BUILDING ENTERPRISE FUND ADVISORY COMMITTEE

November 6, 2025

CLARK COUNTY NEVADA

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INTRODUCTIONS

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PUBLIC COMMENT

CLARK COUNTY NEVADA

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Review and Approval of Meeting Minutes August 7, 2025

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Approval of Agenda
November 6, 2025

CLARK COUNTY NEVADA

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Proposal from UNLV Dept of Civil Engineering and Construction Management Dept SRM2

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Seismic Risk MAP 2 (SRM2)

Southern Nevada Supplemental Airport Pilot Proposals

Publicly accessible subsurface information for planners, developers, builders and government agencies

November 6, 2025

Principal Investigators: Dr. Pramen Shrestha (UNLV), Dr. Ying Tian (UNLV) and Dr. John Louie (Terēan)

Contact: Dr. Pramen Shrestha (Dept. of Civil Engineering and Construction Management)

Presenter, Bill Honjas, Principal and Sr. Geophysicist, Terēan

UNLV

Team and Credentials

Pramen Shrestha

- Professor, Civil Eng., UNLV
- Ph.D. (UT Austin), P.E. (Texas)
- Construction cost, Engineering economic analysis
- Fellow of ASCE
- Transportation Research Board Project Delivery and Construction Management Committees

Ying Tian

- Professor, Civil Eng., UNLV
- Ph.D. (UT Austin), P.E. (Nevada)
- Earthquake engineering, Building progressive collapse
- Past Chair, ACI Committee 377
- ASCE Technical and Standard Committees for Disproportionate Collapse

John Louie

- Chief Geophysicist, Terēan
- PI for Seismic Risk Map (SRM1)
- Professor (Emeritus), Seismology, UNR
- Ph.D. (Caltech)
- Pioneering scientist for geotechnical measurements
- Past Fulbright Senior Scholar, Victoria University of Wellington, New Zealand

Contact: Dr. Pramen Shrestha (Dept. of Civil Engineering and Construction Management)

Project SRM1 Results (funded 2007-2011 by Clark County, City of Henderson, and Southern Nevada ICC)

Outcome

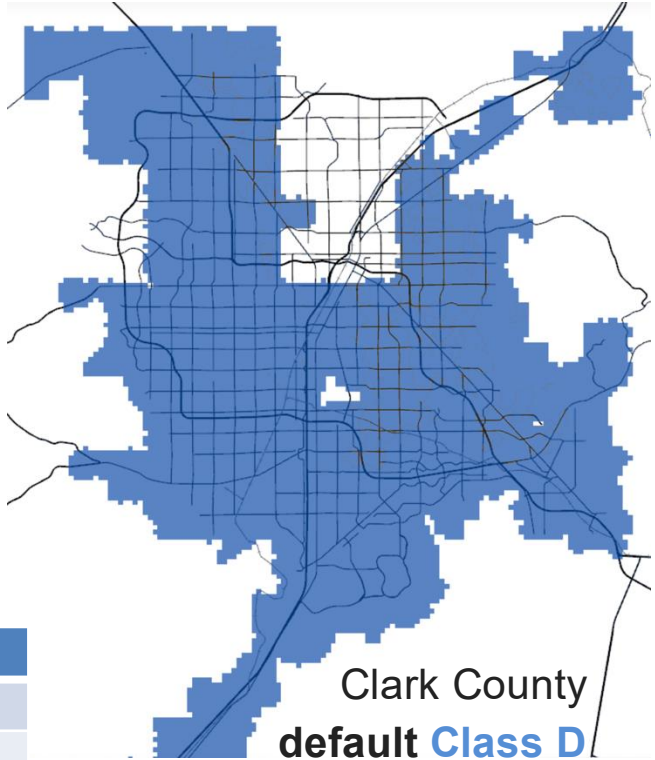
- **SRM1 completed using the CC Building Enterprise Fund at a cost of $7.5M**
- **Over 10,500 measurements**
- **83% of default Class D sites reclassified to Class C**

Impact

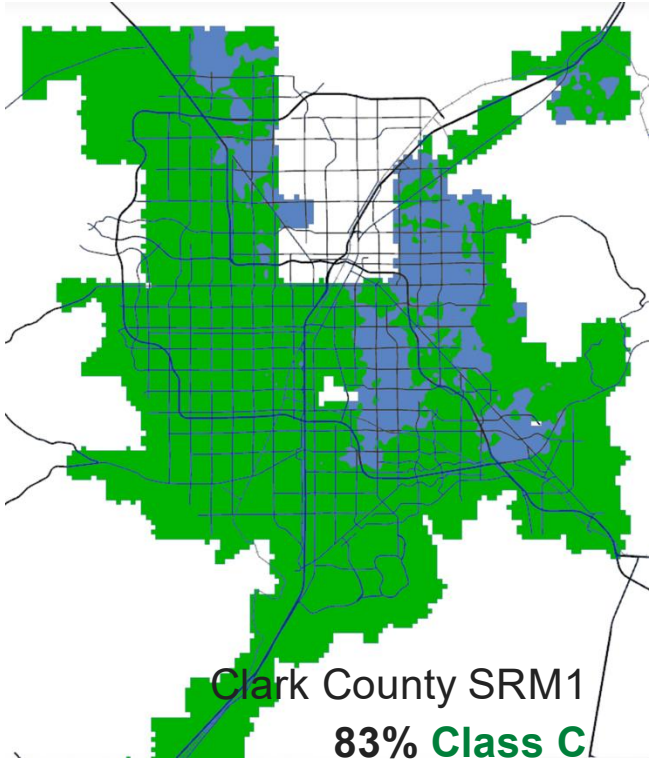
- Enhanced public safety
- Streamlined permit processes
- Data available for engineered projects at any stage of planning or development…
- **With no capital outlay required**

Site Class	Development Cost
Class B	Lower
Class C	Typical
Class D	Higher

Before SRM1



After SRM1

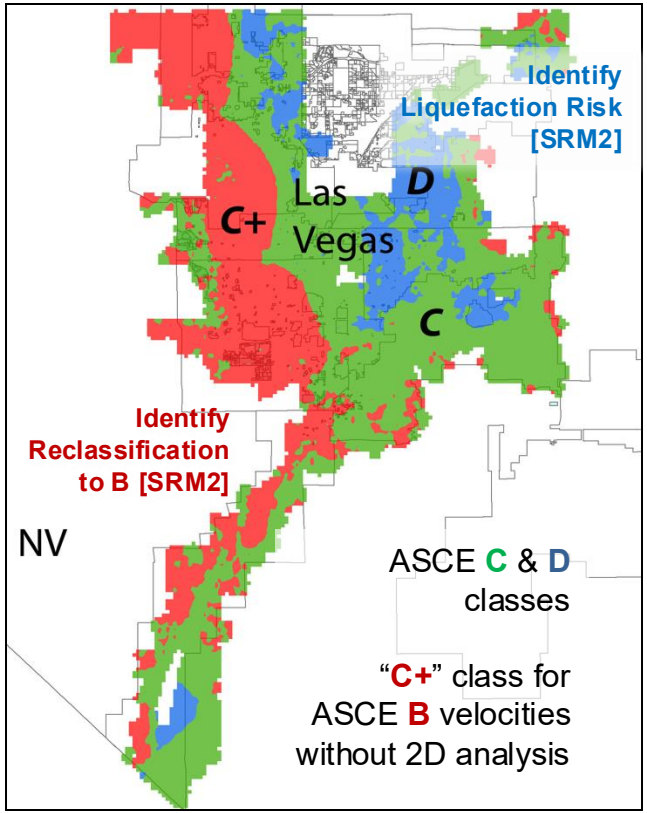


Contact: Dr. Pramen Shrestha (Dept. of Civil Engineering and Construction Management)

Proposed SRM2: Enhancing SRM1 County-wide to further increase value

14,000+ new seismic measurements integrated with 10,500+ SRM1 datasets to generate publicly available 2D and 3D subsurface models and refined site-class mapping.

