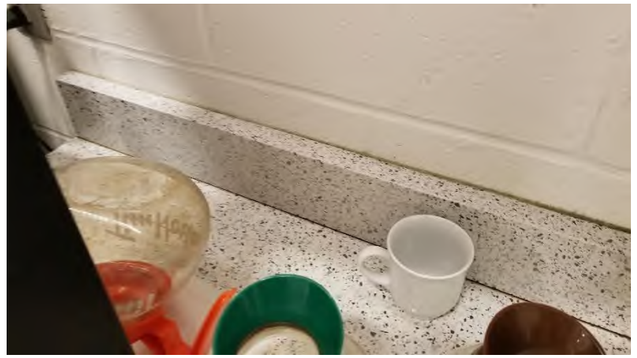
Routine maintenance practices can help to alleviate observed conditions.

Dock Area: Concrete deterioration at base of exterior stair.

Rear Overhead Door: DNC reports that this door sags and sticks, and is difficult to operate.

Commissary Kitchen: Pair of doors leading to the main kitchen are dinged up, smoke seals are damaged.

Commissary Kitchen: Floors are generally coated in grease.



Break Room; Others: Countertop sealants are typically stained in areas of heavier use.

Commissary Kitchen: Floors do not slope to trench drains.

Dock Area: Dock levelers exhibit rust, especially at exposed connections.

RECOMMENDATIONS

Minor adjustments in routine maintenance practices can take care of most items observed. Other actions that would be recommended include:

- Route out and seal all shrinkage cracks in floors and walls. Repair adjacent finishes as indicated.
- Minor impact holes in exterior wall panels can be sealed with compatible white sealant.
- Larger impact holes in exterior wall panels may require panel replacement.
- Replace missing or damage metal trim at exterior wall panels.
- Replace damaged ice chutes at ice factory. Consult with DNC to determine if a different type of chute is appropriate to their operations.

OPERATIONS BUILDING

The Operations Building was constructed in 2014. It houses shop and storage space, vehicle parking and repair bays, and provides offices, lockers, a break room, and meeting space for the Ops Staff. The building is alternatively used for temporary storage of equipment needed to be moved out of the stadium Field Level on Game-Day.

Some damage to the exterior walls has occurred from vehicle impacts.

There was an early history of leaks at the building's skylights. Those problems have been resolved, but a few small areas of water damage can be seen.

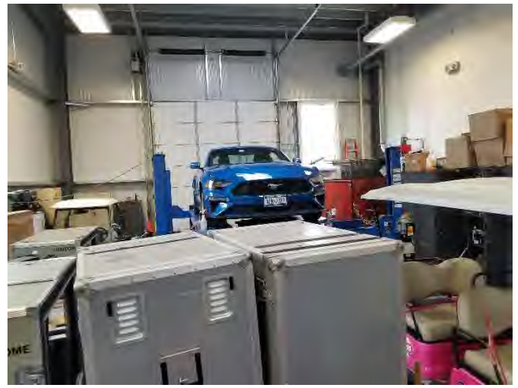
Floors surfaces not sloping toward drains was reported by the staff.

Staff indicated that they could use additional space for storing small vehicles out of the weather, and for enclosed equipment storage.

West Wall: Damaged metal siding trim around window.

Exterior West Side: Forklift damage to exterior wall panels.

Vehicle Bay 2: Wash-down floor does not slope to drains.



Vehicle Bays: Insufficient enclosed space for vehicles and equipment.

Conference Room: Evidence of water leaks in SE corner of room.

RECOMMENDATIONS

The building is in good condition and functions well except for the noted space shortages. Considering the difficulty of expanding this building so close to its creek-side location, we recommend that additional storage provisions be combined into a future storage or garage building project mentioned in other sections of this Report.

STORAGE SPACE

Storage space is generally in short supply throughout the stadium. Food Service storage needs are pervasive, as the Concession stands are extremely tight, lacking space to hold supplies sufficient for the length of a game and also hold trash. Stadium Operations and Guest Services both lack storage space where they need it. Many equipment items and vehicles are stored in open-air exterior locations, shortening their useful life due to extended weathering. Designated interior storage spaces are small and used inefficiently at times because they are located where space is found – not where storage space is needed. The Bills and DNC expend a lot of labor storing and moving the same materials around the stadium multiple times.

Typical Concession: Product sits on floor wherever space is available

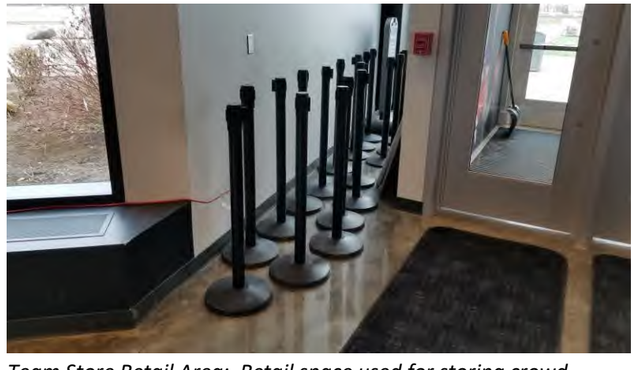
Concessions, Kitchens, and Pantries: Insufficient storage space is available within food service spaces, generally.

Commissary Corridors: Insufficient storage space is available for Event Staff operations.

Tunnel: Storage of field related items occurs within the tunnel entrance.

Concourses: Ice melt bags are distributed around most concourse spaces.

Janitor Closets: Storage space is limited in most Janitor Closets.



Team Store Retail Area: Retail space used for storing crowd control equipment.

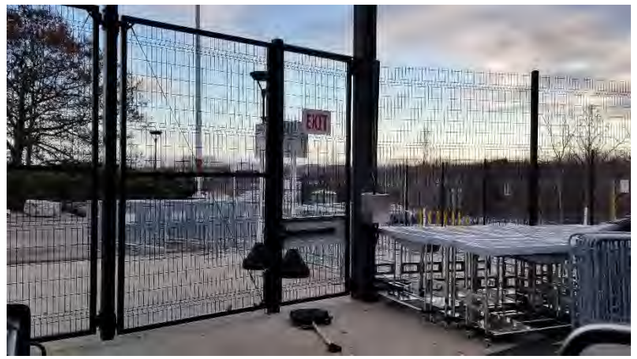
Team Store Electrical Room: Electrical Room being used for additional storage space.

100 Level Concourse – East End: Storage of snow removal chutes occurs within public concourse.

50-Yard Line Plazas: Food carts are scattered and unsightly. Food sales are reportedly minimal during cold months.

Official's Locker 023.28: Insufficient storage space.

100 Level Concourse: No dedicated parking space for EMS carts.

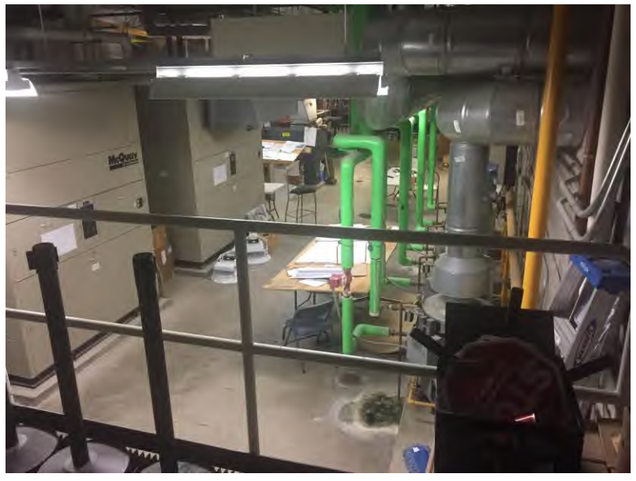


200 Level Entry Gates: Equipment used for searches and crowd control is stored on the open-air plaza adjacent to each gate.

100 Level Mechanical & Electrical Spaces: MEP spaces typically also used for storage.

50-Yard Line Plazas: Dumpsters, cart parking, and salt storage.

<u>200 Level Mechanical & Electrical Spaces</u>: MEP spaces typically also used for storage (attic stock for repairs here).



<u>200 Level Mechanical & Electrical Spaces</u>: MEP spaces are often used as office space for maintenance staff.

<u>Storage 321.02</u>: Designated storage areas are often inefficient due to lack of storage shelving or other organizing equipment.

<u>Near Butler Building</u>: Butler Building provides additional storage space, but more space is needed, especially for food service equipment.

<u>RECOMMENDATIONS</u>

Over the life of a facility, storage needs often take a back seat to other revenue generating and operational needs. It is not uncommon for storage to end up being located simply wherever space is found. A comprehensive facility review of storage needs and storage opportunities will likely still result in storage being scattered all over the stadium - unless a major renovation is undertaken that includes a focus on accommodating storage needs. Recommended options range from small scale improvements to construction of new dedicated storage space.

- Review existing storage spaces for potential additions such as shelving, bins, and lockers appropriate to their storage function with a goal of improving efficiency in the use of space.
- Review stadium spaces for opportunities to insert new storage closets or storage lockers.
- Review Concession stands at both the 100 and 300 Levels for increases in storage capacity through the addition of undercounter storage and overhead wall shelving.
- Work with DNC to investigate product packaging options that generate less trash within the Concessions stands.
- Develop four new central janitorial supply rooms at the 100 Level from space carved out of existing Mechanical Rooms 104.06, 119.06, 125.06, and 141.05.
- Develop a storage improvement program focused on programming storage needs throughout the stadium and identifying the most appropriate locations for storage of each type of item. Design and construct new storage facilities as indicated.
- Construct a new remote storage building for long-term storage of items infrequently used.
- Construct a new vehicle storage building.

WASTE HANDLING

Waste handling at New Era Field involves a number of varied activities and facilities. Not all activities appear to be well coordinated with services of separate departments. But, the waste handling practices employed are primarily a result of "making do" within the constraints of existing conditions.

Primary trash generators are concession food and beverage containers handled directly by patrons, internal concession stand activities, internal pantry/kitchen activities, and restroom trash. Eighty percent of food and beverage sales is beer. So, the aluminum can content of trash is high.

The Bills hire a cleaning service (Jani-King) that is also responsible for trash and recyclables collection and processing after each game. DNC's responsibilities for handling trash end just outside each concession and kitchen, or at the Commissary dock. Cardboard is not bailed, but is comingled with other recyclables.

The Bills have recently started replacing trash and recyclable containers around the public concourses. The newer units have larger capacities and appear to be of sturdier construction than the older units.

DNC staff collect trash within their concession and kitchen spaces, holding it inside these spaces through the game. Concourses are typically too crowded to allow for movement or trash or product during a game. After the game, DNC staff places bagged trash in the Concourse just outside of each stand.

Jani-King picks all trash up from concourses and moves it to collection points on small flatbed vehicles.

Recycle and Trash Containers: Bills have started to replace pictured units. Doors don't stay shut and get damaged. Containers inside are small and therefor numerous.

Recycle and Trash Containers: Newer containers pictured above.

Concourses: Trash is deposited in concourses after each event. Trash is held inside each Concession Stand, Pantry, Kitchen, and Club until after game-time. Most of these spaces have little room for trash holding.

Concourses: Trash leaks onto slab, often seeping into floor cracks.

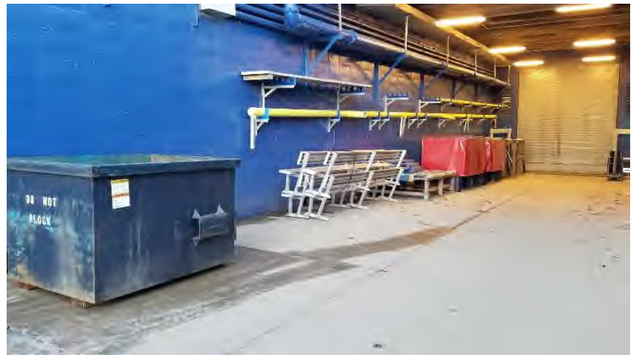
300 Level Concession Alcoves: Service supplies and trash often become wind-borne and blow into the seating bowl or concourse.

Most of the trash generated within the stadium ends up in large dumpsters positioned on the exterior 200 Level concourse and plazas. In this highly visible public space are positioned dozens of large dumpsters which are used by patrons as well as staff. There are dumpsters designated for recyclables and trash separately. These dumpsters are frequently located adjacent to the perimeter Entry gates, and near many entrances to the Club Lounges and Suites. A security review also identified that the dumpsters provide places for people to hide from security staff.

Exterior Concourse: Unsightly and inconvenient trash dumpsters are maintained along the exterior concourses.

Entry Gates: Trash dumpsters are positioned next to each patron Entry Gate.

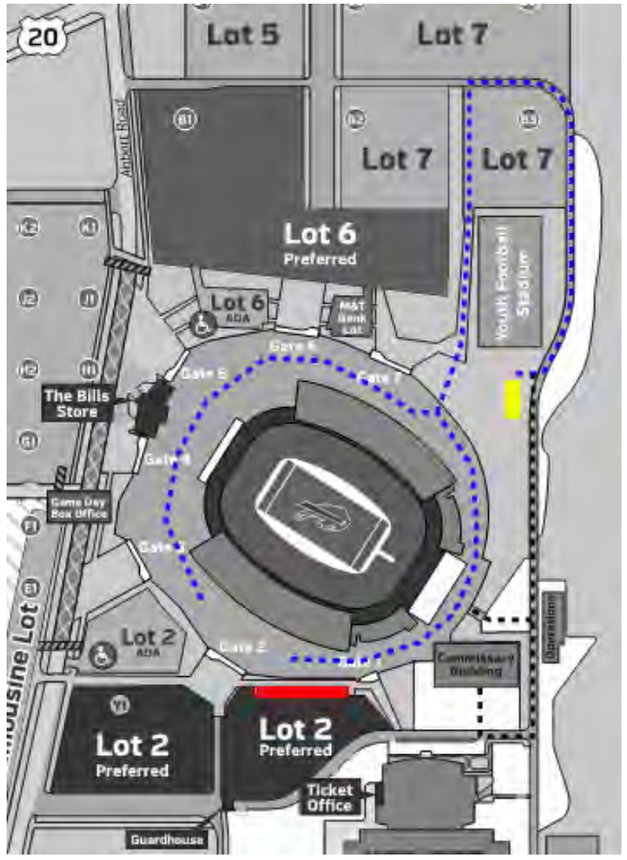
50-Yard Line Plazas: Dumpsters positioned near primary Club entrances.



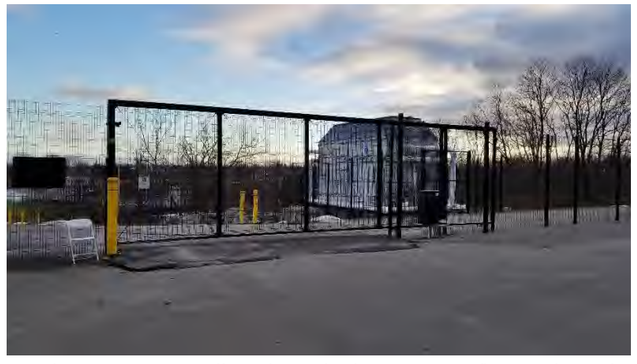
Field Tunnel: Individual dumpsters are often positioned wherever they fit.

New Era Field lacks a central trash dock where all of these varied activities might be co-located and related processes therefor optimized. Instead, trash vehicles arrive at the 200 Level Concourse to directly collect trash from the dozens of dumpsters to be hauled away. Other trash destined for an on-site compactor is hauled great distances by Jani-King along circuitous routes. See map below. The blue line indicates routes taken from the stadium, through Jani-King's compound, and around the parking lot to a compactor. The black line traces a separate route for trash collected at the Commissary and Field Level. The yellow box marks the location of the single compactor. The red box marks the location of an unused collection area constructed in 2014.

A typical new stadium facility housing over 70,000 people would be expected to have 3 or 4 compactors each with 40 yard bins. A central trash dock located near the commissary would typically house this equipment, plus 2 or 3 small dumpsters for separated recyclables, a cardboard bailer, and a grease tank.



Waste routes: Site map showing waste handling routes.



North Service Gate: All trash inside the perimeter fence is brought through the operable North Service Gate.

Jani-King Compound: The cleaning service is housed in trailers and tents. Trash is trafficked through these areas.

Near Butler Building: The facility's one waste compactor resides far from the stadium. Area is fouled with liquid waste.

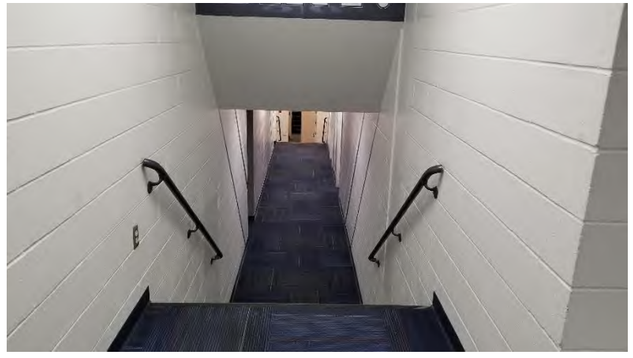
RECOMMENDATIONS

The creation of a conveniently located central trash dock could clean up the appearance of concourses and optimize waste handling procedures by facilitating fewer shorter moves (and even fewer trash truck trips off-site). This is potentially a big project. So, the development of a design that accommodates needs with minimal new construction is indicated.

- Complete the purchase of new concourse trash and recyclable containers.
- Consider a major floor treatment improvement project on the 100 Level Main Concourse. Refer to Concrete Slab section in this Report.
- Design and construct a new central trash facility addressing the issues noted above.

MISCELLANEOUS ISSUES

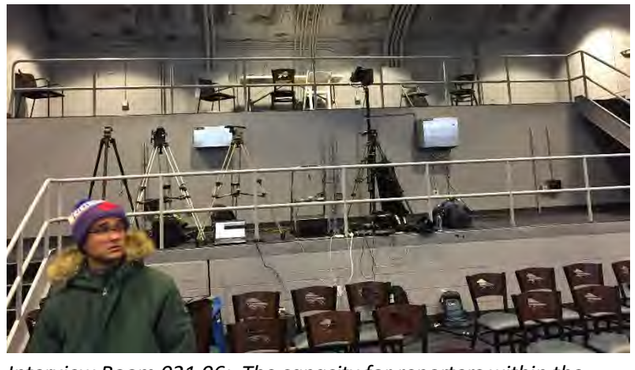
Some conditions within the facility are symptomatic of broader issues, and are not manifested by damaged or worn materials. The photos and descriptions that follow were collected either by direct observation from the Assessment Team, or are taken from conversations with Bills staff. These issues generally describe changes in the use of a space over time, inappropriate use of a space, or the inadequacy of a given space for its intended purpose. Please also refer to the Storage and Waste Handling sections of this Report.



Corridor 021.13: Bills have recently started using this corridor to access the field. Bills would like a wider pathway for players.

Game-Day Trainer's Room: Sub-par by NFL standards.

Game-Day Exercise Room: Sub-par by NFL standards.



Interview Room 021.06: The capacity for reporters within the room is less than desirable.

100 Level Concourse: *Narrow concourse width leads to conflicts between queue lines and patrons traversing the concourse.*

100 Level West End: *Positioning of portable carts at base of ramps leads to significant congestion here during games.*

Base of West Ramps: *Crowded concession queues back up into the ramp landings.*

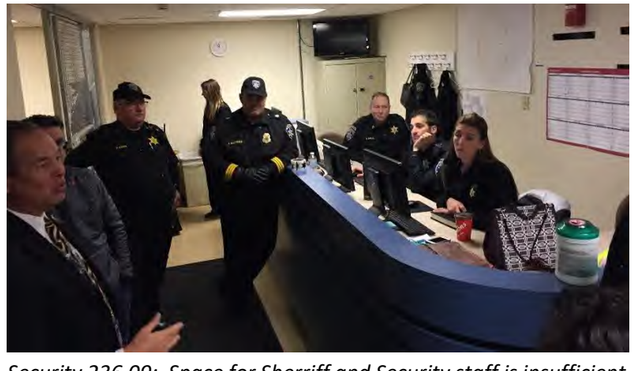
East End Bar: *Used for non-game-day storage of coaching camera equipment.*

Mech and Elect Rooms: *Storage inside MEP spaces.*

Mech and Elect Rooms: *Use of MEP spaces as impromptu office, break room, or warming space.*

Sideline Club Deliveries: *Deliveries arrive at main entrance doors. Product is carted by hand through lounge spaces.*

SE Retail Stand: *Lowest performing Retail Stand has been shuttered and turned into storage space.*

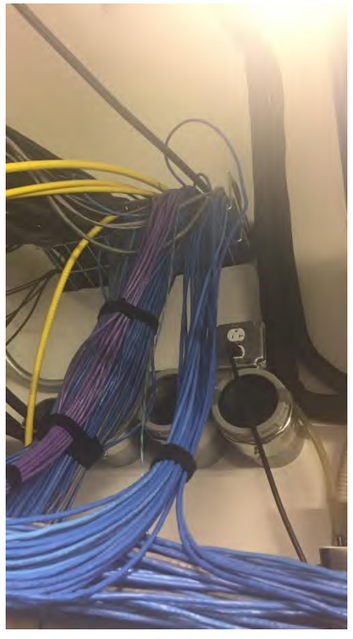


Security 236.09: *Space for Sherriff and Security staff is insufficient, which lead to the addition of temporary huts outside.*

Security 236.09: Cages, interview rooms and auxiliary spaces utilized for unintended uses (walkie storage, jerseys, and wands).

Security Huts: Located directly outside Security Office due to lack of space inside.

Sideline club amp and electrical rooms: Spaces typically serve primarily as and equipment janitorial storage



NFL Broadcast Area: Exposed cable trays and pathways are not utilized. New above ceiling pathways were created instead.

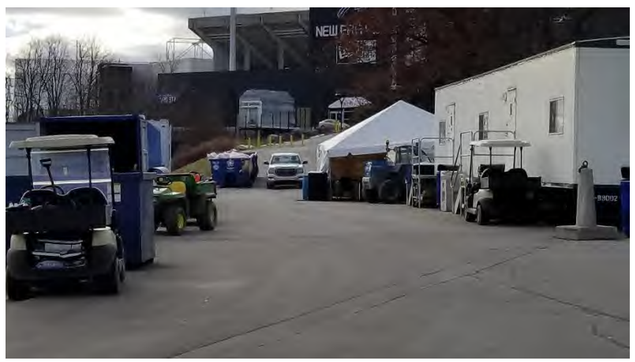
Command Center 322.01: Bills would like additional space for game-day operations inside the Command Center.

West End Pyrotechnic Booth: No storage included for rigging.

Broadcast Meeting Room: Room in the Commissary Building is too small for double broadcast teams.

Game-Day Box Office: Ticket windows were moved to a game-day location outside of the perimeter fence.

Game-Day Retail Stand: A Retail Stand was added next to Abbott Road to accommodate crowds arriving at the stadium.



Cleaning Crew Compound: Trailer compound was added after the old pole barn was demolished in 2014.

BUILDING CODE / ACCESSIBILITY OBSERVATIONS

ADA COMPLIANCE

The 2010 *Americans with Disabilities Act Standards* (ADA) provided the basis for accessibility reviews at New Era Field. In New York State, additional requirements may be found in Chapter 11 of the *2015 International Building Code* (IBC as adopted by the state, and by reference in the current version of ANSI A117.1 *Accessible and Useable Buildings and Facilities*.

Several accessibility studies have been made over the years at New Era Field, including a comprehensive review made in 2010, and follow-up condition reviews in 2014 (after the last major renovations at the stadium). Comments found in this report are taken from those earlier reports, and from confirming observations made recently by the assessment team.

Observations presented below are organized by the typical space groupings where specific non-conforming items are found.

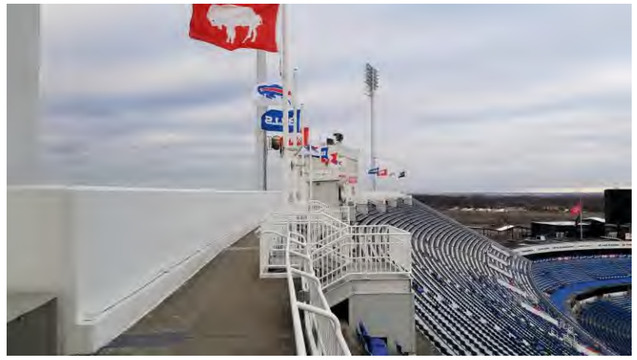
SEATING BOWL

As the seating bowl was constructed long before ADA came into existence, there are several structural configurations to the bowl which inherently prevent full accessibility. Many seating areas are not provided with any accessible seating, including the entire Club Level and most of the Suites within the stadium. Other areas have been outfitted as best as possible with the construction of inserted accessible platforms. Currently, the Lower Bowl is provided with 122 accessible seating spaces, and the Upper Bowl with 60 spaces. Additionally, the M&T Club is provided with 9 spaces, and the Goal Line Club with 8 spaces. These account for a total of 199 accessible seating spaces within the entire stadium. The 2010 ADA Standards would require approximately 365 total accessible seating spaces for New Era Field.

Club Deck Seating: No accessible seating is provided.

Lower Deck Seating: Platforms are provided in both endzones.

Lower Deck Seating: Individual accessible seats are provided in pairs at the base of each vomitory along the sidelines.



Upper Deck Seating: Accessible seating platforms are provided along the top of each sideline, accessed via elevator.

DUGOUT SUITES

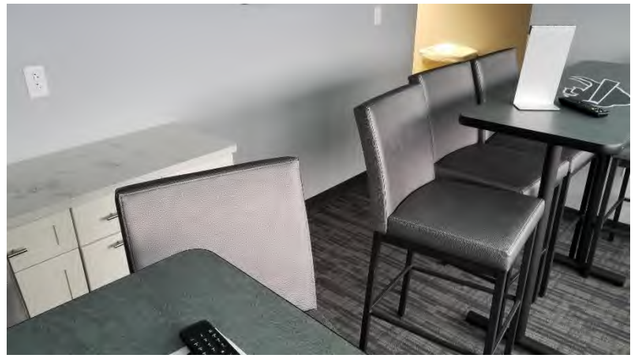
There are 57 “Dugout” Suites positioned along the top of the Lower Bowl. These small Suites were shoe-horned into the seating bowl in 1999. The suites are accessed via very circuitous routes from the 100 Level Main Concourse. Access issues that occur in most of the Dugout Suites include:

- Maneuvering clearances at chair lifts are insufficient, both at top and bottom of lifts.
- Depth of suite entry doors within recess exceeds 8 inches.
- Side clearances are often not provided at suite entry doors.
- Opening force of suite entry door exceeds 5 pounds.
- Vision panels in doors are positioned far above 43” AFF.
- An accessible route to seating areas is often not available.
- Accessible sightlines are not provided for seating areas within the suites.
- Not all suites are provided with accessible height tables.
- Wall phones are positioned well above 48” AFF.
- Wall-mounted TV’s protrude into walkways beyond 4 inches.
- Coat hooks are positioned well above 48” AFF.
- Countertops are typically set at 36” AFF (instead of 34” AFF).

- Windows are not provided with accessible operating hardware.
- Appliances and sinks are not provided with proper approach clearances.
- Restroom countertops interfere with access clearances.
- Urinals and screens, where added, interfere with access clearances.
- Accessible plumbing fixture clearances are not provided.
- Plumbing guards are not provided at restroom lavatories.
- Toilet accessories are not mounted in accessible locations.
- Restroom signage is non-compliant or is not provided.

Dugout Suites: There are no seated views within the Dugout Suites that provide sightlines over standing patrons.

Dugout Suites: All Dugout Suites are provided with chair lifts – most not having proper approach clearances.



Dugout Suite 140A: Occasionally there is no accessible pathway to viewing positions within the suite.

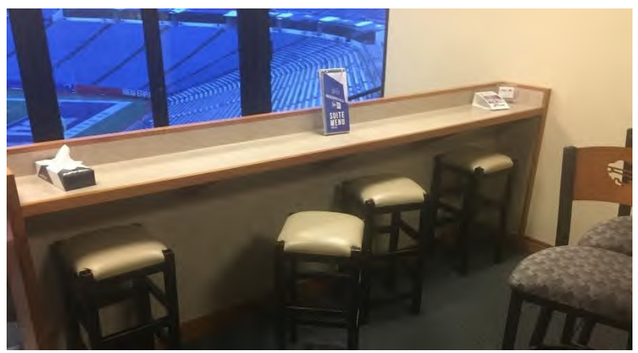
Dugout Suites: Appliances and sinks are typically not accessible.

Dugout Suite Restroom 129 AB: Addition of urinal leaves the restroom with inaccessible approaches to any fixture.

WEST END SUITES

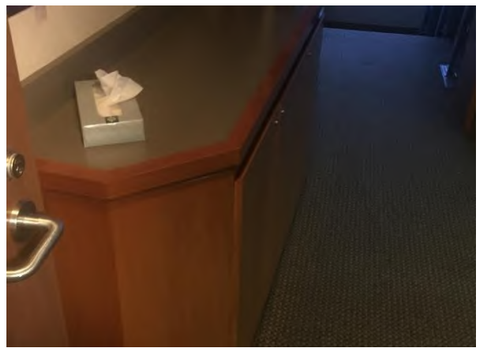
There are 35 West End Suites positioned above the bowl in the west endzone. These slightly more spacious Suites were also added during the 1980's. The suites are accessed via ramped routes from the 200 Level west plaza. Access issues that occur in most of the West End Suites include:

- North & south ramps leading to West End Suites are not provided with compliant rails and edge protection.
- West ramps leading to West End Suites have slopes exceeding 5% and also lack handrails.
- Entry doors to the West Suite Corridor are not provided with level landings.
- Suite entry door clearances are often obstructed by countertops and furniture.
- Vision panels in doors are positioned far above 43" AFF.
- An accessible route to seating areas is often not available due to placement of countertops and furniture.
- Not all suites are provided with accessible height tables.
- Wall phones and thermostats are positioned well above 48" AFF.
- Wall-mounted TV's protrude into walkways beyond 4".
- Coat hooks are positioned well above 48" AFF.
- Countertops are typically set at 36" AFF or 42" AFF (instead of 34" AFF).
- Appliances and sinks are not provided with proper approach clearances.



West End Suites: Un-renovated suites do not include accessible seating areas with proper sightlines.

West End Suites: 15% of un-renovated suites do not include accessible bar top seating.

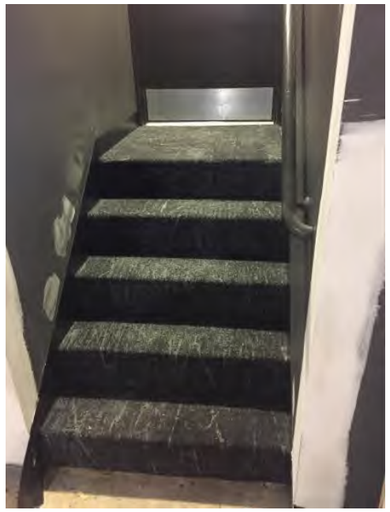


West End Suites: 75% of unrenovated suites had millwork installed at entries that prevent proper door clearances.

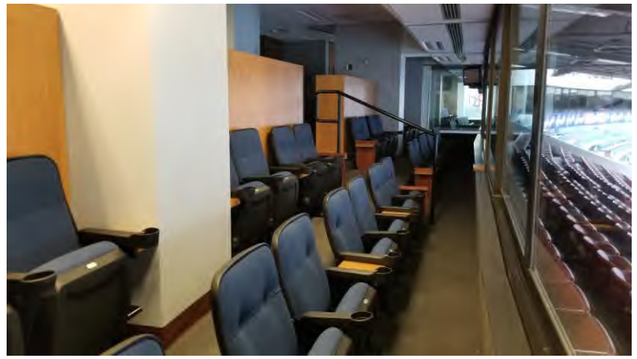
SIDE LINE SUITES

There are 34 Side Line Suites positioned above Club Level seating sections along the side lines. These suites are part of the original stadium construction. They are accessed via stairs through common Club Lounge spaces. Side Line Suites are provided with individual restrooms that are sometimes shared with adjacent suites. Access issues that occur in most of the Side Line Suites include:

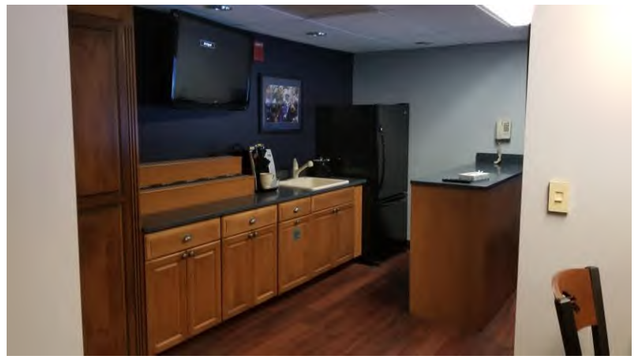
- There is no accessible route provided to any of the Side Line Suites. Access is via stairs over a 40" vertical rise from the adjacent Club Lounge floors.
- Adequate clearances at suite entry doors is not provided.
- Vision panels in doors are positioned far above 43" AFF.
- An accessible route to seating areas is often not available.
- Not all suites are provided with accessible height tables or counters.
- Wall phones are positioned well above 48" AFF.
- Wall-mounted TV's protrude into walkways beyond 4 inches.
- Coat hooks are positioned well above 48" AFF.
- Countertops are typically set at 36" AFF or 42" AFF (instead of 34" AFF).
- Appliances and sinks are not provided with proper approach clearances.
- Restrooms often do not provide required maneuvering clearances.
- Some restroom doors do not provide 32" clear width.
- Restroom pocket door hardware is not graspable.
- Restroom lavatories do not provide for knee clearances.
- Toilet accessories are not always mounted in accessible locations.
- Restroom signage is non-compliant or is not provided.



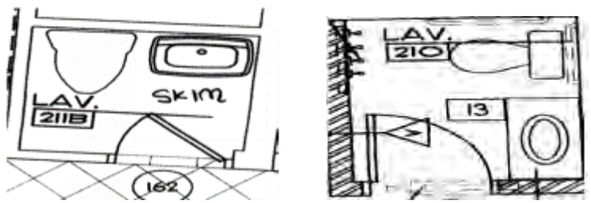
Side Line Suites: The only access to these suites is via stairs.



Side Line Suites: Only a handful of Side Line Suites provide accessible seating areas within the suite.



Side Line Suites: Suites typically do not have accessible approaches to countertops, appliances, sinks, or phones.



Side Line Suite Restrooms: None of the suites are provided with accessible restroom clearances.

CONCOURSES

Concourses at both the 100 Main Level and 300 Upper Level were renovated in 2014. Most access issues were corrected at that time. There remain a few items generally found throughout all concourses that were not addressed as part of the 2014 project.

- Concourse floors at the 100 Level are a patchwork of different slab materials (typically concrete or asphalt). The slab exhibit a lot of cracking and heaving, which has led to excessive uneven floor surfaces in many locations.
- Uneven floors have led to non-compliant slope conditions at some doorways.
- Vehicle ramps leading to and from the 300 Level Concourse are also pedestrian ramps. These ramps have excessive slopes and lack intermediate landings.
- Drinking fountains were removed as part of the 2014 renovation, and replaced with water served in paper cups at Guest Service stands. The Bills have indicated that this practice is very labor intensive.

100 Level Concourse: Concourse floor surfaces present numerous cracks and uneven shifting slab edges.

New storage adjacent to 117.09 Women: Ramp outside of door not accessible. Railing along accessible route removed.

