cityofnovi.org

CITY OF NOVI

SUPPLEMENTARY BUILDING & TRADE INSPECTION SERVICES AND PLAN REVIEW SERVICES- RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL BUILDINGS

VENDOR QUESTIONNAIRE

Failure to answer all questions could result in rejection of your proposal. Please attach additional sheets if necessary.

Name of Firm: Carlisle Wortman Associates, Inc.

Address: 117 N. 1st Street Suite 70

City, State Zip Ann Arbor, MI 48104

Telephone (734) 662-2200 Fax (734) 662-1935

Mobile (734) 585-6900

Agent's Name Michael Radzik

Agent's Title Operations Manager

Email Address: mradzik@cwaplan.com

Website https://www.cwaplan.com

1. Organizational structure: Corporation
2. Firm established: 1984
3. Has your firm filed for Chapter 7 or Chapter 11 within the last ten (10) years?
   No
4. Under what other or former names has your organization operated?
   Code Enforcement Services, Inc
5. How many full time employees? 40 Part time? 25
6. How many years has your company been providing inspection and plan review services? 29 years
7. How many clients does your company currently serve with the type of services described?
   Approximately 35.

8. Please provide a complete description of the services you will provide for the City.

CWA will provide complete construction code plan review services for all types of construction projects. We will verify code compliance with all applicable State of Michigan construction codes. We will also be available anytime to provide expert code consultation and code interpretation advice.

We will also provide building, mechanical, electrical, and plumbing inspectors on a regularly scheduled or "as-needed" basis to perform permit inspections, record inspection results, and provide code consultation as required.

9. What are the qualifications of your staff and/or consultants that will be doing the inspections? Include all applicable registrations and certifications. Attach additional sheets if necessary.

All plan reviewers and inspectors are properly trained, experienced and registered in their specific disciplines with the State of Michigan, Bureau of Construction Codes. Copies of individual state registrations for staff assigned to assist the City of Novi shall be provided upon acceptance of this proposal.

10. What are your billing procedures?

CWA invoices clients by mid-month on a monthly basis for work performed the previous month. Payment is expected within 30 days of receipt. We are understanding and flexible with municipal expense approval processes and ask to be kept informed as necessary.

11. Additional information / Points not covered. Attach additional sheets if necessary.

None.

12. References: Provide at least three (3) client references. Include name address, phone, contact person and briefly describe scope of services.

Company: City of Troy

Address: 500 W. Big Beaver Rd Troy, Michigan 48084

Phone: 248-524-3352 Contact name: Salim Huerta

Scope of services: Commercial construction plan review and fill-in inspections.

Company: City of Ann Arbor

Address: 301 E. Huron St. Ann Arbor, MI 48104

Phone: 734-417-9090 Contact name: Mike Lemieux

Scope of services: Construction plan review and trade inspections.

Company: Pittsfield Township

Address: 6201 W. Michigan Ave. Ann Arbor, MI, 48108-9721

Phone: 734-822-3129 Contact name: Chris Svihra

Scope of services: Construction plan review.

13. Can you meet the City's insurance requirements? **Yes X** No

14. Please provide a copy of your inspection checklists.

Yes **No X**

Inspectors do not use checklists; we use ICC checklists only when necessary.

15. Our fee proposal is included in a separate sealed envelope.

Yes X No

16. Claims & Suits: Does your firm have any litigation pending or outstanding against your organization or its officers? If yes, please provide details.

No X Yes

THE FOREGOING QUESTIONNAIRE IS A TRUE STATEMENT OF FACTS:

Signature of Authorized Company Representative:

Representative's Name (please print): Michael Radzik – Operations Manager

Date: January 7, 2025

Carlisle | Wortman Associates

SUPPLEMENTARY BUILDING & TRADE INSPECTION AND PLAN REVIEW SERVICES

January 7, 2025

PREPARED FOR

CITY OF NOVI

CARLISLE WORTMAN ASSOCIATES, INC
117 N. FIRST STREET, SUITE 70
ANN ARBOR, MI 48104
(734) 662-2200
https://cwaplan.com

TABLE OF CONTENTS

WELCOME TO CARLISLE | WORTMAN ASSOCIATES, INC

Carlisle | Wortman Associates (CWA) is a municipal services consulting firm doing business exclusively in the State of Michigan. We are a Michigan corporation headquartered at 117 N. First St., Suite 70, in downtown Ann Arbor, MI 48104. The firm's principal officers are President Benjamin Carlisle, Vice President John Enos, principals R. Donald Wortman, Doug Lewan, Dave Scurto, Sally Elmiger, Craig Strong, Paul Montagno, Laura Kreps, Brent Strong, and Senior Principal Richard Carlisle.

CWA has been providing high quality planning and zoning services for more than 40 years, and construction code services for nearly 30 years. You may have been familiar with our former division known as Code Enforcement Services established in 1996. We're centrally located in Ann Arbor convenient to clients in Southeast and Mid-Michigan. Since initially specializing in plan review, our Construction Code Services division has expanded to include construction code consultation, permit fee studies, building department administration and performance auditing, building, trade and property maintenance inspections, rental housing certification and point-of-sale inspections to our growing menu of professional services.

Construction plan review services are performed at our main office in downtown Ann Arbor, Michigan. However, most of our employees are embedded at the municipal offices we serve on an ongoing or on-demand basis. When you partner with Carlisle Wortman Associates, you never need to be concerned about potential conflicts of interest. By choice, we *only* work for the benefit of municipal clients. It is our firm's distinct honor and privilege to assist local, county, and regional government entities in their quest to provide equitable, efficient, and cost-effective public services to their residents and businesses.

Thank you for taking time to learn about our growing menu of professional municipal services. CWA helps bridge the gap many cities face with ever-changing workload demands during the ups and downs of economic business cycles and surges in development activity. Whether you're looking for expert help to provide basic government services or have a unique special need or project, don't hesitate to contact us to explore how we can help!

QUALIFICATIONS AND EXPERIENCE

Our Construction Code Services division provides dependable construction plan review and inspection services, as well as expert consultation on complicated construction code and administrative issues. We provide code consultation, training, and qualified personnel to review construction plans as needed in a timely and professional manner.

Our experienced and certified plan reviewers are called upon to:

- Evaluate plans quickly and thoroughly (more than 8,000 individual plans reviewed in the last five years alone)
- Clear up municipal backlogs due to staffing issues
- Handle unique and large-scale commercial projects on deadline
- Provide consultation services that instill *confidence* in your code interpretations and enforcement decisions
- Deal directly with design professionals to resolve code compliance issues in an atmosphere of mutual respect
- Avoid conflicts of interest through guaranteed objective and consistent services *only* for municipal clients

The CWA Construction Code Services division has extensive experience performing complex plan reviews for large projects. A few recent examples of such projects include:

- Clinton County, St/ John's Food Plant
  - 3 bldg manufacturing complex
  - 352,000 sf cheese plant (F/S/B occupancies)
  - Waste water treatment plan
- City of Ann Arbor, Autograph High Rise: The Glen
  - Single bldg mixed occupancy high rise
  - 7-story hotel/2-storu conference center/4-story underground parking garage
- Huron Township, Amazon DTW3 Warehouse
  - 750,000 sf/ included hydrogen storage & refueling (hazardous materials)
- York Township, Toyota Regional R&D Headquarters
  - Multiple bldgs. Over several years
- Ann Arbor Township, KLA Headquarters
  - 3 bldgs/R&D development complex
  - High-rise admin bldg/5-story computer modeled egress & atrium smoke control

Our Capacity to Service the City of Novi

CWA currently serves a wide variety of local municipalities both large and small and we stand ready to proudly serve the City of Novi. Our plan review clients include larger cities like Ann Arbor, Troy, and Novi; medium size communities such as Pittsfield, Orion, Northville, and Plymouth townships, as well as smaller communities including Huron Township, Riverview, Southgate, Howell, Plymouth, and the Village of Clarkston.

Building officials and elected leaders of communities representing more than 535,000 residents have trusted the experienced professionals at Carlisle Wortman Associates to safeguard the safety of their constituents, business owners, and visitors for many years.

The Construction Code division of CWA currently employs sixteen (16) full-time professionals providing plan review, inspection, and administrative services to municipal clients in Southeast Michigan. In addition, we have approximately twenty-five (25) part-time employees engaged in plan review and inspection services on an as-needed basis. We are structured and managed to be flexible and consistent to meet our client's needs.

Plan Review Staff Assignments

To service the City of Novi, we will assign our core plan review staff who are widely recognized as experts in the field of construction code plan review:

Craig Strong, Principal brings 34 years' experience in construction, inspection, plan review, and municipal building official duties to work on your plan reviews.

Larry Pickel, Chief Plan Reviewer is a licensed architect and building official with 45 years' experience in construction plan review, instruction, and code conflict resolution skills.

Vernon Pappas, Lead MEP Plan Reviewer brings 50 years' experience in construction, inspection, municipal plan review, and code instruction.

Brent Strong is a registered building plan reviewer, inspector, and building official with more than 10 years' experience.

Doug Weaver is a registered electrical plan reviewer and inspector with 18 years' experience.

Scott Glowinski is a registered mechanical and plumbing plan reviewer and inspector with many years of experience with construction plan review and inspections.

Inspection Staff Assignments

To service the City of Novi, we will assign experienced inspection staff to act as the go-to professionals to meet the city's performance standards in a timely manner on an as-needed basis.

CWA employs a wide variety of full and part-time inspectors in all areas of permit inspection that may be called upon to service the City of Novi as supplementary inspectors when the need arises.

Specific inspectors to be assigned to service the City of Novi's needs will be selected dependent upon the timing and duration of assignments based on availability. Copes of state registration documentation for each inspector shall be provided in advance for review and approval by the city's building official.

Continuity and Management of Staff Assignments

Our field inspection staff assigned to work in the City of Novi will be supervised by **Brent Strong**, the firm's **Construction Code Division Director/Principal**. Brent has vast experience as a building official, plan reviewer, inspector, and municipal building department manager. He will be responsible for monitoring the work of our inspectors and will communicate with the City of Novi's building official on a regular basis to evaluate our performance. We will maintain consistent staffing assignments for continuity for both the city and its customers and will immediately troubleshoot any concerns that may arise.

CWA's **Operations Manager** is responsible to monitor contract performance and act as a liaison between our firm and our client. **Michael Radzik** has the benefit of 40 years of government experience, including 19 years as Community Standards Director overseeing building, planning, and code enforcement operations for the Charter Township of Ypsilanti.

As you can see, plan review and inspection services provided to the City of Novi will be supported by managers in the field and in the office, all-inclusive as part of a contractual relationship for plan review and inspection services.

WORK PLAN SPECIFICATIONS

Plan Review Services

Plan review services for both Building and MEP disciplines will be performed within the time frames shown below upon receipt of all necessary documentation for all categories including residential, multiple family, new commercial, commercial alteration, and any other reviews:

Completion of First Review	Completion of Revisions
Within 7 working days	Within 3 working days

As previously mentioned, our firm is staffed and ready to provide a full range of plan review services for building, mechanical, electrical, plumbing, and fire code.

CWA has developed a standardized plan review report format that includes all necessary elements in an easy-to-comprehend manner for design professionals. Randomly selected examples of both a commercial and a residential plan review are enclosed for reference.

CWA regularly performs internal peer reviews of plans after initial review is completed and prior to submittal. We do so in an effort to maintain the highest quality standards demanded by the City of Novi of its professional consultants.

Our plan reviewers are adept at bifurcating projects into phased approvals including foundation-only, shell, and build-out in order to expedite timelines for completion.

CWA utilizes Bluebeam plan review software with revision tracking and full documentation. Plans and review reports are transmitted in digital format by email or file download applications, or manually on hardcopy paper when requested.

CWA maintains a detailed digital project tracking program that may be accessed at any time by the City of Novi staff to monitor the progress and status of plan reviews, and ready access to our administrative staff responsible for project tracking from submission to completion.

Inspection Services

Inspection services for both Building and MEP disciplines will be performed within agreed upon time frames on an as-needed basis.

Our firm employs more than adequate full-time and part-time inspection staff in all areas of construction to be able to service the City of Novi's needs on an as-needed basis. Inspection requests will be submitted and coordinated through our division director, Brent Strong, or through alternate arrangements directly with the inspectors assigned to the city. Inspections can normally be accommodated same day or next day in most cases within the parameters of the RFP.

Our inspectors are fluent with the use of BS&A and other recordkeeping software and are capable of recording inspection results on city-owned tablet computers in the field or manually pursuant to alternate arrangements to the city's satisfaction.

Inspection results will be recorded and fully explained to ensure the permit applicant has adequate information in order to correct deficiencies. City administrative staff will be fully informed and knowledgeable to communicate results and expectations.

Other Services

Attendance at pre-construction meetings, internal coordination meetings, and enforcement/court hearings will be accommodated at the rates specified.

Miscellaneous Qualifications

Our plan review and inspection staff have a proven history of cooperatively working well with local departments and agencies and will act in accordance with direction given by the City of Novi's building official in a professional, effective, and efficient manner.

PROJECT APPROACH

CWA fully understands the limited nature of the requested services to provide plan reviews and inspections on an as-needed basis for an undetermined period of time as the city seeks to cover scheduled and unexpected employee absences.

We understand that the quantity and frequency of requested services may fluctuate during the contract period depending upon workload demands. Our firm stands ready to provide plan review and inspection services in whatever capacity is needed over time. Our goal is to become the Building Department's trusted and dependable partner and to earn your trust and confidence.

We have enclosed sample plan review documents using our proprietary report template customized through experience over many years.

In addition, we have enclosed a listing of sample construction projects of varying categories that we have successfully completed for other local municipalities. Building Officials in communities large and small representing well over *half-a-million people* have chosen to trust our firm to help them with the critical work of reviewing construction plans to help protect the health, safety and welfare of their citizens and business communities.

We stand ready to earn the City of Novi's trust as well.

REFERENCES

CWA offers the following professional references from jurisdictions both larger and smaller than the City of Novi, and we encourage the city to reach out and explore their opinions and experiences with our firm.

Our list of municipal Building Department clients includes:

Municipality	Building Official	Phone Number	Jul 2023 Population SEMCOG Estimate
City of Ann Arbor	Mike Lemieux	(734) 417-9090	121,653
City of Troy	Salim Huerta	(248) 524-3352	88,051
City of Ypsilanti	Jerry Dunham	(734) 483-1100	20,648
Pittsfield Township	Chris Svihra	(734) 822-3129	39,308

PRICING ALTERNATIVES

Carlisle Wortman Associates encourage the City of Novi to evaluate the benefits of our chosen pricing methods. Our firm is open to negotiating a mutually agreeable fee schedule individually for each type of service.

Construction plan review services are priced based on an hourly rate reflecting actual work effort.

This proposal includes a pricing option for inspections based on a per-inspection rate, as opposed to an hourly rate as specified in the RFP.

We strongly recommend that the City of Novi evaluate this pricing option, which is open to be negotiated to mutual satisfaction. This pricing model provides the City of Novi with the ability to accurately predict and budget its contracted inspection costs per permit, as compared to an hourly pricing scheme that necessarily comes with unpredictable time fluctuations and cost uncertainty associated with the bottom-line inspection cost per permit.

By charging a flat fee per inspection, our clients can easily and accurately align their municipal fee schedule to guarantee total cost recovery for permit inspections.

VALUE ADDED SERVICES AVAILABLE

CWA offers the following value-added services that are available to the City of Novi upon request.

Permit Fee Studies

Our firm will conduct a study to evaluate the City of Novi's permit fee schedule in comparison to other similarly situated municipalities, including a building permit fee calculation based upon the International Code Council's construction valuation formula. We will examine permit revenue, Building Department expenses and staffing levels, and make recommendations accordingly.

Building Department Performance Audits

Our firm will audit the Building Department to evaluate the performance and effectiveness of the department. The audit will include the status of permits issued that have expired without resolution with recommendations for improvement, as well as administrative staffing efficiencies.

Expired Permit Management

Our firm will catalogue expired building and trade permits and implement a path forward to resolve each one in accordance with state construction code requirements. The work will include formal and informal communication with permit applicants, contractors, and property owners to determine and document the status of permitted work and achieve final inspection approval.

Dangerous Building Abatement

Our firm will work with the Building Officials and city attorneys to document code violations at dangerous buildings and forge a path forward to abatement in the form of code compliance or demolition.

Rental Housing & Vacant Building Certification

Our firm will work with city representatives to craft or improve rental housing and/or vacant building ordinances and implement or improve programs to successfully certify structures for occupancy, or to achieve safe and attractive prolonged vacancy.

MUNICIPAL BUILDING DEPARTMENT CLIENTS

PLAN REVIEW CLIENTS

- City of Ann Arbor
- Ann Arbor Township
- Ash Township
- City of Village of Clarkston
- Clinton County
- Cooper Township
- City of East Lansing
- City of Eaton Rapids
- Grand Haven Township
- Green Oak Township
- City of Howell
- Huron Township
- Independence Township
- Meridian Township
- Northfield Township
- Northville Township
- City of Novi
- Orion Township
- Pittsfield Township
- City of Plymouth
- Plymouth Township
- City of Riverview
- Rose Township
- City of Saline
- City of Southgate
- Southwest MI Bldg Authority
- City of Troy
- Texas Township

PLAN REVIEW CLIENTS

- University of Michigan
- City of Woodhaven
- York Township
- City of Ypsilanti
- Ypsilanti Township

INSPECTION CLIENTS

- City of Ann Arbor
- Bloomfield Township
- City of Village of Clarkston
- Huron Township
- City of Novi
- Pittsfield Township
- City of Plymouth
- City of Riverview
- Rose Township
- City of Saline
- Scio Township
- City of Ypsilanti
- Ypsilanti Township

SPECIAL PROJECT CLIENTS

- City of Berkley
- City of Eastpointe
- Grand Traverse County
- Independence Township
- City of Howell
- Village of Manchester
- City of Saline
- Sumpter Township

BUILDING ADMINISTRATION CLIENTS

- City of Village of Clarkston
- City of Northville
- City of Plymouth
- City of Riverview
- City of Southgate
- Rose Township

RENTAL HOUSING INSPECTION CLIENTS

- City of Milan
- City of Riverview
- City of Saline
- City of Southgate

BRENT STRONG, DIRECTOR CONSTRUCTION CODE DIVISION, has worked in the construction field for 22 years. For the past 5 years he has served as the Chief Building Official for the City of Northville and the City of Plymouth managing building department processes and enforcing state and local codes. He is also a veteran, serving 8 years in the Michigan Army National Guard as commissioned Officer. He is a current board member of the Huron Valley Association of Code Officials.

EDUCATION/CERTIFICATIONS

BS, Bachelor of Science | Eastern Michigan University

Graduate | Military Police Officer Basic Academy

State Licensed Building Official | Building Inspector | Plan Reviewer

EXPERIENCE

Director – Construction Code Division
2024-Present

Chief Building Official, Code Enforcement Services
2015 - 2024

Owner/President, Strong Family Builders LLC
2011 – 2015

Operations Coordinator, United Solar Ovonics
2008 – 2011

Superintendent/Project Manager, Strong Builders LLC
2002 - 2008

CRAIG STRONG, DIRECTOR OF CODE ENFORCEMENT SERVICES has been in the construction field for 35 years. He served 10 of those years as the City of Milan, Michigan Building/Zoning Official responsible for plan reviews and construction inspections. Mr. Strong's vast experience in the field and of current construction codes allows him to provide quality service to communities seeking professional assistance in code enforcement areas. He holds current State of Michigan registration as a Building Official, Construction Plan Reviewer and Building Inspector.

EDUCATION

Criminal Justice Studies | Washtenaw Community College

Police Officer State Certification | Detroit Police Academy

Continuing Education Courses | State of Michigan approved Public Act 54 construction-related courses. (72 hours of training required every three-year cycle) to maintain state certification as Building Official/Building Inspector.