- Identify and reclassify sites from Classes D to C, B, or A – increasing real-property value and reducing construction costs.
- Support engineers in evaluating faults and liquefaction potential, streamlining permitting, planning, and design timelines.
- Expand SRM coverage to include both existing and planned developments since 2010, enabling broader parcel reclassification and higher project valuations.



Portion of SRM1 (Clark County)

Contact: Dr. Pramen Shrestha (Dept. of Civil Engineering and Construction Management)

Proposed SRM2: Conservatively Estimated Construction & Retrofit Savings

New Constructions

Assuming structural costs (material and labor) account for 25% of total cost, and site reclassification reduces 3% structural costs

- Residential parcels (80%)
  - 10% of the parcels will be used for new buildings, **saving = $100 millions**
- Commercial parcels (20%)
  - Example: Southern Nevada Supplemental Airport (SNSA), (area = 2.6 million ft^2), **saving = $36 millions for this project ONLY**

Seismic Retrofit for Older Buildings

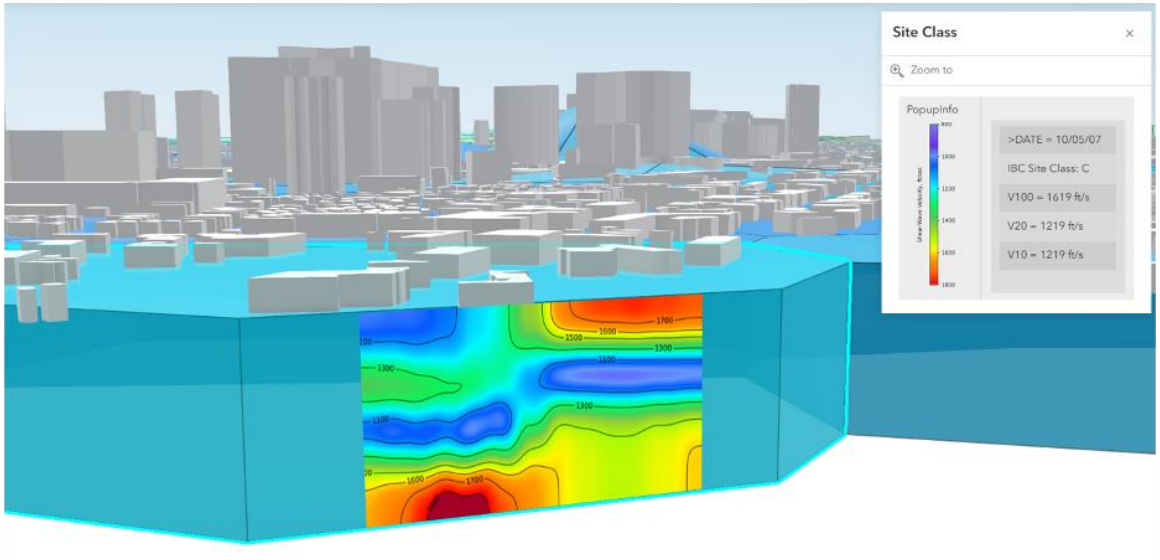
- Seismic retrofits are often costly due to structural work, business downtime, relocation, and engineering fees.
- Average cost of seismic retrofit is **$66/$ft^2$** (Fung et al., 2021, The Total Costs of Seismic Retrofits: State of the Art, Earthquake Spectra, 37(4)).
- Reclassifying from Site Class D to C reduces seismic design loads – significantly lowering or even eliminating retrofit requirements for many structures.

Contact: Dr. Pramen Shrestha (Dept. of Civil Engineering and Construction Management)

3-D ArcGIS Online Database

Create an ArcGIS Online database with **publicly accessible interactive layers** to visualize and communicate subsurface conditions.

- **Leverages the value of SRM1 data and combines it with thousands of new SRM2 data into 3D community models**, enabling ASCE **reclassification from D to C, B or A**
- **Expands regional data coverage** to create an **interactive 3D model to 100-ft depth**, accessible to both engineers and the public
- **Improves design efficiency** by providing **liquefaction assessment and foundation parameters** for structural planning
- **Reduces permitting, planning, and construction costs -** for the **Ivanpah Airport and co-development area ONLY** by an estimated minimum **$36 million**



Information shared via Clark County's 3D GIS platform
Delivering public insight into seismic site conditions for future development.

Contact: Dr. Pramen Shrestha (Dept. of Civil Engineering and Construction Management)

Summary of Positive Impacts of Proposed SRM 2 Project

UNLV

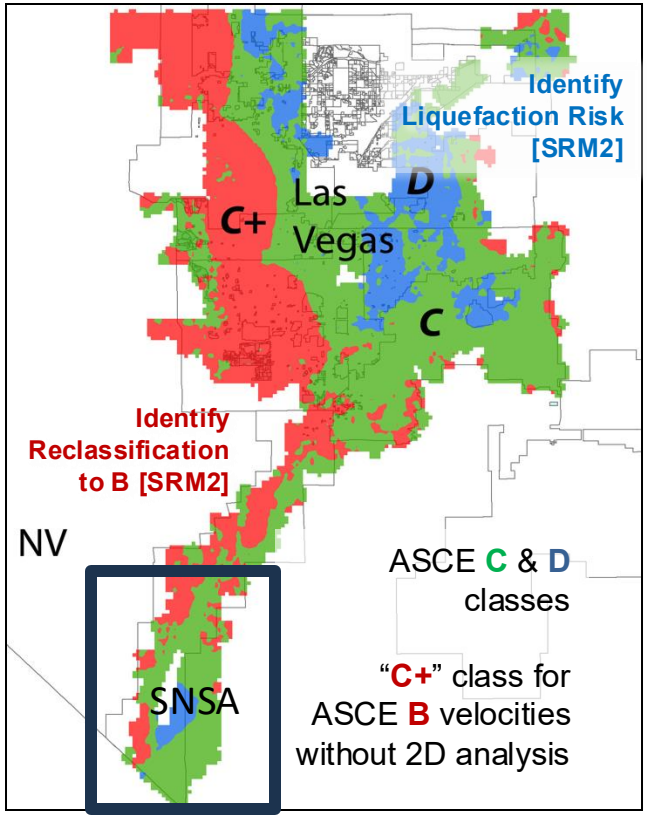
- **Improved Public Safety**
  - "Universal" Publicly available seismic hazard information protects building occupants
  - SRM-2 results shared with Clark County and updated quarterly
  - **Direct Cost-Benefit to Builders, Developers, and Government**
  - Significant savings during planning, geotechnical, and structural design for both new and existing buildings
  - **Conservatively estimated $100 million in savings** for new construction, increasing over time
  - **Return on investment (ROI): ~10×, as "fixed digital infrastructure" advnces ROI continually**
  - Substantial **property value increases** for reclassified parcels
- **Transparent Information Sharing**
  - Results integrated into the **Clark County 3D GIS** for easy access by builders, planners, and the public
- **Strengthened Education & Workforce Development**
  - Builds local capacity and technical expertise and workforce development for continued economic growth

Contact: Dr. Pramen Shrestha (Dept. of Civil Engineering and Construction Management)

Alternative Proposal: SRM2 Pilot – Southern Nevada Supplemental Airport (SNSA)

This focused pilot achieves similar goals as the SRM2 program on a **smaller, faster, and lower-cost scale**.