300 Level Ramps: Ramps have excessive slope and lack intermediate landings.

CONCOURSE RESTROOMS

Many concourse gang restrooms were renovated as part of the work performed in 2014. In general, those restrooms are fully accessible with the exception of some older door hardware remaining in places.

Older gang restrooms not renovated as part of the 2014 project still exhibit many non-compliant access issues. These restrooms include the following spaces:

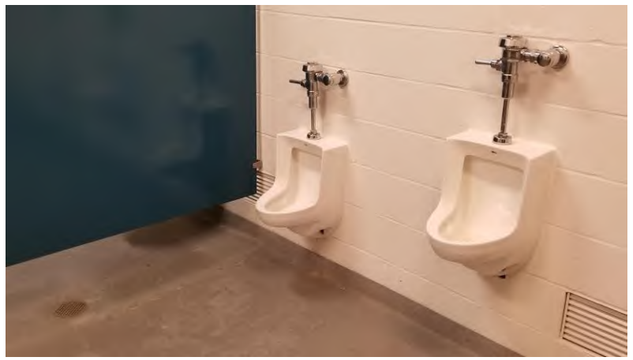
- 100 Level “Berm Toilets” (8 rooms).
- 300 Level “Tower” restrooms (8 rooms).
- 400 Level “Tower” restrooms at the top of the Seating Bowl (8 rooms).

The types of non-compliant access conditions in these restrooms generally include the following:

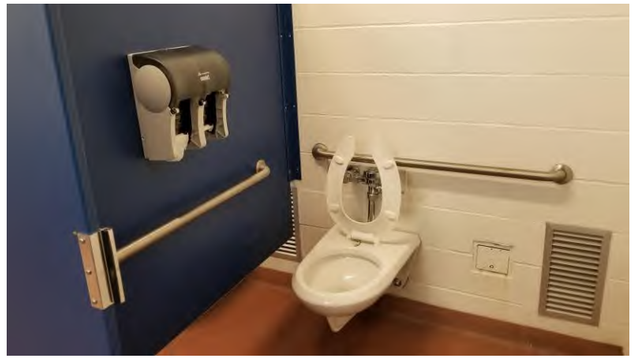
- Gang lavatories remaining in use do not provide accessible approaches or controls within accessible reach ranges.
- Watercloset stalls intended to be accessible often have non-compliant dimensions, approaches, door swings, and accessories.
- Alternate stall configurations (36” or 48” width) are not provided in any of the older restrooms.
- Urinals intended to be accessible are sometimes at incorrect heights, and lack required grab bars.
- Smaller restrooms often do not have required clearances at restroom entrance doors.
- Mirrors are often placed on walls at heights exceeding 40” AFF to the bottom of the mirror.

Gang Lavatories: Gang lavatories of several types still remain in many public restrooms. These lavatories do not provide accessible clearances or controls within allowable reach ranges.

"Accessible" Stalls: Older toilet stalls labeled as accessible typically are not dimensionally compliant, do not have doors swinging in the correct direct, do not provide required types of stalls, or do not have required accessories.



Urinals: Urinal heights & grab bar configurations that are not accessible remain in many restrooms.



Stalls: Many of the accessible stalls in older restrooms do not have accessories configured in an accessible location.

PREMIUM CLUB RESTROOMS

Although many of the premium club spaces in the stadium have been renovated since 2014, these improvements typically did not consist of anything beyond paint inside the Club Restrooms. Many of these restrooms still exhibit non-compliant access issues, although with less frequency than at the concourse restrooms. These club restrooms include the following spaces:

- 200 Level West End Suite Restrooms (6 rooms)
- 200 Level Side Line Clubs (16 rooms)
- East End Clubs (corners clubs - 6 rooms)

The types of non-compliant access conditions in these restrooms generally include the following:

- Restrooms often are not provided with required maneuvering clearances at entry doors.
- Watercloset stalls intended to be accessible often have non-compliant dimensions, approaches, door swings, and accessories.
- Alternate stall configurations (36" or 48" width) are not provided in any of the older restrooms.
- Urinals intended to be accessible are sometimes at incorrect heights, and lack required grab bars.
- Restroom lavatories are sometimes mounted higher than 34" AFF.
- Toilet accessories are not always mounted in accessible locations.
- Restroom signage is non-compliant or is not provided.

Accessible Stalls: Doors at accessible stalls often swing in the wrong direction.

Watercloset: Vertical grab bars are often missing at accessible stalls.

Urinals: Required grab bars are often missing at urinals.

BACK-OF-HOUSE RESTROOMS & SHOWER ROOMS

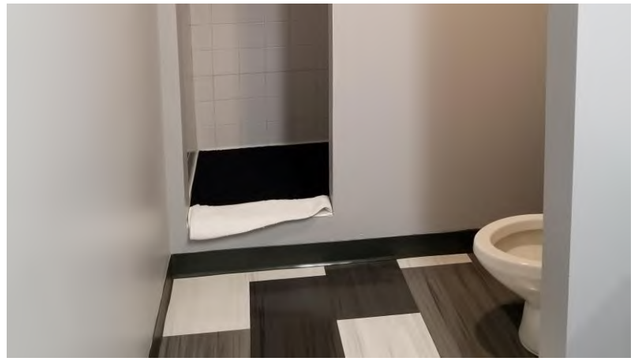
Many smaller back-of-house employee restrooms and locker room facilities have not been updated since the time of their original construction. Some have been provided with updated finishes, only. Most of these restrooms exhibit non-compliant access issues. These restrooms include the following spaces:

- 000 Field Level Players, Officials, and Game-Day Staff restrooms (6 rooms).
- 200 Level First Aid & Security restrooms (4 rooms).
- 200 Level Admin Building restrooms (4 rooms)
- 300 Level Admin Building restrooms (4 rooms)

The types of non-compliant access conditions in these restrooms generally include the following:

- Smaller restrooms often are not provided with required maneuvering clearances at entry doors.
- Accessible stalls are not provided in some gang restrooms.
- Watercloset stalls intended to be accessible often have non-compliant dimensions, approaches, door swings, and accessories.
- Urinals intended to be accessible are sometimes at incorrect heights, and lack required grab bars.
- Accessible shower stalls are not provided.
- Shower stalls that are provided often do not have flush sill conditions.
- Restroom lavatories are sometimes mounted higher than 34” AFF.
- Toilet accessories are not always mounted in accessible locations.
- Mirrors are often mounted higher than 40” AFF to the bottom of the mirror.
- Restroom signage is non-compliant or is not provided.

Game-Day Lockers: Stalls are not accessible. Lavatories do not provide knee clearances. Mirrors and accessories are not mounted at accessible heights.



Field Level Shower Rooms: Curbs at shower entries are not accessible. Accessible approach space not provided.

Sideline Medical and Security Restrooms: Missing vertical grab bars.

Newly Renovated Tunnel Spaces: Signage is not compliant.

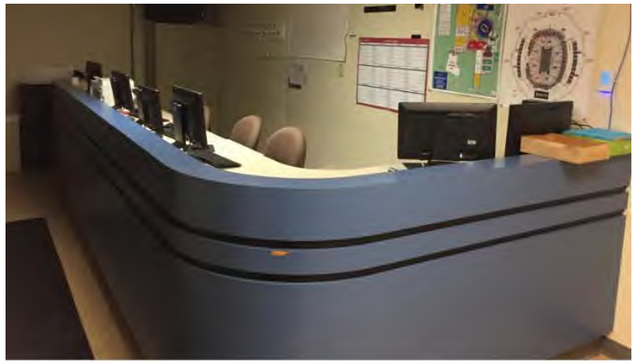
MISCELLANEOUS BACK-OF-HOUSE SPACES

Many smaller back-of-house employee spaces exhibit non-compliant access issues. Often these items are minor in nature, although several can occur within the same space. These rooms include the following types of spaces:

- Security & First Aid Rooms
- Employee break rooms
- Janitor closets
- Storage rooms
- Mechanical and electrical rooms

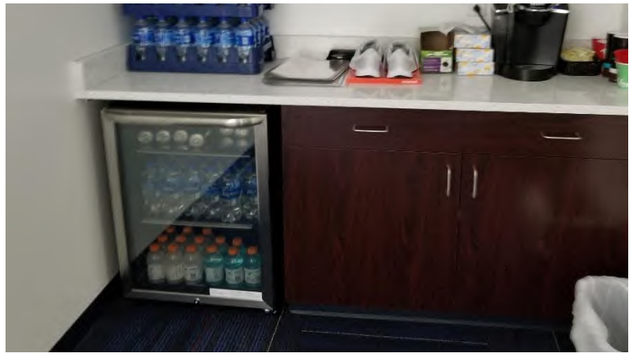
The types of non-compliant access conditions in these rooms generally include the following:

- Lack of doorway clearances into smaller spaces.
- Lack of turn-around space inside smaller rooms.
- Countertops that exceed 34” in height.
- Appliances that are not provided with an accessible approach.
- Sinks and lavatories that are not provided with an accessible approach.



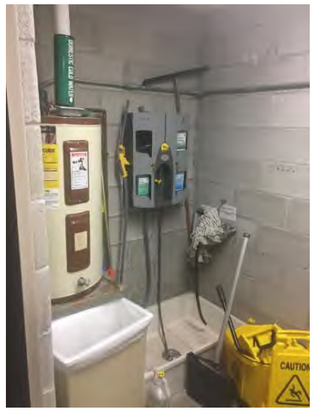
Security Rooms: Counters and equipment are not accessible.

Break Room 221.10: Counters, cabinets, and equipment are not accessible.



Field Level Break Rooms: Undercounter equipment and sinks are typically not accessible.

Food Service Spaces: The amount of items stored within these spaces often render them inaccessible to those in wheelchairs (including inspectors).



Janitor Closets: Rooms are often configured so that not all items can be accessed from the doorway. Doors will sometimes swing into the closet not allowing for adequate access or turn-around space.

Storage Rooms: Storage rooms often lack maneuvering space for persons in wheelchairs.

PARKING LOTS

The stadium is surrounded with acres of open air parking lots. During the 2014 renovations, dedicated accessible parking lots were constructed adjacent to stadium entrances between Gates 2 & 3 and between Gates 5 & 6. These two lots more than the required minimum number of stalls for the stadium. The facility also has other dedicated accessible parking stalls at buildings containing offices and employee work areas, including at the Training Facility, Commissary, and Operations Building.

Access issues observed at parking areas OTHER than the two dedicated lots include those noted below:

- Accessible stalls are generally not provided with identifying signage where located away from curbed areas.
- Access aisle are generally not provided with identifying signage.

The Bills have confirmed that these signage requirements have been intentionally ignored, as they conflict with necessary snow removal operations.

Lot 2 Overflow Accessible Parking: Accessible stalls and access aisles are not provided with identification signage.

RECOMMENDATIONS

Much of the stadium was brought into compliance with the 2010 ADA Standards as a part of the 2014 renovations. Those remaining items described above in this section of the Assessment Report generally fall into two categories: 1) those items that have a quick and easy fix, and 2) those items that are of either a structural or configuration nature that will be very difficult to remedy.

A few access issues that can be positively affected with relatively little effort include:

- Relocation of furniture, equipment, and stored items that obstruct access pathways.
- Adjusting the opening force required at various door closers.
- Replacing or supplementing non-compliant countertops with adjacent compliant furniture.
- Repositioning or supplementing coat hooks, switches, wall phones, televisions, and other equipment with items placed at accessible heights and within required reach ranges.
- Changing the direction of swing on some accessible stall doors.
- Repositioning or replacement of restroom accessories not located within required reach ranges.
- Replacement of non-compliant or non-existing signage.

Most access issues listed in this section of the report will necessarily need to wait for a very large-scale renovation to occur, including:

- Lack of accessible seating in the Club Bowl.
- Lack of sufficient accessible seating in the Lower and Upper Bowls.
- Lack of accessible seating with unobstructed views inside Suites of all types.
- Lack of an accessible route to all Side Line Suites.
- Insufficient space to develop compliant access routes within many patron spaces such as Suites.
- Non-compliant ramped access routes throughout the building.
- Rough and uneven concourse floor surfaces.
- Insufficient space to develop accessible restroom and shower features with proper approach clearances.
- Insufficient numbers and distribution of required and compliant plumbing fixture types.
- Plumbing fixtures located outside of required access requirements.
- Non-compliant counter, cabinet, and appliance configurations that do not allow for proper approaches.

Of course, most of the above items that are difficult to remedy fall within the provisions of the 2010 ADA Standards, Paragraph 202.3 which allows an exception for compliance with applicable requirements where those alterations would be deemed “technically infeasible”. ADA does require that alterations, when undertaken, shall comply with the requirements to the maximum extent feasible.

As future renovations to the stadium are considered, a review of each subject area should be made to determine what “maximum extent feasible” implies to the design of each affected space.

CODE COMPLIANCE

Several facility reviews have been performed over the years at New Era Field. A comprehensive review was conducted in 2011. Since then, Erie County has contracted for on-going structural inspection services that continue today, and are summarized in the Structural Conditions portion of this report.

Applicable Codes adopted and amended by the State of New York at this time are as follows:

- *2015 International Building Code*
- *2015 International Existing Building Code*
- *2015 International Fire Code*
- *2015 International Fuel Gas Code*
- *2015 International Energy Conservation Code*
- *2015 International Plumbing Code*
- *2015 International Mechanical Code*
- *2015 International Property Maintenance Code*
- *2014 National Electrical Code*
- *2016 Uniform Code Supplement (State of New York)*
- *2016 Supplement to the New York State Energy Conservation Code*
- *2017 Uniform Code Supplement (State of New York)*

The purpose of this review is to evaluate the existing means of egress, building construction, and life safety components at New Era Field. Please review related Code reviews to be found in other sections of this Report, including Structural, Mechanical, Plumbing, and Electrical.

The *2015 International Existing Building Code* sets forth requirements for establishing Code compliant conditions within existing buildings, such as New Era Field. Chapter 5 defines “work areas” and specifies the nature of construction activities falling into one of several categories, including:

- Repairs
- Level 1 Alterations
- Level 2 Alterations

- Level 3 Alterations
- Changes of Occupancy
- Additions

Each of the above categories carries with it varying degrees of required compliance with the *2015 International Building Code.* This is important to understand as it relates to potential future construction projects at New Era Field. Conditions as they exist currently (if kept intact and in sound working order) will generally comply with the requirements of the Existing Building Code, unless alterations falling into one of the above categories are undertaken. In other words, most of the items presented below are typically ***not required to be corrected*** – that is ***until*** a construction project is undertaken in the subject area.

SEATING BOWL ISSUES

Many of the following comments are taken directly from the *2011 Facility Condition Assessment* document. As few renovations to the existing seating bowl have been made since that time, these earlier comments remain applicable.

A conceptual means of egress analysis was performed for the seating bowl as part of the 2011 report to determine if adequate egress components are provided. The results of that preliminary analysis indicate the following:

- Exits from the main concourse and upper concourse appear to be sufficient capacity for game day event.
- The aisle stairs serving the lower bowl and upper bowl do not provide sufficient capacity for the amount of seating provided.

- The aisles stairs in the lower bowl are tapered in width and were found to have an approximate maximum dimension of 54 inches, reducing down in some cases to 34 inches. Aisle stairs with 54 inches of width provided sufficient egress capacity for 720 people in accordance with the building code (a reduced capacity since handrails are not provided). However, the majority of the aisle stairs in the lower bowl are required to serve occupant loads much greater than this. Specifically, the majority of aisle stairs in the lower bowl serve occupant loads greater than 900 people, with a maximum occupant load of 1164 occurring in front of the press box. In order to accommodate 900 occupants, an aisle stair, with no handrail, must provide a minimum 68 inches of width (88 inches in width for 1164 occupants). If handrails were provided within the aisle stairs, a 54 inch aisle stair would be sufficient for 900 people.
- Additional aisle stair width is most likely required in order to accommodate a field seating event (i.e. concert). In this scenario, occupants are expected to egress from the field up through the lower bowl aisles, which increases the amount of people the aisle stairs are required to serve. Final aisle widths should be determined by a more detailed egress analysis considering every seating configuration on the field.

- The majority of the aisle stairs within the upper seating bowl are required to serve occupant loads between 982 and 1145 people. The current width of these aisle stairs is approximately 50.5 inches which is only suitable for 673 people since handrails are not provided. In order to accommodate the number of occupants within the upper bowl, the aisle stairs would need to provide 74 – 86 inches of width. If handrails were provided the required width of the aisles would be 59 inches (aisles serving 982 occupants) and 69 inches (aisles serving 1145 occupants). Since the building is existing, no modifications to the aisle stairs are required at this time. However, if the lower bowl seating is altered the aisle stairs would need to be modified to achieve the requirements of the current building code, which would most likely include wider aisles and the addition of handrails. It is important to note, if the seating is removed in order to make repairs to the concrete bowl, no modifications to the aisles are required provided the same seats are replaced in the same configuration.

- Handrails are not provided throughout any of the aisle stairs located within seating bowl. The building code requires aisle stairs to be provided with center handrails or handrails at either side. However, it is not uncommon to find many older stadiums and arenas that were originally constructed without handrails. Since this facility is existing, handrails are not required to be provided unless the seating bowl is renovated or altered.
- Other issues: since handrails are not provided, the egress capacity of the aisle stairs is required to be reduced by the Building Code which has resulted in many capacity issues throughout the lower and upper seating bowl (although not the only issue since the aisles taper in the lower bowl). In addition, the lack of handrails has been known to result in the occurrence of additional slip and falls by occupants that can leave a venue prone to lawsuits. For these reasons, it is recommended to add handrails throughout the stadium if renovations are planned to the seating bowl.

- The aisle stairs located above the vomitories and within the Lower seating bowl are only provided with handrails on one side of the stair. Handrails are required to be provided on both sides of the stair in accordance with the building code. Upon renovation, a second handrail will be required to be added to the opposite side of the aisle stairs.
- In addition, the existing handrails provided at the aisle stairs do not extend horizontally the depth of one tread beyond the bottom riser, as required by the building code. Upon renovation this existing condition will also need to be revised.

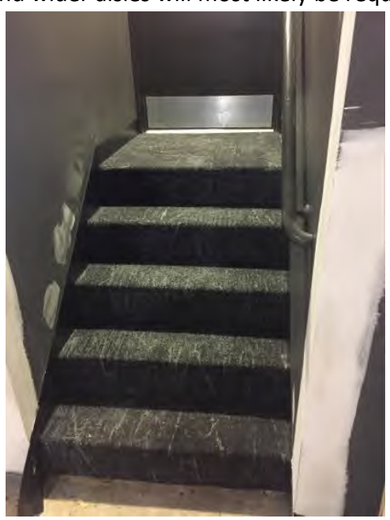
- The aisle stairs that split around the vomitories in the upper bowl were found to provide 30 inches in width. Aisle stairs that split around a vomitory typically provide a minimum width of 36 inches since the building code does not permit anything less. Since the building is existing, no modifications to the aisle stairs are required at this time. However, if the upper bowl seating is configuration is altered the aisle stairs would need to adjusted to provide a minimum 36 inches in width around each vomitory.

- Aisle stairs throughout the Level 200 seating were found to be less than 48 inches in width. Any aisle stair that serves more than 50 occupants and has seating on each side is required to provide a minimum of 48 inches in width. Since the building is existing, no modifications to the aisle stairs are required at this time. However, if the Level 200 seating configuration is altered the aisle stairs would need to be adjusted to provide a minimum 48 inches in width.

- The aisle stairs serving the lower seating bowl taper in width. The variations in width were found to be approximately 52 inches at the top of the aisle reducing down to approximately 34 inches at the bottom, although dimensions varied aisle to aisle. As discussed in the previous comment, aisle stairs are not permitted to be less than 48 inches in width, but more importantly the majority of the aisle stairs are not sufficient width to accommodate the occupant loads of the seating sections they serve. As determined above, many of the lower bowl aisles are required to provide a minimum 68 inches in width since handrails are not provided. The addition of handrails would help to increase the code determined egress capacity of the aisle stairs, but many aisles would need to be widened. A detailed egress analysis should be performed to determine the code required egress widths of the aisle stairs. Since the building is existing, no modifications to the aisle stairs are required at this time. However, if the lower bowl seating is altered the aisle stairs would need to be modified to achieve the width requirements of the current building code, which would most likely include the addition of handrails and wider aisles. It is important to note, if the seating is removed in order to make repairs to the concrete bowl, no modifications to the aisles are required provided the same seats are replaced in the same configuration. However, if new seats are provided or the configuration of the seats is changed, modifications may be required.

- Ramps throughout the exterior of the building were found to have slopes that border the code maximum for egress, which could be considered 8 percent or 12.5 percent depending upon code interpretation. Most stadiums and arenas are allowed aisle slopes up to 12.5 percent to account for sightline views; however, the building code does not address whether this allowable slope may be applied outside of the seating bowl. Discussion with the code officials will be required in order to obtain their interpretation of this issue.
- In addition, the majority of the exterior ramps have slopes greater than 8 percent, which is more than permitted by the building code for an accessible route. As a result, the lower seating bowl and service level may not be provided with an adequate accessible route. No modifications are required at this time. However, upon renovation this issue may need to be addressed. Site constraints may make it technically infeasible to alter these ramps in which case a variance for this issue may be required.

- The aisle stairs within the clubs provide less than 48 inches in width and are not provided with handrails, which are not permitted by the building code. No changes to the club aisles stairs are required at this time since it is an existing building; however, upon renovation handrails and wider aisles will most likely be required.



- The stairs providing access to the Side Line Suites are only provided with handrails on one side. All stairs are required to be provided with handrails on both sides. Upon renovation additional handrails will be required to be added to the opposite side of the stairs.

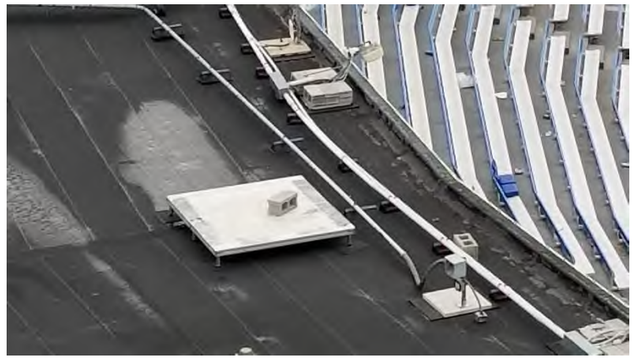
MISCELLANEOUS ISSUES

The non-conforming items that follow are presented in no particular order. Consideration should be given to those that may represent current violations not exempted by the *2015 International Existing Building Code.*

Kitchen 230.04: Suspended gas piping is present above food preparation areas, creating a dust shelf condition. Health Code.

CO2 Tanks: Tanks are secured but open to potential terrorist or insider attack. DHS Safety Act.

Elevator lobby 334.07: Also Lobby 430.03. Doors to lobby locked from concourse, not allowing for egress from Lobby. Building Code.



West End Camera Platforms: D-ring tie-offs are provided, but remain unused. May need protective railings. Building Code.

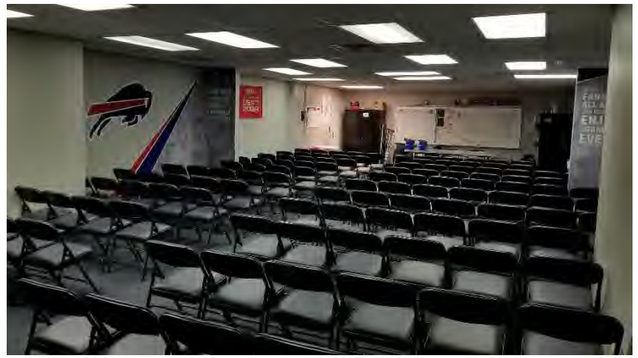
300 Level Concession Alcoves: Carts are typically configured so as to leave insufficient egress space for employees. Building Code.

Visitor's Locker Room 023.31: No compliant exits provided from room (door configurations, damaged hardware). Building Code.

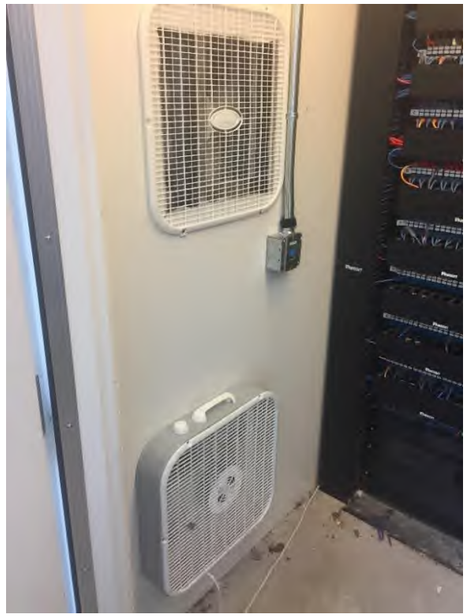
Exterior Mechanical Louvers: Six louvers on sidelines located near ground, subject to potential terrorist attack. DHS Safety Act.

Electrical 122.04: Floor penetrations not sealed with fire caulk. Building Code.

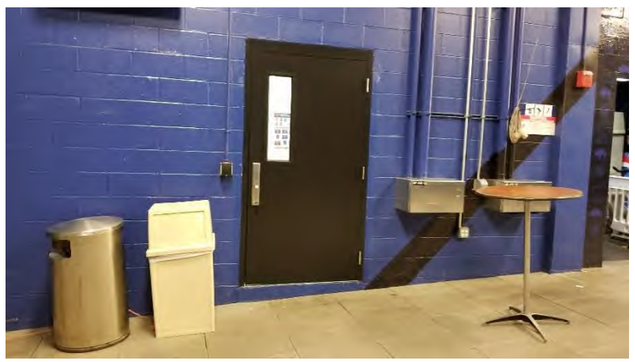
Admin Central Stair: Railings are old and do not comply with current requirements. Building Code.



Guest Services Meeting Room 223.07: No compliant exits are provided out of this room. Building Code.

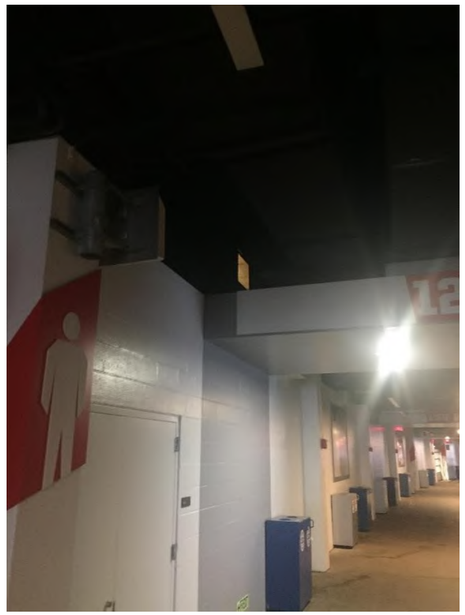


Berm IDF closets: Unrated penetrations through rated assemblies.



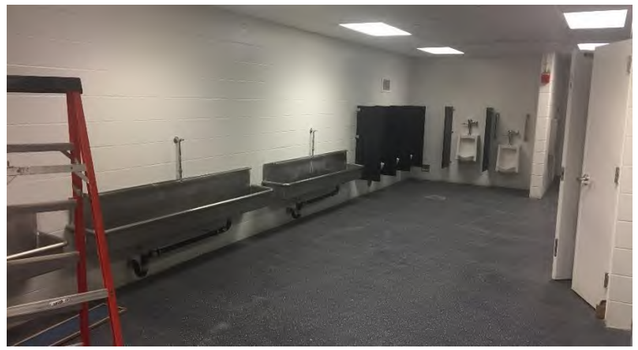
Admin Building Stairs: Tunnel stair landing does not provide compliant sill condition. Building Code.

Concourses: No drinking fountains are provided in the public concourses. Plumbing Code.



100 Level Electrical Rooms: Unrated penetrations through rated assemblies.

Sideline Restroom Towers: No urinal partitions.



100 and 300 level Concourse Restrooms: Wide use of urinal troughs.

West End Camera Booths: Stairs not securely fastened and lack compliant railing. Ice buildup from above.

Fire Extinguisher Tags: Throughout facility there were a number of locations that had these designation stickers where room did not actually store fire extinguishers, or they had been removed.

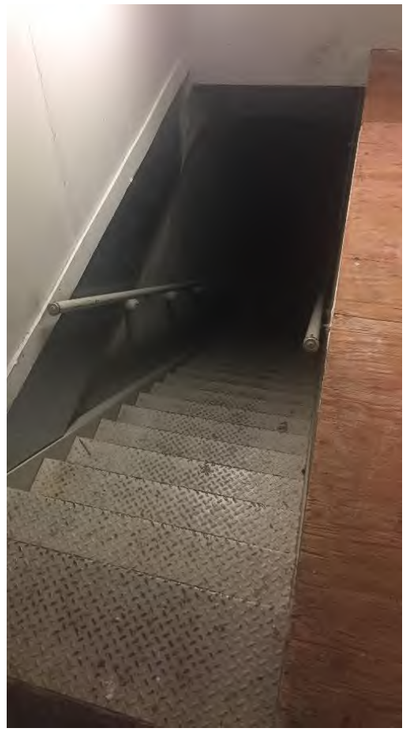
West End Suite Ramps: Ramps appear to be steeper than 1:20 and do not include handrails and or landings.

Security 236.09: Exit signage improperly modified.

Corridor 231.12: Corridor may potentially be a dead end corridor. Use of medical or security space may have once served as the means of exit. To be further analyzed.

West End Suites: 15-20% of suites are missing handrails in seating areas.

300 Level Admin – Injured Player Area: Railings to a means of egress are not code compliant. Lighting was out or off and no signage leading to the spaces was limited and or visually blocked.



West End Zone Suite Roof Access: Railing extensions missing.

300 Level Concourse Access Stairs: Railing extensions missing.

RECOMMENDATIONS

Based upon the 2011 Facilities Assessment Report, the 2014 renovation project addressed many non-conforming conditions throughout the building. However, a number of spaces within the building remained untouched by that renovation. The non-conforming items that are presented in this section come from the Assessment Team's on-site observations and document research. This list is not intended to be all encompassing. It represents a sampling of observed conditions that can be taken as representative of similar conditions elsewhere in the facility. Any future renovation projects should undertake a thorough review of the specific Code requirements that must be addressed for those projects.

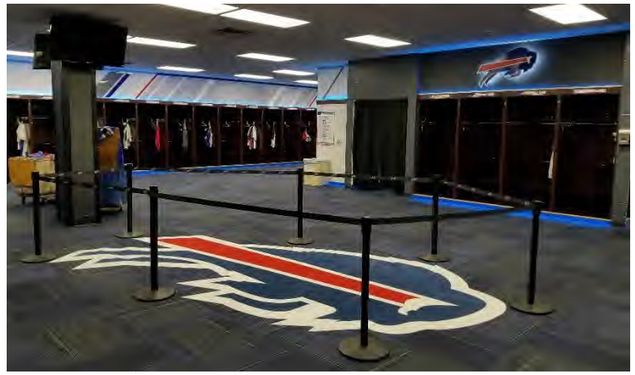
INTERIOR FINISHES AND SIGNAGE OBSERVATIONS

INTERIOR FINISHES – GENERAL OBSERVATIONS

Interior finishes throughout the facility vary widely in their age and condition. Their condition is often affected by problems with water tightness and abuse addressed in other sections of this Report. Many finishes were replaced in the 2014 renovation and in subsequent club renovations. However, such renovations often neglected back-of-house spaces. A summary of observed conditions follows.

000 FIELD LEVEL SPACES

The lower portion of the Field Level was renovated in 2014 and finishes remain in good condition. Similarly, the Game-Day Locker facilities in the upper portion of the Field Level were renovated in 2016 and remain in good condition. Only the central intermediate areas of this level exhibit older worn and damaged finishes. These spaces include the team meeting rooms, storage rooms, field crew locker facilities, and game-day operations staff offices highlighted in the plan below.



Home Team Locker Room 021.26: Locker room finishes were updated in 2016.

Home Team Training Spaces: newly renovated in 2016.

Visitor's Locker Room 023.31: Locker room finishes were updated in 2016.

Corridor 021.01: Rubber Flooring shows substantial wear from cleats and traffic.

Corridor 021.13: Damaged tread nosings on stair.

Visitor's Interview Room 023.48: Inadequate and out-of-date finishes and lighting.

Corridor 023.01: Damaged fireproofing adjacent to Band Locker Room entrance.

100 LEVEL MAIN CONCOURSE

Finishes in the public concourse, most restrooms, all concessions, retail shops, and guest service spaces were upgraded in 2014. Spaces remaining to be upgraded include food service pantries, janitor closets, and outer ring toilets (including the "berm toilets").

The concourse floor is mentioned in the Concrete Slab section of this Report. Traffic coatings are mentioned in the Coatings section of the report. Floor finishes are varied and present uneven and unsightly conditions.

100 Level East Concourse: Traffic coatings are damaged by snow removal, and allow water to leak into spaces below.

Dugout Suite entrance alcoves off of the Concourse were coated with a thin traffic coating sometime after 2014. That coating is damaged in places, and exhibits cracking from movement in the slab surfaces it is applied to.

100 Level Suite Entry Alcoves: Alcove floor coating is failing to various degrees in most alcoves.

Concession stands at the 100 Level present flooring conditions that will be difficult to correct. The existing floors do not slope toward drains, and cracks tend to collect dirt. The floor coating is a tinted sealer product that has not held up well to food service operations. Other finishes in the concessions show a normal level of wear and abuse for being 5 years old.

Typical Concession: Worn and damaged floor coating. Floors do not slope toward drains.

Concession 139.06: Worn and damaged floor coating; damaged wall base at corner

Concession 125.05: Wall damaged where equipment was moved.

Concession 139.06: Damaged wall tracks at corners.

Concession 117.05: Undetermined damage at ceiling and beer lines.

100 Level Concessions & Pantries: Water sitting in light fixtures.

Existing 100 Level Pantries have not been renovated in decades. Finishes show high levels of wear and abuse. Paint finishes are flat, and tend to collect dirt. Ceilings are damaged and stained from greasy fumes escaping the hoods.

100 Level Pantries: Floor coating has been damaged by stray hot grease.

100 Level Pantries: Ceiling tiles have been stained by grease.

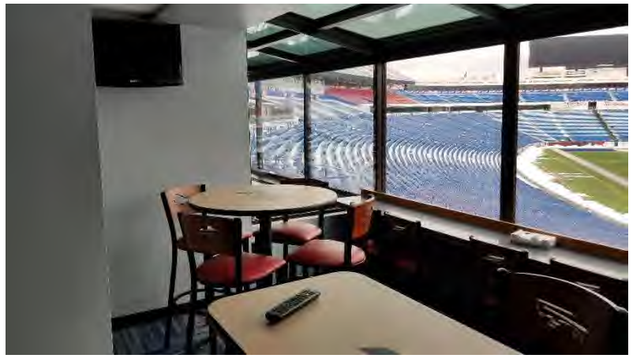
The retail Shops located at the north and south sides of the concourse are generally in good condition. The choice of a dark flooring color tends to easily show dirt and salt from foot traffic.

100 Level Retail Stands: Black flooring shows salt and other debris tracked in by patrons.

East End Bar: New MMA Floors installed in 2017 within bar and restrooms.

DUGOUT SUITES

The Dugout Suites have for years been renovated in small groups on a rotating basis. The age of interior finishes therefore varies from suite to suite. There is some consistency in materials used; there appears to be 2 or 3 primary finish palettes in these suites. Other than damage caused by water intrusion, most suite finishes are in good condition relative to their ages.



