2024-147
551 Congress Parkway – Preliminary/Final PUD
Project Review for Planning and Zoning Commission

Meeting Date:	December 4, 2024
Request:	Preliminary and Final Planned Unit Development review for a new 93-unit apartment development
Location:	551 Congress Pkwy
Acreage:	Approximately 6.62 acres
Zoning:	M Manufacturing
Surrounding Properties:	North: M Manufacturing South: M Manufacturing & B-2 General Commercial East: M Manufacturing West: B-2 PUD General Commercial & O PUD Office
Staff Contact:	Elizabeth Maxwell (815.356.3738)

Background:

- Existing Use: The site is a vacant parcel located near the southeast intersection of Congress Parkway and Exchange Drive.
- Previous Approvals:
    - The subject property was annexed in 1987.
    - The property received a Preliminary PUD, Rezoning and Comp Plan Amendment in January of 2022 and the Final PUD in May of 2022 for a93-unit apartment development.
- Planned Unit Developments are only valid for two years, so this petition expired. They are back to request a new Preliminary and Final Planned Unit Development approval.
- The changes from the original petition are revised architecture only.

Land Use Analysis:

- The land use is High Density Residential, which is appropriate for this use.
- The zoning is R-3B Multi-Family Residential, which is appropriate for this use.

Request:

- Preliminary and Final PUD for a 93-unit apartment development.
- The Petitioner is requesting variations in conjunction with the Planned Unit Development. Based on the plans submitted, the following variations are required:
    - Density: The proposed density is 14.06 units to the acre. R-3B allows a maximum of 9 units to the acre. This is a variation of 5.06 units to the acre.
    - Lot area: The lot is an existing vacant parcel at 288,048 square feet. Lot area for multi-family is calculated based on the total number of units, and the number of units proposed requires a lot area of 373,400 square feet. This is a variation of 85,352 square feet. Since this is an existing lot surrounded by development, there is not an opportunity to acquire additional property to increase the lot size. At 9 units to the acre (60 units), a variation would not be required, as the lot area would be 241,400 square feet.
    - Lot width: The existing lot width is 567.23 feet measured along both frontages. Lot width for multi-family is calculated based on the total number of units, and the number of units proposed requires a minimum lot width of 980 feet. This is a variation of 412.77 feet. In order to meet the lot width requirements, the development would need to be reduced to 40 units.

SITE

- The proposed development would consist of three 3-story apartment buildings with 31 units each for a total of 93 units. It would feature 21 one-bedroom units and 72 two-bedroom units.
- The proposed development complies with the setback requirements of the R-3B zoning district.

	R-3B requirement	Lot – Proposal
Front Yard Setback	30 feet	~99 feet
Side Yard Setbacks	8 feet	~83 feet
Combined Side Yard Setbacks	30 feet	~166 feet
Rear Yard Setback	20 feet	~98 feet

- The proposed impervious surface coverage is 50%, which meets the 65% UDO requirement.
- The site layout provides green space throughout the development most predominately between the two center (horizontal) buildings, as well as the northeastern and southeastern portions of the development. The amenities include a grassy community area with gazebo and benches, and a dog park (northeast corner) and recreation area (southeast corner).
- The adjacent detention area, while not included in the subject property, provides a buffer between the eastern building and Congress Parkway.
- Currently, the stormwater detention is shown off-site as part of the Crystal Lake Business

Center detention area. This basin is sufficient to accommodate this property's detention requirements.

PARKING

- Surface parking would be utilized for the multi-family apartment buildings.
- Based on the submitted plans, 199 parking spaces would be required for the residential units (1.5 space per 1-bedroom unit, 2 spaces per 2-bedroom unit, 0.25 guest stalls per unit), and 199 spaces are provided.

SITE LAYOUT - ACCESS

- Access into the site would be provided off Exchange Drive. Developments that have sprinkle systems and are less than 200 dwelling units may proceed with one access, subject to the requirements of the 2018 International Fire Code (IFC).
- The total width of the community drive aisles are 24 feet, which will require one lane to be marked with "NO PARKING – FIRE LANE" signs.
- Sidewalks and parkway trees are required along all roadway frontages. Sidewalk connections are provided between buildings and throughout the development. The sidewalks will connect to the existing sidewalk along Exchange Drive, as well as, the proposed sidewalk across the property's frontage along Congress Parkway.
- A traffic study was completed by Sam Schwartz. With implementation of the recommendations below, the area traffic operation would be acceptable. The recommendations are as follows:
    - Restripe the median on Exchange Drive between Station Drive and the proposed site driveway to provide a two-way left-turn lane.
    - Relocate the existing curb ramps on Exchange Drive at the proposed site driveway south of the driveway. Stripe a high-visibility crosswalk between the ramps and post "Stop Here for Pedestrians" signage on both legs of Exchange Drive.
    - Provide a continuous sidewalk across the site driveway and stripe a stop bar behind the sidewalk.
    - Construct sidewalks between the site parking lot and the existing sidewalk on Exchange Drive near the north and south ends of the site.
    - The proposed use will increase the average volume of traffic at the Exchange Drive and Congress Parkway intersection by 0.7%. Similar to other projects in the City, it is recommended that the petitioner contribute 0.7% of the cost of the scheduled intersection improvement (roundabout installation).

BUILDING ELEVATIONS

- The buildings are 3-stories with a combination of Hardi Board Siding and brick.
    - The brick is a "Cloud" colored brick veneer with soldier course dividing line between the brick and the siding.

  - The siding is features horizontal, vertical and shake. All siding colors are "Artic White" making it difficult to distinguish between the different siding types.
  - Staff has requested changes to the elevations including increasing the balcony brick columns up to the top of the first floor and to have a black trim around all the windows and doors.
- The proposed elevations meet the design criteria for multi-family residential, and include the following architectural accents:
  - A pronounced entry with peaked roof;
  - Larger base columns for the balconies along the first floor with brick;
  - Eaves with a minimum six-inch projection from the façade plane;
  - Varying styles of Hardie board siding (horizontal, smooth , and shake siding); and
  - Projecting side window bays.
- Each first floor unit will be provided a patio, and each second and third story units will be provided a balcony.

LANDSCAPING

- The landscape plan illustrates foundation base landscape around all the buildings.
- There are parking lot islands with trees and bushes and perimeter landscape around the parking lot.
- Additional plantings are in the recreational areas.

Findings of Fact:

PRELIMINARY / FINAL PLANNED UNIT DEVELOPMENT

The petitioner is requesting approval of a Preliminary and Final Planned Unit Development to allow the development of a 93-unit apartment community with variations. A Planned Unit Development is a Special Use and Special Uses require separate review because of their potential to impact surrounding properties and the orderly development of the City.

Section 2-400 B General Standards for all special uses in the Unified Ordinance establishes standards for all special uses in Crystal Lake. Briefly, the criteria are as follows:

1. The use is necessary or desirable, at the proposed location, to provide a service or facility which will further the public convenience and general welfare.
   ☐ *Meets* ☐ *Does not meet*

2. The use will not be detrimental to area property values.
   ☐ *Meets* ☐ *Does not meet*

3. The use will comply with the zoning districts regulations.
   ☐ *Meets* ☐ *Does not meet*

4. The use will not negatively impact traffic circulation.
   ☐ *Meets* ☐ *Does not meet*

5. The use will not negatively impact public utilities or municipal service delivery systems. If required, the use will contribute financially to the upgrading of public utilities and municipal service delivery systems.
   ☐ *Meets* ☐ *Does not meet*

6. The use will not negatively impact the environment or be unsightly.
   ☐ *Meets* ☐ *Does not meet*

7. The use, where possible will preserve existing mature vegetation, and provide landscaping and architecture, which is aesthetically pleasing, compatible or complementary to surrounding properties and acceptable by community standards.
   ☐ *Meets* ☐ *Does not meet*

8. The use will meet requirements of all regulating governmental agencies.
   ☐ *Meets* ☐ *Does not meet*

9. The use will conform to any conditions approved as part of the issued Special Use Permit.
   ☐ *Meets* ☐ *Does not meet*

10. The use will conform to the regulations established for specific special uses, where applicable.
    ☐ *Meets* ☐ *Does not meet*

In addition PUDs must also meet the standards in Section 4-500 C. Development Standards and 4-500 D. 1 Additional standards for Planned Unit Developments Residential PUDs.

a. Location: A residential PUD can be located anywhere in the City, including any land proposed for annexation.
   ☐ *Meets* ☐ *Does not meet*

b. Permissible uses: A mix of different residential dwelling types in proximity to each other is encouraged. Neighborhood commercial uses serving the development may be approved as part of a residential PUD where appropriate.
   ☐ *Meets* ☐ *Does not meet*

c. Nonresidential uses: Any nonresidential use permitted in a residential PUD shall be compatible with the residential nature of the development. Parking areas which are intended to serve nonresidential uses shall be separated from those designed to serve residential areas. Unless commercial and residential uses are combined within a single structure, commercial uses shall

be separated from dwelling units by a heavily landscaped buffer zone that meets the requirements of Section 4-400, Landscaping and screening standards.
☐ *Meets* ☐ *Does not meet*

d. Pedestrian paths: Pedestrian paths shall connect residential uses and nonresidential uses within a residential PUD.
☐ *Meets* ☐ *Does not meet*

e. Growth management: A growth management schedule shall be provided to and approved by the City Council, which indicates the number and type of residential units to be constructed in each calendar year. The maximum number of units to be constructed shall be 25 residential units or 15% of the total number of residential units (including all phases of the proposal), whichever is greater, in any calendar year. The City Council with recommendations from the Planning and Zoning Commission, at final PUD approval can approve, deny or adjust the percentage of an increase in the number of units that can be built in one calendar year. The City Council and the Planning and Zoning Commission shall consider the following criteria in approving an increase in the number of units that can be built annually:

i. Advance dedication of school and park sites and advance payment of school, park and other impact fees;
☐ *Meets* ☐ *Does not meet*

ii. Payment for installation of road impact improvements or fees applicable by law;
☐ *Meets* ☐ *Does not meet*

iii. Smaller subdivisions which encourage in-filling within an established part of the community;
☐ *Meets* ☐ *Does not meet*

iv. Completion of major and collector road networks and critical linkages in the street systems;
☐ *Meets* ☐ *Does not meet*

v. Fulfill a need for various unit types and income levels such as low and moderate-income housing;
☐ *Meets* ☐ *Does not meet*

vi. Provisions which satisfy needed public facilities;
☐ *Meets* ☐ *Does not meet*

vii. Innovative architectural design, quality of exterior materials and creative use of landscaping;
☐ *Meets* ☐ *Does not meet*

viii. Other criteria or extraordinary amenities, not listed above, which may meet the development goals of the City.

☐ *Meets* ☐ *Does not meet*

PLANNED UNIT DEVELOPMENT VARIATIONS

The petitioner is requesting approval of a Preliminary and Final Planned Unit Development to allow variations for density, lot area and lot width. The purpose of Planned Unit Developments is to encourage and allow more creative and imaginative design of land developments than is possible under district zoning regulations. Planned Unit Developments are, therefore, intended to allow substantial flexibility in planning and designing a proposal. This flexibility is often in the form of relief from compliance with conventional zoning ordinance site and design requirements which may otherwise require individual requests and applications for zoning variations.

Ideally, this flexibility results in a development that is better planned, contains more amenities, and is ultimately more desirable than one that would have been produced through compliance with typical zoning ordinance and subdivision controls.

Therefore, more lenient site requirements may be granted where the Planned Unit Development contains features not normally required of traditional developments. Although a formal variation request is not required to be made in conjunction with a Planned Unit Development, staff identifies those aspects of the Planned Unit Development which effectively result in variations from UDO requirements. If the evidence is not found to justify these variations from the UDO that fact shall be reported to the City Council with a recommendation that the variations from the UDO which are proposed as part of the Planned Development be lessened or denied.

The Planned Unit Development Amendment proposed by the Petitioner includes the following variations from the UDO:

1. Article 3-200(A)(6) Maximum net density of 9 dwelling units per acres to allow 14.06 dwelling units per acre.

2. Article 3-200(A)(6) Minimum lot area of 373,400 square feet to allow 288,048 square feet.

3. Article 3-200(A)(6) Minimum lot width of 980 feet to allow 455.8 feet.

4. Article 4-500(D)(1)(e) Growth management requirement of 25 residential units or 15% of the total number of residential units in a calendar year.

Comprehensive Land Use Plan 2030 Vision Summary Review:

Land Use: Residential

The proposed use will require an amendment to the Comprehensive Plan from an Office designation to Residential. The goal of a Residential designation is as follows:

Encourage a diversity of high quality housing in appropriate locations throughout the city that supports a variety of lifestyles and invigorates community character.

The Comprehensive Plan indicates this can be accomplished with the following supporting action:

Supporting Action: Encourage a diversity of housing types throughout the city, which satisfy wide-range needs for all persons regardless of age, race, religion, national origin, physical ability and economic level for existing and future city residents.

Recommended Conditions:

If a motion to recommend approval of the petitioner's request is made, the following conditions are recommended:

1. Approved plans, reflecting staff and advisory board recommendations, as approved by the City Council:
   A. Application (Projades, LLC., dated 08/05/2024)
   B. Revised Preliminary Site Plan (Paul Swanson, received 02/18/2022)
   C. Landscape Plan (Gary Weber, dated 03/16/2022, received 03/16/2022)
   D. Architectural Plan (Purohit Architects, dated 09/13/2024, received 9/13/2024)
   E. Architectural Elevations (Purohit Architects, dated 09/13/2024, received 11/11/2024)
   F. Floor Plans (Arthur Swanson & Associates, LTD, dated 11/08/2021, last revised 12/19/2021, received 11/10/2021)
   G. Engineering Plans (Haeger Engineering, dated 02/22/2022, received 02/25/2022)
   H. Executive Summary of Preliminary Engineering Report (Haeger Engineering, dated 02/22/2022, received 02/25/2022)
   I. Traffic Impact Study (Sam Schwartz Engineering, dated 12/06/2021, received 12/06/2021)

2. The internal drive aisles shall be posted with "NO PARKING – FIRE LANE" signs on one side of the road.

3. A Final Photometric and Lighting Plan must be submitted with Final Planned Unit Development that complies with the lighting requirements of the UDO.

4. Elevations:
   A. Increase the height of the brick for the balcony columns through the first floor to match the adjacent brick height.
   B. The trim around the windows and doors shall be a dark black trim.
   C. The garage buildings shall match the revised architecture of the apartment buildings.

5. Traffic Study:
   A. Restripe the median on Exchange Drive between Station Drive and the proposed site driveway to provide a two-way left-turn lane, bookended by dedicated left-turn lanes into Station Drive and the proposed site access driveway, each with a 50-foot storage bay and 50-foot taper transition.

B. Relocate the existing curb ramps on Exchange Drive at the proposed site driveway south of the driveway. Stripe a high-visibility crosswalk between the ramps and post "Stop Here for Pedestrians" signage on both legs of Exchange Drive.

C. Provide a continuous sidewalk across the site driveway and stripe a stop bar behind the sidewalk.

D. Construct sidewalks between the site parking lot and the existing sidewalk on Exchange Drive near the north and south ends of the site.

E. The developer must contribute their proportionate fair share of the construction costs for the improvements to Congress Parkway and Exchange Drive traffic circle (0.7% at $ 5,645.92) based on the projected traffic volume increase for the proposed development as determined by the traffic impact study dated December 6, 2021 by Sam Schwartz prior to the issuance of the first building permit.

6. The petitioner shall address all of the review comments and requirements of the Community Development, Public Works, Police and Fire Rescue Departments, as well as the City's traffic consultant, Sam Schwartz Engineering and stormwater consultant, Christopher B. Burke Engineering, Ltd.

PIQ Map

551 Congress Parkway



City of Crystal Lake
Development Application

Office Use Only
File # _____

Project Title: *The Courtyard at Congress Station*

Action Requested

__ **Annexation**
__ **Comprehensive Plan Amendment**
__ **Conceptual PUD Review**
__ **Final PUD**
__ **Final PUD Amendment**
__ **Final Plat of Subdivision**
__ **Preliminary PUD**
__ **Preliminary Plat of Subdivision**
__ **Rezoning**
__ **Special Use Permit**
__ **Variation**
X **Other** *(Reinstatement of a lapsed Planned Unit Development)*

Petitioner Information

Name: *Projades, LLC*
Address: *33 W. Higgins Rd Suit 723-725, South Barrington, IL 60010*
Phone: *224-215-6477*
Fax: _____
E-mail: *ram@projades.com*

Owner Information (if different)

Name: *551 Exchange Apartments, LLC*
Address: *33 W. Higgins Rd Suit 723-725, South Barrington, IL 60010*
Phone: *224-215-6477*
Fax: _____
E-mail: *ram@projades.com*

Property Information

Project Description: *Three 3-story 31-unit apt. buildings w/ 199 car parking*

Project Address/Location: *551 Congress Pkwy, Crystal Lake, IL, 60014*
(See attached legal description - Exhibit 'A' of Title Commitment)
(See attached survey)

PIN Number(s): *24165185 (Title Commitment File No.), 2007R041940 (Plat Document No.)*

Development Team

Please include address, phone, fax and e-mail

Developer: *Projades, LLC*
33 W. Higgins Rd Suit 723-725, South Barrington, IL 60010
Phone: 224-215-6477
Email: ram@projades.com

Architect: *Arthur Swanson & Associates, LTD*
10500 W. Lunt Ave, Rosemont, IL 60018
Phone: 708-635-6111
Fax: 708-635-6926

Attorney: *Tom Burney, Burney Law, LLC*
240 Deer Run, Crystal Lake, IL 60014
Phone: 312-636-7627
Email: tom@burneylaw.org

Engineer: *Haeger Engineering*
100 E. State Pkwy, Schaumburg, IL 60173
Phone: 847-394-6600
Fax: 847-394-6608
Email: daniel-v@haegerengineering.com

Landscape Architect: *Gary R. Weber Associates, Inc*
402 W. Liberty Drive, Wheaton, IL 60187
Phone: 630-668-7197
Email: rolson@grwainc.com

Planner: *None*

Surveyor: *Vander Stappen Land Surveying, Inc*
1316 N. Madison St. Woodstock, IL 60098
Phone: 815-337-8310
Email: kathy@vandersinc.com

Other:

Signatures

Projades, LLC by: *Ram Prashantha* *8/5/2024*

PETITIONER: Print and Sign name (*if different from owner*) **Date**

As owner of the property in question, I hereby authorize the seeking of the above requested action.

551 Exchange Apartments, LLC by: *Ram Prashantha* *8/5/2024*

OWNER: Print and Sign name **Date**

NOTE: If the property is held in trust, the trust officer must sign this petition as owner. In addition, the trust officer must provide a letter that names all beneficiaries of the trust.

Commitment for Title Insurance

Transaction Identification Data, for which the Company assumes no liability as set forth in Commitment Condition 5.e.:
JDP Title LLC,
A policy issuing agent for Old Republic Title
33 W Higgins Rd Suite 720
South Barrington, IL 60010
Issuing Office's ALTA Registry ID: N/A
Issuing Office File Number: 24165185
Property Address: 551 E Congress Pkwy, Crystal Lake, IL

COMMITMENT - SCHEDULE A

1. Commitment Effective Date: May 2, 2024

2. Policies to be issued:

   (a) 2021 ALTA OWNER'S POLICY

   Proposed Insured:

   N/A
   Proposed Policy Amount: N/A

   (b) 2021 ALTA LOAN POLICY

   Proposed Insured:

   Farmers & Merchants Bank, its successors and/or assigns, as their interest may appear

   Proposed Policy Amount: $1,120,000.00

3. The estate or interest in the Land described at the Commitment Date is Fee Simple.

4. The Title is, at the Commitment Date, vested in:

   551 Exchange Apartments LLC

5. The land is described as follows:

   See Attached Legal Description

This page is only a part of a 2021 ALTA Commitment for Title Insurance issued by Old Republic National Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; and Schedule B, Part II-Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

SCHEDULE B
SCHEDULE B - SECTION I - REQUIREMENTS

All of the following Requirements must be met:

1. The Proposed Insured must notify the Company in writing of the name of any party not referred to in this Commitment who will obtain an interest in the Land or who will make a loan on the Land. The Company may then make additional Requirements or Exceptions.

2. Pay the agreed amount for the estate or interest to be insured.

3. Pay the premiums, fees, and charges for the Policy to the Company.

4. Documents satisfactory to the Company that convey the Title or create the Mortgage to be insured, or both, must be properly authorized, executed, delivered, and recorded in the Public Records. Note: If the seller or mortgagor are individuals, the deed and/or mortgage must show marital status, and if married, be joined by spouse.

5. Pay all taxes, charges, assessments levied and assessed against the subject premises, which are due and payable.

6. Satisfactory evidence shall be produced that all improvements and/or repairs or alterations thereto are completed; that contractor, subcontractor, labor and material men are all paid in full, if applicable.

7. We have been asked to waive the Gap in Recording General Exception and also Exception(s) 1, 2, 3, 4 and 5 and 6 of Schedule B-Section 2 of this Commitment on the Final Owner's and Loan Policies. Said exceptions can be waived upon the following conditions:

   a) The Standard Exception Number 1 for Gap in Recording. This exception can be waived at closing only if this transaction is closed by Old Republic National Title Insurance Company.

   b) Exceptions 3 and 4 of Schedule B-Section 2 (Survey Exception). We must be supplied with an acceptable survey certified to ALTA standards, Old Republic National Title Insurance Company and the proposed insureds. Upon receipt and review of said survey, the Final Owner's and Loan Policies will be subject to our findings but free and clear of the General Exceptions 3 and 4.

   c) Exception 2 of Schedule B-Section 2 (Parties in Possession Exception). We must be supplied with an affidavit executed by the owner dated the day of closing which sets forth the status of any unrecorded leases, options to purchase, rights of first refusal, easements, construction/rehab work, etc. The Final Owner's and Loan Policies will be subject to the disclosures of said Affidavit but free and clear of the General Exception 2.

   d) Exception 5 of Schedule B-Section 2 (Mechanic's Lien Exception). We must be advised of the status of improvements on premises before a determination can be made in regard to waiving said exception.

   e) Exceptions 2 and 3 of Schedule B-Section 2 (Unrecorded Rights and Interests Exception). This exception can be waived upon receipt of the items required at paragraphs (b) and (c) above. The Final Owner's and Loan Policies will be subject to the disclosures in the items required in said paragraphs, but free and clear of the General Exception 4.

   f) Exceptions 5 and 6 of Schedule B-Section 2 (Unrecorded Liens and Encumbrances Exceptions). This exception can be waived upon receipt of the item required at paragraph (c) above. The Final Owner's and Loan Policies will be subject to the disclosures in the items required in said paragraphs, but free and clear of the General Exceptions 5.

8. The State of Illinois has enacted legislation that amends the Title Insurance Act (215 ILCS 155/ et al) to require that all parties of residential transactions, and non-residential real estate transactions of under $2,000,000.00, to receive Closing Protection Letters.
   The legislation also comes with an amendment that establishes minimum charges for the issuance of the Closing Protection Letters.
   For all refinance transactions these charges will apply:
   Lender(s) - $25.00; and Borrowers - $50.00.
   For all purchase transactions these charges will apply:
   Lender(s) - $25.00; Buyers - $25.00; Sellers - $50.00.
   This legislation is effective January 1, 2011, for all transactions closed after December 31, 2010

9. NOTE: An amendment to the Title Insurance Act, 215 ILCS 155/26, took effect on January 1, 2010 requiring title companies to only accept good funds when closing on a transaction within the state. Please note the limitation on the funds we are allowed to disburse on;
   1. For amounts of $50,000 or greater the funds must be either a wire, or a check issued by the United States or any political subdivision or a title insurance company check or collected funds.
   2. For amounts less than $50,000 any of the above are acceptable in addition to cash, cashiers checks, certified checks, bank money orders, official bank checks, teller checks or a check drawn on the trust account of any licensed lawyer or real estate broker.
   3. Personal check or checks in the aggregate amount that do not exceed $5,000 provided that the title company has reasonable grounds to believe that sufficient funds are available for withdrawal in the account upon which the check is drawn at the time of disbursement. (NOTE: For any personal check(s), please contact your local ORTIC office for approval)
   4. Collected funds are funds that are deposited, finally settled, and credited to the title companies trust account.
   This is only a summary of the act. Please review the law or contact your closer for any additional question or concerns.

10. Note: Your attention is directed to Illinois Statute 765 ILCS 77/70 (SB1167), which requires either a Certificate of Exemption or a Certificate of Compliance in order for mortgages to be recorded in the following Counties: Cook, Kane, Will and Peoria. The County Recorders will not record any mortgage unless the same has a Certificate of Compliance or Exemption attached thereto.
-Old Republic Title Insurance Company will charge a $100.00 SB1167 certificate Processing Fee

11. NOTE: If the property is within a municipality that has an ordinance for transfer tax being imposed up the sale or conveyance of real property within the municipality, then all deeds presented to the Company for recording must have the appropriate Transfer Tax Stamps affixed thereof, or be marked "Exempt" by the municipality.

