

City of Stanwood



Stanwood City Council Special Meeting Workshop

Thursday, August 12, 2021



CITY OF STANWOOD CITY COUNCIL SPECIAL MEETING

City Council Workshop
Thursday, August 12, 2021- 5:00 p.m.

This meeting will be conducted by telephone and online via Zoom,
Connection information will be posted on City Website—
<https://www.stanwoodwa.org>

AGENDA

1. American Rescue Plan Act Funds
2. Civic Campus
3. Adjourn



CITY OF STANWOOD COUNCIL AGENDA STAFF REPORT

ITEM NUMBER: 1

DATE: August 12, 2021

SUBJECT: DISCUSSION: American Recovery Plan Act (ARPA)

CONTACT PERSON: Jennifer Ferguson, City Administrator

ATTACHMENTS: A – ARPA resource
B – Washington State NEU Distribution List
C – NCFE Request for ARPA Funds
D – Proposed List of Uses

PURPOSE

The purpose of this special meeting workshop item is for Council discussion regarding the use of the ARPA funds.

BACKGROUND

The President signed the American Rescue Plan Act (ARPA) into law to provide a \$1.9 trillion federal relief plan and funds for financial assistance to individuals, businesses, and local governments across the nation. Under the plan, U.S. cities and towns received \$65.1 billion in direct and flexible federal funds. The first half of the allocated funding was received by the City of Stanwood at the end of June 2021 in the amount of \$1,017,075.50. Attachment A is an AWC briefing about the ARPA and Attachment B is the Washington State distribution list by non-entitlement city.

Additionally, the City received a request for financial support from NCFE from the City's source of ARPA funds (See Attachment C)

COUNCIL DISCUSSION QUESTIONS

1. How shall the ARPA funds be used? See Attachment D for proposed uses.

The American Rescue Plan Act

2021



Providing direct flexible funding to cities across the country

President Joe Biden recently signed the American Rescue Plan Act (ARP) into law. The sweeping **\$1.9 trillion** federal relief plan brings much needed financial assistance to individuals, businesses, and local governments across the nation.

Under the plan, U.S. cities and towns will receive **\$65.1 billion** in direct and flexible federal funds. The funding will begin to arrive in the next couple of months and will be distributed in two tranches: the first in 2021 and a second in 2022.



Washington cities are projected to receive more than **\$1.1 billion** in federal funding.

Cities can use ARP funds for:

- Responding to the COVID-19 pandemic
- Covering costs incurred from the public health emergency
- Replacing lost, delayed, or decreased revenues due to COVID-19
- Addressing the negative economic impacts on local businesses and nonprofits
- Making necessary investments in water, sewer, and broadband infrastructure

A chart of projected allocations for cities is available on our website. **The estimates are not official values and are subject to change.**



Funds will be available to cities through December 31, 2024.

In addition to city funding, the ARP provides **\$1.4 billion** to Washington counties and critical funding to social programs, schools, small businesses, and individuals.

The bill includes funding for:

- Agriculture and nutrition programs, including extending SNAP and Pandemic EBT to keep families fed through the pandemic;
- Schools and institutions of higher education to safely reopen schools, address learning loss, and support students and staff, including broadband support for students;
- Childcare to help sustain providers and expand childcare assistance to 857,000 children;
- COVID-19 vaccinations, testing, treatment, and prevention, especially for hard-to-reach communities;
- Mental health and substance use disorder services;
- Emergency rental assistance, homeowner assistance, and other housing programs to help families pay rent, mortgages, and utilities;
- Transit agencies to prevent transit worker layoffs and prevent severe cuts to transit services that essential workers and the public rely on;
- Small business assistance, including specific programs for restaurants and live venues;
- Tribal government services;
- Extending enhanced unemployment benefits through September 2021, providing an additional \$300 per week, on top of all state unemployment benefits; and
- Expanding the Child Tax Credit and the Earned Income Tax Credit, two powerful and effective tools to end poverty.

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Washington State NEU Distribution

Population Estimates provided by U.S. Treasury from the most recent Bureau of the Census data

If you have questions or need more information, please contact OFM staff at ofmbudget@ofm.wa.gov or (360) 902-0560.

NEU Recipient Number	Name	State	Population Estimate 2019	Allocation %	Total Payment	2021 Payment	2022 Payment
WA0005	Aberdeen city	Washington	16,756	1.06%	4,677,403	2,338,702	2,338,702
WA0010	Airway Heights city	Washington	9,485	0.60%	2,647,719	1,323,859	1,323,859
WA0015	Albion town	Washington	604	0.04%	168,605	84,303	84,303
WA0020	Algona city	Washington	3,208	0.20%	895,507	447,753	447,753
WA0025	Almira town	Washington	280	0.02%	78,161	39,081	39,081
WA0045	Arlington city	Washington	20,523	1.29%	5,728,954	2,864,477	2,864,477
WA0050	Asotin city	Washington	1,289	0.08%	359,822	179,911	179,911
WA0058	Bainbridge Island city	Washington	25,298	1.59%	7,061,885	3,530,943	3,530,943
WA0060	Battle Ground city	Washington	21,252	1.34%	5,932,453	2,966,226	2,966,226
WA0070	Beaux Arts Village town	Washington	324	0.02%	90,444	45,222	45,222
WA0085	Benton City city	Washington	3,495	0.22%	975,622	487,811	487,811
WA0090	Bingen city	Washington	742	0.05%	207,128	103,564	103,564
WA0095	Black Diamond city	Washington	4,781	0.30%	1,334,606	667,303	667,303
WA0100	Blaine city	Washington	5,607	0.35%	1,565,183	782,591	782,591
WA0105	Bonney Lake city	Washington	21,148	1.33%	5,903,421	2,951,711	2,951,711
WA0110	Bothell city	Washington	47,415	2.99%	13,235,801	6,617,901	6,617,901
WA0120	Brewster city	Washington	2,357	0.15%	657,952	328,976	328,976
WA0125	Bridgeport city	Washington	2,613	0.16%	729,414	364,707	364,707
WA0127	Brier city	Washington	6,970	0.44%	1,945,661	972,831	972,831
WA0130	Buckley city	Washington	5,058	0.32%	1,411,930	705,965	705,965
WA0135	Bucoda town	Washington	592	0.04%	165,256	82,628	82,628
WA0140	Burlington city	Washington	9,224	0.58%	2,574,861	1,287,430	1,287,430
WA0145	Camas city	Washington	24,418	1.54%	6,816,235	3,408,118	3,408,118
WA0150	Carbonado town	Washington	735	0.05%	205,174	102,587	102,587
WA0155	Carnation city	Washington	2,282	0.14%	637,016	318,508	318,508
WA0165	Cashmere city	Washington	3,172	0.20%	885,457	442,729	442,729
WA0170	Castle Rock city	Washington	2,298	0.14%	641,482	320,741	320,741
WA0175	Cathlamet town	Washington	572	0.04%	159,673	79,836	79,836
WA0180	Centralia city	Washington	17,745	1.12%	4,953,481	2,476,740	2,476,740
WA0190	Chehalis city	Washington	7,654	0.48%	2,136,599	1,068,299	1,068,299
WA0195	Chelan city	Washington	4,237	0.27%	1,182,750	591,375	591,375
WA0200	Cheney city	Washington	12,522	0.79%	3,495,491	1,747,745	1,747,745
WA0205	Chewelah city	Washington	2,676	0.17%	747,000	373,500	373,500
WA0215	Clarkston city	Washington	7,375	0.46%	2,058,716	1,029,358	1,029,358
WA0220	Cle Elum city	Washington	2,037	0.13%	568,624	284,312	284,312
WA0225	Clyde Hill city	Washington	3,386	0.21%	945,195	472,598	472,598
WA0230	Colfax city	Washington	2,872	0.18%	801,713	400,856	400,856
WA0235	College Place city	Washington	9,317	0.59%	2,600,822	1,300,411	1,300,411
WA0240	Colton town	Washington	458	0.03%	127,850	63,925	63,925
WA0250	Colville city	Washington	4,832	0.30%	1,348,843	674,421	674,421
WA0255	Conconully town	Washington	208	0.01%	58,063	29,031	29,031
WA0260	Concrete town	Washington	738	0.05%	206,011	103,006	103,006
WA0265	Connell city	Washington	5,545	0.35%	1,547,875	773,938	773,938

Washington State NEU Distribution

Population Estimates provided by U.S. Treasury from the most recent Bureau of the Census data

If you have questions or need more information, please contact OFM staff at ofmbudget@ofm.wa.gov or (360) 902-0560.

NEU Recipient Number	Name	State	Population Estimate 2019	Allocation %	Total Payment	2021 Payment	2022 Payment
WA0270	Cosmopolis city	Washington	1,662	0.10%	463,944	231,972	231,972
WA0275	Coulee City town	Washington	564	0.04%	157,439	78,720	78,720
WA0280	Coulee Dam town	Washington	1,080	0.07%	301,480	150,740	150,740
WA0290	Coupeville town	Washington	1,972	0.12%	550,480	275,240	275,240
WA0293	Covington city	Washington	21,175	1.33%	5,910,958	2,955,479	2,955,479
WA0295	Creston town	Washington	229	0.01%	63,925	31,962	31,962
WA0300	Cusick town	Washington	217	0.01%	60,575	30,288	30,288
WA0305	Darrington town	Washington	1,421	0.09%	396,669	198,335	198,335
WA0310	Davenport city	Washington	1,744	0.11%	486,834	243,417	243,417
WA0315	Dayton city	Washington	2,442	0.15%	681,679	340,840	340,840
WA0320	Deer Park city	Washington	4,364	0.28%	1,218,202	609,101	609,101
WA0325	Des Moines city	Washington	32,348	2.04%	9,029,879	4,514,939	4,514,939
WA0330	DuPont city	Washington	9,516	0.60%	2,656,372	1,328,186	1,328,186
WA0335	Duvall city	Washington	8,107	0.51%	2,263,053	1,131,526	1,131,526
WA0360	Eatonville town	Washington	3,026	0.19%	844,702	422,351	422,351
WA0362	Edgewood city	Washington	13,053	0.82%	3,643,718	1,821,859	1,821,859
WA0365	Edmonds city	Washington	42,605	2.69%	11,893,099	5,946,550	5,946,550
WA0375	Electric City city	Washington	1,002	0.06%	279,706	139,853	139,853
WA0380	Ellensburg city	Washington	21,111	1.33%	5,893,093	2,946,546	2,946,546
WA0385	Elma city	Washington	3,351	0.21%	935,425	467,712	467,712
WA0390	Elmer City town	Washington	248	0.02%	69,229	34,614	34,614
WA0395	Endicott town	Washington	305	0.02%	85,140	42,570	42,570
WA0405	Entiat city	Washington	1,280	0.08%	357,309	178,655	178,655
WA0410	Enumclaw city	Washington	12,190	0.77%	3,402,814	1,701,407	1,701,407
WA0415	Ephrata city	Washington	8,136	0.51%	2,271,148	1,135,574	1,135,574
WA0425	Everson city	Washington	2,841	0.18%	793,059	396,530	396,530
WA0430	Fairfield town	Washington	626	0.04%	174,747	87,373	87,373
WA0440	Farmington town	Washington	152	0.01%	42,430	21,215	21,215
WA0445	Ferndale city	Washington	14,897	0.94%	4,158,467	2,079,234	2,079,234
WA0450	Fife city	Washington	10,184	0.64%	2,842,843	1,421,421	1,421,421
WA0455	Fircrest city	Washington	6,835	0.43%	1,907,976	953,988	953,988
WA0465	Forks city	Washington	3,880	0.24%	1,083,094	541,547	541,547
WA0470	Friday Harbor town	Washington	2,562	0.16%	715,177	357,589	357,589
WA0480	Garfield town	Washington	609	0.04%	170,001	85,001	85,001
WA0489	George city	Washington	516	0.03%	144,040	72,020	72,020
WA0490	Gig Harbor city	Washington	10,717	0.68%	2,991,629	1,495,814	1,495,814
WA0495	Gold Bar city	Washington	2,352	0.15%	656,556	328,278	328,278
WA0500	Goldendale city	Washington	3,505	0.22%	978,414	489,207	489,207
WA0510	Grand Coulee city	Washington	1,048	0.07%	292,547	146,274	146,274
WA0515	Grandview city	Washington	11,078	0.70%	3,092,401	1,546,201	1,546,201
WA0520	Granger city	Washington	3,830	0.24%	1,069,137	534,568	534,568
WA0525	Granite Falls city	Washington	4,234	0.27%	1,181,913	590,956	590,956
WA0535	Hamilton town	Washington	310	0.02%	86,536	43,268	43,268

Washington State NEU Distribution

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WA0540	Harrah town	Washington	640	0.04%	178,655	89,327	89,327
WA0545	Harrington city	Washington	418	0.03%	116,684	58,342	58,342
WA0550	Hartline town	Washington	154	0.01%	42,989	21,494	21,494
WA0555	Hatton town	Washington	104	0.01%	29,031	14,516	14,516
WA0560	Hoquiam city	Washington	8,655	0.55%	2,416,026	1,208,013	1,208,013
WA0570	Hunts Point town	Washington	435	0.03%	121,429	60,715	60,715
WA0575	Ilwaco city	Washington	991	0.06%	276,636	138,318	138,318
WA0580	Index town	Washington	211	0.01%	58,900	29,450	29,450
WA0585	lone town	Washington	472	0.03%	131,758	65,879	65,879
WA0590	Issaquah city	Washington	39,509	2.49%	11,028,857	5,514,429	5,514,429
WA0595	Kahlotus city	Washington	193	0.01%	53,876	26,938	26,938
WA0600	Kalama city	Washington	2,798	0.18%	781,056	390,528	390,528
WA0605	Kelso city	Washington	12,417	0.78%	3,466,180	1,733,090	1,733,090
WA0609	Kenmore city	Washington	23,097	1.46%	6,447,481	3,223,740	3,223,740
WA0620	Kettle Falls city	Washington	1,635	0.10%	456,407	228,203	228,203
WA0630	Kittitas city	Washington	1,497	0.09%	417,885	208,942	208,942
WA0635	Krupp (Marlin) town	Washington	52	0.00%	14,516	7,258	7,258
WA0640	La Center city	Washington	3,404	0.21%	950,220	475,110	475,110
WA0650	La Conner town	Washington	949	0.06%	264,911	132,456	132,456
WA0655	LaCrosse town	Washington	319	0.02%	89,048	44,524	44,524
WA0657	Lake Forest Park city	Washington	13,504	0.85%	3,769,614	1,884,807	1,884,807
WA0664	Lake Stevens city	Washington	33,911	2.14%	9,466,187	4,733,093	4,733,093
WA0668	Lamont town	Washington	74	0.00%	20,657	10,328	10,328
WA0670	Langley city	Washington	1,140	0.07%	318,229	159,114	159,114
WA0675	Latah town	Washington	187	0.01%	52,201	26,100	26,100
WA0680	Leavenworth city	Washington	2,029	0.13%	566,391	283,196	283,196
WA0684	Liberty Lake city	Washington	10,956	0.69%	3,058,345	1,529,173	1,529,173
WA0685	Lind town	Washington	563	0.04%	157,160	78,580	78,580
WA0690	Long Beach city	Washington	1,496	0.09%	417,605	208,803	208,803
WA0705	Lyman town	Washington	473	0.03%	132,037	66,018	66,018
WA0710	Lynden city	Washington	15,223	0.96%	4,249,470	2,124,735	2,124,735
WA0715	Lynnwood city	Washington	39,141	2.47%	10,926,131	5,463,065	5,463,065
WA0725	Mabton city	Washington	2,268	0.14%	633,108	316,554	316,554
WA0728	McCleary city	Washington	1,764	0.11%	492,417	246,209	246,209
WA0730	Malden town	Washington	206	0.01%	57,504	28,752	28,752
WA0735	Mansfield town	Washington	343	0.02%	95,748	47,874	47,874
WA0739	Maple Valley city	Washington	27,202	1.71%	7,593,383	3,796,692	3,796,692
WA0740	Marcus town	Washington	172	0.01%	48,013	24,007	24,007
WA0750	Mattawa city	Washington	4,758	0.30%	1,328,186	664,093	664,093
WA0755	Medical Lake city	Washington	4,966	0.31%	1,386,249	693,124	693,124
WA0760	Medina city	Washington	3,288	0.21%	917,839	458,919	458,919
WA0763	Mercer Island city	Washington	25,894	1.63%	7,228,258	3,614,129	3,614,129
WA0765	Mesa city	Washington	508	0.03%	141,807	70,904	70,904

Washington State NEU Distribution

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WA0770	Metaline town	Washington	183	0.01%	51,084	25,542	25,542
WA0775	Metaline Falls town	Washington	251	0.02%	70,066	35,033	35,033
WA0778	Mill Creek city	Washington	20,897	1.32%	5,833,355	2,916,678	2,916,678
WA0780	Millwood city	Washington	1,800	0.11%	502,466	251,233	251,233
WA0785	Milton city	Washington	8,299	0.52%	2,316,649	1,158,325	1,158,325
WA0790	Monroe city	Washington	19,776	1.25%	5,520,430	2,760,215	2,760,215
WA0795	Montesano city	Washington	4,052	0.26%	1,131,108	565,554	565,554
WA0800	Morton city	Washington	1,199	0.08%	334,698	167,349	167,349
WA0805	Moses Lake city	Washington	24,086	1.52%	6,723,558	3,361,779	3,361,779
WA0810	Mossyrock city	Washington	820	0.05%	228,901	114,451	114,451
WA0815	Mountlake Terrace city	Washington	21,338	1.35%	5,956,459	2,978,230	2,978,230
WA0825	Moxee city	Washington	4,104	0.26%	1,145,623	572,812	572,812
WA0830	Mukilteo city	Washington	21,441	1.35%	5,985,212	2,992,606	2,992,606
WA0835	Naches town	Washington	847	0.05%	236,438	118,219	118,219
WA0840	Napavine city	Washington	2,001	0.13%	558,575	279,288	279,288
WA0855	Nespelem town	Washington	392	0.02%	109,426	54,713	54,713
WA0858	Newcastle city	Washington	12,292	0.77%	3,431,287	1,715,643	1,715,643
WA0860	Newport city	Washington	2,199	0.14%	613,846	306,923	306,923
WA0865	Nooksack city	Washington	1,631	0.10%	455,290	227,645	227,645
WA0870	Normandy Park city	Washington	6,604	0.42%	1,843,493	921,747	921,747
WA0875	North Bend city	Washington	7,423	0.47%	2,072,115	1,036,058	1,036,058
WA0877	North Bonneville city	Washington	1,007	0.06%	281,102	140,551	140,551
WA0885	Northport town	Washington	301	0.02%	84,024	42,012	42,012
WA0890	Oakesdale town	Washington	439	0.03%	122,546	61,273	61,273
WA0895	Oak Harbor city	Washington	23,565	1.49%	6,578,122	3,289,061	3,289,061
WA0900	Oakville city	Washington	692	0.04%	193,170	96,585	96,585
WA0907	Ocean Shores city	Washington	6,494	0.41%	1,812,787	906,393	906,393
WA0910	Odessa town	Washington	894	0.06%	249,558	124,779	124,779
WA0915	Okanogan city	Washington	2,588	0.16%	722,435	361,217	361,217
WA0925	Omak city	Washington	4,778	0.30%	1,333,769	666,885	666,885
WA0935	Oroville city	Washington	1,675	0.11%	467,573	233,786	233,786
WA0940	Orting city	Washington	8,610	0.54%	2,403,464	1,201,732	1,201,732
WA0945	Othello city	Washington	8,386	0.53%	2,340,935	1,170,467	1,170,467
WA0950	Pacific city	Washington	7,178	0.45%	2,003,724	1,001,862	1,001,862
WA0955	Palouse city	Washington	1,075	0.07%	300,084	150,042	150,042
WA0970	Pateros city	Washington	714	0.05%	199,312	99,656	99,656
WA0975	Pe Ell town	Washington	675	0.04%	188,425	94,212	94,212
WA0985	Pomeroy city	Washington	1,395	0.09%	389,411	194,706	194,706
WA0990	Port Angeles city	Washington	20,229	1.28%	5,646,884	2,823,442	2,823,442
WA1005	Port Townsend city	Washington	9,831	0.62%	2,744,304	1,372,152	1,372,152
WA1010	Poulsbo city	Washington	11,168	0.70%	3,117,525	1,558,762	1,558,762
WA1015	Prescott city	Washington	305	0.02%	85,140	42,570	42,570
WA1020	Prosser city	Washington	6,380	0.40%	1,780,964	890,482	890,482