Dugout Suites: Finishes have replaced on a rotating schedule over the years. Some suites have outdated finishes.

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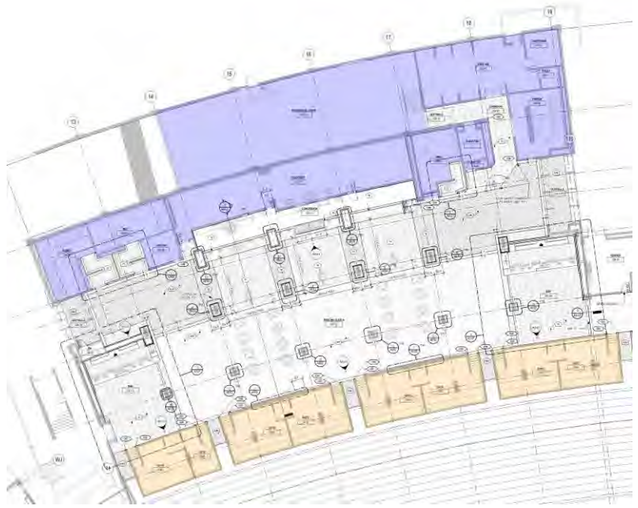
Dugout Suites: Where older plastic laminate finishes remain, it is not uncommon to see chipped and damaged edges.

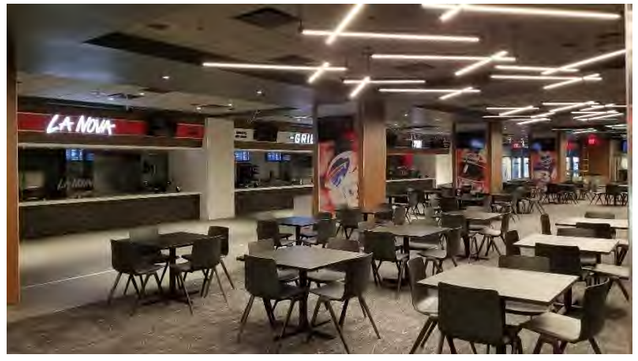
Dugout Suites: Older laminate flooring exhibits wear and tear.

200 LEVEL CLUB SPACES

Finishes in the Pepsi Club, Toyota Club, and Dunn Tire Club were all replaced in 2017. These renovations did not address restrooms or back-of-house spaces. For a typical building quadrant, spaces not upgraded include those highlighted in the plan below. Examples of worn and damaged finishes in back-of-house spaces are pictured.



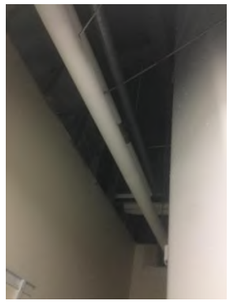
Typical 200 Level Club quadrant plan: Blue highlight shows back-of-house spaces not addressed in recent renovations. Orange highlight shows location of Sideline Suites.



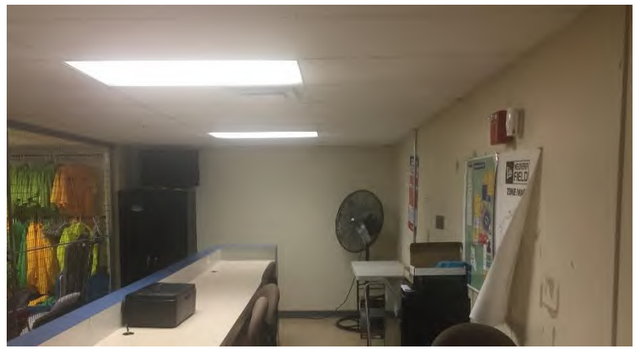
Sideline Clubs: Sideline Clubs were renovated in 2017 and remain in good condition.

Sideline Club Restrooms: Restroom finishes are somewhat dated, but remain quite serviceable.

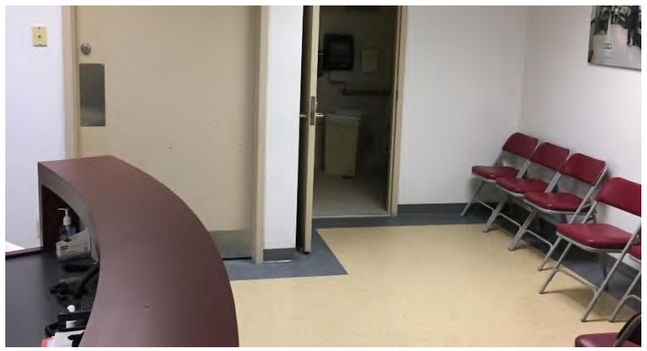
Women's Restroom 213.04: Tile flooring is cracked; appears to indicate movement in floor structure below.



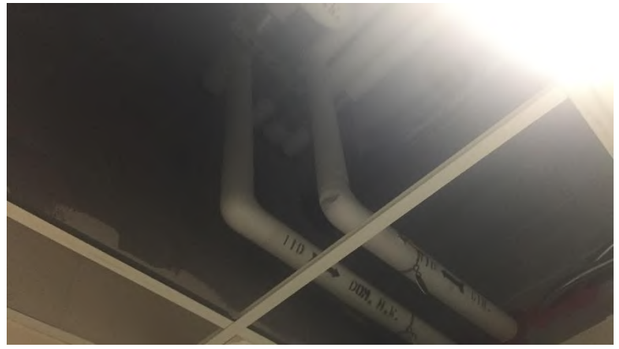
Sideline Club Janitors closets w/ sports lighting poles: Most do not have ceilings and may have privacy issues with adjacent restrooms.



Sideline Club Security Spaces: Dated millwork and flooring but generally in ok condition.



Sideline Club Medical Spaces: Materials are in decent shape but looks dated.



Sideline Club MEP vestibules: Missing ceilings tiles throughout.

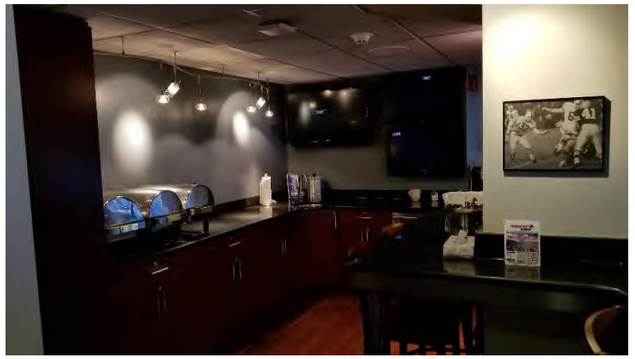
200 Level Kitchens: Finishes are worn and out of date, typically.

200 Level Kitchens: Renovations are frequently not completed.

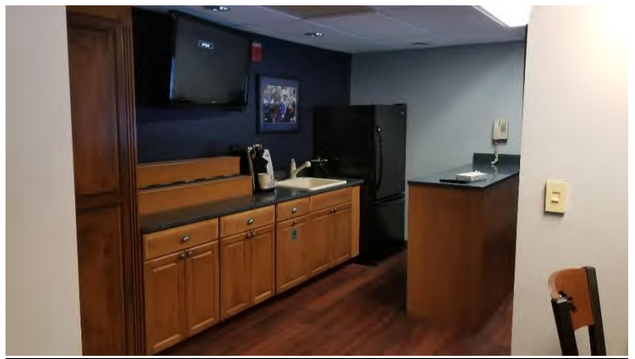
200 Level Kitchens: Ventilation screens added in 2014 collect dirt and grease.

SIDELINE SUITES

Sideline Suites, highlighted in orange above, have been renovated on a rotating basis, like other suites. The finishes in these suites generally trends a little bit older than others, but most finishes remain serviceable.

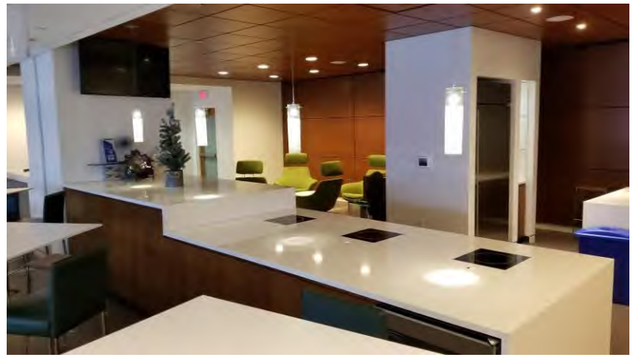


Sideline Suites: Finishes have replaced on a rotating schedule over the years. Above is a fairly recent renovation.



Sideline Suites: Finishes have been replaced on a rotating schedule over the years. Above suite has outdated finishes.

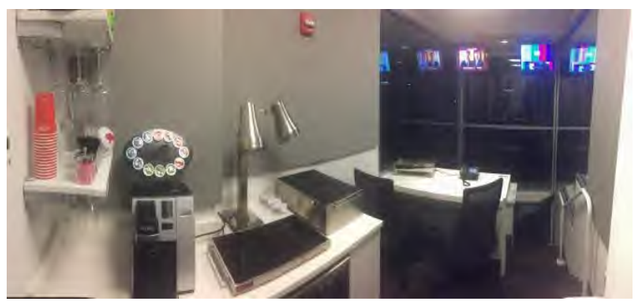
On the south sideline, two large "Super Suites" were added as part of the 2014 renovations. The finishes in these suites are generally in good shape, except for those affected by water damage and movement of the building at each of the building expansion joints running through these spaces.



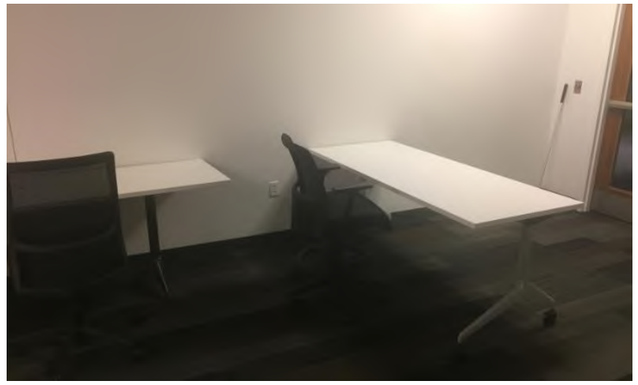
Super Suites: Suites were constructed in 2014. Water damage has created need for intermittent repairs.

200 LEVEL BROADCAST PRESSBOX

The entire Broadcast Pressbox facility was completely reconstructed during the 2014 renovation project. Except for isolated areas of water damage, finishes remain in good condition throughout.



Typical Broadcast Booths: Finishes are generally in good condition.



Broadcast Pressbox Entry: The finishes inside the entry to the Broadcast area are a bit underwhelming.

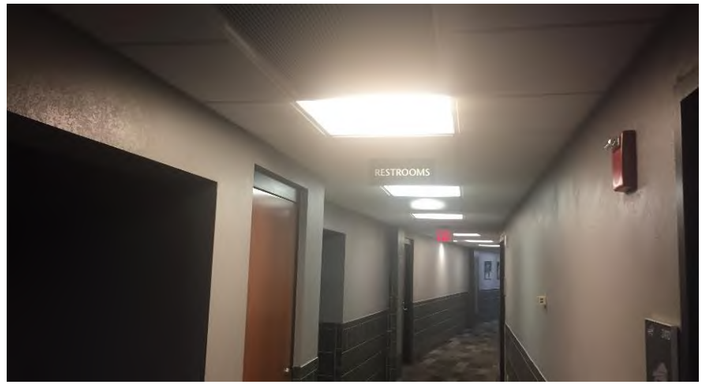
National Broadcast booth: Solid surface flip tops removed and replaced with laminate flip tops. Flip tops show significant damage and modifications from original design and likely need to be replaced.

WEST END SUITES

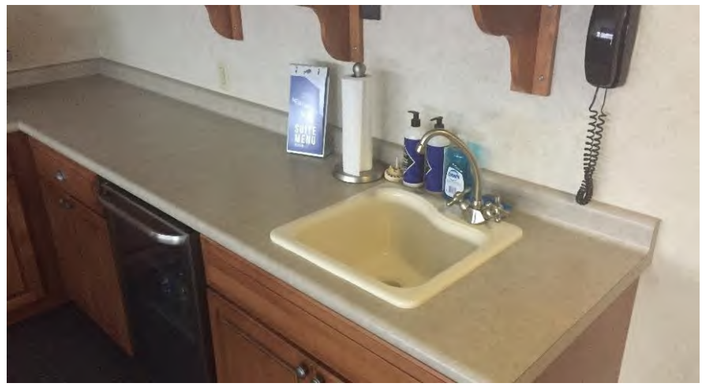
The West End Suites are also renovated on a rotating basis. The common space finishes are a bit worn and out of date.

Typical West End Suites: Finishes are in fair to good condition, but appear dated.

West End Suite Restrooms: Unfinished millwork and bare piping and ventilation throughout.



West End Suite Corridors: Graphics and flooring have been updated recently but general overall the finishes are dated.



West End Suite: 10% of suites have been updated recently. Remainder of suites have dated millwork, paint, and flooring. Seating had been reupholstered in a few locations.

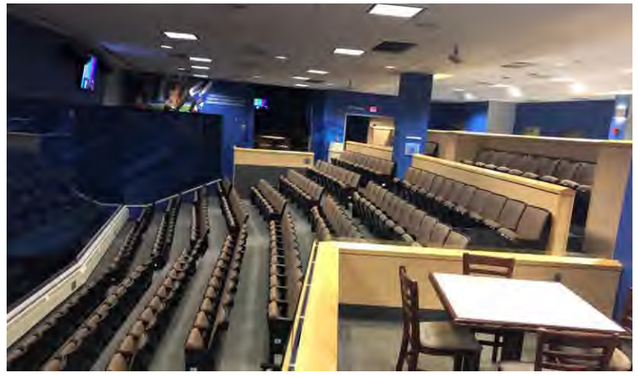
END ZONE CLUBS & WRITING PRESS

The Writing Press Facilities were renovated in 2014, and finishes remain in good condition.

The M&T Club and the Goal Line Club were both renovated in 2017. Again the finishes are generally in good condition with the exception of concession prep areas and restrooms which were not updated.

M&T Club: Finishes were updated in 2017.

The Business Class Club has only received minor cosmetic updates since it was constructed in 1999. A design for the full renovation of this club is being developed at this time.



Business Class Club: Finishes are scheduled for replacement in 2019.

300 & 400 LEVEL SPACES

Most 300 Level spaces were upgraded during the 2014 renovation project. Finishes remain in good condition with a few exceptions:

- Lack of expansion control has damaged walls and floors along the four primary expansion joints.
- Failed expansion joints in the seating bowl has caused water damage to materials below.
- Snow removal procedures damage concourse floor surfaces an expansion joints, both leading to water damage at the 200 Level below.

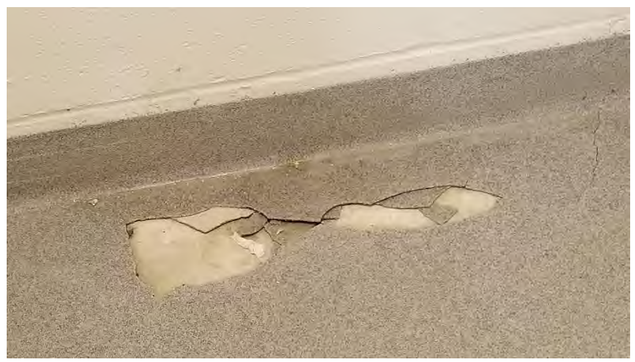
Please refer to other sections of this Report for greater detail on these observed problems.

300 Level Ramp Landings: Traffic coatings become damaged from snow removal processes at all four upper ramp landings.

Those spaces not addressed during the 2014 renovation include older restrooms and elevator lobbies. These spaces occur at both the 300 and 400 Levels.

Older Restrooms: Restrooms not renovated during the 2014 project are generally worn, and still have a relatively flat paint finish that catches dirt.

400 Level Elevator Lobbies: Lobbies do not have ceilings.



Men 430.01: Flooring substrate unsound. Flooring finish is cracked.

ADMIN BUILDING

Portions of the Admin Building were renovated during the 2014 project. Most of the 100 Level was changed to serve as the East End Bar and associated prep area and restrooms. The finishes in these spaces remain in good shape. The Elevator Lobby on the 100 Level was only repaired to address disruptions from adjacent construction.

Admin Lobby 122.10: Finishes are a patchwork of outdated materials installed under several separate renovations.

Admin Building renovations at the 300 Level have now updated finishes on approximately 75% of the floor plate. The 200 Level remained relatively untouched during the 2014 project, but has had some finishes replaced in subsequent years. In general, the entire 200 Level of the Admin Building provides a good opportunity for repurposing of existing spaces to serve uses not accommodated elsewhere in the stadium.

Admin 300 Level Restrooms: Finishes are in good shape, but the look is dated.

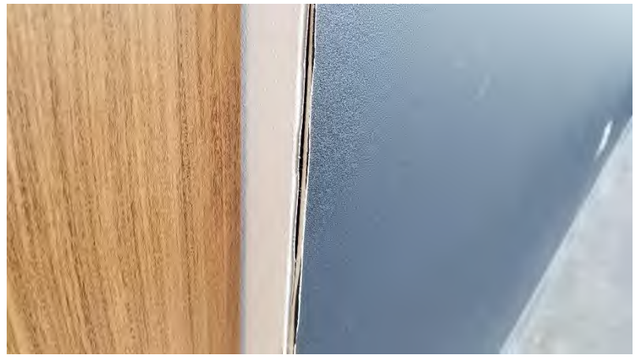
300 Level Admin - Injured players area: Multiple patches and replacements over the years have occurred. Dated finishes. Has food service/bar area without any equipment.

TEAM STORE

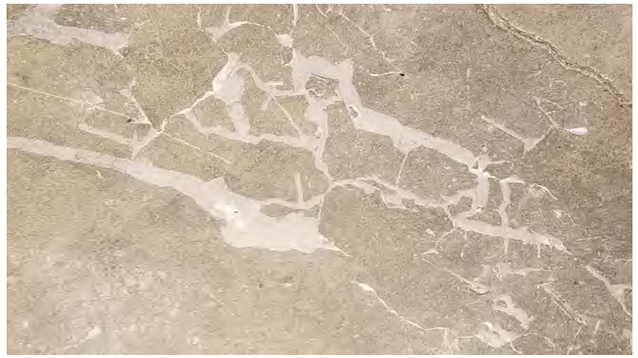
The Team Store was constructed in 2014. All finishes are original to the space, and most are in good condition. There have been some problems with the floor sealer reported. The sealer is bubbling up off of the concrete in a few areas.

And, the DNC staff report that the finish of the sealer is very slick, and contributes to people slipping during winter months when water and snow are tracked into the building.

Team Store: Team Store was constructed in 2014; finishes generally remain in good condition.

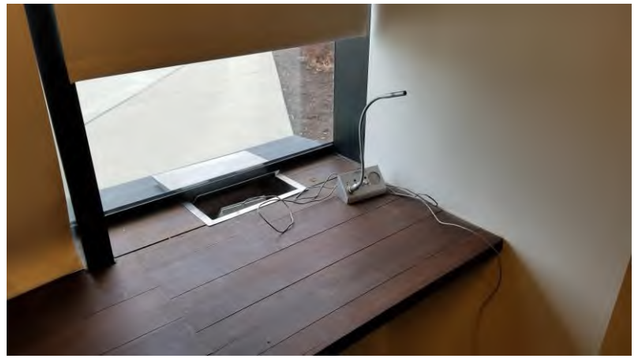


Team Store Retail Area: Wall coverings have no corner protection resulting in damaged edges at outside corners.



Team Store Retail Area: Clear sealer on floor is peeling in areas. DNC reports this started after a vendor worked in the space.

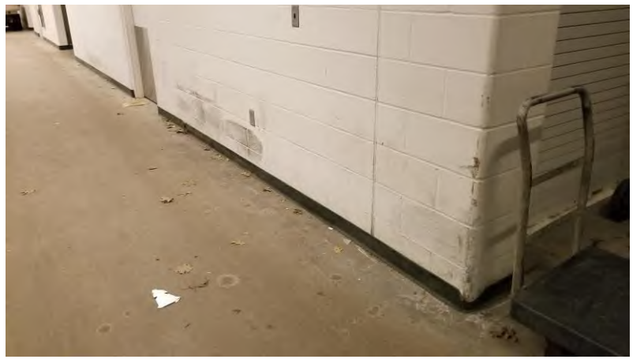
Team Store Retail Area: Clear sealer on floor can be slippery when wet. Staff noted issues during winter games.



Guest Relations Booth: The wooden countertop is deteriorating due to thermal movement and material warping.

COMMISSARY

The Commissary Building was constructed in 2014. All interior finishes are original. Most finishes appear to be holding up well, with only a few exceptions. In areas of heavy cart and vehicle traffic, walls and doors tend to exhibit a lot of scuffs, scrapes, and dents.



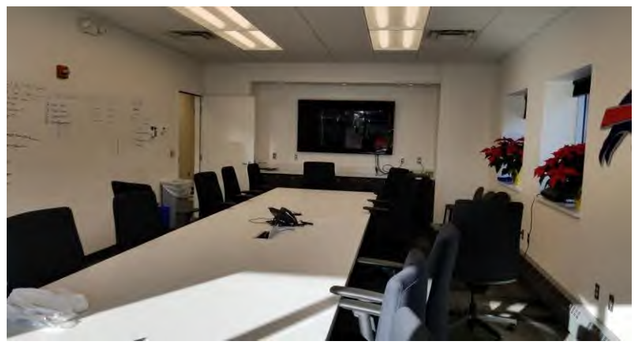
Main Corridor: Walls are scratched and otherwise damaged from cart traffic.

Main Corridor: Doors are scratched and dented from cart traffic.

Break Room: Clear acrylic sealant at countertops is stained in nearly all locations within the Commissary. Since this condition happens nowhere else in the stadium, the culprit may be the cleaning methods used.

OPERATIONS BUILDING

The Operations Building was also constructed in 2014. All finishes are original and remain in good shape. Past instances of water leaks from skylights are still visible in only a couple of locations.



Operations Building: Building was constructed in 2014. Most finishes remain in good shape.

GRAPHICS AND SIGNAGE ISSUES

As in any facility that is 46 years old, the signage stock at New Era Field has become a jumble of styles and conditions. A major renovation in 2014 replaced much of the wayfinding and room identification signage within the Stadium, Commissary, and Operations Building. But the replacements were not comprehensive, and much remains of older signs and graphics.

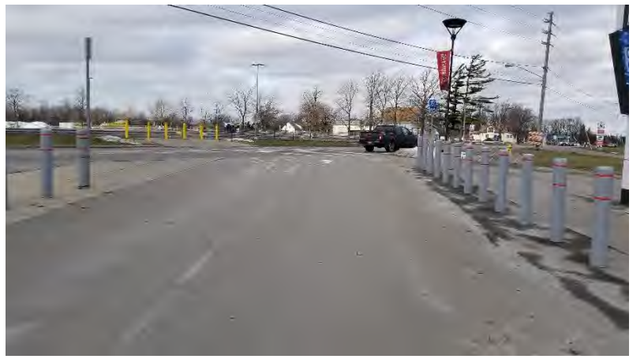
Issues observed with signage at New Era Field can generally be classified in one of the following categories:

- Needs for new signage
- Damaged or missing signage
- Temporary Signage
- Inconsistencies in style or format
- Incorrect or out-of-date signage

Signage and graphics associated with sponsorships is generally updated quickly. The Bills have indicated that additional signage could be used along Abbott Road to better identify the Bills Store and to more clearly label intended traffic patterns at vehicular drive entrances.

Bills Store: The Bills would like to add signage that identifies the store from a greater distance than this photo was taken at.

Concourse Directionals: The Bills have kept up with high visibility signage changes.



Bills Store Parking Lot: The Bills would like to add signage that better identifies desired traffic routes at entrances and exits.

Instances of damaged or missing signage are scattered about the facility. Damage has typically occurred from exposure or vehicle impacts. Wall graphics have also suffered from cart of pedestrian impacts. At times, adjacent construction has caused inadvertent damage.

100 Level Concourse: Section ID signage at vomitory 127/129 is missing.

Exterior Room ID's: Several door signs on the east face of the Commissary Building exhibit corrosion on the text of signage.

Exterior Room ID's: Several door signs on the 300 Level Concourse exhibit corrosion on the text of signage.

Partially Removed Signage: Bills to confirm if message still applicable and should be removed or replaced accordingly.

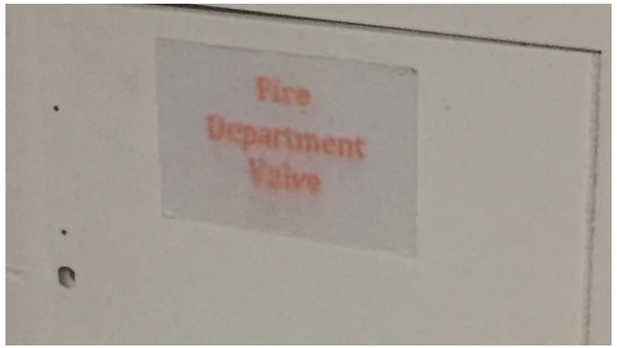
Vinyl Wall Graphics: Exposed edges at outside corners are sometimes damaged.

Temporary signage can be found in many locations, and is generally an indication that a more detailed review of signage needs is in order. Some needs are truly temporary. Others may suggest a change in building features such as equipment placement, access to spaces, or changes to the use of a space. It can be hard to control the use of 8.5 x 11 paper and tape signs in a facility where the staff is organized in multiple departments, and even multiple companies. In public spaces, the clutter of temporary signs can create negative impressions.

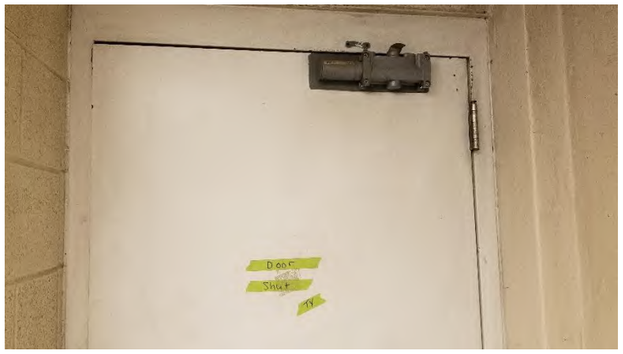
East End Bar: *Need for additional signage handled with 8.5 x 11 paper and tape.*

Temporary Signs: *Need for signage handled with 8.5 x 11 paper and tape.*

Temporary Signs: *Some temporary sings need to be permanent.*



Temporary Signs: *Signage not water proofed and worn. Codes would require a permeant sign here.*



Temporary Signs: *Some temporary signage has been added because other repairs are required (damaged closer).*

Messages: *Signage often designates new unintended uses. Uses and appropriate signage to accommodate use to be determined.*

Temporary Signs: *Some temporary signage quickly falls out of place.*

Temporary Signs: *Some temporary signage needs are appropriately handled with a white board or tack board.*

Some legacy aspects of older renovation projects no longer fit with current space uses. Older elevators were provided with simple floor designations (1, 2, 3). These designations do not correspond to the overall floor designations used throughout the stadium. Sometimes the use of a space changes and signage is slow to catch up.

Elevators: Floor designations are not uniform. Supplementary signage could help communicate appropriate destination floors.

Door Usage: Changes in use patterns have led to some added directional signage. Bills report these are often ignored.

Signage Revisions: Signage revisions sometimes present areas of non-matching colors.

Signage Revisions: When exterior signs are removed there is often a "tan line" caused by adjacent color fading.

The facility exhibits a very unorganized collection of newer signs not conforming to any overall signage standard. As stated earlier. This can be hard to control within multiple departments or companies. Also, one specific standard for the design of signage may not necessarily be applicable to the entire facility.

Added Signage: Added signage often does not match the character of the overall signage program.

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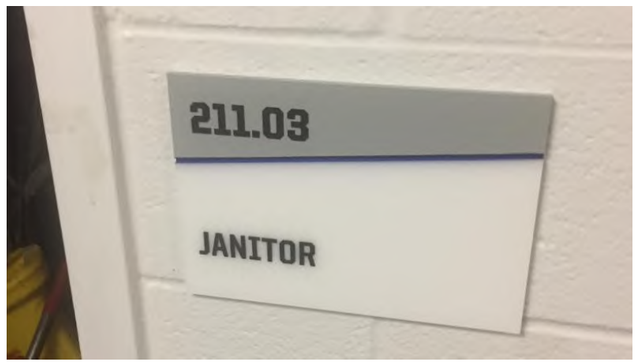


Added Signage: Signage is some areas may be subject to different standards than in other locations.

Older Signage: Older signage in un-renovated areas often does not match the character of the overall signage program.

Incorrect and out-of-date signage can potentially be confusing to patrons as well as to staff who may not be familiar with current practices at the stadium.

Incorrect Signage: This elevator is also for use by disabled individuals.

Incorrect Signage: This stall is not accessible.

Out-of-Date Signage: The purpose for many older signs no longer exists.

Never out of date:

Photos: What a great group of guys!

RECOMMENDATIONS

Options vary from minor changes up to full scale construction projects.

- Consider development of a comprehensive design program to review the need for new signage and graphics elements. These elements could range from major items (such as new ID graphics for the Bills Store) to implementation of a comprehensive set of design standards for signs of any type. Funnel all major project items through this program.
- Consider implementing a program to replace older signage in the facility with new signage complying with the establish design standard.
- Consider setting up a policy of having all signage needs funneled through a one point procurement process. Place one small group of people in charge of all minor signage improvements in order to better regulate compliance with the established design standard. Have this same group be responsible for investigating and resolving observed instances of temporary signage use.

MECHANICAL, PLUMBING AND FIRE PROTECTION SYSTEM OBSERVATIONS

RESTROOMS

Most have been refurbished in the last 10 years. Freeze problems occur in several restrooms on Level 300. These are mainly seen in the hot water supply to the lavs. This system is piped above the ceiling. The roof above is uninsulated or lightly insulated concrete allowing the ceiling cavity to freeze in spite of being open to the heated restrooms. A few restroom locations with high ceilings have been difficult to heat with the installed cabinet heaters due to limited air throw velocities. These spaces become stratified.

Adding electric heaters above the ceilings would be the easiest and least expensive solution. Heat trace of the piping could be done however its service life is only 5-10 years. Insulation of the roof above the ceiling would reduce the likelihood of freezing and reduce the energy necessary to heat the ceiling cavity. Stratified rooms may need small de-stratification fans added to stir the air and get the room evenly heated.

Cold cavity above Level 300 restrooms where heater and insulation might be added.

Typical restroom ceiling with cabinet heater and wall cavity fan.

High ceiling spaces where destratification fans would help to evenly heat the space.

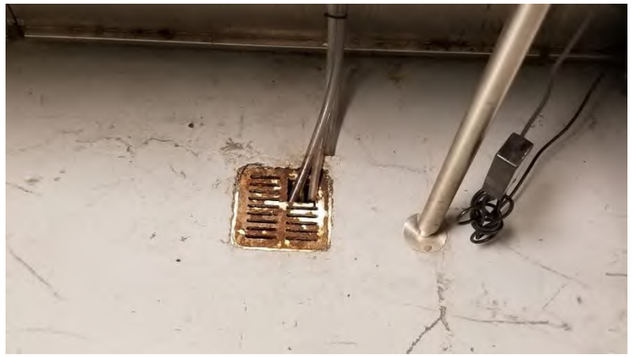
Wall cavity inlet/outlet grille. May need to add some in various locations to improve warm air circulation in wall cavity.

CONCESSIONS

Most concessions have been refurbished and updated in the last 5 years. Heat was added however there is not enough heat in many locations causing freeze issues with water lines. Staff has taken to leaving cooking equipment on to heat the space. No other issues reported with concessions.

Adding additional electric heat to concessions would eliminate freeze problems. Corroded floor sink grates need to be replaced.

Unit heaters are hung low within spaces. Single heater locations leads to uneven heating and freeze problems.



Floor sink finish corroded. Typical of many concessions.

Cooking equipment left on to provide space heat.

Floor sink grate replaced in some areas.

HEAT PUMP SYSTEMS

Boilers serving the heat pump loops were replaced in 2015 and all look to be in good operating order. All but one of the 7 cooling towers date from 1993 or 1994. The remaining tower was installed in 1973 and is now in need of replacement. Approximately half the heat pumps serve spaces throughout the stadium have been replaced in the last 5 years. Six heat pumps are from 1999 and nearing the anticipated end of service life. Heat pumps in suite areas are not able to keep up when window walls are opened. Replacement should consider higher capacity units in these areas.

Ducted cooling tower for heat pump loop.

Heat pump air handler.

NORTHWEST, SOUTHWEST, WEST END AND GOAL LINE MECHANICAL ROOMS

These mechanical rooms were built in 1993 and contain domestic water heaters, boilers and heat pump loop pumps. Boilers and water heaters were replaced in 2015. Pumps and most make-up air units are original and in good condition. Given the light and seasonal use of this equipment it should last well beyond normal service life (20-25 years). Currently at 25 years, this equipment is likely adequate for another 5-10 years.

No action recommended at this time.

Heat pump loop boilers.

Heat pump condenser water circulation pumps.

NORTHEAST AND SOUTHEAST MECHANICAL ROOMS

The two large mechanical rooms serving the Dugout Suites, Writing Press and M&T Club were built in 1999 and contain boilers, DW Heaters, Pumps and Chillers. Equipment in these rooms appears to be well maintained. Operations reports no significant issues with these systems. Given the light and seasonal use of this equipment it should last well beyond normal service life (20-25 years). Currently at 20 years, this equipment is likely adequate for another 10-15 years.

No action recommended at this time.

ROOFTOP AC UNITS

There are numerous rooftop units on the stadium building roofs. Most have been replaced from 2011 to 2014. Currently one older unit on the Admin Bldg is slated for replacement this coming off season.

Replace old RTUs as scheduled. Replacement is overdue.

Replacement RTUs on left.

Older RTU on left in need of replacement.

Typical of newer RTUs recently installed.

INDOOR AHUs

There are at least 3 indoor AHUs dating from 1972 putting them at over 45 years old. These units were installed with pneumatic controls and no provisions for economizer mode (100% outside air). These AHUs have had most of their controls replaced with electric actuators however overall they are in poor condition and should be replaced. All of them are single zone systems.

Old AHUs must be replaced and brought up to code for areas served. Increasing outside air access would allow for longer periods of economizer mode operation.

1972 AHU in need of replacement. Typical of 3.

Outside air intake damper disabled and lacking economizer capability.

DATA ROOM AC UNITS

The split systems serving a few of the 2014 data rooms have been short cycling and failing. A few have been replaced or an in-room AC unit has been added. Rack loads in these rooms appear to be light which may be causing the short cycling.

It is not clear if troubleshooting by the manufacturer was done. Often widening the deadband (temperature where it comes on minus temp where it shuts off) can help. There may be other issues at play that the manufacturer could address. If new equipment is to be installed using (2) units at half max capacity each may help alleviate short cycling issues.

BMS

The Building Management Systems are broken into three separate software solutions; Security, Lighting and HVAC. The HVAC system is by Novar. It has been expanded but may be reaching the limits of the system. Operations staff likes the simplistic and straightforward layout of the graphics interface and programming. Most equipment is shown on the system in some way even if only by alarm notification.