12. NOTICE: Please be aware that due to the conflict between federal and state laws concerning the cultivation, distribution, manufacture or sale of marijuana, the company is not able to close or insure any transaction involving land that is associated with these activities.

13. NOTICE TO PURCHASERS:

Old Republic National Title Insurance Company ("The Company") and its policy issuing agents ("Agents") are required by Federal law to collect certain additional information from the purchasers of real property. United States Code Title 31, Section 5326 authorizes the U.S. Department of Treasury to collect information about certain transactions in specified geographic areas in order to carry out the purposes or prevent evasions of the Bank Secrecy Act. This statute, as implemented by the Treasury orders, also prohibits The Company or its Agents from disclosing the specific terms of said orders.

14. With respect to the proposed mortgagor, a Limited Liability Company, the Company must be provided with the following:
    a) A certification from the Illinois Secretary of State that the L.L.C. has properly filed its articles of organization;
    b) A copy of the Articles of Organization, together with any amendments thereto;
    c) A Certificate of Good Standing from the Illinois Secretary of State;
    d) A copy of the Operating agreement and all amendments thereto; and,
    e) A Roster of members or incumbent managers.
    f) A certification that no event of dissolution has occurred.
    NOTE: Unless the mortgage is executed by all members, we must also be furnished evidence satisfactory to the Company that all necessary consents, authorizations, resolutions, notices and actions relating to the execution and delivery of the note and mortgage as required under applicable law and the governing documents have been conducted, given or properly waived.

15. We should be advised whether any recent improvements have been placed on the subject property within the last six months.

16. Any lien or right to a lien in favor of the property manager employed to manage the land.
    Note: We should be furnished either (a) an Affidavit from the owner indicating that there is no property manager employed to manage the land, or, (b) a Final Lien waiver from the property manager acting on behalf of the owner.

17. Any lien or right to a lien as established pursuant to the Commercial Broker Lien Act.
    Note: We should be furnished either (a) an Affidavit from the owner indicating that there is no broker employed to sell the land, or, (b) a Final Lien waiver from the broker acting on behalf of the owner.

18. Standard exceptions numbers 2 through 6 shown in Schedule B will be waived from the policy upon review and acceptance of the following:
    A) A current Survey or an "Affidavit of no new improvements" with an old survey and
    B) A properly executed ALTA Extended Coverage Statement.

19. NOTE: All endorsement requests should be made prior to closing to allow ample time for the Company to examine required documentation.

20. Upon any conveyance or Mortgage of the Land, a statement from the secretary of the board of managers of the townhome, homeowners, or other association, that there are no unpaid assessment liens existing by reason of the nonpayment of assessments should be furnished.
    Note: The statement should cover the recording date of the Mortgage or, if title is to be conveyed, the recording date of the deed, whichever date is later.

21. The Company finds no open mortgage of record. We must be advised of any unrecorded mortgage(s) and/or liens, and this commitment is subject to such further exceptions, if any, as may then be deemed necessary.

SCHEDULE B, SECTION II

EXCEPTIONS

Some historical land records contain Discriminatory Covenants that are illegal and unenforceable by law. This Commitment and the Policy treat any Discriminatory Covenant in a document referenced in Schedule B as if each Discriminatory Covenant is redacted, repudiated, removed, and not republished or recirculated. Only the remaining provisions of the document will be excepted from coverage.

The Policy will not insure against loss or damage resulting from the terms and conditions of any lease or easement identified in Schedule A, and will include the following Exceptions unless cleared to the satisfaction of the Company:

1. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I - Requirements are not met.

2. Rights or claims of parties in possession not shown by the public records

3. Easements, or claims of easements, not shown by the public records

4. Encroachments, overlaps, boundary line disputes, or other matters which would be disclosed by an accurate survey and inspection of the premises

5. Any lien, or right to a lien, for services, labor, or material heretofore and hereafter furnished, imposed by law and not shown by the public records

6. Taxes or special assessments which are not shown as existing liens by the public records.

7. General real estate taxes for the year(s) 2023, 2024 and subsequent years.
   Permanent Index Number: 19-04-427-009
   Note: The first installment of the 2022 taxes in the amount of $23,395.92 is PAID
   Note: The second installment of the 2022 taxes in the amount of $23,395.92 is PAID
   Note: The taxes for the year 2024 are not yet due or payable.

8. First amended and restated Declaration of Protective Covenants for the Crystal Lake Business Center, recorded December 3, 1990 as Document No. 90R44556, made by Amli Land Development-I Limited Partnership, relating to regulation of improvements and approval of plans, regulation of operations and uses, the association, common areas, assessments and liens arising therefrom; maintenance and easements, and including but not limited to a provision for a lien for assessments.
   Note: A breach or violation of the above noted restrictions will not cause a forfeiture or reversion of title.
   Note: First supplemental declaration of protective covenants for the Crystal Lake Business Center recorded May 22, 1991 as Document No. 91R18042.
   Note: Second Supplemental Declaration of Protective Covenants for the Crystal Lake Business Center recorded January 30, 1996 as Document No. 96R004880.
   First Amendment to the first amended and restated declaration of Protective Covenants for the Crystal Lake Business Center recorded May 15, 1996 as document 96R025070.

Second Amendment to the first amended and restated declaration of Protective Covenants for the Crystal Lake Business Center recorded June 24, 1996 as document 96R032389.
Assignment and assumption agreement regarding first amended and restated declaration of Protective Covenants for the Crystal Lake Business Center dated August 6, 1998 and recorded August 13, 1998 as document 98R53085 made by and between Amli Land Development-I Limited Partnership, an Illinois Limited Partnership and Amli Commercial Properties Trust, a Maryland Real Estate Investment Trust.
Assignment and assumption agreement regarding first amended and restated declaration of Protective Covenants for the Crystal Lake Business Center dated August 6, 1998 and recorded as document 98R53090 made by and between Amli Commercial Properties Trust, a Maryland real estate investment trust and Amli Commercial Properties Limited Partnership, a Delaware Limited partnership.
Assignment and assumption agreement regarding first amended and restated declaration of Protective Covenants for the Crystal Lake Business Center dated June 29, 2001 and recorded July 11, 2001 as document 2001R0048321.

9. Public Utility easement (P.U.E.) as shown on the Plat of the Subdivision of the Resubdivision of Lot 8 in Crystal Lake Business Center Unit 4, recorded as document 97R1111. (Affects the Southwesterly 10 feet of the Northeasterly 30 feet of the Land)
   Note: Said Building Line is shown on the survey prepared by Vanderstappen Surveying and Engineering, Inc., as job number 210878 dated September 20, 2021.

10. Building set-back lines as shown on the Plat of the Subdivision, recorded as document number 95R053680. (Affects 50 feet from the Northeasterly and Westerly line of the Land and 15 feet from the Northerly, Southerly and Easterly line of the land)
    Note: Said Building Line is shown on the survey prepared by Vanderstappen Surveying and Engineering, Inc., as job number 210878 dated September 20, 2021.

11. Ordinance establishing City of Crystal Lake Special Service Area 5 recorded May 15, 1990 as document number 90R17475, to provide special municipal service to said area in addition to other services provided to the City of Crystal Lake and the provisions and conditions therein contained.

12. Access easement recorded April 30, 2007, as document 2007R0028803, made by and between Crystal Lake Medical Partners, LLC, an Indiana Limited Liability Company, and Harvest Bible Chapel Crystal Lake, an Illinois not for profit corporation, and the terms, provisions and conditions as contained therein.

13. Terms, provisions and conditions contained in a convenant with the City of Crystal Lake recorded as document number 2009R0032191 relating to irrigation system.

14. Building Line(s) as shown on the Plat of Crystal Lake Medical Pavilion Subdivision recorded as Document No. 2007R0041940, affecting:
    The West 30 feet, North 15 feet, Northeasterly 30 feet, Easterly 15 feet and South 15 feet of Lot 2.

15. Municipal easement, and the easement provisions and grantees as set forth on the Plat of Crystal Lake Medical Pavilion Subdivision recorded as Document No. 2007R0041940, over the following:
    The West 5 feet of Lot 2 of the Land.

16. Municipal Utility and drainage easement, and the easement provisions and grantees as set forth on the Plat of Crystal Lake Medical Pavilion Subdivision recorded as Document No. 2007R0041940, over the following:
    The Northeasterly 20 feet of Lot 2.

17. Easement for Public Utilities, and the easement provisions and grantees as set forth on the Plat of Crystal Lake Medical Pavilion Subdivision recorded as Document No. 2007R0041940, over the following:
    The Southerly 10 feet of the Northeasterly 30 feet of Lot 2.

18. Easement in favor of Nicor, the Commonwealth Edison Company, AT&T, Cable Television Franchise, and its/their respective successors and assigns, to install, operate and maintain all equipment necessary for the purpose of serving the Land and other property, together with the right of access to said equipment, and the provisions relating thereto contained in the Plat of Crystal Lake Medical Pavilion recorded/filed as Document No. 2007R0041940.

19. Notes as shown on Plat of Crystal Lake Medical Pavilion Subdivision recorded as Document No. 2007R0041940, as follows:
    Cross access easements: Cross access easements "A" and "B" are hereby reserved for and granted to owner(s) of Lot 2, and their successors and assigns, for vehicular and pedestrian ingress and egress
        a) over and across cross access easement "A" on Lot 1 for access to and from exchange drive to and from Lot 2 only and
        b) over and across cross access easement "B" on Lot I for access to and from Congress Parkway to and from Lot 2 only.
    Access Note: Access from Lot 2 to Exchange Drive must be located within 75 feet of the Southwest corner of Lot 2.

20. Rights of way for drainage ditches, tile, feeders and laterals, and other drainage easements, if any.

21. Existing unrecorded leases, if any.

22. Rights of parties in possession of the subject property by reason of unrecorded leases, if any.

Countersigned
JDP Title LLC

Authorized Signatory

EXHIBIT "A"

LOT 2 IN THE FINAL PLAT OF CRYSTAL LAKE MEDICAL PAVILION, BEING A RESUBDIVISION OF LOTS 1 AND 2 IN THE RESUBDIVISION OF LOT 8 OF CRYSTAL LAKE BUSINESS CENTER UNIT 4, BEING A RESUBDIVISION IN THE SOUTHEAST 1/4 OF SECTION 4, TOWNSHIP 43 NORTH, RANGE 8, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED JUNE 18, 2007 AS DOCUMENT 2007R041940, IN MCHENRY COUNTY, ILLINOIS.

Thank you for using Old Republic National Title Insurance Company.

To Schedule a Closing, or to order a Closing Protection Letter please contact our Customer Service Department at 866-969-5010 or ilcustomerservice@oldrepublictitle.com

Loan Documents can be emailed to ilclosingdocs@oldrepublictitle.com

Our current office locations are:

Chicago - Loop
20 South Clark Street, #2900
Chicago, Illinois 60603
312-641-7799 (P)
312)-205-0363 (F)
866-969-5010 (Toll Free)

Bloomingdale
255 East Lake St, Suite 202
Bloomingdale, IL 60108
312-641-7799 (P)
312-205-0363 (F)

Crystal Lake
360 Memorial Drive, #110
Crystal Lake, IL 60014
815-459-3370 (P)
815-531-1048 (F)

Des Plaines
2340 South River Road, Suite 115
Des Plaines, Illinois 60018
847-375-8774 (P)
847-440-9080 (F)

Libertyville
By appointment only
1880 W. Winchester Road,
Suite 206
Libertyville, IL 60048
312-641-7799 (P)
312-205-0363 (F)

Naperville
650 E. Diehl Road, Suite 107
Naperville, IL 60563
630-955-0075 (P)
630-839-6580 (F)

Oak Brook
2311 West 22nd Street, #310
Oak Brook, Illinois 60523
630-218-8022 (P)
630-388-1283 (F)

Oak Lawn
9601 Southwest Highway
Oak Lawn, Illinois 60453
708-424-0184 (P)
708-850-4834 (F)

Orland Park
9031 W. 151st Street, Suite 110
Orland Park, IL 60462
708-873-1319 (P)
800-520-8108 (F)

Schaumburg
1375 E. Woodfield Road, #260
Schaumburg, IL 60173
847-278-1525 (P)
312-275-7367 (F)

ALTA COMMITMENT FOR TITLE INSURANCE

Issued by Agent

NOTICE

IMPORTANT-READ CAREFULLY: THIS COMMITMENT IS AN OFFER TO ISSUE ONE OR MORE TITLE INSURANCE POLICIES. ALL CLAIMS OR REMEDIES SOUGHT AGAINST THE COMPANY INVOLVING THE CONTENT OF THIS COMMITMENT OR THE POLICY MUST BE BASED SOLELY IN CONTRACT.

THIS COMMITMENT IS NOT AN ABSTRACT OF TITLE, REPORT OF THE CONDITION OF TITLE, LEGAL OPINION, OPINION OF TITLE, OR OTHER REPRESENTATION OF THE STATUS OF TITLE. THE PROCEDURES USED BY THE COMPANY TO DETERMINE INSURABILITY OF THE TITLE, INCLUDING ANY SEARCH AND EXAMINATION, ARE PROPRIETARY TO THE COMPANY, WERE PERFORMED SOLELY FOR THE BENEFIT OF THE COMPANY, AND CREATE NO EXTRACONTRACTUAL LIABILITY TO ANY PERSON, INCLUDING A PROPOSED INSURED.

THE COMPANY'S OBLIGATION UNDER THIS COMMITMENT IS TO ISSUE A POLICY TO A PROPOSED INSURED IDENTIFIED IN SCHEDULE A IN ACCORDANCE WITH THE TERMS AND PROVISIONS OF THIS COMMITMENT. THE COMPANY HAS NO LIABILITY OR OBLIGATION INVOLVING THE CONTENT OF THIS COMMITMENT TO ANY OTHER PERSON.

COMMITMENT TO ISSUE POLICY

Subject to the Notice; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and the Commitment Conditions, Old Republic National Title Insurance Company, a Florida corporation, (the "Company"), commits to issue the Policy according to the terms and provisions of this Commitment. This Commitment is effective as of the Commitment Date shown in Schedule A for each Policy described in Schedule A, only when the Company has entered in Schedule A both the specified dollar amount as the Proposed Amount of Insurance and the name of the Proposed Insured.

If all of the Schedule B, Part I-Requirements have not been met within six months after the Commitment Date, this Commitment terminates and the Company's liability and obligation end.

Issued through the Office of:
Old Republic National Title Insurance Company
20 South Clark Street, Suite 2900
Chicago, IL 60603
Phone: 312-641-7799

Authorized Signatory

OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
A Stock Company
1408 North Westshore Blvd., Suite 900, Tampa, Florida 33607
(612) 371-1111 *www.oldrepublictitle.com*

By C Monroe President

Attest David Wold Secretary

COMMITMENT CONDITIONS

1. DEFINITIONS
    a. “Discriminatory Covenant”: Any covenant, condition, restriction, or limitation that is unenforceable under applicable law because it illegally discriminates against a class of individuals based on personal characteristics such as race, color, religion, sex, sexual orientation, gender identity, familial status, disability, national origin, or other legally protected class.
    b. “Knowledge” or “Known”: Actual knowledge or actual notice, but not constructive notice imparted by the Public Records.
    c. “Land”: The land described in Item 5 of Schedule A and improvements located on that land that by State law constitute real property. The term “Land” does not include any property beyond that described in Schedule A, nor any right, title, interest, estate, or easement in any abutting street, road, avenue, alley, lane, right-of-way, body of water, or waterway, but does not modify or limit the extent that a right of access to and from the Land is to be insured by the Policy.
    d. “Mortgage”: A mortgage, deed of trust, trust deed, security deed, or other real property security instrument, including one evidenced by electronic means authorized by law.
    e. “Policy”: Each contract of title insurance, in a form adopted by the American Land Title Association, issued or to be issued by the Company pursuant to this Commitment.
    f. “Proposed Amount of Insurance”: Each dollar amount specified in Schedule A as the Proposed Amount of Insurance of each Policy to be issued pursuant to this Commitment.
    g. “Proposed Insured”: Each person identified in Schedule A as the Proposed Insured of each Policy to be issued pursuant to this Commitment.
    h. “Public Records”: The recording or filing system established under State statutes in effect at the Commitment Date under which a document must be recorded or filed to impart constructive notice of matters relating to the Title to a purchaser for value without Knowledge. The term “Public Records” does not include any other recording or filing system, including any pertaining to environmental remediation or protection, planning, permitting, zoning, licensing, building, health, public safety, or national security matters.
    i. “State”: The state or commonwealth of the United States within whose exterior boundaries the Land is located. The term “State” also includes the District of Columbia, the Commonwealth of Puerto Rico, the U.S. Virgin Islands, and Guam.
    j. “Title”: The estate or interest in the Land identified in Item 3 of Schedule A.
2. If all of the Schedule B, Part I-Requirements have not been met within the time period specified in the Commitment to Issue Policy, this Commitment terminates and the Company's liability and obligation end.
3. The Company's liability and obligation is limited by and this Commitment is not valid without:
    a. the Notice;
    b. the Commitment to Issue Policy;
    c. the Commitment Conditions;
    d. Schedule A;
    e. Schedule B, Part I-Requirements; and
    f. Schedule B, Part II-Exceptions; and
    g. a counter-signature by the Company or its issuing agent that may be in electronic form.
4. COMPANY'S RIGHT TO AMEND

    The Company may amend this Commitment at any time. If the Company amends this Commitment to add a defect, lien, encumbrance, adverse claim, or other matter recorded in the Public Records prior to the Commitment Date, any liability of the Company is limited by Commitment Condition 5. The Company is not liable for any other amendment to this Commitment.

5. LIMITATIONS OF LIABILITY
    a. The Company's liability under Commitment Condition 4 is limited to the Proposed Insured's actual expense incurred in the interval between the Company's delivery to the Proposed Insured of the Commitment and the delivery of the amended Commitment, resulting from the Proposed Insured's good faith reliance to:
        i. comply with the Schedule B, Part I-Requirements;
        ii. eliminate, with the Company's written consent, any Schedule B, Part II-Exceptions; or
        iii. acquire the Title or create the Mortgage covered by this Commitment.
    b. The Company is not liable under Commitment Condition 5.a. if the Proposed Insured requested the amendment or had Knowledge of the matter and did not notify the Company about it in writing.
    c. The Company is only liable under Commitment Condition 4 if the Proposed Insured would not have incurred the expense had the Commitment included the added matter when the Commitment was first delivered to the Proposed Insured.
    d. The Company's liability does not exceed the lesser of the Proposed Insured's actual expense incurred in good faith and described in Commitment Condition 5.a. or the Proposed Amount of Insurance.
    e. The Company is not liable for the content of the Transaction Identification Data, if any.
    f. The Company is not obligated to issue the Policy referred to in this Commitment unless all of the Schedule B, Part I-Requirements have been met to the satisfaction of the Company.
    g. The Company's liability is further limited by the terms and provisions of the Policy to be issued to the Proposed Insured.
6. LIABILITY OF THE COMPANY MUST BE BASED ON THIS COMMITMENT; CHOICE OF LAW AND CHOICE OF FORUM
    a. Only a Proposed Insured identified in Schedule A, and no other person, may make a claim under this Commitment.
    b. Any claim must be based in contract under the State law of the State where the Land is located and is restricted to the terms and provisions of this Commitment. Any litigation or other proceeding brought by the Proposed Insured against the Company must be filed only in a State or federal court having jurisdiction.
    c. This Commitment, as last revised, is the exclusive and entire agreement between the parties with respect to the subject matter of this Commitment and supersedes all prior commitment negotiations, representations, and proposals of any kind, whether written or oral, express or implied, relating to the subject matter of this Commitment.
    d. The deletion or modification of any Schedule B, Part II-Exception does not constitute an agreement or obligation to provide coverage beyond the terms and provisions of this Commitment or the Policy.
    e. Any amendment or endorsement to this Commitment must be in writingand authenticated by a person authorized by the Company.
    f. When the Policy is issued, all liability and obligation under this Commitment will end and the Company's only liability will be under the Policy.
7. IF THIS COMMITMENT IS ISSUED BY AN ISSUING AGENT

    The issuing agent is the Company's agent only for the limited purpose of issuing title insurance commitments and policies. The issuing agent is not the Company's agent for closing, settlement, escrow, or any other purpose.
8. PRO-FORMA POLICY

    The Company may provide, at the request of a Proposed Insured, a pro-forma policy illustrating the coverage that the Company may provide. A pro-forma policy neither reflects the status of Title at the time that the pro-forma policy is delivered to a Proposed Insured, nor is it a commitment to insure.
9. CLAIMS PROCEDURES
    This Commitment incorporates by reference all Conditions for making a claim in the Policy to be issued to the Proposed Insured. Commitment Condition 9 does not modify the limitations of liability in Commitment Conditions 5 and 6.
10. CLASS ACTION

    ALL CLAIMS AND DISPUTES ARISING OUT OF OR RELATING TO THIS COMMITMENT, INCLUDING ANY SERVICE OR OTHER MATTER IN CONNECTION WITH ISSUING THIS COMMITMENT, ANY BREACH OF A COMMITMENT

PROVISION, OR ANY OTHER CLAIM OR DISPUTE ARISING OUT OF OR RELATING TO THE TRANSACTION GIVING RISE TO THIS COMMITMENT, MUST BE BROUGHT IN AN INDIVIDUAL CAPACITY. NO PARTY MAY SERVE AS PLAINTIFF, CLASS MEMBER, OR PARTICIPANT IN ANY CLASS OR REPRESENTATIVE PROCEEDING. ANY POLICY ISSUED PURSUANT TO THIS COMMITMENT WILL CONTAIN A CLASS ACTION CONDITION.

11. ARBITRATION

The Policy contains an arbitration clause. All arbitrable matters when the Proposed Amount of Insurance is $2,000,000 or less may be arbitrated at the election of either the Company or the Proposed Insured as the exclusive remedy of the parties. A Proposed Insured may review a copy of the arbitration rules at http://www.alta.org/arbitration

Vanderstappen
Land Surveying, Inc.
www.vandersinc.com
1316 N. Madison St.
Woodstock, Illinois 60098
ph. 815-337-8310 fax 815-337-8314
"Always faithful to the property line"

BOUNDARY AND TOPOGRAPHIC SURVEY

Lot 2 in Crystal Lake Medical Pavilion, being a Resubdivision in the Southeast Quarter of Section 4, Township 43 North, Range 8, East of the Third Principal Meridian, According to the Plat recorded June 18, 2007 as Document 2007r041940, in McHenry County, Illinois.



LEGEND	
●	CATCH BASIN
▬	CURB INLET
⊖	FIRE HYDRANT
✚	FOUND CROSS
●	FOUND IRON BAR
○	FOUND IRON PIPE
⊠	GAS VALVE
☼	LIGHT
⬟	SANITARY MANHOLE
⊗	SET CROSS
⊦	SIGN
⬟	STORM MANHOLE
T	TELEPHONE HANDHOLE
◯	TREE
⊖	VALVE VAULT
⊠	WATER VALVE

PROJECT BENCHMARK
McHENRY COUNTY MONUMENT
"CRYSTAL LAKE-2B"
ELEVATION=918.78 NAVD88

40' 0' 40' 80'
SCALE: 1" = 40'

CLIENT: EQUITY TRUST COMPANY
DRAWN BY: SES CHECKED BY: APG
SCALE: 1"=40' SEC. 4 T. 43 R. 8 E.
BASIS OF BEARING: PER RECORD SUBDIVISION
P.I.N.: 19-04-427-009
JOB NO.: 210878 I.D. TPB
FIELDWORK COMP.: 08/14/21 BK. ___ PG. ___
ALL DISTANCES SHOWN IN FEET AND DECIMAL PARTS THEREOF CORRECTED TO 68° F. REF: 060923

NOTE: Only those Building Line Restrictions or Easements shown on a Recorded Subdivision Plat are shown hereon unless the description ordered to be surveyed contains a proper description of the required building lines or easements.

- **No distance should be assumed by scaling.**
- **No underground improvements have been located unless shown and noted.**
- **No representation as to ownership, use, or possession should be hereon implied.**
- **This Survey and Plat of Survey are void without original embossed or colored seal and signature affixed.**

Compare your description and site markings with this plat and AT ONCE report any discrepancies which you may find.