Washington State NEU Distribution

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WA1025	Pullman city	Washington	34,506	2.18%	9,632,280	4,816,140	4,816,140
WA1030	Puyallup city	Washington	42,361	2.67%	11,824,987	5,912,494	5,912,494
WA1040	Quincy city	Washington	8,033	0.51%	2,242,396	1,121,198	1,121,198
WA1050	Rainier city	Washington	2,287	0.14%	638,411	319,206	319,206
WA1055	Raymond city	Washington	2,994	0.19%	835,769	417,885	417,885
WA1060	Reardan town	Washington	610	0.04%	170,280	85,140	85,140
WA1075	Republic city	Washington	1,066	0.07%	297,572	148,786	148,786
WA1085	Ridgefield city	Washington	9,153	0.58%	2,555,041	1,277,521	1,277,521
WA1090	Ritzville city	Washington	1,654	0.10%	461,711	230,855	230,855
WA1095	Riverside town	Washington	273	0.02%	76,207	38,104	38,104
WA1100	Rockford town	Washington	486	0.03%	135,666	67,833	67,833
WA1105	Rock Island city	Washington	1,124	0.07%	313,762	156,881	156,881
WA1115	Rosalia town	Washington	558	0.04%	155,765	77,882	77,882
WA1120	Roslyn city	Washington	958	0.06%	267,424	133,712	133,712
WA1125	Roy city	Washington	822	0.05%	229,460	114,730	114,730
WA1127	Royal City city	Washington	2,237	0.14%	624,454	312,227	312,227
WA1130	Ruston town	Washington	845	0.05%	235,880	117,940	117,940
WA1135	St. John town	Washington	559	0.04%	156,044	78,022	78,022
WA1139	SeaTac city	Washington	29,044	1.83%	8,107,574	4,053,787	4,053,787
WA1150	Sedro-Woolley city	Washington	12,072	0.76%	3,369,874	1,684,937	1,684,937
WA1155	Selah city	Washington	8,087	0.51%	2,257,470	1,128,735	1,128,735
WA1160	Sequim city	Washington	7,640	0.48%	2,132,690	1,066,345	1,066,345
WA1165	Shelton city	Washington	10,655	0.67%	2,974,322	1,487,161	1,487,161
WA1175	Skykomish town	Washington	220	0.01%	61,413	30,706	30,706
WA1180	Snohomish city	Washington	10,154	0.64%	2,834,468	1,417,234	1,417,234
WA1185	Snoqualmie city	Washington	13,622	0.86%	3,802,554	1,901,277	1,901,277
WA1190	Soap Lake city	Washington	1,603	0.10%	447,474	223,737	223,737
WA1195	South Bend city	Washington	1,698	0.11%	473,993	236,997	236,997
WA1205	South Cle Elum town	Washington	559	0.04%	156,044	78,022	78,022
WA1210	South Prairie town	Washington	443	0.03%	123,663	61,831	61,831
WA1215	Spangle city	Washington	319	0.02%	89,048	44,524	44,524
WA1225	Sprague city	Washington	460	0.03%	128,408	64,204	64,204
WA1230	Springdale town	Washington	300	0.02%	83,744	41,872	41,872
WA1235	Stanwood city	Washington	7,287	0.46%	2,034,151	1,017,076	1,017,076
WA1240	Starbuck town	Washington	128	0.01%	35,731	17,865	17,865
WA1245	Steilacoom town	Washington	6,390	0.40%	1,783,756	891,878	891,878
WA1250	Stevenson city	Washington	1,601	0.10%	446,916	223,458	223,458
WA1255	Sultan city	Washington	5,388	0.34%	1,504,049	752,025	752,025
WA1265	Sumas city	Washington	1,534	0.10%	428,213	214,106	214,106
WA1270	Sumner city	Washington	10,427	0.66%	2,910,676	1,455,338	1,455,338
WA1275	Sunnyside city	Washington	16,796	1.06%	4,688,569	2,344,285	2,344,285
WA1285	Tekoa city	Washington	799	0.05%	223,039	111,520	111,520
WA1290	Tenino city	Washington	1,865	0.12%	520,611	260,305	260,305

Washington State NEU Distribution

Population Estimates provided by U.S. Treasury from the most recent Bureau of the Census data

If you have questions or need more information, please contact OFM staff at ofmbudget@ofm.wa.gov or (360) 902-0560.

NEU Recipient Number	Name	State	Population Estimate 2019	Allocation %	Total Payment	2021 Payment	2022 Payment
WA1295	Tieton city	Washington	1,308	0.08%	365,126	182,563	182,563
WA1300	Toledo city	Washington	771	0.05%	215,223	107,612	107,612
WA1305	Tonasket city	Washington	1,121	0.07%	312,925	156,462	156,462
WA1310	Toppenish city	Washington	8,809	0.56%	2,459,014	1,229,507	1,229,507
WA1320	Tukwila city	Washington	20,347	1.28%	5,679,824	2,839,912	2,839,912
WA1330	Twisp town	Washington	963	0.06%	268,819	134,410	134,410
WA1335	Union Gap city	Washington	6,200	0.39%	1,730,717	865,359	865,359
WA1340	Uniontown town	Washington	344	0.02%	96,027	48,013	48,013
WA1343	University Place city	Washington	34,001	2.14%	9,491,310	4,745,655	4,745,655
WA1345	Vader city	Washington	670	0.04%	187,029	93,515	93,515
WA1360	Waitsburg city	Washington	1,231	0.08%	343,631	171,816	171,816
WA1375	Wapato city	Washington	5,010	0.32%	1,398,531	699,266	699,266
WA1380	Warden city	Washington	2,812	0.18%	784,964	392,482	392,482
WA1385	Washougal city	Washington	16,107	1.02%	4,496,236	2,248,118	2,248,118
WA1390	Washtucna town	Washington	208	0.01%	58,063	29,031	29,031
WA1395	Waterville town	Washington	1,213	0.08%	338,606	169,303	169,303
WA1400	Waverly town	Washington	109	0.01%	30,427	15,214	15,214
WA1420	Westport city	Washington	2,100	0.13%	586,211	293,105	293,105
WA1425	West Richland city	Washington	15,075	0.95%	4,208,156	2,104,078	2,104,078
WA1435	White Salmon city	Washington	2,691	0.17%	751,187	375,594	375,594
WA1440	Wilbur town	Washington	861	0.05%	240,346	120,173	120,173
WA1445	Wilkeson town	Washington	514	0.03%	143,482	71,741	71,741
WA1450	Wilson Creek town	Washington	215	0.01%	60,017	30,008	30,008
WA1455	Winlock city	Washington	1,428	0.09%	398,623	199,312	199,312
WA1465	Winthrop town	Washington	472	0.03%	131,758	65,879	65,879
WA1469	Woodinville city	Washington	13,263	0.84%	3,702,340	1,851,170	1,851,170
WA1470	Woodland city	Washington	6,495	0.41%	1,813,066	906,533	906,533
WA1475	Woodway city	Washington	1,391	0.09%	388,295	194,147	194,147
WA1480	Yacolt town	Washington	1,796	0.11%	501,350	250,675	250,675
WA1490	Yarrow Point town	Washington	1,149	0.07%	320,741	160,371	160,371
WA1495	Yelm city	Washington	9,456	0.60%	2,639,623	1,319,812	1,319,812
WA1500	Zillah city	Washington	3,140	0.20%	876,525	438,262	438,262
	Total		1,586,341	100%	442,823,871	221,411,936	221,411,936



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May 7, 2021

From: Chief, North County Regional Fire Authority

To: Mayor, City of Stanwood

Subj: AMERICAN RESCUE PLAN FUNDING APPORTIONMENT

Dear Mayor Callaghan:

The North County Regional Fire Authority requests your support in apportioning a percentage of funding that has been made available to the City of Stanwood through the American Rescue Plan Act (ARPA), to help offset the loss of operational funding due to the negative impacts that the COVID-19 Pandemic has had on your fire department.

Fire Authority funding comes from just two primary sources of revenue: property taxes and EMS Billing. The full arrival of the COVID-19 pandemic in 2020 resulted in public fear of going to the hospital for medical issues that normally would have caused them to call 911. The impact of this hesitancy by the public to use the 911 system caused the number of EMS calls to drop in 2020 by almost 15% compared to the number of EMS calls in 2019. This has had a significant negative impact on the Fire Authority's revenues received through EMS Billing, which provides roughly 20% of its revenues. With call volumes historically increasing year after year, it makes sense that the planned revenues from EMS Billing would be some dollar value more than what was received from that funding source in 2019. Instead, North County Fire's EMS Billing revenue in 2020 was over \$393,000 less than those revenues received in 2019. As a result, many planned capital improvements were unable to be realized in accordance with our strategic plan. With the pandemic likely to continue through the majority of 2021, North County Fire is facing another year of significantly reduced EMS Billing revenue; a reality that is simply out of our control.

The funding guidelines of ARPA, as you are aware, include funding to combat the negative economic impacts resulting from the COVID-19 Pandemic. Direct, flexible funding has gone directly to every county and municipality in the United States, but has not trickled down further to public safety agencies. Realizing that each City department will be advocating for their own portion of the \$1.59M that the City of Stanwood has been allotted, I respectfully request that your fire department be factored in to the apportionment of those funds in a fair and equitable manner.

Your consideration of this request is much appreciated and we look forward to hearing from you soon.

Sincerely,

A handwritten signature in blue ink, appearing to read "John C. Cermak".

John C. Cermak
Fire Chief

City of Stanwood

ARPA Funding	\$	2,034,151
Potential Uses	\$	2,045,000
Difference	\$	(10,849)

Local Economic Recovery	Amount	Purpose
Downtown Redevelopment	\$ 200,000	Expedite design planned in 2023
Economic Impact Analysis	\$ 50,000	Comp plan support
Tourism & Promotion	\$ 200,000	Promote and support business community
Municipal Code Update	\$ 250,000	Update all sections of SMC for Comp plan support
Other ?	\$ -	
Local Economic Recovery Efforts	\$ 700,000	

Technology, Security and Information Services	Amount	Purpose
GIS	\$ 410,000	Software, equipment, staffing to support Infrastructure
IT	\$ 100,000	Supports assessment of in-house IT
Records Management	\$ 125,000	Supplements current project; Scanning of historical records
Security Systems - all city facilities	\$ 210,000	
Other ?	\$ -	
Technology, Security & Information Services	\$ 845,000	

Infrastructure Projects	Amount	Purpose
Movable Flood Wall	\$ 500,000	Supports flood mitigation efforts; FEMA CRS improvements
Other?	\$ -	
Infrastructure Projects	\$ 500,000	



**CITY OF STANWOOD
CITY COUNCIL WORKSESSION
AGENDA STAFF REPORT**

DATE: August 12, 2021

SUBJECT: Stanwood Civic Campus Project Discussion

FROM: Patricia Love, Community Development Director

ATTACHMENTS: Exhibit A Civic Campus Comparison Worksheet
Exhibit B Stanwood Commons Building Feasibility Study
Exhibit C 72nd Avenue Corridor Study

Purpose of Meeting:

The purpose of this worksession is to continue the City Council discussion on the civic campus municipal facility project and how best to provide police and city hall services to the residents of Stanwood.

Further Discussion:

In April of 2021, the City Council discussed the possibility of keeping the civic campus in downtown Stanwood and directed staff to prepare a feasibility study on the Stanwood Commons building. The feasibility study has been completed on the property and a comparison analysis worksheet is attached for Council's review and consideration. The comparison analysis includes the following three options:

Option 1 (former Option E):

Move forward with the Stanwood Commons site which includes renovating the existing building for City Hall and Council Chambers. A standalone Police Station with sally port would be built within the existing sport court area.

Option 2 (former Option E):

Move forward with the Stanwood Commons site which includes renovating the existing building for City Hall, Council Chambers and Police Station uses. Renovations would include additional foundation support work to meet existing building codes for essential facilities, which the police department is classified as.

Option 3 (former Option A):

Locate and construct a new building for the Police Station, City Hall and Council Chamber at the city vacant lot on 72nd Avenue, including extension of Church Creek Park into the site. The building would include an attached community and Emergency Operations Center (EOC) room which could also be used as either a permanent or temporary Council Chambers.

Staff Recommendation:

Staff is recommending that Council discuss the options above and provide direction to staff on which option should be pursued further for design or that staff continue to look for alternative sites for

consideration. Formal action, based on the Council's direction, will be proposed to be taken at the September 9th regular meeting.



Stanwood Civic Campus – Comparison Analysis

Project Description:

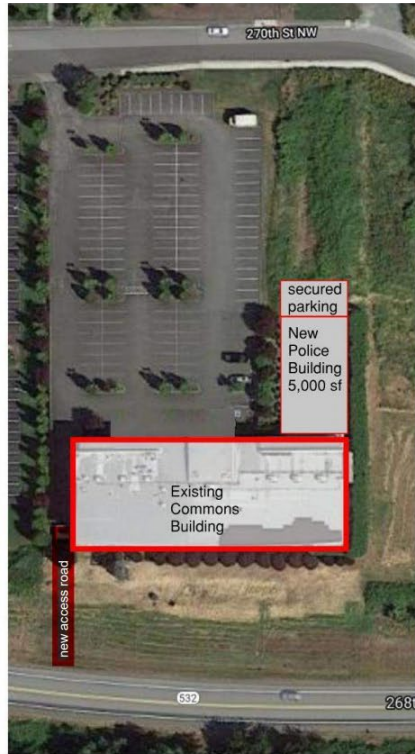
Stanwood Commons Building	72 nd Avenue Property
Locate the Police Station, City Hall and Council Chambers in the downtown area of Stanwood in the Stanwood Commons building at 9612-270th Street NW. Uses could be located in the same building or in separate buildings depending on structural requirements.	Proceed with the combined Police Station, City Hall and Council Chambers building off 72nd Avenue next to Church Creek Park. This option could include the purchase of up to an additional acre to better accommodate access and integration with Church Creek Park.
Stanwood Commons Building  • Option to keep City Hall, Council Chambers & Police Station in downtown • Space for future park & recreation department and/or programs • Built to meet floodplain regulations (14' Elevation) • Visibility from SR 532; • Access from 270th Street • Need Renovation	





Site Design Options

Stanwood Commons Building – Option 1: Stand Alone Police Station



Option #1 Recommended Design Proposal:

Renovate 12,000 sq. ft. of the existing Commons Building for use as City Hall and Council Chambers. Remainder of building is leased to tenants.

Provide exterior aesthetic upgrades to the building, including paint, metal panels at entrance, signage, and laminated wood accent panels throughout.

Construct new 5,000 sq.ft. Police Station adjacent to the Commons building with attached secured parking.

Upgrade site, including improvements to parking lot and storm water management. Add a new emergency use only access road to SR532.

Estimated Cost: \$16.3 million *(does not include land acquisition)*





Stanwood Commons Building – Option 2: Police Station within Existing Building with Secured Parking North of Building

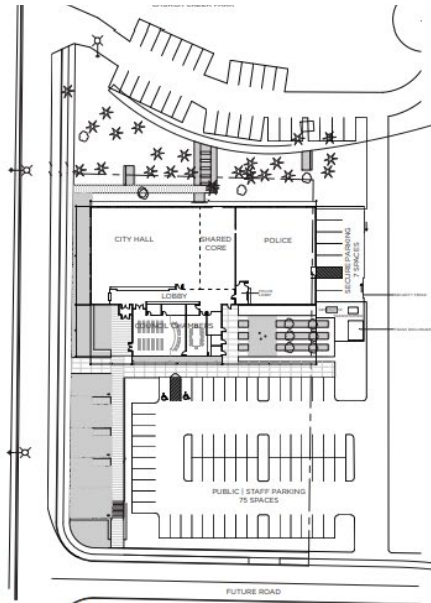
Option #2 site and building configuration:

- In lieu of a new Police station building, police is located in the renovated existing building
- Upgrade existing building to emergency operations center seismic design standard, including extensive foundation upgrades
- New Sally Port secured parking garage adjacent to existing building
- Estimated cost: \$20.7 million (does not include land acquisition)





72nd Avenue Site – Option 3: Combined Police Station, City Hall and Council Chambers (Previously Referred to as Option A – Community Porch Concept)



SITE PLAN



AERIAL VIEW *Note: Most current plan is above site plan*



PERSPECTIVE



PERSPECTIVE CHURCH CREEK PARK



ELEVATION

Parking Count	
Public Staff:	44 39
Secured:	06 14
Overflow:	28

Site area:	
Original:	58,000 sf
East addition:	18,400 sf
Total:	76,400 sf
Building area:	
First floor:	16,268 sf
Mezzanine:	1,500 sf
Total:	17,768 sf

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Exterior Stanwood Commons Building Design:

Exterior Design Option 1:

Combination of grey paint with wood accents on the building walls and roof to soften the look of the building to give it a “northwest” architectural aesthetic.

Stand alone Police Station would mimic the roof line and include similar paint colors and wood accents.

Frontage and side of main building could include the City’s Snow Goose design / art concepts.

Option #1 Recommended Design Proposal Views





Exterior Design Option 2:

Paint accents on walls, no wood laminae wall panels, and wood accents in roof soffits only.

Frontage and side of main building could include the City's Snow Goose design / art concepts.