Operations staff would prefer a new system that integrates lighting and HVAC in one user interface and workstation.

DOMESTIC WATER

Domestic water is provided by the Erie County Water Authority. Service entry is at a backflow preventer building at edge of site. Same location as fire service entry. The buried domestic service main from entry building at edge of site into stadium is reported to be about 45 years old and was noted as brittle when a portion was uncovered for recent construction. Operators are concerned about below grade rupture failure. Operations is also concerned about a lack of redundancy to the water service in the event of a failure on the water district side of things. They would like to see another line brought in from a different district main. Alternatively, they suggested a water tower on site would also be acceptable. Water pressure is boosted by a pump skid located in a room at the entry point of the 16” water service. The skid was installed in 1999. Given the limited use it sees the skid is still in good working condition. There are no VFD controllers just pressure reducing valves at the discharge of each pump.

Replacement of the water main should be considered based on the recent findings or possible wide spread corrosion. It may be beneficial to dig down to the main at a few locations to inspect the pipe prior to taking on a full line replacement. Corrosion may be limited to certain section of the run.

Given the size of the water service line a new second street tap would likely be very expensive. A second water tap is not typical for NFL stadiums or ballparks and arenas. An on-site water tank or tower would serve the purpose and likely cost less than a second tap.

Booster pump control panel.

Booster pump skid.

FIRE SPRINKLER SYSTEMS

The fire sprinkler main within the stadium pipe was replaced in 1999. Operations reports pinhole leaks in several locations that sound like potential MIC (Microbiologically Influenced *Corrosion) issues. No issues reported with any of the dry valve systems. Operations is also dealing with a lot of system low points (over 200) that need to be periodically manually drained.*

ELECTRICAL SYSTEM OBSERVATIONS

POWER DISTRIBUTION

The stadium electrical system is a 12.47kV distribution system that was built in 1972 and expanded upon in 1999. The stadium is feed by two New York Electric & Gas (NYSEG) utility feeders that are connected to separate utility substations. These two utility feeders allow the facility to energize the 12.47kV stadium main electrical switchgear from either utility source should a failure occur on a feeder.

NYSEG Utility Service

Each of the utility services feeds a 15kV, 600amp Main Switchgear that is located on the Lower Level on the west side. The 15kV switchgear then distributes both utility sources around the stadium to each of the twelve substations. This dual source configuration at substation provides that the staff a means to not only re-energize on the 15kV side but also on the ability on the 480volt side.

1972 15kV Main Switchgear on Feeders B &D

The stadium has 12 substations and two pad transformers that are connected to the 12.47kV distribution system. Each of the twelve substations distributes 480/277volt power to lighting, mechanical equipment and 208volt step down transformers which in turn serve receptacles and food service equipment.

Existing Substation with 1972 transformer

The 15kV main switchgear, two of these substations (US3 & US7) and the transformer for US8 are the original 1972 equipment and still serve loads essential loads to the game day operation of the stadium. This equipment has exceeded its expect life of 40 years and that equipment could fail in the next few years and limit the use of certain areas for a game.

The total distribution transformation capacity on the 12.47kV system is 15,250kVA. Based on the current peak load readings of 8,500kVA for both utility feeders, the system has plenty of growth capacity for future renovations if the original 1972 equipment is replaced.

ELECTRICAL PANELBOARDS AND CONDUCTORS

The electrical panelboard and conductors are comprised of 1972 vintage equipment and newer equipment that was installed during the construction of the dugout suites, club additions or the 2014 renovation. Beyond the dozens of 1972 panelboards and feeders, the majority of equipment is functioning properly and is in fair condition. However, it should be anticipated that the equipment that has been in use for more the 15 years will start to experience more equipment component failures. These failures will generally be due to equipment degradation which is inherent to any electrical distribution system. Consequently, this will reduce the reliability of the system and will warrant an increased need to perform more periodic and in some cases the replacement of equipment in the next 5 years.

Existing 1972 Panelboards

RECOMMENDATION FOR POWER DISTRIBUTION

To maintain the reliability of the distribution system for game days, we recommend that the original 1972 15kV service, substations US3, US7, US8 and the downstream panelboards and feeder be replaced in the next few years.

EMERGENCY POWER GENERATION

The stadium two diesel generator that are located on the east side of the stadium that provide back-up power to the egress lighting, sound system, water pumps and elevators. Both generators have skid mounted fuel tanks and generate power at 480/277volt. The 230kW generator was installed in 1999 and the 600kW was installed in 2014. Both generators are in good working condition.

Existing Diesel Generators

RECOMMENDATION FOR EMERGENCY POWER DISTRIBUTION

To maintain the life safety system in the stadium, several of the emergency panelboards are the original 1972 equipment and should be replaced in the next few years. This should also include the conductors feeding the panelboards as they are susceptible to damage due the age and the shallow depth of these feeders below the main concourse slab.

Concession Power

Most of the electrical panelboards in concession stands were replaced in 2014 and are in good condition. However, several the outlets appear to be not operating properly and need to be replaced and/or re-wired.

CONCESSION OUTLET – not functioning properly

LIGHTING & LIGHTING CONTROLS

The parking lot lighting consists of 90 foot, LED fixtures that are served and controlled from the stadium. These fixtures appear to be in good condition and operating properly. The only area that still need to be upgraded to LED are the fixtures in the employee parking lot.

Site LED Parking Lot Lights

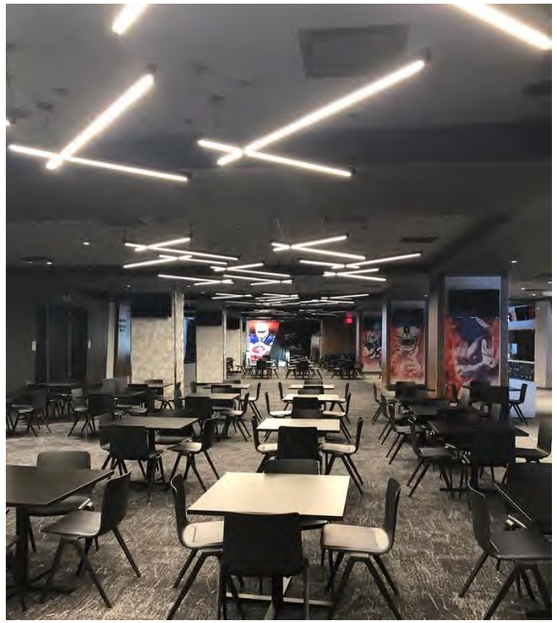
The interior public area lighting such as the concourses, concession and public restrooms are typically lit with either fluorescent pendant fixtures or 2x4 fluorescent fixtures. The club, suites and lounges areas are illuminated with indirect LED fixtures, fluorescent downlights fixtures. In all areas, the light fixtures appear to be working properly and are fairly energy efficient.

Main Concourse Fluorescent Linear Lighting – installed in 2014

Main Concourse Concession with fluorescent 2x4 luminaires

Main Concourse Dugout Suite Downlights – installed in 2014

Upper Concourse Fluorescent Linear Lighting – installed in 2014



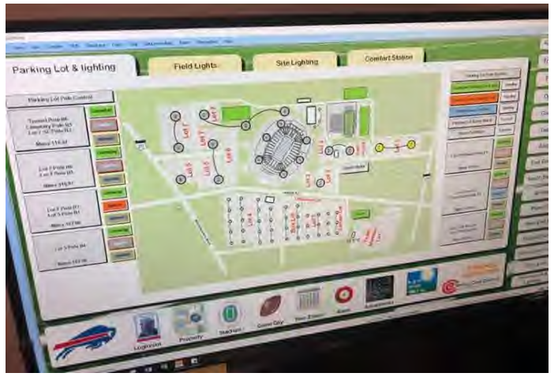
Sideline Club LED Linear Lighting – installed in 2018

The area of lighting that has not been upgrade in the last 15 years is the Club level suites which has downlights and fluorescent troffers. The other lighting item notice during the walk-thru that needed to be upgraded are exit signage. Several of the signs fluorescent lights are burned out and need to be replaced with new LED exit signs.

Exit Sign – Needs to be replaced

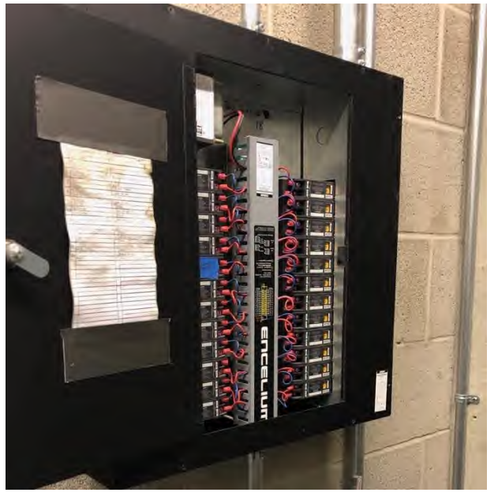
Lighting Controls

The lighting control at the stadium utilizes several systems (Trend, Encelium and ETC). The first system is the Trend system which controls all of the site lighting.



TREND Lighting Control for Site

An Encelium system which was installed in 2014 to control the interior areas that were renovated such as the concessions, concourses and public restrooms. In restrooms the controls also included the addition of occupancy sensors that are not functioning properly.



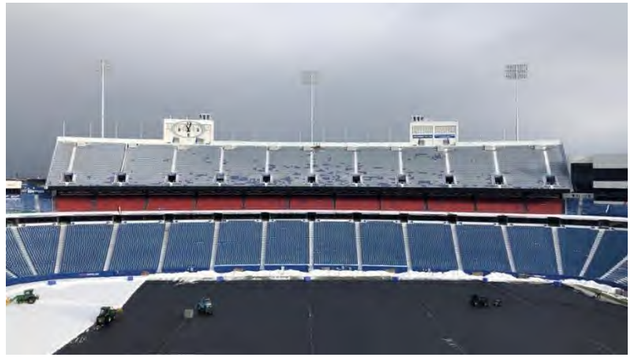
ENCELIUM Lighting Control for Main and Upper Concourse Public Lighting

An ETC dimming control system which was installed in 2018 for the sideline clubs. All of the other areas of the stadium are controlled by a local switches/dimmers.

ETC Control for Sideline Clubs

SPORTS LIGHTING

The original metal halide fixtures were replaced in 2018 with Carolina High Mast LED fixtures. The controls are just on and off and do not have DMX controls or dimming. Future control upgrades should include adding to dimming to this system to reduce energy and create flexibility in using the system for half-time and pre-game fan entertainment.



Sports Lighting - CHM LED Lighting installed in 2018

RECOMMENDATION FOR LIGHTING AND CONTROLS

The overall lighting for the stadium is good condition the only areas of concern are the Club level suites, exit signage, DMX controls on sports lighting and lack of a single lighting control system to operate the stadium. Having several independent systems is not efficient and most likely increase energy usage and maintenance of the lighting system.

FIRE ALARM SYSTEM

The stadium fire alarm system has been replaced with a Siemens system over the last 5 years and is in good condition.

Fire Alarm Pull Station – Installed in 2014

TEAM STORE BUILDING

Electrical Distribution: The team store has a 600amp electrical service at 277/480volt. This service was installed in 2014, is in good condition and is fed from substation US1. The only concern is the storage of equipment in the room that limits the access to equipment.

Lighting: The lighting in the area consist of fluorescent and quartz track heads that were installed in 2014. The illumination and fixtures appear to be good condition.

Team Store Lighting – installed in 2014

OPERATIONS BUILDING

Electrical Distribution: The Operations Building has a 400amp electrical service at 277/480volt. This service was installed in 2014, is in good condition and is fed from substation US9. The only concern is the storage of merchandise racks in the room that don't allow access to equipment.

Lighting: The lighting in the area consist of fluorescent striplights and 2x4 luminaires that were installed in 2014. The illumination and fixtures appear to be good condition.

COMMISSARY BUILDING

Electrical Distribution: The team store has a 1600amp electrical service at 277/480volt. This service was installed in 2014, is in good condition and is fed from substation US9.

Lighting: The lighting in the area consist of fluorescent striplights and 2x4 luminaires that were installed in 2014. The illumination and fixtures appear to be good condition.

FOOD SERVICE OBSERVATIONS

INTRODUCTION

New Era Field was opened to the public in 1973. The facility supports professional football with the club level hosting multiple corporate and social events throughout the week / year. The stadium is open-air, with a capacity of 80,290. The facility has been through several renovations with the last renovation in 2018. The latest renovation updated four side line clubs, the M&T Club and the Goal line club. Concession stands on the 100 and 300 level were completely renovated in 2014. A commissary located in an adjacent building was also added in 2014.

The facilities foodservice operator is Delaware North. Much of the foodservice equipment was replaced between the 2014 and 2018 renovations. Equipment that was not replaced is in the back of the house kitchen and storage in the east and west clubs, M&T Club back of house, Goal Line club back of house, Business Class Club and all suite kitchens.

There is a total of 38 cooking and non-cooking concessions stands. Included is a brew pub with a large bar and six concessions. Level 100 concessions are all single concept spaces. Level 300 concessions are multiple concept spaces with two to three concept per location. Concepts include: Grill Stands, Dog House, LaNova Pizza, Tim Hortons, Lloyd Burrito, 716 Roast Beef and Duff Wings.

The narrow width of 100 & 300 concourses prevents people from traveling far and restricts fans to concessions near their seats. The narrow width also eliminates the possibility of adding drink rails in areas where they would otherwise be beneficial. Cooking concessions are limited on concourses due to a lack of refrigeration and space.

Ranked 29th in NFL in terms of F&B satisfaction, fans feel the cost of food is too high and options limited. The Buffalo market finds success with perceived value and local favorites integrated in the menu options. The food mix is low; 20% of gross sales (60% alcohol, non-alcoholic beverages 18%). Additionally, 70% of sales are cash sales. Customer behavior will need to evolve to see success in the implementation of self-serve POS and remote ordering. Two options that are gaining traction in similar type venues.

POS ratios are as follows: 100/200 end zone levels, 1:170 POS, 300 level, 1:196, Club level, 1:57. Delaware North standard is 1:100.

INFLUENCERS & TRENDS

Social media has become a major consumer influencer. "Instagram worthy" photos to promote and reinforce consumer choices allows people, particularly millennials to relate to the product / brand, and share their experiences. These influencers have resulted in updated photo worthy package branding. It will be important to consider facility design decisions (ex. reconsideration of area lighting for photo worthy opportunities, photo op areas, etc.) to support this.

The last five years have seen a rapid growth of digital ordering. Putting the decision making into the hands of the consumer in a more intimate/technology-based process. We are seeing self-serve kiosks that upsell as well as the development of facility specific custom apps for phone/tablet ordering. There is an integration of ordering and simultaneous marketing.

In addition to infrastructure considerations as influencers, alternate delivery methods are gaining traction. Food trucks, pop-up restaurants and food halls allow the operator to differentiate themselves from the pack.

Operationally, concession stand trends include self-serve beverage stations. Guests are sold a cup and choose their beverage of choice at a remote beverage station. This increases speed of service and allows guests to feel they are getting a good value for their money.

Menu trends are leaning toward ethic choices as well as local favorites. The incorporation of well-known brands into the menu choices have given rise to increased sales.

Kitchen / cooking trends include the following: Chef's tables, Chef's counters where guests can point and pick, ventless cooking and undermount (hidden) induction cooking, chilling and holding.

EXISTING SPACES SURVEY, CHALLENGES AND RECOMMENDATIONS

Commissary: The commissary is in a separate building shared with Delaware North administration offices. It is divided into the following areas: Cold prep, cooking / hot food production, ice production, bulk storage, refrigerated / freezer storage and warewashing.

The loading dock is located on the south side of the building and is adjacent to bulk storage and the bulk cooler and freezer. Ice production is in the same area. As you leave the bulk storage area the kitchen walk-ins are on the north side of the building. All walk-ins are on grade with an air-cooled refrigeration rack on the roof. The walk-ins consist of one large bulk cooler freezer and one seven compartment cooler(s) /freezer(s). The seven-compartment unit consists of a beer refrigerator, bagged ice freezer, wine refrigerator, issue refrigerator, two working refrigerators and a working freezer. They are placed so as the beer refrigerator, bagged ice freezer, wine refrigerator open into the commissary and all other walk-ins open into the kitchen / cooking area.

A popcorn plant is across from the large walk-ins.

Commissary walk-in Coolers

Hot holding cabinets and secure storage are located closer to the commissary entrance to allow staff to move equipment without having to enter the kitchen / cooking areas.

The cold prep area is divided by a center wall. The area includes work tables with shelves above, prep tables with sinks, a large floor mixer, table top mixers, a meat slicer and reach-in refrigeration.

Warewashing includes a rack conveyor machine with a soiled dish table and a three-compartment sink across the aisle. The soiled dish table includes one prewash sink with a prewash spray faucet and disposer. A pot washing machine is next to the three-compartment sink. An eight-foot floor trough is centered in the working aisle to allow for drainage. Outside of the warewashing area are storage shelves.

The cooking line is on the south west side of the building. Equipment consists of the following:

- Five Cook & Hold ovens
- Four roll-in combi's
- One double stacked combi
- Three Double stack convection ovens
- One steamer
- Two tilt skillets
- One 60-gallon steam jacketed kettle

In front of the cooking line are work tables for prepping etc. A blast freezer is also included in the space.

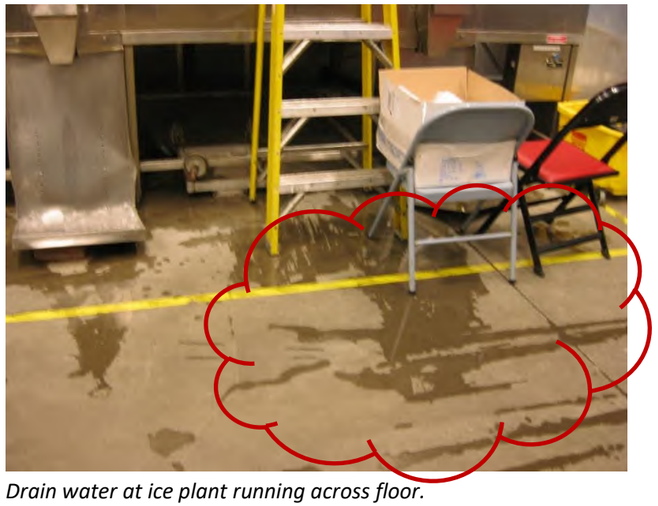
Across from the production cooking line is a "Hot" line. Cooking equipment consists of the following:

- Double conveyor oven
- Six burner range
- 60" Charbroiler
- 72" griddle on a refrigerated equipment stand
- Six banks of fryers
- Double conveyor oven

In front of the hot line is a 12-foot chef's table with a sandwich prep table and mobile work tables.

COMMISSARY CHALLENGES

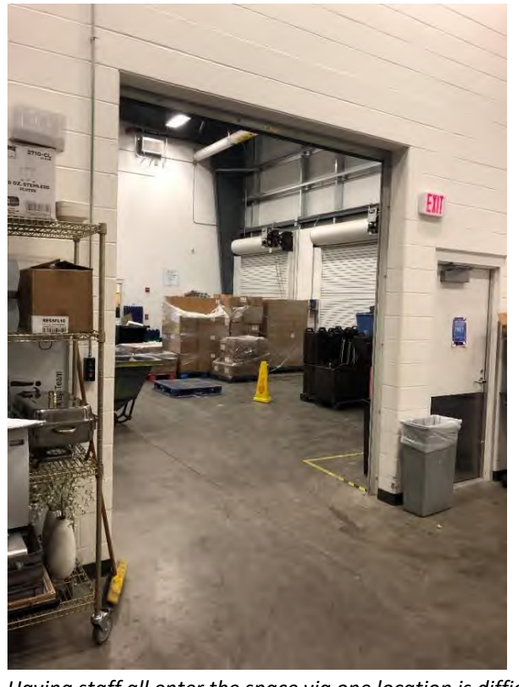
Kitchen and ice production area do not include a floor troughs or drains. Results in water running across the floor toward the walk-ins at the ice plant and kitchen staff are unable to hose down the floors.



Drain water at ice plant running across floor.

Unable to run all culinary kitchens out of the commissary. To many spaces to support for one kitchen.

Staff are exposed to the elements when walking between the commissary building and the stadium. Additionally, the path to the stadium is shared with approximately 2,000 fans. Very congested and can be challenging for staff to navigate.



Having staff all enter the space via one location is difficult. Overhead door motor requires replacement every three months due to overuse.

No separation between the warehouse and commissary. Birds can enter the building.

Warming Cabinets very old.

Warewashing area does not include a place to stage or store pans etc. Results in storage shelves crowding the area.

Heated mobile cabinets very old and require replacing. These were not replaced in 2014.

RECOMMENDATIONS:

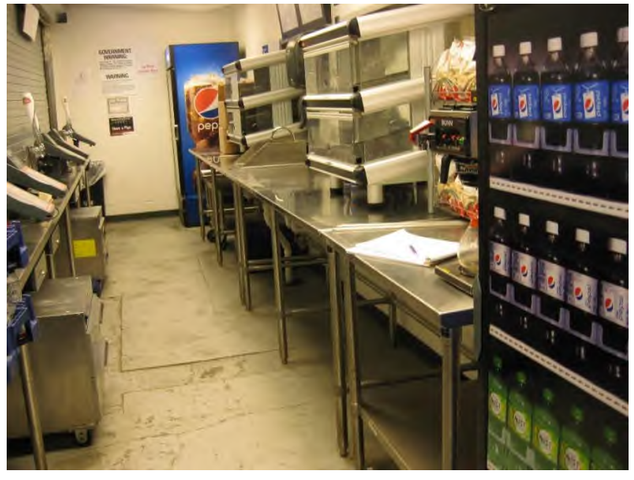
- Add floor drain at ice plant. If floor drain is not a viable solution, consider adding a catch pan to capture melting ice.
- Provide separation between warehouse and commissary. This require some research to determine the best method of separation.
- Replace overhead door with a heavy-duty type to withstand heavy use.
- At warewashing area consider relocating items stored on shelving directly adjacent to allow for a staging and storage area.
- Develop an equipment replacement plan. Prioritize equipment needs to replace equipment as equipment ages out. This is an appropriate step for all foodservice equipment throughout the stadium.
- Add enclosed tunnel between commissary building and stadium for staff and equipment.

CONCESSION STAND OVERVIEW

All concession stands were redesigned and updated in 2014. Concessions are belly-up style with a front and back of house. Stainless-steel front counters include two faucet beer towers and POS machines. Back counters are stainless-steel with integral hand sinks and an open base. All concessions include a hot water heater, three compartment sinks hand sinks and mop sinks. Each concession sells a main menu item as well as popcorn, peanuts, pretzels and snacks. All soda and domestic beer are sold as packaged products. Package goods are held in vendor supplied glass door refrigerators, Texas tankers and refrigerated merchandisers. Two flavors of premium beer are sold on tap. Tap beer flavors vary by stand. Ice is not available in any of the concession stands. Non-digital menu boards are used throughout the stadium.

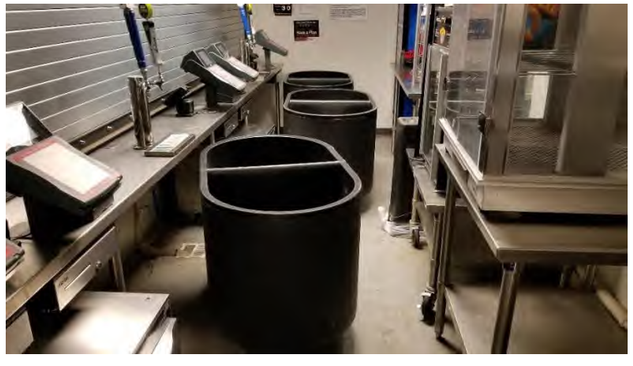
Stands that include a keg cooler have less storage. Because the back counters bases are open, storage is in the back of the house. This exacerbates storage issues.

CONCESSION CHALLENGES:



- Back counters do not allow for any undercounter storage. Results in storage being moved to the back of the house where there may not be room due to space limitations.
- Shortage of shelving.

- Coffee makers are undersized and too few to support the operation.
- Narrow width of concourses limits new menu options due to congestion.
- Walk-in coolers on the 300 level have condensers on top of the box. Many condensers have required replacement due to the units burning out and overheating early in the season.
- Texas Tankers do not fit under front counters. Creates congestion inside the stand.



- Space does not allow for pretzel ovens in all concessions. Pretzels are a top selling item. Would benefit the operation to have pretzel ovens in all stands.

GENERAL RECOMMENDATIONS FOR ALL CONCESSIONS:

- Replace current coffee makers with larger units that include air pots. One unit per stand with multiple air pots will allow staff easy access to coffee.

- Purchase mobile locking cabinet bases to fit under back counters. Include locking doors, casters and center shelf to accommodate storage needs.

- Relocate any condensers located on top of walk-ins and relocate to building roof.
- Replace Texas Tankers with smaller units that fit under front counters. Due to the smaller size additional units may be required.

- With the addition of back counter mobile locking cabinets additional space will become available to place pretzel ovens either in the back or front of the house. Depending upon the location.
- Continue to test the market to consider adding self-serve POS. An indicator for self-serve POS would be an increase in electronic payments.
- Add Grab & Go stands on 100 level where current pantries reside. This would only be possible with the development of larger suite kitchens on the 200 level. This is further discussed in the suite kitchen section.

Portables: Portables are located throughout the concourses. Per the operator portable food carts are not popular with the fans. This may be due to concourse congestion. Delaware North has created one grab & go beverage area on the 300 level. This has proven to be successful and the plan is to create more of these areas.

Level 300 Beverage Grab & Go

CONCESSION STAND EQUIPMENT AND SPACE REVIEW

Grill, six locations 100 level, three locations on level 300. General description: Belly-up style concession. Typical equipment includes front counters with POS, beer towers with 2 faucets, undercounter warming drawers and a refrigerated merchandiser dedicated to beer sales. Back counters include vendor supplied glass door merchandisers, Hatco 30" heated merchandiser, coffee machine and a snack rack. Back of house equipment includes a reach-in refrigeration, exhaust hood, a fryer, French fry dump station, 5' griddle with a 6' refrigerated base, hand sink, beverage hot water heater, three compartment sink, mop sink, hot water heater, mobile work table and 48" shelving unit. Two stands include Giles ventless hoods in lieu of standard hoods.

POS and beer tower counts are acceptable for operation.

POS Counts
Stands 141.04, 125.05, 119.05, 330.06, 308.06, 337.06: 6 POS
Stands 111.05, 133.02: 8 POS, 2 are dedicated to beer sales only.
Brew Pub Grill: 4 POS

Beer Tower Counts
Stand 125.05: Four 2-faucet beer towers.
Stand 111.05, 133.02, 141.04, 330.06, 308.06, 337.06: Three 2-faucet beer towers.
Stand 119: Beer towers removed due to racoon issues.
Brew Pub Grill: Two 4-faucet beer towers

Space Challenges

- Shortage of shelving.
- Front of house back counters do not allow for storage
- Undersized coffee maker.
- Texas tankers do not fit under the front counters well and can be difficult to get around.

Dog House Stand, nine locations 100 level, three locations 300 level. General description: Belly-up style concession, non-cooking. Typical equipment includes front counters with POS, beer towers with 2 faucets, undercounter warming drawers. Back counters include vendor supplied glass door merchandisers, pretzel cabinets, a popcorn machine, coffee machine, snack rack and a refrigerated merchandiser dedicated to beer sales. Back of house equipment includes a beverage hot water heater, one-door reach in refrigerator, keg cooler, ventless combi oven, 36" roller grill, 5' griddle with a 6' refrigerated base, hand sink, three compartment sink, mop sink, hot water heater, mobile work table and shelving units.

POS Counts
Stands 127.05, 308.06, 315.02, 330.06: 5 POS.
Stands 102.05, 106.05, 143.05, 139.05: 6 POS.
Stands 110.05, 135.05: 8 POS, 2 are dedicated to beer sales only.
Brew Pub Dog House: 4 POS x 2.

Beer Tower Counts
Stand 102.05, 110.05, 127.05, 135.05, 139.06, 143.05, 308.06, 315.02, 330.06: Three 2-faucet beer towers.
Stand 106.05: Beer towers removed due to racoon damage.

Space Challenges

- Shortage of shelving.
- Front of house back counters do not allow for storage.
- Undersized coffee maker.
- Texas tankers do not fit under the front counters well and can be difficult to get around.

Recommendations: In areas where beer towers have been removed due to racoon damage, determine and seal point of entry.

LaNova Pizza, six locations on 100 level, three locations on 300 level: General description: Belly-up style concession with cooking. Typical equipment includes front counters with POS, beer towers with 2 faucets, undercounter warming drawers. Back counters include vendor supplied glass door merchandisers, pretzel cabinets, nacho cheese dispensers, coffee machine and a 48" heated merchandiser. Back of house equipment includes a beverage hot water heater, reach in refrigeration, keg cooler, double stack Turbo Chef oven, 36" griddle, exhaust hood, hand sink, three compartment sink, mop sink, hot water heater, mobile work table and shelving units.

Five stands include a Giles ventless exhaust hood.

POS Counts
Stands 107.05, 113.05, 116.05, 129.05, 132.05, 138.05: 8 POS, 2 are dedicated to beer sales only.
Stands 312.06, 332.02: 6 POS
Stands 310.02: 5 POS

Beer Tower Counts
Stand 107.05, 113.05, 116.05, 129.05, 132.05, 138.05, 312.06, 332.02, 310.02: Three 2-faucet beer towers.

- Shortage of shelving.
- Front of house back counters do not allow for storage.
- Undersized coffee maker.
- Texas tankers do not fit under the front counters well and can be difficult to get around.

Tim Hortons, four location, 100 level, one location 300 level. General description: Belly-up style concession, non-cooking. Typical equipment includes front counters with POS and two faucet beer towers. Back counters include vendor supplied glass door merchandisers, pretzel cabinets, nacho cheese dispensers, three coffee machines, a 72" refrigerated merchandiser and undercounter warming drawers. Back of house equipment includes a beverage hot water heater, reach-in refrigeration, 36" roller grill, hand sink, three compartment sink, mop sink, hot water heater, mobile work table, heated mobile cabinet and shelving units.

POS Counts
Stands 108.05, 115.05, 130.05, 137.05: 8 POS, 2 are dedicated to beer sales only.
Stands 310.02: 6 POS

Beer Tower Counts
Stand 108.05, 115.05, 130.05, 137.05, 310.02: Three 2-faucet beer towers

Space Challenges:

- Front of house back counters do not allow for storage.
- Undersized coffee maker.
- Texas tankers do not fit under the front counters well and can be difficult to get around.
- Shortage of shelving.
- Lack of pretzel ovens.

Lloyd Burrito, two locations 100 level, two locations 300 level. General description: Belly up style concession, non-cooking. Front counters include POS, beer towers with 2 faucets and two undercounter warming drawers. Back counters include two vendor supplied glass door merchandisers, coffee machine, a 36" roller grill, two 30" heated merchandisers and a 60" refrigerated

merchandiser. Back of house equipment includes a beverage hot water heater, two-door reach in refrigerator, electric combi oven, two double hot wells, with a double cold well, both mounted in a fixed stainless-steel table with over shelf, hand sink, three compartment sink, mop sink, hot water heater, mobile work table and two 48" shelving units.

POS Counts
Stands 109.05, 131.05: 8 POS, 2 are dedicated to beer sales only.
Stands 312.02, 332.02: 5 POS.
Brew Pub Lloyd: 2 POS.

Beer Tower Counts
Stand 109.05, 131.05, 312.02, 332.02: Three 2-faucet beer towers.

Brew Pub Lloyd: One 4-faucet beer tower.

Space Challenges

- Shortage of shelving.
- Front of house back counters do not allow for storage.
- Undersized coffee maker.
- Texas tankers do not fit under the front counters well and can be difficult to get around.

716 Roast Beef, three locations 100 level, one location 300 level. General description: Non-cooking stand. Typical equipment includes front counters with POS, two faucet beer towers and undercounter warming drawers. Back counters include vendor supplied glass door merchandisers, coffee machine, pretzel cabinets, nacho cheese dispensers and a 72" refrigerated merchandiser, dedicated to beer sales. Back of house equipment includes a beverage hot water heater, reach in refrigeration, 36" roller grill, sandwich prep refrigerator, three hot wells in a 6' stainless steel table. hand sink, three compartment sink, mop sink, hot water heater, heated mobile cabinet and shelving units.

POS Counts
Stands 114.05, 136.05: 8 POS, 2 are dedicated to beer sales only.
Stands 334.02: 5 POS.
Brew Pub 716: 2 POS.

Beer Tower Counts
Stand 114.05, 136.05, 334.02: Three 2-faucet beer towers.
Brew Pub 716: One 4-faucet beer tower.

Space Challenges

- Front of house back counters do not allow for storage.
- Undersized coffee maker.
- Texas tankers do not fit under the front counters well and can be difficult to get around.
- Shortage of shelving.

Duff's, 100 level: one location, 300 level, two locations. General description: Typical equipment includes front counters with POS, two faucet beer towers and undercounter warming drawers. Back counters include vendor supplied glass door merchandisers, coffee machine, pretzel cabinets, nacho cheese dispensers and 30" Hatco heated merchandisers. Back of house equipment includes a beverage hot water heater, reach in refrigeration, Fryers, dump station, 60" griddle with a 72" refrigerated base, exhaust hood, hand sink, three compartment sink, mop sink, hot water heater and shelving units.

POS Counts
Stands 104.05, 315.02: 6 POS.
Stands 337.06: 5 POS.
Brew Pub Duffs: 4 POS.

Beer Tower Counts
Stand 104.05, 337.06: Three 2-faucet beer towers.
Brew Pub Duffs: Two 4-faucet beer tower.

Brew Pub, 100 level: one location. General description: The Brew pub is a heated, self-contained space with restrooms a large bar and six concession stands. Bar equipment includes front counters with fourteen POS, seven four-faucet beer towers, ten 60" back bar coolers and five pretzel cabinets. There are three smaller scale concessions on each side of the bar. The concessions are set back from the bar area to allow for queuing. Concession stand concepts include two Dog House stands, a Grill, 716 Beef, Duff's and Lloyd Burrito. Equipment in each stand matches typical equipment seen in comparative stands. POS counts range from two to four depending upon the stand. The front counter includes 4-faucet beer tower(s). Back counters include vendor supplied glass door merchandisers, coffee machine, pretzel cabinets, nacho cheese dispensers and heated merchandisers. Back of house equipment supports the front of house operation. Two large coolers house beer kegs. Additional equipment includes shelving units, hand sinks, three compartment sinks, mop sinks, hot wells, cold wells, electric combis, griddles, refrigerated bases, fryers, dump stations, double stack conveyor ovens, proofers, reach-in refrigeration and salad / sandwich prep tables.

Brew Pub Bar

Brew Pub Concession Stands

Recommendations: The space is well designed and exceeds the expectations of Delaware North. An equipment replacement plan to replace equipment as it ages out is recommended.

SUITE KITCHENS

Suite Kitchen / Pantry, level 100 four locations: All equipment original to 1998 renovation except for the walk-in cooler. They were installed over the last two years. Space includes conveyor oven, full size combi oven, French top oven with salamander above, two bank fryer, one two door reach in freezer, one two door reach in refrigerator, 48" shelving unit, hand sink, mop sink, three compartment sink, shelving unit and center work tables. Each pantry supports approximately 20 suites, with one pantry also supporting the press.