ARTHUR P. GRITMACHER
035-003857
PROFESSIONAL LAND SURVEYOR
STATE OF ILLINOIS
EXP. 11/30/2022
WOODSTOCK, ILLINOIS

REVISED 02/18/22 – ADDITIONAL TOPOGRAPHY – CKV
REVISED 09/28/21 – EASEMENT LABELED PER ATTORNEY REVIEW – SES

STATE OF ILLINOIS)
) S.S.
COUNTY OF McHENRY)

In my professional opinion, and based on my observations, I hereby certify that we have surveyed the premises above described, and that the plat hereon is a true representation of the said survey. This professional service conforms to the current Illinois minimum standards for a boundary and topographic survey.

Dated at Woodstock, McHenry County, Illinois 09/20 A.D., 20 21.

Vanderstappen Land Surveying Inc.
Design Firm No. 184-002792

By: _____
Illinois Professional Land Surveyor No. 3857

Y:\PLATS\2021\0800-0999\210878_V-210878\210878 TPB2.dwg-Layout1-2/21/2022 1:57 PM

PUBLIC NOTICE BEFORE THE PLANNING AND ZONING COMMISSION OF THE CITY OF CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

IN THE MATTER OF THE APPLICATION OF
551 Exchange Apartments LLC

LEGAL NOTICE

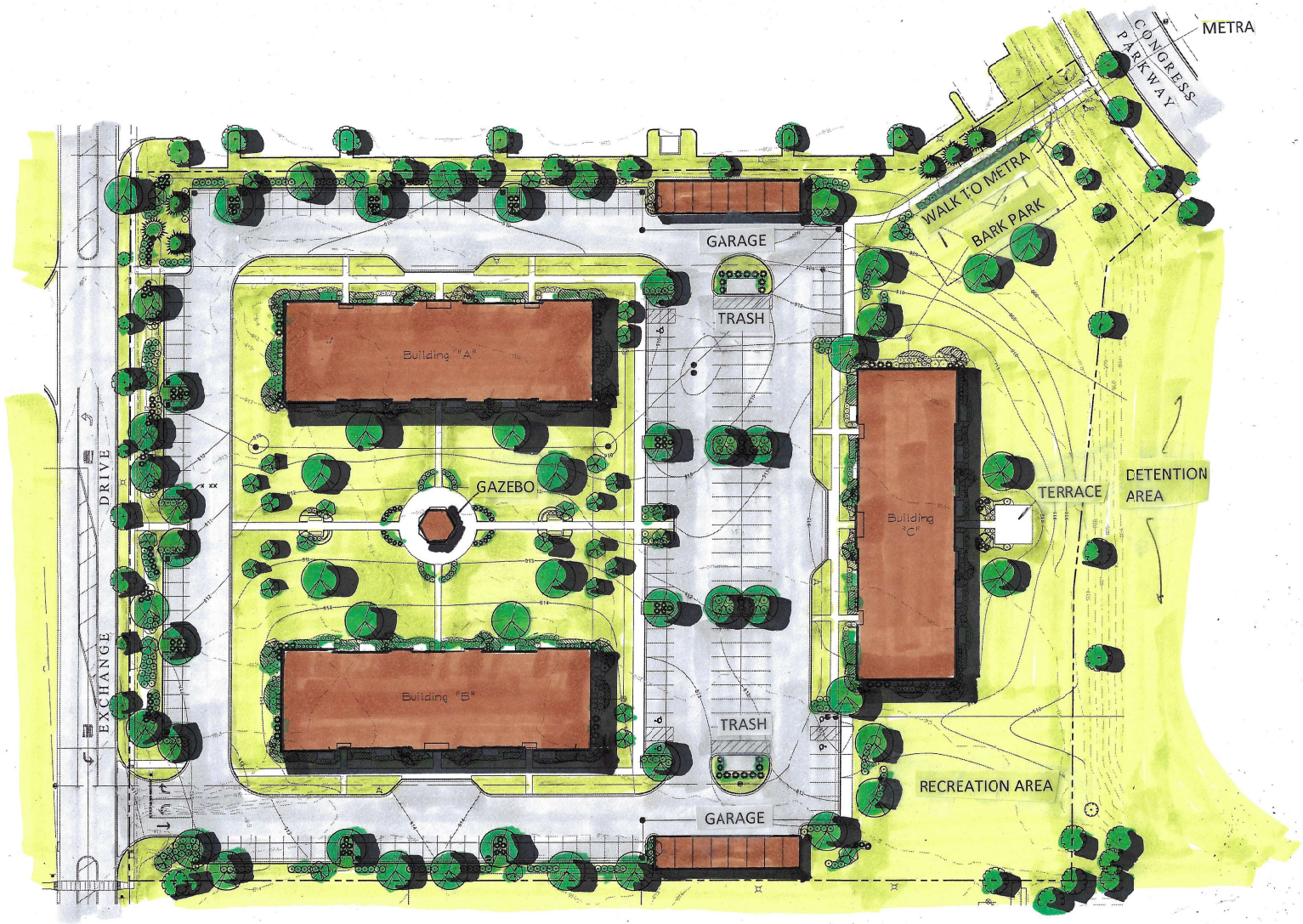
Notice is hereby given in compliance with the Unified Development Ordinance (UDO) of the City of Crystal Lake, Illinois, that a public hearing will be held before the Planning and Zoning Commission upon the application by Ram Prashantha, representing Projades LLC, on behalf of 551 Exchange Apatments LLC for approval of a Preliminary and Final Planned Unit Development at the following real estate known as 551 Congress Parkway, Crystal Lake, Illinois 60014, PIN: 19-04-427-009.

This application is filed for the purposes of seeking a Preliminary and Final Planned Unit Development for a 93-unit apartment development with a variation to allow for a lot area of 288,048 square feet, a variation of 85,352 square feet, a lot width of 455.78 feet, a variation of 524.22 feet, a variation for a density of 14.06 units to the acres, a variation of 5.06 units to the acre and any other variations as necessary to approve the plans as presented pursuant to Article 2, Article 3, Article 4 and Article 9. Plans for this project can be viewed at the City of Crystal Lake Planning and Economic Development Department at City Hall.

A public hearing before the Planning and Zoning Commission on the request will be held at 7:00 p.m. on Wednesday, December 4, 2024, at the Crystal Lake City Hall, 100 West Woodstock Street, at which time and place any person determining to be heard may be present.

Jeff Greenman, Chairperson
Planning and Zoning Commission
City of Crystal Lake

(Published in Northwest Herald November 19, 2024) 2207542



551 CONGRESS PARKWAY

SITE PLAN

2/18/22

0 15' 30' 60' 90'
SCALE: 1"=30'

NORTH

FINAL LANDSCAPE PLAN

551 CONGRESS PARKWAY

Crystal Lake, IL

March 16, 2022

CONSULTANTS:

LANDSCAPE ARCHITECT:

GARY R. WEBER ASSOCIATES, INC
402 W. LIBERTY DRIVE
WHEATON, ILLINOIS 60187

ENGINEER:

HAEGER ENGINEERING
100 EAST STATE PARKWAY
SCHAUMBURG, IL 60173



LOCATION MAP

SCALE: 1"=300'

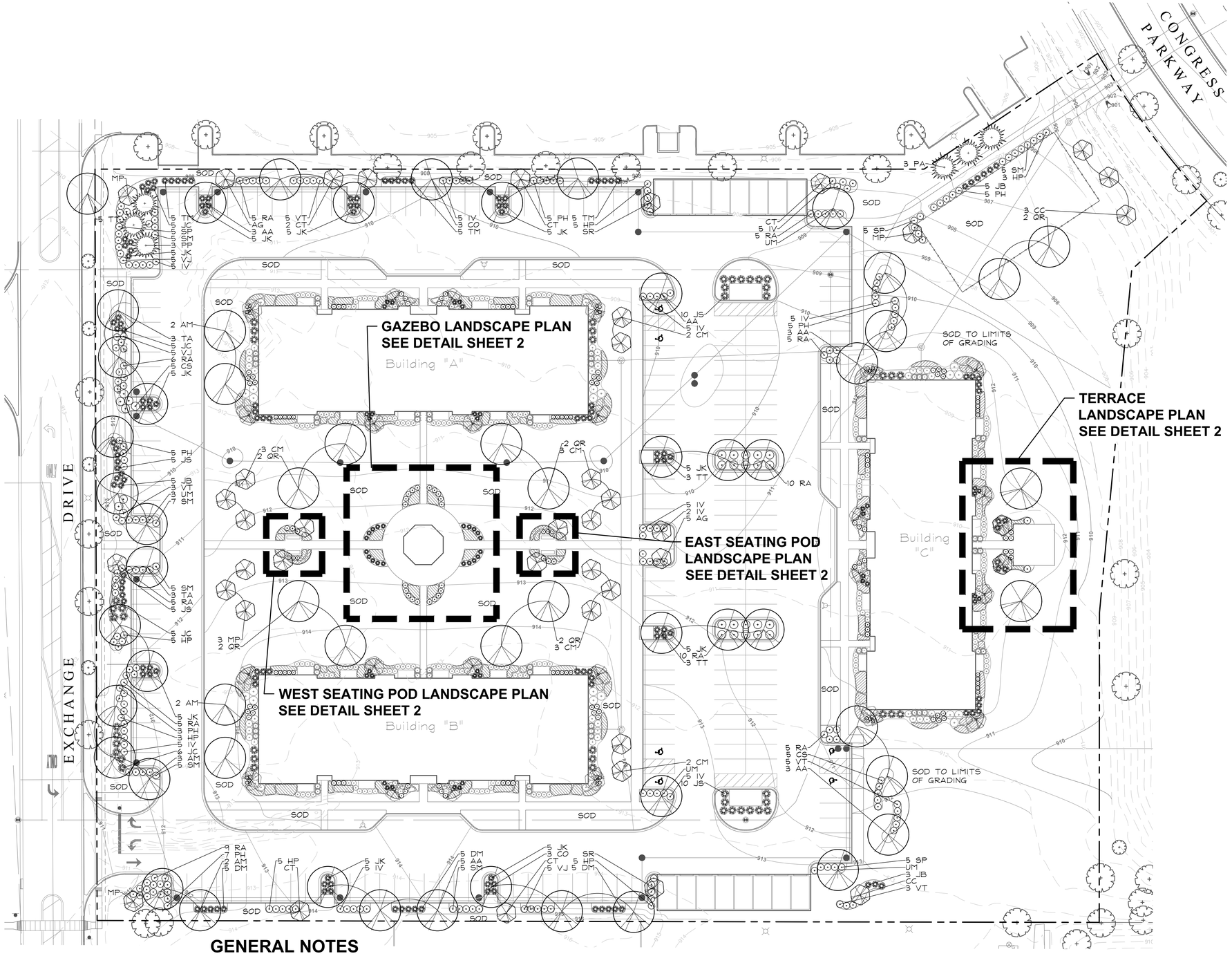
INDEX OF SHEETS

SHEET NO.	DESCRIPTION
0	COVER SHEET
1	OVERALL LANDSCAPE PLAN
2	LANDSCAPE PLANS & DETAILS
3	FOUNDATION LANDSCAPE PLAN
4	TREE PRESERVATION PLAN
5	LANDSCAPE SPECIFICATIONS

L:\Projects\PSW2205\Acad\PSW2205_A02_00LP.dwg

PLANT LIST

Key	Qty	Botanical/Common Name	Size	Remarks
		SHADE TREES		
AA	13	Acer x freemanii 'Jeffer's Red' AUTUMN BLAZE MAPLE	2 1/2" Cal.	
AM	9	Acer miyabei 'Morton' STATE STREET MAPLE	2 1/2" Cal.	
CO	6	Celtis occidentalis COMMON HACKBERRY	2 1/2" Cal.	
QR	12	Quercus rubra RED OAK	2 1/2" Cal.	
TA	6	Tilia americana 'Redmond' REDMOND AMERICAN LINDEN	2 1/2" Cal.	
TT	7	Tilia tomentosa 'Sterling' STERLING SILVER LINDEN	2 1/2" Cal.	
UM	6	Ulmus 'Morton Glossy' TRIUMPH ELM	2 1/2" Cal.	
		ORNAMENTAL TREES		
AG	3	Amelanchier x grandiflora APPLE SERVICEBERRY	8' Ht.	Multi-Stem
CC	6	Cercis canadensis EASTERN REDBUD	8' Ht.	Multi-Stem
CM	13	Cornus mas CORNELIANCHERRY DOGWOOD	8' Ht.	Multi-Stem
CT	6	Crataegus crusgalli var. inermis THORNLESS COCKSPUR HAWTHORN	8' Ht.	Multi-Stem
MP	9	Malus 'Prairifire' PRAIRIFIRE CRABAPPLE	8' Ht.	Multi-Stem
SR	4	Syringa reticulata 'Ivory Silk' IVORY SILK JAPANESE TREE LILAC	8' Ht.	Multi-Stem
		EVERGREEN TREES		
PA	3	Picea abies NORWAY SPRUCE	8' Ht.	
PP	3	Picea pungens COLORADO SPRUCE	8' Ht.	
		DECIDUOUS SHRUBS		
CS	12	Cornus sericea 'Baileyi' BAILEY'S REDTWIG DOGWOOD	36" Tall	5' O.C.
HP	46	Hydrangea paniculata 'SMHPLGF' LITTLE QUICK FIRE HYDRANGEA	24" Tall	3' O.C.
IV	50	Itea virginica 'Little Henry' LITTLE HENRY VIRGINIA SWEETSPIRE	24" Tall	3' O.C.
PH	30	Physocarpus opulifolius 'Seward' SUMMER WINE NINEBARK	30" Tall	4' O.C.
RA	65	Rhus aromatica 'Gro-low' GRO-LOW SUMAC	24" Wide	3' O.C.
SM	35	Syringa meyeri 'Palabin' DWARF KOREAN LILAC	24" Tall	4' O.C.
SP	18	Syringa patula 'Miss Kim' MISS KIM LILAC	24" Tall	4' O.C.
VT	16	Viburnum trilobum 'Redwing' JN SELECT CRANBERRYBUSH VIBURNUM	36" Tall	5' O.C.
VJ	15	Viburnum x juddii JUDD VIBURNUM	36" Tall	4' O.C.
		EVERGREEN SHRUBS		
JK	56	Juniperus chinensis 'Kallays Compact' KALLAYS COMPACT PFITZER JUNIPER	24" Wide	4' O.C.
JC	21	Juniperus chinensis 'Sea Green' SEA GREEN JUNIPER	30" Wide	5' O.C.
JS	30	Juniperus chinensis var. sargentii 'Viridis' GREEN SARGENT JUNIPER	24" Wide	5' O.C.
JB	34	Juniperus conferta 'Blue Pacific' BLUE PACIFIC JUNIPER	24" Wide	4' O.C.
TM	30	Taxus x media 'Densiformis' DENSE YEW	24" Wide	4' O.C.
		ORNAMENTAL GRASSES		
CK	12	Calamagrostis x acutiflora 'Karl Foerster' FEATHER REED GRASS	#1	30" O.C.
PE	26	Pennisetum alopecuroides 'Burgundy Bunny' BURGUNDY BUNNY FOUNTAIN GRASS	#1	24" O.C.
		PERENNIALS		
AB	46	Allium 'Summer Beauty' SUMMER BEAUTY ONION	#1	18" O.C.
EC	18	Echinacea 'CBG Cone 2' PIXIE MEADOWBRITE CONEFLOWER	#1	18" O.C.
GB	80	Geranium 'Brookside' BROOKSIDE GERANIUM	#1	18" O.C.
HH	104	Hemerocallis 'Happy Returns' HAPPY RETURNS DAYLILY	#1	18" O.C.
HL	20	Hemerocallis 'Little Wine Cup' LITTLE WINE CUP DAYLILY	#1	18" O.C.
RG	12	Rudbeckia fulgida 'Goldsturm' GOLDSTRUM BLACK-EYED SUSAN	#1	18" O.C.
SE	18	Sedum 'Autumn Joy' AUTUMN JOY SEDUM	#1	18" O.C.
		MISC. MATERIALS		
	100	SHREDDED HARDWOOD MULCH	C.Y.	
	11,543	SOD	S.Y.	



GENERAL NOTES

1. Contractor shall verify underground utility lines and is responsible for any damage.
2. Contractor shall verify all existing conditions in the field prior to construction and shall notify landscape architect of any variance.
3. Material quantities shown are for contractors convenience only. The Contractor must verify all material and supply sufficient materials to complete the job per plan.
4. The landscape architect reserves the right to inspect trees and shrubs either at place of growth or at site before planting, for compliance with requirements of variety, size and quality.
5. Work shall conform to American Standard for Nursery Stock, State of Illinois Horticultural Standards, and Local Municipal requirements.
6. Contractor shall secure and pay for all permits, fees, and inspections necessary for the proper execution of this work and comply with all codes applicable to this work.
7. See General Conditions and Specifications for landscape work for additional requirements.

0 15' 30' 60' 90'
SCALE: 1"=30'

NORTH

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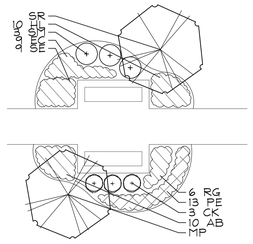
OVERALL LANDSCAPE PLAN

1	03.16.2022	
REVISIONS		

DATE	2022.02.21
PROJECT NO.	PSW2205
DRAWN	DHS
CHECKED	MGM
SHEET NO.	

1 OF 5

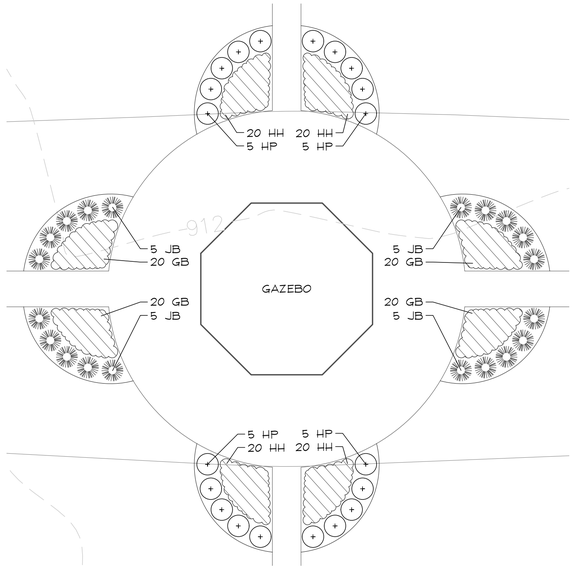
XREFS:
PLOT CONFIG:



WEST SEATING POD LANDSCAPE PLAN

0 5' 10' 20' 30'
SCALE: 1"=10'

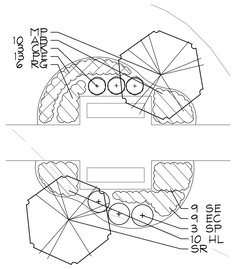
NORTH



GAZEBO LANDSCAPE PLAN

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SCALE: 1"=10'

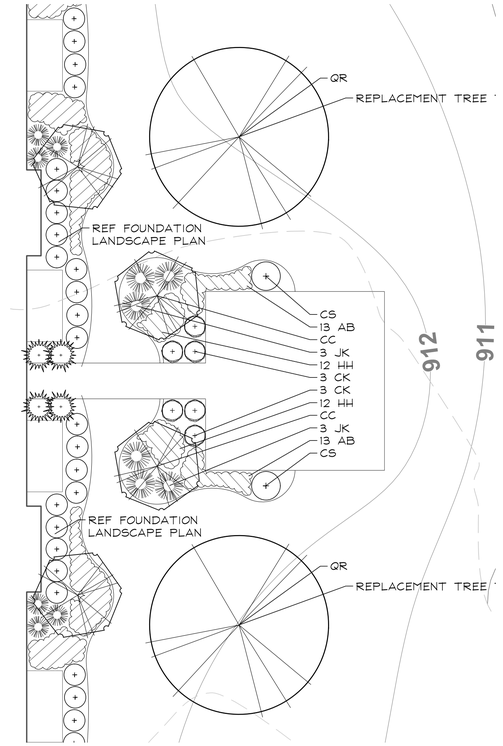
NORTH



EAST SEATING POD LANDSCAPE PLAN

0 5' 10' 20' 30'
SCALE: 1"=10'

NORTH

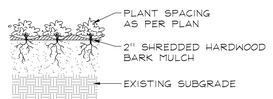


TERRACE LANDSCAPE PLAN

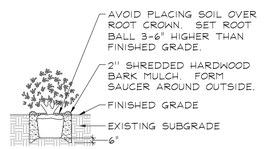
0 5' 10' 20' 30'
SCALE: 1"=10'

NORTH

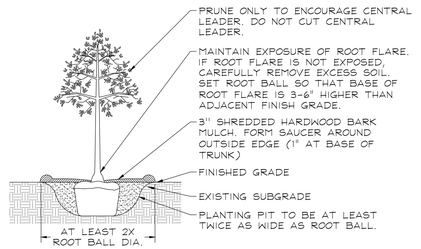
PLANTING DETAILS



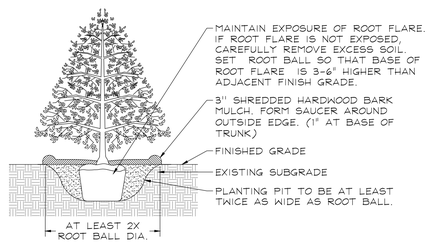
PERENNIALS AND GROUNDCOVERS
NOT TO SCALE



DECIDUOUS AND EVERGREEN SHRUBS
NOT TO SCALE



DECIDUOUS TREES
NOT TO SCALE



EVERGREEN TREES
NOT TO SCALE

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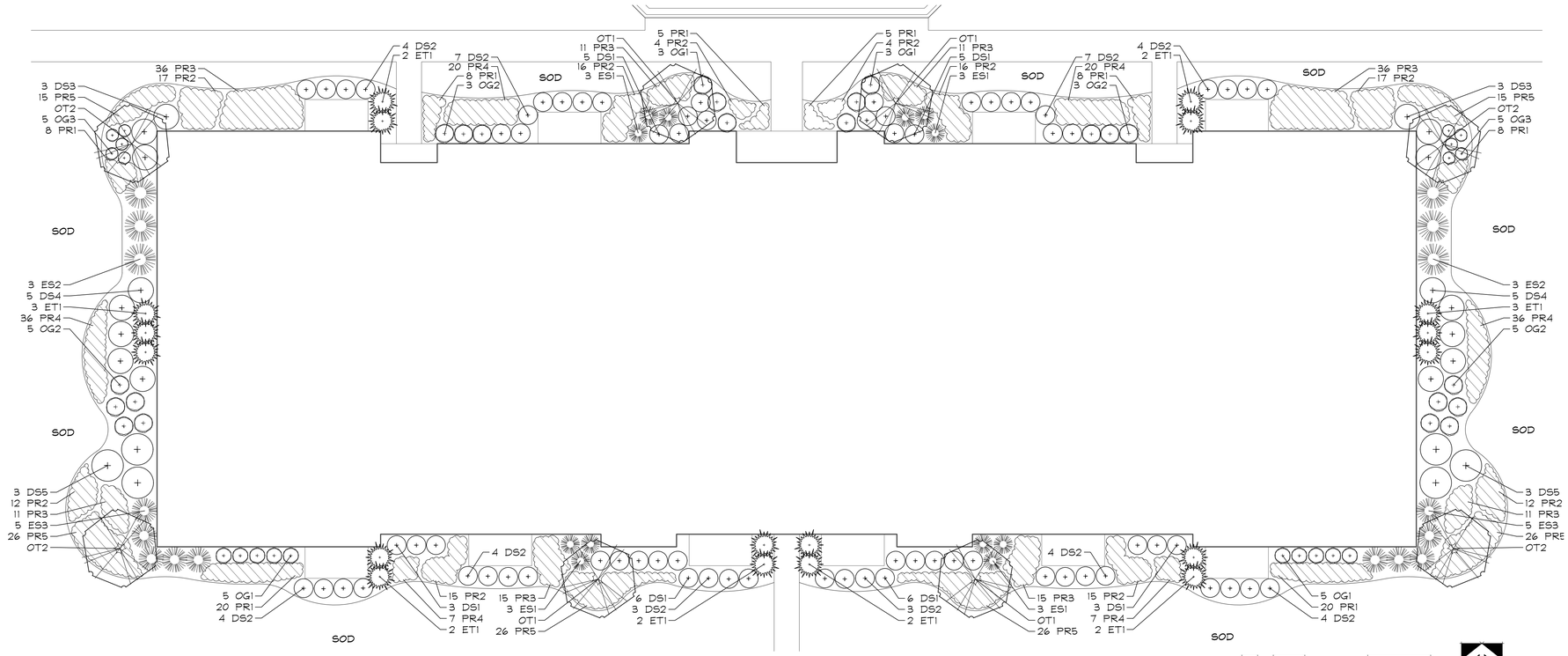
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LANDSCAPE PLANS & DETAILS

1 03.16.2022
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DATE 2022.02.21
PROJECT NO. PSW2205
DRAWN DHS
CHECKED MGM
SHEET NO.
2 OF 5

XREFS:
PLOT CONFIG:



PLANT LISTS

TYPICAL APARTMENT BUILDING FOUNDATION PLANT LIST A (BUILDINGS A& C)

Key	Qty	Botanical/Common Name	Size	Remarks
		ORNAMENTAL TREES		
OT1	4	Syringa pekinensis 'Morton' CHINA SNOW PEKING LILAC	6' Ht.	Multi-Stem
OT2	4	Betula nigra 'Cully' HERITAGE RIVER BIRCH	6' Ht.	Multi-Stem
		EVERGREEN TREES		
ET1	9	Thuja occidentalis 'Nigra' DARK GREEN ARBORVITAE	8' Ht.	
		DECIDUOUS SHRUBS		
DS1	28	Fothergilla gardenii DWARF FOTHERGILLA	24" Tall	3' O.C.
DS2	44	Hydrangea arborescens 'Abetwo' INCREDIBALL HYDRANGEA	24" Tall	3' O.C.
DS3	6	Syringa patula 'Miss Kim' MISS KIM LILAC	24" Tall	4' O.C.
DS4	10	Viburnum trilobum 'Redwing' JN SELECT CRANBERRYBUSH VIBURNUM	36" Tall	5' O.C.
DS5	6	Weigela florida 'Alexandra' WINE & ROSES WEIGELA	36" Tall	4' O.C.
		EVERGREEN SHRUBS		
ES1	12	Juniperus chinensis 'Kallays Compact' KALLAYS COMPACT PFITZER JUNIPER	24" Wide	4' O.C.
ES2	6	Juniperus chinensis var. sargentii 'Viridis' GREEN SARGENT JUNIPER	24" Wide	5' O.C.
ES3	10	Taxus x media 'Densiformis' DENSE YEW	24" Wide	4' O.C.
		ORNAMENTAL GRASSES		
OG1	16	Sporobolus heterolepis PRAIRIE DROPSEED	#1	24" O.C.
OG2	16	Panicum virgatum 'Heavy Metal' HEAVY METAL SWITCHGRASS	#1	24" O.C.
OG3	10	Pennisetum alopecuroides 'Hameln' DWARF FOUNTAIN GRASS	#1	24" O.C.
		PERENNIALS		
PR1	82	Hemerocallis 'Happy Returns' HAPPY RETURNS DAYLILY	#1	18" O.C.
PR2	128	Echinacea 'CBG Cone 2' PIXIE MEADOWBRITE CONEFLOWER	#1	18" O.C.
PR3	146	Nepeta racemosa 'Walker's Low' WALKER'S LOW CATMINT	#1	18" O.C.
PR4	126	Iris sibirica 'Caesars Brother' CAESAR'S BROTHER SIBERIAN IRIS	#1	24" O.C.
PR5	134	Geranium 'Brookside' BROOKSIDE GERANIUM	#1	18" O.C.
		MISC. MATERIALS		
	26	SHREDDED HARDWOOD MULCH	C.Y.	