Alternate exterior cost reduction:

--In lieu of exterior laminate wall panels, paint existing concrete block surface

--Estimated construction savings reduction from option 1 or 2 base: \$455,000



Alternate without PV panels cost reduction:

--Do not include PV panels and roof load reinforcement

--Estimated construction savings reduction from option 1 or 2 base: \$580,000



exterior option without laminate wood wall panels





Cost:

Stanwood Commons Building		72 nd Avenue Property	
Option 1 – Separate Police Building:	\$16.3 Million Plus Acquisition	Option 1 - Build on Existing Site:	\$15.4 Million
Option 2 – Police Station in Existing Building:	\$20.7 Million Plus Acquisition	Option 2 - Expand Site:	\$16.7 – 18 M
		Signal Improvements:	TBD

Note: All cost figures were rounded; See actual cost estimate in Mackenzie Stanwood Design E Feasibility Study

Design Proposal Summary:

Stanwood Commons – Option 1	Stanwood Commons – Option 2	72 nd Avenue Site
▪ New Police Building – 5,000 sq. ft. ▪ New Sally Port secured parking for police ▪ Renovate existing building area of approximately 12,000 sq. ft. for use as City Hall and Council Chambers ▪ New photovoltaic panels on existing building. ▪ New roof membrane ▪ Mechanical, electrical and plumbing upgrades for the renovated spaces ▪ Site upgrades: repair and upgrade parking lot, upgrade storm water management, add emergency access road ▪ Exterior updates: paint, metal panels at entrance, signage, and laminated wood accent panels	▪ New Sally Port secured parking for police ▪ Renovate existing building area of approximately 12,000 sq. ft. for use as City Hall and Council Chambers. ▪ Renovate existing building area of approximately 5,000 sq. ft. for police ▪ Seismic upgrade to entire building to make it suitable to use as a police station and emergency options center. Upgrade includes major foundation improvements ▪ New photovoltaic panels on existing building. ▪ New roof membrane; Mechanical, electrical and plumbing system retrofits ▪ Site upgrades: repair and upgrade parking lot, upgrade storm water management, add emergency access road. ▪ Exterior updates: paint, metal panels at entrance, signage, and laminated wood accent panels	▪ New combined Police Station, City Hall and Council Chambers building ▪ Total building area is approximately 18,000 square feet ▪ Site improvements include frontage improvements on 72nd Avenue, the 268th Street, parking, drainage, landscaping ▪ A new traffic signal at 268th Street (Not included in cost estimate) ▪ Site would have direct access to Church Creek Park ▪ Additional property acquisition is needed





Site Element Comparison:

Project Element	Stanwood Commons Building		72 nd Avenue Property	
	Pro's	Con's	Pro's	Con's
Site Design	Civic campus is located in the center of downtown and maintains a city presence in the historic downtown area as desired by the Downtown Master Plan The existing building is large enough to accommodate other public uses if desired, such as the library or other non-profits The building could generate other tenant income in the remainder of the building, including existing leases Locating in the downtown area could	A new stand alone police station is recommended to not incur code required seismic upgrades if it were to be located in the existing building Proposed Police Station would be located in the current sport court area	Combined Police Station and City Hall in one building allows for better communication and shared building efficiencies City currently owns 1.25 acres of the property	Widening of 72nd Avenue and access to Church Creek Park will require purchasing additional land An additional half to full acre of property should be purchased to better accommodate access into the park





Project Element	Stanwood Commons Building		72 nd Avenue Property	
	Pro's	Con's	Pro's	Con's
	allow for the expansion of Church Creek Park if approved by the Department of Commerce			
Police Security Needs	A sally port and secured parking is proposed on the north side of the new Police Station building	The clear height for the underground parking garage is too low to accommodate van use and there is no secure access from floor to floor Secure parking must be located outside the existing building	A sally port and secured parking is proposed on the east side of the new Police Station building	
Floodplain	Property Meets Floodplain Elevation	Located in floodplain – Need to emergency access from site to SR 532	Located outside floodplain- No additional building requirements	Located outside of historic city core Potential to discourage downtown revitalization and redevelopment





Project Element	Stanwood Commons Building		72 nd Avenue Property	
	Pro's	Con's	Pro's	Con's
Road Improvements	No off-site street improvements required	Will need to construct an emergency vehicle access from Stanwood Commons Building to SR 532 Due to the grade of the existing garage driveway, a portion of the emergency vehicle access would still be in the floodplain	Civic campus project does not adversely affect Level of Service Standards Full off-site street improvements will be required on 72nd Avenue and new access road (These costs are already in the overall cost estimate)	TranspoGroup prepared an analysis of 72nd Avenue at buildout conditions Functional improvements are necessary to 72nd Avenue including a new stop sign at the intersection of 72nd Avenue and 272nd Street and a new signal at the school / civic campus building intersection These costs are not included in the cost estimate
Emergency Access		Emergency access is through the floodplain which is prohibited if other reasonable options exist; new emergency	Access will be off of 72 nd Avenue and/or the relocated 268 th Street NW	72 nd Avenue has heavy traffic during high school bus drop-off and pick-up hours





Project Element	Stanwood Commons Building		72 nd Avenue Property	
	Pro's	Con's	Pro's	Con's
		access drive to SR 532 would need to be built and approved by WSDOT Depending on Council direction, staff will initiate the process to obtain access onto SR 532	Police has noted they have no concerns about emergency access off of 72nd Avenue; they also have Opticom systems in their vehicles which turns traffic signal lights green for emergency vehicles	
Geotechnical		The property is located in the downtown area which was once part of the Stillaguamish River area with soft underlying soils subject to liquefaction; DNR classifies the property as moderate to high liquefaction risk; the building is built on pilings but if it were to be expanded additional pilings would be needed		Soils in the uptown area consist of firm soils on top of a layer of soft soils; to prevent building settling and cracking the geotech report recommends building a deep aggregate pier foundation (nearly 40 feet deep) to avoid soft soils; DNR classifies the property as low to moderate risk for liquefaction





Project Element	Stanwood Commons Building		72 nd Avenue Property	
	Pro's	Con's	Pro's	Con's
Structural Analysis	The building was designed under the 1997 building code. Existing structure meets the building code requirements for City Hall and Council Chambers	The 2018 Building code requires seismic upgrades for Police Station facilities which significantly impacts the cost to renovate the existing building; a separate standalone building next to the existing building would be more economical than installing additional foundation pilings to the existing building	New combined civic campus building would be built to current seismic standards for essential facilities	
Parking Lot Pavement		The existing parking lot was built on unevenly uncompacted soils with a shallow water table which allowed water seepage into pavement cracks resulting in pavement deterioration. The pavement is also reaching the end of its	New parking lot built to current standards. Lifespan of new pavement is approximately 20 years; on-going maintenance will be required	





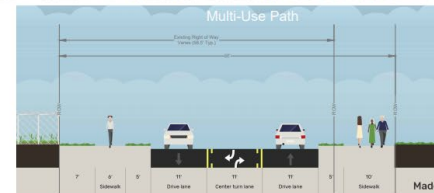
Project Element	Stanwood Commons Building		72 nd Avenue Property	
	Pro's	Con's	Pro's	Con's
		typical lifespan. Options to fix include continued patching or replacement		
Roof / HVAC		These elements are reaching their 20-year lifespan. If purchased, the City should consider upgrading or replacing HVAC and roof	New development will be constructed to current building codes; on-going maintenance will be required	
Pool	The pool could be filled as repurposed for other uses	If the pool is to be used for future recreational programming, the ventilation system would need to be inspected and potentially upgraded	N/A	N/A





72nd Avenue Recommended Roadway Configuration:

TranspoGroup evaluated 72nd Avenue at full build out conditions which includes the Vine Street property and the high school traffic. In general, the high school produces two peak use periods: AM and PM for approximately 20 minutes each. Their evaluation concluded that the following roadway improvements could address the traffic congestion issues on 72nd Avenue. In addition, the city should consider designing and building the 64th Avenue roundabout sooner as that improvement on SR 532 can relieve congestion on 72nd Avenue.



72nd Ave NW - Active Transportation Improvements
City of Stanwood - SR532 Bypass

SR532 to 272nd St NW
transpogroup

FIGURE
A

Southbound (268th – SR 532):

- 1-Westbound Turning Lane
- 2-Through Lanes
- 1-Eastbound Turning Lane

North & Southbound (272nd – 268th)

- 3-Lane Road Configuration

Northbound (SR 532 – 268th):

- 1-Northbound Through Lane
 - 1-Northbound Turn Lane Into 268th
- (Subject to Discussions with School District)

Additional Improvements:

- Signal at 72nd Avenue & 268th Street
- 4-Way Stop at 72nd Avenue & 272nd Street
- 10' Multipurpose Sidewalk on East Side of 72nd Avenue
- Continue 10' Sidewalk North to 276th Street







Liquefaction Levels of Risk



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STANWOOD DESIGN E FEASIBILITY STUDY

To

City of Stanwood

For

Stanwood City Hall, Police and
Council Chambers

Dated

July 28, 2021

Project Number

2190151.00



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III.	DESIGN PROPOSAL SUMMARY	2

ATTACHMENTS

1. Exterior Concept
2. Cost Summary Worksheet
3. Design E Existing Floor Plan
4. Site Assessment
5. Structural Assessment
6. Mechanical Assessment
7. Electrical Assessment
8. Design A Contract Exhibit Building and Site

I. OBSERVATION AND DESIGN PROPOSAL SUMMARY

The City of Stanwood is studying an option for the location of City Hall, Council Chambers and the Police Station at the Port Susan Commons Building at 9612 - 270th Street Northwest. The building, originally built in 2005, has approximately 45,000 square feet with 36 covered parking spaces. Mackenzie has been engaged to do a feasibility study for incorporating the city uses into the building.

II. OBSERVATIONS AND RECOMMENDATIONS

An on-site walk was conducted on May 26, 2021, to observe the existing uses of the building and general condition. The building is in use by several tenants, including a physical therapy studio, a dental office, and a fitness center with a pool. Current occupancy is approximately 18,150 sq. ft. for the current tenants and 9,890 sq. ft. vacant. One elevator serves the first and second floor as well as the parking garage below. Several tenant spaces are accessed via an exterior balcony that serves the tenant entrances. The building is constructed of concrete block that appears to be in good condition. An adjacent exterior fitness court at the northeast of the building is below grade and accessed via stairs.

While the building appears to be in generally good condition for tenant uses such as professional offices, it was found that some components of the building are aging and should be updated. This is not an exhaustive summary, but rather several items that were observed at the time of the site walk. If the project were to continue, a more in-depth inspection and survey is recommended. It was found that the roof was nearing the end of its useful life and should be replaced. The pool area of the existing fitness center exhibited some wear and need of repair, including rusting building components. The pool area appears to be poorly ventilated and should be inspected for any additional condensation problems. For future use, the pool could be infilled so the area could be used for another purpose. Please see additional sections of this document for recommended site upgrades, mechanical, electrical, and plumbing upgrades, and structural upgrades.

The initial intent for the proposal was to incorporate City Hall, Police, and Council Chambers all in the existing building. After the site observation and subsequent discussion with key staff, it was found that the existing parking below the building was inadequate for use as a police secure parking area. The clear height is low for van use, and the means of moving from floor to floor is not secure from public use. Secure police parking must be located outside of the existing building.

Design option #2 shows the police incorporated into the existing building, with an adjacent new sally port secure parking garage. Due to Risk Category IV seismic design requirements for a police station that is used as an emergency operations center, this design option would require extensive upgrades to the building for seismic reinforcement, including significant foundation improvements.

The design options were further expanded to include another option with Police in a separate adjacent building. Design option #1 is recommended, as it would eliminate the need for expensive seismic upgrades to the existing building. Instead, a police station in a separate building would have current building code seismic requirements built into its design. The existing building, when used for professional offices, has a different seismic standard that would not require extensive upgrades.

The City of Stanwood has requested an emergency access road leading from the existing parking lot to SR532. Note that the route of the access road, because it slopes down to the garage, is within the flood zone. Additionally, there is a trash enclosure at the proposed access road that would need to be relocated. See the civil engineering section of this report for further discussion on the access road design.

III. DESIGN PROPOSAL SUMMARY

The cost estimate includes two (2) options, one (1) with police in a separate building, and one (1) with the police in the existing building.

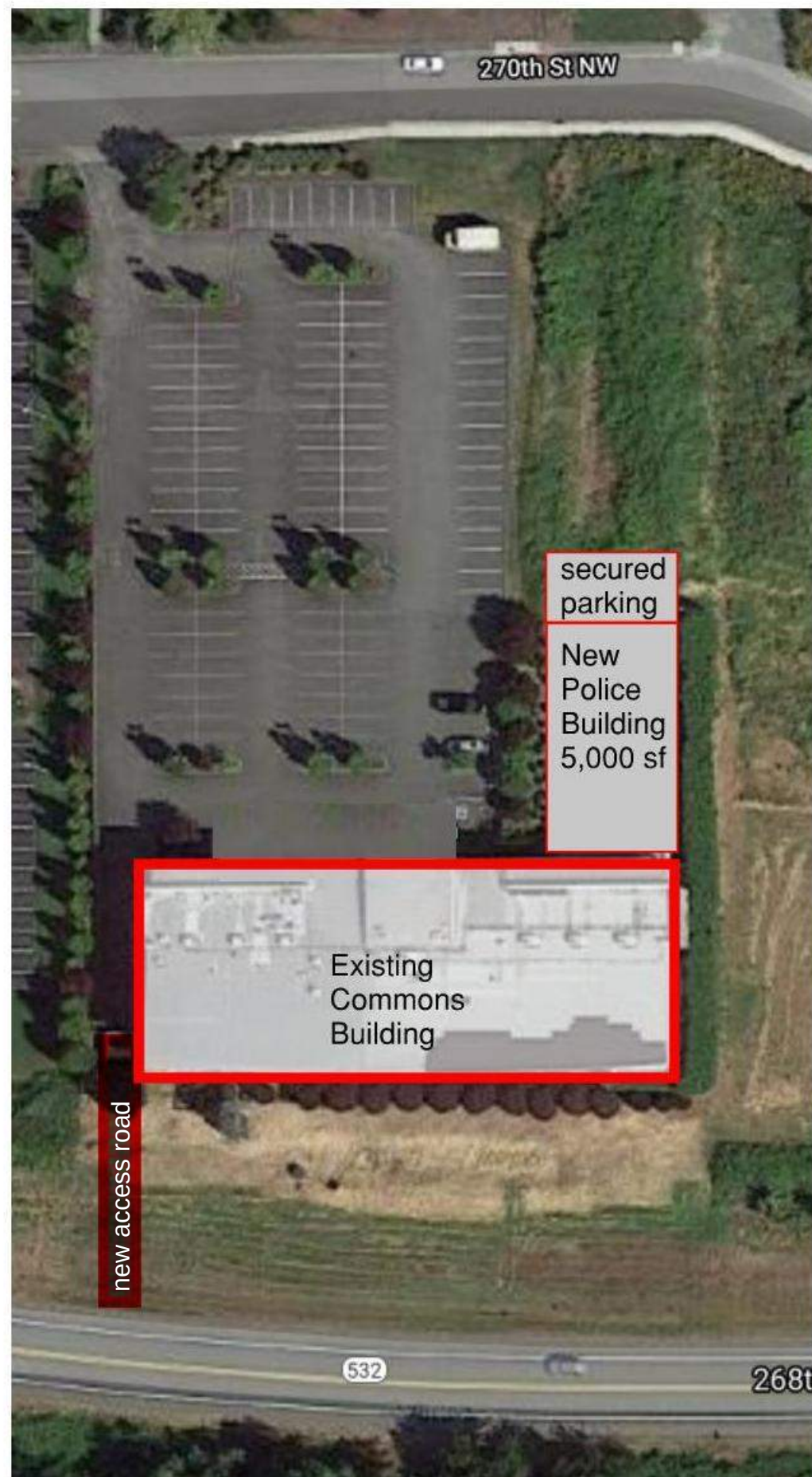
Option #1, Police in separate building:

- A. New Police Building – 5,000 sq. ft.
- B. New Sally Port secured parking for police.
- C. Renovate existing building area of approximately 12,000 sq. ft. for use as City Hall and Council Chambers.
- D. New photovoltaic panels on existing building.
- E. New roof membrane.
- F. Mechanical, electrical and plumbing upgrades for the renovated spaces.
- G. Site upgrades: repair and upgrade parking lot, upgrade storm water management, add emergency access road.
- H. Exterior updates: paint, metal panels at entrance, signage, and laminated wood accent panels

Option #2, police within the existing building:

- A. New Sally Port secured parking for police.
- B. Renovate existing building area of approximately 12,000 sq. ft. for use as City Hall and Council Chambers.
- C. Renovate existing building area of approximately 5,000 sq. ft. for police.
- D. Seismic upgrade to entire building to make it suitable to use as a police station and emergency options center. Upgrade includes major foundation improvements.
- E. New photovoltaic panels on existing building.
- F. New roof membrane.
- G. Mechanical, electrical and plumbing system retrofits.
- H. Site upgrades: repair and upgrade parking lot, upgrade storm water management, add emergency access road.
- I. Exterior updates: paint, metal panels at entrance, signage, and laminated wood accent panels.

Cost savings can be achieved by eliminating the PV panels and eliminating the laminated wood panels from the exterior upgrade. See the attached cost summary for a comparison of the options. Note that the cost summary does not include the cost of the land purchase.



Option #1 Recommended Design Proposal:

Renovate 12,000 sq. ft. of the existing Commons Building for use as City Hall and Council Chambers. Remainder of building is leased to tenants.

Provide exterior aesthetic upgrades to the building, including paint, metal panels at entrance, signage, and laminated wood accent panels throughout.

Construct new 5,000 sq.ft. Police Station adjacent to the Commons building with attached secured parking.

Upgrade site, including improvements to parking lot and storm water management. Add a new emergency use only access road to SR532.