EXPERIENCE

Plan Reviewer, Carlisle Wortman Associates, Inc.
2024-Present

Director of Code Enforcement Services, Carlisle|Wortman Associates, Inc.
Ann Arbor, MI, 2012 – 2024

Self-Employed Commercial/Residential Building Contractor and Construction Consultant, Strong Builders, LLC.
2001 – 2012

Building, Zoning Official, City of Milan, Michigan
1991 – 2001

Residential Building Contractor, Strong Building, Inc.
1985 - 1991

Washtenaw County Sheriff/US Army
1975 - 1985

LARRY PICKEL, CHIEF PLAN REVIEWER/CODE CONSULTANT has been involved in the construction industry for nearly 50 years in a variety of capacities. He is a licensed architect, registered in the State of Michigan, and a registered building official and plan reviewer. Larry retired from the City of Ann Arbor in 2004 after nearly 26 years there. He was a plan examiner for 18 years before being promoted to Building Department Director in 1996. A graduate of the University of Michigan with a master's degree in architecture, he has also had architectural experience with several firms prior to his career with the City. He has taught numerous classes to construction industry professionals since 1990, including architects, builders, and government officials. He has also worked as a program manager for continuing education classes in the areas of business, construction and professional development with Washtenaw Community College in Ann Arbor, Michigan.

EDUCATION

MA, Architecture | University of Michigan

BA, Architecture | University of Michigan

Continuing Education Courses | State of Michigan approved Public Act 54 construction-related courses. (72 hours of training required every three-year cycle) to maintain state certification as Building Official/Building Inspector.

EXPERIENCE

Plan Reviewer/Code Consultant, Code Enforcement Services Inc.
2014 – Present

Program Manager, Washtenaw Community College
2005 – 2013

Director/Building Official, City of Ann Arbor Building Department, Michigan
1996 – 2004

Plan Reviewer, City of Ann Arbor, Michigan
1978 – 1996

Architect, Fry/Peters Associates
1976 – 1978

Architect, James P. Wong & Associates
1974-1976

Architect, Daverman Associates
1973-1974

CERTIFICATIONS

Registered Architect, State of Michigan No. 1301024152

Registered Plan Reviewer, State of Michigan No. 386

Huron Valley Association of Code Officials Member/Past President

PROFESSIONAL TRAINING EXPERIENCE

Part Time Instructor
Washtenaw Community College

Guest Lecturer
University of Michigan College of Architecture Building Code Issues

Guest Lecturer
A.I.A.Huron Valley Chapter of Ann Arbor
Building Code Issues

Guest Instructor (1994 &1995)
Michigan Dept of State Police
State Certified Fire Inspector School

Lifetime Instructor (No. 121) for Continuing Education Programs by State of Michigan

MICHAEL RADZIK, OPERATIONS MANAGER applies more than 40 years' experience in local government and law enforcement to offer solutions to today's municipal challenges. As Office of Community Standards Director for the Charter Township of Ypsilanti, Mike managed the Building, Planning, and Code Enforcement departments and executed organizational restructuring to improve service delivery. Mike has deep experience developing and managing programs that improve neighborhoods, from rental housing and vacant structure certification to blight and public nuisance abatement. Mike previously served in law enforcement as a First Lieutenant and SWAT Commander with the Washtenaw County Sheriff's Office, and as Police Services Administrator for Ypsilanti Township. Mike enjoys working with local officials to improve the quality of life for communities and advocates for interdisciplinary teamwork to solve and prevent predictable code enforcement issues.

EDUCATION

Political Science/Journalism/Criminal Justice Studies | Eastern Michigan University

Community Policing Studies | School of Criminal Justice/Michigan State University

Community Policing Management Studies | Criminal Justice Management Institute

Michigan Police Officer State Certification | Detroit Metropolitan Police Academy

EXPERIENCE

Administrative Manager of Code Enforcement Services | Carlisle|Wortman Associates, Inc.
Ann Arbor, MI, 2021 – Present

Police Services Administrator | Charter Township of Ypsilanti
Ypsilanti, MI, 2002-2008

Office of Community Standards Director & Police Administrator | Charter Township of Ypsilanti
Ypsilanti, MI, 2008-2021

First Lieutenant | Washtenaw County Sheriff's Office
Ann Arbor, MI, 1981-2002

Police Academy Instructor | Washtenaw Community College
Ann Arbor, MI 1989-2000

Police Officer/Detective | Pittsfield Township Police Department
Ann Arbor, MI, 1984-1985

VERNON PAPPAS, PLAN REVIEWER holds certifications as a State of Michigan Plan Reviewer/Mechanical Inspector & Building Official. He has been in the construction field for 49 years. He also holds a State of Michigan Mechanical Contractors license since 1972. He received his State Inspector/Plan Reviewer Certification in 2002. He served his last 10 years as a plan reviewer and mechanical inspector for the City of Ann Arbor prior to retiring from the City and starting work for CES in 2015.

EDUCATION

Macomb County Community College

Continuing Education Courses | State of Michigan approved Public Act 54 construction-related courses. (72 hours of training required every three-year cycle) to maintain state certification as Building Official/Building Inspector.

EXPERIENCE

Plan Reviewer/Mechanical Inspector (remotely reviewing plans from Florida), Code Enforcement Services
2017 - Present

Plan Reviewer/Mechanical Inspector, Code Enforcement Services
2015 - 2017

Mechanical Inspector/Plan Reviewer, City of Ann Arbor, Michigan
2006 - 2015

Part Time Inspector, City of Walled Lake & City of Royal Oak, Michigan
2002 - 2006

Pappas Heating and A/C
1972 - Present

CERTIFICATIONS

Served as President of Metropolitan Mechanical Inspectors Assn. 2008-2010

Served as Treasurer of Metropolitan Mechanical Inspectors Assn. 2010-2011

Served as President of Southeastern Michigan Mechanical Inspectors Assn. 2014-2016

PROFESSIONAL TRAINING EXPERIENCE

Lifetime Instructor for Continuing Education Programs by State of Michigan

CODE ENFORCEMENT SERVICES – PLAN REVIEW

Mixed occupancy re-development
(R-2 / A-2)

Recreational Building
(A-3)

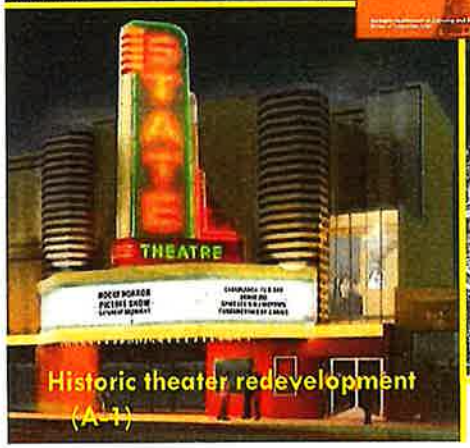

3 Building Food Processing Complex
(F-2 / S-2 / H-3 / B) (852,000 sq. ft.)


19 Story High Rise
(R-2 / A-3 / B / S-2)


Atrium Special
Occupancy


Intramural Sports Building
(A-3)


3 Building Research & Development Complex
(High rise / Hazardous Materials)
(B / S-2 / F-1)



Historic theater redevelopment
(A-1)


Multi-building
Retirement
Complex
(I-1 / R-2 / A-3)


750,000 sq. ft. Distribution Center
(S-1 / A-2 / B)

St. John's - Plymouth Township

ANN ARBOR AUTOGRAPH COLLECTION

ANN ARBOR, MICHIGAN

OWNER	CATHERINE ANN DEVELOPMENT COMPANY, LLC 6960 ORCHARD LAKE ROAD, SUITE 300A WEST BLOOMFIELD, MI 48322
ARCHITECT	NEUMANN/SMITH ARCHITECTURE 400 GALLERIA OFFICENTRE, SUITE 555 SOUTHFIELD, MI 48034 (248) 352-8310
LANDSCAPE ARCHITECT/, CIVIL ENGINEER	MIDWESTERN CONSULTING 3815 PLAZA DR. ANN ARBOR, MI 48108 (734) 995-0200
EARTH RETENTION ENGINEER	SME THE KRAMER BUILDING 43980 PLYMOUTH OAKS BLVD. PLYMOUTH, MI 48170-2584 (734) 454-9900
STRUCTURAL ENGINEER	RESURGENT ENGINEERING PLC 4219 WOODWARD AVENUE, SUITE 308 DETROIT, MI 48201 (415) 373-8410
MECH / ELEC / PLUMB ENGINEER	STRATEGIC ENERGY SOLUTIONS, INC. 4000 W. ELEVEN MILE RD. BERKLEY, MI 48072 (248) 399-1900
INTERIOR DESIGNER	DLR GROUP 520 NICOLLET MALL, SUITE 200 MINNEAPOLIS, MN 55402 (612) 977-3500

REVISED

DEFERRED SUBMITTALS

[illegible]

LEGAL DESCRIPTION

[illegible]

LOCATION MAP

NEUMANN SMITH
SOUTHFIELD • DETROIT
400 Galleria Officentre
Suite 555
Southfield, Michigan 48034
phone 248.352.8310
fax 248.352.1821
www.neumannsmith.com

ANN ARBOR AUTOGRAPH COLLECTION
Glen Avenue
Ann Arbor, MI 48104

12.10.2021	Bulletin #1
04.09.2020	Addendum #1
10.17.2019	Permits and Bid
[illegible]	Permits
[illegible]	75% Construction Documents
06.27.2019	30% Construction Documents
05.23.2019	Design Development
03.25.2019	Schematic Design

Drawn: AM
Checked: PB
Approved: GC

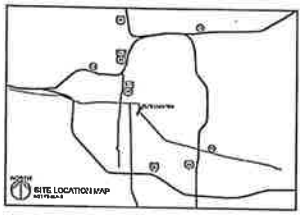
☐ Preliminary
■ Construction
☐ Record

Job Number: 2018128

Title: TITLE SHEET

Scale: 12" = 1'-0"

Sheet: A001



VOLUME 1 OF 2

VIC VILLAGE SOUTH

1116 S. UNIVERSITY AVENUE
ANN ARBOR, MI

HOBBS + BLACK PROJECT #: 17-000

BUILDING PERMIT SET

12/17/2021

OWNER / DEVELOPER
SOUTH UNIVERSITY - SOUTH, LLC
30100 TELEGRAPH ROAD
SUITE 220
BINGHAM FARMS, MICHIGAN 48025
PHONE: (248) 641-2500
FAX: (248) 641-1530

STRUCTURAL ENGINEER
EHLERT BRYAN
8609 WESTWOOD CENTER DR.
SUITE 800
TYSONS, VIRGINIA 22182
PHONE: (703) 821-4552
FAX: (703) 356-2031

CONSTRUCTION MANAGER
THE CHRISTMAN COMPANY
3011 WEST GRAND BOULEVARD
SUITE 2600
DETROIT, MICHIGAN 48202
PHONE: (313) 408-5080
FAX: (313) 408-5055

MECHANICAL / ELECTRICAL ENGINEER
MA ENGINEERING
180 HIGH OAK STREET
BLOOMFIELD HILLS, MICHIGAN 48009
PHONE: (248) 335-1650
FAX: (248) 356-1526

ARCHITECT
HOBBS + BLACK ASSOCIATES, INC.
100 N. STATE STREET
ANN ARBOR, MICHIGAN 48104
PHONE: (734) 663-4189
FAX: (734) 663-1110

INTERIOR DESIGNER
HOBBS + BLACK ASSOCIATES, INC.
100 N. STATE STREET
ANN ARBOR, MICHIGAN 48104
PHONE: (734) 663-4189
FAX: (734) 663-1110

CIVIL ENGINEER / LANDSCAPE ARCHITECT
MIDWESTERN CONSULTING, LLC
3815 PLAZA DRIVE
ANN ARBOR, MICHIGAN 48108
PHONE: (734) 995-0200
FAX: (734) 995-0200

LOW VOLTAGE
SYNERGY FIBER
3131 S. STATE STREET
ANN ARBOR, MICHIGAN 48108
PHONE: (734) 222-6060

DATE ISSUED

T.W
DRAWN BY

CHECKED BY

HOBBS + BLACK ARCHITECTS
100 N. State St.
Ann Arbor, MI 48104
P: (734) 663-4189
www.hobbsblack.com

VIC VILLAGE SOUTH
1116 S. UNIVERSITY AVENUE
ANN ARBOR, MI 48104
PROJECT

CONSULTANT

COVER SHEET
SHEET TITLE

17-000
PROJECT NUMBER

G-000

Lansing State Journal

Wacker Chemical

WACKER

Innovation Center + Regional HQ

Bids / Permits

07/01/2020

HED

2018-03887-000

KIRCO | KIRCO MANIX

HIGH-RISE BUILDINGS (Section 403: 15MBC)

☐ CONSTRUCTION 403.2

BUILDING HEIGHT + 420 :

- ☐ Construction type based on Ch. 5
- ☐ No construction type reductions
- ☐ Enhanced stair / elevator enclosure (All buildings +420 ft.) (403.2.3 & 4)
- ☐ + Applicable requirements below 420 ft.

BUILDING HEIGHT UP TO 420:

- ☐ Construction type based on Ch. 5
- ☐ Sprinkler valve each floor (403.2.1)
- ☐ Type IA to IB reduction (403.2.1.1)
- ☐ Type IB to IIA reduction (403.2.1.1) (All but M / F-1 / S-1)
- ☐ Shaft reductions (403.2.1.2)
- ☐ Enhanced stair / elevator enclosure (Risks III & IV) (403.2.3 & 4)

☐ SPRINKLER SYSTEM 403.3

BUILDING HEIGHT +420 :

- ☐ 2 Risers / Sprinkler Zones (403.3.1)
- ☐ Risers in Exit Stairways (403.3.1.1)
- ☐ Fire Pumps – 2 water mains (403.3.2)
- ☐ + Applicable requirements below 420 ft.

BUILDING HEIGHT UP TO 420:

- ☐ NFPA 13 system (403.3 / 903.3.1.1)
- ☐ Seismic C-D-E-F 2nd water supply (403.3.3)
- ☐ Fire Pump rooms (403.3.4 / 913.2.1)

☐ EMERGENCY SYSTEMS 403.4

- ☐ Automatic Detection (403.4.1)
- ☐ Fire Alarm (403.4.2)
- ☐ Standpipe System (403.4.3)
- ☐ Emergency Voice Alarm / Communication (403.4.4)
- ☐ Emergency Responder Radio Coverage (403.4.5)
- ☐ Fire Command Center (403.4.6)
- ☐ Smoke Removal Method (403.4.7)
- ☐ Standby & Emergency Power (403.4.8)

REQUIRED EMERGENCY SYSTEMS See Diagram 403.4.1

☐ MEANS of EGRESS 403.5

BUILDING HEIGHT +420 :

- ☐ Min. # Exits (1006)
- ☐ + 1 Additional Exit (403.5.2) ⊗ R-2 ⊗ 3008
- ☐ Min. 2 exits separated per/ 403.5.1
- ☐ + Applicable requirements below 420 ft.

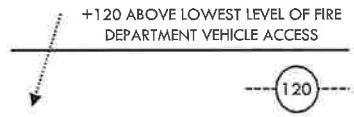
BUILDING HEIGHT UP TO 420:

- ☐ Min. # Exits (1006)
- ☐ Separated min. 30 ft. or ¼ max. diagonal (403.5.1)
- ☐ Stairway doors permitted locked (403.5.3)
- ☐ Locked stair communication system (403.5.3.1) (Every 5th floor)
- ☐ Smokeproof enclosure all stairs (403.5.4) (909.20) + (1023.10)
- ☐ Stairs 2-hour enclosure (1023.2)
- ☐ Luminous path markings (403.5.5) +75 ft. floor height (A, B, E, I, M, R-1)

☐ ELEVATORS 403.6

OVER 120 ABOVE LOWEST LEVEL OF FIRE DEPT. VEHICLE ACCESS:

- ☐ 2 Fire service elevators (3007)
- ☐ Each elevator 3500# capacity
- ☐ Additional requirements MBC 3007
- ☐ Elevator Lobby :
- ☐ Lobby at each floor (3007.6)
- ☐ Direct access to an exit stair (3007.6.1)
- ☐ + Applicable requirements below 120 ft.



BUILDINGS UP TO 120 ABOVE LOWEST LEVEL OF FIRE ACCESS:

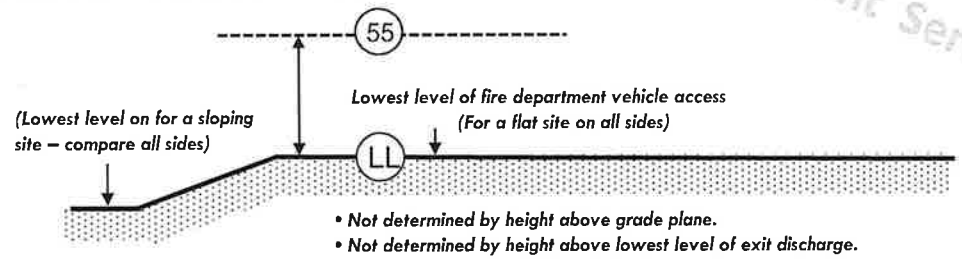
- ☐ Fire service elevator (3002.4) (4 or more stories above grade plane)
- ☐ Accessible means of egress elevator (1009.2.1)
- ☐ Elevator lobbies (713.14.1) (4 or more stories above LE discharge)

* **START HERE:**

APPLICABILITY 403.1

- ☐ Occupied floor or roof level located more than 55 ft. above lowest level of Fire Department vehicle access.

Occupied floor or roof level more than 55 ft. above lowest level of fire department vehicle access (403.1)



- ***Not determined by height above grade plane.***
- ***Not determined by height above lowest level of exit discharge.***

PLAN REVIEW - NOTE: This checklist is intended to be used as a supplement to a building plan review and does not list all code requirements for the given topic.

HIGH-RISE BUILDINGS (Section 403: 15MBC)

☐ CONSTRUCTION
403.2

BUILDING HEIGHT + 420 :

- ☐ Construction type based on Ch. 5
- ☐ No construction type reductions
- ☐ Enhanced stair / elevator enclosure (All buildings +420 ft.) (403.2.3 & 4)
- ☐ + Applicable requirements below 420 ft.

BUILDING HEIGHT UP TO 420:

- ☐ Construction type based on Ch. 5
- ☐ Sprinkler valve each floor (403.2.1)
- ☐ Type IA to IB reduction (403.2.1.1)
- ☐ Type IB to IIA reduction (403.2.1.1) (All but M / F-1 / S-1)
- ☐ Shaft reductions (403.2.1.2)
- ☐ Enhanced stair / elevator enclosure (Risks III & IV) (403.2.3 & 4)

☐ SPRINKLER SYSTEM
403.3

BUILDING HEIGHT +420 :

- ☐ 2 Risers / Sprinkler Zones (403.3.1)
- ☐ Risers in Exit Stairways (403.3.1.1)
- ☐ Fire Pumps – 2 water mains (403.3.2)
- ☐ + Applicable requirements below 420 ft.

BUILDING HEIGHT UP TO 420:

- ☐ NFPA 13 system (403.3 / 903.3.1.1)
- ☐ Seismic C-D-E-F 2nd water supply (403.3.3)
- ☐ Fire Pump rooms (4 03.3 4 / 913.2.1)

☐ EMERGENCY SYSTEMS
403.4

- ☐ Automatic Detection (403.4.1)
- ☐ Fire Alarm (403.4.2)
- ☐ Standpipe System (403.4.3)
- ☐ Emergency Voice Alarm / Communication (403.4.4)
- ☐ Emergency Responder Radio Coverage (403.4.5)
- ☐ Fire Command Center (403.4.6)
- ☐ Smoke Removal Method (403.4.7)
- ☐ Standby & Emergency Power (403.4.8)

REQUIRED EMERGENCY SYSTEMS
See Diagram 403.4.1

☐ MEANS of EGRESS
403.5

BUILDING HEIGHT +420 :

- ☐ Min. # Exits (1006)
- ☐ + 1 Additional Exit (403.5.2) ⊗ R-2 ⊗ 3008
- ☐ Min. 2 exits separated per/ 403.5.1
- ☐ + Applicable requirements below 420 ft.

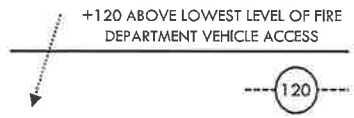
BUILDING HEIGHT UP TO 420:

- ☐ Min. # Exits (1006)
- ☐ Separated min. 30 ft. or ¼ max. diagonal (403.5.1)
- ☐ Stairway doors permitted locked (403.5.3)
- ☐ Locked stair communication system (403.5.3.1) (Every 5th floor)
- ☐ Smokeproof enclosure all stairs (403.5.4) (909.20) + (1023.10)
- ☐ Stairs 2-hour enclosure (1023.2)
- ☐ Luminous path markings (403.5.5) +75 ft. floor height (A, B, E, I, M, R-1)

☐ ELEVATORS
403.6

OVER 120 ABOVE LOWEST LEVEL OF FIRE DEPT. VEHICLE ACCESS:

- ☐ 2 Fire service elevators (3007)
- ☐ Each elevator 3500# capacity
- ☐ Additional requirements MBC 3007
- ☐ Elevator Lobby :
- ☐ Lobby at each floor (3007.6)
- ☐ Direct access to an exit stair (3007.6.1)
- ☐ + Applicable requirements below 120 ft.