Space Challenges

- Equipment very old.
- Some equipment not used.
- Staffing challenging due to the number of kitchens.

Recommendations: Determine if level 200 suite kitchens can be expanded and eliminate all 100 level suite kitchens. Modify space into grab & go markets.

Cooking Equipment past its life cycle

New Pantry walk-ins

Suite Kitchen / Pantry, level 200: All equipment original to 1998 renovation. Space includes hand sinks, three compartment sink, shelving units, double conveyor oven, four burner range, fryers, combi oven, double convection ovens, warming cabinets, walk-in cooler, chef's table with two hot wells and plate shelves in front, warewasher, disposer, reach-in refrigeration and coffee maker.

Space Challenges

- Equipment very old and past its life span.
- Spaces are too small to support all suites.
- Staffing challenging due to the number of kitchens.

Cooking equipment requires replacement

Warewashing equipment very old and requires replacement.

Recommendations: Determine if level 200 suite kitchens can be expanded and provide direct access to 100 level suites and press box. Eliminate all 100 level suite kitchens.

CLUBS

Business Class Club: Club not being utilized for the 2018 season except for a few non-game day private events. It is an all-inclusive space on game day. The front of the house is buffet style with hot wells and refrigerated pans for food offerings. All equipment and finishes are original to the 1998 renovation. BOH house equipment includes, hand sink, three compartment sink, mop sink, ice maker, salad prep table, reach-in refrigeration, work top refrigerators, large coffee makers, 36" charbroiler, fryers, with dump station, double convection oven, steamer, keg coolers with a three faucet beer towers, bag and box, glass door merchandisers. Bar equipment includes beer towers, 2 Faucet, underbar hand sinks, soda guns, cocktail stations, undercounter three compartment sink, back bar cooler and undercounter blender station.

Space Challenges

- Entire space is very dated and unwelcoming.
- Equipment is very old.

Dated front of house finishes

Recommendations: Work with operator to program space. Consider using cooking equipment for in seat service.

Business Class Club cooking line

M&T Club: Front of house renovated for 2018 season. Back of house equipment original to 1998 renovation. Bar equipment was reused, a new back bar cooler, reach in refrigerator and new bar top finishes were included. Display cooking with a ventless griddle was added to the buffet space with heated shelves flanking the griddle. An ambient merchandiser and ice cream dipping cabinet, back counter with sink, pass through refrigeration were also added to the space.

Front of house serving line: Desserts.

Front of house hot cooking.

Front of house renovations

Back of house equipment is original to the 1998 renovation. Equipment includes, hand sink, three compartment sink, mop sink, ice maker, salad prep table, reach-in refrigeration, work top refrigerators, large coffee makers, 36" Charbroiler, fryers, with dump station, double convection oven, steamer, keg coolers with a three faucet beer towers, bag and box, glass door merchandisers. Bar equipment includes beer towers, 2 Faucet, underbar hand sinks, soda guns, cocktail stations, undercounter three compartment sink, back bar cooler and undercounter blender station.

Space Challenges

- Back of House equipment is very old, requires replacement.

Back of house equipment, very old.

Pantry walk-in very old and undersized. Does not include a ramp; a tripping hazard to staff.

Goal Line Club: Front of house renovated for 2018 season. Back of house equipment original to 1998 renovation. Bar equipment was reused, and new bar top finishes were included. Concession cooking equipment includes a 48" griddle, a double stacked impinge oven, fryers, a dump station, refrigerated equipment stands, sandwich prep table, reach-in refrigeration, stainless steel work tables, hot wells and decorative heat lamps. Back of house equipment is original to the 1998 renovation. Equipment includes, hand sink, three compartment sink, mop sink, reach-in refrigeration, walk-in cooler, new combi oven and shelving units. Bar equipment includes a direct drawer beer cooler, underbar hand sink, soda guns, cocktail stations and undercounter three compartment sink.

Front of house bar and concession

Space Challenges

- Providing in seat service out of concession stand. Very challenging.
- Need more heat lamps to hold hot food items.


Pantry walk-in very old and does not include a ramp; a tripping hazard to staff.

Recommendations:

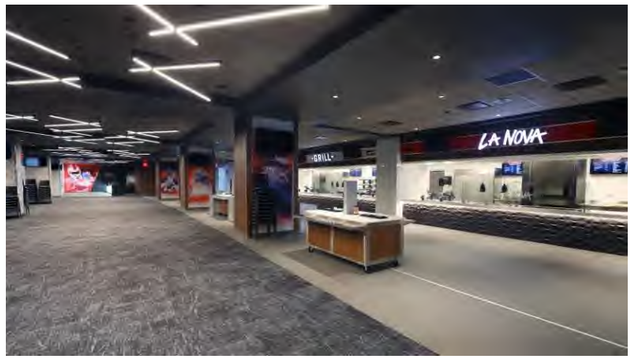
- Add heat lamps for holding.
- Consider producing in seat service menu items out of the Business Class Club, which is currently not being used.
- Replace walk-in with new larger unit to include a ramp.
- At all clubs discontinue bottled non-alcoholic beverages. Add remote beverage stations. Soda stations, ice makers and bag-in-boxes would need to be added to each club. The benefit is a reduction in trash, cold holding and labor to stock refrigerated merchandisers.

Side Line Clubs: Pepsi Club West, Pepsi Club East, Toyota Club and Dunn Tire Club : Four clubs with three menu concepts in each area and two bars. The front of house was renovated in 2018 with some new back of house cooking equipment. The bulk of the back of house equipment is from the 1998 renovations. Front of house menu concepts include grilled items with display cooking, pizza, carvery and Lloyd Burrito. Display cooking is achieved using ventless griddles. Fried food is produced out of the back of the house. Pizzas are prepared in the back of the house and baked using a conveyor oven that allows finished pizzas to be accessed from the front of the house. New fryers with dump stations were included in the renovation as well as a double stacked combi oven and reach-in refrigeration. Hot and cold wells are used to hold food items as they are finished for each guest. All bottled beverages are held in multiple refrigerated merchandisers. They are along the back counter for easy access by staff. Back of house equipment includes reach-in refrigeration, walk-in coolers, exhaust hoods, work tables, three compartment sinks, hand sinks, mop sinks, sandwich and salad prep tables, coffee makers and storage shelves. Additionally, two clubs include new walk-in coolers in place of an existing keg cooler. Three condiment counters are also included in each space.

The two bars are in each club space. Each bar includes cocktail stations, underbar blender stations, underbar hand sinks, and back bar coolers with glass door each ends flanking the center back bar coolers. Each bar is designed to support six bartenders.

Space Challenges

- Back of house equipment old and requires replacement.
- Front of house refrigerated merchandisers are oversized and require staff to rotate bottled beverages.



Side Line Club front of house


Typical side line club bar. New to 2018 season

Pass through pizza conveyor oven

Condiment counters

Recommendations:

- If Grab & Go spaces are incorporated into the stadium, consider using club refrigerated merchandisers and replace club merchandisers with smaller units.
- Develop a replacement equipment plan for outdated / old equipment.

BOH refrigeration original to 1998 renovation

Back of house laminate counters. Should be replaced with stainless steel.

FOODSERVICE EQUIPMENT BY AREA

Area	Quantity	Equipment Type
Commissary	2	TILT SKILLET
Commissary	3	COMBI OVEN, ROLLIN
Commissary	1	COMBI OVEN, STACKED
Commissary	5	OVEN, SLOW COOK/HOLD
Commissary	5	EXHAUST HOODS
Commissary	3	OVEN, CONVECTION, DOUBLE DECK
Commissary	1	STEAMER, CONVECTION
Commissary	1	KETTLE, STEAM JACKETED, 60 GALLON TILT
Commissary	1	RANGE, 6-BURNER
Commissary	1	BROILER, UNDER-FIRED, 60"
Commissary	1	GRIDDLE, 72"
Commissary	3	CONVEYOR OVENS, STACKED
Commissary	1	OVEN, COOK/HOLD, SMOKE/HOLD
Commissary	2	TRIPLE FRYER BATTERY, W/FILTER
Commissary	1	SLICER, FOOD (QTY 1)
Commissary	1	MIXER, FLOOR, 60 QUARTS, (QTY 1)
Commissary	1	MIXER, COUNTER, 20 QUARTS, (QTY 1)
Commissary	1	FOOD PROCESSOR, (QTY 1)
Commissary	2	ICE MAKER W/ BIN
Commissary	1	POPCORN POPPING PLANT
Commissary	1	REFRIGERATOR, COLD PREP
Commissary	1	REFRIGERATOR, REACH-IN, 2-SECTION
Commissary	1	FREEZER, REACH-IN, 2-SECTION
Commissary	1	FREEZER, REACH-IN, 3-SECTION
Commissary	1	REFRIGERATED EQUIPMENT STAND, 72"
Commissary	1	BLAST CHILLER / SHOCK FREEZER, REACH-IN
Commissary	22	HOLDING CABINET, HEATED
Commissary	1	POT WASHER
Commissary	1	WAREWASHER, RACK CONVEYOR
Commissary	1	HOSE REEL WITH GUN
Commissary	1	SPRAY SYSTEM, WALL MOUNT
Commissary	1	DOUBLE HOT WELL
Commissary	1	REFRIGERATOR/FREEZER, BULK STORAGE
Commissary	1	REFRIGERATOR/FREEZER
Commissary	Multiple	Work tables, three compartment sinks, pan racks, shelving units, Security Cages, hand sinks.
Dog House (100 Level) Rooms: 102.05, 110.05, 135.05, 143.05	2	DRAFT BEER SYSTEM, AIR-COOLED
Dog House (100 Level) Rooms: 102.05, 110.05, 127.05, 135.05, 139.06, 143.05	3	BEER TOWER, 2 TAPS + DRAINER
Dog House (100 Level) Rooms: 102.05, 106.05, 110.05, 127.05, 135.05, 139.06, 143.05	1	DISPENSER, HOT WATER, 25 GALLON
Dog House (100 Level) Rooms: 102.05, 106.05, 110.05, 127.05, 135.05, 139.06, 143.05	1	COFFEE MAKER, AUTOMATIC
Dog House (100 Level) Rooms: 102.05, 106.05, 143.05, 139.05	6	POS STATION
Dog House (100 Level) Rooms: 127.05, 308.06, 315.02, 330.06	5	POS STATION
Dog House (100 Level) Rooms: 110.05, 135.05	8	POS STATION
Dog House (100 Level) Rooms: 102.05, 106.05, 110.05	3	NACHO CHEESE WARMER/DISPENSER
Dog House (100 Level) Rooms: 110.05, 135.05, 139.05	2	NACHO CHEESE WARMER/DISPENSER
Dog House (100 Level) Rooms: 102.05, 106.05, 110.05, 127.05, 135.05, 139.05, 143.05	1	POPCORN DISPLAY WARMER
Dog House (100 Level) Rooms: 102.05, 106.05, 110.05, 127.05, 135.05, 139.05, 143.05	1	OVEN-STEAMER, COMBINATION W/ HOOD
Dog House (100 Level) Rooms: 102.05, 106.05, 110.05, 127.05, 135.05, 139.05, 143.05	2	HOT DOG GRILL
Dog House (100 Level) Rooms: 102.05, 106.05, 127.05	1	PRETZEL DISPLAY WARMING CABINET
Dog House (100 Level) Rooms: 135.05, 139.05, 143.05	2	PRETZEL DISPLAY WARMING CABINET
Dog House (100 Level) Rooms: 102.05, 106.05, 110.05, 127.05, 135.05, 139.05, 143.05	2	SHELF, PASS-THRU
Dog House (100 Level) Rooms: 102.05, 106.05, 110.05, 127.05, 135.05, 139.06, 143.05	1	FRONT COUNTER
Dog House (100 Level) Rooms: 102.05, 143.05	1	GLASS DOOR REFRIGERATORS (VENDOR PROVIDED)
Dog House (100 Level) Rooms: 106.05, 110.05, 127.05, 135.05, 139.05	2	GLASS DOOR REFRIGERATORS (VENDOR PROVIDED)
Dog House (100 Level) Rooms: 102.05, 110.05, 143.05	1	REFRIGERATOR, REACH-IN, 1-SECTION
Dog House (100 Level) Rooms: 106.05, 139.05	1	REFRIGERATOR, REACH-IN, 2-SECTION
Dog House (100 Level) Rooms: 139.05	1	FREEZER, REACH-IN, 2-SECTION
Dog House (100 Level) Rooms: 106.05, 139.05	1	60" REFRIGERATED MERCHANDISER
Dog House (100 Level) Rooms: 110.05, 135.05	1	72" REFRIGERATED MERCHANDISER
Dog House (100 Level) Rooms: 102.05, 106.05, 110.05, 127.05, 135.05, 139.06, 143.05	3	TEXAS TANKERS
Dog House (100 Level) Rooms: 102.05, 106.05, 127.05, 139.06, 143.05	1	SHELVING, MOBILE
Dog House (100 Level) Rooms: 102.05, 106.05, 110.05, 127.05, 135.05, 139.06, 143.05	1	HAND SINK
Dog House (100 Level) Rooms: 102.05, 106.05, 110.05, 127.05, 135.05, 139.06, 143.05	1	SINK, MOP

Area	Quantity	Equipment Type
Dog House (100 Level) Rooms: 102.05, 106.05, 110.05, 127.05, 135.05, 139.06, 143.05	1	SINK, 3-COMPARTMENT
Dog House (100 Level) Rooms: 102.05, 106.05, 110.05, 127.05, 135.05, 139.06, 143.05	2	SHELF, WALL MOUNT
Dog House (100 Level) Rooms: 102.05, 106.05, 110.05, 127.05, 135.05, 139.06, 143.05	3	TABLE, WORK
Dog House (100 Level) Rooms: 102.05, 106.05, 110.05, 127.05, 135.05, 139.06, 143.05	1	BACK COUNTER
Dog House (100 Level) Rooms: 102.05	2	RACK, PAN, UNDERCOUNTER
Dog House (100 Level) Rooms: 106.05	2	DOUBLE DRAWER WARMER. MOBILE
Dog House (100 Level) Rooms: 102.05, 110.05, 135.05, 139.05	3	DOUBLE DRAWER WARMER. MOBILE
Dog House (100 Level) Rooms: 127.05	4	DOUBLE DRAWER WARMER. MOBILE
Dog House (100 Level) Rooms: 102.05, 106.05, 110.05, 127.05, 135.05, 139.06, 143.05	1	WATER HEATER
Dog House (100 Level) Rooms: 102.05, 110.05, 135.05, 143.05	1	WALK-IN KEG COOLER
Pizza (100 Level) Rooms: 107.05, 113.05, 116.05, 129.05, 132.05, 138.05	2	DRAFT BEER SYSTEM
Pizza (100 Level) Rooms: 107.05, 113.05, 116.05, 129.05, 132.05, 138.05	3	BEER TOWER, 2 TAPS + DRAINER
Pizza (100 Level) Rooms: 107.05, 113.05, 116.05, 129.05, 132.05, 138.05	1	COFFEE MAKER, AUTOMATIC
Pizza (100 Level) Rooms: 107.05, 113.05, 116.05, 129.05, 132.05, 138.05	1	DISPENSER, HOT WATER, 25 GALLON
Pizza (100 Level) Rooms: 107.05	3	HOT CHOCOLATE INSULATED CARRIER
Pizza (100 Level) Rooms: 107.05, 113.05, 116.05, 129.05, 132.05, 138.05	3	WORK TABLE

Area	Quantity	Equipment Type
Pizza (100 Level) Rooms: 107.05, 113.05, 116.05, 129.05, 132.05, 138.05	8	POS
Pizza (100 Level) Rooms: 107.05, 113.05, 116.05, 129.05, 132.05, 138.05	1	GRIDDLE, GAS, 36"
Pizza (100 Level) Rooms: 107.05, 113.05, 116.05, 129.05, 132.05, 138.05	2	CONVEYOR OVEN, VENTLESS
Pizza (100 Level) Rooms: 113.05, 138.05	2	PRETZEL DISPLAY WARMER CABINET
Pizza (100 Level) Rooms: 107.05	1	PRETZEL DISPLAY WARMING CABINET
Pizza (100 Level) Rooms: 113.05	1	NACHO CHEESE WARMER/DISPENSER
Pizza (100 Level) Rooms: 116.05, 129.05, 138.05	2	NACHO CHEESE WARMER/DISPENSER
Pizza (100 Level) Rooms: 107.05, 113.05, 116.05, 129.05, 132.05, 138.05	1	FRONT COUNTER
Pizza (100 Level) Rooms: 107.05	1	REFRIGERATOR, SANDWICH/SALAD PREP
Pizza (100 Level) Rooms: 107.05, 113.05, 116.05, 129.05, 132.05, 138.05	2	GLASS DOOR REFRIGERATORS (VENDOR PROVIDED)
Pizza (100 Level) Rooms: 113.05, 129.05	1	60" REFRIGERATED MERCHANDISER
Pizza (100 Level) Rooms: 107.05, 116.05, 132.05, 138.05	1	72" REFRIGERATED MERCHANDISER
Pizza (100 Level) Rooms:	1	REFRIGERATOR, REACH-IN, 1-SECTION
Pizza (100 Level) Rooms: 132.05	1	REFRIGERATOR, REACH-IN, 2-SECTION
Pizza (100 Level) Rooms: 107.05, 113.05, 116.05, 129.05, 138.05	1	FREEZER, REACH-IN, 1-SECTION
Pizza (100 Level) Rooms: 132.05	1	FREEZER, REACH-IN, 2-SECTION
Pizza (100 Level) Rooms: 107.05, 113.05, 116.05, 129.05, 132.05, 138.05	1	HEATED MOBILE CABINET
Pizza (100 Level) Rooms: 107.05, 113.05, 116.05, 129.05, 132.05, 138.05	4	TEXAS TANKERS

Area	Quantity	Equipment Type
Pizza (100 Level) Rooms: 107.05, 113.05, 116.05, 129.05, 132.05, 138.05	1	SHELVING, MOBILE
Pizza (100 Level) Rooms: 107.05, 113.05, 116.05, 129.05, 132.05, 138.05	1	HAND SINK, WALL MOUNT
Pizza (100 Level) Rooms: 107.05, 113.05, 116.05, 129.05, 132.05, 138.05	1	SINK, MOP
Pizza (100 Level) Rooms: 107.05, 113.05, 116.05, 129.05, 132.05, 138.05	1	SINK, 3-COMPARTMENT
Pizza (100 Level) Rooms: 107.05, 113.05, 116.05, 129.05, 132.05, 138.05	1	SHELF, WALL MOUNT
Pizza (100 Level) Rooms: 107.05, 113.05, 116.05, 129.05, 132.05, 138.05	1	BACK COUNTER, WITH HAND SINK
Pizza (100 Level) Rooms: 107.05, 113.05, 129.05, 132.05	2	WARMER, DRAWER TYPE
Pizza (100 Level) Rooms: 132.05, 138.05	3	WARMER, DRAWER TYPE
Pizza (100 Level) Rooms: 107.05, 113.05, 116.05, 129.05, 132.05, 138.05	1	DISPLAY CASE, HEATED, PASS-THROUGH
Pizza (100 Level) Rooms: 107.05, 113.05, 116.05, 129.05, 132.05, 138.05	1	WATER HEATER
Pizza (100 Level) Rooms: 107.05, 113.05, 116.05, 129.05, 132.05, 138.05	1	EXHAUST HOOD
Pizza (100 Level) Rooms: 107.05, 113.05, 116.05, 129.05, 132.05, 138.05	1	WALK-IN KEG COOLER
Lloyd (100 Level) Rooms: 109.05, 131.05	3	BEER TOWER, 2 TAPS + DRAINER
Lloyd (100 Level) Rooms: 109.05, 131.05	1	COFFEE MAKER, AUTOMATIC
Lloyd (100 Level) Rooms: 109.05, 131.05	1	DISPENSER, HOT WATER, 25 GALLON
Lloyd (100 Level) Rooms: 109.05, 131.05	2	HOT CHOCOLATE DISPENSER
Lloyd (100 Level) Rooms: 109.05, 131.05	2	WORK TABLES
Lloyd (100 Level) Rooms: 109.05, 131.05	8	POS

Area	Quantity	Equipment Type
Lloyd (100 Level) Rooms: 109.05, 131.05	2	NACHO CHEESE WARMER/DISPENSER
Lloyd (100 Level) Rooms: 109.05, 131.05	1	OVEN-STEAMER, COMBINATION W/ HOOD & STAND
Lloyd (100 Level) Rooms: 109.05, 131.05	1	FRONT COUNTER
Lloyd (100 Level) Rooms: 109.05, 131.05	2	GLASS DOOR REFRIGERATORS (VENDOR PROVIDED)
Lloyd (100 Level) Rooms: 109.05, 131.05	1	60" REFRIGERATED MERCHANDISER
Lloyd (100 Level) Rooms: 109.05, 131.05	1	REFRIGERATOR, REACH-IN, 2-SECTION
Lloyd (100 Level) Rooms: 109.05, 131.05	4	TEXAS TANKERS
Lloyd (100 Level) Rooms: 109.05, 131.05	1	DROP-IN, COLD PAN
Lloyd (100 Level) Rooms: 109.05, 131.05	4	SHELVING UNIT, MOBILE
Lloyd (100 Level) Rooms: 109.05, 131.05	1	HOT DOG GRILL
Lloyd (100 Level) Rooms: 109.05, 131.06	1	OVEN-STEAMER, COMBINATION W/ HOOD
Lloyd (100 Level) Rooms: 109.05, 131.05	1	HAND SINK, WALL MOUNT
Lloyd (100 Level) Rooms: 109.05, 131.05	1	SINK, MOP
Lloyd (100 Level) Rooms: 109.05, 131.05	1	SINK, 3-COMPARTMENT
Lloyd (100 Level) Rooms: 109.05, 131.05	1	SHELF, WALL MOUNT
Lloyd (100 Level) Rooms: 109.05, 131.05	1	TABLE, WORK
Lloyd (100 Level) Rooms: 109.05, 131.05	1	BACK COUNTER, WITH HAND SINK
Lloyd (100 Level) Rooms: 109.05, 131.05	1	RACK, PAN, UNDERCOUNTER
Lloyd (100 Level) Rooms: 109.05	1	TORTILLA PRESS

Area	Quantity	Equipment Type
Lloyd (100 Level) Rooms: 109.05, 131.05	2	DOUBLE HOT WELLS
Lloyd (100 Level) Rooms: 109.05, 131.05	2	WARMER, DRAWER TYPE
Lloyd (100 Level) Rooms: 109.05, 131.05	2	PASS THROUGH WARMER, 30"
Lloyd (100 Level) Rooms: 109.05, 131.05	1	WATER HEATER
Grill (100 Level) Rooms: 111.05, 125.05, 133.02, 141.04	3	BEER TOWER, 2 TAPS + DRAINER
Grill (100 Level) Rooms: 111.05, 119.05, 125.05, 133.02, 141.04	1	COFFEE MAKER, AUTOMATIC
Grill (100 Level) Rooms: 111.05, 119.05, 125.05, 133.02, 141.04	1	DISPENSER, HOT WATER, 25 GALLON
Grill (100 Level) Rooms: 111.05, 119.05, 125.05, 133.02, 141.04	3	HOT CHOCOLATE INSULATED CARRIER
Grill (100 Level) Rooms: 119.05, 125.05	6	POS
Grill (100 Level) Rooms: 111.05, 133.02, 141.04	8	POS
Grill (100 Level) Rooms: 111.05, 119.05, 125.05, 133.02, 141.04	1	GRIDDLE, ELECTRIC, 60"
Grill (100 Level) Rooms: 111.05, 133.02	1	DOUBLE FRYER BATTERY, ELECTRIC W/FILTER
Grill (100 Level) Rooms 119.05, 125.05, 141.04	1	TRIPLE FRYER BATTERY, ELECTRIC W/FILTER
Grill (100 Level) Rooms: 111.05, 119.05, 125.05, 133.02, 141.04	1	FRONT COUNTER
Grill (100 Level) Rooms: 111.05, 119.05, 133.02, 141.04	1	GLASS DOOR REFRIGERATORS (VENDOR PROVIDED)
Grill (100 Level) Rooms: 125.05	1	GLASS DOOR REFRIGERATORS (VENDOR PROVIDED)
Grill (100 Level) Rooms: 111.05, 133.02, 141.04	1	60" REFRIGERATED MERCHANDISER
Grill (100 Level) Rooms: 111.05, 119.05, 125.05, 133.02, 141.04	1	REFRIGERATOR, REACH-IN, 2-SECTION

Area	Quantity	Equipment Type
Grill (100 Level) Rooms: 119.05, 133.02	1	FREEZER, REACH-IN, 2-SECTION
Grill (100 Level) Rooms: 111.05	2	FREEZER, REACH-IN, 2-SECTION
Grill (100 Level) Rooms: 125.05, 133.02, 141.04	1	FREEZER, REACH-IN, 3-SECTION
Grill (100 Level) Rooms: 111.05, 119.05, 125.05, 133.02, 141.04	4	TEXAS TANKERS
Grill (100 Level) Rooms: 111.05, 119.05, 125.05, 133.02, 141.04	1	REFRIGERATED EQUIPMENT STAND
Grill (100 Level) Rooms: 111.05, 119.05, 125.05, 133.02, 141.04	1	SHELVING UNIT, MOBILE
Grill (100 Level) Rooms: 119.05, 125.05, 133.02, 141.04	1	HAND SINK, WALL MOUNT
Grill (100 Level) Rooms: 111.05	2	HAND SINK, WALL MOUNT
Grill (100 Level) Rooms: 111.05, 119.05, 125.05, 133.02, 141.04	1	SINK, MOP
Grill (100 Level) Rooms: 111.05, 119.05, 125.05, 133.02, 141.04	1	SINK, 3-COMPARTMENT
Grill (100 Level) Rooms: 111.05, 119.05, 125.05, 133.02, 141.04	2	SHELF, WALL MOUNT
Grill (100 Level) Rooms: 111.05, 119.05, 125.05, 133.02, 141.04	3	WORK TABLES
Grill (100 Level) Rooms: 111.05, 119.05, 125.05, 133.02, 141.04	1	BACK COUNTER
Grill (100 Level) Rooms: 111.05, 119.05, 125.05	2	WARMER, DRAWER TYPE
Grill (100 Level) Rooms: 133.02, 141.04	3	WARMER, DRAWER TYPE
Grill (100 Level) Rooms: 111.05, 119.05, 125.05, 133.02, 141.04	1	FRY DUMP STATION
Grill (100 Level) Rooms: 111.05, 119.05, 125.05, 133.02, 141.04	2	DISPLAY CASE, HEATED
Grill (100 Level) Rooms: 111.05, 119.05, 125.05, 133.02, 141.04	1	WATER HEATER

Area	Quantity	Equipment Type
Grill (100 Level) Rooms: 111.05, 119.05, 125.05, 133.02, 141.04	1	HOOD, VENTLESS, 48"
Grill (100 Level) Rooms: 111.05, 119.05, 125.05, 133.02, 141.04	1	HOOD, VENTLESS, 72"
716 Beef (100 Level) Rooms: 114.05, 136.05	3	BEER TOWER, 2 TAPS + DRAINER
716 Beef (100 Level) Rooms: 114.05, 136.05	1	COFFEE MAKER, AUTOMATIC
716 Beef (100 Level) Rooms: 114.05, 136.05	1	DISPENSER, HOT WATER, 25 GALLON
716 Beef (100 Level) Rooms: 114.05, 136.05	3	HOT CHOCOLATE INSULATED CARRIER
716 Beef (100 Level) Rooms: 114.05, 136.05	8	POS
716 Beef (100 Level) Rooms: 114.05, 136.05	2	PRETZEL WARMING CABINET
716 Beef (100 Level) Rooms: 136.05	2	NACHO CHEESE WARMER/DISPENSER
716 Beef (100 Level) Rooms: 114.05, 136.05	1	HOT DOG GRILL
716 Beef (100 Level) Rooms: 114.05, 136.05	1	SHELF, PASS-THRU
716 Beef (100 Level) Rooms: 114.05, 136.05	1	FRONT COUNTER
716 Beef (100 Level) Rooms: 114.05, 136.05	1	REFRIGERATOR, SANDWICH PREP
716 Beef (100 Level) Rooms: 114.05, 136.05	2	GLASS DOOR REFRIGERATORS (VENDOR PROVIDED)
716 Beef (100 Level) Rooms: 114.05, 136.05	1	72" REFRIGERATED MERCHANDISER
716 Beef (100 Level) Rooms: 114.05, 136.05	2	REFRIGERATOR, REACH-IN, 2-SECTION
716 Beef (100 Level) Rooms: 114.05, 136.05	4	TEXAS TANKERS
716 Beef (100 Level) Rooms: 114.05, 136.05	3	SHELVING UNIT, MOBILE
716 Beef (100 Level) Rooms: 114.05, 136.05	1	HAND SINK

Area	Quantity	Equipment Type
716 Beef (100 Level) Rooms: 136.05	2	HAND SINK
716 Beef (100 Level) Rooms: 114.05, 136.05	1	SINK, MOP
716 Beef (100 Level) Rooms: 114.05, 136.05	1	SINK, 3-COMPARTMENT
716 Beef (100 Level) Rooms: 114.05, 136.05	3	SHELF, WALL MOUNT
716 Beef (100 Level) Rooms: 114.05, 136.05	4	WORK TABLE
716 Beef (100 Level) Rooms: 114.05, 136.05	1	BACK COUNTER
716 Beef (100 Level) Rooms: 136.05	1	HOLDING CABINET, HEATED
716 Beef (100 Level) Rooms: 114.05, 136.05	1	TRIPLE HOT WELL, DROP-IN
716 Beef (100 Level) Rooms: 114.05, 136.05	2	WARMER, DRAWER TYPE
716 Beef (100 Level) Rooms: 114.05, 136.05	1	WATER HEATER
Duff's Rm (100 level location) Rm104.05	3	DISPENSING HEAD, DRAFT BEER, 2 TAPS + DRAINER
Duff's Rm (100 level location) Rm104.05	1	COFFEE MAKER, AUTOMATIC
Duff's Rm (100 level location) Rm104.05	1	DISPENSER, HOT WATER, 25 GALLON
Duff's Rm (100 level location) Rm104.05	3	HOT CHOCOLATE INSULATED CARRIER
Duff's Rm (100 level location) Rm104.05	6	POS
Duff's Rm (100 level location) Rm104.05	1	TRIPLE FRYER
Duff's Rm (100 level location) Rm104.05	1	FRONT COUNTER
Duff's Rm (100 level location) Rm104.05	3	GLASS DOOR REFRIGERATORS (VENDOR PROVIDED)
Duff's Rm (100 level location) Rm104.05	1	REFRIGERATOR, REACH-IN, 2-SECTION

Area	Quantity	Equipment Type
Duff's Rm (100 level location) Rm104.05	2	FREEZER, REACH-IN, 3-SECTION
Duff's Rm (100 level location) Rm104.05	3	TEXAS TANKERS
Duff's Rm (100 level location) Rm104.05	2	SHELVING UNIT
Duff's Rm (100 level location) Rm104.05	1	HAND SINK, WALL MOUNT
Duff's Rm (100 level location) Rm104.05	1	SINK, MOP
Duff's Rm (100 level location) Rm104.05	1	SINK, 3-COMPARTMENT
Duff's Rm (100 level location) Rm104.05	2	SHELF, WALL MOUNT
Duff's Rm (100 level location) Rm104.05	3	WORK TABLES
Duff's Rm (100 level location) Rm104.05	1	BACK COUNTER, WITH HAND SINK
Duff's Rm (100 level location) Rm104.05	1	GREASE TRAP
Duff's Rm (100 level location) Rm104.05	2	FRIED FOOD DUMP STATION
Duff's Rm (100 level location) Rm104.05	2	SLANTED DISPLAY CASE, HEATED
Duff's Rm (100 level location) Rm104.05	1	WATER HEATER
Duff's Rm (100 level location) Rm104.05	1	EXHAUST HOOD
Tim Horton's Rm (100 level location) Rm 108.05, 115.05, 130.05, 137.05	2	DRAFT BEER SYSTEM
Tim Horton's Rm (100 level location) Rm 108.05, 115.05, 130.05, 137.05	3	BEER TOWER, 2 TAPS + DRAINER
Tim Horton's Rm (100 level location) Rm 108.05, 115.05, 130.05, 137.05	3	COFFEE MAKER, AUTOMATIC
Tim Horton's Rm (100 level location) Rm 108.05, 115.05, 130.05, 137.05	1	DISPENSER, HOT WATER

Area	Quantity	Equipment Type
Tim Horton's Rm (100 level location) Rm 108.05, 115.05, 130.05, 137.05	8	POS
Tim Horton's Rm (100 level location) Rm 108.05, 115.05, 130.05, 137.05	1	POPCORN DISPLAY WARMER
Tim Horton's Rm (100 level location) Rm 108.05, 115.05, 130.05, 137.05	1	PRETZEL CABINET
Tim Horton's Rm (100 level location) Rm 108.05, 115.05, 130.05, 137.05	1	NACHO CHEESE WARMER/DISPENSER
Tim Horton's Rm (100 level location) Rm 108.05, 115.05, 130.05, 137.05	1	OVEN-STEAMER, COMBINATION W/ HOOD
Tim Horton's Rm (100 level location) Rm 108.05, 115.05, 130.05, 137.05	1	HOT DOG GRILL
Tim Horton's Rm (100 level location) Rm 108.05, 115.05, 130.05, 137.05	1	SHELF, PASS-THRU
Tim Horton's Rm (100 level location) Rm 108.05, 115.05, 130.05, 137.05	1	FRONT COUNTER
Tim Horton's Rm (100 level location) Rm 108.05, 115.05, 130.05, 137.05	2	GLASS DOOR REFRIGERATORS (VENDOR PROVIDED)
Tim Horton's Rm (100 level location) Rm 108.05, 115.05, 130.05, 137.05	1	72" REFRIGERATED MERCHANDISER
Tim Horton's Rm (100 level location) Rm 108.05, 115.05, 130.05, 137.05	1	REFRIGERATOR, REACH-IN, 1-SECTION
Tim Horton's Rm (100 level location) Rm 108.05, 115.05, 137.05	2	REFRIGERATOR, REACH-IN, 1-SECTION
Tim Horton's Rm (100 level location) Rm 130.05	4	TEXAS TANKERS
Tim Horton's Rm (100 level location) Rm 108.05, 115.05, 130.05, 137.05	1	HAND SINK, WALL MOUNT
Tim Horton's Rm (100 level location) Rm 108.05, 115.05, 130.05, 137.05	1	SINK, MOP
Tim Horton's Rm (100 level location) Rm 108.05, 115.05, 130.05, 137.05	1	SINK, 3-COMPARTMENT
Tim Horton's Rm (100 level location) Rm 108.05, 115.05, 130.05, 137.05	2	SHELF, WALL MOUNT
Tim Horton's Rm (100 level location) Rm 108.05, 115.05, 130.05, 137.05	4	TABLE, WORK