TYPICAL APARTMENT BUILDING FOUNDATION PLANT LIST B (BUILDING B)

Key	Qty	Botanical/Common Name	Size	Remarks
		ORNAMENTAL TREES		
OT1	4	Malus 'Prairifire' PRAIRIFIRE CRABAPPLE	6' Ht.	Multi-Stem
OT2	4	Cornus mas CORNELIANCHERRY DOGWOOD	6' Ht.	Multi-Stem
		EVERGREEN TREES		
ET1	9	Thuja occidentalis 'Nigra' DARK GREEN ARBORVITAE	8' Ht.	
		DECIDUOUS SHRUBS		
DS1	28	Cornus sericea 'Farrow' ARCTIC FIRE REDTWIG DOGWOOD	24" Tall	3' O.C.
DS2	44	Itea virginica 'Little Henry' LITTLE HENRY VIRGINIA SWEETSPIRE	24" Tall	3' O.C.
DS3	6	Rhus aromatica 'Gro-low' GRO-LOW SUMAC	24" Wide	3' O.C.
DS4	10	Syringa meyeri 'Palabin' DWARF KOREAN LILAC	24" Tall	4' O.C.
DS5	6	Weigela florida 'Bramwell' FINE WINE WEIGELA	24" Tall	3' O.C.
		EVERGREEN SHRUBS		
ES1	12	Juniperus chinensis 'Kallays Compact' KALLAYS COMPACT PFITZER JUNIPER	24" Wide	4' O.C.
ES2	6	Juniperus chinensis 'Sea Green' SEA GREEN JUNIPER	30" Wide	5' O.C.
ES3	10	Taxus x media 'Densiformis' DENSE YEW	24" Wide	4' O.C.
		ORNAMENTAL GRASSES		
OG1	16	Schizachyrium scoparium 'Twilight Zone' TWILIGHT LITTLE BLUESTEM	#1	24" O.C.
OG2	16	Panicum virgatum 'Northwind' NORTHWIND SWITCHGRASS	#1	30" O.C.
OG3	10	Pennisetum alopecuroides 'Burgundy Bunny' BURGUNDY BUNNY FOUNTAIN GRASS	#1	24" O.C.
		PERENNIALS		
PR1	82	Hemerocallis 'Rosy Returns' ROSY RETURNS DAYLILY	#1	18" O.C.
PR2	128	Allium 'Summer Beauty' SUMMER BEAUTY ONION	#1	18" O.C.
PR3	146	Perovskia atriplicifolia RUSSIAN SAGE	#1	24" O.C.
PR4	126	Rudbeckia fulgida 'Goldsturm' GOLDSTRUM BLACK-EYED SUSAN	#1	18" O.C.
PR5	134	Hosta 'Patriot PATRIOT HOSTA	#1	24" O.C.
		MISC. MATERIALS		
	26	SHREDDED HARDWOOD MULCH	C.Y.	

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FOUNDATION LANDSCAPE PLAN

1	03.16.2022
REVISIONS	

DATE	2022.02.21
PROJECT NO.	PSW2205
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SHEET NO.	

3 OF 5

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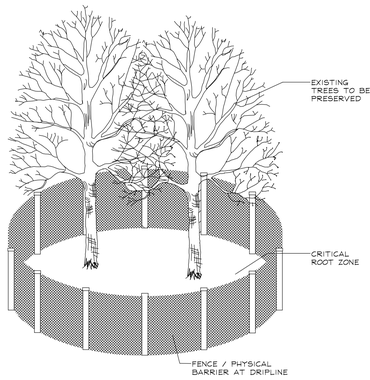
XREFS:
PLOT CONFIG:

LEGEND

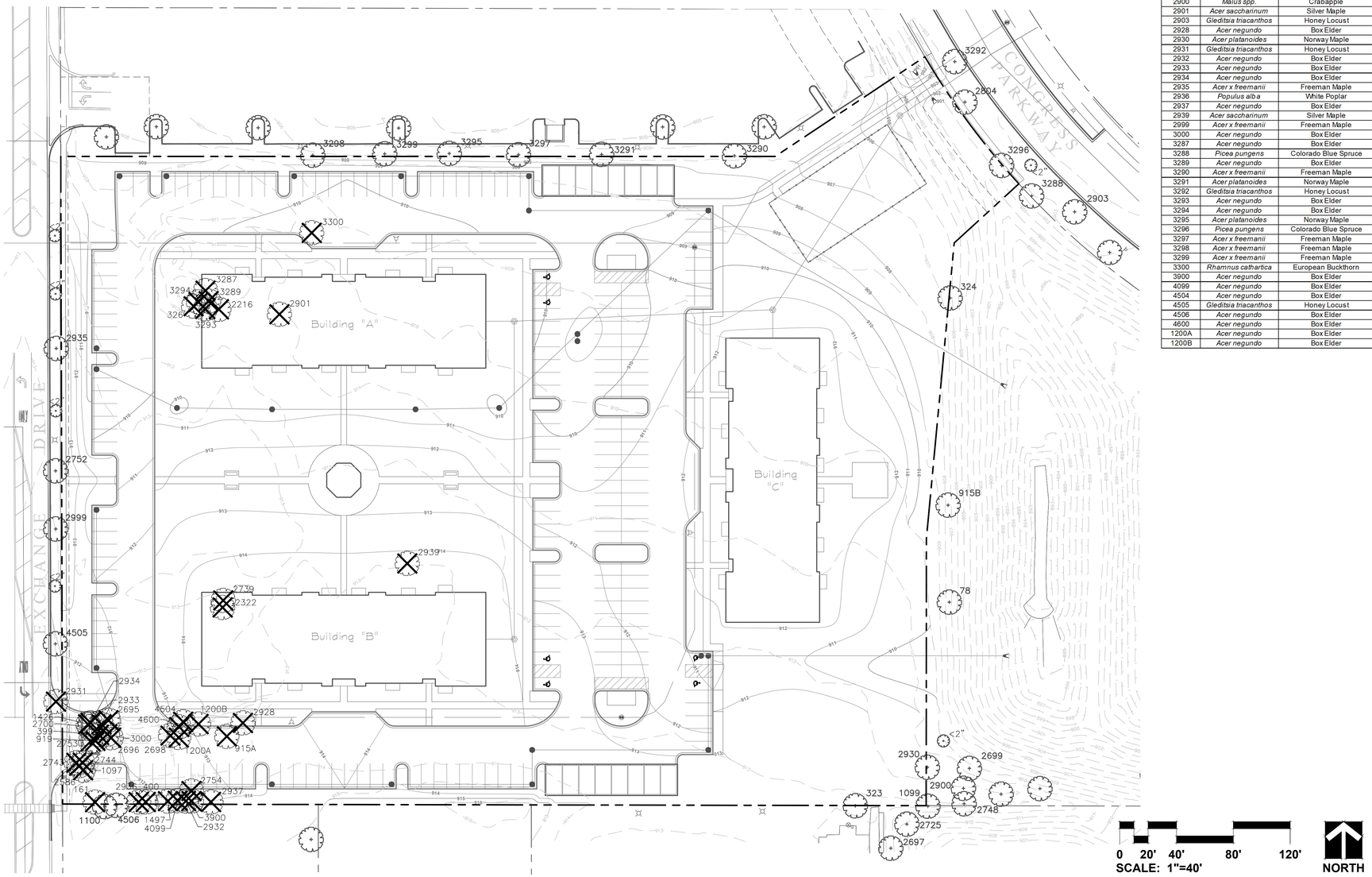
1234 — **TREE TO BE PRESERVED**

<2" — **TREE LESS THAN 2" DBH TO BE PRESERVED**

1234 — **TREE TO BE REMOVED**



TREE PRESERVATION DETAIL
(NOT TO SCALE)
SEE NOTES



0 20' 40' 80' 120'
SCALE: 1"=40'

NORTH

TREE INVENTORY

TAG NO.	SCIENTIFIC NAME	COMMON NAME	DBH (inches)	RATING	No. Rating	HEALTH/STRUCTURE	REMOVE/ PRESERVE	REPLACEMENT VALUE (CAL. IN.)
78	*Acer x freemanii*	Freeman Maple	7	Poor	5	Trunk scar, dead branches	Preserve	
161	*Acer negundo*	Box Elder	7	Poor	4	Strong lean	Remove	
323	*Acer platanoides*	Norway Maple	13	Good	2		Preserve	
324	*Acer platanoides*	Norway Maple	10	Good	2		Preserve	
326	*Acer negundo*	Box Elder	7,5,4	Poor	5	Strong crown lean	Remove	
399	*Acer negundo*	Box Elder	5	Fair	4	Lean	Remove	
400	*Populus alba*	White Poplar	9	Good	2		Replace	0.45
915A	*Acer negundo*	Box Elder	9,5	Poor	5	Strong lean	Remove	
915B	*Acer x freemanii*	Freeman Maple	6	Poor	5	Trunk scar, dead branches	Preserve	
919	*Acer negundo*	Box Elder	6,4	Fair	4	Lean	Remove	
1097	*Populus deltoides*	Eastern Cottonwood	10	Fair	3	Lean	Replace	1
1099	*Acer platanoides*	Norway Maple	14	Good	2		Preserve	
1100	*Acer negundo*	Box Elder	5	Poor	5	Strong crown lean	Preserve	
1426	*Acer negundo*	Box Elder	7	Poor	5	Strong crown lean	Remove	
1497	*Acer negundo*	Box Elder	4,2	Poor	5	Strong lean	Remove	
2216	*Acer negundo*	Box Elder	5	Poor	5	Strong lean	Remove	
2322	*Rhamnus cathartica*	European Buckthorn	2,2,2	Poor	5	Crowded	Remove	
2586	*Populus deltoides*	Eastern Cottonwood	7	Fair	3	Lean	Replace	0.7
2695	*Acer negundo*	Box Elder	9,6,5	Fair	4	Lean	Remove	
2696	*Acer negundo*	Box Elder	6,6	Poor	5	Split risk	Remove	
2697	*Acer platanoides*	Norway Maple	12	Good	2		Preserve	
2698	*Acer negundo*	Box Elder	10,8,8,6	Poor	5	Split risk	Remove	
2699	*Acer platanoides*	Norway Maple	12	Good	2		Preserve	
2700	*Acer negundo*	Box Elder	8,7	Poor	5	Strong lean	Remove	
2725	*Acer platanoides*	Norway Maple	12	Good	2		Preserve	
2739	*Rhamnus cathartica*	European Buckthorn	2,2	Poor	5	Crowded	Remove	
2743	*Populus deltoides*	Eastern Cottonwood	9	Fair	3	Lean	Replace	0.9
2744	*Salix nigra*	Black Willow	8	Poor	5	Strong lean	Remove	
2748	*Acer platanoides*	Norway Maple	11	Good	2		Preserve	
2752	*Gleditsia triacanthos*	Honey Locust	2.5	Good	3	Trunk scar (from mower)	Preserve	
2753	*Acer negundo*	Box Elder	4,4	Poor	5	Strong lean	Remove	
2754	*Acer negundo*	Box Elder	7	Poor	5	Strong lean	Remove	
2804	*Gleditsia triacanthos*	Honey Locust	14	Good	2		Preserve	
2900	*Malus spp.*	Crabapple	3,2	Fair	3		Preserve	
2901	*Acer saccharinum*	Silver Maple	8,7	Poor	5	Split risk	Remove	
2903	*Gleditsia triacanthos*	Honey Locust	12	Good	2		Preserve	
2928	*Acer negundo*	Box Elder	12,10,7,7	Poor	5	Strong lean	Remove	
2930	*Acer platanoides*	Norway Maple	11	Good	2		Preserve	
2931	*Gleditsia triacanthos*	Honey Locust	2.5	Good	2		Replace	1.25
2932	*Acer negundo*	Box Elder	7	Poor	5	Strong lean	Remove	
2933	*Acer negundo*	Box Elder	8	Poor	5	Strong lean	Remove	
2934	*Acer negundo*	Box Elder	8	Poor	5	Strong lean	Remove	
2935	*Acer x freemanii*	Freeman Maple	4	Good	2		Preserve	
2936	*Populus alba*	White Poplar	10	Fair	3	Vines	Replace	0.5
2937	*Acer negundo*	Box Elder	7	Poor	5	Strong lean, dead limbs, trunk scar	Remove	
2939	*Acer saccharinum*	Silver Maple	7,7	Poor	5	Split risk	Remove	
2999	*Acer x freemanii*	Freeman Maple	6	Good	2		Preserve	
3000	*Acer negundo*	Box Elder	5,4	Poor	5	Strong lean	Remove	
3287	*Acer negundo*	Box Elder	9,7	Poor	5	Strong lean	Remove	
3288	*Picea pungens*	Colorado Blue Spruce	12	Good	1		Preserve	
3289	*Acer negundo*	Box Elder	7	Poor	5	Strong lean	Remove	
3290	*Acer x freemanii*	Freeman Maple	7	Good	2		Preserve	
3291	*Acer platanoides*	Norway Maple	10	Good	2		Preserve	
3292	*Gleditsia triacanthos*	Honey Locust	12	Good	2		Preserve	
3293	*Acer negundo*	Box Elder	5	Poor	5	Strong lean	Remove	
3294	*Acer negundo*	Box Elder	5,3,3	Poor	5	Strong lean	Remove	
3295	*Acer platanoides*	Norway Maple	9	Good	2		Preserve	
3296	*Picea pungens*	Colorado Blue Spruce	14	Good	1		Preserve	
3297	*Acer x freemanii*	Freeman Maple	10	Good	2		Preserve	
3298	*Acer x freemanii*	Freeman Maple	6	Good	2		Preserve	
3299	*Acer x freemanii*	Freeman Maple	8	Good	2		Preserve	
3300	*Rhamnus cathartica*	European Buckthorn	3,2,2,2	Poor	5		Remove	
3900	*Acer negundo*	Box Elder	7	Poor	5	Strong lean	Remove	
4099	*Acer negundo*	Box Elder	7	Poor	5	Strong lean	Remove	
4504	*Acer negundo*	Box Elder	8	Poor	5	Strong lean	Remove	
4505	*Gleditsia triacanthos*	Honey Locust	2.5	Good	2		Preserve	
4506	*Acer negundo*	Box Elder	6	Poor	5	Strong crown lean	Preserve	
4600	*Acer negundo*	Box Elder	12,10,9	Poor	5	Split risk	Remove	
1200A	*Acer negundo*	Box Elder	10,8,8,6	Poor	5	Split risk	Remove	
1200B	*Acer negundo*	Box Elder	8,6,5,5	Poor	5	Strong lean	Remove	

REQUIRED TREE REPLACEMENTS

4.8 CALIPER INCHES OF REPLACEMENT

LOCATION OF REQUIRED REPLACEMENT TREES TO BE SHOWN ON FINAL LANDSCAPE PLAN

TREE PRESERVATION NOTES

1. 48'' high snow fence or wood barriers shall extend to the dripline of the tree or tree mass whenever possible, shall be installed before construction begins, and should not be removed until the completion of construction.
2. All accidental damage to existing trees that are to be preserved shall be promptly treated as required in accordance with recognized horticultural practices and the instructions of the professional Arborist, Landscape Architect or Horticulturist.
3. Broken or badly bruised branches shall be removed with a clean cut. If recommended by the professional Arborist, Landscape Architect or Horticulturist.
4. Care shall be exercised by the contractors to protect all overhead limbs and branches from damage by contact with material, machinery or equipment and by damage from engine exhaust.
5. Contractors shall protect trees and vegetation against spills or discharge of fuels,lubricating oils, hydraulic fluids, anti-freeze and coolants, calcium chloride, lime and all other similar hydrocarbons, organic chemicals, and other materials which can be harmful.
6. When underground utilities are proposed within 5' of a preserved tree trunk, they must be augered if possible.

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TREE PRESERVATION PLAN

1 03.16.2022
REVISIONS

DATE	2022.02.21
PROJECT NO.	PSW2205
DRAWN	DHS
CHECKED	MGM
SHEET NO.	

4 OF 5

XREFS
PLOT CONFIG

LANDSCAPE WORK PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

The work shall consist of furnishing, transporting and installing all seeds, plants and other materials required for:

1. The establishment of trees, shrubs, perennial, annual and lawn areas as shown on Landscape Plan;
2. The provision of post-planting management as specified herein;
3. Any remedial operations necessary in conformance with the plans as specified in this document;
4. Permits which may be required.

1.2 QUALITY ASSURANCE

A. Work shall conform to State of Illinois Horticultural Standards and local municipal requirements.

B. Quality Control Procedures:

1. Ship landscape materials with certificates of inspection as required by governmental authorities. Comply with governing regulations applicable to landscape materials.

2. Do not make substitutions. If specified landscape material is not obtainable, submit to Landscape Architect proof of non-availability and proposal for use of equivalent material.

3. Analysis and Standards: Package standard products with manufacturer's certified analysis.

1.3 SUBMITTALS

A. Planting Schedule

Submit three (3) copies of the proposed planting schedule showing dates for each type of planting

B. Maintenance Instruction - Landscape Work

Submit two (2) copies of typewritten instructions recommending procedures to be established by the Owner for the maintenance of landscape work for one full year. Submit prior to expiration of required maintenance periods.

Instructions shall include: watering, fertilizing, spraying, mulching and pruning for plant material and trimming groundcover. Instructions for watering, fertilizing and mowing grass areas shall be provided ten (10) days prior to request for inspection for final acceptance. Landscape Architect shall receive copies of all instructions when issued.

C. Submit two (2) copies of soil test of existing topsoil with recommendations for soil additive requirement to Landscape Architect for review and written approval.

D. Submit two (2) samples of shredded hardwood bark mulch, erosion control blankets, and all other products and materials as specified on plans to Landscape Architect for review and written approval.

E. Nursery packing lists indicating the species and quantities of material installed must be provided to the Owner and/or City upon request.

1.4 JOB CONDITIONS

A. Examine and evaluate grades, soils and water levels. Observe the conditions under which work is to be performed and notify Landscape Architect of unsatisfactory conditions. Do not proceed with the work until unsatisfactory conditions have been corrected in an acceptable manner.

B. Utilities: Review underground utility location maps and plans; notify local utility location service; demonstrate an awareness of utility locations; and certify acceptance of liability for the protection of utilities during course of work. Contractor shall be responsible for any damage to utilities or property.

C. Excavation: When conditions detrimental to plant grauth are encountered such as rubble fill, adverse drainage conditions or obstructions, notify Landscape Architect before planting.

1.5 GUARANTEES

A. Guarantee seeded and sodded areas through the specified maintenance period and until final acceptance.

B. Guarantee trees, shrubs, groundcover and perennials for a period of one year after date of acceptance against defects including death and unsatisfactory growth, except for defects resulting from neglect by Owner, abuse or damage by others or unusual phenomena or incidents which are beyond Landscape installer's control.

LANDSCAPE WORK PART 2 - PLANT MATERIALS

2.1 LAWN SOD

Provide strongly rooted sod, not less than two (2) years old and free of weeds and undesirable native grasses. Provide only sod capable of growth and development when planted (viable, not dormant) and in strips not more than 18" wide x 4' long. Provide sod composed of a 5-way blend of Kentucky Bluegrass such as: Midnight, Allure, Viva, Washington, Liberty.

2.2 LAWN SEED MIXTURE

Grass Seed: Provide fresh, clean, new crop seed complying with the tolerance for purity and germination established by the Official Seed Analysts of North America. Provide seed of the grass species, proportions and maximum percentage of weed seed, as specified.

A. Lawn Seed Mixture - 5 lbs./1,000 sq. ft.
50% Kentucky Bluegrass 98/85
15% Cutter Perennial Ryegrass
10% Spartan Hard Fescue
10% Edge Perennial Ryegrass
10% Express Perennial Ryegrass
5% Pennlawn Creeping Red Fescue

B. Temporary Lawn Seed Mixture - 5 lbs./1,000 sq.ft.
40% Kentucky Bluegrass 98/85
40% Perennial Ryegrass
20% Annual Ryegrass

2.3 NATIVE PLANTING MIXTURES

Provide fresh, clean, new crop of the species and proportions as specified. Native seed and live plant material shall be obtained from a reputable supplier (approved by Landscape Architect) that has collected from sources east of the Mississippi River within the same EPA Level III Ecoregion as the project site (Central Corn Belt Plains). Any material sourced from outside this ecoregion must be approved by the Landscape Architect prior to installation.

For each species, the amount of seed indicated on the specifications shall mean the total amount of pure live seed (PLS) per acre. Seed tags and PLS testing information shall be provided to the Landscape Architect prior to seeding.

It is the sole responsibility of the Native Landscape Contractor to provide approved seed that meets industry-standard PLS requirements.

2.3 GROUNDCOVERS, PERENNIALS AND ANNUALS

Provide plants established and well-rooted in removable containers or integral peat pots and with not less than the minimum number and length of runners required by ANSI Z60.1 for the pot size shown or listed.

2.4 TREES AND SHRUBS

A. Name and Variety: Provide nursery grown plant material true to name and variety.

B. Quality: Provide trees, shrubs and other plants complying with the recommendations and requirements of ANSI Z60.1 "Standard for Nursery Stock" and as further specified.

C. Deciduous Trees: Provide trees of height and caliper listed or shown and with branching configuration recommended by ANSI Z60.1 for type and species required. Provide single stem trees except where special forms are shown or listed. Provide balled and burlapped (B&B) deciduous trees.

D. Deciduous Shrubs: Provide shrubs of the height shown or listed and with not less than the minimum number of canes required by ANSI Z60.1 for the type and height of shrub required. Provide balled and burlapped (B&B) deciduous shrubs.

E. Coniferous Evergreen: Provide evergreens of the sizes shown or listed. Dimensions indicate minimum spread for spreading and semi-spreading type evergreens and height for other types. Provide quality evergreens with well-balanced form complying with requirements for other size relationships to the primary dimension shown. Provide balled and burlapped (B&B) evergreen trees and containerized shrubs.