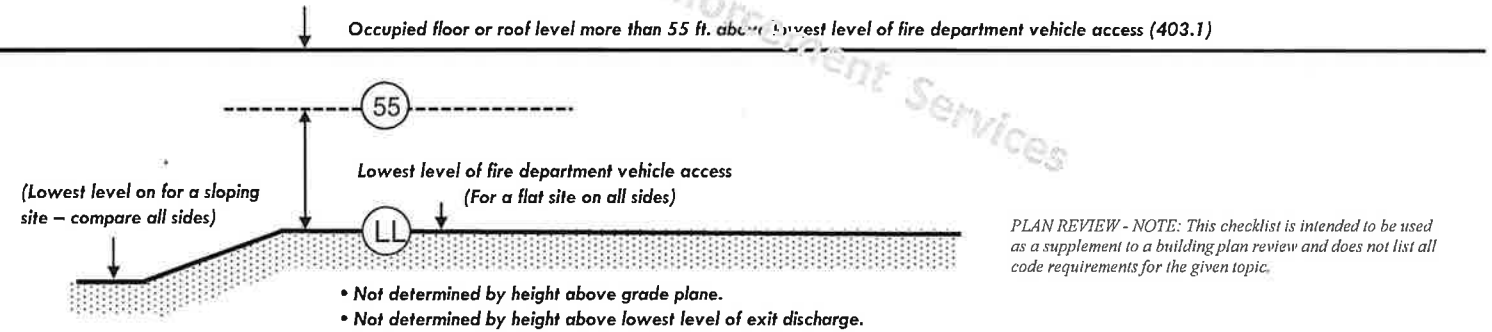
BUILDINGS UP TO 120 ABOVE LOWEST LEVEL OF FIRE ACCESS:

- ☐ Fire service elevator (3002.4) (4 or more stories above grade plane)
- ☐ Accessible means of egress elevator (1009.2.1)
- ☐ Elevator lobbies (713.14.1) (4 or more stories above LE discharge)

* **START HERE:**

APPLICABILITY
403.1

- ☐ Occupied floor or roof level located more than 55 ft. above lowest level of Fire Department vehicle access.



- *Not determined by height above grade plane.*
- *Not determined by height above lowest level of exit discharge.*

PLAN REVIEW - NOTE: This checklist is intended to be used as a supplement to a building plan review and does not list all code requirements for the given topic.

407 SPECIAL GROUP I-2 REQUIREMENTS: I-2 (1) and I-2 (2) (15MBC)

CORRIDORS – REQUIRED CONTINUITY (407.2)

- ☐ Corridors continuous to the exits
- ☐ Separated per / 407.3 from other areas
- ☐ Areas permitted to be open to corridor:
- ☐ ▪ Waiting areas: 4 Conditions (407.2.1)
- ☐ ▪ Care provider stations (407.2.2)
- ☐ ▪ Psychiatric treatment areas: 6 Conditions (407.2.3)
- ☐ ▪ Gift shops < 500 sq. ft. (407.2.4)
- ☐ ▪ Nursing home housing unit: 5 Conditions (407.2.5)
- ☐ (Dining / library / meeting / multipurpose)
- ☐ ▪ Nursing home cooking facilities:
- ☐ 13 Conditioons (407.2.6)
- ☐ Projections / furniture in corridor (407.4.3)
- ☐ Width: Corridors & Aisle: 1018.5 & T1020.2:
  (36 <50 occ) (44) (72 stretcher) (96 beds)

CORRIDORS – REQ'D CONSTRUCTION (407.3)

- ☐ **WALLS: SMOKE PARTITIONS** (407.3) / 710)
- ☐ Continuity:
- ☐ ↕ Foundation/floor-to-floor/roof sheathing (or)
- ☐ ↕ Foundation/floor-to-Ceiling membrane (710.4)
- ☐ (Membrane must limit transfer of smoke)
- ☐ Must form effective smoke barrier (710.4)
- ☐ Rating: NR (710.3 / T1020.1)
- ☐ **DOORS** (407.3):
- ☐ Equipped with positive latching (407.3.1)
- ☐ No fire protection rating required
- ☐ NR self-closing or automatic closing devices
- ☐ Must form effective smoke barrier (909.5 / 716.5.3)
- ☐ Rated if required by T509 (Incidental uses)
- ☐ Louvers not permitted (710.5.2.1)
- ☐ **WINDOWS** sealed or automatic closing (710.5.1)
- ☐ **JOINTS** sealed to prevent smoke transfer (710.7)
- ☐ **PENETRATIONS** sealed (710.6)
- ☐ **DUCTS** perimeter openings sealed (710.8)
- ☐ **AIR TRANSFER OPENING** smoke damper (717.3.2.2)

INCIDENTAL USE SEPARATIONS (T509)

- ☐ Laboratory: 1-hr. + Sprinkler
- ☐ Laundry +100 sf: 1-hr. or Sprinkler
- ☐ Maintenance shop: 1-hr.
- ☐ Waste linen +10 cf capacity: 1-hr.
- ☐ Storage +100 sf: 1-hr.
- ☐ Incinerator: 2-hr. + Sprinkler
- ☐ Medical gas ≠ Incidental (see IFC 5306)

MEANS OF EGRESS (407.4)

- ☐ Fire safety / evac plan (1001.4 / IFC 404 & 408)
- ☐ Habitable rooms: Direct access to a corridor (407.4.1)
- ☐ (See exceptions: Door to outside or care suites)
- ☐ Egress doors readily openable egress side (407.4.1.1)
- ☐ (See exceptions: Controlled egress / corridor sides)
- ☐ Controlled egress doors permitted (see 1010.1.9.6)
- ☐ Rooms: Max. 50 ft. to exit access door (407.4.2)
- ☐ Projections / furniture in corridors (407.4.3)
- ☐ (See 6 conditions + maintain 72 min. width)
- ☐ Carpet: Class I Critical radiant flux (804.4)
- ☐ All level changes <12 in. = ramp (1003.5)
- ☐ Secured discharge yard permitted (407.9)
- ☐ Width: Corridors & Aisle: 1018.5 & T1020.2:
- ☐ (36 <50 occ) (44) (72 stretcher) (96 beds)
- ☐ Movement doors 41 ½ in. x 80 for beds (1010.1.1)
- ☐ Maximum width of door 48 in. (1010.1.1)
- ☐ High-rise: Luminous path (403.5.5 / 1025.0)

- ☐ Independent egress each smoke compartment (407.5.2)
- ☐ (Egress without returning through same compartment)
- ☐ (Egress may pass through multiple compartments)
- ☐ Refuge areas required within each compartment (407.5.1)
- ☐ (See area requirements 30/6 sq. ft. / person)
- ☐ (Corridors / sleeping area / treatment / lounge)
- ☐ Maximum TD 200 ft. to smoke barrier door

CARE SUITES (407.4.4)

(See separate list: 407.4.4.1 – 407.4.4.6)

SECURED YARD (407.9)

- ☐ Permitted between exit discharge and public way
- ☐ Fences / gates / locks permitted
- ☐ Safe dispersal area: 30 / 6 sq. ft. design factors
- ☐ Not less than 50 ft. from building served

SMOKE COMPARTMENTS REQUIRED (407.5)

- ☐ Smoke compartments required:
  Every story used for care / treatment / sleeping
  Every story ≥ 50 occupants
- ☐ Minimum 2 compartments per/ story:
  I-2 (1): 22500 sq. ft. maximum area
  I-2 (2): 40000 sq. ft. maximum area
- ☐ **COMPARTMENT WALL: SMOKE BARRIER** (709)
- ☐ Rating: 1-hour (709.3)
- ☐ Continuity:
- ☐ ↔ Outside wall-to-Outside wall
- ☐ ↕ Foundation/floor-to-floor/roof sheathing (or)
- ☐ ↕ Foundation/floor-to-Ceiling membrane (710.4)
  (Membrane 1 hr. + must limit transfer of smoke)
- ☐ Must form effective smoke barrier (710.4)
- ☐ Horizontal support assembly – resist smoke (407.5.3)
- ☐ **SMOKE BARRIER DOORS:**
- ☐ Comply 407.3.1 (see 716: Exception 2):
- ☐ Equipped with positive latching (407.3.1)
- ☐ No fire protection rating required (407.3.1)
- ☐ Must form effective smoke barrier
- ☐ Rated if required by T509 (Incidental uses)
- ☐ Corridor: Pair of opposite-swinging allowed (709.5)
- ☐ Corridor: Auto-closing / smoke detector (709.5.1)
- ☐ **OPENINGS**: 716 (709.5)
- ☐ **PENETRATIONS**: 714 (709.6)
- ☐ **DUCTS**: 717 (709.8)
- ☐ **EGRESS** (See also separate column)
- ☐ Independent egress each smoke compartment (407.5.2)
- ☐ (Egress without returning through compartment)
- ☐ (Egress may pass through multiple compartments)
- ☐ Refuge areas required within each compartment (407.5.1)
- ☐ (See area requirements 30/6 sq. ft. / person)
- ☐ (Corridors / sleeping area / treatment / lounge)
- ☐ Maximum TD 200 ft. to smoke barrier door (407.5)

SPRINKLERS (407.6)

- ☐ Required smoke compartments w/ sleeping rooms
- ☐ 903.3.1.1: NFPA 13
- ☐ 903.3.2: Quick-response / residential sprinklers:
- ☐ All spaces with sleeping units
- ☐ All spaces with treatment rooms in ACF

FIRE ALARM (407.7)

- ☐ Manual alarm system required (907.2.6)

AUTO DETECTION (407.8)

- ☐ Corridors + Areas open to corridors (907.6.2)

ELECTRICAL SYSTEMS (407.10)

- ☐ Essential electrical system provisions
- ☐ MBC 2702
- ☐ NFPA 99

R-2 MULTIFAMILY DWELLING (15)

☐ *R-2: Permanent occupancy in sleeping units or more than two dwelling units (MBC 310.4)*

☐ Energy code: 3 stories or less: Residential MI R101
All others: C401.2: ASHRAE 90.1

R-2

OCCUPANCY / HEIGHT & AREA

*Note (i) Height and (ii) Area differences between :
NFPA 13 (T504.3 / T504.4 / T506.2)..... ☐
NFPA 13R (T504.3 / T504.4 / T506.2)..... ☐

508 Check mixed use and occupancy:
- ▫ Party / amenity rooms (A-2 or A-3)..... ☐
- ▫ Business offices / Study lounge (B) ..... ☐
- ▫ Decks / Outdoor / Occupied roof (A-3)... ☐
- ▫ Parking garage (S-2 / OPG) ..... ☐
- ▫ Exercise rooms (A-3) or (B) < 50 occ.... ☐

403 Check high-rise ..... ☐
510.2 Podium construction ..... ☐
510.4 / .7 Parking below R-2..... ☐
510.5 / .6 R-2 additional construction type options... ☐

SPECIAL OCCUPANCY REQUIREMENTS

420.2 Unit Separation Walls (FP 708) 1-hr..... ☐
420.3 Unit Horizontal Separations (711)1-hr ☐
420.5 Sprinkler system (see 903)..... ☐
420.6 Fire/smoke Alarm systems (see 907)..... ☐
915.1.1 Carbon monoxide alarms ..... ☐
916 Emergency responder radio coverage ..... ☐
MBC 2018 Roof top occupancy (see 302.1 / 503.1.4). ☐
P-403 Toilet fixtures - amenities rooms / roof ... ☐
406 Motor Vehicle Garages ..... ☐

FIRE RESISTANCE

705.8.5 Vertical separation of exterior openings.... ☐
706.5 & 6 Fire wall continuity – Horiz. & Vert. ..... ☐
712.1.7 Main lobby atrium / multi-story space ..... ☐
713.13 Trash / linen chute ratings:
- ☐ Chute: shaft rating (713.13.1) ..... ☐
- ☐ Chute access room: 1 hr. (713.13.3) ..... ☐
- ☐ Discharge room: Same as shaft (713.13.4) ☐

713.14 Elevator lobby..... ☐
Hoistway enclosure (1 or 2 hour) ..... ☐
714 Through penetration protections ..... ☐
716-717 Opening protectives (doors) ..... ☐
718.2 Fire blocking / concealed spaces ..... ☐
718.3 Draft-stopping floors: Ex. 1 & 2 ..... ☐
718.4 Draft-stopping attics: Ex. 2 ..... ☐
T1020.1 Bearing corridor walls (?) = 1 hr. (T601)... ☐

Occupancy allowances: ▪ Residential 1:200 gross ▪ Offices 1:100 gross ▪ Assembly 1:5 / 7 / 15 net ▪ Parking garage 1:200 gross ▪ Outdoor (1004.5) ▪ Exercise 1:50 gross ▪ Storage 1:300 gross

FIRE PROTECTION

420.5 Group R sprinkler (903.2.8): ☐
*Note height / area differences between:
NFPA 13 (T504.3 / T504.4 / T506.2) ☐
NFPA 13R (T504.3 / T504.4 / T506.2) ☐

903.3.2 Quick response sprinklers required ..... ☐
903.2.11.2 Rubbish / linen chute sprinklers ..... ☐
420.6 Fire/smoke Alarm systems
- ☐ Manual (907.2.9.1) ..... ☐
- ☐ Single/multi-station - units (907.2.9.2) ☐

Alarm locations (907.2.11.2) ..... ☐
907.5.2.3 Visible alarm locations – General areas... ☐
907.5.2.3.3 Visible alarm locations – Units ..... ☐
915.1.1 Carbon monoxide alarms (915.1.1) ..... ☐
905 Standpipe system – Floor level +30 ft. ... ☐
916 Emergency responder radio coverage .... ☐

MEANS of EGRESS

1003.3 Protruding objects (seating / tables)..... ☐
1015 Guards: Open sided area / balcony..... ☐
1015.3 Guards: Height 42 + 4 max. opening ..... ☐
1015.7 Roof access guards if edge ≤ 10 ft. ..... ☐
1015.8 Window sill guards / protection .... ☐
Egress distance: (R-2 only)*:
1017.2 ↔TD: 200 (NS) 250 (S) ..... ☐
T1006.2.1 ↔ CP: 75 (NS) 125 (S) ..... ☐
1020.4 ↔ DE: 20 (NS) 50 (S) ..... ☐
*Measure from outside spaces / balconies
1013.0 Exit signs ..... ☐
1008.0 Emergency power / lights ..... ☐
1022 Stair enclosure (1-3: 1 hr.) (4+: 2 hr.) ... ☐
1023.8 Stair discharge identification & barrier... ☐
1023.9 Stair landing identification signs ..... ☐
1011.7.3 Area beneath stairs 1 hr. ..... ☐
1011.5.2 Treads and riser sizes ..... ☐
1011.5.5.3 Solid risers (see exceptions) ..... ☐
1011.11 Stair handrails (1014) ..... ☐
1011.12 Roof access methods (see 1011.2) ..... ☐
1020.1 & 2 Corridor rating & width ..... ☐
1030.1 Emergency escape & rescue openings ... ☐
T-1006.3.2 Single exit (R-2 only):
Story: T-1006.3.2 (1) ▪ 4 DU / 125 CP... ☐
Unit: T-1006.2.1: 10 occ. / 125 CP... ☐
*Measure from outside spaces / balconies
▪ Sprinkler system + EERO (1030) Reqd.

ACCESSIBILITY

(A = A117.1-2009 standard)
Accessible route must connect:
1104.1 / 2 ▫Site arrival / parking / curb ramps ..... ☐
1104.3 ▫ All interior accessible portions ..... ☐
▫ All public spaces (1107.3) ..... ☐
1105.1 Public entrances: Min. 60% accessible.... ☐
1106.2 Parking spaces (1106.2) 2% ..... ☐
1106.5 Van spaces – 1:6 ratio..... ☐
A: 502.6 Van space vert. clearance 98 in. ..... ☐
Units: Level of accessibility:
1107.6.2 ▫Type A Units - A117.1: 1003 ..... ☐
▫Type B Units - A117.1: 1004 ..... ☐
1009.1 Accessible means of egress ..... ☐
1109.11 Seating at counters / work surfaces ..... ☐
1109.12.3 Service counters (A: 904) ..... ☐
1108.2.9 Dining / drinking tables & areas ..... ☐
1109.13 Window / controls (see A117.1) ..... ☐
1110.4.10 Exercise rooms – 1 type each machine.... ☐
A: 804.3 Amenities tenant-use kitchenette ..... ☐
1110.4.13 Pool access / pool barrier (ISPSC) ..... ☐
(see also A:1109.1.1)
1109.12.1 Locker rooms (see also A:803 / 903) ..... ☐

INTERIOR ENVIRONMENT & FINISHES

T-803.11 Surface finishes ..... ☐
804.4.2 Carpet finishes ..... ☐
806 Combustible decorative materials ..... ☐
1207.2 STC: ≥ 50 or field test≥ 45 ..... ☐
1207.3 IIC: ≥ 50 or field test≥ 45 ..... ☐
1208 Interior Dimensions: ☐
1208.1 Min. 7 ft. room widths habitable space.... ☐
1208.2 Ceiling height 7 ft. 6 in.+ exceptions ..... ☐
1208.3 One room 120 sf + Other habitable 70 sf ☐
1208.4 Efficiency 200 sf + separate bath / closet ☐
1203.2 Attic ventilation each attic area ..... ☐
1209.2 Attic access openings 20 x 30 inches .... ☐
2406 Safety glazing*..... ☐
*Note any pool / wet areas ..... ☐

ELEVATORS / ESCALATORS & HOISTWAYS

713.14 Lobby (+3 stories connected) ..... ☐
A: 407.4.1 Inside dimensions for accessibility ..... ☐
3002.4 Stretcher 24 X 84 (4 stories above G.P.) ☐
1009.4 Accessible MOE (4 stores above LED).. ☐
403.6.1 Fire Service Access Elevator (+120 ft.).. ☐

STRUCTURE & MATERIALS

T1604.5 Risk II unless +5000 occupants =III ..... ☐
T-1607.1 Floor load capacity
Private rooms / corridors: 40 psf ..... ☐
Public rooms / corridors: 100 psf ..... ☐
Stairs / exits: 100 psf uniform ..... ☐
Stairs / exits: 300 psf concentrated ..... ☐
Exercise / assembly / lobby: 100 psf ... ☐
1607.8 Handrails, guards, grab bars design loads ☐
2603.4 Foam plastic thermal barrier
2603.4.1.5 Foam plastic roof insulation thermal barrier

CARBON DIOXIDE PROTECTION

IFC5307 CO2 system 100#max. NFPA55
(Restaurant / Function Rooms / Kitchens)

POOLS / SPAS / HOT TUBS

- •State of MI Public Swimming Pools Act 368 of 1978
  State of MI permit required
  Occupant load MPC 403.1 x (3): R325.2111
- •2015 International Swimming Pool and Spa Code (I)
  (Considered as "Public" pool: see definition)
- ☐ Pool barrier required: I-305
- ☐ Portion of building used as barrier: I-305.4
- ☐ Suction entrapment protection: I-310
- ☐ Accessibility requirements: A117.1: 1109
- ☐ Family / assisted use toilet room: MBC 1109.2.1
- ☐ Pool entry: A117.1: 1109.1.1
- ☐ Adjacent glazing: MBC 2406.4.5
- ☐ Deck clearance: I-406.3
- ☐ Public swimming pool details: I-chapter 4

NOTES

..... ☐
..... ☐
..... ☐
..... ☐
..... ☐
..... ☐
..... ☐

PLAN REVIEW - NOTE: This checklist is intended to be used as a supplement to a comprehensive building plan review and does not list all code requirements for this topic.

BUILDING PLAN REVIEW

Approved as noted

Permit Number: PBC 23-0030 / PBC 23-0031 / PBC-0032

This review shall be attached to the plans and shall be part of the construction documents.