- **Ivanpah Valley** selected because it is the site of the proposed **Southern Nevada Supplemental Airport (SNSA)** and its **associated co-development corridor**.
- Integrates **new** seismic measurements with 10,500+ SRM1 data to generate new 2D and 3D subsurface models and refined site classifications.
  - Assisting engineers in assessment of **fault** and **liquefaction potential** across both SRM1 & SNSA areas.
- **30%+** of the area expected to be **reclassified to Class C, B or A**, increasing property value and reducing construction costs.
- Extends SRM coverage beyond SRM1 limits.
- **Estimated $36 M savings in airport planning and design.**



Portion of SRM1 (Clark County)

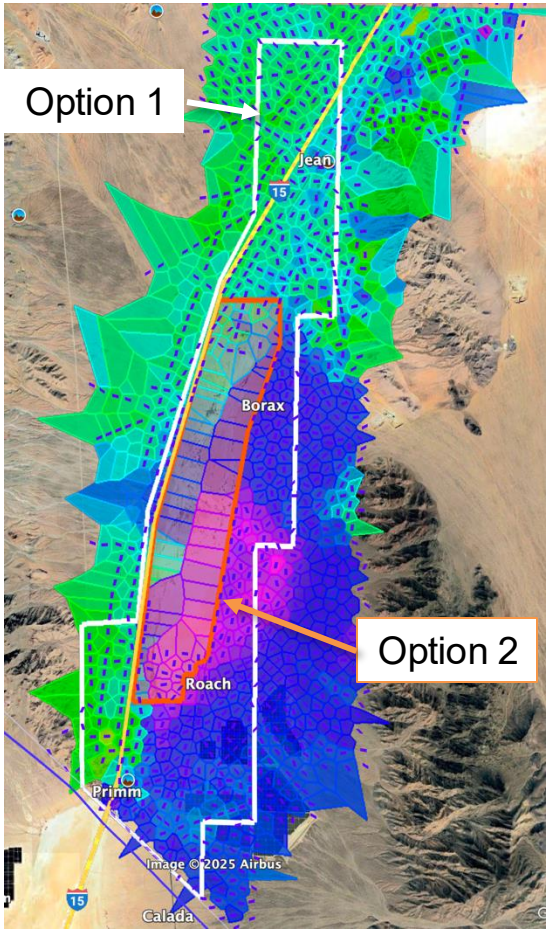
Contact: Dr. Pramen Shrestha (Dept. of Civil Engineering and Construction Management)

SNSA Option 1:

- **White line** - SNSA site plus compatibility buffer
- 12,000 measurements over 23,000 acres
- Total estimated permitting, planning and building cost savings
  - **Airport footprint savings estimated $36M+**
  - **Buffer** commercial and industrial development **savings $72M+**
- Results returned to CC quarterly assessing site re-classification
- Publicly available 3D GIS results (faults, liquefaction potential)
- Development planning tool for SNSA compatibility buffer

SNSA Option 2:

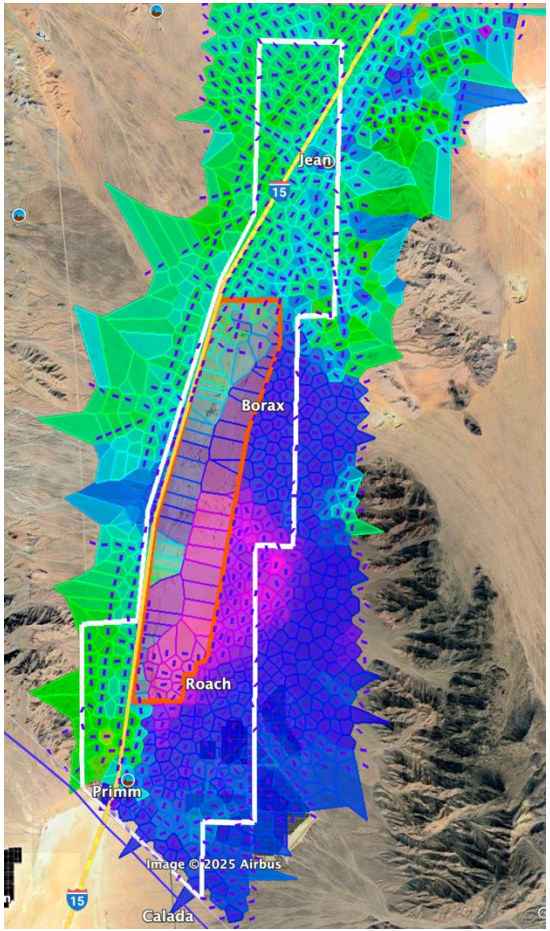
- **Orange line** - SNSA site
- 2,600 measurements over 6,000 acres
- Total estimated permitting, planning and building cost savings
  - **Airport footprint savings estimated $36M+**
- Results returned to CC quarterly assessing site re-classification
- Publicly available 3D GIS results (faults, liquefaction potential)



Contact: Dr. Pramen Shrestha (Dept. of Civil Engineering and Construction Management)

UNLV SNSA Site Characterization

Project Cost Allocation Summary	UNLV: ArcGIS data base development, public safety & economic impact assessment, workforce development	Terean: Field data acquisition, compilation, processing, delivery of ASCE-compliant 1D & 2D results to CC & UNLV	Total
Option 1 (White line)	$2.5 million	$3.25 million	$5.75 million
Option 2 (Orange line)	$2 million	$2.6 million	$4.6 million



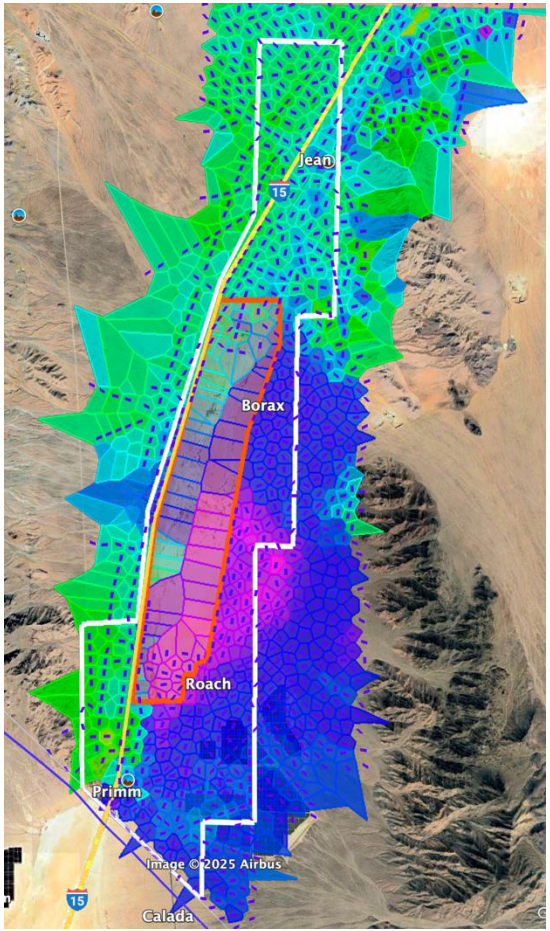
Portion of SRM1

Contact: Dr. Pramen Shrestha (Dept. of Civil Engineering and Construction Management)

UNLV SNSA Site Characterization Value Proposition

Site Characterization Method	Measurements	Cost per Measurement	Total Cost
UNLV SNSA Option 1	12,000	$480 **(76% less)**	$5.75M
UNLV SNSA Option 2	2,600	$1,769 **(11% less)**	$4.6M
Conventional Cost*	2,600 - 12,000	$2,000 (+)	$5.2M - $24M (+)

*In addition to “conventional” 1-Dimensional results, UNLV SRM2 deliverables will include 2D and 3D publicly available GIS models to support liquefaction and fault assessment, and will also serve as a planning engineering, design tool for builders, developers, government and the public.