F. Inspection: All plants shall be subject to inspection and review at the place of growth or upon delivery and conformity to specification requirements as to quality, right of inspection and rejection upon delivery at the site or during the progress of the work for size and condition of balls or roots, diseases, insects and latent defects or injuries. Rejected plants shall be removed immediately from the site.

2.5 PLANTING SOIL MIXTURE

Provide planting soil mixture consisting of clean uncompacted topsoil (stockpiled at site) for all planting pits, perennial, annual and groundcover areas. Topsoil shall be conditioned based on any recommendations resulting from the soil test in 1.3.C.

2.6 EROSION CONTROL

A. Lawn Seed Areas Erosion Control Blanket: North American Green DS75, or equivalent approved equal.

B. Native Areas Erosion Control Blanket: North American Green S150, or equivalent approved equal.

2.7 MULCH

Provide mulch consisting of shredded hardwood. Provide sample to Landscape Architect for approval prior to ordering materials.

LANDSCAPE WORK PART 3 - EXECUTION

3.1 PLANTING SCHEDULE

At least thirty (30) days prior to the beginning of work in each area, submit a planting schedule for approval by the Landscape Architect.

3.2 PLANTINGS

A. Sodding New Lawns

1. Remove existing grass, vegetation and turf. Dispose of such material legally off-site, do not turn over into soil being prepared for launs.

2. Till to a depth of not less than 6"; apply soil amendments as needed; remove high areas and fill in depressions; till soil to a homogenous mixture of fine texture, remove lumps, clods, stones over 1" diameter, roots and other extraneous matter. Dispose of such material legally off-site.

3. Sodded areas shall receive an application of commercial fertilizer at the rate of 10 lbs. per 1,000 sq. ft. and shall have an analysis of 16-8-8.

4. Lay sod within 24 hours from time of stripping.

5. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod strips; do not overlap. Stagger strips to offset joints in adjacent courses. Work from boards to avoid damage to subgrade or sod. Tamp or roll lightly to ensure contact with subgrade. Work sifted soil into minor cracks between pieces of sod; remove excess to avoid smothering of adjacent grass.

6. Water sod thoroughly with a fine spray immediately after planting.

B. Seeding New Lawns

1. Remove existing grass, vegetation and turf. Dispose of such material legally off-site. Do not turn over into soil being prepared for launs.

2. Till to a depth of not less than 6"; apply soil amendments; remove high areas and fill in depressions; till soil to a homogenous mixture of fine texture, remove lumps, clods, stones over 1" diameter, roots and other extraneous matter. Dispose of such material legally off-site.

3. Seeded lawn areas shall receive an application of commercial fertilizer at the rate of 5 lbs. per 1,000 sq. ft. and shall be 6-24-24. Fertilizer shall be uniformly spread and mixed into the soil to a depth of 1" inches.

4. Do not use wet seed or seed which is moldy or otherwise damaged in transit or storage.

5. Sow seed using a spreader or seeding machine. Do not seed when wind velocity exceeds five (5) miles per hour. Distribute seed evenly over entire area by sowing equal quantity in two directions at right angles to each other.

6. Sow not less than specified rate.

7. Rake lawn seed lightly into top 1" of soil, roll lightly and water with a fine spray.

8. After the seeding operation is completed, spray a wood fiber mulch (Conweb 2000 with tacifier or approved equal) over the entire grassed area at the rate of 2,000 lbs. per acre. Use a mechanical spray unit to insure uniform coverage. Exercise care to protect buildings, automobiles and people during the application of the mulch.

C. Seeding Native Areas

1. The period for planting prairie seed shall be from April 1 to May 15 or November 1 to just before the first frost. Seeding outside of these timeframes must be approved by the landscape architect. Native seed planted outside of specified timeframes must have at least 60 days of growth prior to frost. Dormant seeding in winter is possible if soil conditions allow.

2. The General Contractor and Native Landscape Contractor shall be responsible for performing all work necessary to achieve and maintain an acceptable seedbed prior to seeding. All areas must be properly prepared before seeding begins. Equipment having low unit pressure ground contact shall be utilized within the planting areas.

3. If present, compacted soils shall be disked or raked prior to seeding. Remedial measures for the access area may, at the direction of the Wetland Consultant, involve ripping from 12 to 18 inches of the soil horizon prior to disking.

4. Prior to seeding, planting areas shall have at least twelve inches of clean un-compacted topsoil. Clumps, clods, stones over 2" diameter, roots and other extraneous matter shall be removed and disposed of legally off-site.

5. Granular mycorrhizal inoculants shall be installed with the seed mix at a rate of 40lbs/ acre. Inoculant can be banded under seed, worked into seed or added into spray tanks. Native areas shall not receive fertilizer.

6. Contractor shall be solely responsible for the proper handling and storage of the seed according to the best seed handling and storage practices, including fungicide treatments and stratification considerations. Owner shall make no compensation for damage to the seed because of improper storage, cleaning, threshing, or screening operations.

7. Except where site conditions preclude their use, seeding shall be performed using a Truax drill, Truax Trillion seeder, or comparable equipment designed specifically for installation of native seed. For areas where site conditions preclude the use of specialized equipment, seed may be installed through hand broadcasting and followed by light raking. Hand broadcast seed shall be spread at twice the specified rate. Other methods of seed installation may be used with prior approval from the Landscape Architect.

8. Prior to starting work, all seeding equipment shall be calibrated and adjusted to sow seeds at the proper seeding rate. In general, the optimum seeding depth is 0.25 inch below the soil surface. Areas where the seed has not been incorporated into the soil to the proper depths will not be accepted, and no compensation for materials or labor for the rejected work will be made by the Owner.

9. Seeding and soil tracking/firming shall not be done during periods of rain, severe drought, high winds, excessive moisture, frozen ground, or other conditions that preclude satisfactory results.

10. Wet mesic and emergent areas shall be planted, and seed allowed to germinate (if possible), prior to flooding with significant amounts of water. Any areas of significant permanent water located within the planting area will receive live plugs in lieu of seed.

11. After the seeding operation is completed, install erosion control blanket per manufacturer's specifications.

12. Emergent plugs shall be planted in natural groupings within designed areas containing saturated soils or shallow inundation. Plants within groupings shall be planted at 2 foot centers.

13. Emergent plugs shall not be planted less than the specified rate and shall be protected with goose exclosures surrounding all natural groupings of plugs.

E. Groundcover and Perennial Beds

Groundcover, perennials, and annuals shall be planted in continuous beds of planting soil mixture a minimum of 8" deep. Install per spacing indicated on plan.

F. Trees and Shrubs

1. Set balled and burlapped (B&B) stock plumb and in center of pit or trench with top of ball at an elevation that will keep the root flare exposed upon backfill and mulching. Remove burlap from top and sides of balls; retain on bottoms. When set, place additional topsoil backfill around base and sides of ball and work each layer to settle backfill and eliminate voids and air packets. When excavation is approximately 2/3 full, water thoroughly before placing remainder of backfill. Repeat watering until no more is absorbed. Water again after placing final layer of backfill.

2. Dish top of backfill to allow for mulching. Provide additional backfill berm around edge of excavations to form shallow saucer to collect water.

3. Mulch pits, trenches and planted areas. Provide not less than 2" thickness of mulch and work into top of backfill and finish level with adjacent finish grades. Maintain exposed root flare at all times.

4. Prune only injured or dead branches from flowering trees, if any. Protect central leader of tree during shipping and pruning operations. Prune shrubs to retain natural character in accordance with standard horticultural practices.

5. Remove and replace excessively pruned or ill-formed stock resulting from improper pruning.

6. The Contractor shall be wholly responsible for assuring that all trees are planted in a vertical and plumb position and remain so throughout the life of this contract and guarantee period. Trees may or may not be staked and guyed depending upon the individual preference of the Contractor; however, any bracing procedure(s) must be approved by the Owner prior to its installation.

3.3 LANDSCAPE MAINTENANCE

A. Turf Maintenance
1. Mowing
a. All litter (i.e. paper, cans and bottles) will be removed from turf and plant bed areas prior to mowing.
b. All lawn areas will be mowed weekly to a height of 3" from April through November, or as needed. No more than 1/3 of the grass blade is to be removed per cutting. Mowing height may be seasonally adjusted depending upon weather conditions in order to reduce stress and promote healthy turf.
c. Mowing patterns shall be altered on a weekly basis wherever possible. Mowing patterns shall create straight lines for a more manicured appearance.
d. Clippings shall be bagged and removed when clipping buildup is such that the excess clipping lay in an unsightly matted condition on the lawn.
e. The turf shall be cut in such a manner as to avoid blowing clippings toward structures, patios, air conditioners, and planting beds.
f. If the turf could potentially be damaged by equipment due to weather, mowing should not be performed.
g. Turf bordering vertical surfaces such as foundations, fences, and utility boxes shall be trimmed to match the mowing height.
h. Clippings shall be removed from all pavement areas.

2. Edging
a. Turf areas adjacent to walks, driveways and curbing will be mechanically edged monthly in a uniform manner.
b. Shrub beds and tree rings shall be neatly and uniformly edged twice per year; once during the spring cleanup, and again in August or September weather permitting.

3. Fertilizer & Weed Control
a. Pesticides must be applied by a licensed individual.
b. Notice shall be given to the homeowners association or owner's representative 1 week prior to any pesticide application.
c. The lawn shall be fertilized three (3) times with a high quality granular or liquid formula. The applications should be made approximately in April, May and September. Timing, frequency and rate of application shall be adjusted to meet the development's current needs and conditions
d. A pre-emergent weed control application for annual grass prevention shall be incorporated into the first turf fertilization in spring.
e. The entire turf area will be treated one (1) time with a post emergent broad leaf weed control at the appropriate time of year. Spot treatment should be done as necessary.
f. Flags shall be posted throughout the community following each fertilizer application. Remove flags once the application is dry or as directed by the product's label.

B. Planting Bed Maintenance
1. Pruning
a. Trees, shrubs and evergreens should be pruned, trimmed or sheared at the appropriate time for each species to maintain the plant's proper form. Methods and timing shall conform to standard horticultural practices. The initial spring pruning will include:
1. Removal of dead or injured limbs.
2. Removal of branches that are touching structures.
3. Shaping and internal thinning of the plant to allow for its natural form and habit.
b. Shrubs will be pruned two (2) additional times at the appropriate time so as not to interfere with flowering.
c. Trees over 6" in diameter will not be pruned other than removal of low branches hazardous to pedestrian traffic and sucker growth which may occur.
d. Groundcovers should be pruned twice during the season to maintain a neat appearance.
e. Ornamental grasses should be trimmed during the spring cleanup.
f. All pruning debris shall be removed from the site by the contractor immediately after the work is complete.

2. Fertilizer & Weed Control
a. Pesticides must be applied by a licensed individual.
b. Notice shall be given to the homeowner's association 1 week prior to any pesticide application.
c. Pre-emergent weed control shall be applied at the beginning of the growing season.
d. Post emergent applications or hand pulling shall be used on any weeds that appear throughout the season.
e. Trees, shrubs and groundcover shall be fertilized one (1) time during the season. The application rate will be determined by the specific needs of the plant material.

C. Spring & Fall Cleanup
1. Spring Cleanup
a. Lawn areas and planting beds will be raked as necessary to remove leaves, dead branches, litter and debris.
b. All mulch beds shall be cultivated to break up any existing compaction in the mulch.
c. Fresh mulch should be applied to any bare spots in the planting beds.
d. Monitor plant health and notify homeowner's association or owner's representative of any dead plants.
e. Debris generated during the cleanup shall be disposed of legally off site.

2. Fall Cleanup
a. All lawn areas will have leaves removed either by raking or through the mowing process so as to prevent leaf buildup on the turf on a weekly basis.
b. All planting beds will have leaves and debris removed at the end of the season.
c. Perennials without winter interest shall be cut back.
d. Monitor plant health and notify homeowner's association or owner's representative of any dead plants.
e. Debris generated during the cleanup shall be disposed of legally off site.

3.4 NATIVE LANDSCAPED AREAS
CONTINUED MONITORING & MAINTENANCE

A. Monitoring

The Owner shall notify the County upon completion of plantings. The Owner's Environmental Specialist shall inspect the plantings and provide the County with a copy of the planting locations, species, and quantities for verification by the County.

The Owner's Environmental Specialist shall inspect the plantings at least twice per year during the three-year term of the Establishment and Maintenance Cash Bond or Letter of Credit, to determine compliance with the minimum annual performance criteria (See 1.5C Guarantees). A monitoring report will be provided to the County by January 31st following each inspection.

B. Maintenance:

First Season

With the exception of the emergent area, native seeding areas should be mowed to a height of 6" to control annual nonnative and invasive species early in the growing season. Mowing, including weed whipping, should be conducted during prior to weed seed production. Mowing height and timing may need to be adjusted per target species. Small quantities of undesirable plant species, shall be controlled by hand pulling prior to the development and maturity of the plant. Hand removal shall include the removal of all above-ground and below-ground stems, roots and flower masses prior to development of seeds. Herbicide should be applied as necessary by a trained and licensed operator that is competent in the identification of native and nonnative herbaceous plants. Debris and litter shall be removed from the native areas and storm structures shall be inspected and maintained as necessary.

Second Season

Control of undesirable plant species during the second growing season shall consist primarily of precise herbicide application. Mowing and weed whipping shall be conducted as needed during the early growing season and as needed to a height of 6 to 8 inches to prevent annual weeds from producing seed. Debris and litter shall be removed from the native areas and storm structures shall be inspected and maintained as necessary.

Third Season:

Seasonal mowing and herbicide will continue as above but should be reduced over time. Debris and litter shall be removed from the native areas and storm structures shall be inspected and maintained as necessary. At the completion of the third growing season (dependent on fuel availability; dominance of graminoid species; and favorable weather conditions), fire may be introduced to the planted areas as a management tool.

State and local permits shall be required prior to controlled burning. Burning shall be conducted by trained professionals experienced in managing smoke in urban environments. Prior to a controlled burn, surrounding property owners as well as local fire and police departments shall be notified. A burn plan detailing preferred wind direction and speed, location of fire breaks, and necessary personnel and equipment shall be prepared and utilized in planning and burn implementation.

The initial burn shall be dependent on fuel availability which is directly related to the quantity and quality of grasses contained within the plant matrix. Timing of the burn shall be determined based on results of the annual monitoring indicating species composition of the management area and other analysis of management goals. Generally, burns shall be scheduled from spring to fall on a rotational basis. Burn frequency shall also be dependent on the species composition within the management area. Generally, a new prairie restoration area shall be burned annually for two years after the second or third growing season after planting and then every 2-3 years thereafter, burning 50-75% of the area.

C. Long Term Wetland and Prairie Management/Maintenance

A final compliance report and Long-Term Operation and Maintenance Plan shall be submitted by the Developer/Owner's Environmental Specialist no less than 60 days prior to the expiration of any landscape Cash Bond or Letter of Credit posted for the native areas. Final acceptance and release shall be determined by the County/City/USACE upon inspection of the site to verify compliance.

The Long -Term Operation and Maintenance Plan shall be written to include guidelines and schedules for burning, mowing, application of herbicide, debris/litter removal and inspection schedule for storm structures and sediment removal.

3.5 CLEAN UP AND PROTECTION

A. During landscape work, store materials and equipment where directed. Keep pavements clean and work areas and adjoining areas in an orderly condition.

B. Protect landscape work and materials from damage due to landscape operations, operations by other trades and trespassers. Maintain protection during installation and maintenance periods. Treat, repair or replace damaged landscape work as directed by Landscape Architect.

3.5 CLEAN UP AND PROTECTION

A. During landscape work, store materials and equipment where directed. Keep pavements clean and work areas and adjoining areas in an orderly condition.

B. Protect landscape work and materials from damage due to landscape operations, operations by other trades and trespassers. Maintain protection during installation and maintenance periods. Treat, repair or replace damaged landscape work as directed by Landscape Architect.

3.6 INSPECTION AND ACCEPTANCE

A. The Landscape Architect reserves the right to inspect seeds, plants, trees and shrubs either at place of growth or at site before planting for compliance with requirements for name, variety, size, quantity, quality and mix proportion.

B. Supply written affidavit certifying composition of seed mixtures and integrity of plant materials with respect to species, variety and source.

C. Notify the Landscape Architect within five (5) days after completing initial and/or supplemental plantings in each area.

D. When the landscape work is completed, including maintenance, the Landscape Architect will, upon request, make a final inspection to determine acceptability. After final acceptance, the Owner will be responsible for maintenance.

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HAEGER ENGINEERING
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SCHAUMBURG, IL 60173

551 CONGRESS PARKWAY

551 E. CONGRESS PARKWAY
CRYSTAL LAKE, IL 60014

LANDSCAPE SPECIFICATIONS

1	03.16.2022
REVISIONS	

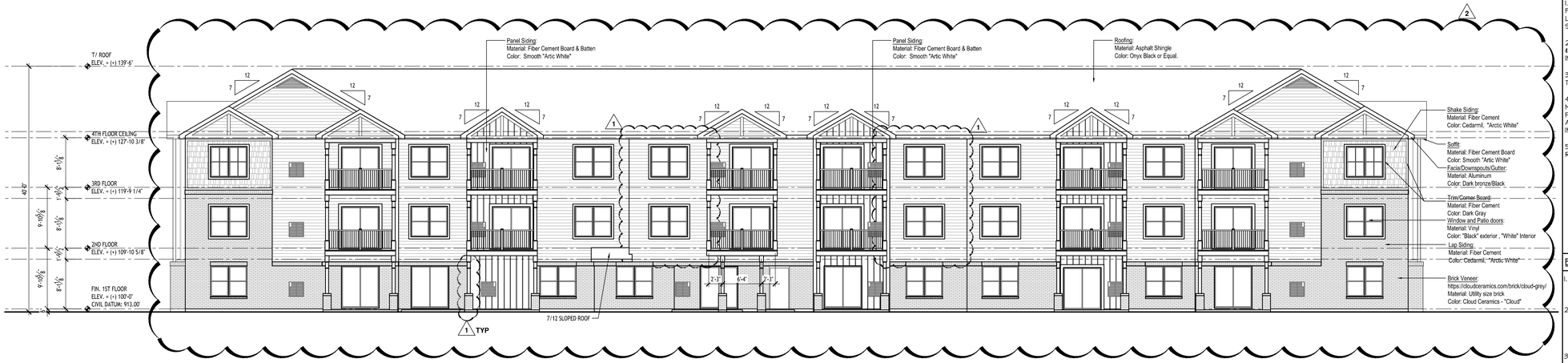
DATE	2022.02.21
PROJECT NO.	PSW2205
DRAWN	DHS
CHECKED	MGM
SHEET NO.	

5 OF 5

Know what's below. Call before you dig.

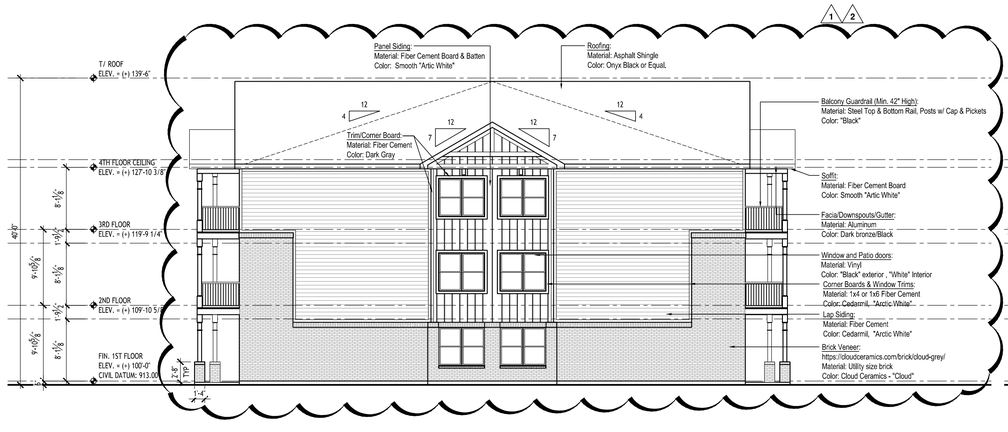
XREFS:

PLOT CONFIG:



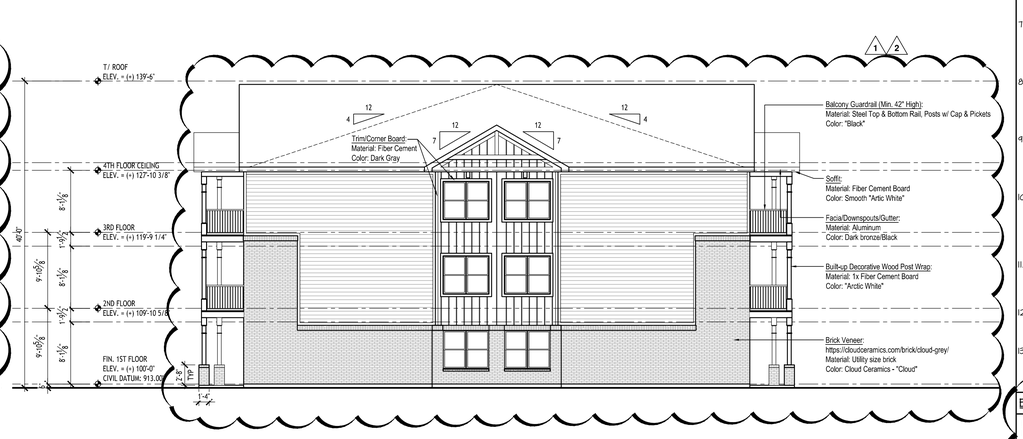
3 REAR ELEVATION

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



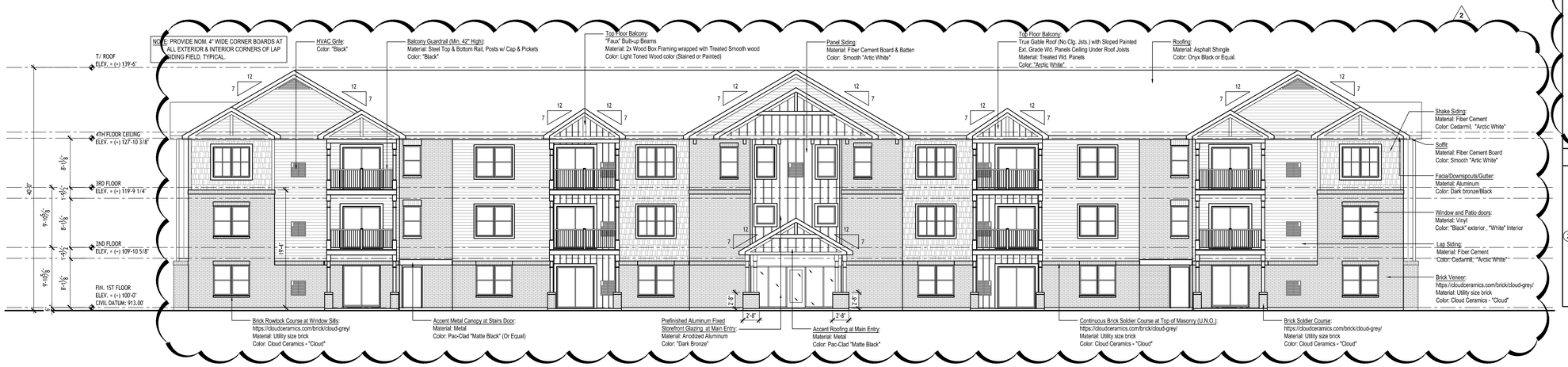
2 LEFT SIDE ELEVATION

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



4 RIGHT SIDE ELEVATION

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



1 FRONT ELEVATION

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

ELEVATION GENERAL NOTES:

1. REFER TO FLOOR PLAN SHEETS FOR FURTHER INFORMATION ON OVERALL FLOOR LAYOUT & DISTRIBUTION OF VARIOUS CORE SPACES.
2. REFER TO DOOR SCHEDULE SHEET A7.1 & WINDOW SCHEDULE SHEET A7.2 FOR INFORMATION ON OPENING REQUIREMENTS.
3. REFER TO SHEET A4.1 FOR INFORMATION ON WALL CONSTRUCTION.
4. G.C. TO COORDINATE ALL PLUMBING / MECHANICAL / FIRE PROTECTION PENETRATION THROUGH FLOORS / WALLS AMONG VARIOUS CONTRACTORS & TRADES INVOLVED, TYPICAL.
5. REFER TO ROOF ASSEMBLY PLAN FOR ROOF PITCH INFORMATION.