Date:	April 26, 2023	
Project Title:	Outpatient OR Expansion Project	
Site Address:	47601 Grand River	
Type of Review:	Building	
Architect:	Name:	HKS Architect
	Address:	235 E. Main St. Suite 102C Northville, MI 48167
Contractor:	Name:	Auch Construction
	Address:	65 University Drive Pontiac MI 48342

Design Professional in Responsible Charge:

Name:	John Avdoulos
License #:	1301039334

Scope of Work:

Project description: Renovation of Existing Operatory Suites – 3 phases

Phase 1: Smoke Compartment E
Smoke Compartment C: Corridor Portion only
Smoke Compartment A: Waiting Area
Phase 2: Smoke Compartment D: Operatory Suite area
Phase 3: Smoke Compartment C: Recovery Suite area

Use Group: I-2 (Institutional – Hospital: Includes OR Expansion)
(Risk category: IV)

Construction type: I-B (Protected) +
Building-wide automatic sprinkler system

Project Sq. ft.:	26,211 sq. ft. (2nd story work area) 10,645 sq. ft. (2nd story phase 1 work only)
Occupant Load:	193 occupants

Codes Applicable to Project:

This Project has been reviewed for compliance with the 2015 MICHIGAN BUILDING CODE (MBC) and the Michigan Barrier Free Design Law PA 1 OF 1966 incorporating the 2009 ICC/ANSI A117.1Standard. Additional requirements may apply under the Americans with Disabilities Act (ADA), which is beyond the authority of this agency. Information on the ADA may be obtained by calling 1-800-USA-ABLE (1-800-872-2253) or visit www.access-board.gov.

This project is also subject to the following codes as may be applicable:

2015 Michigan Rehabilitation Code for Existing Buildings (MRCEB)
2015 Michigan Building Code (MBC)
2018 Michigan Plumbing Code (MPC)
2015 Michigan Mechanical Code (MMC)
2017 Michigan Electrical Code (MEC) effective Jan. 4, 2019.
(Documents indicate 2015 NEC)
2015 Michigan Energy Code Including ASHRAE 90.1 – 2013
ICC A117.1-2009 Standard for Accessibility and Usable Buildings and Facilities

Validity:

The issuance of a permit or approval of construction documents shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of other ordinances of the jurisdiction. A permit presuming to give authority to violate or cancel the provisions of this code shall be invalid.

The issuance of a permit based upon construction documents and other data shall not prevent the code official from thereafter requiring the correction of errors in the construction documents and other data or from preventing building operations from being carried on when in violation of this code or of other ordinances of this jurisdiction (Michigan Building Code 106.4.2).

General Items:

1. The approved plans & plan review report shall be present at the construction site and made available to the inspector upon request.
2. Building shall be provided with approved address identification visible from street.
3. Separate plans, permits and inspections are required for the following types of work: building, electrical, mechanical, plumbing, grading, fire protection and alarms systems, demolition, building relocation and change of occupancy unless otherwise approved by the authority having jurisdiction.
4. All work is subject to field inspections.
5. This building plan review assumes that all permits and approvals from other agencies have been obtained.

Specific Plan Review Remarks/Conditions:

1. Scope of work / construction documents do not indicate changes to the occupant load or occupancy classification of the work area. City of Novi must review the existing egress / exit access to verify maintenance of required egress capacity (MRCEB 704.1). Note:

   • Occupant load of 2nd story surgery center indicated at 193 occupants
   Occupant capacity of stairs indicated at 280 (42 in. width x 2 exit stairs).

   ▪ Exit access path through corridors C2000 through 2009, or other additional approved exit access capacity / width, must be clearly delineated, marked and signed subject to City of Novi review / approval.

2. Scope of work does not indicate changes to the configuration of the atrium, or overall changes of occupancy to the work area. City of Novi must review the existing atrium provisions for continued acceptance (MRCEB 802.1). Note:

   • Smoke control system not indicated within atrium (MBC 404.5)

3. Joints, penetrations, ducts and/or air transfer openings must comply with applicable sections for compliance in a construction type IB protected building (MBC 710.6; 710.7; 710.8 and 717.3.2.2.).

4. Lighting to illuminate all means of egress shall be provided (MBC 1008.1). Emergency power for such lighting shall comply with the requirements of MBC 1008.3. In addition, all rooms and spaces requiring two or more exits or exit access shall be provided with internally illuminated exit signs (MBC 1013.1). Number and location of exit signs may be altered or determined by on-site inspection to insure coverage and visibility (MBC 1013.1). Specific occupancy requirements may apply.

5. Non-combustible or fire rated walls or ceilings: Interior finish material shall be applied directly against such construction or to furring strips not exceeding 1 ¾ inches applied directly against such surfaces (B 803.13.1).

Intervening spaces between furring strips used for interior finish application shall be filled with inorganic or noncombustible material, be filled with Class A finish rating material, or be fire blocked at a maximum of 10 feet in every direction (B 803.13.1.1).

6. All glass that is both within 60 inches of the floor and 24 inches of the vertical edge of a door; in swinging doors, in fixed or sliding panels of sliding door assemblies, glazing with an area of greater than 9 sq. ft. and 18 inches or less above the floor surface and top edge greater than 36 inches above the floor; glazing in guard rails and railings; glazing adjacent to stairways, landings and ramps within a 36 inch horizontal distance of a walking surface and less than 60 inches above the floor or walking surface and 60 inches horizontally from the bottom of a stairway in any direction; and glazing near wet surfaces as outlined in 2406.4.5 shall be approved safety glass (MBC 2406.3).

Deferred Submittal Items, Application and Documents:

• Updated fire safety and evacuation plans to City of Novi (MBC 1001.4 / IFC 401.2 & 404).

• Statement of special inspections must be provided to and approved by the authority having jurisdiction (MBC 1704.3; 1704.2.3). Statement must include all penetrations, joints, ducts, and air transfer openings for type IB construction.

• Documents for revisions to automatic sprinkler, standpipe and / or fire alarm systems.

• Hazardous materials report as may be applicable or as requested by the City of Novi (MBC 414 & 307).

The following inspections are required - Please check with the Building Department of the Jurisdiction listed above if you have questions about whether a listed inspection applies to the project:

Rough framing inspection (scheduled after mechanical, electrical and plumbing have passed rough inspection).
Insulation (if applicable).
Fire and smoke-resistant penetrations (prior to concealment)
Drywall screw (required for all drywall installation).
Above ceiling (scheduled after mechanical electrical and plumbing have passed inspection).
Final inspection (scheduled after mechanical, electrical and plumbing have passed final inspection).

BUILDING PLAN REVIEW

Approved as noted

Permit Number: PBC 22-0155

This review shall be attached to the plans and shall be part of the construction documents.

Date:	January 17, 2023	
Project Title:	Ascension Hospital: 6th Floor Build-Out	
Site Address:	47601 Grand River	
Type of Review:	Building	
Architect:	Name:	HKS Architects
	Address:	236 East Main Street Suite 102C Northville, MI 48167
Contractor:	Name:	Auch Construction
	Address:	65 University Dr. Pontiac, MI 48342

Design Professional in Responsible Charge:

Name: John A. Avdoulos
License #: 1301039334

Scope of Work:

Project description: Build-out of previously unoccupied 6th floor

Use Group: I-2 (Hospital)

Construction type: I-B (Non-combustible / protected) + high-rise systems:

- Smoke detection system (403.4.1)
- Fire Alarm system (403.4.2)
- Automatic sprinkler system (403.3)
- Standpipe system (403.4.3)
- Emergency voice/alarm communication system (403.4.4)
- Emergency responder radio coverage (403.4.5)
- Fire Command Center (403.4.6)
- Stand-by and Emergency Power system (403.4.8)
- Smokeproof Exit Enclosures (403.5.4)

Project Sq. ft.:	50,689 sq. ft.
Occupant Load:	358 occupants

Codes Applicable to Project:

This Project has been reviewed for compliance with the 2015 MICHIGAN BUILDING CODE (MBC) and the Michigan Barrier Free Design Law PA 1 OF 1966 incorporating the 2009 ICC/ANSI A117.1Standard. Additional requirements may apply under the Americans with Disabilities Act (ADA), which is beyond the authority of this agency. Information on the ADA may be obtained by calling 1-800-USA-ABLE (1-800-872-2253) or visit www.access-board.gov.

This project is also subject to the following codes as may be applicable:

2015 Michigan Rehabilitation Code for Existing Buildings (MRCEB)
2015 Michigan Building Code (MBC)
2018 Michigan Plumbing Code (MPC)
2015 Michigan Mechanical Code (MMC)
2017 Michigan Electrical Code (MEC)
2015 Michigan Energy Code Including ASHRAE 90.1 – 2013
ICC A117.1-2009 Standard for Accessibility and Usable Buildings and Facilities

Validity:

The issuance of a permit or approval of construction documents shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of other ordinances of the jurisdiction. A permit presuming to give authority to violate or cancel the provisions of this code shall be invalid.

The issuance of a permit based upon construction documents and other data shall not prevent the code official from thereafter requiring the correction of errors in the construction documents and other data or from preventing building operations from being carried on when in violation of this code or of other ordinances of this jurisdiction (Michigan Building Code 106.4.2).

General Items:

1. The approved plans & plan review report shall be present at the construction site and made available to the inspector upon request.
2. Building shall be provided with approved address identification visible from street.
3. Separate plans, permits and inspections are required for the following types of work: building, electrical, mechanical, plumbing, grading, fire protection and alarms systems, demolition, building relocation and change of occupancy unless otherwise approved by the authority having jurisdiction.
4. All work is subject to field inspections.
5. This building plan review assumes that all permits and approvals from other agencies have been obtained.

Specific Plan Review Remarks/Conditions:

1. Response letter from HKS submitted with transmittal dated December 5, 2022 is incorporated with these conditions (see attached). Responses are accepted contingent upon approval of the City of Novi.

   Please discuss the following with the City of Novi:

   a. The STC ratings for the patient room wall assembl8es are subject to review by the City of Novi (see attached response letter). Patient rooms are subject to the requirements of MBC 1207.2 regarding the STC rating requirements (see 2015 ICC Building Code Commentary page 2-86: Definition of Sleeping Unit).

   b. Provide carbon monoxide alarms (MBC 915.1.1). Alarms are required for sleeping units (see commentary as referenced in item 1(a) above).

2. Provide emergency responder radio coverage in accordance with section 510 of the International Fire Code (MBC 916.1) or as otherwise acceptable to the City of Novi.

3. Provide an updated fire safety and evacuation plan to the City of Novi in compliance with MBC 407.4, 1001.4 and sections 401.2 and 404 of the International Fire Code.

4. Swing one of the two doors in door-pair 6310 in the opposite direction, out of corridor 6310 and in the direction of corridor 6200.

5. Please verify that there is an accessible route into the space to and from the nearest accessible parking space including curb cuts, building entrances, elevators, toilet rooms and drinking fountains (MRCEB 410.6 and 410.7).

   Section 410.7 of the MRCEB requires that where an alteration contains an area of primary function, the route to the primary function shall be accessible, including toilet facilities and drinking fountains serving the area of primary function.

   In the event the existing route, or portions of it such as building entrances, toilet rooms, drinking fountains, or seating / counters are not in compliance with the current editions of the applicable standards such as ICC A117.1-2009, please (1) modify those areas to comply, (2) install new facilities in compliance (3) indicate an applicable exception based on the codes, standards or public acts, or (4) obtain a variance from State of Michigan.

   The costs of providing the accessible route are not required to exceed 20% of the total costs of the alterations affecting the area of primary function (Act 230 of 1972: 125.1513g effective March 27, 2019).

6. The force for pushing or pulling open interior swinging egress doors (other than fire doors), interior sliding and folding doors, and doors along an accessible route shall not exceed those indicated in MBC 1010.1.3 and ICC A117.1-2009 section 404.2.8.

7. Door hardware: Handles, pulls, latches, locks and other operable parts on accessible doors shall have a shape that is easy to grasp with one hand and does not require tight grasping, pinching or twisting of the wrist to operate. Operable parts of such hardware shall be 34 inches minimum and 48 inches maximum above the floor (ICC A117.1-2009: 404.2.6; MBC 1010.1.9 and 1104).

8. Lighting to illuminate all means of egress shall be provided (MBC 1008.1). Emergency power for such lighting shall comply with the requirements of MBC 1008.3. In addition, all rooms and spaces requiring two or more exits or exit access shall be provided with internally illuminated exit signs (MBC 1013.1). Number and location of exit signs may be altered or determined by on-site inspection to insure coverage and visibility (MBC 1013.1). Specific occupancy requirements may apply.

9. Non-combustible or fire rated walls or ceilings: Interior finish material shall be applied directly against such construction or to furring strips not exceeding 1 ¾ inches applied directly against such surfaces (B 803.13.1).

   Intervening spaces between furring strips used for interior finish application shall be filled with inorganic or noncombustible material, be filled with Class A finish rating material, or be fire blocked at a maximum of 10 feet in every direction (B 803.13.1.1).

10. Where seating or standing space at fixed or built-in tables, counters or work surfaces is provided in accessible spaces, at least 5% of the seating and standing spaces, but not less than one, shall be accessible and shall be distributed throughout the space or facility and located on an accessible route (MBC 1109.11).

11. Counters for sales and service, including reception windows and desks, shall include at least 1 that is accessible with a 36" long portion no more than 36" above the floor. The accessible portion of the countertop shall extend the same depth as the sales and service countertop. Where the counter surface is less than 36 inches in length, the entire counter surface shall be 36 inches maximum in height above the floor. A clear floor space complying with section 305 positioned for a parallel approach shall be provided (A117.1 – 904.3.2 and MBC1109.12.3).

12. All glass that is both within 60 inches of the floor and 24 inches of the vertical edge of a door; in swinging doors, in fixed or sliding panels of sliding door assemblies, glazing with an area of greater than 9 sq. ft. and 18 inches or less above the floor surface and top edge greater than 36 inches above the floor; glazing in guard rails and railings; glazing adjacent to stairways, landings and ramps within a 36 inch horizontal distance of a walking surface and less than 60 inches above the floor or walking surface and 60 inches horizontally from the bottom of a stairway in any direction; and glazing near wet surfaces as outlined in 2406.4.5 shall be approved safety glass (MBC 2406.3).

13. A sign shall be provided at each floor landing in an interior exit stairway and ramp connecting more than three stories designating the floor level, the terminus of the top and bottom of the stairway and ramp, and the identification of the stairway or ramp. The signage shall also state the story of, and the direction to, the exit discharge and the availability of roof access for the fire department. Additional requirements as outlined in MBC section 1023.9 also apply.

Deferred Submittal Items, Application and Documents:

• Statement of special inspections must be provided to and approved by the authority having jurisdiction (MBC 1704.3; 1704.2.3).

• Documents for revisions to automatic sprinkler, standpipe and / or fire alarm systems.

Inspections:

The following inspections are required - Please check with the City of Novi Building Department if you have questions about whether a listed inspection applies to the project:

Rough framing inspection (scheduled after mechanical, electrical and plumbing have passed rough inspection).
Insulation (if applicable).
Fire and smoke-resistant penetrations (prior to concealment)
Drywall screw (required for any rated assemblies).
Above ceiling (scheduled after mechanical electrical and plumbing have passed inspection).
Final inspection (scheduled after mechanical, electrical and plumbing have passed final inspection).

2015 INTERNATIONAL BUILDING CODE®
PLAN REVIEW RECORD

Plan Review #: _____
Date: _____
Valuation: _____
Fee: _____

JURISDICTION: City of Ann Arbor
(City, County, Township, etc.)

BUILDING LOCATION: 201 Catherine
(Street address)

BUILDING DESCRIPTION: Ann Arbor Autograph Hotel

REVIEWED BY: VP

Numerals indicated in parenthesis are applicable code sections of the 2015 *International Building Code (IBC)*. The plan review accomplished as indicated in this record is limited to those code sections specifically identified herein. This record references commonly applicable code sections. It does not reference all code provisions which may be applicable to specific buildings. This record is designed to be used only by those who are knowledgeable and capable of exercising competent judgment in evaluating construction documents for code compliance.

CORRECTIONS LIST

No.	DESCRIPTION	Code Section
✓ ○	STC/IIC	✓ ○ Ped Protection 3306
		✓ ○ Const. Sequence 3309
✓ ○	EPRC 916	
✓ ○	Auger cast pile) with special inspection (1705.8.)	
	Post-Tensioned concrete special insp. (1705.3)	3015 ✓
✓ ○	Code Compliance Data indicates separated occupancy	
	Numerous A-2/B non-separated areas L1	
	Terraces are not separated	
	Verify	
✓	Verify Carbon Monoxide detection 915.1.1	

ISBN 978-1-60983-609-2
Item No. 0002PR15

Level 1 ○ Columns 4ft - Verify 44 in. corridor width remains ✓

(1) #(2)

Level 1 ○ Private dining - side hinged doors (2 Rooms) 1010.1.2 ✓

350/15 = 24 = +10 ∴ No sliders ✓

Room 2 = 24 occupants shown ∴ No Sliders ✓

Level 1 ○ Hotel Lounge Stair 1 - Risers 1011.5.3 ✓

Winders not permitted ✓

↓ ✓

If not MBE stair - See 1011.9 ✓

(1023.1)

Level 1 ○ Storage 106A opens directly to exit enclosure ✓

(Used as means of ingress - not just egress) ✓

Level 1 ○ Revolving door 1010.1.4.1 ✓

✓ ○ Verify voice/alarm communication system ✓

w/ high rise (Stair 2.0 limit rate used) ✓

○ Handrails / guards / grab bar loads 1607.8 ✓

* ○ Verify - No extended stay or use as a residence ✓

Intermediate rail Stair Entry 103 : 1014.9 ✓

CO² Storage 106A ✓

Level 2 Mech Room 217 / Corridor 219

Openings onto R-2 (West side)

Check w/ glass

Level 3-7 Check w/ glass @ room (west side)

Level 8 d.o. (west side)

Level 9 d.o. (west side)

Dumpster enclosure on adjacent lot? (west side)

Check stairs for any accumulating loads from 2 to 1

✓ ○ Level 2 Corridor 219 Not approved as part of means of egress

✓ ○ Level 2 Exit 004 Door may only count for 42" based on wing wall restricting approach width to ± 84 inches

✓ ○ Level 2 Plumbing Count,
add for revised occupancy
A-3: Assume 993 < 497 4WC + 3lav ok
497 8WC + 3lav ok

✓ Level 8 = Common path Suite 816 exceeds } 75 ft T1006.2.1
Terrace 846 B
= Glazed openings from corridor.

✓ Level 1 & 2 0-3 FSD - No openings permitted

✓ Level 2 (South) 13 FSD
✓ (North) 0 FSD - No Openg Stair #4 or Vent ○

✓ Level 3 (North) 6 FSD - Windows 25%
✓ (North) 0 Stair - No Openg in Stair Tower #4
✓ (South) +30 FSD

✓ Level 4 (North) 6 FSD - Windows 25%
✓ 0 Stair - No Openg in Stair tower #4 ○
✓ (South) +30 FSD

✓ Same Level 5, 6, 7, 8, 9

✓ L2 | Corridor 219 must be circulation only
Egress may not pass thru kitchen area

✱ Pressurization area = No exits shown in area
of 2 required (?) based on occupancy

✓ L3 | Outside Terrace - Toilet rooms ?

✓ West wall openings ok. Check all levels

✓ Encroachments along street lines (Signs)
all others +15 ft. above sidewalk ✓

✓ Approval from neighbors for borings

✓ L9 Terraces @ 1:15 = +50 = 2 exits : Toilet Rooms ✓

✓ L8 Private terraces = Assume part of R-1 (?)

✓ OK Private Roof terrace 846B exceeds 75 sf limit?

Private Roof terrace 845B } Eliminate Windows
846A } (Part of Corridor Sep.)

Exterior walls separating terraces = Same as Unit Sep.?

✓ OK

846A	846B
	(NA) No roof
845A	845B

✓

✓ L2 Pre-Function Lobby must have an identified occupant load

A 5334/15 = 355 /7 = 762
B 2733/15 = 182 /7 = 390
Lobby 2418/15 = 161 /7 = 345
(698) (1497)

* No non-simultaneous occupancy Concepts in MBC w/o BO Approval

If 80 =
Over 1000 people = 4 exits

✓ Stair #2 may count as 1 exit only and Stair #1 does not meet geometry or enclosure

- Allowable area of opening / story T705.8 (25%) 5-10 ft (6 ft) West wall / north Exceeds 25% allowed (±32%) (All stories 3-9)
- Allowable area of openings / story T705.8 (0%) 0-3 ft sep West wall north Exceeds 0% Stories 1 & 2
- Allowable area of openings / story T705.8 (45%) 13 ft sep west wall south Story 2 Exceeds limits (actual 56%)
- Sheet A505 / Detail 3/A401 = Where? Section
  - Sign Support - Check for Encroachments
  - Verify meets encroachment standard
- Laundry chute details - does shaft 90 minute rating
- Safety glass general note
- Verify = Garage mechanical vent system 404.6.2
- High Rise items

- ✓ Tieback approval to Building Official
- ✓ Service Elevator 3 only access to garages - Ch. 11
- ✓ Location of van accessible spaces 1106.2
- ✓ 30 day stay? 1107.6.1
- ✓ Venting Smoke, Press. @ Elevator & Stairs (?)
- ✓ Level 2 split problems

CORRECTION LIST (cont'd.)		
No.	DESCRIPTION	Code Section
✓	Sign canopy projections Sheet A505 / 3/A401 Section	3202.3.1
	Max. projections 2/3 width sidewalk	
✓	Health Dept - Approval A-2 (?)	
✓	Risk III not II?	