Estimated Cost: \$16.3 million *(does not include land acquisition)*

Option #1 Recommended Design Proposal Views



STANWOOD CITY HALL, COUNCIL CHAMBERS AND POLICE

07.28.21

PROPOSED EXTERIOR CONCEPT

2190151.00

2-25



Alternate exterior cost reduction:

--In lieu of exterior laminate wall panels, paint existing concrete block surface

--Estimated construction savings reduction from option 1 or 2 base: \$455,000



exterior option without laminate wood wall panels

Alternate without PV panels cost reduction:

--Do not include PV panels and roof load reinforcement

--Estimated construction savings reduction from option 1 or 2 base: \$580,000

Option #2 site and building configuration:

--In lieu of a new Police station building, police is located in the renovated existing building

--Upgrade existing building to emergency operations center seismic design standard, including extensive foundation upgrades

--New Sally Port secured parking garage adjacent to existing building

--Estimated cost: \$20.7 million (does not include land acquisition)



COST ESTIMATE*Feasibility Study - July 30, 2021***DESIGN E - Police, City Hall, Council Chambers - Commons Building***Construction Start: Q3, 2022*

Construction Cost of Facility	Option #1: Separate Police Building	Option #2: Police in existing building
New Police Building + Sally Port	\$3,254,161	\$0
New Sally Port only	\$0	\$484,000
Existing Building renovation, sitework, general conditions	\$7,003,360	\$12,993,154
PV System on Roof	\$221,400	\$221,400
Laminated wood slat panels on exterior of existing building	\$362,790	\$362,790
Subtotal (today's dollars)	\$10,841,711	\$14,061,344
Escalation (Q1, 2023 @ 5%/year) - 7.5%	\$813,128	\$1,054,601
Subtotal (escalated)	\$11,654,839	\$15,115,945
Cost per Square foot	\$685.58 /sf	\$889.17 /sf
Margins		
Owner's Contingency (7.5%)	\$874,113	\$1,133,696
Sales Tax (9.2% combined state and city)	\$1,072,245 ¹	\$1,390,667 ¹
Subtotal	\$1,946,358	\$2,524,363
Total Construction Costs	\$13,601,197	\$17,640,308

Consultants Costs	Option #1: Separate Police Building	Option #2: Police in existing building
A/E Design and Construction - Base	\$917,184 ²	\$1,145,085 ²
Expanded Design Services	\$349,645 ⁵	\$453,478 ⁵
Reimbursables (3%)	\$27,516	\$34,353
Owner's Project Manager	\$0	\$0
Marketing Materials	\$5,000	\$5,000
Topo and Boundary Survey	\$4,500 ³	\$4,500 ³
Geotechnical Investigations	\$11,800 ³	\$11,800 ³
Special Inspections	\$35,000	\$35,000
Geotechnical Field Inspections	\$10,000	\$10,000
Environmental Services	\$0	\$0
Haz. Material Survey/Testing/Mitigation Specs	\$0	\$0
Commissioning	\$25,000	\$25,000
Arborist	\$0	\$0
Subtotal - Consultants	\$1,385,645	\$1,724,216
Consultants Contingency	\$103,923	\$0
Total Consultants Costs	\$1,489,568	\$1,724,216
	\$87.62 /sf	\$101.42 /sf

Owner Costs	Option #1: Separate Police Building	Option #2: Police in existing building
Land Acquisition - for additional 0.25 acre	TBD ⁴	TBD ⁴
Fixtures, Furniture & Equipment (FF&E)	\$395,000 ⁶	\$395,000 ⁶
Low Voltage Equipment/Telephone/Security	\$233,097	\$302,319
Moving Allowance	\$15,000	\$15,000
Temporary Facilities	\$0	\$0
Permit Fees	\$415,000	\$415,000
Subtotal - Owner Costs	\$1,058,097	\$1,127,319
Owner Contingency (10%)	\$105,810	\$112,732
Sales Tax	\$57,785 ¹	\$64,153 ¹
Total Owner Costs	\$1,221,691	\$1,304,204
	\$71.86 /sf	\$76.72 /sf
Total Project Cost	\$16,312,457	\$20,668,728
	\$959.56 /sf	\$1,215.81 /sf

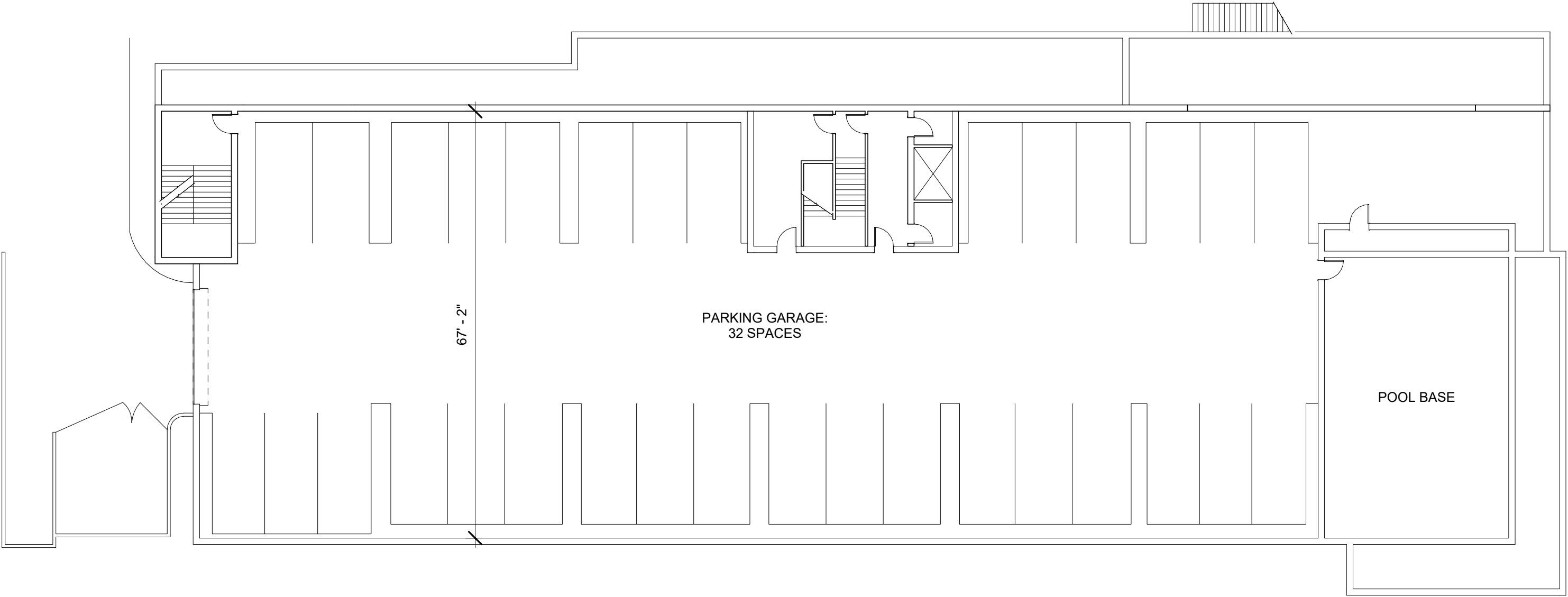
Building Size (SF):	17,000 SF	17,000 SF
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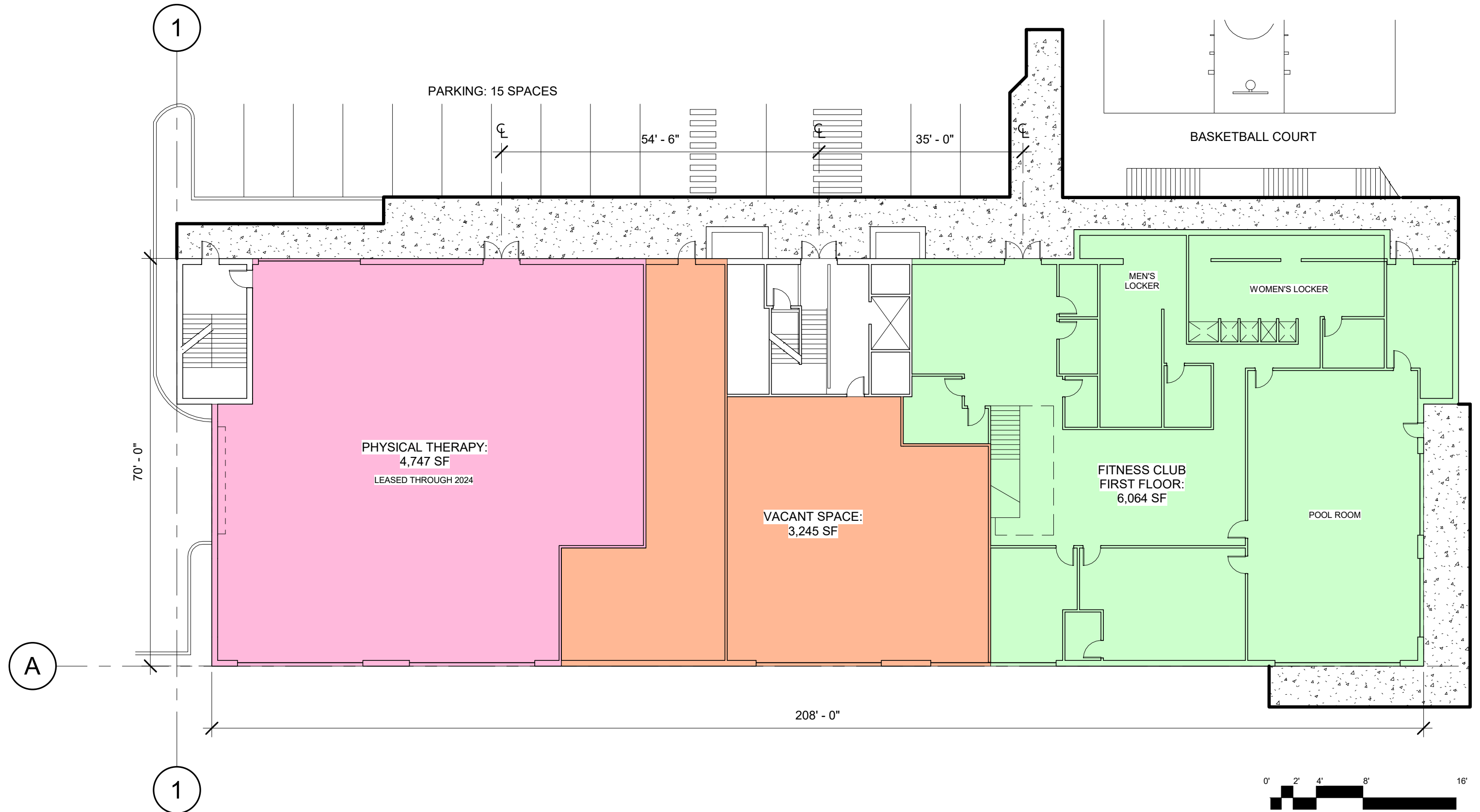
Footnotes:

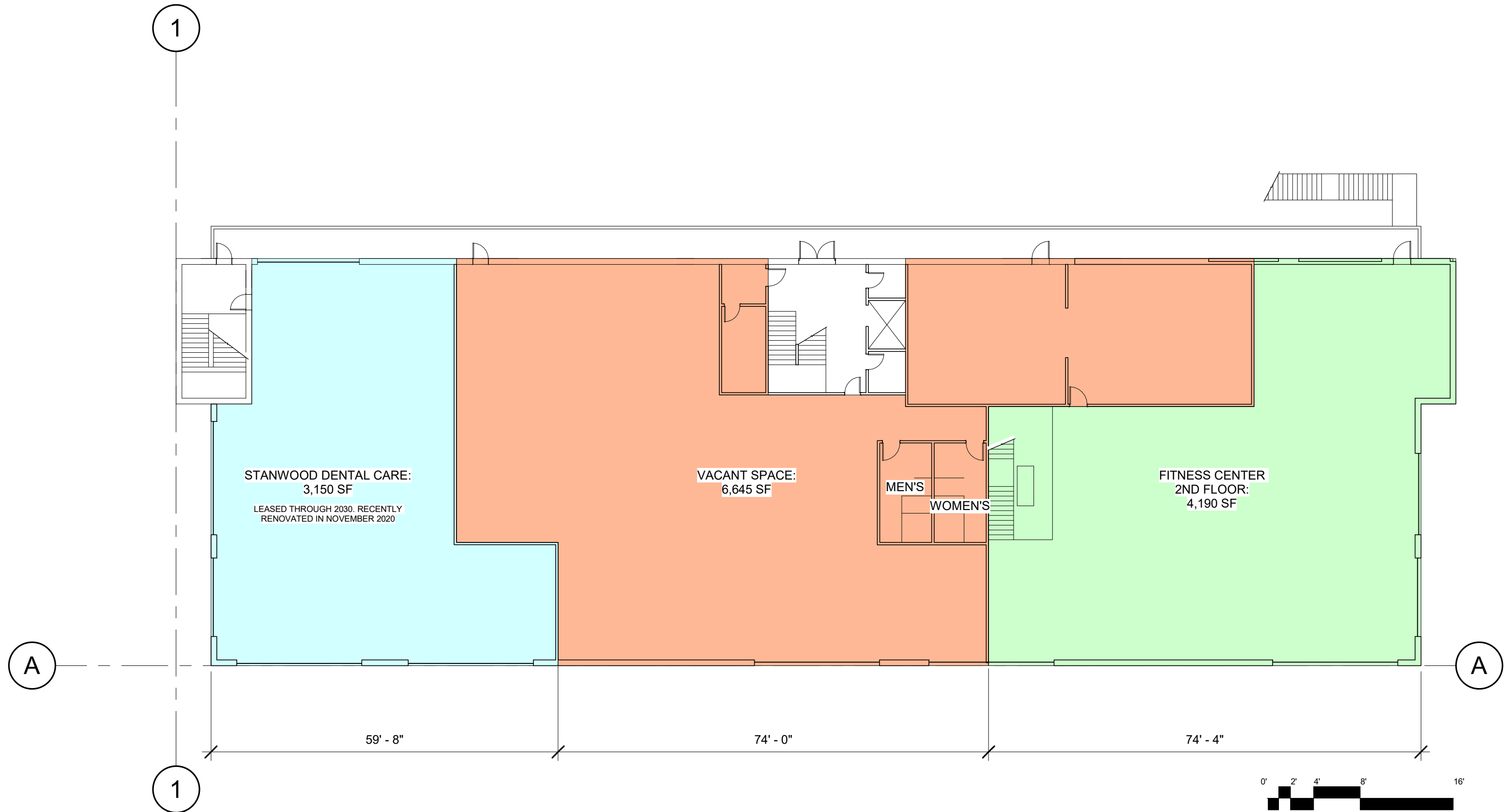
1. Sales Tax: 9.2% combined city and state
2. A/E Guidelines - Off. Of Financial Mgmt.-WA
3. By City of Stanwood
4. Land Purchase not included in total project cost

5. Expanded Design Services include: Signage design, FF&E, Telecommunications/security/AV design, Transportation Engineering, Cultural Resources Assessment, Public Outreach
6. Existing police lockers will be reused

SPACE	FIRST FLOOR	SECOND FLOOR	TOTAL
VACANT:	3,245 SF	6,645 SF	9,890 SF
PHYSICAL THERAPY:	4,747 SF	0 SF	4,747 SF
FITNESS CENTER:	6,064 SF	4,190 SF	10,254 SF
STANWOOD DENTAL:	0 SF	3,150 SF	3,150 SF
TOTAL:	14,056 SF	13,985 SF	28,041 SF







Existing Building and Site Assessment

City of Stanwood

June 29, 2021

Stanwood Civic Campus Planning and Design Services



Stanwood Commons

	Site
Vehicle Circulation	Vehicle circulation appears to be sufficient for the proposed uses of the site. No improvements proposed.
People Circulation	Circulation of pedestrians appears to be sufficient. No improvements proposed.
Public Works Vehicle Parking	Additional secure, structured parking will be required as part of the police station development.
Personal Vehicle Parking	Approximately 128 stalls, of which five are ADA. This meets WSDOT parking standards. About six general stalls would be lost in construction of the police station. No improvements proposed to general purpose parking.
Accessibility	ADA compliant entrances should be added to new and existing structures. This will include at least three curb ramps, including the replacement of two existing improvised ramps and one new ramp for the new police building. An example of an existing ramp is shown below.
	
General Assessment	The site should support the proposed uses with minimal spatial modifications to the layout. See site access discussion below.

Civil	
Site Overview	Parcel 32032400415300.
Topography and Existing Conditions	The site slopes to the northwest, but also falls off sharply on the east and south sides of the property. There is a stormwater detention pond on the south side of the property and a recessed basketball court approximately eight feet below the parking lot surface on the east side. The primary structure sits just north of the stormwater pond with the parking lot extending north to 270th Street NW. The southern edge of the property abuts SR 532.



Site Access	Site access appears to be sufficient for public use. An auxiliary entrance above the flood plain is desired from the parking lot to SR 532 for emergency vehicles. The access point would be located in the drive aisle along the west side of the building, adjacent to the parking garage. This will require either an elevated roadway supported by retaining walls or a bridge supported by columns and will impact the detention pond. There is a 20' drive aisle in the existing condition. Any elevated roadway using this space would block access to the parking garage. At a minimum, access to the garage would need to be provided by a 16' wide alley. If access to the garage is maintained, the elevated roadway would need to be located partially on the adjacent property. Another alternative would be to use an at-grade driveway as a continuation of the drive aisle to the garage. This would likely have the greatest impact on the detention pond and would fall within the floodplain but would be the least expensive and least technically challenging alternative. Sight lines would be more challenging in the at-grade alternative. If the new entrance is expected to serve one vehicle in one direction at a time, the width could be as low as 12', according to City engineer Shawn Smith, not counting grading required to install the roadway. As noted above, however, the narrowest cross section allowed by Snohomish County is a 16' alley.
Sanitary Sewer	No sanitary sewer complaints have been brought to our attention, so no improvements are proposed.

Drainage Systems Stormwater runoff from the existing parking lot sheet flows to a curb cut at the northwest corner of the site where a swale (shown below) carries the runoff to the south and into a detention pond.



Roof runoff is conveyed directly to the pond (shown below) in downspouts connected to buried PVC pipes.



Except for the basketball court, which evinced ponding, the site drainage appears to be functioning. Since the basketball court is proposed for replacement, no drainage improvements are proposed except those incorporated in the design of the new police station building and auxiliary access point. Per City Engineer Shawn Smith, the site is flow control exempt because it discharges to the Stillaguamish River. The site will, however, be required to provide enhanced water quality treatment. It is the City's preference to use a natural system like a bioretention swale rather than an emerging technology that requires replacement of cartridges. The existing swale along the western edge of the parking lot should be improved to meet the requirements of a bioretention swale. Any target surfaces created by the auxiliary entrance will need to be treated downstream of the existing pond with a new bioretention system.

Water System	Existing water pressure is around 52 PSI in a 2" main. It is recommended that the meter be upsized from 1-1/2" to 2" to mitigate the lower pressure.
On-Ste Paving	Parking lot paving exhibits severe damage that will require full-depth repair. The images below give examples of pavement damage and settlement. Curbing is mostly intact but is composed of extruded curb. Where pavement is replaced, it is recommended that the curbs be traffic curb for ease of installation of the new HMA pavement as well as a more sturdy and longer lasting product that can better sustain bumps from vehicle tires.





According to design plans, the existing pavement section is 2" HMA, 3" CSTC, and 12" gravel base. Geotechnical explorations performed by Associated Earth Sciences, Inc. on July 14, 2021 show that the exiting asphalt section varies across the parking lot from 3" to 6". Since more than 20% of the pavement requires replacement, it is recommended that the entire lot be repaved. At this 20% threshold, unit prices of construction materials likely

make full replacement of the parking lot paving the economical design. The pavement section recommended by the geotechnical engineer is:

- 3" Class ½" HMA
- 4" Crushed Surfacing Top Course
- 6" Cement Treated Base

A cement treated base is a difficult material to excavate in the event of utility repairs and replacements. The City should be consulted about the desirability of installing this material where future utility work will be impacted.

ADA Accessibility	As noted above, at least three curb ramps will be required.
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Key Improvements

- Auxiliary entrance either at-grade, elevated with retaining walls, or as a bridge with support columns. Elevated auxiliary entrance with retaining walls would need expansion to the west and likely some property acquisition.
- Enhanced water quality treatment.
- Replacement of parking lot pavement with more resilient section.
- WSDOT standard curb ramps for ADA accessibility.

MACKENZIE.

STRUCTURAL FEASIBILITY REPORT

To
City of Stanwood

For
Option E Commons Building
Stanwood, WA

Dated
July 23, 2021

Project Number
2190151.04



MACKENZIE
Since 1960

Logan Building | 500 Union Street, Suite 410, Seattle, WA 98101
T 206.749.9993 | F 503.228.1285 | www.mcknze.com



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ATTACHMENTS

1. ASCE 41-17 Structural Checklists



I. EXECUTIVE SUMMARY

At the direction of the City of Stanwood, Mackenzie has completed a structural feasibility report for the existing Port Susan Landing Professional Center in Stanwood, WA. As part of the review of the structure, Mackenzie conducted a site visit on May 26, 2021.