Portion of SRM1

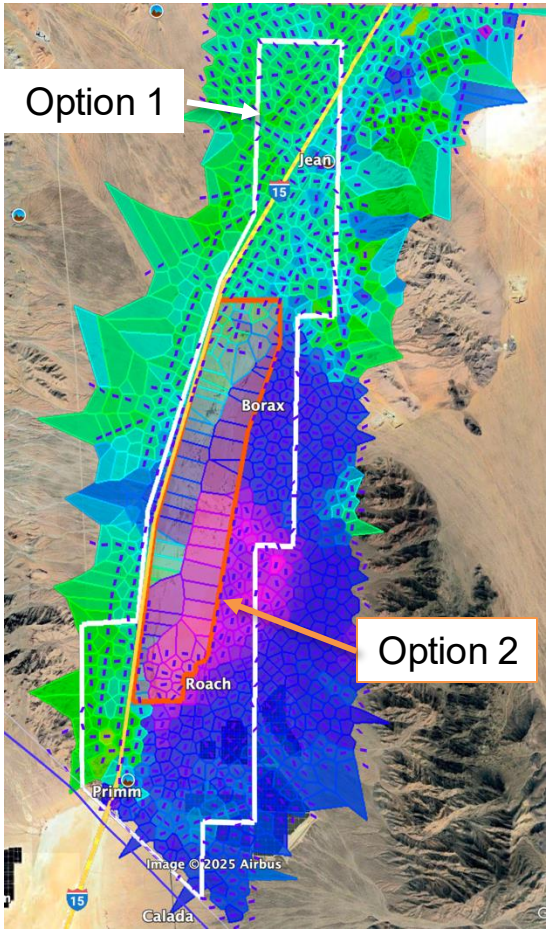
Contact: Dr. Pramen Shrestha (Dept. of Civil Engineering and Construction Management)

SNSA Option 1 ($5.75 m over 36 months):

- **White area** - SNSA site plus compatibility buffer
- 12,000 measurements over 23,000 acres
- Total estimated permitting, planning and building cost savings
  - **Airport footprint savings $36M+**
  - **Buffer** commercial and industrial development **savings $72M+**
- Results returned to CC quarterly assessing site re-classification
- Publicly available 3D GIS results (faults, liquefaction potential)
- Development planning tool for SNSA compatibility buffer

SNSA Option 2 ($4.6m over 24 months):

- **Orange area** - SNSA site
- 2,600 measurements over 6,000 acres
- Total estimated permitting, planning and building cost savings
  - **Airport footprint savings $36M+**
- Results returned to CC quarterly assessing site re-classification
- Publicly available 3D GIS results (faults, liquefaction potential)



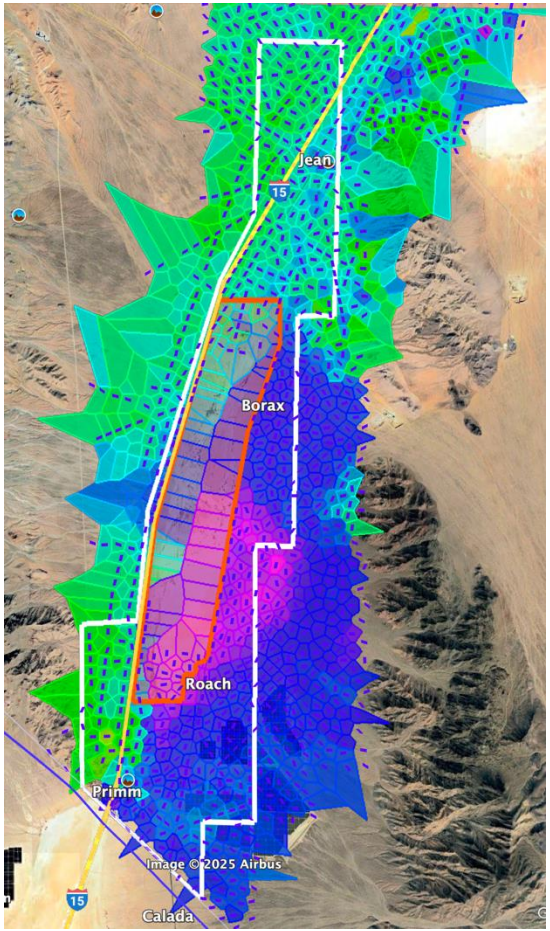
Contact: Dr. Pramen Shrestha (Dept. of Civil Engineering and Construction Management)

SRM2 Actions Requested from BEFAC:

A) A motion to recommend **SNSA Option 1** allocating $5.75 M of the Enterprise Fund for SRM2 mapping by UNLV of the SNSA site and its compatibility buffer. *(white outline)*

OR:

B) A motion to recommend **SNSA Option 2** allocating $4.76 M of the Enterprise Fund for SRM2 mapping by UNLV of the Ivanpah Airport site. *(orange outline)*



Contact: Dr. Pramen Shrestha (Dept. of Civil Engineering and Construction Management)

Thank You

BUILDING ENTERPRISE FUND FINANCIAL UPDATE

CLARK COUNTY NEVADA

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DEPARTMENTAL PERFORMANCE DATA