NOTES: N.R. — Not required
N.A. — Not applicable

ADMINISTRATION (Chapter 1)

(Gene Carroll)
Neumann/Smith

OK Complete construction documents *(107.1, 107.2)*

OK Signed/sealed construction documents *(107.1, State laws vary)*

BUILDING PLANNING (Chapters 3, 4, 5, 6)

OCCUPANCY CLASSIFICATION (302 - 312, 508, 509)

NA Single Occupancy *(302.1)*

OK Incidental uses *(509, Table 509)*

S-2/A-2/B/R-1 Mixed Occupancy *(508.1)*

NA Accessory occupancies *(508.2)*

IB (Sheet A029) **GENERAL BUILDING LIMITATIONS (Chapters 5 & 6)**

Apply Case 1 to determine the allowable height and area and permitted types of construction for a building containing a single occupancy or nonseparated mixed occupancies. Apply Case 2 to determine the allowable height and area and permitted types of construction for a building containing separated mixed occupancies.

HEIGHT	St.	Ft.
A-2	12	180
B	12	180
R-1	12	180
S-2	12	180

FRONTAGE INCREASE

Frontage *(506.3)*

North	East	South	West

Total Frontage *(F)* _____ ft. Perimeter *(P)* _____ ft.

Width of open space *(W)* = _____

Area Increase Factor due to frontage, I_f = _____ *(506.3.3)*

$$I_f = \left[\frac{F}{P} - 0.25\right]\frac{W}{30}$$

AREA	Area
A-2	UL
B	UL
R-1	UL
S-2	257,000/story

NA CASE 1 — SINGLE OCCUPANCY OR NONSEPARATED MIXED OCCUPANCIES (508.3)

Using Tables 504.3, 504.4 and 506.2, identify the allowable height and area of the single occupancy or the most restrictive of the nonseparated mixed occupancies. Construction types that provide an allowable building area and height equal to or greater than the actual building area and height are permitted.

DETERMINE CONSTRUCTION TYPE

Actual building area _____ ft²

Tabular allowance area (A_t) _____ ft²

Tabular allowance area for nonsprinklered buildings (NS) _____ ft²

Allowable building area _____ ft²

$A_a = A_t + (NS \times I_f)$

Actual building height _____ feet _____ stories

Allowable building height _____ feet _____ stories

Permitted types of construction _____

Type of construction assumed for review *(602.1)* _____

✓ CHECK MAXIMUM ALLOWABLE AREA (506.2.3)

Total floor area (all stories) _____ ft²

Maximum allowable floor area (all stories)

_____ (Allowable building area (A_a)) × _____ (number of stories above grade plane (maximum 3) (S_a)) = _____ ft²

Compliance verified _____

IB = UL area ∴ OK

∞ × ∞ = ∞ ∴ OK

Flow Area & Occupancy II

2712 total
↓
1483 Assembly
(54% total)

				Occ. Load	
9	12,390			156	156 − 98 = 58 58 + 10 = (68)
8	14,404			72	
7	16,463			83	
6	16,463			83	~~672~~ 604
5	16,463			83	
4	16,463			83	
3	16,463			83 + Terrace 49 = 132	604
2	20,724	(A) 609 (Lobby) 246 (B) 312 } 1197		See attached	(?) Total 1269 (2) 1197 A
1	13,786	R-1	A-2	Tenant Space (?)	Drive Through ± Total 311 (180 = 2.14 A) } 1111
U-1	21,802	S-2		1:200 = 110	
U-2	21,802	S-2		1:200 = 110	Total 440
U-3	21,802	S-2		1:200 = 110	
U-4	21,802	S-2		1:200 = 110	

NA MEZZANINES (505)

_____ Area limitation *(505.2.1)*

_____ Egress *(505.2.2)*

_____ Openness *(505.2.3)*

_____ Equipment platforms *(505.3)*

NA UNLIMITED AREA BUILDINGS (507)

_____ Open space *(507.2)*

_____ Nonsprinklered, one story *(507.3)*

_____ Sprinklered, one story *(507.4)*

_____ Two story *(507.5)*

_____ Group A-3 buildings *(507.6, 507.7)*

_____ Group H-2, H-3 and H-4 occupancies *(507.8)*

_____ Group H-5 occupancy *(507.9)*

_____ Aircraft paint hangar *(507.10)*

_____ Group E buildings *(507.11)*

_____ Motion picture theaters *(507.12)*

_____ Covered and open mall buildings/anchor stores *(507.13)*

NA SPECIAL PROVISIONS (510)

_____ Special condition applicable *(510.1)*

_____ Compliance verified

SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY (Chapter 4)

NA COVERED MALL AND OPEN MALL BUILDINGS (402)

_____ Open space *(402.1.1, 402.1.2)*

_____ Lease plan *(402.3)*

_____ Area/type of construction *(402.4.1)*

_____ Fire separations *(402.4.2 - 402.4.2.3)*

_____ Open mall construction *(402.4.3)*

_____ Automatic sprinkler system *(402.5)*

_____ Interior finish *(402.6.1)*

_____ Kiosk requirements *(402.6.2)*

_____ Children's play structures *(402.6.3)*

_____ Plastic signs *(402.6.4)*

_____ Standpipe system *(402.7.1)*

_____ Smoke control *(402.7.2)*

_____ Emergency power and emergency voice/ alarm *(402.7.3, 402.7.4)*

_____ Fire department access *(402.7.5)*

_____ Mall width *(402.8.1)*

_____ Occupant load *(402.8.2 - 402.8.2.4)*

_____ Egress *(402.8.3 - 402.8.7)*

_____ Security grilles and doors *(402.8.8)*

HIGH-RISE BUILDINGS (403)

IB Construction *(403.2)* ✓

✓ Automatic sprinkler system *(403.3)*

Smoke detection *(403.4.1)*

Fire alarm system *(403.4.2)*

Standpipes *(403.4.3)*

Emergency voice/alarm systems *(403.4.4)*

Emergency responder radio coverage *(403.4.5)*

✓ Fire command center *(403.4.6)*

Smoke removal *(403.4.7)* Post-fire

Standby/emergency power *(403.4.8)*

✓ Stair remoteness *(403.5.1)*

N/A Additional stairway *(403.5.2)*

Stairway doors *(403.5.3)*

Smokeproof exit *(403.5.4)*

Stair + Elevator (2) Luminous egress path *(403.5.5)* Req'd (91 ft ±)

Elevators *(403.6)*

NA ATRIUMS (404)

Use *(404.2)*

Automatic sprinkler system *(404.3)*

Fire alarm system *(404.4)*

Smoke control *(404.5)*

Enclosure *(404.6)*

Standby power *(404.7)*

Interior finish *(404.8)*

Travel distance *(404.9)*

Interior exit stairways *(404.10)*

OTHER SPECIAL USE AND OCCUPANCY

N Underground structures *(405)*

N Motor-vehicle-related occupancies *(406, 510)*

Group I-2 *(407)*

Group I-3 *(408)*

Motion picture projection rooms *(409)*

Stages, platforms and technical production areas *(410)*

Special amusement buildings *(411)*

Aircraft-related occupancies *(412)*

Combustible storage *(413)*

Hazardous materials *(307.1, 414)*

Groups H-1, H-2, H-3, H-4 and H-5 *(415)*

Application of flammable finishes *(416)*

Drying rooms *(417)*

Organic coatings *(418)*

Live/work units *(419)*

N Groups I-1, R-1, R-2, R-3 and R-4 *(420)*

Hydrogen fuel gas rooms *(421)*

Ambulatory care facilities *(422)*

Storm shelters *(423)*

Children's play structures *(424)*

Hyperbaric facilities *(425)*

Combustible dusts *(426)*

FIRE PROTECTION (Chapters 6, 7, 8, 9)

FIRE-RESISTANCE-RATED CONSTRUCTION (Tables 601 & 602 and Chapter 7)

Note: Entry in ☐ indicates required rating in hours. NC indicates noncombustible construction required.

Construction classification *(602)*

COMBUSTIBILITY (602.2, 602.3, 602.4, 602.5, 603)

Exterior walls

Interior elements

Roof

FIRE-RESISTANCE RATINGS AND FIRE TESTS (703)

See attached Ratings / Combustibility *(703.2, 703.4, 703.5)*

Alternative methods *(703.3, 719, 721, 722)*

Rated glazing *(703.6)*

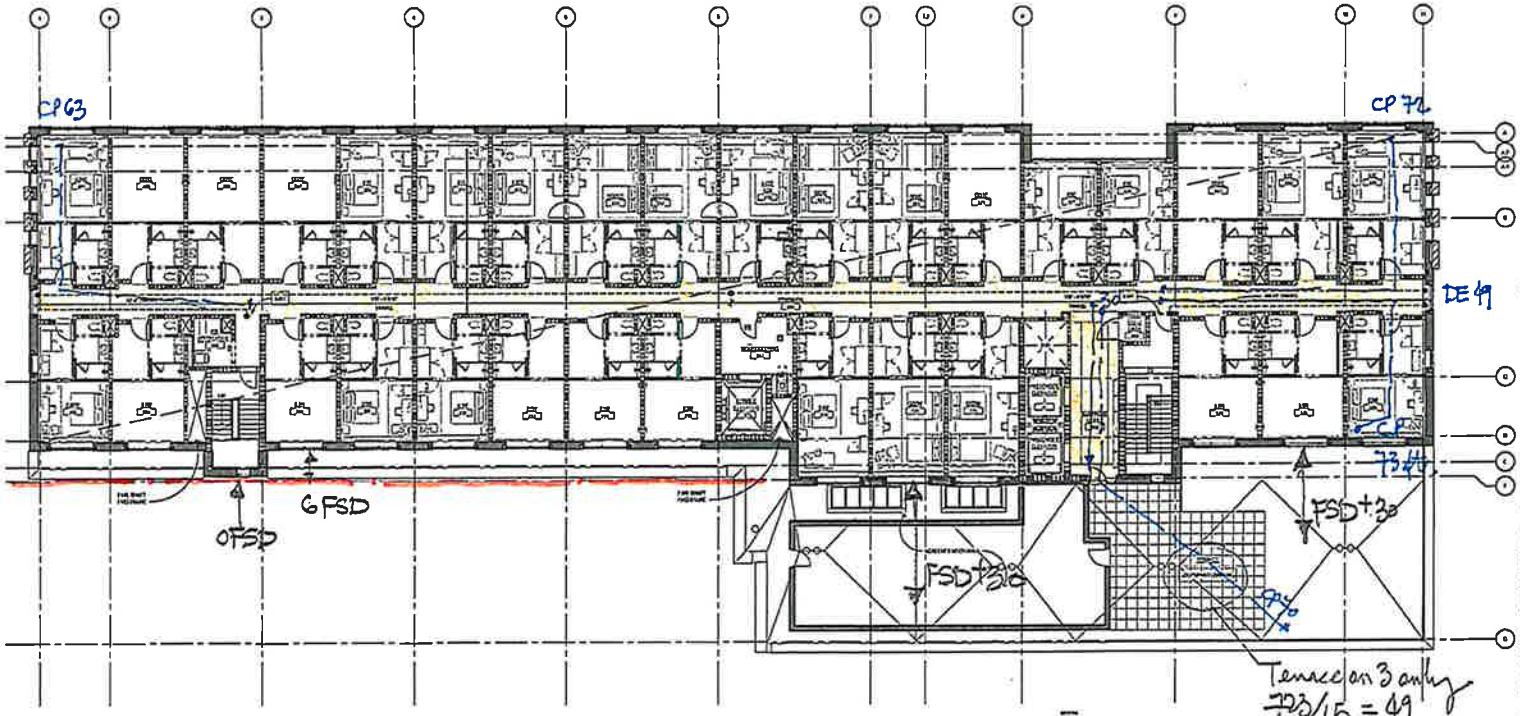
Marking and identification *(703.7)*

TD 250
CP 75
DE 50

7, 6, 5, 4 16,463/200 = 83

3 16,463/200 = 83 + Terrace 49 = 132

Stair = 132(.2) = 27 ok
Door = 132(.15) = 20 ok
Corridor



LEVEL 3-7 LIFE SAFETY PLAN

LIFE SAFETY PLAN LEGEND

NEUMANN SMITH
SOUTHFIELD • DETROIT
400 Galleria Officentre
Suite 555
Southfield, Michigan 48034
phone 248.350.8310
fax 248.350.1821
www.neumannsmith.com

ANN ARBOR AUTOGRAPH COLLECTION
Glen Avenue
Ann Arbor, MI 48104

10/17/2019 Permits and Bid
08/29/2019 Permits
08/01/2019 75% Construction Documents
06/27/2019 50% Construction Documents
05/29/2019 Design Development

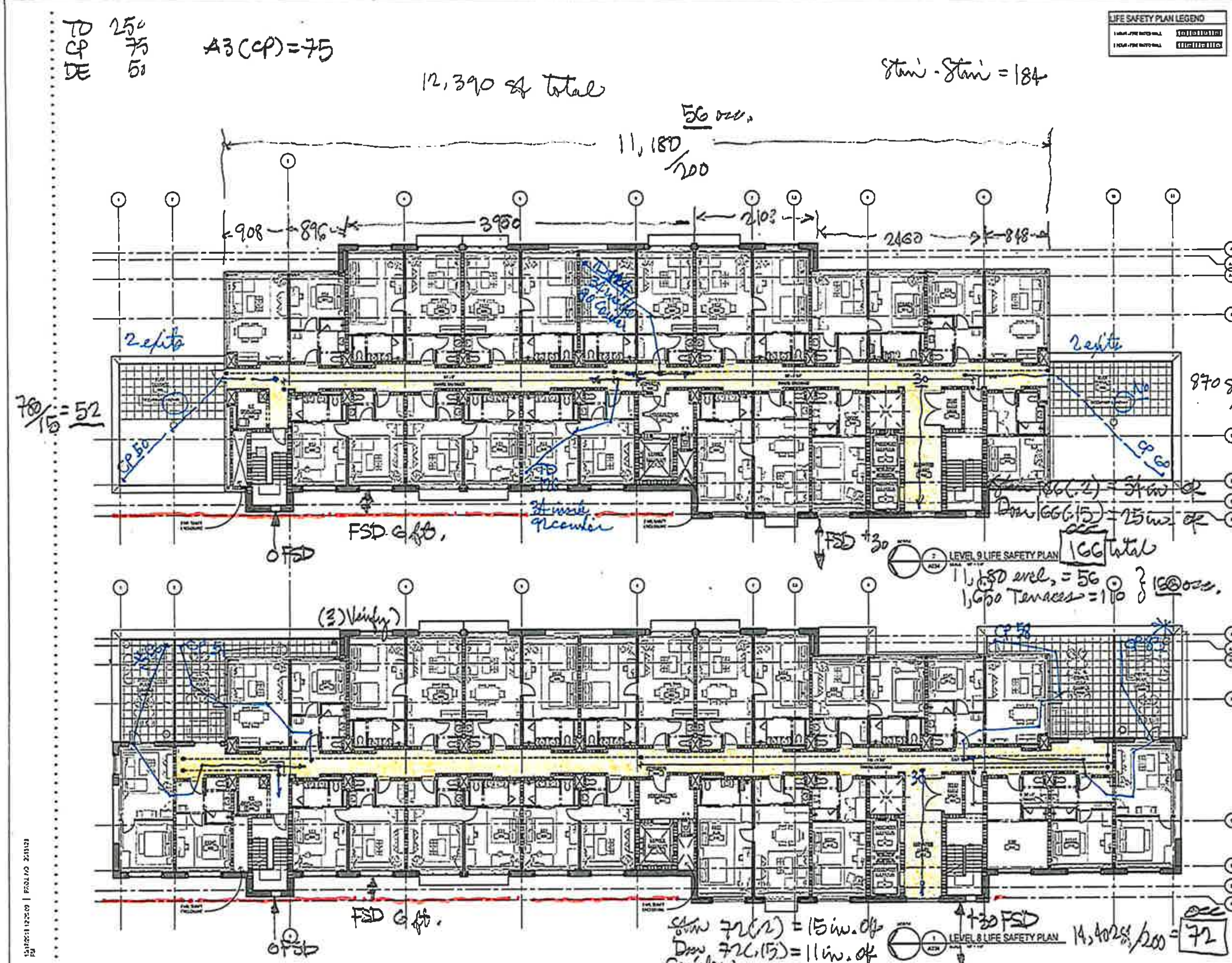
PD
PD
CC

2018128

THIRD TO SEVENTH FLOOR LIFE SAFETY PLAN

Scale: 1/8" = 1'-0"

A033



architecture
NEUMANN SMITH
SOUTHFIELD • DETROIT
400 Galleria Officentre
Suite 555
Southfield, Michigan 48034
phone 248.352.8310
fax 248.352.1821
www.neumannsmith.com

ANN ARBOR AUTOGRAPH COLLECTION
Glen Avenue
Ann Arbor, MI 48104

Permits and Bid
Permits
75% Construction Documents
30% Construction Documents
Design Development

PD
PD
CC

2019128
EIGTH AND NINTH FLOOR LIFE AND SAFETY PLAN
Scale: 1/8" = 1'-0"
A034

IB

BUILDING ELEMENTS (Table 601)

2 _____ Structural frame *(704)*

2 _____ Interior bearing walls

0 _____ Interior nonbearing walls

2 _____ Floor construction *(711)*

1 _____ Roof construction *(711)*

EXTERIOR WALLS *(507, Table 602, 705, 707.4)*

	North	East	South	West
Fire separation distance	(See attached W. Sides) all other (N, S, E) + 30 ft			
Bearing	☐	☐	☐	☐
Nonbearing	☐	☐	☐	☐

ok _____ Projections *(705.2)* None W side 30 ft. all N, S, E

_____ Materials/stability *(705.4, 705.6)*

☐ Noted Opening protection *(705.8.1 - 705.8.4)* (See attached W Sides)

☐ NA Vertical fire spread protection *(705.8.5, 705.8.6)* 8, 2

☐ OK Parapets *(705.11)* 8 3

FIRE BARRIERS (707)

2 _____ Shaft enclosures *(707.3.1)*

2 _____ Interior exit stairway/ramp *(707.3.2)*

— _____ Exit access stairway/ramp *(707.3.3)*

— _____ Exit passageway *(707.3.4)*

— _____ Horizontal exits *(707.3.5)*

☐ ok _____ Atriums *(707.3.6)* 2 Story only

— _____ Incidental uses *(707.3.7)*

— _____ Control areas *(707.3.8)*

— _____ Mixed occupancy and fire area separations *(707.3.9, 707.3.10, 901.7)*

— _____ Construction *(707.2, 707.5 - 707.10)*

VERTICAL OPENINGS (712)

Noted _____ Compliance *(712.1.1 - 712.1.16)* Atrium OK Elevator - Note lobby

SHAFTS (713)