The existing building has been designed for traditional occupancy types, such as offices. The building appears to generally be in good structural condition. During the walkthrough, noticeable rust was observed at the underside of the existing steel in the pool and pool equipment areas, and Mackenzie recommends that a special inspector be retained to evaluate the extent and severity of the rust; any recommendations for repair and/or replacement should be followed, and the structure should be re-coated with protective paint to limit any future deterioration. Mackenzie recommends that an architect and mechanical engineer be retained to improve the ventilation in those spaces to limit the potential for condensation and future rust. Based on the existing drawings, the building appears to have been designed for relatively high floor live loads and for the seismic demands of a relatively recent building code. Typical interior non-structural work for reconfiguring architectural spaces and reroofing likely will not trigger the need to significantly retrofit the structure. Additionally, it is unlikely that the overall weight of the building will change enough to trigger the need for seismic reevaluation and potential seismic retrofits, assuming that the building structure will be left in-tact. Upgrading the mechanical units and the addition of photovoltaic panels to the roof will likely require additional steel infill support framing below the roof structure, and could trigger the need to strengthen the existing open web joist trusses if the increased load is significant enough; the units and panels likely will not add enough weight to the structure to trigger the need to re-evaluate the lateral system.

If the intent is to include a police station occupancy within any portion of the building, then the building will require a reevaluation of the lateral system due to the change in occupancy type. The higher risk category associated with police occupancy requires designing the structure for significantly larger lateral forces than were considered in the original design. Additional lateral frame elements, such as reinforced concrete or CMU shear walls, will be needed to resist these increased forces. Since the structure was designed on deep foundations to mitigate the risk of liquefaction-induced settlement, additional deep foundations will be required to provide increased capacity for the larger lateral forces. Addition of deep foundations to an existing structure is typically associated with high costs. Costs of demolition of portions of the existing structure to provide access for the new lateral and foundation elements should be considered in the overall cost of modifications. If instead the police station is to be built in the adjacent existing basketball court, then care should be taken to ensure adequate structural separation is provided between the new and the existing buildings as to not trigger the need for lateral redesign.

An ASCE 41-17 Tier 1 seismic evaluation of was conducted to help identify potential deficiencies with the existing structure. According to the prescriptive ASCE-41 Tier 1 checklists, the three-story professional building has a few deficiencies in the structure that do not meet the standards for a building that provides a performance level of Collapse Prevention after a major seismic event. The primary deficiencies include significant torsion in the lateral force resisting system, liquefiable soils beneath the structure, high shear stresses in the shear walls, and unknown details of exterior wall anchorage to the floor framing. These deficiencies, however, may have been considered and mitigated in the original design of the building structure. Per ASCE 41-17, the building qualifies as a benchmark building for both Life Safety and Collapse Prevention performance criteria, since it is a reinforced masonry shear wall building constructed to the provisions of the 1997 Edition of the Uniform Building Code per the General Notes of the record drawings. For a benchmark building, the Tier 1 structural checklist evaluations are not required to be performed, but nonetheless were included for reference.



II. EXISTING BUILDING DESCRIPTION

The existing structural drawings, prepared by Kosnik Engineering and dated 09-30-04, state that the structure was originally designed to the requirements of the 1997 Edition of the Uniform Building Code as adopted by the City of Stanwood. The existing structure is a three-story structure consisting of fully grouted, reinforced concrete masonry unit (CMU) bearing shear walls as the primary lateral force resisting system of the structure. The gravity system is predominantly steel-framed construction relying on steel wide flange columns and the CMU walls for bearing. The main floor is composite slab-on-metal-deck with wide flange beams, the upper floor is composite slab-on-metal-deck with open web steel joists and girders, and the roof is bare metal deck with open web steel joists and girders. The lowest level of the structure is partially below-grade. Based on the existing drawings, it appears that multiple detached, delegated design retaining walls were placed in various locations around the building to eliminate some of the unbalanced soil loads that would have otherwise been caused by the sloping site. The foundation level consists of deep foundations (auger-cast reinforced concrete piles) with reinforced concrete pile caps and a reinforced concrete structural slab that appears to have been designed to span between pile caps to mitigate the expected liquefaction-induced settlement mentioned in the 2004 Associated Earth Sciences geotechnical report. The northern side of the foundation level of the building has full-height CMU walls that span between the foundation level and the main level; at some locations they retain soil while at other locations a separate deferred design retaining walls prevent the structural walls from being loaded with earth pressure. During Mackenzie's site visit, the structure appeared to have been constructed with good quality and appeared to be in general conformance with the construction documents. A tenant improvement was performed since the original structural drawings, but any structural drawings that may have been part of the tenant improvement were not made available to Mackenzie. Nonstructural CMU walls appeared to have been added in the lockers north of the pool area, some of them being partial height.

There is an existing pool structure in the southeast portion of the structure on the main level that is supported on a network of CMU walls that bear on the foundation level. During Mackenzie's site visit, visible rust was observed in the pool and pool equipment room areas. Mackenzie recommends that a special inspector be retained to assess the extent and severity of the deterioration, and that any of their recommendations for remediation be followed. After repairing the structure, it should be re-coated with fresh paint for future protection. Mackenzie also suggests that an architect and mechanical engineer be retained to mitigate the ventilation issue that likely caused the rust to form.

Similarly, some efflorescent discoloration on the interior face of CMU walls was observed at the upper level in the northern portion of the eastern exterior wall, and it appeared to be water damage. Mackenzie recommends that the special inspector also evaluate this area for damage, and that an architect be consulted for re-roofing in that area as needed.

Mackenzie noticed an instance of stacked CMU that appeared to have been sawcut and removed from the existing structure but was not able to find any locations where this CMU may have been taken from. Mackenzie recommends that the building owner verify that these were not removed from any shear walls, and if so an engineered solution will be required.



III. STRUCTURAL IMPACT OF PROPOSED MODIFICATIONS (IF NO CHANGE IN OCCUPANCY)

The following are Mackenzie's understanding of the proposed changes to the building, and their associated structural impacts. This list assumes that there will not be a change in occupancy as defined by the International Building Code.

1. Replace mechanical units on the roof. It is assumed that the units will be of similar size and weight to the existing units.
 - A. Depending on if the weight and/or support geometry change, there may be a need for new steel support infill framing beneath the roof structure to support the new units. If new units or significantly heavier than original units are added, the existing open web joist trusses likely will need to be strengthened.
2. Add new photovoltaic panels on the existing roof. Approximate weight is 70 pounds each, and there will be 280 panels, with 5,500 square feet of total area.
 - A. New infill steel framing and support posts will be needed to support the new array of photovoltaic panels. Depending on the layout and concentration of panels, the existing open web joist trusses may need to be strengthened.
3. Fill in existing pool structure with floor slab.
 - A. The existing pool structure can be filled in with rigid structural foam (EPS Geofoam) and topped with a reinforced concrete slab. The built-up concrete slab will need to be doweled into the perimeter existing concrete slab with drilled and epoxied reinforcement. No further modification should be needed for the existing structure since the built-up slab on foam will weigh less than a pool filled with water.
4. Re-roof the structure
 - A. If new roof weight is kept similar to existing roof weight, then no major structural retrofits will be required.
5. Relocate existing trash enclosure.
 - A. No structural impact to existing structure.
6. New access road adjacent to west side of existing structure.
 - A. The access road should be kept clear of the existing structure with adequate structural separation, and if it is elevated relative to the existing structure then it should have its own retaining walls that prevent any load from being imparted onto the existing structure. If this is done, then there should be no impact to the existing structure.
7. New police building adjacent to existing structure.
 - A. The new building should be built on its own foundations and be fully separated from the existing building with adequate structural separation. Any difference in grade that requires backfill should be supported by retaining walls off of the new structure and should not impart any new forces on the existing structure. No portion of the existing building structure should be relied upon to provide functionality to the new police building structure (egress routes, power, etc.). If this is done, then there should be no impact to the existing structure.



IV. CHANGE OF OCCUPANCY TO AN ESSENTIAL FACILITY (RISK CATEGORY IV)

The following are Mackenzie's understanding of additional cost impacts associated with a change in occupancy for police station occupancy as defined by the International Building Code. Please note that this is a very conceptual estimate of potential cost impacts, and that no detailed structural calculations have been performed to generate this list. Future detailed calculations and analysis by other disciplines may find even more retrofits that will add to this list, both structural and nonstructural.

1. Demolition of portions of existing structure as required for access to install new structural elements. This includes demolition of portions of the existing foundation.
2. Non-structural costs of re-routing mechanical, electrical, and/or plumbing systems as required to install structure.
3. Non-structural costs of additional mechanical, electrical, and/or plumbing systems, such as a backup generator, associated with changing occupancies. Please consult with other disciplines as required for a better idea of these cost impacts.
4. Non-structural costs of reprogramming spaces as required to meet operational needs for an essential facility.
5. Costs of new finishes as required at locations where finishes needed to be demolished to access retrofit locations and/or as needed at structural elements.
6. Addition of reinforced concrete shear walls, reinforced masonry shear walls, or steel braced frames at all levels as required to increase the lateral capacity for the larger design loads. As a rough estimate, since for a new building the lateral load increases by roughly 1.5 times for a Risk Category IV structure when compared to a Risk Category II structure, the cost estimator may assume that the new walls will be an additional 0.5 times the existing wall length in each direction.
7. Significant strengthening to the steel framing at all elevated floors as needed to strengthen the diaphragms.
8. Additional pile caps and grade beams as required at the foundation level. Again, as a rule of thumb, the cost estimator may multiply approximately 0.5 times the area of grade beams and pile caps under existing CMU walls to get an estimate of how much more pile cap area will be needed under the new lateral frames.
9. Additional deep foundations will be required to increase the lateral capacity of the deep foundations, likely battered small-diameter steel piles.



V. ASCE 41-17 TIER I SEISMIC ASSESSMENT

ASCE 41-17 Analysis Background

The seismic evaluation was conducted using ASCE 41-17 Seismic Evaluation and Retrofit of Existing Buildings. This document is not a code, but a nationally recognized standard used by engineers to evaluate and retrofit existing buildings. New building codes include many provisions that require or encourage design and detailing practices that improve the seismic performance of a building, including regular building configuration, ductile detailing, and high-quality materials. Most existing buildings will not meet these criteria that new construction would be designed and detailed for; however, it is recognized that these existing structural systems still have capacity that the new code doesn't recognize. The ASCE 41-17 includes guidelines and methods for evaluating the capacities of existing structural elements that might otherwise be insufficient when analyzed using the new building code provisions.

Within the ASCE 41-17 there are four building Performance Levels (lower to higher performance): Collapse Prevention, Life Safety, Immediate Occupancy, and Operational. Unless otherwise required by code (i.e., emergency response facilities, prisons, or other essential facilities), the majority of buildings are designed for the Performance Level of Collapse Prevention (CP). The CP performance level is meant to ensure collapse prevention in a major seismic event; however, buildings with this performance level will likely experience significant damage that may or may not be repaired or occupied after the earthquake.

ASCE 41-17 incorporates a multi-tier methodology for evaluating existing structures. Tier 1, which was chosen for this analysis, is a preliminary screening phase which utilizes a checklist approach to identify potential seismic hazards. It should be noted that at this stage, any identified risks are preliminary and may or may not be justifiable using a higher tier analysis. Tier 2 and Tier 3 are the evaluation and detailed evaluation phases, respectively, which were not conducted at this time. If a deficiency is identified in the Tier 1 screening phase, further Tier 2 or Tier 3 analysis can be used to show the specific item is acceptable. After the seismic evaluation is completed, ASCE 41-17 may be used to complete a seismic retrofit design to address issues identified in the evaluation stage. As a part of the Tier 1 screening phases, various analyses or "Quick Checks" are to be performed where specifically required. Not all items that pass the quick check will necessarily meet more detailed checks nor are they guaranteed to meet current code requirements.

The Tier 1 analysis consists of a visual survey, which was conducted on May 26, 2021. For each of the Tier 1 checklist items, an evaluation of Compliant (C), Non-compliant (NC), Not Applicable (N/A), or Unknown (U) is marked. NC does not necessarily mean that the issue cannot be justified with a higher tier evaluation phase; rather, only that it does not pass the Tier 1 screening criteria.

Scope and Limitations

The Tier 1 analysis and retrofit scheme is based on site observations of only readily visible items and evaluation of available drawing documents listed herein. It should be noted that other deficiencies might exist that have not been identified by this screening phase and quick checks. In addition, no material or other testing was performed at this time for review. The checklists and preliminary quick calculations of retrofits were performed using ASCE 41-17 standards.

See the Executive Summary Section for a summary of the findings based on the ASCE 41-17 assessment, and the ASCE 41-17 Structural Checklists attachment for the completed Tier 1 structural checklists.



VI. CLOSING

To summarize the key takeaways of the report:

1. The building appears to be in generally good condition. A special inspector should be retained to investigate the extent and severity of rust damage in the pool and pool equipment areas, as well as the efflorescent discoloration of the CMU walls on the Upper Level eastern wall towards the north end. Any recommendations for remedial repair should be followed, and the repaired structure should be protected from future deterioration. An architect and mechanical engineer should be retained to address the underlying issues that led to the original deterioration.
2. If no change of occupancy or hazard is triggered as part of tenant improvement a seismic upgrade would not be required. In general, the building should be well suited for non-structural modifications. The roof will need additional infill support framing and may need strengthening at the existing trusses to support new mechanical units and photovoltaic panels.
3. If a change of occupancy, such as for a police function, is planned for the building, then a seismic upgrade will be required. It would include extensive structural strengthening of the lateral system and foundations to bring the building up to the higher design standard required for essential facilities.
4. An ASCE 41-17 checklist was performed. Please reference the attached files. This building qualifies as a benchmark building so the checklists were not required to be performed but were nonetheless included for reference.

Table 17-2. Collapse Prevention Basic Configuration Checklist

Status	Evaluation Statement	Tier 2 Reference	Commentary Reference
Low Seismicity			
Building System—General			
C NC N/A U	LOAD PATH: The structure contains a complete, well-defined load path, including structural elements and connections, that serves to transfer the inertial forces associated with the mass of all elements of the building to the foundation.	5.4.1.1	A.2.1.1
C NC N/A U	ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building is greater than 0.25% of the height of the shorter building in low seismicity, 0.5% in moderate seismicity, and 1.5% in high seismicity.	5.4.1.2	A.2.1.2
C NC N/A U	MEZZANINES: Interior mezzanine levels are braced independently from the main structure or are anchored to the seismic-force-resisting elements of the main structure.	5.4.1.3	A.2.1.3
Building System—Building Configuration			
C NC N/A U	WEAK STORY: The sum of the shear strengths of the seismic-force-resisting system in any story in each direction is not less than 80% of the strength in the adjacent story above.	5.4.2.1	A.2.2.2
C NC N/A U	SOFT STORY: The stiffness of the seismic-force-resisting system in any story is not less than 70% of the seismic-force-resisting system stiffness in an adjacent story above or less than 80% of the average seismic-force-resisting system stiffness of the three stories above.	5.4.2.2	A.2.2.3
C NC N/A U	VERTICAL IRREGULARITIES: All vertical elements in the seismic-force-resisting system are continuous to the foundation.	5.4.2.3	A.2.2.4
C NC N/A U	GEOMETRY: There are no changes in the net horizontal dimension of the seismic-force-resisting system of more than 30% in a story relative to adjacent stories, excluding one-story penthouses and mezzanines.	5.4.2.4	A.2.2.5
C NC N/A U	MASS: There is no change in effective mass of more than 50% from one story to the next. Light roofs, penthouses, and mezzanines need not be considered.	5.4.2.5	A.2.2.6
C NC N/A U	TORSION: The estimated distance between the story center of mass and the story center of rigidity is less than 20% of the building width in either plan dimension.	5.4.2.6	A.2.2.7

continues

Table 17-2 (Continued). Collapse Prevention Basic Configuration Checklist

Status	Evaluation Statement	Tier 2 Reference	Commentary Reference
Moderate Seismicity (Complete the Following Items in Addition to the Items for Low Seismicity)			
Geologic Site Hazards			
C NC N/A U	LIQUEFACTION: Liquefaction-susceptible, saturated, loose granular soils that could jeopardize the building's seismic performance do not exist in the foundation soils at depths within 50 ft (15.2 m) under the building.	5.4.3.1	A.6.1.1
C NC N/A U	SLOPE FAILURE: The building site is located away from potential earthquake-induced slope failures or rockfalls so that it is unaffected by such failures or is capable of accommodating any predicted movements without failure.	5.4.3.1	A.6.1.2
C NC N/A U	SURFACE FAULT RUPTURE: Surface fault rupture and surface displacement at the building site are not anticipated.	5.4.3.1	A.6.1.3
High Seismicity (Complete the Following Items in Addition to the Items for Moderate Seismicity)			
Foundation Configuration			
C NC N/A U	OVERTURNING: The ratio of the least horizontal dimension of the seismic-force-resisting system at the foundation level to the building height (base/height) is greater than $0.6S_a$.	5.4.3.3	A.6.2.1
C NC N/A U	TIES BETWEEN FOUNDATION ELEMENTS: The foundation has ties adequate to resist seismic forces where footings, piles, and piers are not restrained by beams, slabs, or soils classified as Site Class A, B, or C.	5.4.3.4	A.6.2.2

Note: C = Compliant, NC = Noncompliant, N/A = Not Applicable, and U = Unknown.

continues

Table 17-34. Collapse Prevention Structural Checklist for Building Types RM1 and RM2