ELEVATION KEY NOTES: (##)

1. 4" TH. NOMINAL UTILITY SIZE FACE BRICK MASONRY VENEER - COLOR TO BE SELECTED BY THE OWNER/SHIP
2. MIN. 42" HIGH PAINTED STEEL GUARDRAIL - PROVIDE 2"x2" STEEL POST AT THE MIDDLE & AT EACH CORNER - "BRONZE" COLOR, TO BE VERIFIED
3. 4/4 FIBER CEMENT SMOOTH BOARD PANEL - REFER TO WALL ASSEBLY - FINISH COLOR TO BE SELECTED
4. 4/4 FIBER CEMENT HORIZONTAL BOARDS LAP SIDING - FINISH COLOR TO BE SELECTED
5. vPVC WINDOWS (OR EQUAL) WITH I.E.C.C. COMPLIANT U-FACTOR - SINGLE-HUNG "SINGLE UNIT" OR FACTORY MULLED "DOUBLE UNIT" WITH INSULATED (LOW-E) CLEAR GLAZING - "BRONZE" COLOR, TO BE VERIFIED
6. vPVC OR VINYL (OR EQUAL) SLIDING INSULATED (LOW-E) CLEAR GLASS DOOR WITH I.E.C.C. COMPLIANT U-FACTOR - "BRONZE" COLOR, TO BE VERIFIED
7. PROVIDE CONTINUOUS METAL DRIP EDGE WITH BASE FLASHING, MORTAR NET & COTTON WICKS AT BASE OF MASONRY THROUGH-OUT, TYPICAL - REFER TO WALL SECTION & ARCH SET
8. PROVIDE CONTINUOUS METAL DRIP EDGE WITH HEAD FLASHING & COTTON WICKS AT HEAD OF MASONRY OPENING THROUGH-OUT, TYPICAL - REFER TO WALL SECTION & ARCH SET
9. FIXED PRE-FINISHED ALUMINUM STOREFRONT SYSTEM - U-FACTOR SHALL BE IN COMPLIANT WITH 2018 I.E.C.C. - REFER TO THE SCHEDULE - "BRONZE" COLOR, TO BE VERIFIED
10. PRE-FINISHED ALUMINUM STOREFRONT SYSTEM MAIN ENTRY DOOR - U-FACTOR SHALL BE IN COMPLIANT WITH 2018 I.E.C.C. - REFER TO THE SCHEDULE - "BRONZE" COLOR, TO BE VERIFIED
11. 4" HIGH PRE-CAST CONC. SILL AT WINDOWS WITHIN BRICK MASONRY FIELD - VERIFY EXACT MATERIAL WITH THE OWNER
12. ARCHITECTURAL DIMENSIONAL ASPHALT ROOF SHINGLES - REFER TO ROOF ASSEMBLY ON SHEET A4.1A
13. 5/4 FIBER CEMENT TRIM BOARDS - 1x6 TRIM BOARDS AT WINDOWS & AT FREEZE - 1x12 TRIM BOARDS AT FASCIA (TYPICAL) - COLOR TO BE SELECTED

EXTERIOR MATERIAL SPECS:

Roofing:
Material: Asphalt Shingle
Color: Onyx Black or Equal.

Accent Roofing at Main Entry:
Material: Metal
Color: Pac-Clad "Matte Black"

Facia/Downspouts/Gutter:
Material: Aluminum
Color: Dark bronze/Black

Soffit:
Material: Fiber Cement Board
Color: Smooth "Artic White"

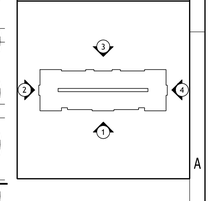
Brick Veneer:
https://cloudceramics.com/brick/cloud-grey/
Material: Utility size brick
Color: Cloud Ceramics - "Cloud"

Lap Siding:
Material: Fiber Cement
Color: Cedarmil, "Arctic White"

Panel Siding:
Material: Fiber Cement Board & Batten
Color: Smooth "Artic White"

Window and Patio doors:
Material: Vinyl
Color: "Black" exterior , "White" Interior

ELEVATION KEY PLAN



Document Record:

Issued Date	Description
09.08.2022	ISSUED FOR BUILDING PERMIT
05.04.2023	REVISIONS 1
09.13.2024	CITY REVISIONS - ELEVATIONS 2

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www.purohitarchitects.com

Proposed New Development for:

The Courtyard At Congress Station

551 Congress Parkway, Crystal Lake, Illinois

Issue Date: 09.08.2022
Drawn By: PAI
Sheet:

EXTERIOR ELEVATIONS

A3.1

PAI PROJECT NUMBER
22116.00

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Roof:

- Material: Asphalt Shingle
- Color: Onyx Black or Equal.



- **Accent Roof at entry door:**
  - Material: Matel
  - Color: Pac-Clad "Matte Black"



- **Facia/Downspouts/Gutter:**
  - Material: Aluminum
  - Color: Dark bronze/Black



- **Soffit:**
  - Material: Fiber Cement Board
  - Color: Smooth "Artic White"



- **Brick Veneer**: https://cloudceramics.com/brick/cloud-grey/
  - Material: Utility size brick
  - Color: Cloud Ceramics - "Cloud"

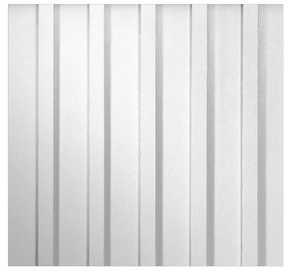


*****When we have shelf angles, we would like to see soldier course directly above the shelf angle.**

- **Lap Siding:**
  - Material: Fiber Cement
  - Color: Cedarmil, "Arctic White"



- **Panel Siding:**
  - Material: Fiber Cement Board & Batten
  - Color: Smooth "Artic White"



- **Window and Patio doors:**
  - Material: Vinyl
  - Color: "Black" exterior , "White" Interior



1 EXTERIOR MATERIAL SPECIFICATIONS

SCALE: NOT TO SCALE

ELEVATION GENERAL NOTES:

1. REFER TO FLOOR PLAN SHEETS FOR FURTHER INFORMATION ON OVERALL FLOOR LAYOUT & DISTRIBUTION OF VARIOUS CORE SPACES.
2. REFER TO DOOR SCHEDULE SHEET A7.1 & WINDOW SCHEDULE SHEET A7.2 FOR INFORMATION ON OPENING REQUIREMENTS.
3. REFER TO SHEET A9.1 FOR INFORMATION ON WALL CONSTRUCTION.
4. G.C. TO COORDINATE ALL PLUMBING / MECHANICAL / FIRE PROTECTION PENETRATION THROUGH FLOORS / WALLS AMONG VARIOUS CONTRACTORS & TRADES INVOLVED, TYPICAL.
5. REFER TO ROOF ASSEMBLY PLAN FOR ROOF PITCH INFORMATION.

ELEVATION KEY NOTES: (##)

1. 4" TH. NOMINAL UTILITY SIZE FACE BRICK MASONRY VENEER – COLOR TO BE SELECTED BY THE OWNERSHIP
2. MIN. 42" HIGH PAINTED STEEL GUARDRAIL – PROVIDE 2"x2" STEEL POST AT THE MIDDLE & AT EACH CORNER – "BRONZE" COLOR, TO BE VERIFIED
3. 4/4 FIBER CEMENT SMOOTH BOARD PANEL – REFER TO WALL ASSEBLY – FINISH COLOR TO BE SELECTED
4. 4/4 FIBER CEMENT HORIZONTAL BOARDS LAP SIDING – FINISH COLOR TO BE SELECTED
5. uPVC WINDOWS (OR EQUAL) WITH I.E.C.C. COMPLIANT U-FACTOR – SINGLE-HUNG "SINGLE UNIT" OR FACTORY MULLED "DOUBLE UNIT" WITH INSULATED (LOW-E) CLEAR GLAZING – "BRONZE" COLOR, TO BE VERIFIED
6. uPVC OR VINYL (OR EQUAL) SLIDING INSULATED (LOW-E) CLEAR GLASS DOOR WITH I.E.C.C. COMPLIANT U-FACTOR – "BRONZE" COLOR, TO BE VERIFIED
7. PROVIDE CONTINUOUS METAL DRIP EDGE WITH BASE FLASHING, MORTAR NET & COTTON WICKS AT BASE OF MASONRY THROUGH-OUT, TYPICAL – REFER TO WALL SECTION & ARCH SET
8. PROVIDE CONTINUOUS METAL DRIP EDGE WITH HEAD FLASHING & COTTON WICKS AT HEAD OF MASONRY OPENING THROUGH-OUT, TYPICAL – REFER TO WALL SECTION & ARCH SET
9. FIXED PRE-FINISHED ALUMINUM STOREFRONT SYSTEM – U-FACTOR SHALL BE IN COMPLIANT WITH 2018 I.E.C.C. – REFER TO THE SCHEDULE – "BRONZE" COLOR, TO BE VERIFIED
10. PRE-FINISHED ALUMINUM STOREFRONT SYSTEM MAIN ENTRY DOOR – U-FACTOR SHALL BE IN COMPLIANT WITH 2018 I.E.C.C. – REFER TO THE SCHEDULE – "BRONZE" COLOR, TO BE VERIFIED
11. 4" HIGH PRE-CAST CONC. SILL AT WINDOWS WITHIN BRICK MASONRY FIELD – VERIFY EXACT MATERIAL WITH THE OWNER
12. ARCHITECTURAL DIMENSIONAL ASPHALT ROOF SHINGLES – REFER TO ROOF ASSEMBLY ON SHEET A9.1A
13. 5/4 FIBER CEMENT TRIM BOARDS – 1x6 TRIM BOARDS AT WINDOWS & AT FREEZE – 1x12 TRIM BOARDS AT FASCIA, TYPICAL – COLOR TO BE SELECTED

EXTERIOR MATERIAL SPECS:

Roofing:
Material: Asphalt Shingle
Color: Onyx Black or Equal.

Accent Roofing at Main Entry:
Material: Matel
Color: Pac-Clad "Matte Black"

Facia/Downspouts/Gutter:
Material: Aluminum
Color: Dark bronze/Black

Soffit:
Material: Fiber Cement Board
Color: Smooth "Artic White"

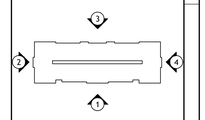
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Material: Fiber Cement
Color: Cedarmil, "Arctic White"

Panel Siding:
Material: Fiber Cement Board & Batten
Color: Smooth "Artic White"

Window and Patio doors:
Material: Vinyl
Color: "Black" exterior , "White" Interior

ELEVATION KEY PLAN



Document Record:

Issued Date	Description
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05.04.2023	REVISIONS 1
09.13.2024	CITY REVISIONS - ELEVATIONS 2

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Proposed New Development for:

The Courtyard At Congress Station

551 Congress Parkway, Crystal Lake, Illinois

Issue Date: 09.08.2022
Drawn By: PAI
Sheet:

EXTERIOR MATERIAL SPECIFICATIONS

A3.2

PAI PROJECT NUMBER
22116.00

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The Courtyard at Congress Station

Luxury Apartments
551 Congress Parkway
Crystal Lake, Illinois 60014



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05.04.2023	REVISIONS 1
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Proposed New Development for:
The Courtyard At Congress Station
551 Congress Parkway, Crystal Lake, Illinois

Issue Date: 09.08.2022
Drawn By: PAI

Sheet:
COVERSHEET

A0.1

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ISSUE LOG

REV.	DESCRIPTION	DATE
	ISSUED FOR BUILDING PERMIT	09.22.2022
△	REVISIONS	05.04.2023
△	REVISIONS	09.13.2024

ISSUE LOG KEY:

- ● INDICATES INITIAL ISSUE OR SHEET ISSUED WITH REVISIONS
- ○ INDICATES SHEET ISSUED WITH NO REVISIONS

SHEET	DESCRIPTION

INTRODUCTION

SHEET	DESCRIPTION

CIVIL (UNDER SEPARATE SEAL)

SHEET	DESCRIPTION
C1.0	TITLE SHEET
C2.0	GENERAL NOTES & SPECIFICATIONS
C2.1	GENERAL NOTES & SPECIFICATIONS
C2.2	CITY OF CRYSTAL LAKE NOTES & SPECIFICATIONS
C3.0	EXISTING CONDITIONS & DEMOLITION PLAN
C4.0	GEOMETRY, PAVING, STRIPING & SIGNAGE PLAN
C5.0	GRADING PLAN
C6.0	UTILITY PLAN
C7.0	SANITARY SEWER PROFILE
C8.0	CITY OF CRYSTAL LAKE STANDARD DETAILS
C8.1	CITY OF CRYSTAL LAKE STANDARD DETAILS
C8.2	CITY OF CRYSTAL LAKE STANDARD DETAILS
C8.3	CITY OF CRYSTAL LAKE STANDARD DETAILS
C8.4	IDOT STANDARD DETAILS
C8.5	IDOT STANDARD DETAILS
C8.6	IDOT STANDARD DETAILS
C8.7	TYPICAL DETAILS
C8.7	TYPICAL DETAILS
	STORM WATER POLLUTION PREVENTION PLAN (SWPPP) SHEET
EC1.0	SWPPP TITLE SHEET
EC2.0	SWPPP GENERAL NOTES & SPECIFICATIONS
EC3.0	SWPPP
EC4.0	SWPPP DETAILS

LANDSCAPE (UNDER SEPARATE SEAL)

SHEET	DESCRIPTION

ARCHITECTURE

SHEET	DESCRIPTION
A0.1	COVER SHEET
A0.2	SHEET INDEX & REVISION LOG
A0.3	GENERAL NOTES
A0.4	ZONING CODE & BUILDING CODE REVIEW DATA
A0.5	ACCESSIBILITY STANDARDS
A0.6	ACCESSIBILITY STANDARDS
A0.7	GENERAL NOTES & CODE REQUIREMENTS
A1.1	SITE PLAN
A1.2	1ST & 2ND FLOOR LIFE SAFETY PLAN
A1.3	3RD FLOOR LIFE SAFETY PLAN
A2.1	1ST & 2ND FLOOR PLAN
A2.2	3RD FLOOR PLAN
A2.3	1ST & 2ND FLOOR CEILING PLAN
A2.4	3RD FLOOR CEILING PLAN
A2.5	ROOF PLAN
A3.1	EXTERIOR ELEVATIONS
A3.2	EXTERIOR MATERIAL ELEVATIONS 2
A4.1	BUILDING SECTIONS
A5.1	ENLARGED PLANS
A5.2	ELEVATOR & STAIR SECTIONS
A5.3	GARAGE SLAB PLAN, FLOOR PLAN & ROOF PLAN 1
A5.4	GARAGE ELEVATIONS & SECTION
A6.1	UNIT INFORMATION
A6.2	UNIT A FLOOR PLAN
A6.3	UNIT B FLOOR PLAN
A6.3a	UNIT B 'ANSI TYPE A' FLOOR PLAN
A6.4	UNIT C FLOOR PLAN
A6.5	UNIT D FLOOR PLAN
A6.6	UNIT E FLOOR PLAN
A7.1	DOOR SCHEDULE & DETAILS
A7.2	WINDOW SCHEDULE & DETAILS
A8.1	WALL SECTIONS
A8.2	WALL SECTIONS
A9.1	DETAILS
A9.2	DETAILS
A9.3	UL DETAILS
A9.4	UL DETAILS
A9.5	UL DETAILS
A9.6	UL DETAILS

INTERIOR DESIGN

SHEET	DESCRIPTION

STRUCTURE (UNDER SEPARATE SEAL)

SHEET	DESCRIPTION
S-0.1	GENERAL NOTES
S-1.0	FOUNDATION PLAN
S-1.1	FIRST FLOOR FRAMING PLAN
S-1.2	TYPICAL FLOOR FRAMING PLAN
S-1.3	ROOF FRAMING PLAN
S-2.0	FOUNDATION DETAILS
S-2.1	FOUNDATION DETAILS
S-3.0	FRAMING DETAILS
S-3.1	FRAMING DETAILS

SITE PHOTOMETRIC (UNDER SEPARATE SEAL)

SHEET	DESCRIPTION

PLUMBING

SHEET	DESCRIPTION
P1.0	PLUMBING NOTES AND SCHEDULES
P2.0	PLUMBING BASEMENT PLAN - SANITARY
P2.1	PLUMBING FIRST FLOOR PLAN - SANITARY
P2.2	PLUMBING 2ND - 4TH FLOOR PLAN - SANITARY
P2.3	PLUMBING ROOF PLAN
P3.0	PLUMBING BASEMENT PLAN - DOMESTIC WATER
P3.1	PLUMBING FIRST FLOOR PLAN - DOMESTIC WATER
P3.2	PLUMBING 2ND - 4TH FLOOR PLAN - DOMESTIC WATER
P4.0	PLUMBING UNIT PLANS
P4.1	PLUMBING UNIT PLANS
P5.0	PLUMBING DETAILS

MECHANICAL

SHEET	DESCRIPTION
M1.0	MECHANICAL NOTES AND SCHEDULES
M1.1	MECHANICAL SCHEDULES
M2.0	MECHANICAL BASEMENT PLAN
M2.1	MECHANICAL FIRST FLOOR PLAN
M2.2	MECHANICAL 2ND - 4TH FLOOR PLAN
M2.3	MECHANICAL ROOF PLAN
M3.0	MECHANICAL UNIT PLANS
M3.1	MECHANICAL UNIT PLANS
M4.0	MECHANICAL DETAILS

ELECTRICAL

SHEET	DESCRIPTION
E1.0	ELECTRICAL NOTES AND SCHEDULES
E1.1	ELECTRICAL SCHEDULES
E1.2	ELECTRICAL SINGLE LINE DIAGRAM
E1.3	SITE ELECTRICAL PLAN 1
E2.0	ELECTRICAL BASEMENT PLAN - POWER
E2.1	ELECTRICAL FIRST FLOOR PLAN - POWER
E2.2	ELECTRICAL 2ND - 4TH FLOOR PLAN - POWER
E2.3	ELECTRICAL ROOF PLAN
E3.0	ELECTRICAL BASEMENT PLAN - LIGHTING
E3.1	ELECTRICAL FIRST FLOOR PLAN - LIGHTING
E3.2	ELECTRICAL 2ND - 4TH FLOOR PLAN - LIGHTING
E4.0	ELECTRICAL UNIT PLANS
E4.1	ELECTRICAL UNIT PLANS

STATEMENT OF COMPLIANCE

THIS SEAL APPLIES TO THE FOLLOWING DOCUMENTS. ALL DOCUMENTS UNDER THIS STAMP BEAR THE SAME ISSUE DATE AS THE SEALED COPY.

SHEET NUMBERS: A0.1 THRU P5.0

I HAVE PREPARED, OR CAUSED TO BE PREPARED UNDER MY DIRECT SUPERVISION, THE ATTACHED PLANS AND SPECIFICATIONS AND STATE THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF AND TO THE EXTENT OF MY CONTRACTUAL OBLIGATION, THEY ARE IN COMPLIANCE WITH ALL APPLICABLE CODES.

OCTOBER 08, 2023

SIGNED: _____
ARCHITECT **DATE**

SEAL:

LICENSED ARCHITECT
HEMAL M. PUROHIT
001.019448
STATE OF ILLINOIS

ILLINOIS REGISTRATION NO.: 001.019448
EXPIRATION DATE: 11.30.2024

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Issue Date: 09.08.2022
Drawn By: PAI

Sheet:
SHEET INDEX & REVISION LOG

A0.2

PAI PROJECT NUMBER
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ABBREVIATIONS

Periods only used on one word abbreviations, if the abbreviation is a different word by itself: e.g. ARCH., BIT., and LAM. Periods are usually used when abbreviating multiple words, unless they are very common without periods, e.g. AFF, HVAC, R/A, and WWF.

A
- A.B. ANCHOR BOLT
- ABV ABOVE
- A/C AIR CONDITIONING
- ACC ACCESS
- ACT ACOUSTICAL TILE (CLG)
- AFF ABOVE FINISH FLOOR
- A.D. AREA DRAIN
- ADD ADDENDUM
- ADH ADHESIVE
- ADJ ADJUSTABLE
- AGG AGGREGATE
- A/H/U AIR HANDLING UNIT
- ALT ALTERNATE
- ALUM ALUMINUM
- A.P. ACCESS PANEL
- APPX APPROXIMATE
- ARCH. ARCHITECT(URAL)
- ASPH ASPHALT
- A.T. ASPHALT TILE
- AUTO. AUTOMATIC
- AVG AVERAGE
- AWNG AWNING

B
- B(36) 36" WIDE BASE CAB.
- BD BOARD
- BF BI-FOLD (DOOR)
- BIT. BITUMINOUS
- BLKG BLOCKING
- BLDG BUILDING
- BLK. BLOCK (CMU)
- BLK'G BLOCKING
- BM BEAM
- B.M. BENCH MARK
- BP BI-PASS (DOOR)
- BRG'G BEARING
- BRK. BRICK
- B.S. BOTH SIDES
- BSMT BASEMENT
- BTM OR BOT BOTTOM
- BTWN BETWEEN
- BVL BEVELED
- BTH. BOTH WAYS

C
- CAB CABINET
- C.B. CATCH BASIN
- CEM CEMENT
- CER. CERAMIC
- CF CUBIC FOOT
- CHAM CHAMFER
- C.I. CAST IRON
- C.I.P. CONC. CAST-IN-PLACE CONC.
- CIR CIRCLE
- CIRC CIRCUMFERENCE
- C.J. CONTROL JOINT OR CONSTRUCTION JOINT
- CK CAULKING (CAULKING)
- CL CLOSET OR CENTER LINE
- CLG CEILING
- CLR CLEAR(ANCE)
- C.O. CLOSURE OR CLOSER (DOOR)
- CM CENTIMETER(S)
- CMU CONCRETE MASONRY UNIT
- C.O. CASED OPENING
- COL COLUMN
- COMB COMBINATION
- CONC CONCRETE
- COND (AC) CONDENSER
- CONST CONSTRUCTION
- CONT CONTINUOUS
- CONTR CONTRACTOR
- CORR CORRUGATED
- CPR COPPER
- C. OR CPT CARPET
- CRS COURSE(S)
- CSMT CASEMENT
- C.ST. CAST STONE
- C.T. CERAMIC TILE
- CTR CENTER OR COUNTER
- CY CUBIC YARD

D
- 12"D 12" DEEP
- D DRYER, OR DRAIN
- DBL DOUBLE
- DEC'O DECORATIVE
- DEM DEMOLISH, DEMOLITION
- DET DETACHED
- DTL DETAIL
- DF. DRINKING FOUNTAIN
- DH DOUBLE HUNG
- DIA. OR DIAM DIAMETER
- DIM DIMENSION
- D.L. DEAD LOAD
- DN DOWN (STAIRS)
- D.P. DAMP-PROOFING
- DR. DOOR
- DRY DRYER, MACHINE
- DS DOWNSPOUT
- D/S DRAWER STACK (CABINET)
- D.T. DRAIN TILE
- DTL DETAIL
- DW DISH WASHER
- DWG DRAWING
- DWR DRAWER

E
- EA EACH
- EB EYEBROW (FLAT ARCH)
- E.F. EACH FACE
- E.J. EXPANSION JOINT
- EL ELEVATION
- ELEC ELECTRIC(AL)
- E.P. ELECTRICAL PANEL
- EQ EQUAL
- EST ESTIMATE
- E.W.C. ELECTRIC WATER COOLER
- EXG EXISTING
- EXH EXHAUST
- EXT EXTERIOR

F
- FAS FASTENER(S)
- F.B. FACE BRICK
- F.B.O. FURNISHED BY OTHERS
- F.D. FLOOR DRAIN
- F.E. FIRE EXTINGUISHER
- F.F.L. FINISH FLOOR (LINE)
- F.G. FIXED GLASS
- FGL FIBERGLASS
- FIN FINISH
- FLG FLASHING
- FLR FLOOR(ING)
- FLUR FLUORESCENT (LIGHT)
- FMB FLOOR MATERIAL BREAK
- FN FENCE
- FND FOUNDATION
- F.O. FACE OF
- FP FIRE PROOF
- FPHB FREEZE PROOF HOSE BIBB
- FPL FIREPLACE
- FR FRAME(D)(ING)
- FS FULL SIZE
- FTG FOOTING
- FUR FURRED(ING)
- FWD FOOD WASTE DISPOSAL

G
- GA GAUGE
- G.B. GYPSUM (WALL) BOARD
- G.C. GENERAL CONTRACTOR
- GD GRADE OR GRADING
- G.D.O. GARAGE DOOR OPENER
- GFI GROUND FAULT INTERRUPTER
- GL GLASS OR GLAZING
- GL.BK. GLASS BLOCK
- G.I. GALVANIZED IRON
- GT GROUT