2 _____ Construction *(713.2 - 713.12, 713.14)*

2 _____ Refuse and laundry chutes *(713.13)* 90 minute doors

OTHER FIRE-RESISTANT CONSTRUCTION

— _____ Fire walls *(706)*

☐ _____ Fire partitions *(708)*

☐ _____ Smoke barriers *(709)*

_____ Smoke partitions *(710)*

_____ Penetrations *(714)*

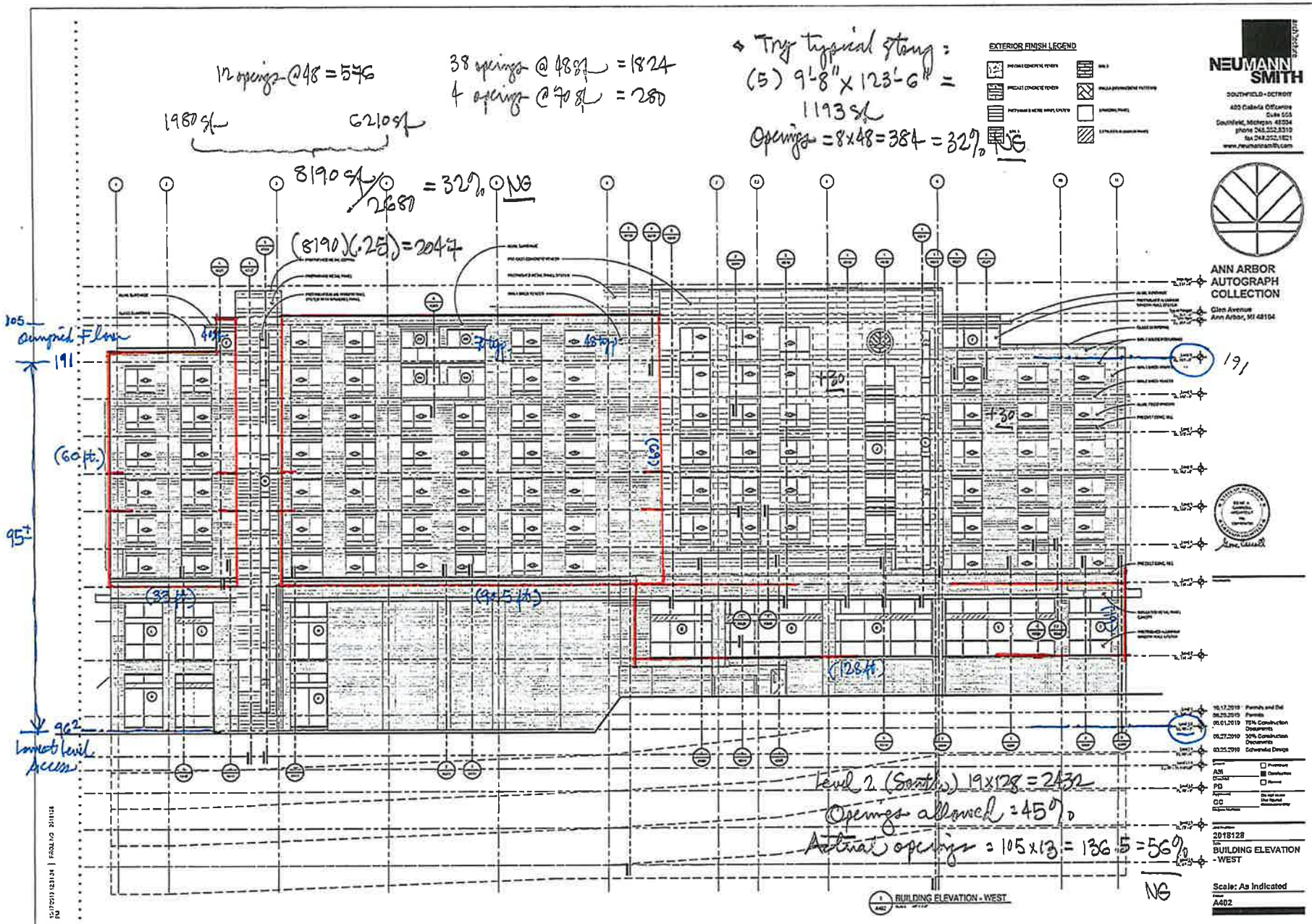
_____ Fire-resistant joint systems *(715)*

_____ Opening protectives *(716)*

_____ Dampers *(717)*

_____ Concealed spaces *(718)*

_____ Thermal- and sound-insulating materials *(720, 807)*


12 openings @ 48 = 576
38 openings @ 48 sf = 1824
4 openings @ 70 sf = 280
1980 sf
6210 sf
8190 sf / 2687 = 32% NG
(8190)(.25) = 2047
Try typical story:
(5) 9'-8" x 123'-6" = 1193 sf
Openings = 8x48 = 384 = 32% NG
EXTERIOR FINISH LEGEND
105 Occupied Floor
191
(60 ft.)
95±
92±
Lowest Level Access
(33 ft)
(91.5 ft)
(128 ft)
+30
+30
Level 2 (South) 19x128 = 2432
Openings allowed = 45%
Actual openings = 105x13 = 136.5 = 56%
NG
BUILDING ELEVATION - WEST
NEUMANN SMITH
SOUTHFIELD • DETROIT
ANN ARBOR AUTOGRAPH COLLECTION
Glen Avenue
Ann Arbor, MI 48104
2018128
BUILDING ELEVATION - WEST
Scale: As Indicated
A402

Fire-Resistance Ratings

Sheet A051

Walls

Exterior Walls	(P-5)	U404	Metal Stud (2)
	(S-V52)	415 (?)	Metal (1/2)
	(P-3)	U420	Metal Stud (2)
	(P-4)	U407	Metal Stud (1)
Shaft Wall Systems		AER-09038 (USG Report)	(1)

(2) Sheet A502 Exterior Walls — V454 typical 2. Walls/Parts.

A502 Spray fire proofing

	U.L.N-706	Beam for floor/clg. (SFRM)
A502	X771, X772	Columns
	P732	Roof Clg SFRM
	D925	Floor-Ceiling SFRM

INTERIOR FINISHES (Chapter 8)

_____ Smoke development *(803.1.1, 803.1.2, 803.11, Table 803.11)*

_____ Flame spread *(803.1.1, 803.1.2, 803.11, Table 803.11)*

_____ Textile/expanded vinyl coverings *(803.1.3, 803.1.4, 803.5 - 803.8)*

_____ Floor finish *(804)*

_____ Combustible materials *(805)*

_____ Decorations and trim *(806)*

_____ Acoustical ceiling systems *(808)*

FIRE PROTECTION (Chapter 9)

AUTOMATIC SPRINKLER SYSTEMS (903)
(Where required) Note: NFPA 13

_____ Assembly (A-1, A-2, A-3, A-4, A-5) *(903.2.1)*

_____ Ambulatory health care facilities (B) *(903.2.2)*

_____ Educational (E) *(903.2.3)*

_____ Factory/Industrial (F-1) *(903.2.4)*

_____ High-hazard (H-1, H-2, H-3, H-4, H-5) *(903.2.5)*

_____ Institutional (I-1, I-2, I-3, I-4) *(903.2.6)*

_____ Mercantile (M) *(903.2.7)*

_____ Residential (R) *(903.2.8)*

_____ Storage/Repair garage (S-1) *(903.2.9)*

_____ Parking garages *(903.2.10)*

_____ Windowless story *(903.2.11.1)*

_____ Rubbish and linen chutes *(903.2.11.2)*

_____ Buildings over 55 ft. high *(903.2.11.3)*

_____ Incidental uses *(Table 509)*

_____ Additional required systems *(Table 903.2.11.6)*

_____ International Fire Code *(IFC 903.2.11.6)*

AUTOMATIC SPRINKLER SYSTEMS* (903)
(Design)

_____ Shop drawings *(107.2.2)*

Required NFPA 13 system *(903.3.1.1)*

13R NFPA 13R system *(903.3.1.2)*

13D NFPA 13D system *(903.3.1.3)*

_____ Quick-response and residential heads *(903.3.2)*

_____ Actuation *(903.3.4)*

_____ Water supplies *(903.3.5)*

_____ Hose threads *(903.3.6)*

_____ Fire department connections *(903.3.7)*

_____ Limited area sprinkler system *(903.3.8)*

_____ Sprinkler monitoring and alarms *(903.4)*

* Also see Fire Code Sprinkler Plan Review Record

ALTERNATIVE AUTOMATIC FIRE-EXTINGUISHING SYSTEMS (904)

_____ Installation *(904.3)*

_____ Wet-chemical systems *(904.5)*

_____ Dry-chemical systems *(904.6)*

_____ Foam systems *(904.7)*

_____ Carbon dioxide systems *(904.8)*

_____ Halon systems *(904.9)*

_____ Clean-agent systems *(904.10)*

_____ Automatic water mist system *(904.11)*

_____ Commercial cooking systems *(903.2.11.5, 904.2.2, 904.12)*

_____ Domestic cooking in Group I-2 *(904.13)*

FIRE PROTECTION (continued)

STANDPIPE SYSTEMS (905)

_____ Installation standard *(905.2)*
Noted Building height *(905.3.1)*
_____ Group A *(905.3.2)*
_____ Covered and open malls *(905.3.3)*
_____ Stages *(905.3.4)*
_____ Underground buildings *(905.3.5)*
_____ Helistops/heliports *(905.3.6)*
_____ Marinas/boatyards *(905.3.7)*
_____ Rooftop gardens/landscaped roofs *(905.3.8)*
_____ Hose connections and locations *(905.1, 905.4, 905.5, 905.6)*
_____ Cabinets *(905.7)*
_____ Dry standpipes *(905.8)*
_____ Valve supervision *(905.9)*

PORTABLE FIRE EXTINGUISHERS (906)

_____ Required locations *(906.1, 906.5, 906.6)*
_____ Installation standard *(906.2)*
_____ Size and distribution *(906.3)*
_____ Cabinets *(906.8)*
_____ Installation *(906.9)*

FIRE ALARM AND DETECTION SYSTEMS (907)
(Where required)

Noted Construction documents/shop drawings *(907.1.1, 907.1.2)*
_____ Assembly (A-1, A-2, A-3, A-4, A-5) *(907.2.1)*
_____ Business (B) *(907.2.2)*
_____ Educational (E) *(907.2.3)*
_____ Factory (F-1, F-2) *(907.2.4)*
_____ High-hazard (H-5/organic coatings/highly toxic gases/organic peroxides/ oxidizers) *(907.2.5)*
_____ Institutional (I-1, I-2, I-3, I-4) *(907.2.6)*
_____ Mercantile (M) *(907.2.7)*
_____ Residential (R-1, R-2, R-4) *(907.2.8, 907.2.9, 907.2.10)*
_____ Single/multiple station smoke alarms *(907.2.11)*
_____ High-rise buildings *(907.2.13)*
_____ Atriums *(907.2.14)*
_____ Other buildings/areas *(907.2.12, 907.2.15 - 907.2.23)*

FIRE ALARM AND DETECTION SYSTEMS (907)
(Design)

Noted Residential smoke alarm interconnection *(907.2.11.5)*
_____ Residential smoke alarm power source *(907.2.11.6)*
_____ Smoke detection system *(907.2.11.7)*
_____ Fire safety functions *(907.3)*
_____ Initiating devices *(907.4)*
_____ Occupant notification *(907.5)*
_____ Installation *(907.6, 907.7)*

EMERGENCY ALARM SYSTEMS (908)

_____ Detection system applicable *(908.1 - 908.7)*

SMOKE CONTROL SYSTEMS (909)

Noted Where required *(402.7.2, 404.5, 405.5, 408.9, 410.3.7.2, 1023.11, 1029.6.2.1)*
_____ Design requirements *(909.1 - 909.4)*
_____ Smoke barriers *(909.5)*
_____ Pressurization method *(909.6)*
_____ Airflow design method *(909.7)*
_____ Exhaust method *(909.8)*
_____ Design fire *(909.9)*
_____ Equipment/Power *(909.10, 909.11)*
_____ Detection and control *(909.12 - 909.18)*
_____ Smokeproof enclosures *(909.20)*
_____ Elevator hoistway pressurization *(909.21)*

SMOKE AND HEAT REMOVAL (910)

NA Where required *(910.2)*
_____ Smoke and heat vents *(910.3)*
_____ Mechanical alternative *(910.4)*

FIRE COMMAND CENTER (911)

Noted Requirements *(911.1.1 - 911.1.6)*

FIRE DEPARTMENT CONNECTIONS (912)

_____ Installation *(912.1 - 912.6)*

FIRE PUMPS (913)

_____ Requirements *(913.1 - 913.5)*

EMERGENCY RESPONDER SAFETY FEATURES/ RADIO COVERAGE (914, 916)

_____ Requirements *(914.1, 914.2, 916.1)*

CARBON MONOXIDE DETECTORS (915)

Verify Requirements *(915.1 - 915.6)*

(See attached)

OCCUPANT NEEDS (Chapters 10, 11, 12)

MEANS OF EGRESS (Chapter 10)

OCCUPANT LOAD *(1004.1.2 and Table 1004.1.2, 1004.4)*

Location	Floor Area	+	Sq. ft./ person	=	Occt. load	Other occt. loads	Total

CAPACITY OF EGRESS COMPONENTS *(1005.3.1, 1005.3.2)*

Egress width (inch/occupant)

Stairways .2

Other egress component .15

Location	Stairways	Other egress components
Existing B/A Comm. System		

NUMBER OF EXITS/EXIT ACCESS *(1006)*

Location	Required	Shown
Note level 2 - 4 required		
Distributed 3 of		
No "Main" Entry to level 2		

	TD	OP	DE	
✓ A	250	~~75~~	20	Floors 1 & 2
✓ R-1	250	75	50	✓ Floors 3-9
✓ S-2	400	100	50	Floors 1 to 4

MEANS OF EGRESS (continued) — See analysis on Reduced plan set

GENERAL MEANS OF EGRESS

_____ Design requirements *(1003.2 - 1003.7)*

Noted Encroachment *(1005.7)*

Noted Means of egress illumination *(1008)*

Verify Exit signs *(1013)* (Field)

Noted Accessible means of egress *(1009)* – Verify

OK Door size/swing/opening force *(1010.1 - 1010.1.3)*

NA Special doors/Gates/Turnstiles *(1010.1.4, 1010.2, 1010.3)*

(See reduced plans)

_____ Door landings/Thresholds/Arrangement *(1010.1.5 - 1010.1.8)*

Noted Door hardware *(1010.1.9, 1010.1.10)*

OK Stairways *(1011)* T/R/Railing

OK Roof access *(1011.12)*

_____ Ramps *(1012)*

_____ Handrails *(1014)*

_____ Guards *(1015)* NR Walks 1015.8 - R-1

OK Luminous egress path markings *(1025)*

(See specs-10-1443 (attached)

EXIT ACCESS

OK Exit access configuration *(1007.1.1 - 1007.1.3)*

OK Common path of egress travel *(Table 1006.2.1)*

OK Intervening spaces *(1016.2, 1016.2.1)*

OK Exit access travel distance *(1017)*

(See attached above)

Noted Aisles *(1018)*

OK Exit access stairways/ramps *(1019)* – ☒ 1//84

OK Corridors *(1020)*

_____ Air movement in corridors *(1020.5)*

NA Egress balconies *(1021)*

EXITS / EXIT DISCHARGE

_____ Exits/Exit doors *(1006, 1022)*

OK Exit configuration *(1007.1.1, 1007.1.2)*

OK Interior exit stairways/ramps *(1023)*

_____ Exit passageways *(1024)*

_____ Horizontal exits *(1026)*

_____ Exterior exit ramps/stairways *(1027)*

OK Exit discharge *(1028)* OK ☒ 1 < 50%

Easily Recognized

OTHER MEANS OF EGRESS

NA Miscellaneous egress requirements *(1006.2.2.1 - 1006.2.2.5)*

NA Bleachers *(1029.1.1)*

OK Assembly exits & egress *(1029.2 - 1029.5)*

Noted Assembly aisles & features *(1029.6 - 1029.16)*

NA Emergency escape and rescue *(1030)* ☒ 1/1085

(Reviewed C. Stang)

ACCESSIBILITY* (Chapter 11)

_____ Scoping requirements *(1103)*

OK Accessible route *(1104)*

OK Accessible entrances *(1105)*

OK Parking and passenger loading *(1106)*

*Also see Accessibility Plan Review Record

See affidavit Dwelling units and sleeping units *(1107)*

_____ Special occupancies *(1108)*

See Elevator Features and facilities *(1109)*

None Recreational facilities *(1110)*

_____ Signage *(1111)*

Catherine Ann Development Company, LLC
2999 NE 191st Street, Suite 800
Aventura, FL 33180

March 18, 2020

Glen Dempsey, Building Official
City of Ann Arbor
301 E Huron St
Ann Arbor, MI 48104
734.794.6000 Ext 42660

RE: Plan Review Responses for Permit #BLDG19-2437

Dear Mr. Dempsey:

In response to the following review comment: *"Please provide a letter from the owner indicating whether or not any sleeping units are intended to be occupied as residences.*

It is through this letter that we would like to attest that based on our interpretation of the 2015 Michigan Building Code no sleeping units within this project are intended to be occupied as "residences".

Feel free to reach out with any questions or comments.

Best Regards,

Robert Finvarb
Manager

Conf. Room = 16
Meeting Room = 24
- Ballroom A 609 Proposed
- Ballroom B 312 Proposed

Fitness Center 21

PreFunction : 246

Miscellaneous : 11

* 993 + PreFunction (?) = +1K = 4 exits
(276) revised = 1269 ← Revised

Bldg =
2712 total
− 88 (9th terrace changed 49 to 5 each = -44x2
2624 total

1st/2nd Assembly = 1411 = 53.7% one-half = A

A = 355
B = 182
Pred = 470 starting
} 1007 Pre-Function

Ball A : 5334/15 = 355
Proposed 609 = 1:8.7 or
5334/7 = 762 max.

Ball B :
2733/15 = 182
Proposed 312 = 1:8.7 or
2733/7 = 390 max.

✓ A = Available exits
3 doors @ 32 =
96/.15 = 640 occ.

Intruder egress

FSD

Ballroom A-1 : 3585/7 = 512 Doors available 640

A-2 = 2094/7 = 299 Doors available 96

FSD = 131ft.

312 (.15) = 46.8 in.
A = 3@32 in = 96 ok

TD 250
CP 75
DE 20

LIFE SAFETY PLAN LEGEND
1-HOUR FIRE RESISTIVE CONSTRUCTION
2-HOUR FIRE RESISTIVE CONSTRUCTION

NEUMANN SMITH
SOUTHFIELD • DETROIT
400 Galleria Officentre
Suite 555
Southfield, Michigan 48034
phone 248.352.8310
fax 248.352.1521
www.neumannsmith.com

ANN ARBOR AUTOGRAPH COLLECTION
Glen Avenue
Ann Arbor, MI 48104

10.17.2019 Permits and Bid
09.20.2019 Permits
09.04.2019 Marriott Arch 2 Review
01.01.2019 75% Construction Documents
05.27.2019 50% Construction Documents
05.03.2019 Design Development

FS ☐ Preliminary ☐ Construction ☐ Permit
FS
CC

2018129
SECOND FLOOR LIFE SAFETY PLAN
Scale: 1/8" = 1'-0"
A032

LEVEL 2 LIFE SAFETY PLAN

Club Convergence --

Doors Total 311 + 110 parking = 421 (.15) = 64 in

5 = 32 in doors = 160 ok

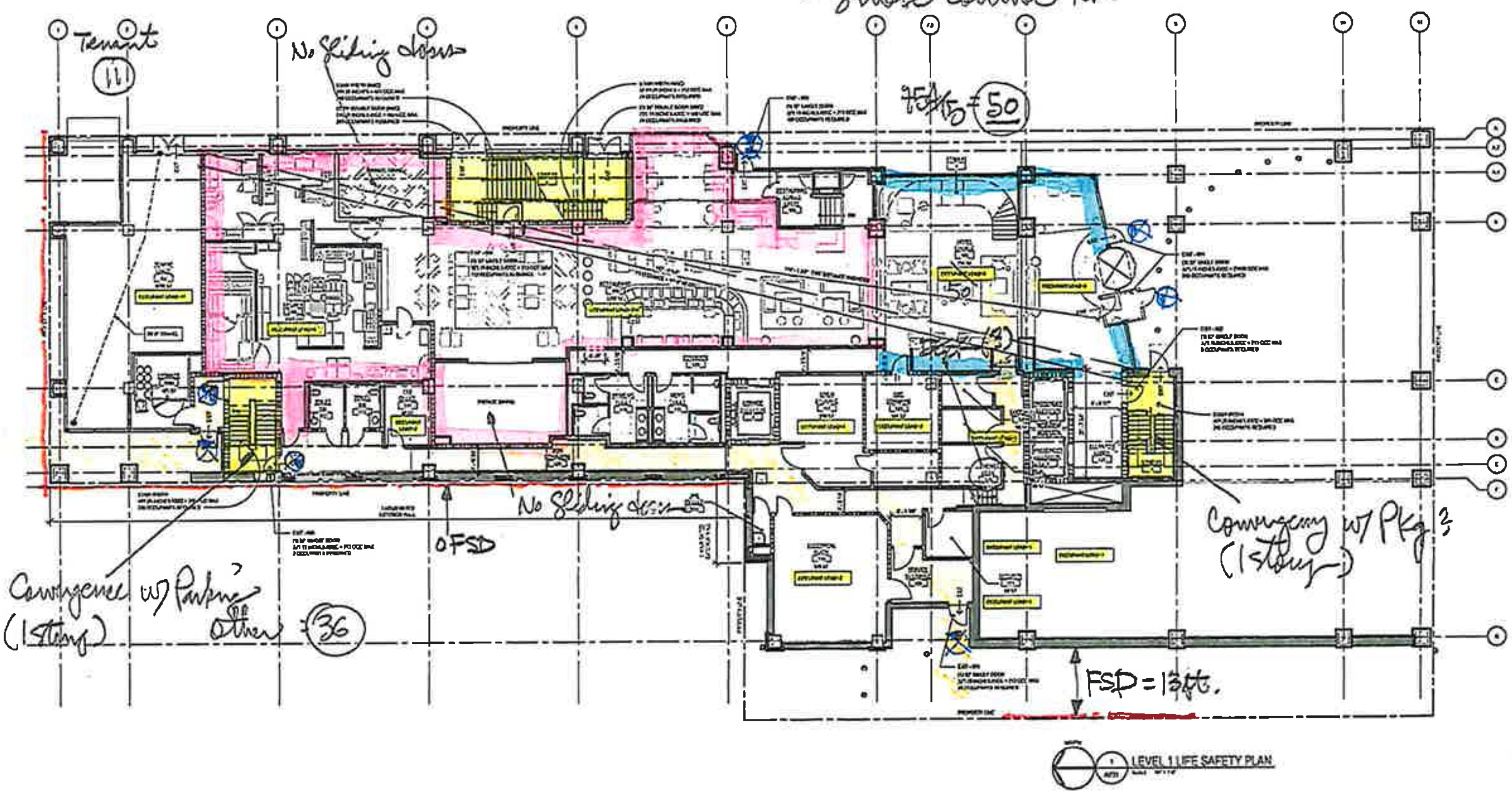
Doors Total = 311 (.15 doors only) = 47 in.