Status	Evaluation Statement	Tier 2 Reference	Commentary Reference
Low and Moderate Seismicity			
Seismic-Force-Resisting System			
C NC N/A U	REDUNDANCY: The number of lines of shear walls in each principal direction is greater than or equal to 2.	5.5.1.1	A.3.2.1.1
C NC N/A U	SHEAR STRESS CHECK: The shear stress in the reinforced masonry shear walls, calculated using the Quick Check procedure of Section 4.4.3.3, is less than 70 lb/in. ² (0.48 MPa).	5.5.3.1.1	A.3.2.4.1
C NC N/A U	REINFORCING STEEL: The total vertical and horizontal reinforcing steel ratio in reinforced masonry walls is greater than 0.002 of the wall with the minimum of 0.0007 in either of the two directions; the spacing of reinforcing steel is less than 48 in. (1220 mm), and all vertical bars extend to the top of the walls.	5.5.3.1.3	A.3.2.4.2
Stiff Diaphragms			
C NC N/A U	TOPPING SLAB: Precast concrete diaphragm elements are interconnected by a continuous reinforced concrete topping slab.	5.6.4	A.4.5.1
Connections			
C NC N/A U	WALL ANCHORAGE: Exterior concrete or masonry walls that are dependent on the diaphragm for lateral support are anchored for out-of-plane forces at each diaphragm level with steel anchors, reinforcing dowels, or straps that are developed into the diaphragm. Connections have strength to resist the connection force calculated in the Quick Check procedure of Section 4.4.3.7.	5.7.1.1	A.5.1.1
C NC N/A U	WOOD LEDGERS: The connection between the wall panels and the diaphragm does not induce cross-grain bending or tension in the wood ledgers.	5.7.1.3	A.5.1.2
C NC N/A U	TRANSFER TO SHEAR WALLS: Diaphragms are connected for transfer of seismic forces to the shear walls.	5.7.2	A.5.2.1
C NC N/A U	TOPPING SLAB TO WALLS OR FRAMES: Reinforced concrete topping slabs that interconnect the precast concrete diaphragm elements are doweled for transfer of forces into the shear wall or frame elements.	5.7.2	A.5.2.3
C NC N/A U	FOUNDATION DOWELS: Wall reinforcement is doweled into the foundation.	5.7.3.4	A.5.3.5
C NC N/A U	GIRDER-COLUMN CONNECTION: There is a positive connection using plates, connection hardware, or straps between the girder and the column support.	5.7.4.1	A.5.4.1
High Seismicity (Complete the Following Items in Addition to the Items for Low and Moderate Seismicity)			
Stiff Diaphragms			
C NC N/A U	OPENINGS AT SHEAR WALLS: Diaphragm openings immediately adjacent to the shear walls are less than 25% of the wall length.	5.6.1.3	A.4.1.4
C NC N/A U	OPENINGS AT EXTERIOR MASONRY SHEAR WALLS: Diaphragm openings immediately adjacent to exterior masonry shear walls are not greater than 8 ft (2.4 m) long.	5.6.1.3	A.4.1.6

continues

Table 17-34 (Continued). Collapse Prevention Structural Checklist for Building Types RM1 and RM2

Status	Evaluation Statement	Tier 2 Reference	Commentary Reference
Flexible Diaphragms			
C NC N/A U	CROSS TIES: There are continuous cross ties between diaphragm chords.	5.6.1.2	A.4.1.2
C NC N/A U	OPENINGS AT SHEAR WALLS: Diaphragm openings immediately adjacent to the shear walls are less than 25% of the wall length.	5.6.1.3	A.4.1.4
C NC N/A U	OPENINGS AT EXTERIOR MASONRY SHEAR WALLS: Diaphragm openings immediately adjacent to exterior masonry shear walls are not greater than 8 ft (2.4 m) long.	5.6.1.3	A.4.1.6
C NC N/A U	STRAIGHT SHEATHING: All straight-sheathed diaphragms have aspect ratios less than 2-to-1 in the direction being considered.	5.6.2	A.4.2.1
C NC N/A U	SPANS: All wood diaphragms with spans greater than 24 ft (7.3 m) consist of wood structural panels or diagonal sheathing.	5.6.2	A.4.2.2
C NC N/A U	DIAGONALLY SHEATHED AND UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms have horizontal spans less than 40 ft (12.2 m) and aspect ratios less than or equal to 4-to-1.	5.6.2	A.4.2.3
C NC N/A U	OTHER DIAPHRAGMS: Diaphragms do not consist of a system other than wood, metal deck, concrete, or horizontal bracing.	5.6.5	A.4.7.1
Connections			
C NC N/A U	STIFFNESS OF WALL ANCHORS: Anchors of concrete or masonry walls to wood structural elements are installed taut and are stiff enough to limit the relative movement between the wall and the diaphragm to no greater than 1/8 in. (3 mm) before engagement of the anchors.	5.7.1.2	A.5.1.4

Note: C = Compliant, NC = Noncompliant, N/A = Not Applicable, and U = Unknown.

Table 17-38. Nonstructural Checklist

Status	Evaluation Statement ^{a,b}	Tier 2 Reference	Commentary Reference
Life Safety Systems			
C NC N/A U	HR—not required; LS—LMH; PR—LMH. FIRE SUPPRESSION PIPING: Fire suppression piping is anchored and braced in accordance with NFPA-13.	13.7.4	A.7.13.1
C NC N/A U	HR—not required; LS—LMH; PR—LMH. FLEXIBLE COUPLINGS: Fire suppression piping has flexible couplings in accordance with NFPA-13.	13.7.4	A.7.13.2
C NC N/A U	HR—not required; LS—LMH; PR—LMH. EMERGENCY POWER: Equipment used to power or control Life Safety systems is anchored or braced.	13.7.7	A.7.12.1
C NC N/A U	HR—not required; LS—LMH; PR—LMH. STAIR AND SMOKE DUCTS: Stair pressurization and smoke control ducts are braced and have flexible connections at seismic joints.	13.7.6	A.7.14.1
C NC N/A U	HR—not required; LS—MH; PR—MH. SPRINKLER CEILING CLEARANCE: Penetrations through panelized ceilings for fire suppression devices provide clearances in accordance with NFPA-13.	13.7.4	A.7.13.3
C NC N/A U	HR—not required; LS—not required; PR—LMH. EMERGENCY LIGHTING: Emergency and egress lighting equipment is anchored or braced.	13.7.9	A.7.3.1
Hazardous Materials			
C NC N/A U	HR—LMH; LS—LMH; PR—LMH. HAZARDOUS MATERIAL EQUIPMENT: Equipment mounted on vibration isolators and containing hazardous material is equipped with restraints or snubbers.	13.7.1	A.7.12.2
C NC N/A U	HR—LMH; LS—LMH; PR—LMH. HAZARDOUS MATERIAL STORAGE: Breakable containers that hold hazardous material, including gas cylinders, are restrained by latched doors, shelf lips, wires, or other methods.	13.8.3	A.7.15.1
C NC N/A U	HR—MH; LS—MH; PR—MH. HAZARDOUS MATERIAL DISTRIBUTION: Piping or ductwork conveying hazardous materials is braced or otherwise protected from damage that would allow hazardous material release.	13.7.3 13.7.5	A.7.13.4
C NC N/A U	HR—MH; LS—MH; PR—MH. SHUTOFF VALVES: Piping containing hazardous material, including natural gas, has shutoff valves or other devices to limit spills or leaks.	13.7.3 13.7.5	A.7.13.3
C NC N/A U	HR—LMH; LS—LMH; PR—LMH. FLEXIBLE COUPLINGS: Hazardous material ductwork and piping, including natural gas piping, have flexible couplings.	13.7.3 13.7.5	A.7.15.4
C NC N/A U	HR—MH; LS—MH; PR—MH. PIPING OR DUCTS CROSSING SEISMIC JOINTS: Piping or ductwork carrying hazardous material that either crosses seismic joints or isolation planes or is connected to independent structures has couplings or other details to accommodate the relative seismic displacements.	13.7.3 13.7.5 13.7.6	A.7.13.6
Partitions			
C NC N/A U	HR—LMH; LS—LMH; PR—LMH. UNREINFORCED MASONRY: Unreinforced masonry or hollow-clay tile partitions are braced at a spacing of at most 10 ft (3.0 m) in Low or Moderate Seismicity, or at most 6 ft (1.8 m) in High Seismicity.	13.6.2	A.7.1.1
C NC N/A U	HR—LMH; LS—LMH; PR—LMH. HEAVY PARTITIONS SUPPORTED BY CEILINGS: The tops of masonry or hollow-clay tile partitions are not laterally supported by an integrated ceiling system.	13.6.2	A.7.2.1
C NC N/A U	HR—not required; LS—MH; PR—MH. DRIFT: Rigid cementitious partitions are detailed to accommodate the following drift ratios: in steel moment frame, concrete moment frame, and wood frame buildings, 0.02; in other buildings, 0.005.	13.6.2	A.7.1.2
C NC N/A U	HR—not required; LS—not required; PR—MH. LIGHT PARTITIONS SUPPORTED BY CEILINGS: The tops of gypsum board partitions are not laterally supported by an integrated ceiling system.	13.6.2	A.7.2.1
C NC N/A U	HR—not required; LS—not required; PR—MH. STRUCTURAL SEPARATIONS: Partitions that cross structural separations have seismic or control joints.	13.6.2	A.7.1.3

continues

Table 17-38 (Continued). Nonstructural Checklist

Status	Evaluation Statement ^{a,b}	Tier 2 Reference	Commentary Reference
C NC N/A U	HR—not required; LS—not required; PR—MH. TOPS: The tops of ceiling-high framed or panelized partitions have lateral bracing to the structure at a spacing equal to or less than 6 ft (1.8 m).	13.6.2	A.7.1.4
Ceilings			
C NC N/A U	HR—H; LS—MH; PR—LMH. SUSPENDED LATH AND PLASTER: Suspended lath and plaster ceilings have attachments that resist seismic forces for every 12 ft ² (1.1 m ²) of area.	13.6.4	A.7.2.3
C NC N/A U	HR—not required; LS—MH; PR—LMH. SUSPENDED GYPSUM BOARD: Suspended gypsum board ceilings have attachments that resist seismic forces for every 12 ft ² (1.1 m ²) of area.	13.6.4	A.7.2.3
C NC N/A U	HR—not required; LS—not required; PR—MH. INTEGRATED CEILINGS: Integrated suspended ceilings with continuous areas greater than 144 ft ² (13.4 m ²) and ceilings of smaller areas that are not surrounded by restraining partitions are laterally restrained at a spacing no greater than 12 ft (3.6 m) with members attached to the structure above. Each restraint location has a minimum of four diagonal wires and compression struts, or diagonal members capable of resisting compression.	13.6.4	A.7.2.2
C NC N/A U	HR—not required; LS—not required; PR—MH. EDGE CLEARANCE: The free edges of integrated suspended ceilings with continuous areas greater than 144 ft ² (13.4 m ²) have clearances from the enclosing wall or partition of at least the following: in Moderate Seismicity, 1/2 in. (13 mm); in High Seismicity, 3/4 in. (19 mm).	13.6.4	A.7.2.4
C NC N/A U	HR—not required; LS—not required; PR—MH. CONTINUITY ACROSS STRUCTURE JOINTS: The ceiling system does not cross any seismic joint and is not attached to multiple independent structures.	13.6.4	A.7.2.5
C NC N/A U	HR—not required; LS—not required; PR—H. EDGE SUPPORT: The free edges of integrated suspended ceilings with continuous areas greater than 144 ft ² (13.4 m ²) are supported by closure angles or channels not less than 2 in. (51 mm) wide.	13.6.4	A.7.2.6
C NC N/A U	HR—not required; LS—not required; PR—H. SEISMIC JOINTS: Acoustical tile or lay-in panel ceilings have seismic separation joints such that each continuous portion of the ceiling is no more than 2,500 ft ² (232.3 m ²) and has a ratio of long-to-short dimension no more than 4-to-1.	13.6.4	A.7.2.7
Light Fixtures			
C NC N/A U	HR—not required; LS—MH; PR—MH. INDEPENDENT SUPPORT: Light fixtures that weigh more per square foot than the ceiling they penetrate are supported independent of the grid ceiling suspension system by a minimum of two wires at diagonally opposite corners of each fixture.	13.6.4 13.7.9	A.7.3.2
C NC N/A U	HR—not required; LS—not required; PR—H. PENDANT SUPPORTS: Light fixtures on pendant supports are attached at a spacing equal to or less than 6 ft. Unbraced suspended fixtures are free to allow a 360-degree range of motion at an angle not less than 45 degrees from horizontal without contacting adjacent components. Alternatively, if rigidly supported and/or braced, they are free to move with the structure to which they are attached without damaging adjoining components. Additionally, the connection to the structure is capable of accommodating the movement without failure.	13.7.9	A.7.3.3
C NC N/A U	HR—not required; LS—not required; PR—H. LENS COVERS: Lens covers on light fixtures are attached with safety devices.	13.7.9	A.7.3.4
Cladding and Glazing			
C NC N/A U	HR—MH; LS—MH; PR—MH. CLADDING ANCHORS: Cladding components weighing more than 10 lb/ft ² (0.48 kN/m ²) are mechanically anchored to the structure at a spacing equal to or less than the following: for Life Safety in Moderate Seismicity, 6 ft (1.8 m); for Life Safety in High Seismicity and for Position Retention in any seismicity, 4 ft (1.2 m)	13.6.1	A.7.4.1

continues

Table 17-38 (Continued). Nonstructural Checklist

Status	Evaluation Statement ^{a,b}	Tier 2 Reference	Commentary Reference
C NC N/A U	HR—not required; LS—MH; PR—MH. CLADDING ISOLATION: For steel or concrete moment-frame buildings, panel connections are detailed to accommodate a story drift ratio by the use of rods attached to framing with oversize holes or slotted holes of at least the following: for Life Safety in Moderate Seismicity, 0.01; for Life Safety in High Seismicity and for Position Retention in any seismicity, 0.02, and the rods have a length-to-diameter ratio of 4.0 or less.	13.6.1	A.7.4.3
C NC N/A U	HR—MH; LS—MH; PR—MH. MULTI-STORY PANELS: For multi-story panels attached at more than one floor level, panel connections are detailed to accommodate a story drift ratio by the use of rods attached to framing with oversize holes or slotted holes of at least the following: for Life Safety in Moderate Seismicity, 0.01; for Life Safety in High Seismicity and for Position Retention in any seismicity, 0.02, and the rods have a length-to-diameter ratio of 4.0 or less.	13.6.1	A.7.4.4
C NC N/A U	HR—not required; LS—MH; PR—MH. THREADED RODS: Threaded rods for panel connections detailed to accommodate drift by bending of the rod have a length-to-diameter ratio greater than 0.06 times the story height in inches for Life Safety in Moderate Seismicity and 0.12 times the story height in inches for Life Safety in High Seismicity and Position Retention in any seismicity.	13.6.1	A.7.4.9
C NC N/A U	HR—MH; LS—MH; PR—MH. PANEL CONNECTIONS: Cladding panels are anchored out of plane with a minimum number of connections for each wall panel, as follows: for Life Safety in Moderate Seismicity, 2 connections; for Life Safety in High Seismicity and for Position Retention in any seismicity, 4 connections.	13.6.1.4	A.7.4.5
C NC N/A U	HR—MH; LS—MH; PR—MH. BEARING CONNECTIONS: Where bearing connections are used, there is a minimum of two bearing connections for each cladding panel.	13.6.1.4	A.7.4.6
C NC N/A U	HR—MH; LS—MH; PR—MH. INSERTS: Where concrete cladding components use inserts, the inserts have positive anchorage or are anchored to reinforcing steel.	13.6.1.4	A.7.4.7
C NC N/A U	HR—not required; LS—MH; PR—MH. OVERHEAD GLAZING: Glazing panes of any size in curtain walls and individual interior or exterior panes more than 16 ft ² (1.5 m ²) in area are laminated annealed or laminated heat-strengthened glass and are detailed to remain in the frame when cracked.	13.6.1.5	A.7.4.8
Masonry Veneer			
C NC N/A U	HR—not required; LS—LMH; PR—LMH. TIES: Masonry veneer is connected to the backup with corrosion-resistant ties. There is a minimum of one tie for every 2-2/3 ft ² (0.25 m ²), and the ties have spacing no greater than the following: for Life Safety in Low or Moderate Seismicity, 36 in. (914 mm); for Life Safety in High Seismicity and for Position Retention in any seismicity, 24 in. (610 mm).	13.6.1.2	A.7.5.1
C NC N/A U	HR—not required; LS—LMH; PR—LMH. SHELF ANGLES: Masonry veneer is supported by shelf angles or other elements at each floor above the ground floor.	13.6.1.2	A.7.5.2
C NC N/A U	HR—not required; LS—LMH; PR—LMH. WEAKENED PLANES: Masonry veneer is anchored to the backup adjacent to weakened planes, such as at the locations of flashing.	13.6.1.2	A.7.5.3
C NC N/A U	HR—LMH; LS—LMH; PR—LMH. UNREINFORCED MASONRY BACKUP: There is no unreinforced masonry backup.	13.6.1.1 13.6.1.2	A.7.7.2
C NC N/A U	HR—not required; LS—MH; PR—MH. STUD TRACKS: For veneer with cold-formed steel stud backup, stud tracks are fastened to the structure at a spacing equal to or less than 24 in. (610 mm) on center.	13.6.1.1 13.6.1.2	A.7.6.1

continues

Table 17-38 (Continued). Nonstructural Checklist

Status	Evaluation Statement ^{a,b}	Tier 2 Reference	Commentary Reference
C NC N/A U	HR—not required; LS—MH; PR—MH. ANCHORAGE: For veneer with concrete block or masonry backup, the backup is positively anchored to the structure at a horizontal spacing equal to or less than 4 ft along the floors and roof.	13.6.1.1 13.6.1.2	A.7.7.1
C NC N/A U	HR—not required; LS—not required; PR—MH. WEEP HOLES: In veneer anchored to stud walls, the veneer has functioning weep holes and base flashing.	13.6.1.2	A.7.5.6
C NC N/A U	HR—not required; LS—not required; PR—MH. OPENINGS: For veneer with cold-formed-steel stud backup, steel studs frame window and door openings.	13.6.1.1 13.6.1.2	A.7.6.2
Parapets, Cornices, Ornamentation, and Appendages			
C NC N/A U	HR—LMH; LS—LMH; PR—LMH. URM PARAPETS OR CORNICES: Laterally unsupported unreinforced masonry parapets or cornices have height-to-thickness ratios no greater than the following: for Life Safety in Low or Moderate Seismicity, 2.5; for Life Safety in High Seismicity and for Position Retention in any seismicity, 1.5.	13.6.5	A.7.8.1
C NC N/A U	HR—not required; LS—LMH; PR—LMH. CANOPIES: Canopies at building exits are anchored to the structure at a spacing no greater than the following: for Life Safety in Low or Moderate Seismicity, 10 ft (3.0 m); for Life Safety in High Seismicity and for Position Retention in any seismicity, 6 ft (1.8 m).	13.6.6	A.7.8.2
C NC N/A U	HR—H; LS—MH; PR—LMH. CONCRETE PARAPETS: Concrete parapets with height-to-thickness ratios greater than 2.5 have vertical reinforcement.	13.6.5	A.7.8.3
C NC N/A U	HR—MH; LS—MH; PR—LMH. APPENDAGES: Cornices, parapets, signs, and other ornamentation or appendages that extend above the highest point of anchorage to the structure or cantilever from components are reinforced and anchored to the structural system at a spacing equal to or less than 6 ft (1.8 m). This evaluation statement item does not apply to parapets or cornices covered by other evaluation statements.	13.6.6	A.7.8.4
Masonry Chimneys			
C NC N/A U	HR—LMH; LS—LMH; PR—LMH. URM CHIMNEYS: Unreinforced masonry chimneys extend above the roof surface no more than the following: for Life Safety in Low or Moderate Seismicity, 3 times the least dimension of the chimney; for Life Safety in High Seismicity and for Position Retention in any seismicity, 2 times the least dimension of the chimney.	13.6.7	A.7.9.1
C NC N/A U	HR—LMH; LS—LMH; PR—LMH. ANCHORAGE: Masonry chimneys are anchored at each floor level, at the topmost ceiling level, and at the roof.	13.6.7	A.7.9.2
Stairs			
C NC N/A U	HR—not required; LS—LMH; PR—LMH. STAIR ENCLOSURES: Hollow-clay tile or unreinforced masonry walls around stair enclosures are restrained out of plane and have height-to-thickness ratios not greater than the following: for Life Safety in Low or Moderate Seismicity, 15-to-1; for Life Safety in High Seismicity and for Position Retention in any seismicity, 12-to-1.	13.6.2 13.6.8	A.7.10.1
C NC N/A U	HR—not required; LS—LMH; PR—LMH. STAIR DETAILS: The connection between the stairs and the structure does not rely on post-installed anchors in concrete or masonry, and the stair details are capable of accommodating the drift calculated using the Quick Check procedure of Section 4.4.3.1 for moment-frame structures or 0.5 in. for all other structures without including any lateral stiffness contribution from the stairs.	13.6.8	A.7.10.2
Contents and Furnishings			
C NC N/A U	HR—LMH; LS—MH; PR—MH. INDUSTRIAL STORAGE RACKS: Industrial storage racks or pallet racks more than 12 ft high meet the requirements of ANSI/RMI MH 16.1 as modified by ASCE 7, Chapter 15.	13.8.1	A.7.11.1