Area	Quantity	Equipment Type
Tim Horton's Rm (100 level location) Rm 108.05, 115.05, 130.05, 137.05	1	BACK COUNTER
Tim Horton's Rm (100 level location) Rm 115.05, 137.05	2	WARMER, DRAWER TYPE
Tim Horton's Rm (100 level location) Rm 108.05, 115.05, 130.05	3	WARMER, DRAWER TYPE
Tim Horton's Rm (100 level location) Rm 108.05, 115.05, 130.05, 137.05	1	WATER HEATER
Tim Horton's Rm (100 level location) Rm 108.05, 137.05	1	WALK-IN REFRIGERATOR
Brew Pub Bar & Concessions	7	COOLER, BOTTLE, 72"
Brew Pub Bar & Concessions	2	UNDERBAR HANDSINK
Brew Pub Bar & Concessions	10	BACK BAR REFRIGERATOR, 2-DOORS
Brew Pub Bar & Concessions	5	PRETZEL WARMING CABINET
Brew Pub Bar & Concessions	4	DRAFT BEER SYSTEM
Brew Pub Bar & Concessions	22	BEER TEE TOWER, 4 TAPS
Brew Pub Bar & Concessions	4	COFFEE MAKER, AUTOMATIC
Brew Pub Bar & Concessions	2	DISPENSER, HOT WATER, 25 GALLON
Brew Pub Bar & Concessions	6	CARRIER, INSULATED BEVERAGE, 11 GALLONS
Brew Pub Bar & Concessions	30	POS STATION
Brew Pub Bar & Concessions	6	NACHO CHEESE WARMERS
Brew Pub Bar & Concessions	2	POPCORN WARMER
Brew Pub Bar & Concessions	2	OVEN-STEAMER, COMBINATION
Brew Pub Bar & Concessions	2	HOT DOG GRILL
Brew Pub Bar & Concessions	1	GRIDDLE, HEAVY DUTY, 48"
Brew Pub Bar & Concessions	2	TRIPLE FRYER BATTERY, W/FILTER
Brew Pub Bar & Concessions	1	SLICER, FOOD
Brew Pub Bar & Concessions	6	FRONT COUNTERS
Brew Pub Bar & Concessions	1	REFRIGERATOR, SANDWICH PREP

Area	Quantity	Equipment Type
Brew Pub Bar & Concessions	6	GLASS DOOR REFRIGERATORS (VENDOR PROVIDED)
Brew Pub Bar & Concessions	3	REFRIGERATOR, REACH-IN, 1-SECTION
Brew Pub Bar & Concessions	3	REFRIGERATOR, REACH-IN, 2-SECTION
Brew Pub Bar & Concessions	3	FREEZER, REACH-IN, 2-SECTION
Brew Pub Bar & Concessions	8	TEXAS TANKERS
Brew Pub Bar & Concessions	1	REFRIGERATED EQUIPMENT STAND
Brew Pub Bar & Concessions	13	SHELVING UNIT, MOBILE
Brew Pub Bar & Concessions	6	HAND SINK, WALL MOUNT
Brew Pub Bar & Concessions	2	SINK, MOP
Brew Pub Bar & Concessions	2	SINK, THREE-COMPARTMENT
Brew Pub Bar & Concessions	6	SHELF, WALL MOUNT
Brew Pub Bar & Concessions	13	WORK TABLES
Brew Pub Bar & Concessions	3	BACK COUNTER WITH HAND SINK
Brew Pub Bar & Concessions	4	BACK COUNTER
Brew Pub Bar & Concessions	2	HOLDING CABINET, HEATED
Brew Pub Bar & Concessions	1	DOUBLE HOT WELL, DROP-IN
Brew Pub Bar & Concessions	1	TRIPLE HOT WELL, DROP-IN
Brew Pub Bar & Concessions	8	WARMER, DRAWER TYPE
Brew Pub Bar & Concessions	2	FRY DUMP STATION
Brew Pub Bar & Concessions	2	WATER HEATER
Brew Pub Bar & Concessions	4	EXHAUST HOOD
Brew Pub Bar & Concessions	2	WALK-IN REFRIGERATOR
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	1	DRAFT BEER SYSTEM
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	6	BEER TOWER, 2 TAPS + DRAINER

Area	Quantity	Equipment Type
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	1	COFFEE MAKER, AUTOMATIC
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	1	DISPENSER, HOT WATER, 25 GALLON
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	4	HOT CHOCOLATE
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	11	POS STATION W/CASH DRAWER
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	2	NACHO CHEESE DISPENSER
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	1	POPCORN WARMING CABINET
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	1	OVEN-STEAMER, COMBINATION
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	1	HOT DOG GRILL
Duff & Dog House (300 level location) Rm 337.06	1	PRETZEL OVEN, COUNTER TOP
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	1	GRIDDLE, HEAVY DUTY, 72"
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	1	QUADRUPLE FRYER BATTERY
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	2	PRETZEL WARMING CABINET
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	2	FRONT COUNTER
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	2	GLASS DOOR REFRIGERATORS (VENDOR PROVIDED)

Area	Quantity	Equipment Type
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	1	REFRIGERATOR, REACH-IN, 2-SECTION
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	2	FREEZER, REACH-IN, 3-SECTION
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	6	TEXAS TANKERS
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	1	REFRIGERATED EQUIPMENT STAND, 72"
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	4	SHELVING UNIT, MOBILE
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	4	HAND SINK, WALL MOUNT
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	1	SINK, MOP
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	1	SINK, THREE-COMPARTMENT
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	2	SHELF, WALL MOUNT
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	6	WORK TABLES
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	2	BACK COUNTER
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	3	WARMER, DRAWER TYPE
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	1	FRY WARMER

Area	Quantity	Equipment Type
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	5	DISPLAY CASE, HEATED
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	1	WATER HEATER
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	2	EXHAUST HOOD
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	1	WALK-IN REFRIGERATOR
Grill & Dog House & (2) Duff & Dog House (300 level location) Rm 308.06, 315.06, 330.06, 337.06	1	FOOD SHIELD
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	1	DRAFT BEER SYSTEM
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	6	BEER TOWER, 2 TAPS + DRAINER
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	1	CO2 TANK
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	3	COFFEE MAKER, AUTOMATIC
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	1	BEER CONDUIT

Area	Quantity	Equipment Type
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	1	DISPENSER, HOT WATER, 25 GALLON
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	4	HOT CHOCOLATE INSULATED CARRIER
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	11	POS
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	2	NACHO CHEESE WARMER/DISPENSER
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	1	POPCORN WARMING CABINET
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	1	OVEN-STEAMER, COMBINATION
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	1	GRIDDLE, ELECTRIC, 36"
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	2	CONVEYOR PIZZA OVEN, VENTLESS
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	2	PRETZEL WARMING CABINET

Area	Quantity	Equipment Type
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	2	FRONT COUNTER
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	1	REFRIGERATOR, COLD PREP
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	2	GLASS DOOR REFRIGERATORS (VENDOR PROVIDED) TWO DOORS
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	1	GLASS DOOR REFRIGERATORS (VENDOR PROVIDED) ONE DOOR
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	1	REFRIGERATOR, REACH-IN, 2-SECTION
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	1	FREEZER, REACH-IN, 2-SECTION
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	6	TEXAS TANKERS
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	1	DROP-IN, COLD PAN
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	1	HAND SINK, WALL MOUNT

Area	Quantity	Equipment Type
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	1	SINK, MOP
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	1	SINK, THREE-COMPARTMENT
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	3	SHELF, WALL MOUNT
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	3	WORK TABLES
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	3	BACK COUNTER, (1) WITH HAND SINK
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	1	DOUBLE HOT WELL, DROP-IN
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	3	WARMER, DRAWER TYPE
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	1	DISPLAY CASE, HEATED
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	1	DISPLAY CASE, HEATED, PASS-THRU

Area	Quantity	Equipment Type
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	1	WATER HEATER
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	1	HOOD, VENTLESS
Tim Horton's & Pizza, Lloyd Burrito & Pizza, Dog House & Pizza, Dog House & 716 Beef, (300 level location) Rm 310.02, Rm 310.02, 332.02, 334.04	1	WALK-IN REFRIGERATOR
Level 100 Suite Pantries, four locations	1	DOUBLE CONVEYOR OVEN
Level 100 Suite Pantries, four locations	1	FULL SIZE SINGLE COMBI
Level 100 Suite Pantries, four locations	1	FRENCH TOP RANGE
Level 100 Suite Pantries, four locations	1	SALAMANDER
Level 100 Suite Pantries, four locations	1	TWO BANK FRYER
Level 100 Suite Pantries, four locations	1	REACH-IN REFRIGERATOR, TWO DOOR
Level 100 Suite Pantries, four locations	1	REACH-IN FREEZER, TWO DOOR
Level 100 Suite Pantries, four locations	1	SHELVING UNITS
Level 100 Suite Pantries, four locations	1	HAND SINK
Level 100 Suite Pantries, four locations	1	THREE COMPARTMENT SINK
Level 100 Suite Pantries, four locations	1	WORK TABLE WITH SINKS
Level 100 Suite Pantries, four locations	1	WORK TABLES
Level 100 Suite Pantries, four locations	1	WALK-IN COOLER
Level 100 Suite Pantries, four locations	2	WARMING CABINETS
Suite Kitchen: Section 331, South Side	1	DOUBLE CONVEYOR OVEN
Suite Kitchen Section 331, South Side	1	FULL SIZE SINGLE COMBI
Suite Kitchen Section 331, South Side	1	FOUR BURNER RANGE
Suite Kitchen Section 331, South Side	1	DOUBLE CONVECTION OVEN
Suite Kitchen Section 331, South Side	3	SINGLE FRYER
Suite Kitchen Section 331, South Side	1	REACH-IN REFRIGERATOR, TWO DOOR
Suite Kitchen Section 331, South Side	1	COFFEE MAKER, AUTOMATIC
Suite Kitchen Section 331, South Side	6	SHELVING UNITS
Suite Kitchen Section 331, South Side	1	HAND SINK
Suite Kitchen Section 331, South Side	1	THREE COMPARTMENT SINK
Suite Kitchen Section 331, South Side		WORK TABLE WITH SINKS
Suite Kitchen Section 331, South Side	1	WORK TABLES
Suite Kitchen Section 331, South Side	1	WALK-IN COOLER
Suite Kitchen Section 331, South Side	1	WARMING CABINETS
Suite Kitchen Section 331, South Side	1	CHEF'S TABLE, W/ HOT WELLS, 12' X 32'
Suite Kitchen Section 331, South Side	1	WAREWASHER
Suite Kitchen Section 331, South Side	1	SOILED DISH TABLE
Suite Kitchen Section 331, South Side	1	CLEAN DISH TABLE
Suite Kitchen Section 331, South Side	1	DISPOSER
Suite Kitchen: Rm 242, 210, 202	1	DOUBLE CONVEYOR OVEN
Suite Kitchen: Rm 242, 210, 202	1	CHARBROILER
Suite Kitchen: Rm 242, 202	1	FOUR BURNER RANGE, 36"
Suite Kitchen: Rm 210	1	FOUR BURNER RANGE, 24"
Suite Kitchen: Rm 242, 210, 202	1	DOUBLE CONVECTION OVEN
Suite Kitchen: Rm 242, 210, 202	1	TRIPLE FRYER
Suite Kitchen: Rm 242, 210, 202	1	ICE MAKER W/ BIN
Suite Kitchen: Rm 202	1	REACH-IN FREEZER, TWO DOOR
Suite Kitchen: Rm 242, 210, 202	2	SHELVING UNITS
Suite Kitchen: Rm 242, 210, 202	1	HAND SINK
Suite Kitchen: Rm 242, 210, 202	1	THREE COMPARTMENT SINK
Suite Kitchen: Rm 242, 210, 202	1	WORK TABLE WITH SINKS
Suite Kitchen: Rm 242, 210, 202	1	WORK TABLES
Suite Kitchen: Rm 242, 210, 202	1	WALK-IN COOLER / FREEZER
Suite Kitchen: Rm 242, 210, 202	1	WAREWASHER
Suite Kitchen: Rm 242, 210, 202	1	SOILED DISH TABLE
Suite Kitchen: Rm 242, 210, 202	1	CLEAN DISH TABLE
Suite Kitchen: Rm 242, 210, 202	1	DISPOSER
Suite Kitchen: Rm 242, 210, 202	1	WARMING CABINET
Suite Kitchen: Rm 210	1	CHEF'S TABLE, W/ HOT WELLS, 9' X 32'
Clubs: Side Line Bars, 8 locations	4	UNDERBAR BLENDER STATION
Clubs: Side Line Bars, 8 locations	1	UNDERBAR HANDSINK
Clubs: Side Line Bars, 8 locations	4	UNDERBAR ICE BIN
Clubs: Side Line Bars, 8 locations	1	BACK BAR COOLER
Clubs: Side Line Bars, 8 locations	4	UNDERBAR SPEED RAIL, 36"
Clubs: Side Line Bars, 8 locations	2	BACK BAR STORAGE CABINET
Clubs: Side Line Bars, 8 locations	7	POS
Clubs: Side Line Bars, 8 locations	6	TRASH CAN
Clubs: Side Line Bars, 8 locations	2	REFRIGERATOR, REACH-IN, ONE DOOR
Clubs: Side Line Bars, 8 locations	1	FRONT BAR COUNTER
Clubs: Side Line Bars, 8 locations	1	BACK BAR COUNTER
Clubs: Concession 238.19, 230.03	12	POS
Clubs: Concession 238.19, 230.03	1	STACKED COMBI
Clubs: Concession 238.19, 230.03	1	GRIDDLE, 36", ON MOBILE STAND
Clubs: Concession 238.19, 230.03	1	DOUBLE STACK CONVEYOR OVEN
Clubs: Concession 238.19, 230.03	1	OVEN, CONVEYOR, COUNTERTOP
Clubs: Concession 238.19, 230.03	1	FRYER BATTERY, GAS
Clubs: Concession 238.19, 230.03	1	EVO GRIDDLE, ELECTRIC
Clubs: Concession 238.19, 230.03	8	STORAGE CABINET, MOBILE
Clubs: Concession 238.19, 230.03	1	REFRIGERATOR BASE, 27"

Area	Quantity	Equipment Type
Clubs: Concession 238.19, 230.03	2	REFRIGERATOR. SANDWICH/SALAD PREP
Clubs: Concession 238.19, 230.03	1	REFRIGERATOR, PIZZA PREP
Clubs: Concession 238.19, 230.03	1	FREEZER, REACH-IN, 2-SECTION
Clubs: Concession 238.19, 230.03	1	DROP-IN, COLD-WELL
Clubs: Concession 238.19, 230.03	1	REFRIGERATOR, ONE-SECTION, ROLL-IN
Clubs: Concession 238.19, 230.03	1	REFRIGERATOR, ONE-SECTION, ROLL-IN, GLASS DOORS
Clubs: Concession 238.19, 230.03	6	REFRIGERATED MERCHANDISER
Clubs: Concession 238.19, 230.03	1	GRIDDLE STAND, REFRIGERATOR, 36"
Clubs: Concession 238.19, 230.03	2	SINK, HAND, ENCLOSED BASE
Clubs: Concession 238.19, 230.03	1	SHELF, WALL MOUNT
Clubs: Concession 238.19, 230.03	6	WORK TABLES
Clubs: Concession 238.19, 230.03	5	WORKTABLE, ENCLOSED BASE
Clubs: Concession 238.19, 230.03	2	HEATED CABINET, UNDERCOUNTER
Clubs: Concession 238.19, 230.03	3	HEATER/PROOFER HOLDING CABINET
Clubs: Concession 238.19, 230.03	1	HOT WELL, DROP-IN
Clubs: Concession 238.19, 230.03	1	FRIED FOOD HOLDING STATION
Clubs: Concession 238.19, 230.03	1	DISPLAY CASE, HEATED
Clubs: Concession 238.19, 230.03	4	HEATED PLATE, DROP-IN
Clubs: Concession 238.19, 230.03	1	EXHAUST HOOD
Clubs: Concession 238.19, 230.03	3	FOOD SHIELD- FIXED PARTITION
Clubs: Concession 238.19, 230.03	3	FRONT COUNTER
Clubs: Concession 238.19, 230.03	3	CONDIMENT CART
Clubs: Concession 238.19, 230.03	14	SHELVING UNITS
Clubs: Concession 238.19, 230.03	1	DUNNAGE RACKS
Clubs: Concession 238.19, 230.03	1	WALK-IN COOLER FREEZER
Clubs: Concession 238.19, 230.03	1	WALK-IN KEG COOLER
Clubs: Concession 238.19, 230.03	2	HAND SINK

Area	Quantity	Equipment Type
Clubs: Concession 238.19, 230.03	1	EXHAUST HOOD
Clubs: Concession 238.19, 230.03	1	THREE COMAPARTMENT SINK
Clubs: Concession 238.19, 230.03	1	MOP SINK
Clubs: Concession 238.19, 230.03	1	WORK TABLES
Clubs: Concession 238.19, 230.03	1	ICE MAKER W/ BIN
Clubs: Concession 238.19, 230.03	1	REACH-IN FREEZER, ONE DOOR
Clubs: Concession 238.19, 230.03	1	REACH-IN REFRIGERATOR, ONE DOOR
Clubs: Concession 238.19, 230.03	2	HEATED WARMING DRAWERS
Clubs: Concession 238.19, 230.03	1	COFFEE MAKER
Clubs: Concession 238.19, 230.03	1	PIZZA PREP REFRIGERATOR
Clubs: Concession 214.04, 237.04	12	POS
Clubs: Concession 214.04, 237.04	1	STACKED COMBI
Clubs: Concession 214.04, 237.04	1	GRIDDLE, 36", ON MOBILE STAND
Clubs: Concession 214.04, 237.04	1	DOUBLE STACK CONVEYOR OVEN
Clubs: Concession 214.04, 237.04	1	FRYER BATTERY, GAS
Clubs: Concession 214.04, 237.04	1	EVO GRIDDLE, ELECTRIC
Clubs: Concession 214.04, 237.04	2	PANINI GRILL
Clubs: Concession 214.04, 237.04	8	STORAGE CABINET, MOBILE
Clubs: Concession 214.04, 237.04	4	REFRIGERATOR. SANDWICH/SALAD PREP
Clubs: Concession 214.04, 237.04	1	REFRIGERATOR, PIZZA PREP
Clubs: Concession 214.04, 237.04	1	FREEZER, REACH-IN, 2-SECTION
Clubs: Concession 214.04, 237.04	1	DROP-IN, COLD-WELL
Clubs: Concession 214.04, 237.04	1	REFRIGERATOR, ONE-SECTION, ROLL-IN
Clubs: Concession 214.04, 237.04	6	REFRIGERATED MERCHANDISER
Clubs: Concession 214.04, 237.04	1	GRIDDLE STAND, REFRIGERATOR, 36"
Clubs: Concession 214.04, 237.04	2	SINK, HAND, ENCLOSED BASE
Clubs: Concession 214.04, 237.04	1	SHELF, WALL MOUNT

Area	Quantity	Equipment Type
Clubs: Concession 214.04, 237.04	5	TABLE, WORK
Clubs: Concession 214.04, 237.04	5	WORKTABLE, ENCLOSED BASE
Clubs: Concession 214.04, 237.04	2	HEATED CABINET, UNDERCOUNTER
Clubs: Concession 214.04, 237.04	3	HEATER/PROOFER HOLDING CABINET
Clubs: Concession 214.04, 237.04	3	HOT WELL, DROP-IN
Clubs: Concession 214.04, 237.04	2	DOUBLE HOT WELL, DROP IN
Clubs: Concession 214.04, 237.04	1	FRIED FOOD HOLDING STATION
Clubs: Concession 214.04, 237.04	1	DISPLAY CASE, HEATED
Clubs: Concession 214.04, 237.04	3	HEATED PLATE, DROP-IN
Clubs: Concession 214.04, 237.04	2	EXHAUST HOOD
Clubs: Concession 214.04, 237.04	3	FOOD SHIELD- FIXED PARTITION
Clubs: Concession 214.04, 237.04	3	FRONT COUNTER
Clubs: Concession 214.04, 237.04	3	CONDIMENT CART
Clubs: Concession 214.04, 237.04	2	WALK-IN COOLER (1 WITH FREEZER)
Clubs: Concession 214.04, 237.04	8	SHELVING UNITS
Clubs: Concession 214.04, 237.04	3	REACH-IN FREEZER, ONE DOOR
Clubs: Concession 214.04, 237.04	1	REACH-IN COOLER, ONE DOOR
Clubs: Concession 214.04, 237.04	2	HEATED WARMING DRAWERS
Clubs: Concession 214.04, 237.04	1	HAND SINK
Clubs: Concession 214.04, 237.04	1	THREE COMPARTMENT SINK
Clubs: Concession 214.04, 237.04	1	MOP SINK
Clubs: Concession 214.04, 237.04	4	WORK TABLES
Clubs: Concession 214.04, 237.04	1	ICE MAKER W/ BIN
Clubs: Concession 214.04, 237.04	1	COFFEE MAKER
Clubs: Concession 214.04, 237.04	1	PIZZA PREP REFRIGERATOR
Goal Line Club: Rm 319.05	1	GRIDDLE, GAS, 48"
Goal Line Club: Rm 319.05	2	IMPINGER, COUNTER
Goal Line Club: Rm 319.05	2	FRYER BATTERY, GAS

Area	Quantity	Equipment Type
Goal Line Club: Rm 319.05	1	REFRIGERATOR, WORKTOP
Goal Line Club: Rm 319.05	2	FREEZER, WORKTOP
Goal Line Club: Rm 319.05	1	REFRIGERATOR, SANDWICH/SALAD PREP
Goal Line Club: Rm 319.05	1	FREEZER, REACH-IN, 2-SECTION
Goal Line Club: Rm 319.05	1	REFRIGERATED EQUIPMENT STAND, 48"
Goal Line Club: Rm 319.05	1	REFRIGERATED EQUIPMENT STAND, 60"
Goal Line Club: Rm 319.05	1	SINK, DROP-IN
Goal Line Club: Rm 319.05	2	WORK TABLES
Goal Line Club: Rm 319.05	5	WORKTABLE, ENCLOSED BASE
Goal Line Club: Rm 319.05	2	HEATER/PROOFER HOLDING CABINET
Goal Line Club: Rm 319.05	1	HOT WELL, DROP-IN
Goal Line Club: Rm 319.05	1	DROP-IN, HOT WELLS
Goal Line Club: Rm 319.05	1	FRIED FOOD HOLDING STATION
Goal Line Club: Rm 319.05	1	EXHAUST HOOD
Goal Line Club: Rm 319.05	1	FRONT COUNTER
Goal Line Club: Bar	1	FRONT BAR COUNTER
Goal Line Club: Bar	1	GLASS DOOR REFRIGERATOR (VENDOR SUPPLIED)
Goal Line Club: Bar	1	BACK BAR COUNTER
Goal Line Club: Bar	1	COFFEE MAKER
Goal Line Club: Bar	2	POS
Goal Line Club: Bar	1	BOTTLE BOX
Goal Line Club: Bar	1	UNDERBAR THREE COMPARTMENT SINK
Goal Line Club: Bar	2	COCKTAIL STATION
Goal Line Club: Bar	2	DRAIN BOARD
Goal Line Club: Bar	1	UNDERBAR HAND SINK
Goal Line Club: Bar	1	DIRECT DRAW BEER COOLER
Goal Line Club Pantry	1	WALK-IN COOLER
Goal Line Club Pantry	2	WORK TABLE
Goal Line Club Pantry	5	SHELVING UNIT
Goal Line Club Pantry	1	MOP SINK
Goal Line Club Pantry	1	HAND SINK
Goal Line Club Pantry	1	THREE COMPARTMENT SINK
Goal Line Club Pantry	1	WALL SHELF
Goal Line Club Pantry	1	REACH-IN FREEZER, TWO DOOR
Goal Line Club Pantry	1	PRETZEL CABINET
Goal Line Club Pantry	1	REFRIGERATED AIRSCREEN CASE
Business Class Club: Bar	1	FRONT COUNTER
Business Class Club: Bar	2	BEER TOWER, 2 TAPS + DRAINER
Business Class Club: Bar	1	UNDERBAR HAND SINK

Area	Quantity	Equipment Type
Business Class Club: Bar	2	COCKTAIL STATION
Business Class Club: Bar	2	DRAIN BOARD
Business Class Club: Bar	1	UNDERBAR THREE COMPARTMENT SINK
Business Class Club: Bar	1	BACK BAR COUNTER
Business Class Club: Bar	1	BACK BAR COOLER
Business Class Club: Bar	1	UNDERBAR BLENDER STATION
Business Class Club: Bar	1	PASS THROUGH ICE BIN
Business Class Club: Bar	1	WALK-IN KEG COOLER
Business Class Club: Bar	1	BEER SYSTEM
Business Class Club: Pantry	1	MOP SINK
Business Class Club: Pantry	1	ICE MAKER
Business Class Club: Pantry	1	HEATED MOBILE CABINET
Business Class Club: Pantry	1	HAND SINK
Business Class Club: Pantry	1	REACH-IN REFRIGERATOR, TWO DOOR
Business Class Club: Pantry	1	WORK TOP REFRIGERATOR
Business Class Club: Pantry	1	COFFEE MAKER
Business Class Club: Pantry	1	SHELVING UNIT
Business Class Club: Pantry	1	SECURITY CAGE
Business Class Club: Pantry	7	WORK TABLES
Business Class Club: Pantry	3	WALL SHELF
Business Class Club: Pantry	3	REACH-IN FREEZER, TWO DOOR
Business Class Club: Pantry	1	EXHAUST HOOD
Business Class Club: Pantry	1	STEAMER ON STAND
Business Class Club: Pantry	1	HEATED MOBILE CABINET
Business Class Club: Pantry	1	DOUBLE CONVECTION OVEN
Business Class Club: Pantry	1	CHARBROILER
Business Class Club: Pantry	3	FRYER
Business Class Club: Pantry	1	REACH-IN REFRIGERATOR, TWO DOOR
Business Class Club: Pantry	1	THREE COMPARTMENT SINK
Business Class Club: Pantry	1	WALK-IN COOLER

Area	Quantity	Equipment Type
Business Class Club: Pantry	1	MOP SINK
Business Class Club: Pantry	4	SHELVING UNIT
Business Class Club: Pantry	2	HAND SINK
Business Class Club: Serving	2	FRONT COUNTER
Business Class Club: Serving	2	FROST TOP
Business Class Club: Serving	7	HOT WELLS
Business Class Club: Serving	1	CARVING STATION
Business Class Club: Serving	1	SALAD PREP REFRIGERATOR
Business Class Club: Serving	2	FIXED FOOD SHIELD
Business Class Club: Serving	2	COUNTER TOP INDUCTION WARMER
M&T Club: Bar	1	FRONT COUNTER
M&T Club: Bar	2	BEER TOWER, 2 TAPS + DRAINER
M&T Club: Bar	1	UNDERBAR HAND SINK
M&T Club: Bar	2	COCKTAIL STATION
M&T Club: Bar	2	DRAIN BOARD
M&T Club: Bar	1	UNDERBAR THREE COMPARTMENT SINK
M&T Club: Bar	1	BACK BAR COUNTER
M&T Club: Bar	1	BACK BAR COOLER
M&T Club: Bar	1	BACK BAR STORAGE CABINET
M&T Club: Bar	1	UNDERBAR BLENDER STATION
M&T Club: Bar	1	PASS THROUGH ICE BIN
M&T Club: Bar	1	WALK-IN KEG COOLER
M&T Club: Bar	1	BEER SYSTEM
M&T Club: Serving	4	INDUCTION WARMERS
M&T Club: Serving	2	HOLDING CABINET
M&T Club: Serving	8	HEATED DROP-IN PLATE
M&T Club: Serving	14	PORTABLE FOOD SHIELD
M&T Club: Serving	1	FRONT COUNTER
M&T Club: Serving	1	COFFEE MAKER, AIRPOT
M&T Club: Serving	1	ESPRESSO/CAPPUCCINO MACHINE
M&T Club: Serving	1	EVO GRIDDLE, ELECTRIC
M&T Club: Serving	1	DISPLAY CASE, NON-REFRIGERATED
M&T Club: Serving	1	REFRIGERATOR, REACH-IN, ONE DOOR
M&T Club: Serving	1	REFRIGERATOR, ROLL-IN PASS THRU
M&T Club: Serving	1	ICE CREAM DIPPING CABINET

Area	Quantity	Equipment Type
M&T Club: Serving	1	SINK, DROP-IN
M&T Club: Serving	1	HAND SINK, WALL MOUNT
M&T Club: Pantry	1	TABLE, WORK
M&T Club: Serving	2	HEATER/PROOFER HOLDING CABINET
M&T Club: Serving	2	HEATED SHELF
M&T Club: Serving	2	WARMER, FOOD OVERHEAD, 36"
M&T Club: Serving	2	FOOD SHIELD- FIXED WITH SHELF
M&T Club: Serving	2	FOOD SHIELD - ADJUSTABLE/FIXED
M&T Club: Serving	2	FRONT COUNTER
M&T Club: Serving	1	BACK COUNTER
M&T Club: Pantry	1	COMBI, ELECTRIC
M&T Club: Pantry	1	MOP SINK
M&T Club: Pantry	1	ICE MAKER
M&T Club: Pantry	1	HEATED MOBILE CABINET
M&T Club: Pantry	1	HAND SINK
M&T Club: Pantry	1	REACH-IN REFRIGERATOR, TWO DOOR
M&T Club: Pantry	1	WORK TOP REFRIGERATOR
M&T Club: Pantry	1	COFFEE MAKER
M&T Club: Pantry	1	SHELVING UNIT
M&T Club: Pantry	1	SECURITY CAGE
M&T Club: Pantry	7	WORK TABLES
M&T Club: Pantry	3	WALL SHELF
M&T Club: Pantry	3	REACH-IN FREEZER, TWO DOOR
M&T Club: Pantry	1	EXHAUST HOOD
M&T Club: Pantry	1	STEAMER ON STAND
M&T Club: Pantry	1	HEATED MOBILE CABINET
M&T Club: Pantry	1	DOUBLE CONVECTION OVEN
M&T Club: Pantry	1	CHARBROILER
M&T Club: Pantry	3	FRYER
M&T Club: Pantry	1	REACH-IN REFRIGERATOR, TWO DOOR
M&T Club: Pantry	1	THREE COMPARTMENT SINK
M&T Club: Pantry	1	WALK-IN COOLER
M&T Club: Pantry	1	MOP SINK
M&T Club: Pantry	4	SHELVING UNIT
M&T Club: Pantry	2	HAND SINK

End of Foodservice report

TECHNOLOGY SYSTEMS OBSERVATIONS

General

Today technology design and implementation in stadia focuses on holistic vision that supports both businesses and consumers. This includes technologies such as voice, video, data, wireless data, cellular data, as well as many other systems communications protocols. Commercial technology used to drive innovations within buildings, but the recent surge in consumer technologies now drive the need for and delivery of data within buildings, particularly wireless communications. Venues are looking to control and manage the technology deployments by converging them over a single IP backbone, often referred to under "smart building" nomenclature. Evolving trends include the following systems and system required applications:

IP Convergence – including communications infrastructure and data infrastructure
Redundancy and Diversity – Physical infrastructure and support systems in place to maintain uptime
Voice over IP – VoIP Phones
High Density Wireless – Wi-Fi and cellular DAS
Megapixel CCTV – high pixel count video surveillance cameras
Digital Analytics – Interface of video systems with algorithm based software
IP Access Controls – individual devices each IP based, controlled and powered via the network
Biometric Access Controls – Personalized access control credentials
IP Television – IPTV based distributed TV
Ultra HD / HDR - Content Acquisition and Distribution – 4K, 8K
Digital Signage – IPTV based signage and wayfinding
Digital Menu Boards – IPTV based menu boards
Location Services – proximity based navigation/mapping
Beacons – proximity based communications
Venue and Team Applications – Smartphone based applications
Social Media – Twitter, Facebook, YouTube, Snapchat, etc.
Electronic Wallet – Credit cards, Apple Pay, PayPal, Amazon Payments, Google Wallet, etc.
Wearable Devices – Apple Watch, Google Glass, Android Wear, etc.
Digital Broadcast – Transition from analog broadcast infrastructure

Communications Infrastructure

The primary objective with technology systems convergence is to combine stand-alone networks into one physical network infrastructure and to co-locate equipment wherever possible and feasible.

Building Infrastructure:

In support of growing data needs (and IP enabled end-point devices), the trend of the communications building infrastructure is to confirm and/or provide additional structured cabling system including fiber optics and twisted pair copper supporting voice and data applications/systems. Primary backbone cables typically include optical single-mode fiber (OS2) and multi-pair telecom (Cat3) cables. Additionally, fully redundant optical fiber (OS2) backbone with diverse routing is a growing trend to maintain uptime for all tele data systems within the venue. Horizontal cable typically consists of Cat6A twisted pair cable capable of supporting 10Gbps or higher speeds to support telephone, data, Wi-Fi (WLAN), IPTV (television), security cameras, point of sale (POS), internet, and other tele/data and IP enabled applications. In support of the growing communications deployments, venues are utilizing dedicated communications rooms including Main Telecommunications Rooms (MTR), Telecommunications Rooms (TR), Wireless Equipment Rooms (WER), Data Centers, Server Rooms, etc.

Systems

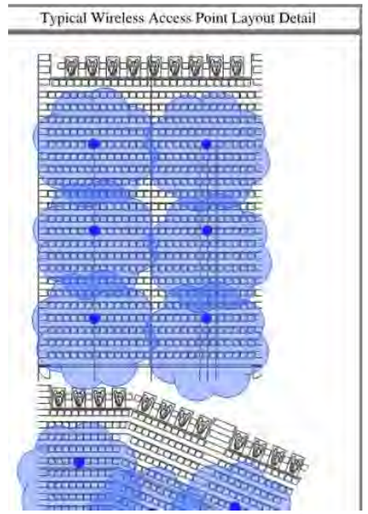
Information Technology (IT) Systems:

IT Systems may include IP Telephone System, Wireless Data Network (WLAN/Wi-Fi), and Converged Data Network (LAN/WAN). Converged systems support the entire venue including administration, teams, operations, tenants, press, and users. Systems will be designed and provided based in best industry practices.

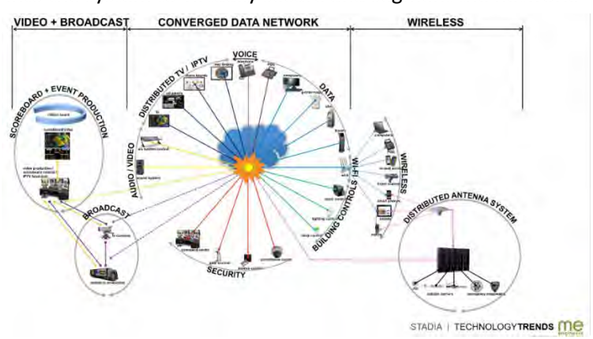
1. IP Telephone System (IPT/VoIP):
   Telephone Systems is a single system to support all facility tenants and users. IP type Telephone System using the converged data network for Ethernet/IP connectivity throughout facility allows for a single platform fully expandable to all users and interface with two-way radios and other building systems.

2. Wireless LAN (WLAN/Wi-Fi):
   The Wireless Data Network is a converged network that provides a single wireless data and backbone connectivity for all building systems, applications, tenants, and user. Virtual local area networks (VLANs) are integrated into the system to virtually secure and segment the network. The Wireless Data Network will use the converged data network for Ethernet/IP connectivity throughout facility. Wireless Data Network should provide ubiquitous coverage of venue including:
   - Back-of-house
   - Public spaces
   - Seating bowl
   - Playing field
   - Parking lots
   - Exterior plazas and surrounding exterior areas.