5 = 32 in doors = 160 ok

Corridors (.15) Hold min.)

3202/15 = 214 ok

- Atrium connects only 2 levels
- Sprinklered ok
- Smoke control NR



LIFE SAFETY PLAN LEGEND

NEUMANN SMITH

architecture

SOUTHFIELD • DETROIT

400 Galleria Officentre
Suite 555
Southfield, Michigan 48034
phone 248.352.8310
fax 248.352.1821
www.neumannsmith.com

ANN ARBOR AUTOGRAPH COLLECTION

Glen Avenue
Ann Arbor, MI 48104

10.17.2019	Permits and Bid
08.23.2019	Permits
08.09.2019	Marriott Arch 3 Review
08.01.2019	75% Construction Documents
05.27.2019	30% Construction Documents
01.23.2019	Design Development

2018128

FIRST FLOOR LIFE SAFETY PLAN

Scale: 1/8" = 1'-0"

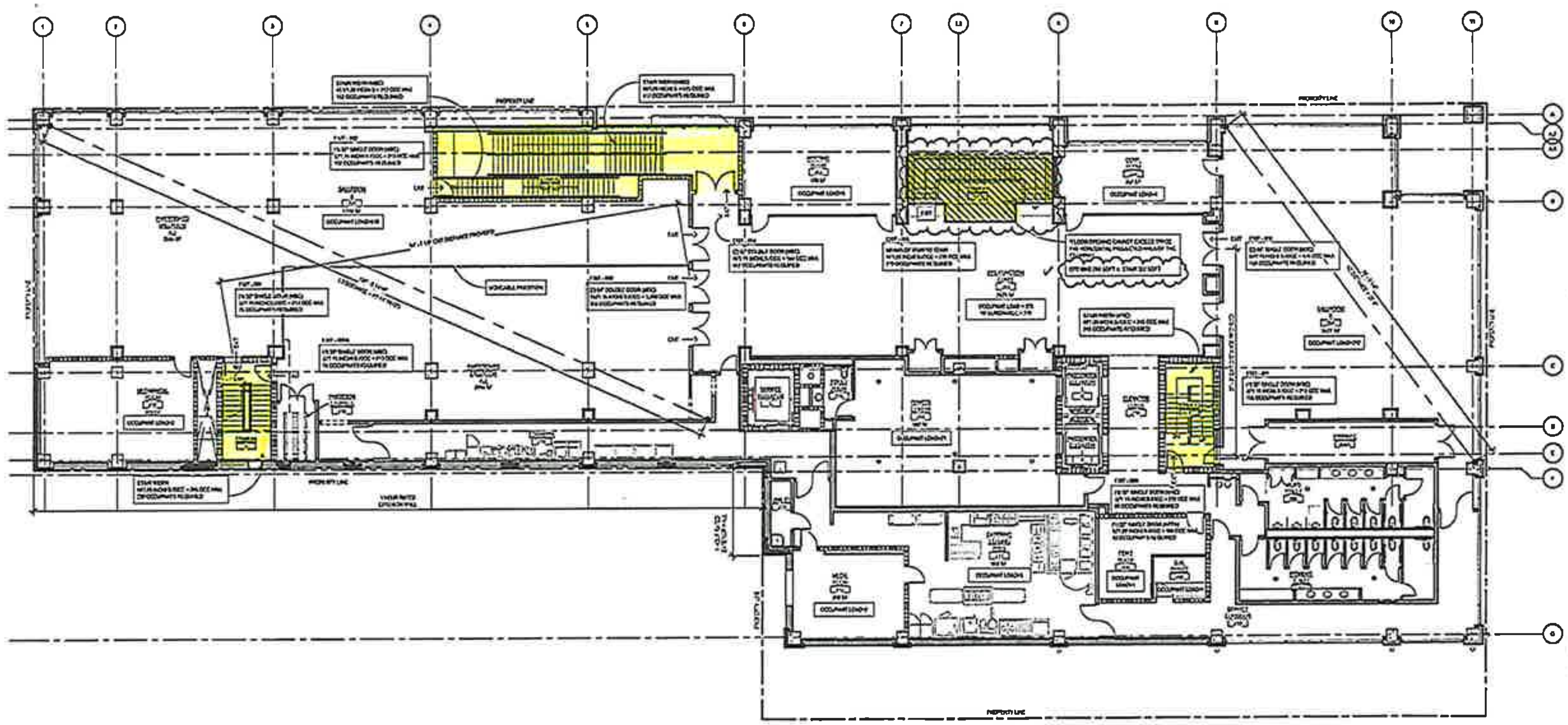
A031

LIFE SAFETY PLAN LEGEND	
1 HOUR FIRE BARRIER/WALL	
2 HOUR FIRE BARRIER/WALL	

architecture
NEUMANN SMITH
SOUTHFIELD • DETROIT
400 Galleria Officentre
Suite 555
Southfield, Michigan 48034
phone 248.352.8310
fax 248.352.1821
www.neumannsmith.com

ANN ARBOR
AUTOGRAPH
COLLECTION

Glen Avenue
Ann Arbor, MI 48104



LEVEL 2 LIFE SAFETY PLAN

04.28.2020	Addendum #2
04.08.2020	Addendum #1
03.00.2020	City Comments
10.17.2019	Permits and Bid
09.23.2019	Permits
08.08.2019	Marriott Arch 3 Review
08.01.2019	75% Construction Documents
06.27.2019	30% Construction Documents
05.23.2019	Design Development

PB
PD
GC

2018128

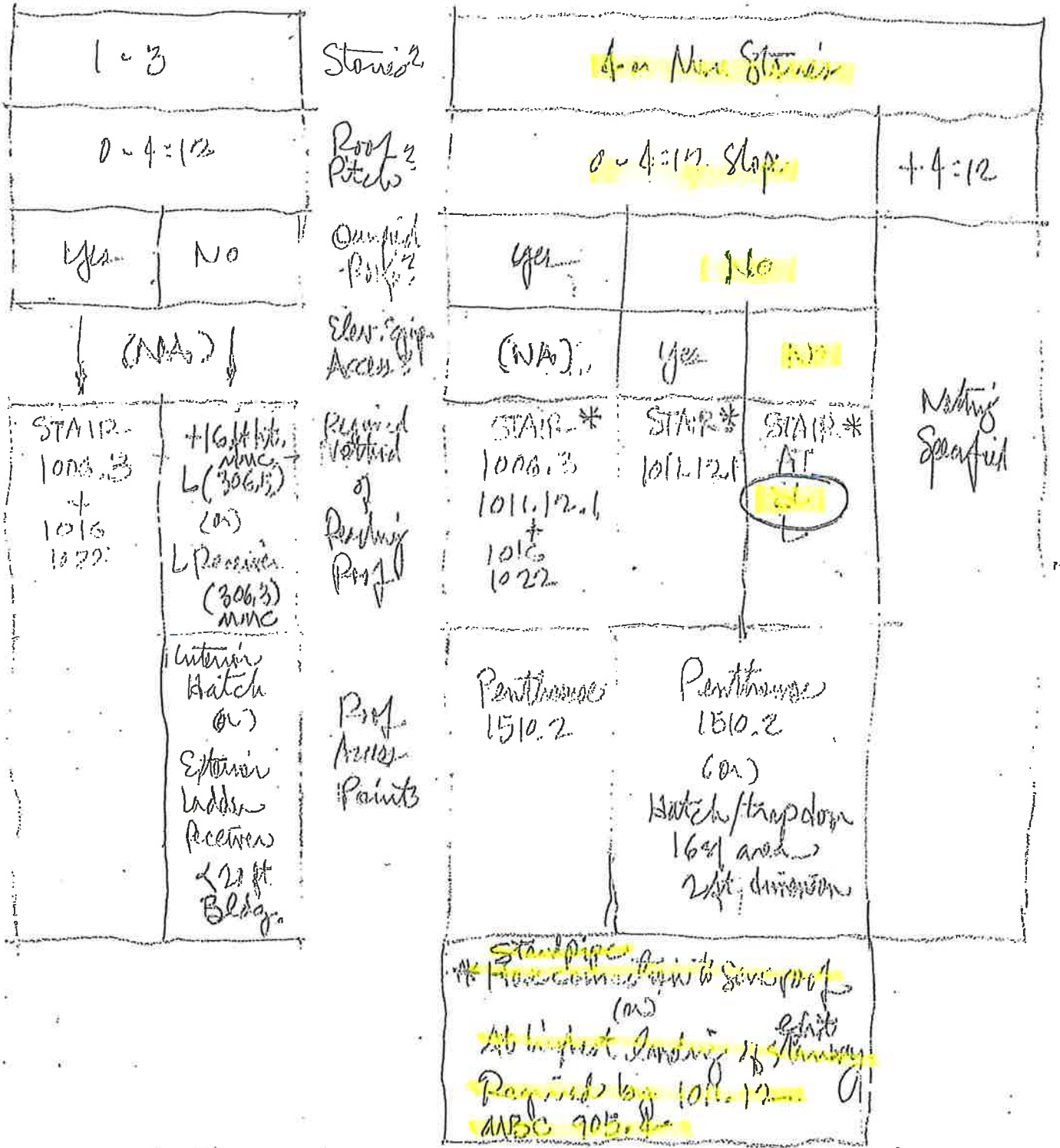
SECOND FLOOR LIFE SAFETY PLAN

Scale: 1/8" = 1'-0"

A032

STAIR = Stairway 1011.1-11
AT = Alt. Tread 1011.14 (20 ft. Max)
SL = Shipsladder 1011.15
L = Ladder 1011.16

Roof Access 1011.12 MBC, 306.5 MMC



Platform for mech. Equipment MMC 306.5.1 Required if Roof > 3:12
Then 30" wide platform + guards required

SECTION 10 1443 - INTERIOR SIGNAGE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Interior directional and informational signs.

B. Stairway Identification signs

C. "In Case of Fire" Egress signage at elevators

D. ADA Compliant Exit Signage

E. Stair Landing Signage

F. Luminous egress path marking and other "glow-in-the-dark" signs.

1.02 REFERENCE STANDARDS

A. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines; current edition.

B. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.

C. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2009.

D. ASTM E2072 - Standard Specification for Photoluminescent (Phosphorescent) Safety Markings; 2014.

E. UL 1994 - Luminous Egress Path Marking Systems; Current Edition, Including All Revisions.

1.03 SUBMITTALS

A. See Section 01 3323 - Shop Drawings, Product Data, and Samples, for submittal procedures.

B. Product Data: Manufacturer's printed product literature for each type of sign, indicating sign styles, font, foreground and background colors, locations, overall dimensions of each sign.

C. Shop Drawings: Provide shop drawings for fabrication and erection of signs. Include plans, elevations and large-scale sections of typical members and other components. Show anchors, grounds, reinforcement, accessories, layout and installation details.

1. For signs supported by or anchored to permanent construction, provide setting drawings, templates, and directions for installation of anchor bolts and other anchors to be installed as a unit of Work in other Sections.

D. Samples: Submit two samples of each type of sign, of size similar to that required for project, illustrating sign style, font, and method of attachment.

1.04 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience, with a record of successful in-service performance, and sufficient production capacity to produce sign units required without causing delay in the Work.

B. Single-Source Responsibility: For each separate type if sign, required, obtain signs from one source from a single manufacturer.

C. Design Criteria: The drawings indicate size, profiles, and dimensional requirements of signs and are based on the specific type and model indicated.

1. Signs by other manufacturers may be considered provided that deviations in dimensions and profiles are minor and do not change the design concept as judged by the Architect.
2. The burden of proof of equality is on the proposer.

D. Code Compliance: All signs must meet the requirements of the current State of Michigan Barrier Free Design Law.

2. Corners: Square.

B. Color and Font: Programmable

2.05 PHOTOLUMINESCENT MEDIA

A. High-Impact Plastic Guidance Strips:
1. Complies with ASTM E2072.
2. Width: 1 inch.
3. Mounting: As recommended by manufacturer for material selected.

B. Polyester Tape Guidance Strips:
1. Complies with UL 1994 and ASTM E2072.
2. Width: 1 inch.

2.06 ACCESSORIES

A. Concealed Screws: Stainless steel, galvanized steel, chrome plated, or other non-corroding metal.

2.07 FINISHES

A. Colors and Surface Textures: For exposed sign material that requires selection of materials with integral or applied colors, surface textures or other characteristics related to appearance, provide color matches indicated, or if not indicated, as selected by the Architect from the manufacturer's standards.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrate surfaces are ready to receive work.

3.02 INSTALLATION

A. Locate sign units and accessories where indicated, using mounting methods of the type described and in compliance with the manufacturer's instructions.

B. Install signage level, plumb and at height in compliance with ADA requirements. Signage surfaces shall be free from distortion or other defects in appearance.

C. Locate signs and mount at heights indicated on drawings and in accordance with ADA Standards and ICC A117.1. Align edge of signage 2 inches from edge of door jamb, unless otherwise indicated or required for compliance with ADA standards and ICC A117.1. Use mounting method indicated.

D. At completion of the installation, clean soiled sign surfaces per manufacturer's instructions. Protect from damage until Substantial Completion; repair or replace damaged items. Replace all damaged defective signs with new units.

END OF SECTION 10 1443

1.05 LEED PERFORMANCE CRITERIA

A. Regional Materials: Building materials should be manufactured and extracted/harvested within a 100 mile (160 km) radius of the project site. The Contractor will make all attempts to maximize the procurement of materials within this specified 100 mile radius. Utilize GPS straight-line distance calculator, found at: www.gpsvisualizer.com/calculators to verify distance.

B. Recycled Content of Materials: The pre-consumer (a.k.a. post-industrial) and/or post-consumer recycled content (by weight) of the products and materials shall be identified and documented. The Contractor will make all attempts to maximize the procurement of materials with recycled content. Recycled content of materials shall be defined according to the Federal Trade Commission's "Guide for the Use of Environmental Marketing Claims," 16 CFR 260.7 (e): (http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&SID=3d5c4ee1b75d3cb33194a6ec045cdbf9&rgn=div5&view=text&node=16:1.0.1.2.24&idno=16) and claims should be certified by an independent third party when possible.

C. VOC Limits: All field-applied adhesives, sealants, paints/coatings, flooring, composite wood, ceilings, walls, thermal insulation, and acoustical insulation used on the interior of the building shall meet the volatile organic compound (VOC) and chemical component limitations as defined in LEED.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Package signs as required to prevent damage before installation.

1.07 PROJECT CONDITIONS

A. Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication to ensure proper fitting. Show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Flat Signs:
1. 2/90 Sign Systems
2. APCO Graphics, Inc.
3. ASI Sign Systems, Inc.
4. Cosco Industries (ADA signs): www.coscoarchitecturalsigns.com.
5. Cosco Industries (non-ADA signs): www.coscoarchitecturalsigns.com.
6. Inpro: www.inprocorp.com/#sle.
7. Takeform

B. Other Signs - _____:

2.02 SIGNAGE APPLICATIONS

A. Accessibility Compliance: Signs are required to comply with ADA Standards and ICC A117.1 and applicable building codes, unless otherwise indicated; in the event of conflicting requirements, comply with the most comprehensive and specific requirements.

B. Interior Directional and Informational Signs: Electric LED signage
1. Sign Type: TBD
2. Sizes: TBD

C. Luminous Egress Path Marking and Other "Glow-in-the-Dark" Signs: Photoluminescent media.

2.03 NON-TEXT GRAPHICS

A. Obtain Art Copy from Owner prior to completing shop Drawings. Submit shop Drawing indicating Art work to Owner for final approval.