CLARK COUNTY NEVADA

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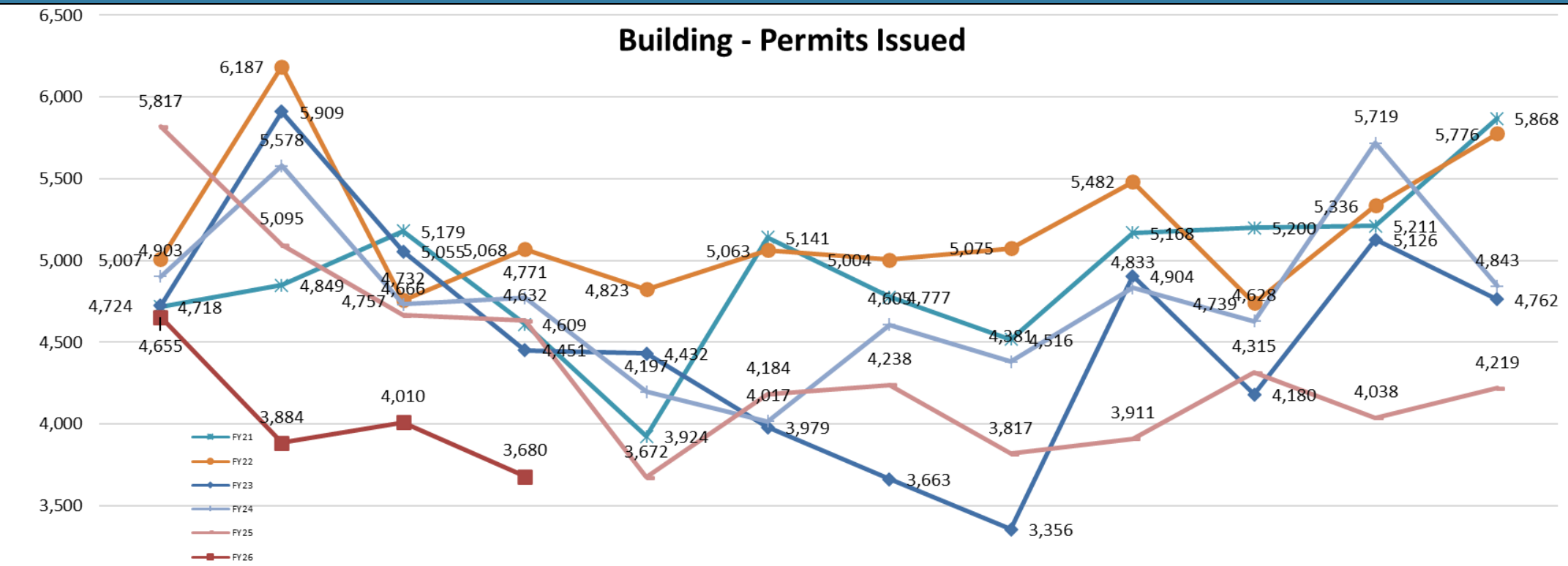
Building - Permits Issued

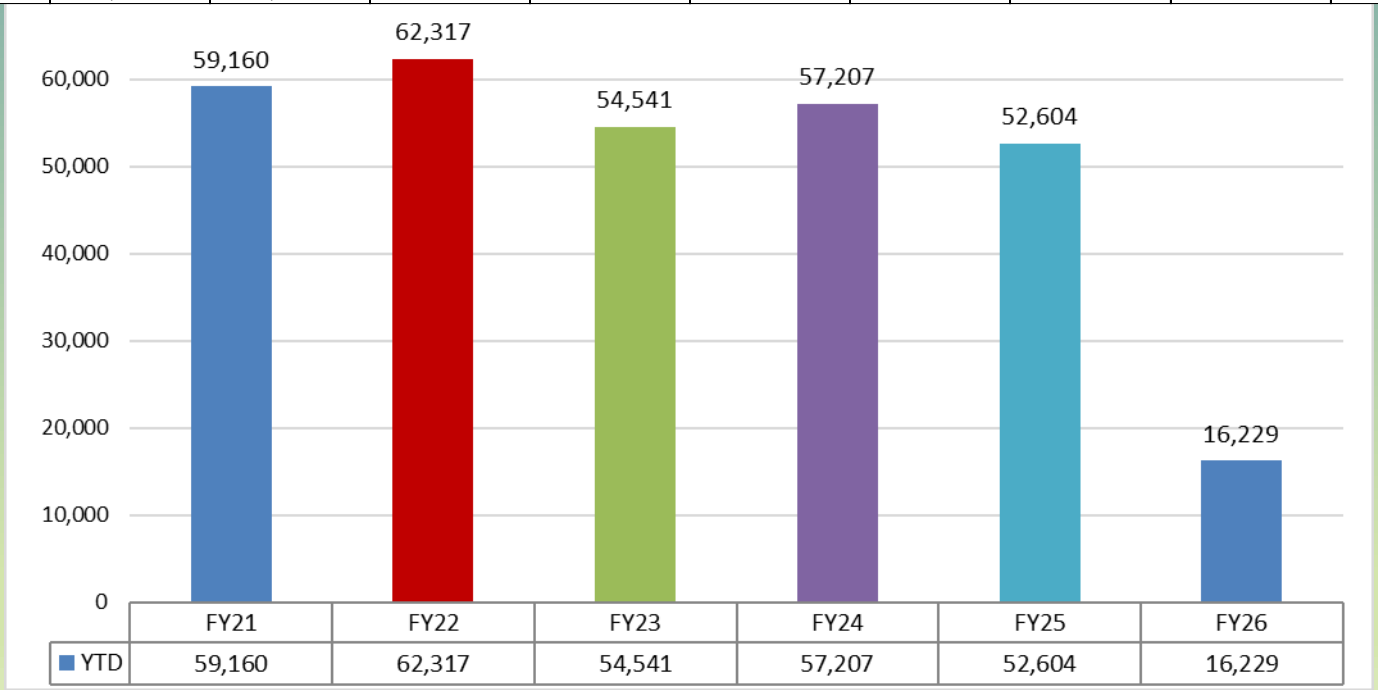


	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
FY21	4,718	4,849	5,179	4,609	3,924	5,141	4,777	4,516	5,168	5,200	5,211	5,868
FY22	5,007	6,187	4,757	5,068	4,823	5,063	5,004	5,075	5,482	4,739	5,336	5,776
FY23	4,724	5,909	5,055	4,451	4,432	3,979	3,663	3,356	4,904	4,180	5,126	4,762
FY24	4,903	5,578	4,732	4,771	4,197	4,017	4,605	4,381	4,833	4,628	5,719	4,843
FY25	5,817	5,095	4,666	4,632	3,672	4,184	4,238	3,817	3,911	4,315	4,038	4,219
FY26	4,655	3,884	4,010	3,680								