Wireless Data Network are typically deployed using a high-density layout and configuration in public areas including entrance portals, concourses, clubs, suites, and seating bowl. The fastest growing data usage is the delivery of video content, specifically over Wi-Fi. Determining factors for a Wi-Fi designs include, per user bandwidth, percentage of connected users, take rate of continuously connected users. Additional factors then include proximity deployment of Access Points and Antenna, deployment strategy including under seat, overhead, handrails, etc. The final consideration is determining the overall outside plant circuit bandwidth in support of the Wi-Fi connected usage.



3. Converged Data Network (LAN/WAN):
   Data Network is an Enterprise grade system based on industry best practices. A converged data network provides a single data network and backbone connectivity for all building systems, applications, tenants, and user. Virtual local area networks (VLANs) are integrated into the system to virtually secure and segment the network.



Wireless Communications:

In addition to, and separate from a Wi-Fi system, a complete and fully functioning distributed antenna system (DAS) includes multiple systems in support of 1) primary cellular carrier, 2) emergency responder (police, fire, ambulance) two-way radios, and 3) operations (facility, event) two-way radios.

Current trends include carriers upgrading their cellular support from 4G to 5G systems. These systems include small coverage zones, which equates to more antennas. This reduces the number of users per antenna and increases the bandwidth per connected user. The industry continues to see increases year over year in cellular usage in large venues.

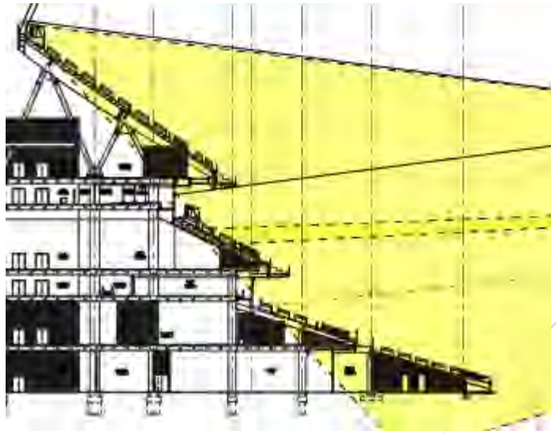
Multiple ownership, procurement and delivery methods exist for DAS deployments. Typically, a Neutral Host DAS is desired to reduce duplication of equipment and components. Options include Owner provided-carrier connected, third party provided-carrier connected, lead carrier provided-carrier connected. Each system provides different upfront costs, ongoing maintenance costs/responsibilities and revenue opportunities.

Security Systems:

The following security system based trends are being deployed throughout the building industry, specifically in the sports and entertainment venues, where large numbers of the public gather.

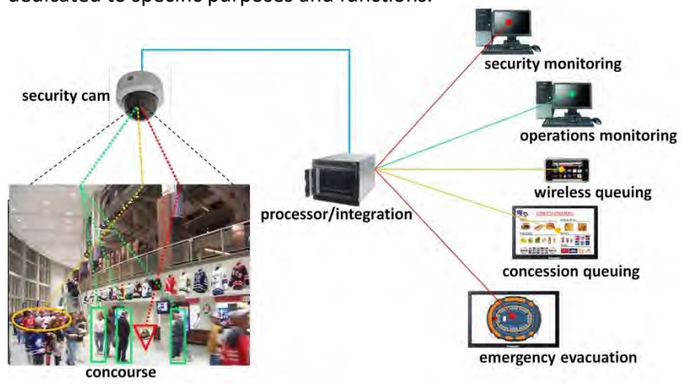
1. Mega Pixel CCTV Cameras:
   The falling cost of IP based CCTV cameras improves the affordability of larger and more detailed camera deployments in venues today. This trend, combined with the improvements in Mega Pixel cameras, means venues no longer have to choose only the highest priority surveillance positions, or sacrifice continuous coverage for pan-tilt-zoom cameras because of cost. Mega Pixel cameras allow for continuous recording of designed zones while allowing the user to digitally pan and zoom within the recorded surveillance footage, and maintain continued recording of the entire zone. The visual goals are to provide high enough visual content for facial recognition. The minimum value for human facial recognition is 40 pixels/foot, and the minimum value for software facial recognition is 80 pixels/foot.

   Additionally, new multi-sensor cameras are providing multiple views from one position, reducing infrastructure and equipment costs. The rise of camera quantities leads to increased data storage requirements. Venues are looking to both cloud based storage as well as on site storage, many times in combination based on cost and data flexibility. A recent advancement is in remote monitoring. This no longer means turning the system over to a third party, with web based viewing administrators may view and control security systems on secured mobile devices both away from and even within the venue.



Megapixel Scene Coverage

2. Digital Analytics:
   In combination with the falling cost of cameras and the increased number of installed cameras, venues can deploy smart analytics to the recorded surveillance footage. This allows software to identify crowds, objects left behind, breach of demarcation lines (invisible fence), paths of travel, objects of specific size, color and shape. Additionally, facial recognition may be deployed to interface with databases.
   Outside the security realm, analytics can be applied to the surveillance footage to support wayfinding and targeting marketing in combination with location systems via venue applications. Examples include providing patrons with information such as shorter restroom or concession lines. Use of analytics for security or business reasons may require additional cameras with views dedicated to specific purposes and functions.



Video Analytics Review

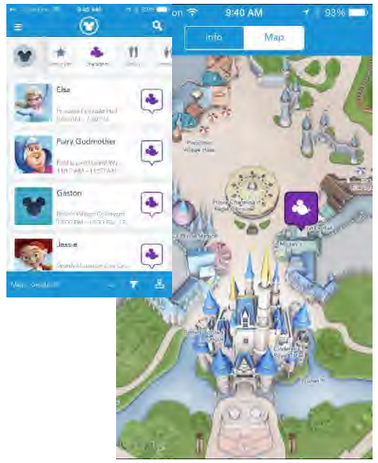
3. IP Access Controls:
   IP based access controls have the opportunity to eliminate separate power supplies, control panels and dedicated wiegand based hard wiring. Individually addressed doors and door controls provides ultimate flexibility in operations and monitoring of the system.

4. Biometric Access Controls:
   Biometric based access controls have the opportunity to provide an additional level of security and convenience. Select personnel, specifically sports and entertainment professionals, may not be able to carry access control credentials at all times, but will be able to provide a finger print, hand, eyes or face to be used for identification. Additionally, biometric authentication provides a level of spoofing that is harder to forge.

Overlay Systems:

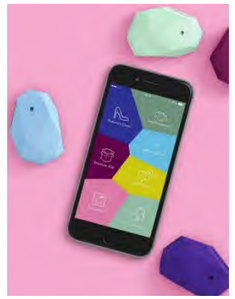
Location Services:

Location based services are typically application delivered to the end user by building off of the building technology infrastructure. Wi-Fi for example can be placed in proximity to deliver a quality data stream to end users, but also to triangulate user position within a building. Other systems such as beacons may provide location assistance. Locations services may typically require a venue application to provide wayfinding assistance combined with understanding of the user position. Combined with analytics and/or beacons additional features may be delivered to end users to target and build off of user behavior.



Beacons:

Beacons currently come in two flavors, Apple and Android supported systems. Beacons may be used to target users' behavior in proximity to low energy blue tooth connectivity with smart phones. This allows venues to provide location based services outside of cellular or Wi-Fi based services. Additionally, beacons may be used to target advertising through an application based on proximity of the users. This is leveraged in sales and marketing in newer venues.



Venue and Team Applications:

Many locations have a Team application to follow the season progress of the team, including aspects related to attending team events, ticketing and merchandise. However, this only targets some of the events at a venue, where as a Venue application allows users to continue to keep in touch with users and patrons at all types of events at a venue including concerts and other events. Venue applications are built to utilize beacon and Wi-Fi technologies to assist in wayfinding, merchandise offers, ticketing, transportation and sales to future events. Venue and team applications provide an easy delivery of Loyalty programs and rewards.

Social Media:

Many venues and teams link social media with team and venue applications. Social media applications allow venues and teams to communicate with users, fans and patrons both outside and inside events. Social media is used in many ways to continue relationships with patrons.

Dedicated IT/Media Staff:

Venues that operate advanced IT and Media systems find that dedicated staff is required to deploy, configure and maintain the systems and overlays. These staff resources fall under many categories including content development for social media, video systems, menu boards and advertising screens. Other systems that require staff considerations include network managers and wireless specialists dedicated to the uptime and connectivity of the converged wired and wireless data network. Because the converged network supports many building functional systems (BMS, VoIP, CCTV and Access Control, etc.) as well as business functional systems (IPTV, POS, Ticketing, etc.) functionality up to, through and directly following an event are critical to the business success. Game Day staff may be an outsourced third party group contracted to work directly with venue specific staff intimate with the intricacies of the systems, or may be additional staff resources required to work the different event days and times.

E-Wallet:

Application based payments are another trend driven by consumers and commercial enterprises must keep pace. E-Wallets may be associated Apple Pay, Google Wallet, specific credit cards loaded on users' smart phones or tied to Loyalty programs and Team/Venue based payment services.

Wearables:

Many new consumer technologies may not have a building or venue related technology yet, but applications and delivery will open up these opportunities. Examples include Google's Glass technology or the Apple Watch. Many of these technologies are tied to other user devices or haven't yet taken mainstream adoption.

Bowl Sound/PA System/Distributed:
High power, 'concert grade' audio loudspeaker systems are becoming the norm. End fire solutions are still readily deployed, especially at the collegiate level, however distributed bowl sound systems in professional facilities aides in coverage, control and intelligibility of a given system. Not only are these systems used for high intelligibly general PA, but also provide full range, high fidelity coverage of various content to the audience area including dedicated zones for pregame on the playing surface. Modern systems are composed of amplifier rooms distributed throughout a venue and are typically interconnected with networked enabled digital signal processors, amplifiers and control processors. Many current systems include touch screen interfaces and preset recall templates, as well as remote management of devices from headend to load sweep monitoring of loudspeaker circuits that aid in operations and maintenance. Systems can output levels in excess of 110dBA, although are typically are limited to 105dBA.

Distributed Television System:

A completely centralized, converged distributed television system using IPTV technology. IPTV system includes a unified head-end for content ingest, encoding, transcoding, control and administrative management tools, edge devices with multichannel HD, FHD, or UHD content playout, analytic data and usage reporting, and various edge user interface consolidations. Cat6A data cables are typically provided at each television and video display location as part of communications infrastructure package. IPTV system are completed with a video content software package installed on centralized servers, allowing the development of custom content including wrappers, tickers, menus, and signage. Software must be flexible to allow for production setup, staging and scheduling content, as well as allow for integration with real time updates for food and beverage menu, POS and ordering systems and retail ordering systems. A popular trend has been the ability to trigger system-wide or zone-specific moments of exclusivity directly from the video production and game in progress control systems.

IPTV systems typically support the following applications listed below. Owner and Architect to determine exact IPTV locations, quantities, and mountings heights.

1. Low latency distribution of live and recorded content to various Television Displays
2. Remote management and administrative control interface
3. Dynamic Digital Menu Boards
4. 'Smart' Video Wall functionality
5. Wireless mobile device compatibility, including app-based interactive channel selection, content recall and playout, as well as systems control of 3rd party systems such as lights, sound systems HVAC etc, equipment in suites, loge boxes, clubs and other premium areas.
6. Digital Signage (Advertising + Wayfinding)
7. Future proofing up to 4K UHD distribution over Cat6a

AV Systems:

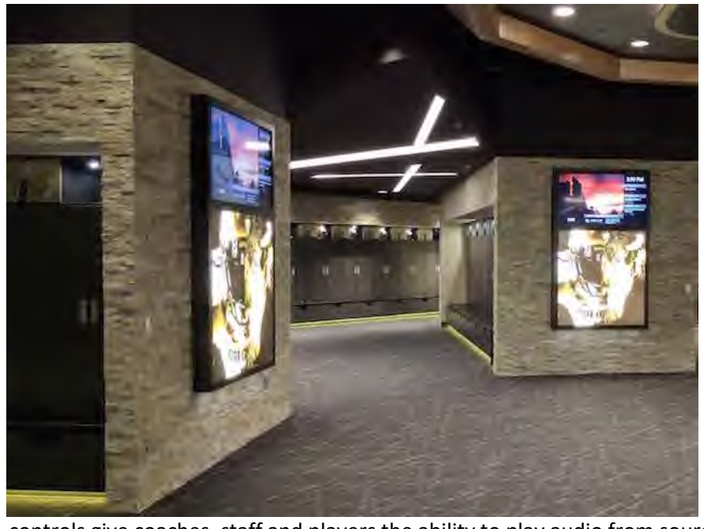
Audio and Video systems that provide connectivity and control systems in premium spaces provides flexibility for local content distribution for specialty

events such as business meetings, weddings, conventions, etc. Typical spaces where AV systems are deployed include clubs, lounges, suites and large meeting rooms. These systems can be small such as video connectivity to a local display, to distributed audio and video. Each system is designed and deployed for a target purpose and audience.

Team Spaces:

An extension of the AV systems deployed for business purposes within a venue, Team AV systems are targeted to private spaces dedicated to team and staff needs. Coaches today utilize many forms of content delivery including professional video footage, play by play evaluations and interactive content. Large format displays with touch screen capabilities or Smart Board technologies allow coaches to diagram the "x's and o's" directly on game or practice video footage. Additionally, specific team content is being distributed to players and coaches wirelessly via tablets and other portable devices.

Within team spaces venues are deploying a combination of video and audio systems. IPTV systems allow individualized content to be deployed with creativity being the limiting factor. Content may include team information such as schedules, time tables, and travel information, promotional or motivational content and highlights. Audio systems with local interfaces and



controls give coaches, staff and players the ability to play audio from sources such as media players, CD/DVD, iPods/iPhones/iPads and other tablets and portable devices.

Broadcast Infrastructure:

Increased building interface, cabling and pathways are required to support the increased demand for league mandated and broadcast specific camera positions and replay angles, new technologies such as Intel's "True View", Augmented and Virtual Reality applications, customized graphical overlay and IP-based workflow. SMPTE fiber or Single Mode Fiber with convertors are required to satisfy the vast quantity and bandwidth requirements of these new workflows. As the consumer demand for this interactive and exciting content increases, planning space, power, interface and cooling for additional mobile production trucks and their workflow specific rolling flight packs of outboard processing equipment will be required. It is expected that many of the Mobile Broadcast Trucks and Venue technologies will continue to migrate toward IP convergence and fiber optic cable plant infrastructure.

I. New Era Field – Existing Systems

General

ME Engineers, Inc. performed a site observation and investigation on December 6th 2018. The site observation included a detailed walk and survey of the building Communications and AV spaces throughout each level of the building. Additionally, key information was gathered from the Pegula Sports and Entertainment IT/AV/Security staff regarding existing conditions, recent upgrades and standards. The following evaluation is a high level summary of the findings of current conditions of the stadium infrastructure and systems.

Communications Infrastructure

Existing Communications Rooms

The Stadium has been fit out with the following dedicated comm rooms:

1. Demarcation
   a. Location = Level 200 – Quad K
   b. Size = ~450sf (18x25)
   c. Fire Rating = 2-hours (minimum)
   d. Service Provider Equipment Racks = *Provided by each Service Provider*
   e. Backboard = 0.75-inch plywood (fire resistant, AC-grade) painted *black*.
   f. Cable Tray = 24-inch ladder rack around room perimeter and above rack/cabinet rows.
   g. Cooling/Heating = Primary supplied by a shared unit with the adjacent electrical room.
   h. Power = 208/120V receptacles at Racks, Cabinets.
   i. Telecom Ground = TMGB
   j. Supports:
      - Telecom Utility Demarc, Cross-Connects, and Equipment
      - Tele/Data Horizontal Cross-Connect –Level 200 Quad K - IDF
      - Data/LAN Core Switches
      - Servers

2. Main Communications Room /Server (MC)
   a. Admin Building – Level 200
   b. Size = ~800sf (23x33)
   c. Fire Rating = 2-hours (minimum)
   d. IT Equipment Racks = (7) @19x84 2-post racks
   e. IT Equipment Cabinets = (5) @24x42x84 4-post enclosure
   f. Backboard = 0.75-inch plywood (fire resistant, AC-grade) painted *black*.
   g. Cable Tray = 24-inch ladder rack around room perimeter and above rack/cabinet rows.
   h. Cooling/Heating = Primary supplied by a shared unit with the adjacent electrical room.
      - (2) CRAC Units
   i. Power = *208/120V receptacles at Racks, Cabinets.*
   j. UPS = (to be confirmed)
   k. Telecom Ground = TMGB
   l. Fire Suppression = (to be confirmed)
   m. Supports:
      - Telecom Backbone Main Cross-Connect
      - Optical Fiber Back-Bone Main Cross-Connect
      - Tele/Data Horizontal Cross-Connect – Admin Bldg – Level 200
      - Data/LAN Core Switches
      - Servers

3. Intermediate Communications Rooms (ICs)
   a. Quantity = 22
   b. Location = (8) ICs @ Level 100, (7) ICs @ Level 200, (7) ICs @ Level 300
   c. Size = ~35-150sf (85sf typically)
   d. Fire Rating = 2-hours (minimum)
   e. IT Equipment Racks = (2) @19x84 2-post racks
   f. IT Equipment Cabinets = (0)
   g. Backboard = 0.75-inch plywood (fire resistant, AC-grade) painted *black* and mounted on one long wall.
   h. Cable Tray = (1) 12-inch around room perimeter and above rack/cabinet rows.
   i. Cooling/Heating = Primary supplied by a shared unit via supply and return ductwork.
   j. Power = Receptacles at Racks, Cabinets.
   k. UPS = Standalone Rack Units (3kW min) and xx-minute runtime (to be confirmed).
   l. Telecom Ground = TGB
   m. Fire Suppression = Wet (to be confirmed).
   n. Supports:
      - Telecom Backbone Intermediate Cross-Connect
      - Optical Fiber Back-Bone Intermediate Cross-Connect
      - Tele/Data Horizontal Cross-Connect
      - Data/LAN Access Switches
      - DAS Remotes + Power Supplies
      - TV Distribution + Riser

Figure 1 IC Room

4. Wireless Equipment Room (WER)
   a. Location = Admin Building - Level 200
   b. Size = ~750sf (15x50)
   c. Fire Rating = 2-hour (minimum)
   d. DAS Equipment Racks DAS, AT&T, T-Mobile, and Verizon equipment racks + spare floor space
   e. Cellular Carrier Cabinets = provided by Carriers (see above).
   f. Backboard = NA – Wall mounted equipment mounted to Uni-Strut Racks off the walls.
   g. Cable Tray = 18x4-inch tray around room perimeter and above rack/cabinet rows.
   h. Cooling/Heating = (2) CRAC Units.
   i. Power = (1) 208/120V, 100A Panel Board with meter and (3) 208/120V, 100/200A Panel Boards each with individual meters.
   j. UPS = Battery equipment provided by Service Provider(s).
   k. Telecom Ground = TGB
   l. Fire Suppression = Pre-Action (to be confirmed)
   m. Supports:
      - DAS Fiber Backbone Main Cross-Connect
      - DAS Head-End
      - Cellular Carrier Equipment (ATT, T-Mobile, Verizon)
      - Emergency Responder Radio System (Fire, Police, Ambulance) Head-End
      - Facility Operations Radios Head-End

Building Infrastructure:

As part of the 2014 renovation, all new backbone cable was installed throughout the Stadium. Primary backbone cables include single-mode fiber optics and 25-pair telecom (Cat3) cable fed in a star topology from the MTR. Horizontal cable is a primarily Cat5e twisted pair supporting telephone, data, security cameras, point of sale (POS), internet, and other tele/data and IP enabled applications. Horizontal cable is Cat6 twisted pair supporting back of house and public Wi-Fi (WLAN).

Systems

Information Technology (IT) Systems:

1. Voice Over IP Telephone System (VoIP):
   The exiting telephone systems is a ShoreTel VoIP phone system on the converged data network.

2. Converged Data Network (LAN/WAN):
   The Data Network is a Layer 2/3 Enterprise grade system. As part of the 2014 renovation the entire switch infrastructure was procured and installed.

   There are three physically separate networks operating in the Stadium; Corporate, Wi-Fi, and Security. Each network utilizes the fiber backbone for inter-connection of the systems. Both the corporate and Wi-Fi access switches are co-located within the IC-rooms throughout the Stadium. The security network is located in various mechanical rooms in support of Ethernet cable distances of the CCTV camera placements.

   Looking at the five to seven year life span of the switched infrastructure, much of the converged data network is reaching its End of Life and will no longer be supported by Cisco.

   The data network is primarily a 10G data network with a 10G redundant link. The redundant link is not however a diverse link, with the primary and redundant strands utilizing the same cable but providing links to each of the two core switches.

Wireless Communications:

The Stadium cellular DAS system was installed in 2014/15 as an AT&T 4G-neutral host system with both Verizon and T-Mobile joining. The DAS has full bowl coverage, concourse coverage and recently includes parking lot coverage. The bowl is supported by a combination of below seating and overhead antenna distribution. There are sections of the upper bowl that have coverage issues, including, specifically, the first 10 rows of the upper bowl.

The DAS head-end room (WER) is really two rooms retrofit to support the DAS. The room is located across the hall from the MC in the Admin Building – Level 200. The backbone from the headend is distributed through the IC rooms throughout the Stadium.

Wireless LAN (WLAN/Wi-Fi):
The wireless data network uses an Extreme Data Networks private data network and APs to provide wireless data connectivity for administrative applications, public Wi-Fi, Point of Sale and ticketing at the entrances. Virtual local area networks (VLANs) are integrated into the system to virtually secure and segment the network.

Figure 2- Under seat wireless enclosure

The distribution from the IC rooms feeds primarily under-seat antenna locations in the seating bowl. The distribution cabling was cut into the concrete of the lower seating bowl supporting 200+ access points under seat. The concourses, suites and portions of the upper bowl are supported via ~650 over-head antenna placements. The team has expressed concerns over the coverage of first 10 rows of the upper bowl. While the entire Stadium has coverage, there have been additional concerns raised about capacity with reduced speeds when concourses are congested pre-game and at halftime.

Parking lots and outdoor Stadium areas are not covered by the Wi-Fi system.

Security Systems:

1. IP CCTV Cameras:
   The Stadium CCTV security system is a Genetic Video Management System (VMS) in support of ~100 Axis and Samsung CCTV cameras. Camera footage is stored on site for 120 days in storage servers and replicated in the Stadium MC. The 100 CCTV cameras are a mix of PTZ, fixed and fisheye cameras including (16) 5MP within the seating bowl, providing full bowl coverage.

Figure 3 Exterior PTZ camera for site coverage

2. Access Controls:
   The Stadium uses a mix of key controlled entry points as well as keyless electronic access control. The Access Control System (ACS) is also built upon the Genetic platform.

3. Game Day Command Center:
   The Game day command center, located within two opened suites in the Admin Building, provides a large room for all game day operations. Within adjacent space is a large conference room for breakout meetings.

Audio-Visual (AV) Systems:

Large Format Video Displays:

The Stadium has received recent upgrades to large format Mitsubishi displays, as well as new ribbon boards installed within the past 7 months. Exterior displays located throughout the stadium site are used for looping video and driven from the production headend equipment room.

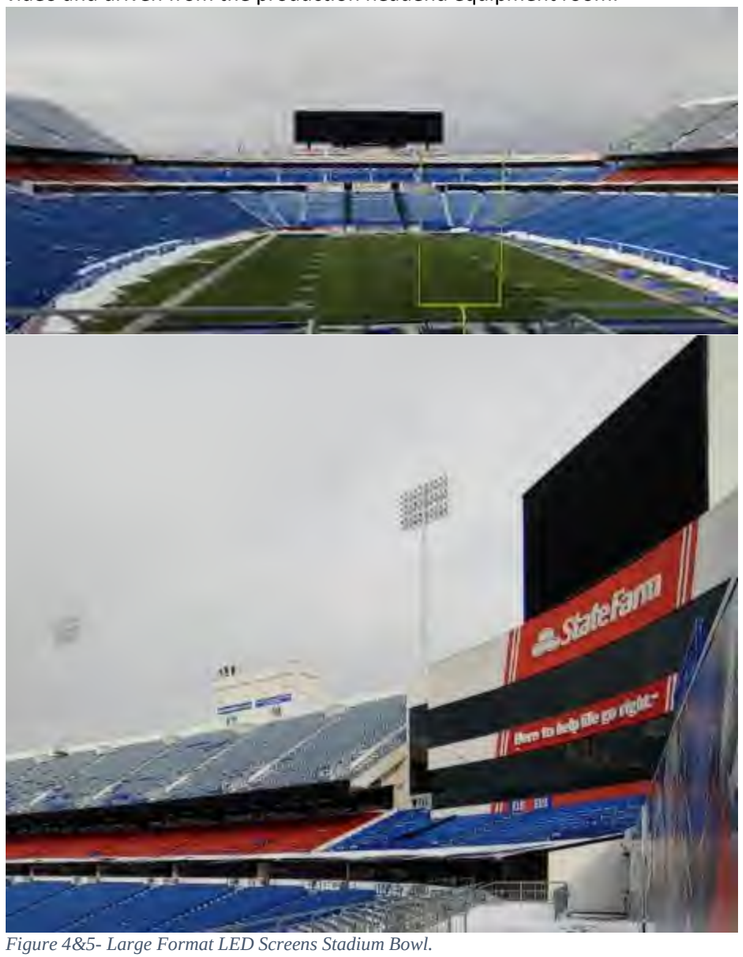


Figure 4&5- Large Format LED Screens Stadium Bowl.

Video Production Systems:

The stadium video production suite and headend systems were upgraded in 2014 with a modern Ross and Grass Valley based system. While newer workflows and supporting technologies such as 4k, IP transport etc have since been released and installed into other current venues, the current installation is capable of supporting the needs of the Bills and has at least 5-6 years of usable life remaining.

Figure 6&7- The recently renovated production suite and K2 Dyno replay controller.

The space, as well as major interface and electrical components were observed to be well maintained, and within their operational limitations with future for expandability. The video processing switcher and content generation equipment and software including video playback and provided multiple K2 Dyno replay interfaces, character generation and Click Effects triggering, which is a hardware independent graphics software package. Additionally, the Mitsubishi LED screen control system was noted to be of current generation of large format screens installed within the bowl.

Video Production headend equipment room HVAC systems were being 'field modified' to properly direct airflow through the racks. The output of the floor diffusers is not properly balanced for both output CFM as well as temperature differentials were noted between diffuser locations. This can cause imbalances and uneven airflow across the equipment and in turn cause hot-spotting of equipment that may lead to a shorter lifespan depending on duty cycle of equipment. It was also noted that the hot aisle of the equipment did not have dedicated exhaust ducting to extract spent air from behind equipment.

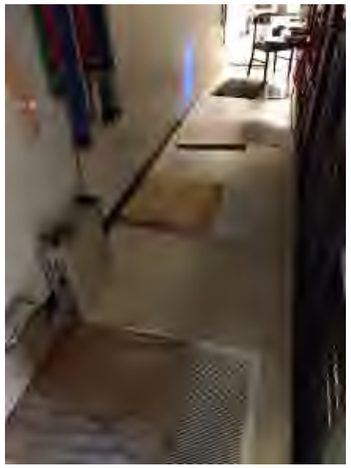


Figure 8- Production headend racks. Plywood covering diffusers to direct and/or balance airflow through racks.

Figure 9- Production headend racks. Hot aisle lacking dedicated exhaust diffusers.

Broadcast Cabling Systems (Headend):

Headend room is detached from main stadium building and located in the commissary. Based on the current configuration, and the room's size, there is limited space to accommodate future growth within the building without disturbing commissary functionality. This is particularly an issue for larger shows requiring multiple rolling flight packs such as Monday Night Football, but also impacts basic functions such as the yellow line technology. The limitation in space is of concern as IO count is expected to increase over the

next 5 years with more cameras, microphones, and augmented reality technologies such as True View 360 video, dynamic advertisement overlays, VR support etc. These technologies and added show elements will require the acquisition of additional rack and storage space, as well as room on the truck pad for mobile production trucks to interface to shore power. While there is sufficient space for additional IO within the existing racks, there is limited space for permanent service provider racks and/or wall mounted enclosures to be located for supporting broadcast uplink services. The space appeared cluttered, and contained waste from previous use, and did not have a bin. IO plates lacked engraved labels and space for scribble strips. Previous shows had left temporary cabling labels in place. Several fiber and SMPTE plates had been taped over and labeled as “NFG” aka – “not working.”

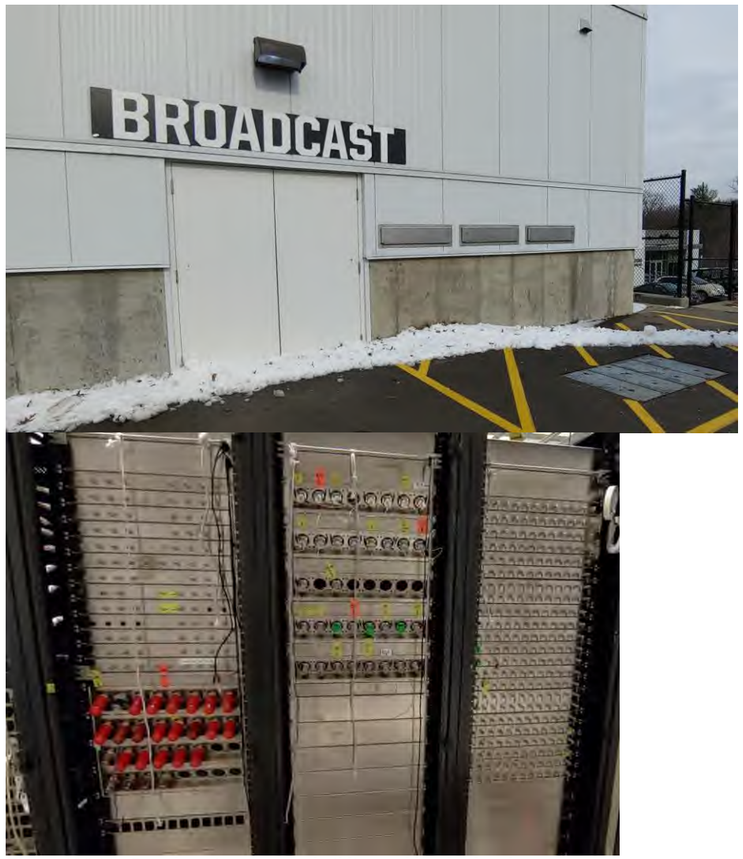


Figure 10&11 - Broadcast interconnect building and headend racks..

Figure 12&13- Broadcast interconnect headend racks and clearances.

The current truck compound is shared with commissary docks, and is restricted in space to roughly 9500 sqft. This footprint works well for standard shows, however support of larger shows or expansion for future growth is very limited within the current footprint and pad configuration. During larger shows (greater than 4 MP) broadcast truck operators are required to park on a sloped driveway adjacent to the headend and provide blocking to shore up the trailers during load in. While this is not prohibitive, it does require a longer load in time, higher costs associated labor, and limited space within a 75’-150’ radius of the interconnect room. These locations lack dedicated I/O panels or shore power interface.

Figure 14- Broadcast truck pad and commissary docks.

Figure 15- Broadcast truck pad, dedicated power connection interface.

Distributed Television System:

The Stadium is fit out with a fiber backbone, COAX, and IP-based HD distributed television system. DirecTV, Spektrum and local content are ingested in the main production server equipment rack room.

Figure 16- DTV satellite service provider interface

The system has approximately 1100 televisions connected of varying manufacturer, resolution, and feature levels. Of the 1110 displays, approximately 900 are connected to a Vitec based IPTV system with Amino H140 set top boxes. These boxes are capable of remote administration, as well as passing through RS-232 and CEC commands to compatible displays. The Current IPTV installation is not correctly configured for this remote control and administrative functionality. It was also noted that the existing Vitec headend was not currently contracted with Vitec for ongoing support, programming and maintenance plans. Based on initial conversations with the operations team, the Vitec system is not being properly utilized, and has quite a lot of potential for addressing several of the operational concerns that were discussed.

Figure 17- Vitec IPTV Headend Encoders and Server

A second IPTV /digital signage system was in place for premium spaces and video walls. This system was composed of Brightsign digital media players. A third Signage system was being utilized for LED video boards located outside of the main stadium building footprint throughout the site.
It was noted that all three of these systems are not integrated together and operate independently.

Figure 18- Harris IPTV/Signage system headend, servers and storage array.

The remaining 200 displays are connected to the stadium's legacy QAM based RF distribution. There are video sync and delay issues between the IPTV and CATV systems.

Figure 18- CATV QAM modulators

Figure 19- CATV Satellite TV STB

Based on conversations and observations, there are potential opportunities to consolidate technologies and provide a centrally managed, unified video, signage and control system to support the team's needs.

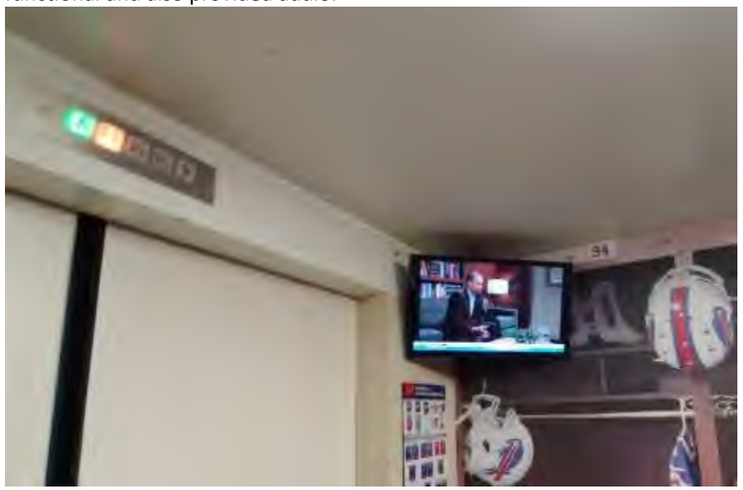
Distributed Televisions throughout Building:

Many of the outdoor displays are not rated for the environmental conditions they have been deployed in, and subsequently have a higher rate of failure and troubleshooting required to keep in service. Outdoor displays appear to have been 'weatherized' by means of a custom fabricated enclosure. These enclosures were observed to be damaged and incapable of providing the environmental protections typically required in harsh temperature and precipitation conditions such as those found in Buffalo.

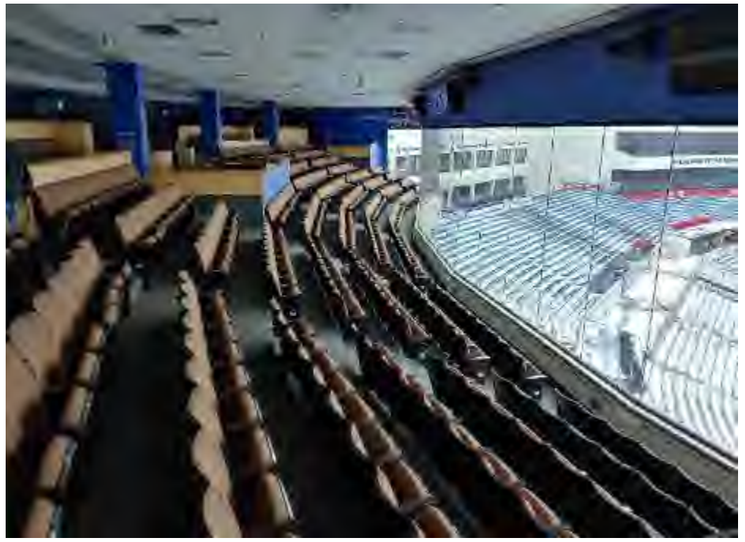
Figure 20-21- Outdoor Displays located throughout facility, not rated .