H
- 42"H 42" HIGH (WALL)
- HB HOSE BIBB
- H.C. HOLLOW CORE
- HD HEAD OR HARD
- H.D. HEAT DETECTOR OR HEAVY DUTY
- HDR HEADER
- HDW HARDWARE
- HGT HEIGHT
- H.M. HOLLOW METAL
- HORIZ HORIZONTAL
- HR HOUR
- H.R. HALF ROUND (WINDOW)
- HS HORIZONTAL SLIDER
- HTG HEATING
- H/V/AC HEATING/VENTILATING/AIR COND.
- HWD HARDWOOD (FLOORS)

I
- I.B. IRONING BOARD
- I.D. INSIDE DIAMETER
- I.L.O. IN LIEU OF
- INS. INSULATED METAL
- INS OR INSUL INSULATE(D)(ION)
- INT INTERIOR

J
- JST JOIST (FLOOR OR ROOF)
- JT JOINT

K
- KD KNOCKDOWN (CEILING)
- KIT KITCHEN
- KO KNOCKOUT
- KPL KICKPLATE (ON DOOR)
- K/S KNEE SPACE

L
- LAM. LAMINATE(D)
- LAV LAVATORY (SINK)
- L.B.O. LOCATION BY OTHERS
- LIV LIVING
- L.L. LIVE LOAD
- L.P. LAMINATED PLASTIC
- LSL LAMINATED STAND LUMBER
- LT LIGHT
- L.T. LAUNDRY TUB
- LTL LINTEL
- LVL LAMINATED VENEER LUMBER
- LVR LOUVER

M
- M METER(S)
- MAX MAXIMUM
- MAS MASONRY
- MATL MATERIAL
- MC MEDICINE CABINET
- MECH MECHANICAL
- MFR. MANUFACTURER
- MH MANHOLE
- MIN MINIMUM
- MIR MIRROR
- MISC MISCELLANEOUS
- MLD MOLDING
- MTL METAL
- MW MICROWAVE
- MO MASONRY OPENING
- MOD MODULAR
- MRB MARBLE
- MTL METAL
- MT MONITER(ING)
- MLL MILLION OR MILLED

N
- N/A NOT APPLICABLE
- N.I.C. NOT IN CONTRACT
- NL NAILABLE
- NOM NOMINAL
- N.T.S. NOT TO SCALE
- N.G.V.D. NAT. GEODETIC VERTICAL DATUM

O
- OA OVERALL
- OBS OBSCURE (GLASS)
- O.C. ON CENTER
- O.CAB. OVERHEAD CABINET
- O.D. OUTSIDE DIAMETER
- O.G.D. OVERHEAD GARAGE DOOR
- OH OVERHEAD
- OPNG OPENING
- OPT OPTIONAL
- OSB ORIENTED STRAND BOARD

P
- PAR PARALLEL
- PBD. PARTICLE BOARD
- PC. CONC. PRECAST CONCRETE
- P.E. PORCELAIN ENAMEL
- PED PEDESTAL (SINK)
- PERF PERFORATED
- PKG PARKING
- PL PLATE (HEIGHT)
- P.LAM. PLASTIC LAMINATE
- PLAS PLASTER
- PLY PLYWOOD
- PNT PAINT(ED)
- PR PAIR (OF)
- PREFAB PREFABRICATED
- PSF POUNDS PER SQUARE FOOT
- PSI POUNDS PER SQUARE INCH
- PSL PARALLEL STRAND LUMBER
- PTN PARTITION
- P.T. PRESSURE TREATED (WOOD)
- PV PAVED(T) OR PAVING
- PVC POLYVINYL CHLORIDE (PIPE)
- PVMT PAVEMENT
- PWD PLYWOOD

Q
- QT. QUARRY TILE

R
- R RISER (ON STAIRS)
- R/A RETURN AIR
- R.B. RUBBER BASE
- RAD RADIUS
- RBL RUBBLE
- R.D. ROOF DRAIN
- REF OR REFR REFRIGERATOR
- REQ REQUIRED
- RES RESILIENT
- REV REVISION(S), REVISED
- REINF REINFORCED(ING)
- RFG ROOFING
- R.J.B. REINFORCED JUNCTION BOX
- RLG RAILING
- R&M RANGE W/ MICROHAVE
- RH ROOM
- R.O. ROUGH OPENING
- R.O.W. RIGHT OF WAY
- R/S OR R&S ROD AND SHELF(S)

S
- SC SOLID CORE (DOOR)
- SCH SCHEDULE
- SD SMOKE DETECTOR
- SEC. SECTION
- S.F. SQUARE FEET
- SF.GL. SAFETY GLASS
- S.G.D. SLIDING GLASS DOOR
- SH SINGLE HUNG OR SHELF(VING)
- SHT (DRAWING) SHEET
- SHTHG SHEATHING
- SIM SIMILAR
- SKL SKYLIGHT
- SL SIDELIGHT OR SLEEVE
- SMT SEALANT
- SPC. SPACER
- SPEC SPECIFICATIONS
- SPR. (AUTO) SPRINKER(S)
- SST STAINLESS STEEL
- STD STANDARD
- STG OR STO STORAGE
- STL STEEL
- STR STRUCTURAL
- SQ SQUARE
- SUS SUSPENDED
- SW SHEAR WALL

T
- T TREAD (AT STAIRS) OR TILE
- T.B. TOWEL BAR
- T.B.D. TO BE DETERMINED
- TC TERRA COTTA
- T.C.J. TROWELED CONTROL JOINT
- TEMP. TEMPERED (GLASS)
- T&G TONGUE & GROOVE
- TEL TELEPHONE
- THK THICK(NESS)
- THR THRESHOLD
- T.O.C. TOP OF CONCRETE
- T.O.F. TOP OF FOUNDATION
- T.O.M. TOP OF MASONRY
- T.O.W. TOP OF WINDOW
- TR OR TRN TRANSOM (WINDOW)
- TP TOILET PAPER HOLDER
- TV TELEVISION OUTLET OR LOCATION
- TYP TYPICAL
- TD TRENCH DRAIN

U
- UC UNDER(CUTDOOR)
- UNF UNFINISHED
- U.N.O. UNLESS NOTED OTHERWISE

V
- VB VANITY BASE
- V.B. VAPOR BARRIER
- VAN 36" WIDE VANITY BASE
- VERT VERTICAL
- VIN (SHEET) VINYL
- V.S. VEGETABLE SINK
- V.T. VINYL TILE

W H36/3'0 36"H X 30"H WALL CAB
- W MDE OR WASHING MACHINE
- WC WATER CLOSET
- WD WOOD
- WF WIDE FLANGE (STEEL BEAM)
- WH WATER HEATER
- W/H WALL-HUNG
- WI WROUGHT IRON
- WIC WALK-IN CLOSET
- WIN WINDOW
- W/ W/O WITH OR WITHOUT
- WP WATERPROOF(ING)
- W.R. WATER RESISTANT
- WS. WATER SOFTENER
- WSCT WAINSCOT
- W.T.W. WALL TO WALL
- WWF WELDED WIRE FABRIC

THE CITY OF CRYSTAL LAKE BUILDING DEPARTMENT:

100 W. Woodstock Street
Crystal Lake, ILLINOIS 60014
V: 815.459.2020

DEPARTMENT HOURS
MONDAY - FRIDAY: 8:00 AM - 5:00 PM

PERMITTED HOURS OF CONSTRUCTION (TO BE VERIFIED)
MONDAY - FRIDAY 7:00 AM - 6:00 PM
SATURDAY 9:00 AM - 5:00 PM
SUNDAY 9:00 AM - 5:00 PM

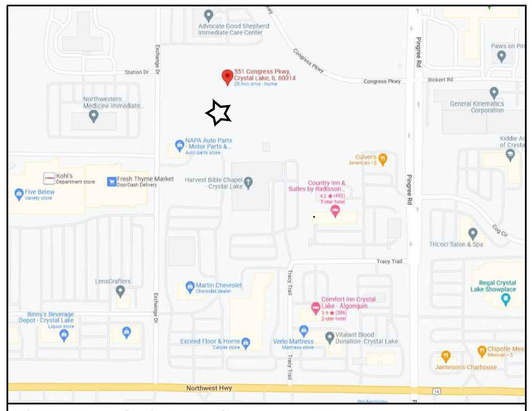
PROJECT DATA

APPLICABLE CODES:

ZONING:	THE ZONING ORDINANCE OF THE CITY OF CRYSTAL LAKE
BUILDING:	2018 INTERNATIONAL BUILDING CODE WITH LOCAL AMENDMENTS
MECHANICAL:	2018 INTERNATIONAL MECHANICAL CODE WITH LOCAL AMENDMENTS
ELECTRICAL:	2017 NFPA NATIONAL ELECTRIC CODE WITH LOCAL AMENDMENTS
PLUMBING:	2014 ILLINOIS PLUMBING CODE WITH LOCAL AMENDMENTS (77 ILL. Admin. Code, Ch.1, Sub-Ch. D, Part 890)
FIRE:	2018 INTERNATIONAL FIRE CODE WITH LOCAL AMENDMENTS
ACCESSIBILITY:	THE FAIR HOUSING AMENDMENTS ACT, Current Edition
STATE ACCESSIBILITY CODE:	ILLINOIS ACCESSIBILITY CODE, (2018 Current Ed.) (77 ILL. Admin. Code, Ch.1, Sub-Ch. B)
ENERGY CONSERVATION CODE:	ILLINOIS ENERGY CONSERVATION CODE 2018 (77 ILL. Admin. Code, Ch.1, Sub-Ch. D, Part 600)
LIFE SAFETY CODE:	NFPA LIFE SAFETY CODE 2000

FIRE PROTECTION INFORMATION

FIRE ALARM CONTROL PANEL	MAIN CONTROL PANEL LOCATED AT ENTRANCE LOBBY
FIRE ALARM INFORMATION PLACARD	PROVIDE AS REQUIRED - VERIFY WITH LOCAL FIRE DEPT.
FIRE ALARM RISER DIAGRAM	TO BE FURNISHED BY A STATE LICENSED F.A. CONTRACTOR
ATTIC DRAFT / SMOKE STOPPING	REQUIRED AT EVERY 3000 S.F. OR ABOVE EVERY TWO (2) DWELLING UNITS, WHICHEVER IS SMALLER
LOCKS & LATCHES : COMMON AREAS	NFPA 101
LOCKS & LATCHES: UNIT ENTRY DOORS	NFPA 101 SECTION A-5-2.1.5.3
SMOKE DETECTORS: PUBLIC AREAS	VERIFY WITH LOCAL FIRE DEPARTMENT
SMOKE DETECTORS: UNITS	85 DB IN HALL / 75 DB IN BEDROOMS - VERIFY WITH CODE
SPRINKLER SYSTEM: PRIVATE GARAGE (S-2)	NOT APPLICABLE
SPRINKLER SYSTEM: RESIDENTIAL (R-2)	NFPA TYPE 13R
STROBE LIGHT & HORN	STROBE - 75 FOOT CANDLES HORN - 103 DB - 72 ADV.



SITE LOCATION MAP

GENERAL PROJECT REQUIREMENTS:

GENERAL CONSTRUCTION/CONTRACTOR REGULATIONS:

ALL CONTRACTORS SHALL VISIT JOB SITE AND BECOME FAMILIAR WITH EXISTING CONDITIONS BEFORE SUBMITTING BIDS. THE ARCHITECT IS TO BE NOTIFIED FOR RE-EVALUATION IF ANY CONDITIONS DO NOT CORRESPOND TO THOSE SHOWN.

ON-SITE VERIFICATION OF ALL DIMENSIONS AND CONDITIONS SHALL BE RESPONSIBILITY OF THE CONTRACTORS.

CONTRACTOR SHALL NOT SCALE ANY DRAWINGS.

THE ARCHITECT SHALL BE NOTIFIED SHOULD ANY DISCREPANCY OR QUESTIONS ARISE PERTAINING TO THESE DRAWINGS.

NO CHANGE SHALL BE MADE WITHOUT REVIEW OF THE ARCHITECT AND APPROVAL OF THE OWNER.

DETAILS NOT SPECIFICALLY SHOWN SHALL BE SIMILAR IN CHARACTER TO COMPARABLE CONDITIONS DETAILED.

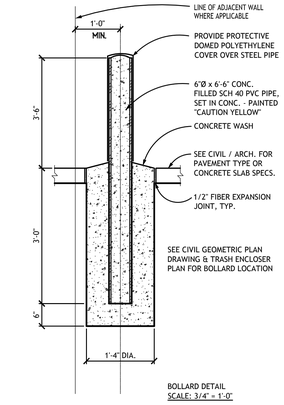
ANY CLARIFICATIONS NECESSARY TO ENSURE ACCURATE BID PROPOSALS, CONSTRUCTION AND COMPLETION OF THE PROJECT, SHALL BE ADDRESSED BY THE CONTRACTOR PRIOR TO SUBMISSION OF BIDS.

THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING HIS BEST SKILL AND ATTENTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, PRECAUTIONS, TECHNIQUES, SEQUENCES AND PROCEDURES AND COORDINATION OF ALL PORTION OF THE WORK UNDER THE CONTRACT.

ALL WORK SHALL BE DONE IN A WORKMAN-LIKE MANNER.

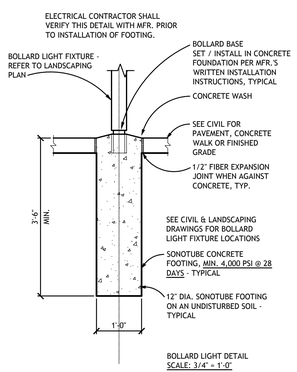
CONTRACTORS ARE TO REMOVE THEIR DEBRIS AND LEAVE JOB-SITE BROOM SWEPT AT THE END OF EACH DAY.

EACH CONTRACTOR/TRADE SHALL MAINTAIN A CURRENT SET OF DRAWINGS ON SITE THAT THEY SHALL MARK UP DAILY WITH ANY CHANGES FOR THE RECORD. AT THE COMPLETION OF THEIR WORK THEY SHALL TURN THIS SET OVER TO THE OWNER AS PART OF THEIR CLOSE-OUT PACKAGE, RECORD DOCUMENTS.



BOLLARD DETAIL
SCALE: 3/4" = 1'-0"

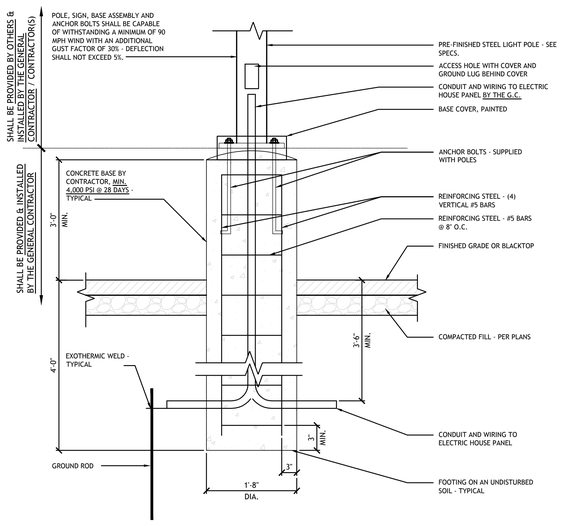
1 PROTECTION BOLLARD DETAIL



BOLLARD LIGHT DETAIL
SCALE: 3/4" = 1'-0"

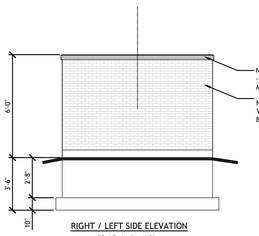
1 BOLLARD LIGHT DETAIL

NOTE:
REFER TO THE CIVIL DRAWINGS FOR LOCATIONS OF ALL DUMPSTER, PARKING LOT LIGHT POLES & OTHER LIGHT FIXTURES.

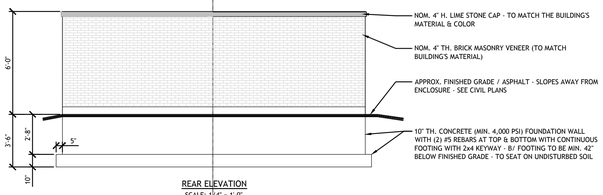


SCALE: 1" = 1'-0"

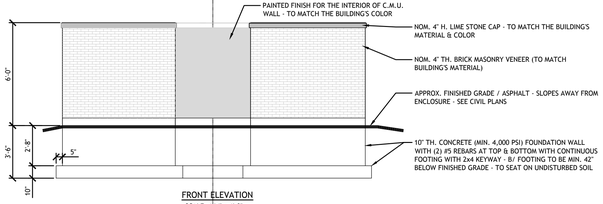
1 LIGHT POLE FOUNDATION DETAIL



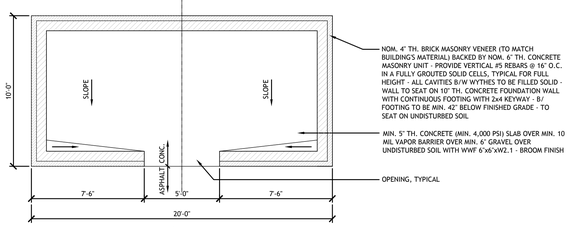
RIGHT / LEFT SIDE ELEVATION
SCALE: 1/4" = 1'-0"



REAR ELEVATION
SCALE: 1/4" = 1'-0"



FRONT ELEVATION
SCALE: 1/4" = 1'-0"



PLAN
SCALE: 1/4" = 1'-0"

1 TRASH ENCLOSURE DETAIL

Document Record:

Issued Date	Description
09.08.2022	ISSUED FOR BUILDING PERMIT
05.04.2023	REVISIONS 1
09.13.2024	CITY REVISIONS - ELEVATIONS 2

DO NOT SCALE THE DRAWINGS. PUROHIT ARCHITECTS, INC. ASSUME NO RESPONSIBILITY FOR USE OF INCORRECT SCALE. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO PROCEEDING WITH CONSTRUCTION. IN THE EVENT THAT THE CONTRACTOR DISCOVERS ANY ERROR, OMISSION OR CONFLICT AS TO THE INTENT OF THE CONTRACT DOCUMENTS WITH REGARD TO THE PROPER EXECUTION AND COMPLETION OF THE WORK REQUIRED, HE SHALL IMMEDIATELY NOTIFY THE OWNER OR THE ARCHITECT AND SEEK CORRECTION OR INTERPRETATION THEREOF PRIOR TO STARTING THE AFFECTED WORK.

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License Expires: 04/30/2023

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info@purohitarchitects.com
www.purohitarchitects.com

Proposed New Development for:

The Courtyard At Congress Station

551 Congress Parkway, Crystal Lake, Illinois

Issue Date: 09.08.2022
Drawn By: PAI

Sheet:
SITE LOCATION MAP,GENERAL PROJECT REQUIREMENTS, SYMBOLS & PROJECT DATA

A0.3

PAI PROJECT NUMBER
22116.00

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ZONING CODE REVIEW DATA
REF: THE ZONING CODE OF THE CITY OF CRYSTAL LAKE
(IN CONJUNCTION WITH APPROVED ORDINANCE NO. 7772 AND 7815)

RENTAL DWELLING UNITS		MAX. ALLWD.	TOTAL PROPOSED
3 APARTMENT BUILDINGS (BUILDING A, B & C)			
3 RESIDENTIAL FLOORS			
TOTAL UNITS PER BUILDING	31 PER BUILDING	PER ORD.	93
TOTAL RENTAL UNITS		93	93

PARKING

REFER TO ARCHITECTURAL SITE PLAN & CIVIL ENGINEERING DRAWINGS

SITE & ZONING DATA

DEVELOPMENT AREA: 6.613 ACRES / 288,048 SQ. FT.

ZONING:
PREVIOUS: M, MANUFACTURING

PROPOSED: PER ORDINANCE NO.: 7772 & 7815
R-3B, MULTIFAMILY
PLANNED UNIT DEVELOPMENT (P.U.D.)

EXTERIOR FINISH MATERIAL & COLORS

- ALL EXTERIOR FINISH MATERIAL & COLORS SHALL BE FULLY COMPLY WITH AN APPROVED ZONING ORDINANCES NOS. 7772 & 7815.
- REFER TO ARCHITECTURAL ELEVATIONS & DRAWING SET FOR ALL EXTERIOR FINISH MATERIALS.
- REFER TO APPROVED ORDINANCES (NOS. 7772 & 7815) FOR APPROVED COLOR FOR ALL EXTERIOR ELEVATIONS.
- THE DEVELOPER / OWNERSHIP SHALL SUBMIT SAMPLES OF ACTUAL EXTERIOR MATERIALS ALONG WITH COLORS & SPECIFICATIONS - PRIOR TO STARTING THE EXTERIOR FINISH WORK - TO THE CITY STAFF FOR THEIR FINAL REVIEW & APPROVAL.

RENTAL UNITS SUMMARY PER BUILDING:

FLOOR	1-BED	2-BED	TOTAL
FLOOR 1	2	8	10
FLOOR 2	2	8	10
FLOOR 3	3	8	11
	7	24	31 D.U.

MEANS OF EGRESS SUMMARY:

FLOOR	TOTAL OCCUPNTS.***	REQ'D NOS. OF EXITS	PROVIDED NOS. OF EXITS
FLOOR 1	54	2	4
FLOOR 2	54	2	2
FLOOR 3	58	2	2

*** REFER TO LIFE SAFETY PLAN SHEETS A1.2 THRU' A1.3 FOR DETAIL BREAK-DOWN OF OCCUPANCY CALCULATIONS.

SUMMARY OF DWELLING UNITS WITH ACCESSIBLE FEATURES PER SEC. 1107.6.2.2 (APARTMENTS: GROUP R-2):

I.C.C. A117.1 "TYPE A" DWELLING UNIT REQUIREMENT PER SEC. 1107.6.2.2.1:

REQ'D NOS.	PROVIDED NOS.	FLOOR & UNIT TYPE
AT LEAST 2% (I.E.: 31 UNITS x 0.02 = 0.62 D.U.s)	01**	1ST FLOOR - UNIT TYPE B (1-BED)

I.C.C. A117.1 "TYPE B" DWELLING UNIT REQUIREMENT PER SEC. 1107.6.2.2.2:

REQ'D NOS.	PROVIDED NOS.	FLOOR & UNIT TYPE
ALL REMAINING (I.E.: 31 UNITS- 1 UNITS = 30 D.U.s)	30*****	ALL FLOORS - ALL UNIT TYPES

** REFER TO SHEETS A6.3A FOR FURTHER DETAILS ON "TYPE A" UNIT.

***** REFER TO SHEETS A6.2 THRU' A6.6 FOR FURTHER DETAILS ON "TYPE B" UNIT.

BUILDING CODE REVIEW DATA
REF: 2018 INTERNATIONAL BUILDING CODE
(WITH LOCAL AMENDMENTS)

BUILDING TYPE: FULLY SPRINKLERED (PER "NFPA 13R") THREE (3) STORY, WITH SLAB-ON-GRADE APARTMENTS.