Building Permits Issued - Fiscal Year Comparison

Through OCTOBER 2025

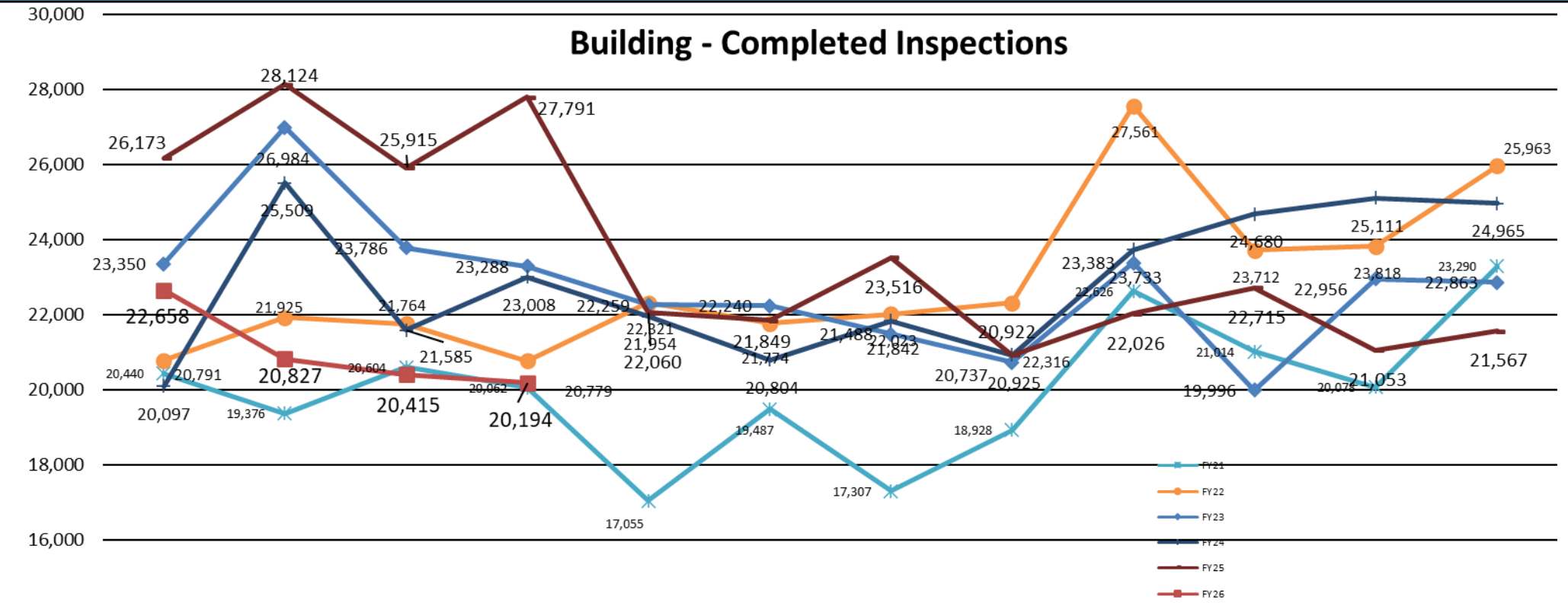
	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	YTD
FY21	4,718	4,849	5,179	4,609	3,924	5,141	4,777	4,516	5,168	5,200	5,211	5,868	59,160
FY22	5,007	6,187	4,757	5,068	4,823	5,063	5,004	5,075	5,482	4,739	5,336	5,776	62,317
FY23	4,724	5,909	5,055	4,451	4,432	3,979	3,663	3,356	4,904	4,180	5,126	4,762	54,541
FY24	4,903	5,578	4,732	4,771	4,197	4,017	4,605	4,381	4,833	4,628	5,719	4,843	57,207
FY25	5,817	5,095	4,666	4,632	3,672	4,184	4,238	3,817	3,911	4,315	4,038	4,219	52,604
FY26	4,655	3,884	4,010	3,680									16,229



Building Permit Volume Trends

- Down 17.2% in 2025 compared to 2024 (January through October)
- Down 19.7% in FY26 compared to FY25 (July through October)

Building - Completed Inspections

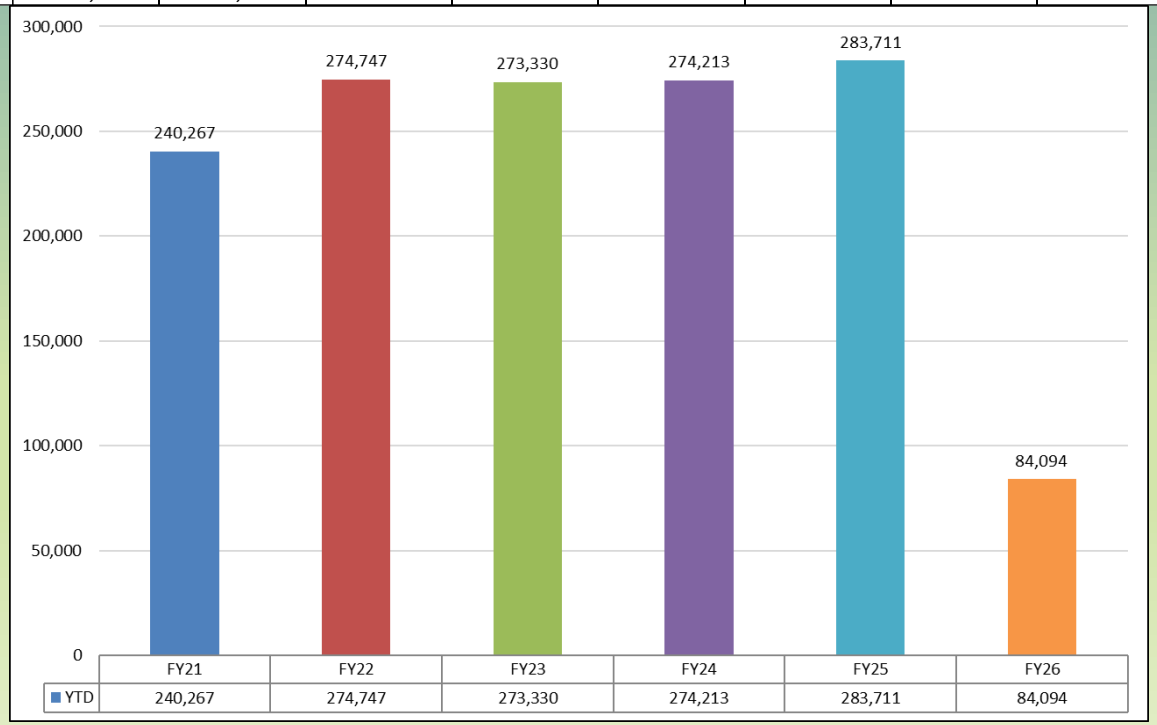


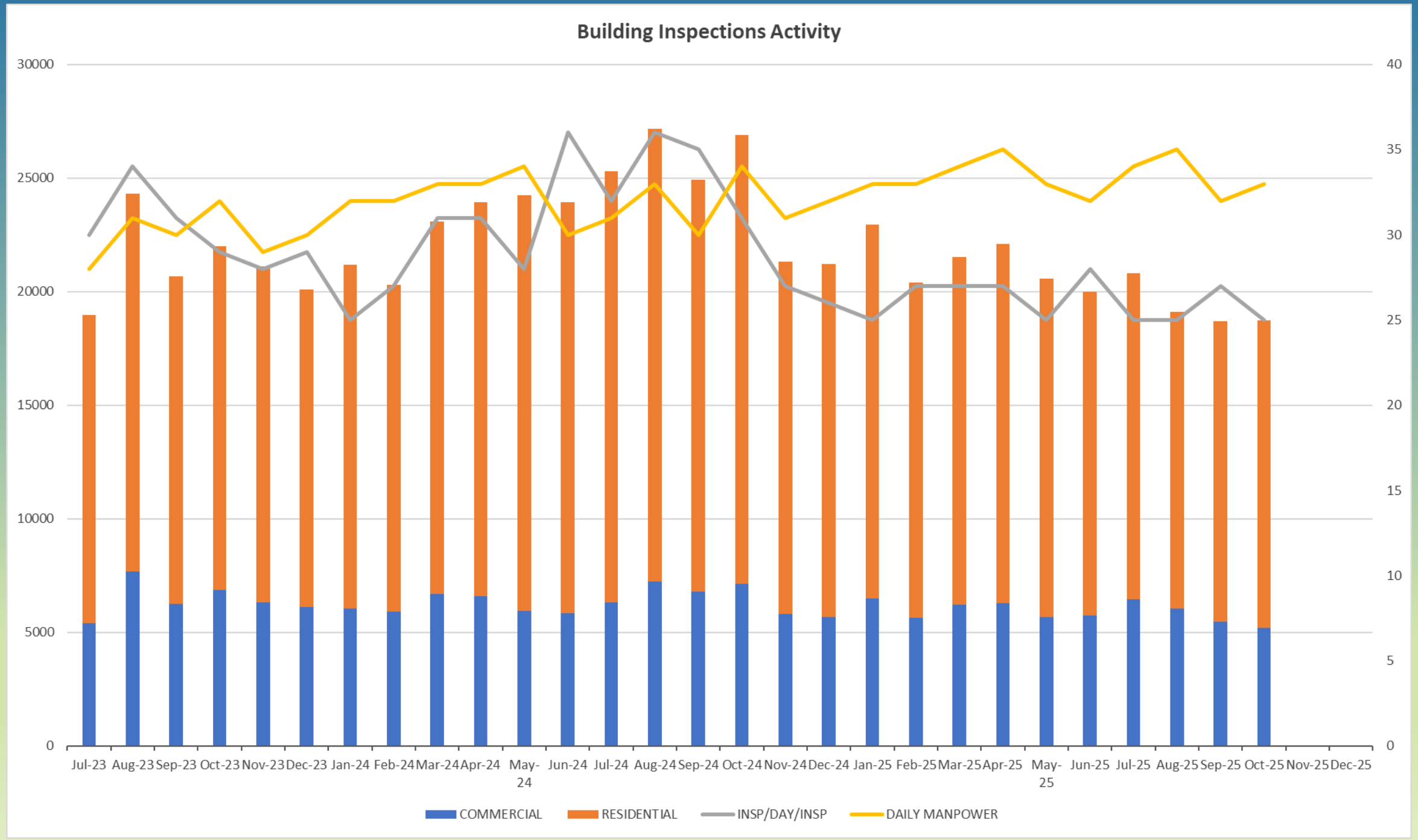
	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
FY21	20,440	19,376	20,604	20,062	17,055	19,487	17,307	18,928	22,626	21,014	20,078	23,290
FY22	20,791	21,925	21,764	20,779	22,321	21,774	22,023	22,316	27,561	23,712	23,818	25,963
FY23	23,350	26,984	23,786	23,288	22,259	22,240	21,488	20,737	23,383	19,996	22,956	22,863
FY24	20,097	25,509	21,585	23,008	21,954	20,804	21,842	20,925	23,733	24,680	25,111	24,965
FY25	26,173	28,124	25,915	27,791	22,060	21,849	23,516	20,922	22,026	22,715	21,053	21,567
FY26	22,658	20,827	20,415	20,194								