Flat panel displays located throughout both suites, clubs and concourses are significantly beyond the 3-5 year technology refresh cycle and while functioning, are in need of replacement

Existing Displays with audio reinforcement were found in elevators, while functional, do not conform to ADA requirements for head height. Clearances functional and also provided audio.



A matrix video wall feature in the premium club seating spaces made of (9) consumer grade, obsolete Sanyo displays detracts overall impact on the "Premium" vibe within the space.



Spaces appear to have been renovated, while leaving previous ceiling mounted loudspeakers abandoned in place.

Premium Clubs spaces recently renovated. AV interface plates located to the lower left of these 3x3 matrix displays are not directly connected to the wall within the space, but rather to the video production headend.

Bowl Audio and Public Address:

The bowl sound system has remained largely unaltered since installation in 1998. The sound system composed of a mix of Danley GH60 horns TH118 subwoofers. The Stadium's covered seating areas also include several additional zones of delays in the club and suite levels.

The bowl sound system has received minor modifications in attempt to address coverage and intelligibility issues. Loudspeaker boxes were observed to be of different manufacture and box /horn design which will contribute a lack of uniform voicing throughout the bowl regardless of coverage, and in turn result in different experiences for patrons within sections and rows.

Distributed Audio and Public Address:

There are 2 FOH audio positions in the facility. Workload for mixing is split between these two positions. While not technically an issue, nor uncommon in production workflows, the location of the PA/Announce booths might lend itself opportunity to consolidate for future premium spaces.

The Midas M32 at FOH for PA is not located at the front seating positions, and therefore the A1 must rely on disconnected indirect mean of audio monitoring of audio program content and levels in bowl. The Midas console also does not directly slave to the production suite main console (Yamaha M7CL), nor integrate directly into a digital signal processor. Due to the lack of direct compatibility of these three primary systems, an increased burden on operations staff is required to train special knowledge of the system signal transports and gain structure & sharing, priorities especially when trouble shooting issues.

The M7Cl console is an older technology that has been obsoleted by the manufacturer 4-5 year ago. As an audio system upgrade is being considered, it would be advisable to replace both consoles.

The stadium is fit out with a mixture of analog and digitally networked digital signal processors feeding amplifiers. There have been several complaints on delays in excess of the generally accepted ~18ms between audio in different zones.

Concourse Distributed loudspeakers were observed to have inadequate layout, mounting locations, density and output to provide even coverage throughout the concourse. In some cases, the loudspeakers were mounted above the lower limit of the MEP, effectively blocking the coverage of these loudspeakers.

In a few locations on the outdoor concourse, surface mounted coaxial loudspeakers were observed to not be properly aimed, this could be due to installation, or other indeterminate factors since the initial installation. These aiming can contribute to coverage and intelligibility issues.

Distributed audio network utilizing Peavey, BSS London and Crown equipment. Amplifier rooms are distributed throughout the stadium including in Telecom Rooms and dedicated Amp/AV Rack rooms. The Lack of a common platform for audio distribution, processing and amplification can be the source of increased workload for operational duty and troubleshooting due to the complexities associated with using multiple software and hardware interfaces that do not speak natively between each other. A common, converged control and monitoring system would be the ideal platform for this type of installation.

Many of the closets labeled as “amplifier rooms” were noted to be in use as a Janitorial or Storage closet.

Premium Suites:

Throughout the premium spaces, it was noted that different levels of technology in each suite was primarily based on owner refurbishing or system adds over the course of the past few technology cycles. Suites on the west tower were outfit with Cat5 based room controls and tied back to a BSS/Crestron based headend. Other suites throughout the venue still had analog selector knobs and rheostats for volume controls.

While these analog systems are still widely accepted and still designed at the time of this assessment, the systems signal chain and headend architecture does not support for proposed for future upgrades including digital control panels and local IO.

Game Clock System:

The stadium utilizes OES for the Timing/Scoring Clock systems. The interfaces are ISC9000 remote units.

<u>Overlay Systems:</u>

Team Mobile Applications:

The Bills have a Team mobile application produced by YinzCam that is primarily focused on the Team including schedules, team news, video replay, team roster information, links to 3rd Party ticketing partners, league standings, team stats, photo links, and social media feeds. The mobile application has limited information related to the New Era Field facility including Box office contact information, Guest Services contact information, as well building access information such as parking, public transportation and mapping directions. There is a 2d seating map included as well focused on the Bills seating configuration. *There are notes from the public/users that the application has lost functionality over time, with video replay problems, removal of the radio support and other typical application concerns.*

Within the Bills mobile app, there are links to the Pegula Sports and Entertainment LLC, “My One Buffalo” mobile app. This app provides further links to the ticketing information across the entire Buffalo platform.

II. New Era Field– Systems Direction and Recommendations

General

The following list is a quick comparison of the Industry Trends against the existing status of the New Era Field.

IP Convergence – Multiple physically separate networks existing within the building. Each data system may use dedicated strands within a shared fiber cable. These systems are not considered a Converged Data Network.
Redundancy and Diversity – The fiber backbone utilizes multiple strands of fiber connecting each switch stack to alternate core switches. As the redundant strands are from within the same fiber cable, there is no diversity in routing (protection) of the redundant cabling.
Voice over IP – A ShoreTel VoIP phone system is distributed throughout the building on the Bills data network.
High Density Wireless (cellular) – AT&T cellular DAS neutral host system supports high density 4G coverage for 3 major cellular carriers within the stadium. There are no current conversations for 5G upgrades.
High Density Wireless (Wi-Fi) – Wi-Fi distribution is provided throughout the bowl via first generation under seat enclosures.
Megapixel CCTV – Multiple Fixed and PTZ IP video surveillance cameras are utilized. Bowl coverage averages 7-12 pixels/foot, well below facial recognition levels.
Digital Analytics – Not observed
IP Access Controls –Access controls are performed primarily by keyed locks and card access in select areas of the building.
Biometric Access Controls – Not observed
IP Television – Combination of multiple systems, IP and Coax distributed TV
Ultra HD – TV distribution is HD quality
Digital Signage – Physically separate signage system installed, system is not dynamic or capable of receiving push data updates.
Digital Menu Boards – Vendors/Tenants are using their own IPTV based menu boards as part of the Concessions
Location Services – Not observed
Beacons – Not observed
Venue Applications – Combination of Bills Team and One Buffalo mobile apps
Team Applications – Combination of Bills Team and One Buffalo mobile apps
Electronic Wallet – Not observed as part of the point of sale deployment
Wearable Devices – No custom usage observed
Digital Broadcast – combination of baseband broadcast infrastructure and fiber in place

Communications Infrastructure

Building Infrastructure:

It is recommended that the existing Fiber backbone cabling be augmented to support continued growth in data bandwidth needs. The Primary backbone and redundant backbone strands are from the same shared multi-strand cable. This is supporting one switch stack primary (10G) and redundant (10G) uplink in each TR. It is recommended that the existing Fiber backbone be transitioned to become entirely the Primary link, by installing a New and fully diverse routed Redundant 12-strand optical single-mode fiber (OS2) backbone. The NEW backbone with diverse routing increases the available strands to each TR and will give back the used strands, effectively increasing the primary link. Additionally, by diversifying the routing, a failure in one cable path will no longer bring down a TR or stack of TRs and therefore increasing the uptime for all tele data systems within the venue.

Fiber Backbone – Diverse 10G backbone

- Benefits: Uptime, Increased Bandwidth, Full level redundancy
- Cost ROM: *$100,000*
- Value (0-10) – 8
- Manufactures/Key Players: CommScope (Systimax), Corning, Berk-Tek / Leviton, Belden, General / Panduit, Superior Essex / Ortronics, TE Connectivity

Systems

Information Technology (IT) Systems:

1. Segregated Network Systems:
   Migrate the multiple physically separate networks onto one converged data network.

   Converging Data Networks
   - Pros: Unified network platform, reduced licensing costs needed for separate networks
   - Cons: Based on operations and ongoing maintenance of selected systems(security by outside integrators), costs to upgrade outweigh the benefits.
   - Cost ROM: *TBD*
   - Value (0-10) - 1

2. Wireless LAN (WLAN/Wi-Fi):
   The recent addition of a full public Wireless Data Network provides the Stadium much needed data transport. Because the enclosures are first generation outdoor/under seat enclosures, they have not lived up under the harsh conditions experienced in the outdoor bowl. It is recommended that the enclosures be upgraded to the latest generation of NEMA 4X (or better) to avoid pending failure of the access points contained within.
   Based on end-of-live for the Wireless Access Points, it is recommended that the APs be replaced on the ongoing replacement schedule.

   Wireless Access Point Replacement: High Density Wi-Fi
   - Benefits: Increased bandwidth, upgrade to the most current 802.11 standard.
   - Cost ROM: *$2500 each*
   - Value (0-10) – 7
   - Manufacturers/Key Players: Cisco

Wireless Communications:

Based on the recent addition of an AT&T neutral host DAS, the current trend is to upgrade all cellular to 5G distribution.

DAS – 5G upgrades
- Benefits: upgrades in bandwidth
- Cost ROM: Ongoing maintenance support
- Value (0-10) - 7

Security Systems:

1. CCTV Bowl Camera upgrades:
   The existing seating bowl is covered with an IP CCTV camera system providing coverage of all seats within the bowl. The cameras are 5MP fixed cameras with an average pixels per foot coverage between 7-11 pix/ft. The minimum human facial recognition resolution starts at 40pix/ft, and software based facial recognition resolution starts at 80pix/ft. The bowl cameras are providing general coverage of the seats but lack sufficient detail necessary for detailed security operations. Camera positions should be reviewed, and additional cameras will be required to reduce the overall coverage zone provided by each camera to increase the resolution per camera.

   CCTV Bowl upgrades – 5-year outline
   - Benefits: Increased bowl surveillance responsiveness. Provide security teams the ability to recognize and determine faces

within the video evidence. New cameras provide increased analytical features as well.

- Cost ROM: *$500K*
- Value (0-10) – 7
- Manufacturers/Key Players: Avigilon

2. CCTV Stadium Perimeter upgrades:
The existing venue is covered with IP CCTV camera system that is based on PTZ cameras at select intervals around the perimeter. PTZ cameras can only record video where they are aimed and focused. High Mega-Pixel fixed cameras provide continuous recording as they are always aimed at the target zone. Security groups can digitally pan and zoom within the recorded footage to gain detail with the recorded image. The building exterior cameras currently only record minimal footage of the perimeter. The cameras should be upgraded to fixed cameras with defined fields of view.

CCTV Refresh – 5-year outline

- Benefits: Full perimeter coverage, 24/7 recording of the building perimeter, increased analytical features.
- Cost ROM: *$500M – 1M*
- Value (0-10) – 7
- Manufacturers/Key Players: Avigilon, Axis, Bosch, Panasonic

3. Digital Analytics:
Software available on the market such as BriefCam, provides multiple analytics for the security CCTV system including object tracking, object follow, condensed time search, object description searches (color, size, speed, direction of travel, etc.). These software packages can reduce post event video research significantly. This time can assist investigations and is being used by large events such as the Boston Marathon, NFL Superbowl, Olympics, World Cup, etc.

Digital Analytics

- Benefits: Increased productivity of post event research
- Cost ROM: Per Camera Licensing fees
- Value (0-10) – 5
- Manufacturers/Key Players: BriefCam, Agora Systems, Bold Technologies, CNL Software, eConnect, Avigilon

4. Secondary Command Center: Relocate on campus
The existing secondary Command and Control room is located with the field tunnel entrance, within the stadium. Based on the campus environment, it is recommended that the secondary command be relocated to a diverse location.

Secondary Command – building diversity

- Benefits: Building diversity on campus, removed from Stadium environment.
- Cost ROM: Conference room fit out.
- Value (0-10) – 7
- Manufacturers/Key Players: BriefCam, Agora Systems, Bold Technologies, CNL Software, eConnect, Avigilon

Overlay Systems:

Location Services:
Location based systems leverage the building Wi-Fi system to triangulate user position within a building. By locating users within the building, analytics can be used to provide valuable information and advertising to the users, such as short restroom/concession lines, sales, team store adds, etc. Additionally, beacons should be considered to bolster location based advertising and assistance as delivered through a Venue Application. This allows the building to combine analytic information with Wi-Fi and beacons to deliver specialized content to end users to target and build off of user behavior.

Location Services:

- Benefits: Patron interaction and interest, business opportunities, data mining, targeted advertising
- Cost ROM: *$TBD*
- Value (0-10) – 4
- Manufactures/Key Players: Cisco, Aruba Networks, Samsung, Extreme, Ruckus, Boingo

Beacons:
Beacons currently come in two flavors, Apple and Android supported systems. Beacons should be used to target users' behavior in proximity to low energy blue tooth connectivity with smart phones. The building can provide location based services outside of cellular or Wi-Fi based services. Additionally, beacons should be used to target advertising through an application based on proximity of the users. This is leveraged in sales and marketing in newer venues.

Beacons

- Benefits: Simplified controls, IPTV interaction, patron interaction and interest, business opportunities
- Cost ROM: *$TBD*
- Value (0-10) – 4
- Manufactures/Key Players: Estimote, Boingo

Venue Applications:
It is recommended that the Bills and One Buffalo mobile app build off of the location services provided by the Wi-Fi location and Beacon services to keep in touch with users and patrons at all types of events at a venue including concerts and other events. Venue applications should be built to utilize beacon and Wi-Fi technologies to assist in wayfinding, merchandise offers, ticketing, transportation and sales to future events. Venue application with location services provide added benefits to the existing team mobile applications and provide an easy delivery of Loyalty programs and rewards.

Bowl Sound/PA System:
It is recommended that the sound systems be replaced, and the venue refitted from top to bottom with a networked distributed loudspeaker audio system for the bowl, concourses, BOH areas and premium spaces. A dedicated effort will be required to fully assess the final scope of system replacement. however, a similar bowl sound system is expected to range from for a full replacement including loudspeakers, headend, amplifiers, digital signal processors, sound desks etc.

- Cost ROM: $7M to $8M or TBD
- Value (0-10) – 8
- Manufactures/Key Players: Community, EAW, JBL/Harman, QSC

Distributed Television System:
It is recommended that the video distribution system be fully evaluated from top to bottom. The existing systems are independent and utilize limited features. The system's mix of signal distribution, traditional coax based feed architecture and IP based causes latency issues, and limited administrative control and management implementation could be consolidated considerably with existing headend gear. It is recommended that the TV distribution be upgraded to a complete distributed television system using IPTV technology. IPTV system includes a head-end, DRM compliant FHD or UHD capable HDMI media players, transcoders and servers as required. 3rd party API for control systems can be incorporated. Horizontal, Cat6A data cables shall be provided at each television as required. Paid creative services will be required to reutilize IPTV system and would require the overhaul of the video content software package, allow customized development of wrappers, tickers, and signage. Software shall be flexible to allow for production setup for staging and scheduling content. This system would allow the Bills to operate and or integrate with food and beverage menu, POS and ordering systems and retail ordering systems, if such a need exists in the future.

It is suggested that the existing and failing displays and signage product be replaced with new flat panel displays rated for their environmental conditions and include allocation for serial or TCP/IP control. For current

displays not ADA compliant due to its depth off the wall or head clearances, It is suggested that this product be replaced with a new, lower profile display readily available in the market..

IPTV system shall support the following applications listed below.

1. Television Displays
2. 3rd party control interface
3. GPI trigger response for moments of exclusivity
4. Remote administration and templates
5. Tablets utilized in suites, loge boxes, clubs and other premium areas.
6. Digital Signage (Advertising + Wayfinding) – replacement of
7. Future proofing up to 4K UHD distribution over Cat6a
8. Dynamic Digital Menu Boards –as opportunity arises

IPTV – Fully Converged Distributed TV System

- Benefits: Increased video resolution, 2-way control capabilities, Advertising/revenue opportunities, Fan interaction and interest
- Cost ROM: *$100,000-$500,000 (using existing Vitec headend), DMP, Cat6 Cable and port connectivity*
    - *Cost ROM: Unit Cost Adds: Indoor Display+$1750 ($900/DMP and $350-$500/port network connectivity)*
    - *Cost ROM: Unit Cost Adds: Outdoor Rated Display+$3800 ($900/DMP and $350-$500/port network connectivity)*
    - Cost ROM: Various Display Upgrades: 40”-46” HD LED displays $1250 ea.
- Value (0-10) – 7
- IPTV Manufacturers/Key Players: Vitec, Yinzcam, Infovalue, Ping HD, Cisco Vision, TriplePlay.
- Display Manufacturers: Brightsign (outdoor), LG, Samsung, Sony etc.

AV Systems:
It is suggested that centralized and simplified Audio and Video control systems be evaluated for key areas of the building. These systems can provide connectivity and simplified controls in premium spaces. This will open the use and flexibility for key areas within the arena for local content distribution for specialty events such as business meetings, weddings, conventions, etc. Typical spaces where AV systems are deployed include clubs, lounges, suites and large meeting rooms. These systems can be small such as video connectivity to a local display, to distributed audio and video. Each system is designed and deployed for a target purpose and audience.

AV Systems - Controls
Benefits: Simplified controls, IPTV interaction, patron interaction and interest, business opportunities
Cost ROM: *$TBD dependent on number of spaces*
Value (0-10) – 4
Manufactures/Key Players: Crestron, Extron, AMX/Harman

Team Spaces:
An extension of the AV systems deployed for business purposes within a venue, Team AV systems are targeted to private spaces dedicated to team and staff needs. Coaches today utilize many forms of content delivery including professional video footage, play by play evaluations and interactive content. Large format displays with touch screen capabilities or Smart Board technologies allow coaches to diagram the “x’s and o’s” directly on game or practice video footage. Additionally, specific team content may be distributed to players and coaches wirelessly via tablets and other portable devices.

The addition of a combination of video and audio systems including IPTV systems allow individualized content to be deployed with creativity being the limiting factor. Content may include team information such as schedules, time tables, and travel information, promotional or motivational content and highlights. Audio systems with local interfaces and controls give coaches, staff and players the ability to play audio from sources such as media players, CD/DVD, iPods/iPhones/iPads and other tablets and portable devices.

END OF TECHNOLOGY CONCEPT NARRATIVE

LANDSCAPING AND SITE IMPROVEMENTS OBSERVATIONS

PERIMETER GATES

Please refer to the site plan at the front of this Report for the Entry Gate numbering system.

All of the perimeter fencing and Entry Gates were added as part of the 2014 renovation. The Bills report that the distribution of ticket taking positions does not accommodate changes in parking patterns at the stadium. Specifically, Gates 2, 3, and 5 tend to get overwhelmed with long queue lines. Gates 6 and 7 tend to have much shorter lines and are not fully utilized.

Hardware problems at the exit gates with panic devices complicate their use. The closers are not strong enough to cause the gates to fully latch closed. This creates a need to staff a security guard at each gate on game-day. Many gates are sagging and have been reinforced with rods.

Exit Gates: Closers are not strong enough to latch gates shut. Bills report that gates cannot be unlocked from the exterior side.

Concrete slabs at some gates have settled and the resulting slopes have created valleys where water collects and can freeze on cold days.

Entry Gate 2: Slab-on-grade slopes to create valley where it meets asphalt. Condition repeats at Gates 2, 3, and 4.

The use of vehicle gates currently requires the gates be staffed by a security guard or other staff (DNC, Jani-King, or Stadium Ops). The cycling time of the operable gates leaves them open far longer than most are willing to wait (so that they can verify no one else sneaks into the stadium).

North Service Gate: Provided with an operable gate mechanism.

Conversely, the Bills need to send staff to other service gates that are not provided with operable mechanisms (in order to unlock the gates).

East Service Gate: Not provided with an operable gate mechanism.

Many conflicting activities happen adjacent to the Entry Gates, making these areas congested at times. Security checks happen just outside the gates. Ticket scanning happens just inside the gates. Portable barricades are stored next to the gates when not in use for queues. Seating is provided adjacent to gates for those with disabilities. Guest Services staffs portable booths to address patron's questions, distribute game-day programs and promotions, and to distribute sensory bags. Prefab temporary huts are located next to some gates, used as a staging and warming area for guest service and security staff. Occasionally a Porta-John is placed next to the entry gates. And, next to almost every Entry Gate is one or more trash dumpsters (due to lack of space elsewhere).

Guest Services Booth: *Portable booths are located at several entry gates.*

Magnetometers at Entry Gates: *Some plastic components exhibit wear and damage.*

Gate 2: *Egress gates creating security issues. Multiple locations propped open for contractors or facilities workers.*

Exit Gates: *General Assistance/ADA waiting area directly adjacent to dumpsters. Gates are racking preventing the egress doors from properly closing. Bars added to prevent racking.*

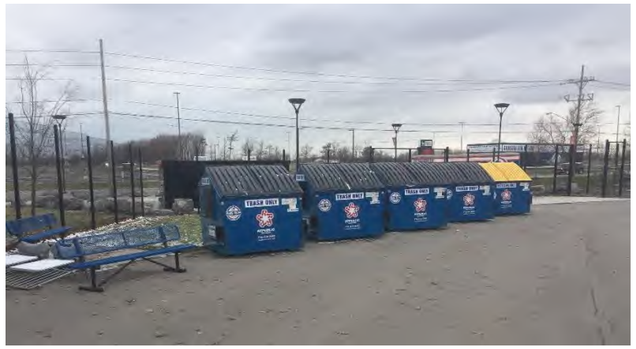
Entry Gates: *Queuing areas are protected by boulders and bollards.*

Gate 2: *Birds roosting on/above newly installed camera, WAPs and pull box locations.*

Prefab Huts: *Huts are used as staging and warming areas for Guest Services and Security staff.*

Gate 1: *Grading around Gate 1 reworked and trench drains added to prevent water damage to security and credentialing booth.*

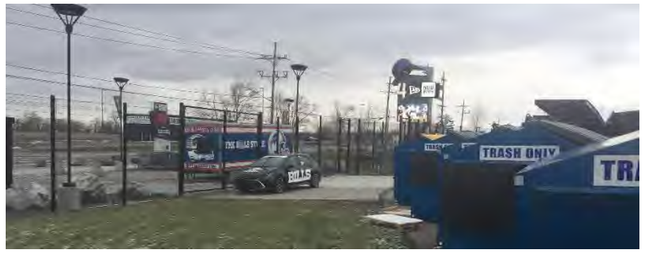
Gate 3 Egress Door: *Gates are racking preventing the egress doors to properly close. Bars added to prevent racking.*



Gate 3: General Assistance/ADA waiting area directly adjacent to dumpsters Gates are racking preventing the egress doors to properly close. Bars added to prevent racking.

Gate 3: Column foundations re-poured to prevent racking.

Gate 3: Storage of pass through trays, bike rack, benching exposed to the exterior elements. No Storage.



Gate 4: Emergency access gate blocked by sponsorship opportunity.

Gate 4: Trash disposal gates utilized for game day event tents and portable toilets.

Gate 5: Temporary building utilized for game-day staff and guest services.

Gate 6: Slabs fully replaced 2018 to run electrical for magnetometers.

Vehicle access gate near Gate 7: Gate appeared open with free access to Jani-King operations.

RECOMMENDATIONS

A coordinated solution is required to address the various operational issues noted. There is very little noted above that can be corrected in isolation, except for the gate hardware issues.

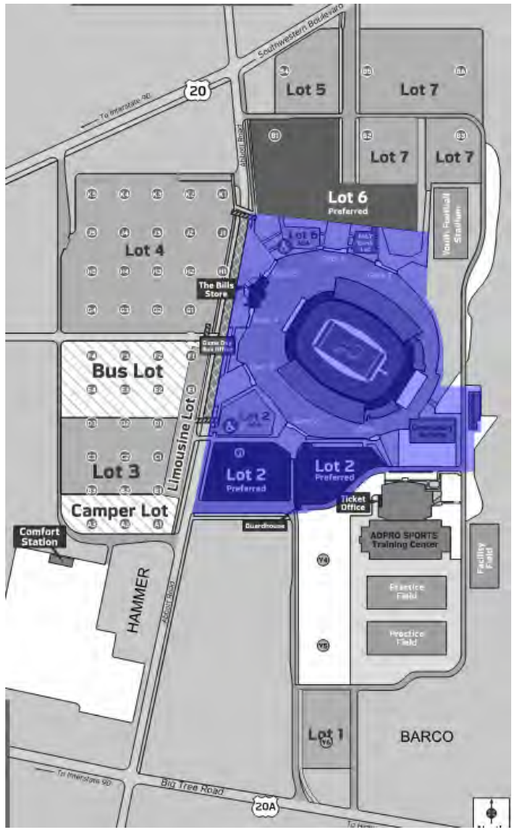
- Develop a coordinated design solution to address Entry Gate activities, including ticket scanning, security checks, seating, barricade storage, Guest Service booths, warming stations, and toilet facilities.
- Consider the addition of temporary platforms just outside each Entry Gate for law enforcement to use to monitor queueing lines. Consider permanent platforms if local hardwired voice communication is also desired.

- Refer to the Waste handling section of this Report for recommendations related to trash collection.
- Replace closers on all egress gates so that gates firmly latch closed. This may require the installation of a header tube over each egress gate.
- Consider replacing locks on panic devices so that keyed access can be accommodated from outside the egress gates.
- Study the Bill's request to replace some of the egress gates with automatic egress turnstiles so that voluntary egress can happen without the exit being staffed.

LANDSCAPING AND SITE IMPROVEMENTS

The site design around much of the stadium was revised and updated during 2014. This renovation addressed areas immediately next to the stadium, but did not extend out far into the parking lots, beyond the north side of the Training Facility, to areas across Abbott Drive, or to service areas between Lot 7 and the Operations Building.

Portions of the site upgraded in 2014 include only those areas highlighted in blue below:



Please refer to other sections within this Report for descriptions of Perimeter Entry Gates, Waste Handling, Site Lighting, and the Playing Field.

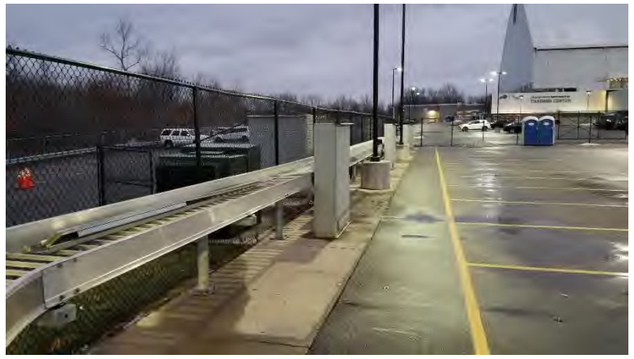
This report did not look specifically at the condition of parking lots. The Bills do have a regular line item in their Capital Expenditures for evaluation and re-topping of lots as needed.

The images that follow are representative of problems that repeat to varying degrees across the entire site. Major issues include:

- Deteriorating planting areas due to foot and vehicular traffic, especially snow removal operations.
- Minor areas of erosion in hillsides and at crushed granite.
- Deteriorating concrete slabs-on-grade due to heavy use of salt.
- General difficulty with snow removal operations due to the push uphill from the West End 100 Level and from a lack of space near the stadium to deposit snow.
- Parking lots undergo a periodic replacement or re-topping process to keep them in useable shape.
- The existing perimeter fence apparently does not meet current NFL security requirements.
- Ticket Windows and a Retail Cart are located outside of the secure perimeter fence.
- Broadcast dock areas are not protected from the weather.
- Much equipment is stored out-of-doors.
- There is no permanent enclosed facility for the cleaning staff, who currently make use of trailers and tents.

<u>Multiple Locations:</u> Vehicles take shortcuts through lawn areas, especially as a part of snow removal efforts.

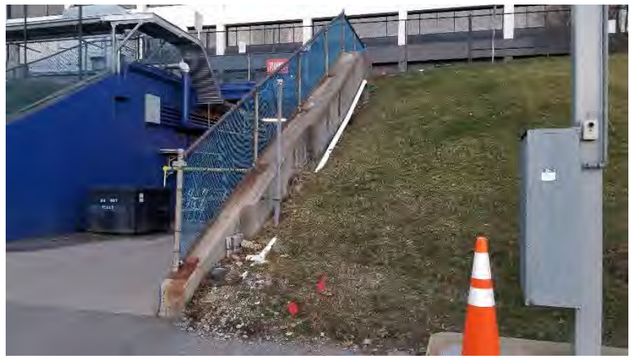
South Sideline Lawn: Vehicles take shortcuts through lawn areas, to help quickly move coaches down to locker rooms at half time.



Broadcast Dock: There is no overhead protection at JBT's.

Planting Areas: Several planting areas at the 200 Level Concourse have been damaged where pedestrian traffic is concentrated.

Temporary Huts: Shelters have been added to house Sherriff and Security personnel, as well as Game-Day staff. Total 6 huts.



Tunnel Areas: Erosion around all sides of tunnel structure.

Bandstand: Temporary stage sits on top of permanent slab area added in 2016. Slabs are spalling where salt is applied.

Site Stairs: Several older site stairs on the east side of the campus exhibit deterioration.

Tunnel Lot: Steep slopes around this area are disturbed by vehicles and are eroding in many places.

West Ramps & Stairs: Bills report that snow removal is difficult due to tight turns at landings. Snow pushed uphill to be removed.

Crushed Granite: Crushed granite surfacing is subject to erosion and mechanical displacement.

Team Store Plaza: Asphalt is failing along the edges on adjacent donor bricks and artificial turf.

Pylon Signs: Several pylon signs exhibit impact damage.

Lawn Areas: Snow is piled up in lawn areas. Lawns are damaged from snow and from plows.

Team Store Plaza: Bills report that this Plaza is too small to host desired pre-game activities.

Team Store Plaza: Low spot creates need for intense use of salt, which leads to spalling concrete surface.

Operable Gates: Bills would like additional gates around the perimeter to be power operated.

Monument: The Tim Russert monument exhibits cracking and spalling of the concrete base.

Team Store Parking Lot: Patrons can be confused by lack of signage identifying intended traffic patterns in lot.

Team Store Parking Lot: Bills and DNC note that the lot is not large enough to accommodate all patrons.

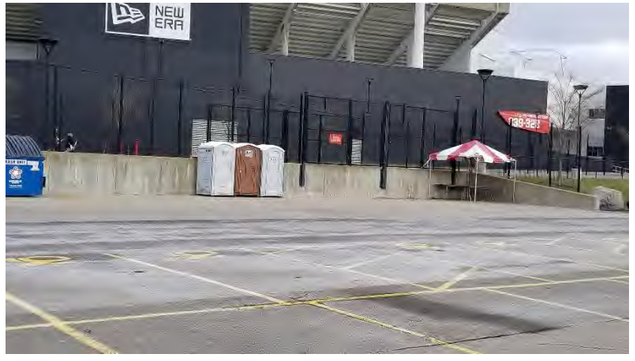
Parking Lot #2: Old guard shack is being used for storage of vehicle control equipment.

General Parking Lot Item: Lack of dedicated snow melting areas causes snow to be trucked across the campus to east end of Lot #7

Parking Lot #2: Old trenches through asphalt are deteriorating.

General Parking Lot Item: Many asphalt lots are deteriorating. Bills replace/repair on a rotating basis with County funds.

Salt Dome: The salt dome functions well for its intended purpose.



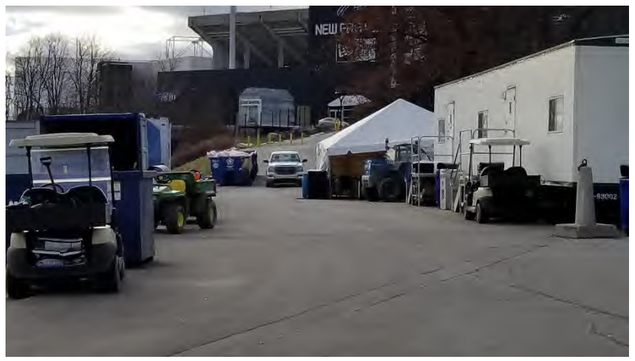
Parking Lot #2: Area designed for trash collection is not being used for that purpose.

General Parking Lot Item: Snow removal operations disturb lawn areas where the large boulders get in the way of plows.

Butler Building: Butler Building provides additional storage space, but more space is needed, especially for food service equipment.

Near Butler Building: Butler Building provides additional storage space, but more space is needed, especially for food service equipment.

Butler Building: Minor damage at overhead door.



Jani-King Compound: The cleaning service is housed in trailers and tents. Upwards of 150 people work out of these facilities.

Jani-King Compound: Portable heaters are used to keep tent warm for staff.

Parking Lot #7: Guard shack remains in use. Also used for storage of vehicle control equipment.

Satellite Hill: ENG broadcast truck compound reportedly lacks sufficient connectivity.

Satellite Hill: ENG broadcast truck compound reportedly lacks sufficient connectivity.

Satellite Hill: Water and debris collects at the bottom of the hill, contributing to trashy and icy conditions.

Youth Field Facilities: Field is only for the Jim Kelly Football Camp, and for some game-day tailgating activities.

PERIMETER HARDENING LINE

A secure stand-off perimeter has been established around the stadium itself, including Entry Gates. New Era Field has received DHS Certification for compliance with Safety Act recommendations.

Hardening Line: Much of the perimeter hardening line is formed with large boulders.

Hardening Line: There are occasional gaps in the perimeter hardening line created by the placement of other site elements.

Hardening Line: Areas near the Team Store and Entry Gates are protected with bollards.

Perimeter Security Fence: The size of openings in the existing fence does not meet recent NFL standards.

Ticket Windows: Ticket Windows were moved to a portable building outside the secure line in 2016.

Retail Trailer: A Retail Trailer was placed outside of the secure line in 2016.

Secondary Perimeter Gates: Secondary gates are protected against intrusion with the use of parked vehicles.

Electrical Service Entry: Two service entry meters and knife switches are unprotected and readily accessible to the public along Abbott Drive.

RECOMMENDATIONS

Keeping up with the period site maintenance plan is necessary. When other priorities become emergencies, the site budget often takes a hit. Specific recommendation include:

- Conduct a study of current snow removal operations to determine if operational improvements are possible, or if changes to pathways, gates, and bollard or boulder placement are indicated.
- Conduct a study of current trash handling operations to determine if operational improvements are possible, or if changes to pathways, gates, and bollard or boulder placement are indicated. Consider if permanent trash collection and compaction facilities are needed.
- Replant lawn areas exhibiting erosion with hardy varieties of grass, or with ground cover.
- Replace frequently disturbed lawn areas with alternative surface materials.
- Study the use and cost of alternative de-icing materials suitable to the Buffalo environment, with the intent of minimizing deterioration to concrete slabs-on-grade.
- Study alternative options for addressing the size of openings in the perimeter fence. Options may include adding additional mesh or screen to the existing fence, or replacing only the mesh material while maintaining use of the existing fence posts.
- Study safer options to the current location of the Ticket Window and Retail trailers. Consider their relationship to Abbott Drive (which is typically closed to vehicles on Game-Day).
- Consider construction of vehicle and pedestrian barriers adjacent to the Abbott Road sidewalk electrical meter locations.
- Study the provision of overhead cover canopies at the Broadcast Dock.
- Study the potential addition of an enclosed storage building.
- Study the potential addition of an enclosed vehicle parking garage.
- Study the potential addition of an enclosed permanent facility for the cleaning staff and their supplies.