2.04 SIGN TYPES

A. Flat Signs: Signage media without frame.
1. Edges: Square.

DESIGN LOADS (continued)

Wind loads *(1603.1.4, 1609; Chapters 26 - 31 of ASCE 7)*

_____ Design procedure *(1609.1.1, 1609.6, Chapters 26 - 31 of ASCE 7)*

120 Alternate all-heights method *(1609.6)*

Noted - 115 Wind speed *(1609.3; Fig. 26.5.1 of ASCE 7)*

Noted - II, III Risk category *(Table 1604.5; Table 1.5-1 of ASCE 7)*

B Surface roughness/Exposure categories *(1609.4; 26.7 of ASCE 7)*

_____ Internal pressure coefficient *(26.11, Table 26.11-1 of ASCE 7)*

_____ Component and cladding pressures *(Chapter 30 of ASCE 7)*

_____ Main wind-force resisting system *(1609.5; 27.4, 27.6, 28.4, 28.6 of ASCE 7)*

Earthquake design data *(1603.1.5, 1613; Chapters 11 - 13 and 15 - 23 of ASCE 7)*

II Risk category *(Table 1604.5; Table 1.5-1 of ASCE 7)*

_____ Seismic importance factor, I_e *(11.5.1, Table 1.5-2 of ASCE 7)*

_____ Mapped spectral response acceleration parameters, S_s and S_1 *(1613.3.1; 11.4.1 of ASCE 7)*

_____ Design spectral response parameters, S_{DS} and S_{D1} *(1613.3.4; 11.4.4 of ASCE 7)*

C Site class *(1613.3.2; 11.4.2, Chapter 20 of ASCE 7)*

D Seismic design category *(1613.3.5; 11.6 of ASCE 7)*

_____ Basic seismic-force-resisting system *(Table 12.2-1 of ASCE 7)*

_____ Response modification coefficient, R *(Table 12.2-1 of ASCE 7)*

_____ Seismic response coefficient, C_s *(12.8.1.1 of ASCE 7)*

_____ Analysis procedure *(12.6 of ASCE 7)*

_____ Design base shear *(12.8 of ASCE 7)*

Flood loads *(1603.1.7, 1612)*

_____ Flood hazard area *(1612.3)*

_____ Documentation *(1612.5)*

Ice loads *(1614; Chapter 10 of ASCE 7)*

_____ Compliance

Other loads

_____ Concentrated live loads *(1607.4)*

_____ Partition loads *(1607.5)*

_____ Impact loads *(1607.9)*

_____ Misc. loads *(1607.6, 1607.7, 1607.8, 1607.13, 1607.14, 1610, 1611, 2404)*

Structural integrity *(1615)*

_____ Design requirements *(1615.1 - 1615.4)*

SPECIAL INSPECTIONS AND TESTS (Chapter 17)

_____ Approvals/Research report(s) *(1703, 1703.4.2)* Report No._____

_____ Statement of special inspections *(1704.3)*

_____ Report requirement/submittal to building official *(1704.2.4, 1704.5)*

_____ Prefabricated items *(1704.2.5, 1705.10)*

_____ Steel construction *(1705.2)*

_____ Concrete construction *(1705.3, 1901.6)*

_____ Masonry construction *(1705.4, 2101.3)*

_____ Wood construction *(1705.5)*

Note Prepared fill and foundations *(1705.6 - 1705.9)*

Auger cast pile wall - Noted Special Inspections

_____ Sprayed fire-resistant materials and coatings *(1705.14, 1705.15)*

_____ EIFS *(1705.16)*

_____ Fire-resistant penetrations and joints *(1705.17)*

_____ Smoke control *(1705.18)*

_____ Wind requirements *(1704.3.3, 1705.11)*

_____ Seismic resistance *(1704.3.2, 1705.12, 1705.13)*

_____ Contractor responsibility *(1704.4)*

_____ Structural observations *(1704.6)*

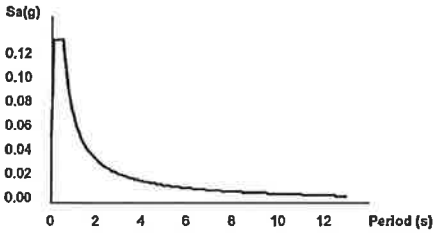
_____ Testing (other) *(1706 - 1709)*

ATC Hazards by Location

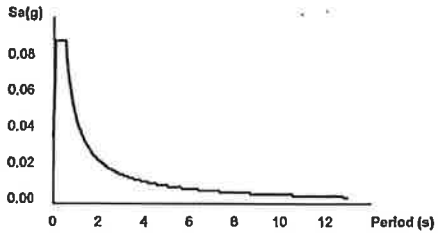
Search Information

Address:	201 Glen Ave. Ann Arbor, MI
Coordinates:	42.2824739, -83.7356509
Elevation:	849 ft
Timestamp:	2020-01-31T14:34:39.657Z
Hazard Type:	Seismic
Reference Document:	ASCE7-16
Risk Category:	II
Site Class:	C

MCER Horizontal Response Spectrum



Design Horizontal Response Spectrum



Basic Parameters

	Name	Value	Description	
✓	S_S	0.104	MCE_R ground motion (period=0.2s)	0.094
✓	S_1	0.048	MCE_R ground motion (period=1.0s)	
	S_{MS}	0.135	Site-modified spectral acceleration value	
	S_{M1}	0.072	Site-modified spectral acceleration value	
✓	S_{DS}	0.09	Numeric seismic design value at 0.2s SA	0.095
✓	S_{D1}	0.048	Numeric seismic design value at 1.0s SA	0.054

Additional Information

Name	Value	Description
SDC	A	Seismic design category
F_a	1.3	Site amplification factor at 0.2s
F_v	1.5	Site amplification factor at 1.0s
CR_S	0.941	Coefficient of risk (0.2s)
CR_1	0.901	Coefficient of risk (1.0s)
PGA	0.052	MCE_G peak ground acceleration
F_{PGA}	1.3	Site amplification factor at PGA
PGA_M	0.068	Site modified peak ground acceleration
T_L	12	Long-period transition period (s)
SsRT	0.104	Probabilistic risk-targeted ground motion (0.2s)
SsUH	0.11	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
SsD	1.5	Factored deterministic acceleration value (0.2s)
S1RT	0.048	Probabilistic risk-targeted ground motion (1.0s)
S1UH	0.053	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
S1D	0.6	Factored deterministic acceleration value (1.0s)
PGAd	0.5	Factored deterministic acceleration value (PGA)

The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

Disclaimer

ATC Hazards by Location

Search Information

Address:	201 Glen Ave. Ann Arbor, MI
Coordinates:	42.2824739, -83.7356509
Elevation:	849 ft
Timestamp:	2020-01-31T14:25:05.668Z
Hazard Type:	Wind

ASCE 7-16

MRI 10-Year	75 mph
MRI 25-Year	80 mph
MRI 50-Year	86 mph
MRI 100-Year	92 mph
Risk Category I	101 mph
Risk Category II	107 mph
Risk Category III	115 mph
Risk Category IV	120 mph

ASCE 7-10

MRI 10-Year	76 mph
MRI 25-Year	84 mph
MRI 50-Year	90 mph
MRI 100-Year	96 mph
Risk Category I	105 mph
Risk Category II	115 mph
Risk Category III-IV	120 mph

ASCE 7-05

ASCE 7-05 Wind Speed	90 mph

The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

Disclaimer

Hazard loads are interpolated from data provided in ASCE 7 and rounded up to the nearest whole integer. Per ASCE 7, islands and coastal areas outside the last contour should use the last wind speed contour of the coastal area – in some cases, this website will extrapolate past the last wind speed contour and therefore, provide a wind speed that is slightly higher. NOTE: For queries near wind-borne debris region boundaries, the resulting determination is sensitive to rounding which may affect whether or not it is considered to be within a wind-borne debris region.

Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.

ATC Hazards by Location

Search Information

Address:	201 Glen Ave. Ann Arbor, MI
Coordinates:	42.2824739, -83.7358509
Elevation:	849 ft
Timestamp:	2020-01-31T14:25:25.089Z
Hazard Type:	Snow

ASCE 7-16

Ground Snow Load ..... 20 lb/sqft

ASCE 7-10

Ground Snow Load ..... 20 lb/sqft

ASCE 7-05

Ground Snow Load ..... 20 lb/sqft

The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

Disclaimer

Hazard loads are interpolated from data provided in ASCE 7 and rounded up to the nearest whole integer.

ATC Hazards by Location

Search Information

Address:	201 Glen Ave. Ann Arbor, MI
Coordinates:	42.2824739, -83.7358509
Elevation:	849 ft
Timestamp:	2020-01-31T14:25:43.464Z
Hazard Type:	Tornado

ASCE 7-16

Wind Speed ..... ⚠ 250 mph

Sections 423.3 and 423.4 of the 2015 edition of the International Building Code (IBC) require that 911 call stations, emergency operations centers, fire, rescue, ambulance and police stations, and schools with an occupant load of 50 or more, to have an ICC 500 compliant tornado shelter in areas where the design wind speed is 250 mph. The 2018 editions of the IBC and the International Existing Buildings Code (IEBC) extend these tornado shelter requirements to also include additions to existing school campuses.

The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

Disclaimer

Hazard loads are interpolated from data provided in ASCE 7 per ICC-500 and FEMA P-361 and rounded up to the nearest whole integer. NOTE: For queries near the 250-mph region boundary, the resulting determination is sensitive to rounding which may affect whether or not it is considered to be within an area requiring the incorporation of a tornado storm shelter as part of the structure under consideration.

While the information presented on this website is believed to be correct, ATC and its sponsors and contributors assume no responsibility or liability for its accuracy. The material presented in the report should not be used or relied upon for any specific application without competent examination and verification of its accuracy, suitability and applicability by engineers or other licensed professionals. ATC does not intend that the use of this information replace the sound judgment of such competent professionals, having experience and knowledge in the field of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the results of the report provided by this website. Users of the information from this website assume all liability arising from such use. Use of the output of this website does not imply approval by the governing building code bodies responsible for building code approval and interpretation for the building site described by latitude/longitude location in the report.

INTERIOR ENVIRONMENT (Chapter 12)

MEP Ventilation *(1203, 1503.5)**
Ok Temperature control *(1204)*
Ok Lighting *(1205)*
NA Yards or courts *(1206)*

Noted Sound transmission *(1207)*
Ok Interior space dimensions *(1208)*
_____ Access to unoccupied spaces *(1209)*
_____ Toilet and bathroom requirements *(1210, 2509)*

*Also see Mechanical Code Plan Review Record

BUILDING ENVELOPE (Chapters 13*, 14, 15)

*See Energy Conservation Code Plan Review Record

EXTERIOR WALLS (Chapter 14)

_____ Performance requirements *(1403)*
_____ Materials *(1404)*
_____ Exterior wall coverings/MCM's *(1405, 1407)*

Ok Combustible material restrictions *(1406)*
_____ EIFS *(1408)*
_____ HPL *(1409)*
_____ Plastic composite decking *(1410)*

ROOF ASSEMBLIES AND ROOFTOP STRUCTURES (Chapter 15)

_____ Weather protection *(1503)*
_____ Flashing *(1503.2, 1507.2.9, 1507.3.9, 1507.5.7, 1507.7.7, 1507.8.8, 1507.9.9)*
_____ Performance requirements *(1504)*
_____ Fire classification *(1505)*
_____ Materials *(1506)*

_____ Roof coverings *(1507)*
Noted Roof insulation *(1508)*
_____ Radiant barriers *(1509)*
_____ Rooftop structures *(1510)*
_____ Reroofing *(1511)*
_____ Solar photovoltaic panels/modules *(1512)*

STRUCTURAL SYSTEMS (Chapters 16, 17, 18)

STRUCTURAL DESIGN (Chapter 16)

See attached (Note - level III, not II)

STRUCTURAL DESIGN CALCULATIONS

_____ Submitted for all structural members *(106, 107.1, 107.2.1, 1604, 1605)*

DESIGN LOADS ON CONSTRUCTION DOCUMENTS (1603)

Uniformly distributed floor live loads *(1603.1.1, Table 1607.1)*

Floor Area Use	Loads Shown

_____ Live load reduction *(1603.1.1, 1607.10, 1607.11)*
_____ Roof live loads *(1603.1.2, 1607.12)*

Roof snow loads *(1603.1.3, 1608; Chapter 7 of ASCE 7)*

✓ 30 Ground snow load, p_g *(1608.2; 7.2 of ASCE 7)*
25 If p_g > 10 psf, flat-roof snow load, p_f *(7.3 of ASCE 7)*
✓ 1.0 If p_g > 10 psf, snow exposure factor, C_e *(Table 7-2, 7.3.1 of ASCE 7)*
✓ 1.0 If p_g > 10 psf, snow load importance factor, I_s *(7.3.3, Table 1.5-2 of ASCE 7)*
✓ 1.0 If p_g > 10 psf, roof thermal factor, C_t *(Table 7-3, 7.3.2 of ASCE 7)*
_____ Sloped roof snow load, p_s *(7.4 of ASCE 7)*
_____ Drift loads *(7.7, 7.8 of ASCE 7)*
_____ Width of snow drift *(7.7, 7.8 of ASCE 7)*
_____ Ponding instability *(1608.3; 7.11 of ASCE 7)*

(See Cov - Report)

SOILS AND FOUNDATIONS (Chapter 18)

_____ Soils investigations/Reports *(1803.1, 1803.2, 1803.3, 1803.6)*

_____ Soil classification *(1803.5)*

_____ Excavation, grading and fill *(1804)*

_____ Dampproofing and waterproofing *(1805)*

_____ Load-bearing values *(1603.1.6, 1806)*

_____ Foundation walls, retaining walls and embedded posts and poles *(1807)*

_____ Foundations *(1808)*

N/A Shallow foundations *(1809)*

O/C Deep foundations *(1810)*

STRUCTURAL MATERIALS (Chapters 19, 21, 22, 23)

CONCRETE (Chapter 19)

_____ Plain, reinforced and structural plain concrete design/construction standard specified *(1901.2, 1905, 1906)*

_____ Construction documents *(1901.5)*

_____ Slab provisions *(1907)*

_____ Shotcrete *(1908)*

MASONRY (Chapter 21)

_____ Design method, construction standard specified *(2101.2, 2104)*

_____ Masonry units *(2103.1)*

_____ Mortar type/grout *(2103.2, 2103.3)*

_____ Metal reinforcement *(2103.4)*

_____ Seismic design *(2106)*

_____ Glass unit masonry *(2110)*

_____ Fireplaces/Heaters/Chimneys *(2101.3.1, 2111, 2112, 2113)*

STEEL (Chapter 22)

_____ Structural steel design/construction standard specified *(2205)*

_____ Composite structural steel and concrete *(1901.4, 2206)*

_____ Open-web steel joist design/construction standard specified *(2207)*

_____ Steel cable structures *(2208)*

_____ Steel storage racks *(2209)*

_____ Cold-formed steel design/construction standard specified *(2210)*

_____ Cold-formed steel light-framed design/ construction standard specified *(2211)*

WOOD (Chapter 23)

_____ Design method option used *(2301.2)*

MATERIAL STANDARDS / CONSTRUCTION REQUIREMENTS (2303 - 2306)

_____ Lumber *(2303.1.1)*

_____ Wood I-joists *(2303.1.2)*

_____ Glue-laminated timbers *(2303.1.3, 2303.1.4)*

_____ Wood structural panels *(2303.1.5, 2304.6, 2304.7, 2304.8)*

_____ Fiber-, hard-, & particle-, boards *(2303.1.6 - 2303.1.8)*

_____ Decay and termite protection *(2303.1.9, 2304.12)*

_____ Structural composite lumber *(2303.1.10)*

_____ Structural log members *(2303.1.11)*

_____ Round timber poles and piles *(2303.1.12)*

_____ Engineered wood rim board *(2303.1.13)*

_____ Fire-retardant-treated wood *(2303.2)*

_____ Hardwood and plywood *(2303.3)*

_____ Trusses *(2303.4)*

_____ Joist hangers *(2303.5)*

_____ Fasteners and fastening *(2303.6, 2304.10, Table 2304.10.1)*

_____ Heavy timber construction *(2304.11)*

_____ Shear walls and diaphragms *(2305, 2306)*

WOOD (continued)

CONVENTIONAL LIGHT-FRAME CONSTRUCTION (2308)

_____ Limitations satisfied *(2308.2)*

_____ Foundations and footings *(2308.3)*

_____ Floor framing *(2308.4)*

_____ Wall construction *(2308.5)*

_____ Wall bracing *(2308.6)*

_____ Roof and ceiling framing *(2308.7)*

_____ Design of elements *(2308.8)*

NONSTRUCTURAL MATERIALS (Chapters 24, 25, 26)

GLASS AND GLAZING (Chapter 24)

_____ Sloped glazing and skylights *(2405)*

_____ Safety glazing *(2406, 2407, 2408, 2409)*

GYPSUM BOARD AND PLASTER (Chapter 25)

_____ Gypsum board materials *(2506, Table 2506.2, Table 2508.1)*

_____ Plaster *(2507, 2508, 2510 - 2513)*

_____ Reinforced gypsum concrete *(2514)*

PLASTIC (Chapter 26)

FOAM PLASTIC INSULATION (2603)

_____ Labeling *(2603.2, 2603.5.6)*

_____ Surface-burning characteristics *(2603.3, 2603.5.4)* Roof = Comm. Shaft dash

ok Thermal barrier *(2603.4)*

_____ Exterior walls/Roofs *(2603.5, 2603.6)*

_____ Interior finish/trim in plenums *(2603.7)*

_____ Protection against termites *(2603.8)*

_____ Special approval *(2603.9)*

_____ Wind resistance *(2603.10)*

_____ Cladding attachment *(2603.11, 2603.12)*

MISCELLANEOUS PLASTICS

_____ Interior finish and trim *(2604)*

_____ Plastic veneer *(2605)*

_____ Light-transmitting plastics *(2606 - 2611)*

_____ Plastic composites *(2612)*

_____ Fiber-reinforced polymer *(2613)*

_____ Reflective plastic core insulation *(2614)*

(See attached) **BUILDING SERVICES* (Chapters 27, 28, 29, 30)**

ELEVATORS AND CONVEYING SYSTEMS (Chapter 30)

_____ Construction standard specified *(3001.2)*

_____ Hoistway enclosures *(3002)*

_____ Opening protectives *(3002.1.1)*

_____ Emergency operations *(3003)*

_____ Conveying systems *(3004)*

_____ Machine rooms *(3005)*

_____ Elevator lobbies/hoistway opening protection *(3006)*

_____ Fire service access elevator *(3007)*

_____ Occupant evacuation elevator *(3008)*

* Also see Electrical (Ch.27), Mechanical (Ch.28) and Plumbing (Ch.29) Plan Review Records

---

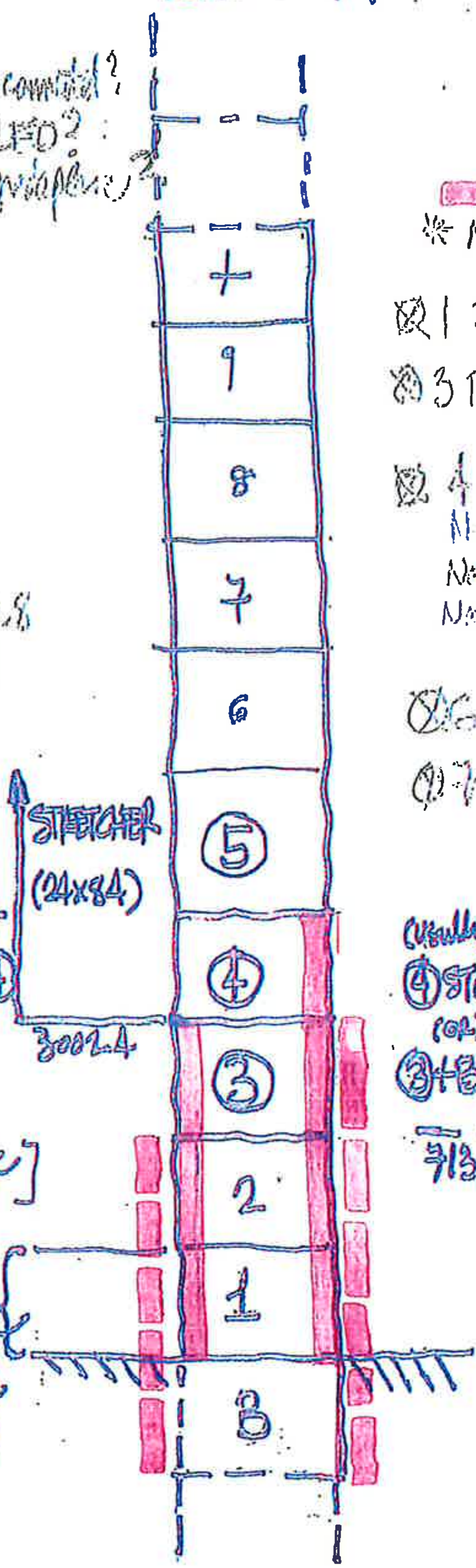
ELEVATORS

Vent 3004.1

13 Ø How many levels are connected?
8 Ø How many stories above LED?
3 ○ How many stories above grade plane?

Enclosure:
1 hr.
(2 hr.)

No Common walls
4 or more elevators
Emerg Op. 1009.4
Dwelling Comm. 1014.8
Vent top 3004.1



(5) Acc MOE 1009.2.1

STRETCHER (24x84) 3002.4

4 or more stories above level of exit discharge

(4) 1007.4 = Emerg. op.
1009.4 = Signalling
– Standby
+
[Area of Refuge NR - Mich.]
1009.6

Level of Exit Discharge (= Story: see definition)

Lobby ✓
* MORE THAN 3 STORIES *
713.14.1

1 3006.1 (3)
3 Doors on hoistway 3006.3
4 Sprinklers (3006.2)?
Not I-2
Not I-3
Not [illegible] (Hi-Rise)

6 Pressurization 3006.4(2)
Presumption
7 ofs

(usually) (4) STORY (or) (3) + BSMT — LOBBY if CONNECTS MORE THAN 3 STORIES
713.14.1

Lobby ✓

Standby + [illegible] NA
Emerg Op. [illegible]
Stretcher
[illegible] Piece

Pressurization
Ø 6

SPECIAL DEVICES AND CONDITIONS (Chapters 31, 32)

SPECIAL CONSTRUCTION (Chapter 31)

_____ Membrane structures *(3102)*

_____ Temporary structures *(3103)*

_____ Awnings and canopies/Marquees *(3105, 3106)*

_____ Signs *(3107)*

N/A Telecommunication and broadcast towers *(3108)*

N/A Swimming pool enclosures *(3109)*

_____ Automatic vehicular gates *(3110)*

_____ Photovoltaic panels/modules *(3111)*

PEDESTRIAN WALKWAYS AND TUNNELS *(3104)*

_____ Construction and use *(3104.3, 3104.4)*

_____ Separation *(3104.5, 3104.10)*

_____ Public way *(3104.6)*

_____ Egress *(3104.7 - 3104.9)*

ENCROACHMENTS INTO THE PUBLIC RIGHT-OF-WAY (Chapter 32)

_____ Below grade *(3202.1)*

_____ Above grade *(3202.2, 3202.3)*

_____ Temporary *(3202.4)*

APPENDICES A - M

_____ Appendices adopted *(101.2.1)*

_____ Compliance verified

NOTES