Building Completed Inspections- Fiscal Year Comparison

Through OCTOBER 2025

	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	YTD
FY21	20,440	19,376	20,604	20,062	17,055	19,487	17,307	18,928	22,626	21,014	20,078	23,290	240,267
FY22	20,791	21,925	21,764	20,779	22,321	21,774	22,023	22,316	27,561	23,712	23,818	25,963	274,747
FY23	23,350	26,984	23,786	23,288	22,259	22,240	21,488	20,737	23,383	19,996	22,956	22,863	273,330
FY24	20,097	25,509	21,585	23,008	21,954	20,804	21,842	20,925	23,733	24,680	25,111	24,965	274,213
FY25	26,173	28,124	25,915	27,791	22,060	21,849	23,516	20,922	22,026	22,715	21,053	21,567	283,711
FY26	22,658	20,827	20,415	20,194									84,094




Building Inspections Activity
30000
25000
20000
15000
10000
5000
0
40
35
30
25
20
15
10
5
0
Jul-23
Aug-23
Sep-23
Oct-23
Nov-23
Dec-23
Jan-24
Feb-24
Mar-24
Apr-24
May-24
Jun-24
Jul-24
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Mar-25
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Jun-25
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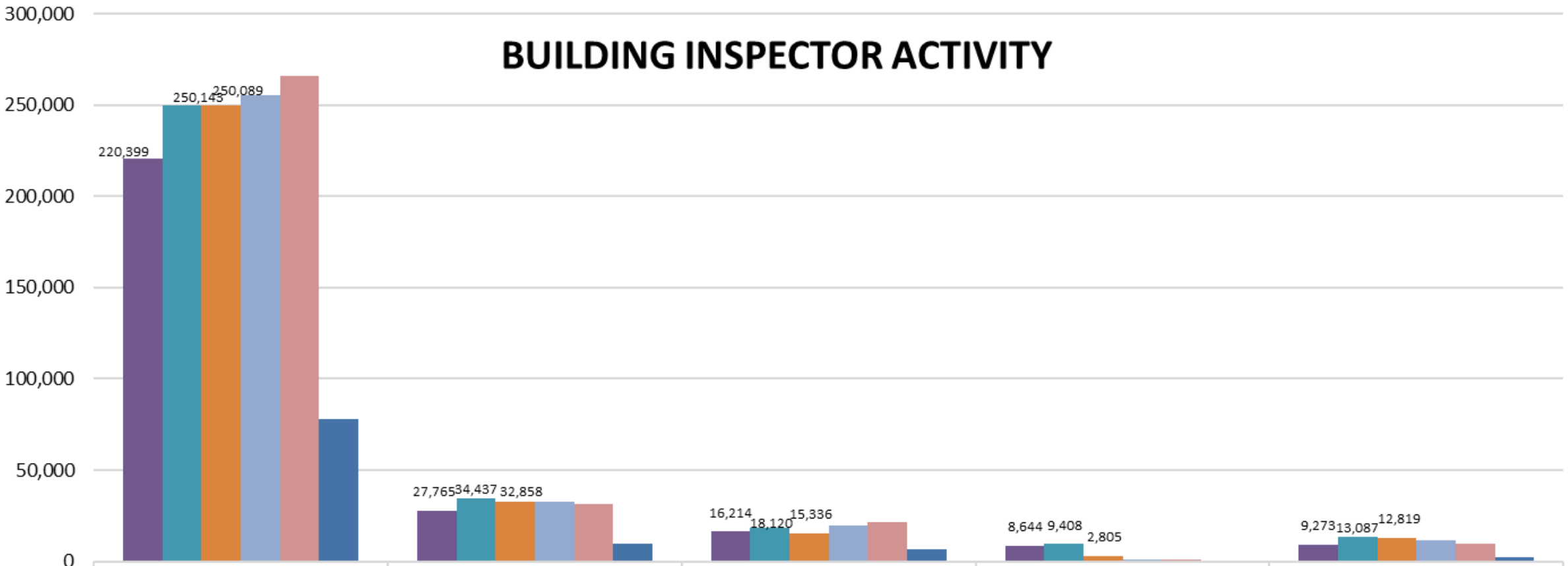
Sep-25
Oct-25
Nov-25
Dec-25
COMMERCIAL
RESIDENTIAL
INSP/DAY/INSP
DAILY MANPOWER