continues

Table 17-38 (Continued). Nonstructural Checklist

Status	Evaluation Statement ^{a,b}	Tier 2 Reference	Commentary Reference
C NC N/A U	HR—not required; LS—H; PR—MH. TALL NARROW CONTENTS: Contents more than 6 ft (1.8 m) high with a height-to-depth or height-to-width ratio greater than 3-to-1 are anchored to the structure or to each other.	13.8.2	A.7.11.2
C NC N/A U	HR—not required; LS—H; PR—H. FALL-PRONE CONTENTS: Equipment, stored items, or other contents weighing more than 20 lb (9.1 kg) whose center of mass is more than 4 ft (1.2 m) above the adjacent floor level are braced or otherwise restrained.	13.8.2	A.7.11.3
C NC N/A U	HR—not required; LS—not required; PR—MH. ACCESS FLOORS: Access floors more than 9 in. (229 mm) high are braced.	13.6.10	A.7.11.4
C NC N/A U	HR—not required; LS—not required; PR—MH. EQUIPMENT ON ACCESS FLOORS: Equipment and other contents supported by access floor systems are anchored or braced to the structure independent of the access floor.	13.7.7 13.6.10	A.7.11.5
C NC N/A U	HR—not required; LS—not required; PR—H. SUSPENDED CONTENTS: Items suspended without lateral bracing are free to swing from or move with the structure from which they are suspended without damaging themselves or adjoining components.	13.8.2	A.7.11.6
Mechanical and Electrical Equipment			
C NC N/A U	HR—not required; LS—H; PR—H. FALL-PRONE EQUIPMENT: Equipment weighing more than 20 lb (9.1 kg) whose center of mass is more than 4 ft (1.2 m) above the adjacent floor level, and which is not in-line equipment, is braced.	13.7.1 13.7.7	A.7.12.4
C NC N/A U	HR—not required; LS—H; PR—H. IN-LINE EQUIPMENT: Equipment installed in line with a duct or piping system, with an operating weight more than 75 lb (34.0 kg), is supported and laterally braced independent of the duct or piping system.	13.7.1	A.7.12.5
C NC N/A U	HR—not required; LS—H; PR—MH. TALL NARROW EQUIPMENT: Equipment more than 6 ft (1.8 m) high with a height-to-depth or height-to-width ratio greater than 3-to-1 is anchored to the floor slab or adjacent structural walls.	13.7.1 13.7.7	A.7.12.6
C NC N/A U	HR—not required; LS—not required; PR—MH. MECHANICAL DOORS: Mechanically operated doors are detailed to operate at a story drift ratio of 0.01.	13.6.9	A.7.12.7
C NC N/A U	HR—not required; LS—not required; PR—H. SUSPENDED EQUIPMENT: Equipment suspended without lateral bracing is free to swing from or move with the structure from which it is suspended without damaging itself or adjoining components.	13.7.1 13.7.7	A.7.12.8
C NC N/A U	HR—not required; LS—not required; PR—H. VIBRATION ISOLATORS: Equipment mounted on vibration isolators is equipped with horizontal restraints or snubbers and with vertical restraints to resist overturning.	13.7.1	A.7.12.9
C NC N/A U	HR—not required; LS—not required; PR—H. HEAVY EQUIPMENT: Floor-supported or platform-supported equipment weighing more than 400 lb (181.4 kg) is anchored to the structure.	13.7.1 13.7.7	A.7.12.10
C NC N/A U	HR—not required; LS—not required; PR—H. ELECTRICAL EQUIPMENT: Electrical equipment is laterally braced to the structure.	13.7.7	A.7.12.11
C NC N/A U	HR—not required; LS—not required; PR—H. CONDUIT COUPLINGS: Conduit greater than 2.5 in. (64 mm) trade size that is attached to panels, cabinets, or other equipment and is subject to relative seismic displacement has flexible couplings or connections.	13.7.8	A.7.12.12
Piping			
C NC N/A U	HR—not required; LS—not required; PR—H. FLEXIBLE COUPLINGS: Fluid and gas piping has flexible couplings.	13.7.3 13.7.5	A.7.13.2

continues

Table 17-38 (Continued). Nonstructural Checklist

Status	Evaluation Statement ^{a,b}	Tier 2 Reference	Commentary Reference
C NC N/A U	HR—not required; LS—not required; PR—H. FLUID AND GAS PIPING: Fluid and gas piping is anchored and braced to the structure to limit spills or leaks.	13.7.3 13.7.5	A.7.13.4
C NC N/A U	HR—not required; LS—not required; PR—H. C-CLAMPS: One-sided C-clamps that support piping larger than 2.5 in. (64 mm) in diameter are restrained.	13.7.3 13.7.5	A.7.13.5
C NC N/A U	HR—not required; LS—not required; PR—H. PIPING CROSSING SEISMIC JOINTS: Piping that crosses seismic joints or isolation planes or is connected to independent structures has couplings or other details to accommodate the relative seismic displacements.	13.7.3 13.7.5	A.7.13.6
Ducts			
C NC N/A U	HR—not required; LS—not required; PR—H. DUCT BRACING: Rectangular ductwork larger than 6 ft ² (0.56 m ²) in cross-sectional area and round ducts larger than 28 in. (711 mm) in diameter are braced. The maximum spacing of transverse bracing does not exceed 30 ft (9.2 m). The maximum spacing of longitudinal bracing does not exceed 60 ft (18.3 m).	13.7.6	A.7.14.2
C NC N/A U	HR—not required; LS—not required; PR—H. DUCT SUPPORT: Ducts are not supported by piping or electrical conduit.	13.7.6	A.7.14.3
C NC N/A U	HR—not required; LS—not required; PR—H. DUCTS CROSSING SEISMIC JOINTS: Ducts that cross seismic joints or isolation planes or are connected to independent structures have couplings or other details to accommodate the relative seismic displacements.	13.7.6	A.7.14.4
Elevators			
C NC N/A U	HR—not required; LS—H; PR—H. RETAINER GUARDS: Sheaves and drums have cable retainer guards.	13.7.11	A.7.16.1
C NC N/A U	HR—not required; LS—H; PR—H. RETAINER PLATE: A retainer plate is present at the top and bottom of both car and counterweight.	13.7.11	A.7.16.2
C NC N/A U	HR—not required; LS—not required; PR—H. ELEVATOR EQUIPMENT: Equipment, piping, and other components that are part of the elevator system are anchored.	13.7.11	A.7.16.3
C NC N/A U	HR—not required; LS—not required; PR—H. SEISMIC SWITCH: Elevators capable of operating at speeds of 150 ft/min (0.30 m/min) or faster are equipped with seismic switches that meet the requirements of ASME A17.1 or have trigger levels set to 20% of the acceleration of gravity at the base of the structure and 50% of the acceleration of gravity in other locations.	13.7.11	A.7.16.4
C NC N/A U	HR—not required; LS—not required; PR—H. SHAFT WALLS: Elevator shaft walls are anchored and reinforced to prevent toppling into the shaft during strong shaking.	13.7.11	A.7.16.5
C NC N/A U	HR—not required; LS—not required; PR—H. COUNTERWEIGHT RAILS: All counterweight rails and divider beams are sized in accordance with ASME A17.1.	13.7.11	A.7.16.6
C NC N/A U	HR—not required; LS—not required; PR—H. BRACKETS: The brackets that tie the car rails and the counterweight rail to the structure are sized in accordance with ASME A17.1.	13.7.11	A.7.16.7
C NC N/A U	HR—not required; LS—not required; PR—H. SPREADER BRACKET: Spreader brackets are not used to resist seismic forces.	13.7.11	A.7.16.8
C NC N/A U	HR—not required; LS—not required; PR—H. GO-SLOW ELEVATORS: The building has a go-slow elevator system.	13.7.11	A.7.16.9

Note: C = Compliant, NC = Noncompliant, N/A = Not Applicable, and U = Unknown.

^a Performance Level: HR = Hazards Reduced, LS = Life Safety, and PR = Position Retention.

^b Level of Seismicity: L = Low, M = Moderate, and H = High.



July 23, 2021

RE: Stanwood Civic Center Commons Building – Existing Facility Mechanical Assessment

BCE Engineers, Inc. performed a mechanical assessment of the existing Commons Building at 9612 270th St. NW in Stanwood, WA. The physical walkthrough occurred on May 26th, 2021. The assessment noted the existing mechanical related items, including plumbing, HVAC, and fire protection systems.

Existing Conditions

The existing Commons Building is approximately 45,000 square feet (including parking garage) and consists multiple tenants. The building is 2 stories with a parking garage underneath the tenant spaces. The parking garage is not the full size of the first floor.

A mechanical room is located on the north side of the facility and contains the building's fire main and fire sprinkler riser. The room was locked at the time of the site visit. The facility manager forwarded pictures of the room after keys were obtained. The cold water header entry was never viewed. According to record drawings, the cold water pipe is 2" with a 1.5" meter. Pressure at the fire riser (which should be the same as the domestic water) is about 52 PSI.

The fire sprinkler header water pressure gauge shows 52 PSI after the double check valve. The fire riser has the double check valve for the fire sprinkler riser. The piping is steel and appears to be adequately sized for this facility. There is a dry auxiliary riser with a floor mounted compressor. Dry sprinklers are used for overhangs and the parking garage.

It appears that the piping system for the cold water is entirely copper. The waste system has a combination of cast iron and ABS plastic depending on the tenant space.

Each tenant has their own water heater. Some are electric and some are gas-fired.

The whole facility has institutional grade fixtures that are in good shape. The water closets are all tank type and urinals have flush valves. There is an unoccupied tenant space that has stainless steel kitchen sinks (handwash sinks and bar sinks). The janitor mop sink in one tenant space was molded plastic and porcelain in another.

The heating, ventilation, and air conditioning system (HVAC) consists of packaged rooftop gas-fired furnaces with direct expansion (DX) cooling coils for the second floor. Half of the first floor (west side) has split system gas-fired furnaces with cooling coils. The condensers are on the roof. Outside air and relief air on the first floor is through a planned set of louvers. The furnaces presumably hang in the ceiling space or are located in closets, but none were observed (large ceiling access doors were observed in some tenant spaces). Most of the equipment was dated as 2004 and 2005 putting them at or near their service life for commercial equipment.

The ductwork observed is steel. There are a variety of diffuser types depending on the tenant space.

The elevator machine room was not observed (no keys to the room were available), but does not appear to have a dedicated cooling unit (just an exhaust fan). This does not meet current code.

The unoccupied kitchen space has a commercial kitchen hood with chemical fire suppression and a make-up air fan.

There is a natatorium on the east side on the first floor. The natatorium is poorly ventilated with one sidewall fan and a few louvers with motorized dampers. The motorized dampers appeared to be failed because operable windows were open instead for ventilation. The pool equipment is located in a poorly ventilated space adjacent to the natatorium and the chemicals are causing a lot of corrosion. In addition, the boiler flue terminates on the inside of the building at a screened louver. This allows some of the combustion products to stay in the building which also causes corrosion. All of the gas meters for the building are located just outside of this room on the east wall and all of the gas pipes enter this room. The gas pipes are showing a high degree of corrosion for their age.

Analysis

Fire Sprinkler System

The fire sprinkler system appears to be adequate for any renovation and addition to the building as long as the hazardous level remains the same (B occupancy). If the hazard level increases, the hydraulic calculations will have to be checked to determine main pipe sizes. In any case, the main service pipe should be adequately sized.

Domestic Cold Water System

The pressure is approximately 52 PSI which is marginal for a 2 story facility. The facility has tank type water closets currently. 52 PSI should be able to support flush valve water closets as long as the pipe mains are sized appropriately (they will be on the large size).

The building service entry was never found. A 2" service entry pipe was noted on the civil record drawings and appeared to be routed near the fire riser room. To support new tenant space and to allow for flush valve water closets, a 2" main pipe will need to be routed to each tenant space. This may not be how the current water piping is distributed.

Hot Water System

There is no central water heater system in the building. Each tenant has their own water heater currently. Some are naturally aspirated gas-fired heaters which require combustion air vents. The combustion air vents did not appear to be present (code deficiency). Other spaces had a sealed combustion, gas-fired instantaneous water heaters and some had electric water heaters.

HVAC System

The building design is set up for rooftop packaged units to serve the second floor and split system heat pumps or furnace/cooling units on the first floor. The first floor has a pattern of louvers that are to be used for outside air and relief air. This allows for first floor ventilation without creating large

chases through the second floor to get to the roof. However, there are small chases needed for the refrigerant pipe and furnace flues. These are present on the west side of the building, but not on the east side. The west side of the building appears to have all of the equipment installed to support the full load of that side of the building. The east side of the building only has the rooftop packaged units installed, therefore the equipment is undersized for the HVAC load of the east side of the building.

All of the current rooftop equipment was installed in 2003 and 2004. The service life of this equipment is 15 years, so all of the equipment is just past its service life. This does not mean all of the equipment will fail soon. It means that statically, there will be accelerated failures of this equipment as time goes on.

A major renovation will trigger the need to install a dedicated cooling unit for the elevator machine room if there is not one installed.

Areas Adjacent to the Natatorium

The areas adjacent to the natatorium are a concern. The natatorium appears to be operation since around 2004 and has been operating with poor ventilation. The humidity and chemicals of a poorly ventilated natatorium will corrode piping, structure, power conductors, etc. in the natatorium space itself and spaces adjacent to the natatorium. Evidence of high degree of corrosion is shown on the natural gas piping entering the building. Other systems may also be compromised which were not observed.

Conclusions

Fire Sprinkler System: Fire service is adequate for reuse. Hydraulic calculations will be required for a hazard level change, but it is not expected to change the service size, only the branch pipe sizes.

Domestic Cold Water System: It should be verified that 2" mains are run to each tenant space to allow for the flexibility of flush valve water closets. It is not expected that a service size will need to be increased. It should be verified that there is a double check valve assembly on the incoming service pipe to protect the water purveyor water system.

Hot Water System: There is no central hot water system. Any tenant improvement will need to add its own water heaters. If gas-fire water heaters are desired, it is recommended that separated combustion type units be used. This eliminates the need for combustion air vents in the building and promotes higher efficient equipment. Any gas-fired water heater installation on the first floor will need to coordinate a chase through the second floor.

HVAC System: All of the equipment appears to be past its service life but is currently running well. It should be budgeted to replace the entire HVAC system if there is a major renovation. The east side of the building does not have the equipment installed for the first floor to meet the entire building HVAC load. Any tenant improvement on that side of the building should expect to add HVAC equipment. Most likely, a cooling unit will need to be installed for the elevator machine room.

Area near the Natatorium: The gas pipe integrity should be further investigated. At a minimum, the pipe should have the corrosion removed and then be coated with several coats of enamel paint. This coating should be inspected every couple of years and recoated as necessary to prevent further corrosion. The natatorium boiler flue should be properly installed to get the flue gases to the outside of the building.

Assessment by:

Chris Caffee, P.E.

Mechanical Engineer, Principal



July 23, 2021

RE: Stanwood Civic Center Commons Building – Existing Facility Electrical Assessment

BCE Engineers, Inc. performed an electrical assessment of the existing Commons Building at 9612 270th St. NW in Stanwood, WA. The physical walkthrough occurred on May 26th, 2021. The assessment noted the existing electrical related items, including power, lighting, telecommunications, and fire alarm systems.

Existing Conditions

The existing Facility consists of a Fitness Center, Physical Therapy office, Dental Office, and some vacant spaces.

The main electrical room is located on the first floor central to the facility. The service is provided by a pad mounted utility service transformer that is located north-west of the electrical room. The existing service is routed underground to the board.

Service information is as follows: 120/208 volt, 3-phase, 4-wire with a 1600 amp rated meter center that contains a 1600 amp trip rated main breaker. There are 10 meter slots of which 7 are in use. At least 2 of the seven are for vacant suites.

Panelboards are scattered throughout the various suites of the building.

Interior lighting consists of a mix of T8 fluorescent, T8-U and compact fluorescent downlights. Interior fixture controls appear to be manual without automatic controls.

The existing fire alarm panel is a Silent Night 5208 zonal control panel. Notification devices are located throughout the building.

The main telecommunication demarc is in the electrical room. It contains the entrance cables (including old phone lines).

CCTV cameras are located in individual suites.



Analysis

Power

The existing utility service is appropriately sized for a building of this square footage and at only 15 years old has a substantial amount of service life left. Currently there is no emergency generator for the building or any of its suites.

Lighting

The existing lighting throughout the facility is aging and does not meet current energy codes. Fixtures are generally fluorescent which require additional maintenance, replacement, and more energy than similar LED fixtures. Current energy codes will require the use of LED lighting throughout the building as well as replacement of the lighting controls to ensure automatic shut-off and daylight harvesting as appropriate for any tenant improvements.

Systems

Fire Alarm

The fire alarm system is a conventional zoned system. A large tenant improvement may require an upgrade to an addressable system. This would mean a new control panel and devices throughout the facility. Further investigation/coordination with code officials would be needed

Telecommunications

Any tenant improvement would require new telecommunications for the renovated portion of the space.

Security

Any present intrusion, CCTV and access control systems would not be salvageable and require new systems for the tenant improvement areas.

Public Address

A PA system was not apparent in the vacant spaces.