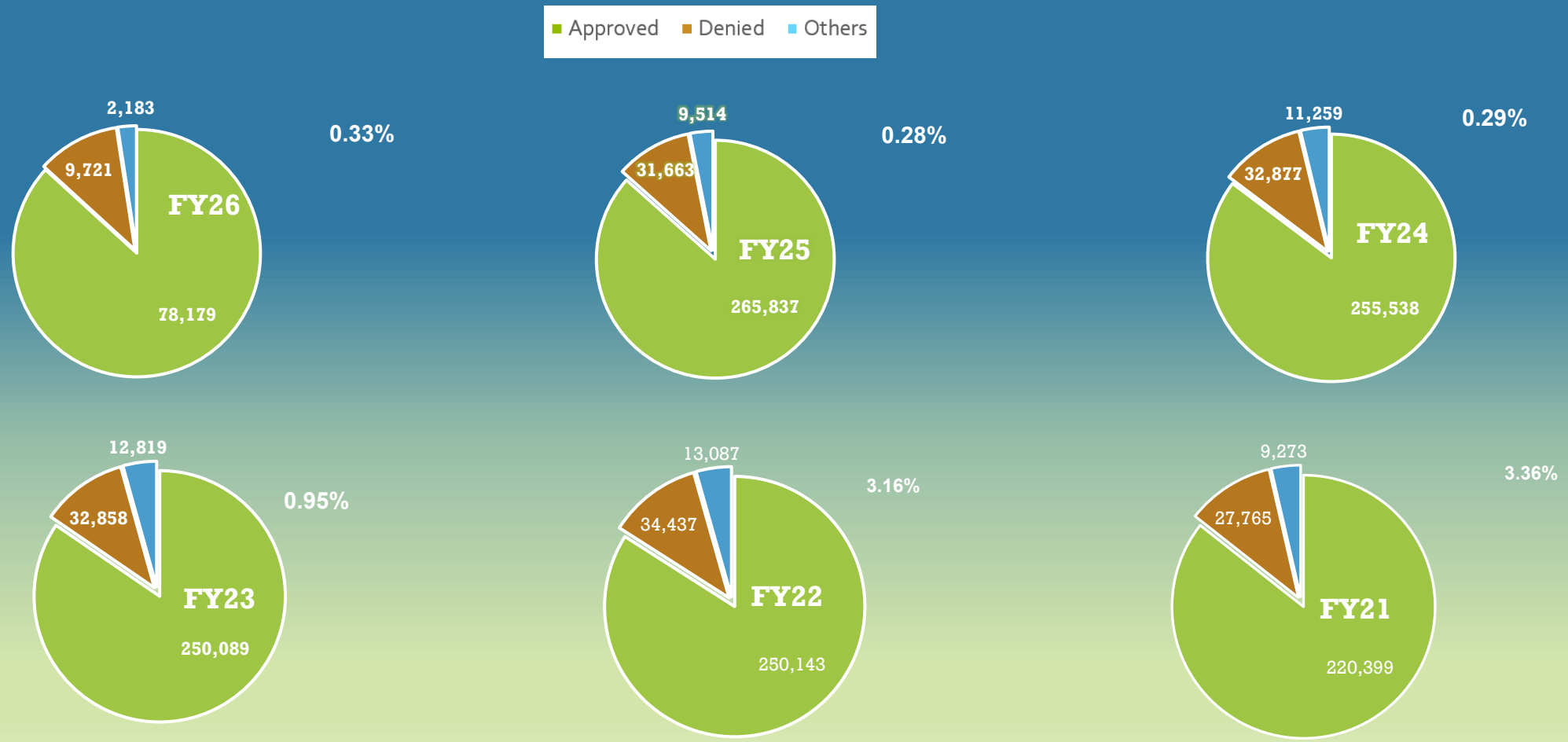
BUILDING INSPECTOR ACTIVITY



	Approved	Denied	Cancelled	Rollover	Others
FY21	220,399	27,765	16,214	8,644	9,273
FY22	250,143	34,437	18,120	9,408	13,087
FY23	250,089	32,858	15,336	2,805	12,819
FY24	255,538	32,877	19,797	857	11,259
FY25	265,837	31,663	21,343	847	9,514
FY26	78,179	9,721	6,279	299	2,183

BUILDING INSPECTOR ACTIVITY
Rollover Data by Fiscal Year

Rollover Data	FY21	FY22	FY23	FY24	FY25	FY26	TOTAL
	3.36%	3.16%	0.95%	0.29%	0.28%	0.33%	1.39%



Building Inspection Volume Trends

- Down 13.0% in 2025 compared to 2024 (January through October)
- Down 20.9% in FY26 compared to FY25 (July through October)

Plan Review Timeliness

January 2025 through October 2025

- Phased Projects: 99.23%
- Commercial 21-Day (>$250K): 98.25%
- Commercial 14-Day (≤$250K): 98.94%
- Commercial 7-Day (≤$100K): 99.33%
- Residential 21-Day: 99.09%
- Residential 14-Day: 99.30%
- Residential 7-Day: 99.00%
- Standard Plans (21-Day): 97.69%
- Revisions (10-Day): 99.27%

OVERALL: 99.09%

Target Goal is 90%

DEPARTMENTAL STAFFING UPDATE

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Staffing Updates

- Current staffing total: 169 (including PT Mgmt. Assistants)
- Total Funded Positions: 182
- Current vacancy rate: 11.54% (includes all vacant positions including approved supplemental positions) 21 vacant positions
- Currently recruiting for:
  - Building Inspector I/II
  - Senior Financial Office Specialist
  - Plans Examiner
  - Senior Building Inspector (ACET) 2

Staffing Updates

New Hires

8/7/2025 to Present

Effective Date	Position	Employee Name
9/29/2025	Building Permit Specialist	Brandon Tan
9/15/2025	Building Permit Specialist	Katie Bradley
11/24/2025	Office Assistant	Charles "Riley" Ison

Staffing Updates

Promotions

8/7/2025 to Present

Effective Date	Position	Employee Name
8/30/2025	Sr Building Inspector	Jay Rosenberg
8/30/2025	Building Permit Specialist	Isiah Stroud
8/30/2025	Sr Building Inspector	Jared Tusko

Staffing Updates
Upcoming Retirements

- PAC
  - Shannon McEwen – 12/04/2025
- Inspections
  - Supervising Building Inspector (1)
    - Brian Johnson – 2/2026
  - Senior Building Inspectors (5)
    - Leo Downey – 5/2026
    - Earl Hamilton – 3/2026
    - Dan Jamieson – 5/2026
    - Kirk Reese – 5/2026
    - Al Green – 11/2026
  - Commercial Combo Inspectors (4)
    - Glenn Weidman – 12/31/2025
    - Robert Sidebottom – 1/2026
    - Tim Robinson – 3/2026
    - Tommie Franklin – 5/2026

CAPITAL IMPROVEMENT PROJECTS UPDATE

CLARK COUNTY NEVADA

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Capital Improvement Projects

- Covered Parking: $6,367,627 (SHF International with Baja Construction)
  - 100% completion in August
- Misc. space improvements
  - PAC/Plans Examination cubicle reconfiguration - $1,477,997
    - Construction to start in December 2025
  - IT area reconfiguration/remodel
  - Accessible controls for badged entry at rear employee entrance
  - New office for Senior Management Analyst-Records
    - Completed in September ($16,268.68 purchase order)

5- and 10- Year Space Utilization Study

- Carpenter Sellers Del Gatto Architects
  - Two separate projects for "Russell Campus Masterplan 2.0"
    - Lobby/First Floor Renovation (Pre-design through CA services for DBB delivery)
      - Redesign of first floor with new County standard furniture
      - Renovate existing restrooms and breakrooms (including accessibility improvements)
      - Renovate public counters with partitions, windows, access-control (security)
    - Building Expansion (Pre-design only)
      - Presentation Room #2
      - Auditorium
      - Capture Inspections patio area for additional building space
  - Design Fee Estimate: $2,201,595
  - Project Cost Estimate for Budget Purposes: $22,532,869

ECONOMIC OUTLOOK
FROM BEFAC MEMBERS

CLARK COUNTY NEVADA

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PROPOSE ITEMS FOR FUTURE AGENDA

CLARK COUNTY NEVADA

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SET NEXT COMMITTEE MEETING DATE

CLARK COUNTY NEVADA

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PUBLIC COMMENT

CLARK COUNTY NEVADA

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