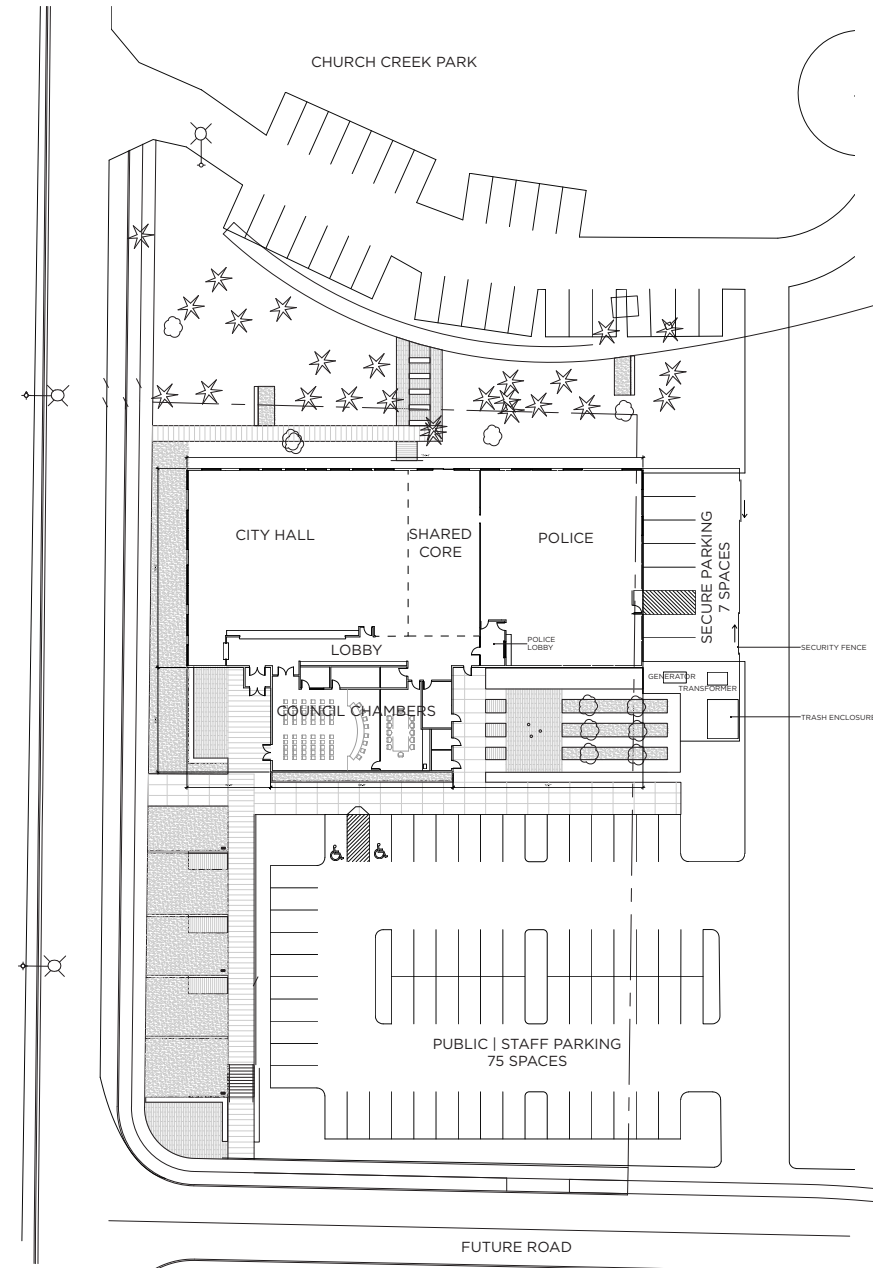
Conclusions

Power Distribution System: Emergency power for the vacant spaces or consideration of the entire building would be a major upgrade for the existing system likely requiring a service replacement to achieve.

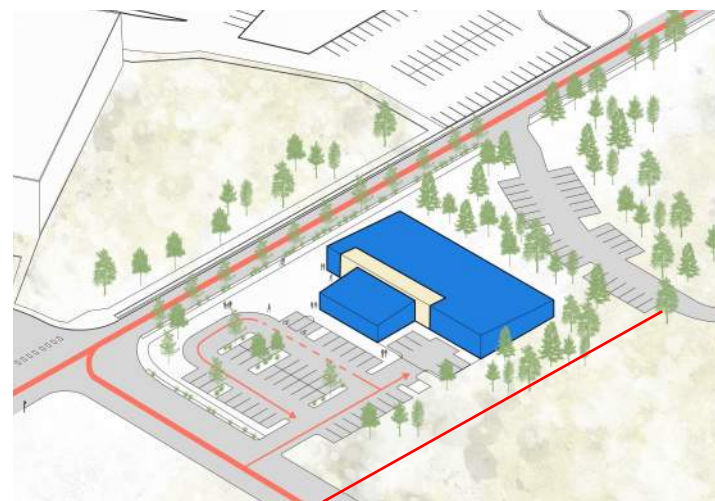
Lighting: Upgrade to current code requirement for tenant improvement areas.



Systems: The fire alarm system may require replacement with most renovations or upgrades. The CCTV, intrusion system, data infrastructure and Access Control system would be new for an tenet improvement requirements



SITE PLAN



AERIAL VIEW *Note: Most current plan is above site plan*

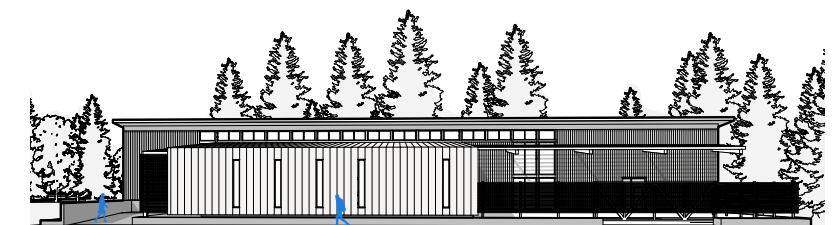


PERSPECTIVE



PERSPECTIVE CHURCH CREEK PARK

Parking Count	
Public Staff:	44 39
Secured:	06 14
Overflow:	28



ELEVATION

Site area:	
Original:	58,000 sf
East addition:	18,400 sf
Total:	76,400 sf
Building area:	
First floor:	16,268 sf
Mezzanine:	1,500 sf
Total:	17,768 sf

MEMORANDUM

Date:	August 4, 2021	TG:	1.21010
To:	Patricia Love, City of Stanwood		
From:	Brent Turley, PE Transpo Group		
cc:	Brett Schock, PE, AICP Transpo Group Kristen Cassias, PE Transpo Group Patrick Lynch, AICP Transpo Group		
Subject:	Stanwood 72nd Avenue Corridor		

The purpose of this memorandum is to document the findings of the traffic analysis and engineering design review of the 72nd Avenue NW corridor, between SR 532 and 276th Street NW. The City asked for Transpo Group to review recent traffic studies, long-range traffic forecasts, City plans, and current conditions to answer the following questions about the corridor:

- What is the recommended buildout cross-section for the corridor?
- How do we best accommodate walk and bike facilities along the corridor?
- What traffic controls are recommended at each intersection?

The summary of recommendations is first presented, then general discussion is provided for more context on the recommendations.

Summary of Recommendations

The recommended corridor improvements and traffic controls are presented graphically in Figures A and B included as attachments.

- A two-lane roadway is recommended north of 272nd Avenue NW, and a three-lane roadway is recommended to the south. The three-lane section will better accommodate the conflict of expected left-turning vehicles and through traffic expected along that section of the corridor.
- This corridor is designated as a walk and bike corridor per the City's Comprehensive Plan. A multi-use trail is recommended on the east side of the roadway to facilitate safe and efficient multimodal movements through the area. The trail also avoids the need for bike lanes on the roadway, allowing for a smaller cross-section and less overall impacts to adjoining properties such as Church Creek Park.
- No change in traffic control is recommended at 276th Street NW intersection. Different controls are not warranted from a traffic volume perspective.
- All-way stop control is recommended and warranted at the 272nd Street NW intersection. A roundabout could be problematic given the high peak of school/event traffic volumes and related queue spillback potential that could make the roundabout not function for all movements. A traffic signal is not warranted with the forecasted volumes, but would have the same footprint (curbs and crosswalks) as the all-way stop if forecast assumptions change and a signal becomes warranted.
- A traffic signal is tentatively recommended and warranted at the new intersection of the High School driveway and the realigned 268th Street NW roadway serving the Civic

Campus area development. This is largely driven by the intensity of development anticipated with the Civic Campus/Vine Street development (details to be determined). Given the short spacing between this new signal and the SR 532 traffic signal, additional lanes are recommended along 72nd Avenue NW: a second southbound through lane; an additional northbound lane that ends as a turn-lane at the new traffic signal. These new storage lanes would help reduce traffic queues at these traffic signals.

- Further traffic mitigation efforts are recommended before finalizing the section of roadway in the vicinity of the new 268th Street NW intersection. This could include a larger study to address the potential shifts in traffic due to a potential SR 532/64th Avenue NW roundabout or traffic signal. This could also include working with the school district on bus routing options.

Discussion and Context

This section is meant to provide more discussion and context to the recommendations presented above. The content focuses on the traffic volume forecasts, the cross-sections, and intersection traffic controls.

Traffic Volume Forecasts

The traffic volume forecasts for the corridor used a horizon year of 2035, consistent with the Comprehensive Plan and the City's travel demand model. The forecasts from the travel demand model were reconciled with recent development plans in the area. This includes the Stanwood High School (TIA, Gibson, December 2017), Stanwood Police Station/Civic Campus (TIA, Perteet, April 2021), and Creekside/Vine Street Development (Preliminary Sight Development Plat, Metron, September 2017). Both AM and PM peak hours were forecasted.

The forecasts were based on September 2019 turning movement counts at the study intersections. Traffic growth forecasts in the City's travel demand model was then added to the 2019 counts to forecast 2035 conditions. These forecasts were cross-checked and adjusted to ensure they reflect traffic growth associated with the recent development plans in the area. The AM peak hour growth was assumed to have similar growth trips as the PM peak hour. For the Creekside/Vine Street Development the traffic growth was a preliminary estimate based on the site plan available. A more detail TIA is recommended to confirm the expected trip generation from the Creekside/Vine Street site.

The 2035 forecasts are meant to capture the known and likely traffic growth within the corridor, but some of the forecast assumptions may change in the future. For example, a possible new roundabout or traffic signal at the intersection of SR 532/64th Avenue NW may shift traffic away from the 72nd Avenue NW corridor. Another example is that the High School may change how buses and/or students access school driveways (including access routes). In addition, development plans may change with higher or lower levels of intensity.

Cross-Sections and Bike Facilities

Several other cross-sections were developed and discussed with City Staff. These different concepts all have one traffic lane in each direction, but differed on the type and location of bike facilities. Traditional bike lanes (both directions), uphill-only bike lanes, and shared-lane facilities were considered. The recommended cross-section was chosen to minimize vehicle-bike conflicts and to keep the size of the roadway within the available right-of-way.

Intersection Traffic Controls

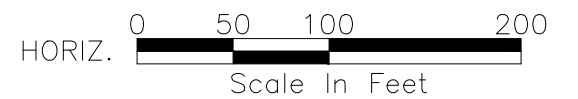
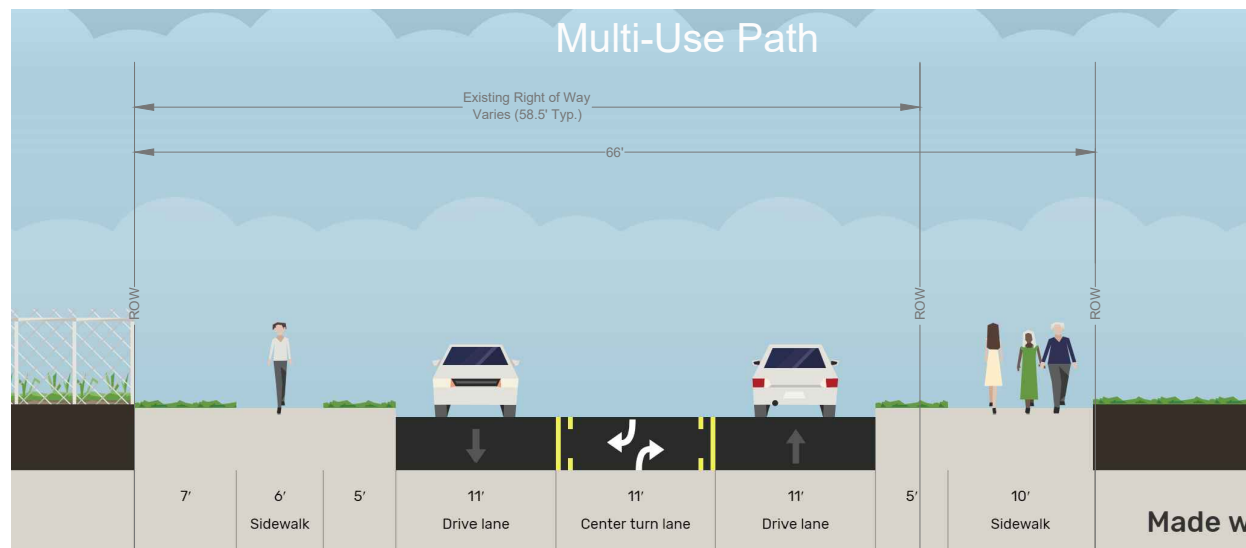
Stop signs, roundabouts, and traffic signals were evaluated at most of the study intersections. Traffic operations analysis was conducted according to the Highway Capacity Manual 6th Edition (TRB, 2016) to determine Level of Service (LOS). Synchro software was used for stop-sign controls and signals, and Sidra software for roundabouts. A table summary of LOS results is included as an attachment. In addition, warrants for new signals and all-way stops were also evaluated (different criteria than LOS).

Ordinarily a corridor with this level of traffic volume would be good candidates for roundabouts. However, it is understood that the high school and related major events have historically created long traffic queues. Traffic queues that spill back into a roundabout can severely limit mobility for all movements, not just the queued movement. This is one reason roundabouts are not recommended in close proximity to traffic signals. Given the possibility of temporary long queues due to high school traffic, roundabouts are not recommended at the 272nd Street NW and 268th Street NW intersections.

At the new 268th intersection a traffic signal is warranted and tentatively recommended due to the level of traffic from the east side development. Ideally it would be better to add more distance between the SR 532 signal and this intersection, but adjusting driveway locations in the area may be impossible. The recommendations include additional lanes between SR 532 and 268th Street NW to minimize queuing impacts. Other ways to help improve operations between these two signals is to work with the school district to understand bus route operations and if they can be adjusted to alternate routes. These school districts discussions may also yield changes to the signal operations or adjusted turn lanes at the 268th intersection. The future traffic impact study for the east side development should also consider the installation of a roundabout or signal at the SR 532/64th Avenue NW intersection as that may shift a significant amount of site traffic away from the new 72nd Avenue NW/268th Street NW intersection.

At the 272nd intersection a traffic signal is not warranted or recommended given the forecasted volumes. An all-way stop is recommended based on a variety of reasons. The primary reason is to control vehicle/pedestrian conflicts in areas with higher volumes of walk and bike trips. This intersection is a primary access point for the new multi-use trail and Church Creek Park area, as well as a major access route for high school students. In addition, traffic volumes for several hours of the day meet all-way stop guidelines. The footprint for the all-way stop and cross-walks would be the same as a traffic signal, so conversion to a future traffic signal would be simple if forecasts assumptions change.

At the 276th intersection no change in traffic control is recommended. Traffic volume warrants and delays do not indicate a need for an all-way stop or roundabout.



72nd Ave NW - Active Transportation Improvements

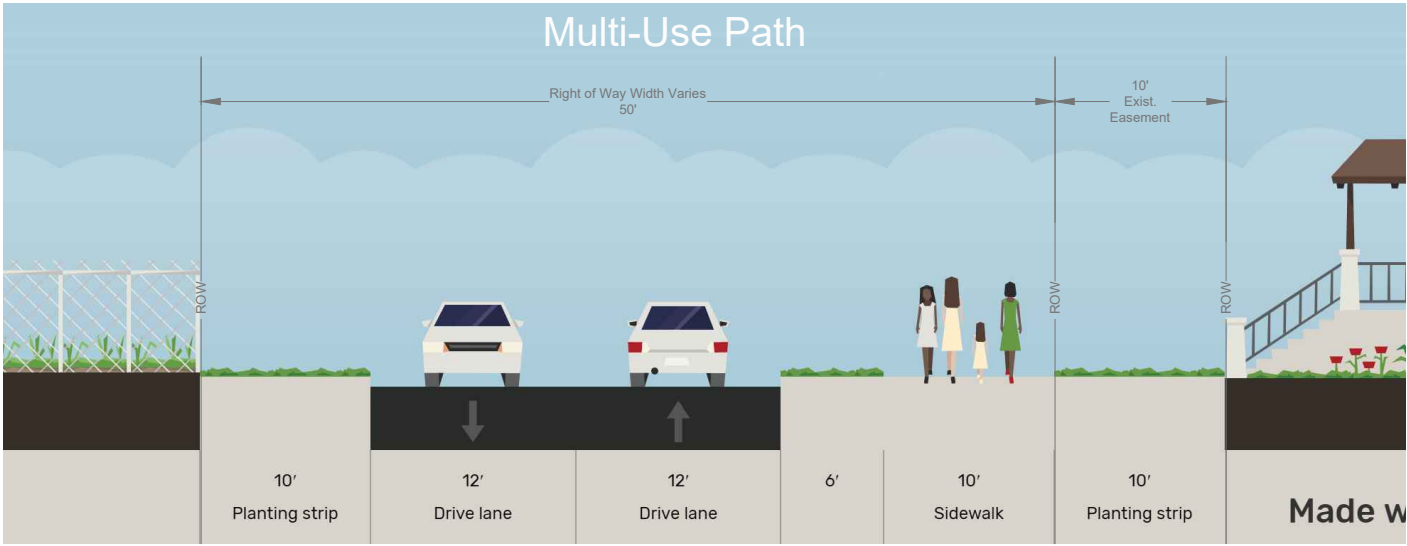
City of Stanwood - SR532 Bypass

SR532 to 272nd St NW

FIGURE

transpogroup

A
2-67



72nd Ave NW - Active Transportation Improvements

City of Stanwood - SR532 Bypass

272nd St NW to 276th St NW

FIGURE

B
2-68

PM

2035				2035				2035				2035			
Control	LOS	Delay	VC/WM	Control	LOS	Delay	VC/WM	Control	LOS	Delay	VC/WM	Control	LOS	Delay	VC/WM
1 72nd Ave NW/276th St NW	TWSC	C	18.7	NB	AWSC	B	13.4	WB							
2 72nd Ave NW/272nd St NW	TWSC	B	14.6	EB	AWSC	B	13.2	SB	Round	A	5.5	0.35	Signal	A	5.3
3 72nd Ave NW/School Dwy-New Road	TWSC	F	188.1	WB	AWSC	D	28.1	SB					Signal	A	6.6
5 72nd Ave NW/SR 532													Signal	D	49.1
6 64th Ave NW/SR 532									Round	A	5.2	0.90			

AM

2035				2035				2035				2035			
Control	LOS	Delay	VC/WM	Control	LOS	Delay	VC/WM	Control	LOS	Delay	VC/WM	Control	LOS	Delay	VC/WM
1 72nd Ave NW/276th St NW	TWSC	D	30.1	NB	AWSC	C	15.9	WB							
2 72nd Ave NW/272nd St NW	TWSC	F	57.6	EB	AWSC	E	42.9	SB	Round	A	6.4	0.43	Signal	C	21.2
3 72nd Ave NW/School Dwy-New Road	TWSC	F	1340.3	WB	AWSC	F	226.1	SB					Signal	B	10.2
5 72nd Ave NW/SR 532													Signal	D	51.4
6 64th Ave NW/SR 532									Round	A	4.8	0.81			

NOTE: The AM peak hour level of service incorporates factors to account for the very high peak volume for 15 minutes associated with the High School.