SECTION	REQUIRED / MAX. ALLOWABLE	PROPOSED	COMMENTS
302.1, 310.4	CLASSIFICATION: – RESIDENTIAL GROUP "R": OCCUPANCY "R-2" (APARTMENTS)	AS REQUIRED	
TAB. 508.4	MIXED OCCUPANCIES, SEPARATED USES: – SEPARATION OF OCCUPANCIES: ONE (1) HOUR	ONE (1) HOUR	EXCEP. "c", TAB. 508.4 (N.A.)
504, 506	CONSTRUCTION TYPE "V-A" OCCUPANCY "R-2": – HEIGHT MODIFICATIONS: FOUR (4) STORIES OR 60 FEET (TAB. 504.3, 504.4)	THREE (3) STORIES & 40'-0" (...O.K.)	
	– AREA MODIFICATIONS: Aa = 58,560 S.F. (SECTION 506.2.3) FRONTAGE INCREASE: If = 100(F/P-0.25)W/30 = 100(673'/709'-0.25)20/30 = 100(0.47)1.00 = 47.00% SPRINKLER SYSTEM: NFPA 13R Aa = 36,000 + (12,000x47.00/100) x 4 = 58,560 S.F.	12,790 S.F./FLOOR (...O.K.)	BUILDING FULLY SPRINKLERED PER SECTION 903.3.1.2
TABLE 601	CONSTRUCTION TYPE "V-A" – STRUCTURAL FRAME (INCL. COLUMNS, GIRDERS, TRUSSES): ONE (1) HOUR – BEARING WALLS, EXTERIOR: ONE (1) HOUR – BEARING WALLS, INTERIOR: ONE (1) HOUR	AS REQUIRED AS REQUIRED AS REQUIRED	
	– NONBEARING WALLS & PARTITIONS: EXTERIOR: ZERO (0) HOUR INTERIOR: ZERO (0) HOUR	AS REQUIRED AS REQUIRED	
	– FLOOR CONSTRUCTION INCL. BEAMS & JOISTS: SEPARATION OF OCCUPANCIES, B/W "S-2" & "R-2": ONE (1) HOUR (SEE ABV.) B/W "R-2" & "R-2": ONE (1) HOUR	AS REQUIRED AS REQUIRED	N.A. EXCEP. "1", SEC. 302.3.3
	– ROOF CONSTRUCTION, INCL. BEAMS & JOISTS: ONE (1) HOUR	AS REQUIRED	
704.8	MAX. AREA OF EXTERIOR WALL OPENING: NO LIMIT		FIRE SEPARATION DISTANCE GREATER THAN 30 FEET
704.9	VERTICAL SEPARATION OF OPENINGS: N/A		BUILDING HEIGHT THREE (3) STORIES OR LESS
704.11	PARAPETS: NOT REQUIRED		EXCEP. "1" & "6"
707.4, 707.14	ELEVATOR HOISTWAY: TWO (2) HOURS	AS REQUIRED	
707.4	EXIT STAIRS (ALL INTERIOR WALLS): TWO (2) HOURS	AS REQUIRED	
TABLE 601	EXIT STAIRS (EXTERIOR BEARING WALLS): ONE (1) HOUR	AS REQUIRED	
707.4	MECH. EXHAUST SHAFT (THRU' ROOF): ONE (1) HOUR	AS REQUIRED	CONNECTING LESS THAN FOUR (4) STORIES
	MECH. EXHAUST SHAFT (THRU' ROOF): TWO (2) HOUR	N.A.	CONNECTING FOUR (4) STORIES OR MORE
707.4, 707.13.1	TRASH CHUTE: TWO (2) HOURS	AS REQUIRED	N.A.
707.13.3	TRASH CHUTE ACCESS ENCLOSURE & TRASH CHUTE TERMINATION POINT ENCLOSURE: ONE (1) HOUR	AS REQUIRED	N.A.
707.14	ELEVATOR LOBBY: ZERO (0) HOUR	AS REQUIRED	EXCEP. "4"
708.3	FIRE PARTITION – DEMISING WALLS BETWEEN UNITS: ONE (1) HOUR	AS REQUIRED	
708.3	FIRE PARTITION – CORRIDOR WALLS: ONE (1) HOUR	AS REQUIRED	PER EXCEP.: TABLE 1004.3.2.1
711	FIREPROOF CAULK & FIRESAFING AROUND PIPES AND DUCTS THROUGH FLOORS AND RATED WALLS	AS REQUIRED	
714, TABLE 714.2	OPEN PROTECTIVES: – MINIMUM OPENING PROTECTION ASSEMBLY PER TAB. 714.2 – FIRE DOOR ASSEMBLIES' LABELLING – FIRE-PROTECTION-RATED GLAZING LABELLING – SIZES OF WIRED GLASS PANELS PER TAB. 714.3.2	AS REQUIRED AS REQUIRED AS REQUIRED AS REQUIRED	
715	FIRE DAMPER RATING PER TAB. 715.3.1	AS REQUIRED	
716	CONCEALED SPACES: – FIRE BLOCKING: CONCEALED SPACES IN STUD WALLS & PARTITIONS AT THE CEILING & FLOOR OR ROOF LEVELS BETWEEN VERTICAL & HORIZONTAL SPACES AT SOFFITS OVER CABINETS DROP CEILING.	AS REQUIRED	
	– FIRE BLOCKING NON-COMBUSTIBLE MATERIALS: GYPSUM BOARD, CEMENT FIBER BOARD OR MINERAL GLASS BATTS SECURELY RETAINED IN PLACE.	AS REQUIRED	
	– DRAFT STOPPING MATERIAL: 1/2" GYP BD. SUPPORTED WHERE CELINGS ARE SUSPENDED BELOW OPEN WEB TRUSSES.	AS REQUIRED	

BUILDING CODE REVIEW DATA
REF: 2018 INTERNATIONAL BUILDING CODE
(WITH LOCAL AMENDMENTS)

SECTION	REQUIRED / MAX. ALLOWABLE	PROPOSED	COMMENTS
716.3.2	FLOOR DRAFTSTOPPING IN GROUP "R-2": DRAFTSTOPPING PER SEC. 101.2 IN COMBUSTIBLE CONSTRUCTION LOCATED ABOVE & IN LINE WITH DWELLING UNIT SEPARATION WALLS.	AS REQUIRED	FLOOR SPACE IS NOT EQUIPPED WITH AN AUTOMATIC SPRINKLER SYSTEM.
716.4.2	ATTIC DRAFTSTOPPING IN GROUP "R-2": PROVIDE DRAFTSTOPPING IN ATTICS, MANSARDS, OVERHANGS OR CONCEALED ROOF SPACES INSTALLED IN LINE ABOVE UNIT SEPARATION WALLS THAT DO NOT EXTEND TO THE UNDERSIDE OF THE ROOF SHEATHING ABOVE. DRAFTSTOPPING IS ONLY REQUIRED ABOVE ONE SIDE OF UNIT/CORRIDOR WALL SEPARATION.	THE ATTIC SPACE SHALL BE SUBDIVIDED BY DRAFTSTOPS INTO AREAS NOT EXCEEDING 3,000 SQ. FT. OR ABOVE EVERY TWO (2) DWELLING UNITS, WHICHEVER IS SMALLER.	ATTIC SPACE IS NOT EQUIPPED WITH AN AUTOMATIC SPRINKLER SYSTEM.
718	THERMAL & SOUND INSULATING MATERIALS: EXPOSED INSULATION IN ATTICS TO HAVE FLAME SPREAD OF 25 OR LESS	AS REQUIRED	
	INSULATION IN CONCEALED SPACES TO HAVE FLAME SPREAD 75 OR LESS	AS REQUIRED	
803	INTERIOR WALL & CEILING FINISHES SHALL BE CLASSIFIED PER SEC. 803.	AS REQUIRED	
TAB. 803.4	INTERIOR FINISH REQUIREMENTS BY OCCUPANCY: – GROUP "R-2": – VERTICAL EXITS & EXIT PASSAGEWAYS: CLASS C – EXIT ACCESS CORRIDORS: CLASS C – ROOMS & ENCLOSED SPACES: CLASS C	AS REQUIRED	BUILDING FULLY SPRINKLERED PER LOCAL AMENDMENT SECTION: 9-2-3.
	– GROUP "S-2": – VERTICAL EXITS & EXIT PASSAGEWAYS: CLASS C – EXIT ACCESS CORRIDORS: CLASS C – ROOMS & ENCLOSED SPACES: CLASS C	AS REQUIRED	
804.1	INTERIOR FLOOR FINISHES SHALL BE CLASSIFIED PER SEC. 804.1.	AS REQUIRED	
903.2.8, 903.2.11	AN AUTOMATIC SPRINKLER SYSTEM SHALL BE REQUIRED THROUGHOUT ALL BUILDINGS.	AS REQUIRED WITH FLOW DEVICES PER LOCAL FIRE DEPARTMENT	
905	STANDPIPE SYSTEM SHALL BE REQUIRED THROUGHOUT ALL BUILDINGS.	AS REQUIRED	
906	PORTABLE FIRE EXTINGUISHERS SHALL BE REQUIRED THROUGHOUT ALL BUILDINGS.	AS REQUIRED & LOCATED PER LOCAL FIRE DEPARTMENT	
907.9	VISIBLE & AUDIBLE ALARM NOTIFICATION APPLIANCES SHALL BE REQUIRED THROUGHOUT ALL BUILDINGS.	AS REQUIRED & LOCATED PER LOCAL FIRE DEPARTMENT	
1003.3.3	STAIRWAYS: MAX. RISER 7", MIN. TREAD 11", MIN. CLEAR WIDTH BETWEEN HANDRAIL 48"	AS REQUIRED PER I.A.C.	
TABLE 1004.2.4	EXIT ACCESS TRAVEL DISTANCE: – GROUP "S-2": MAX. 400 FEET – GROUP "R-2": MAX. 250 FEET	AS REQUIRED AS REQUIRED	BUILDING FULLY SPRINKLERED PER LOCAL AMENDMENT SECTION: 9-2-3.
TABLE 1005.2.1	MINIMUM NUMBER OF EXITS FOR OCCUPANT LOAD: 1-500 OCCUPANTS: MIN. TWO (2) EXITS	AS REQUIRED	
1009	EMERGENCY ESCAPE AND RESCUE: NOT REQUIRED		EXCEP. "1"
3002.4	ELEVATOR CAR SIZE: (PER LOCAL AMDMNT.) CAR TO ACCOMMODATE A 24-INCH BY 84-INCH AMBULANCE STRETCHER IN THE HORIZ. OPEN POSITION.	N.A.	NOT REQUIRED SINCE THE BUILDING IS LESS THAN 4-STORIES IN HEIGHT

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Document Record:

Issued Date	Description
09.08.2022	ISSUED FOR BUILDING PERMIT
05.04.2023	REVISIONS 1
09.13.2024	CITY REVISIONS - ELEVATIONS 2

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Proposed New Development for:

The Courtyard At Congress Station

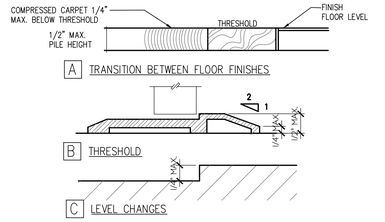
551 Congress Parkway, Crystal Lake, Illinois

Issue Date: 09.08.2022
Drawn By: PAI

Sheet:
ZONING & BUILDING CODE ANALYSIS

A0.4

PAI PROJECT NUMBER
22116.00

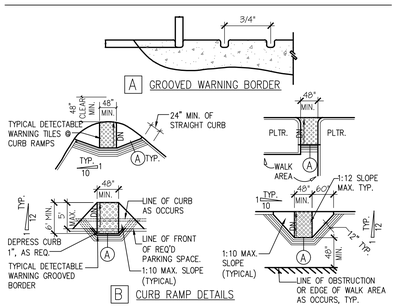


NOTES:

1. 1/2" MAXIMUM TOTAL HEIGHT WITH 1/4" MAXIMUM VERTICAL CHANGE AT EDGE.
2. CHANGES IN LEVEL BETWEEN 1/4" MIN & 1/2" MAX SHALL BE BEVELED w/ A SLOPE NOT GREATER THAN 1:2
3. 1/4" MAXIMUM VERTICAL LEVEL CHANGE.
4. CHANGE GREATER THAN 1/2" SHALL COMPLY WITH RAMP REQUIREMENTS.

12 CHANGES IN LEVEL

SCALE:N/A 303



11 CURB DETAILS AND NOTES

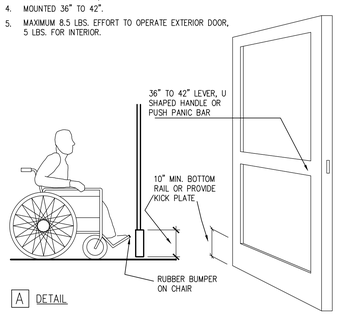
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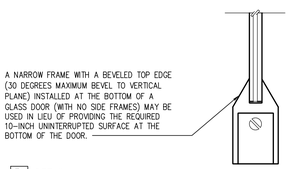
DOOR TYPE:

1. MINIMUM 10" HIGH SMOOTH SURFACE AT DOOR BOTTOM, EITHER ATTACHED PANEL OR BOTTOM RAIL.

HARDWARE:

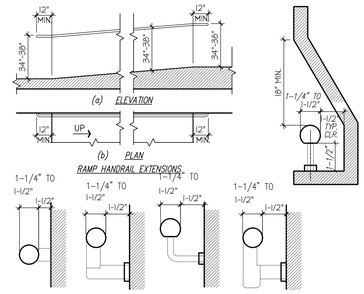
2. OPENABLE FROM INSIDE WITHOUT USE OF KEY OR SPECIAL KNOWLEDGE OR EFFORT.
3. OPENABLE BY SINGLE EFFORT LEVER-TYPE DEVICE (NOT REQUIRING GRASPING).
4. MOUNTED 36" TO 42".
5. MAXIMUM 8.5 LBS. EFFORT TO OPERATE EXTERIOR DOOR, 5 LBS. FOR INTERIOR.





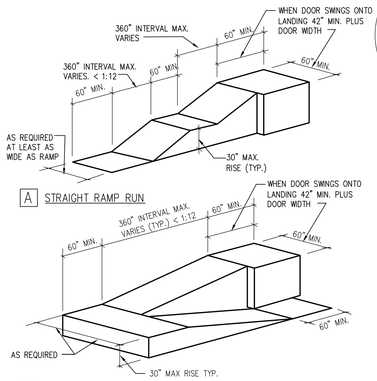
10 DOOR

SCALE:N/A



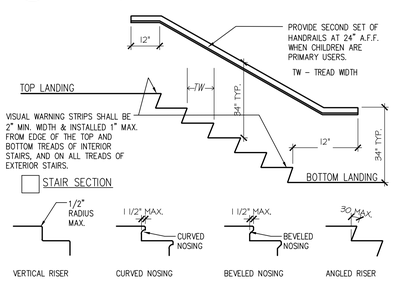
9 HANDRAIL DETAILS

SCALE:N/A



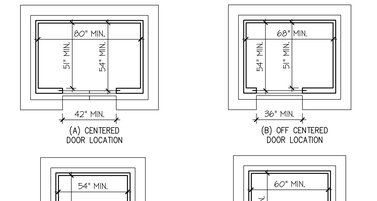
8 RAMP DETAILS AND NOTES

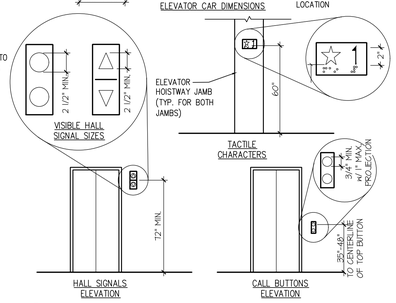
SCALE:N/A ALL RAMPS MUST MEET HANDRAIL AND CURB REQUIREMENTS.



7 STAIR DETAILS

SCALE:N/A

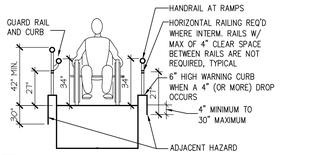


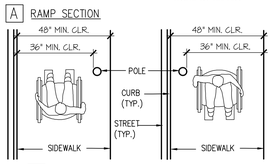


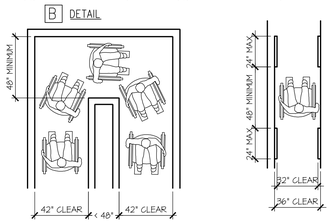
6 ELEVATOR DETAILS

SCALE:N/A 407

1. A VISIBLE AND AUDIBLE SIGNAL SHALL BE PROVIDED AT EACH HOISTWAY.
2. DOOR DELAY SHALL BE A MINIMUM OF 5 SECONDS.
3. ELEVATOR TO BE EQUIPPED WITH AN APPROVED EMERGENCY COMMUNICATION SYSTEM.





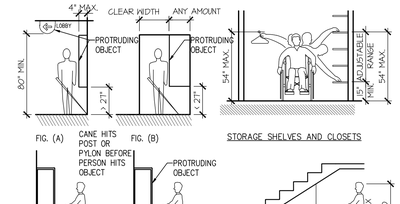


NOTES:

1. PASSING SPACE: AN ACCESSIBLE ROUTE WITH CLEAR WIDTH LESS THAN 60" SHALL PROVIDE PASSING SPACES AT INTERVALS OF 200 FEET MAXIMUM.
2. CONSECUTIVE SEGMENTS OF 32" WIDE MUST BE SEPARATED BY A ROUTE SEGMENT 48" LONG x 36" WIDE MINIMUM.

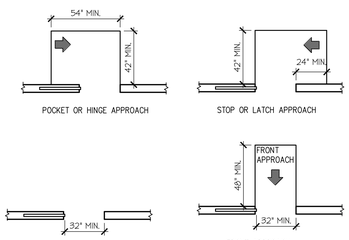
5 ACCESSIBLE ROUTES

SCALE:N/A 403



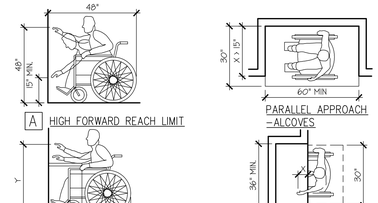
4 PROTRUDING OBJECTS

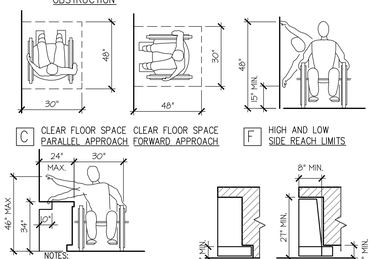
SCALE:N/A 307



3 CLEARANCES - SLIDING DOORS

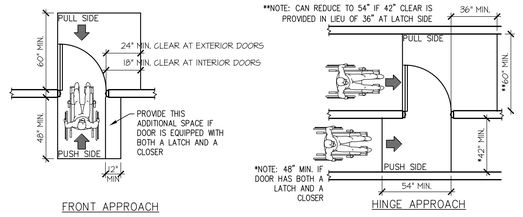
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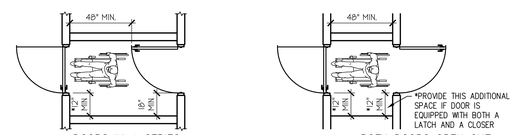




2 SPACE ALLOWANCE/REACH

SCALE:N/A 305, 306, 308, 309







NOTES:

1. CLEAR SPACES MUST BE LEVEL TO PREVENT WHEELCHAIRS FROM ROLLING WHEN THE OCCUPANT RELEASES THE WHEEL GRIPS TO REACH FOR THE DOOR. 1/4" PER FOOT IS ALLOWED FOR DRAINAGE.

1 MANEUVERING CLEARANCES

SCALE:N/A 404

ACCESSIBILITY - ANSI 2017 I.C.C. A117.1

ALL DIMENSIONS SPECIFIED ARE FINISHED DIMENSIONS.

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Issued Date	Description
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09.13.2024	CITY REVISIONS - ELEVATIONS 2

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Proposed New Development for:

The Courtyard At Congress Station

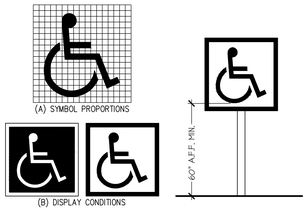
551 Congress Parkway, Crystal Lake, Illinois

Issue Date: 09.08.2022
Drawn By: PAI

Sheet:
ACCESSIBILITY STANDARDS
2017 ICC ANSI A117.1

A0.5

PAI PROJECT NUMBER
22116.00



REFER TO CIVIL DRAWINGS FOR SIGN DETAILS.

1. CHARACTER PROPORTION. LETTERS AND NUMBER ON SIGNS SHALL HAVE A WIDTH-TO-HEIGHT RATIO BETWEEN 3:5 AND 1:1 AND A STROKE-WIDTH-TO-HEIGHT RATIO BETWEEN 1:5 AND 1:10.

2. CHARACTER HEIGHT. CHARACTERS AND NUMBERS ON SIGNS SHALL BE SIZED ACCORDING TO THE VIEWING DISTANCE FORM WHICH THEY ARE TO BE READ. THE MINIMUM HEIGHT IS MEASURED USING AN UPPER CASE X.

3. RAISED AND BRAILLED CHARACTER AND PICTORIAL SYMBOL SIGNS. LETTERS AND NUMERALS SHALL BE RAISED 1/32 in. IN UPPER CASE SANS SERIF SHALL BE ACCOMPANIED WITH GRADE 2 BRAILLE. RAISED CHARACTERS SHALL BE AT LEAST 5/8 in. HIGH, BUT NO HIGHER THEN 2 in. LETTERS AND NUMERALS SHALL BE RAISED 1/32 in. IN UPPER CASE SANS SERIF SHALL BE ACCOMPANIED WITH GRADE 2 BRAILLE. RAISED CHARACTERS SHALL BE AT LEAST 5/8 in. HIGH, BUT NO HIGHER THEN 2 in. PICTOGRAMS SHALL BE ACCOMPANIED BY THE EQUIVALENT VERBAL DESCRIPTION PLACED DIRECTLY BELOW THE PICTOGRAM. THE BORDER DIMENSION OF THE PICTOGRAM SHALL BE 6 in. MIN IN HEIGHT.

4. FINISH AND CONTRAST. THE CHARACTERS AND BACKGROUND OF SIGNS SHALL BE NON-GLARE FINISH. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND – EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND.

5. MOUNTING LOCATION AND HEIGHT. WHERE PERMANENT IDENTIFICATION IS PROVIDED FOR ROOMS AND SPACES, SIGNS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR. WHERE THERE IS NO WALL SPACE TO THE LATCH SIDE OF THE DOOR, INCLUDING AT DOUBLE LEAF DOORS, SIGNS SHALL BE PLACED ON THE NEAREST ADJACENT WALL. MOUNTING HEIGHT SHALL BE 60 in. ABOVE THE FINISH FLOOR TO THE BASELINE OF THE CHARACTERS. MOUNTING LOCATION FOR SUCH SIGNAGE SHALL BE SO THAT A PERSON MAY APPROACH WITHIN 3 ft. OF SIGNAGE WITHOUT ENCOUNTERING PROTRUDING OBJECTS OR STANDING WITHIN THE SWING OF A DOOR.

10 SIGNAGE
ANSI 2017
SCALE: N/A

KITCHENS

THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER SUCH COUNTERS. KITCHENS WITHIN ADAPTABLE UNITS SHALL BE ACCESSIBLE. KITCHENS IN COVERED MULTIFAMILY DWELLING UNITS THAT ARE REQUIRED TO PROVIDE ACCESS TO PERSONS WITH PHYSICAL DISABILITIES SHALL HAVE A CLEAR FLOOR SPACE AT LEAST 30 IN. BY 48 IN. THAT ALLOWS A PARALLEL APPROACH BY A PERSON IN A WHEELCHAIR AT THE RANGE OR COOKTOP AND EITHER A PARALLEL OR FORWARD APPROACH AT THE OVEN, DISHWASHER AND REFRIGERATOR/FREEZER.

–OPERABLE PARTS.
OPERABLE PARTS IN KITCHEN SHALL COMPLY WITH ALL APPLICABLE REQ.

–CLEARANCE.
GALLEY STYLE: CLEARANCE BETWEEN ALL OPPOSING BASE CABINETS, CONTER TOPS, APPLIANCES OR WALLS WITHIN KITCHEN WORK AREAS SHALL BE 40" (1015mm) MINIMUM.
U-SHAPE: KITCHENS WITH COUNTERS, APPLIANCES, OR CABINETS ON THREE CONTINUOUS SIDES, CLEARANCE BETWEEN ALL OPPOSING BASE CABINETS, COUNTERTOPS, APPLIANCES OR WALLS WITHIN THE KITCHEN WORK AREAS SHALL BE 60" (1525mm) MINIMUM.

–COUNTERTOPS.
A MINIMUM LINEAR LENGTH OF 30 IN. OF COUNTERTOP SHALL BE PROVIDED FOR THE KITCHEN SINK, AND A MINIMUM LINEAR LENGTH 30 IN. OF COUNTERTOP SHALL BE PROVIDED FOR A WORK SURFACE, BOTH OF WHICH SHALL BE DESIGNED TO ENABLE REPOSITIONING TO A MINIMUM HEIGHT OF 28 IN. THE SINK AND WORK SURFACE MAY BE A SINGLE INTEGRATED UNIT, OR BE SEPARATE COMPONENTS. THE BASE CABINETS DIRECTLY UNDER SINK AND WORK SURFACE COUNTER AREAS WHICH ARE DESIGNED FOR REPOSITIONING SHALL BE REMOVABLE TO PROVIDE CLEARANCE FOR A WHEELCHAIR. IN PRIVATELY FUNDED APARTMENT HOUSES, TWO 15-INCH (381 mm) MINIMUM WIDTH BREADBOARDS MAY BE PROVIDED IN LIEU OF THE REQUIRED 30 INCHES (762 mm) OF COUNTERTOP WORK SURFACE. THE SIDES AND BACK OF ADJACENT CABINETS, WHICH MAY BECOME EXPOSED TO MOISTURE OR FOOD HANDLING WHEN A COUNTERTOP IS LOWERED, SHALL BE CONSTRUCTED OF DURABLE, NONABSORBENT MATERIALS APPROPRIATE FOR SUCH USES. FINISH FLOORING SHALL BE INSTALLED ON THE FLOOR BENEATH SUCH COUNTERTOP. THE WORK SURFACE SHALL BE 34" MAXIMUM ABOVE THE FLOOR. ADJUSTABLE COUNTERS SHALL PROVIDE A WORK SURFACE OF 29" MINIMUM AND 36" MAXIMUM.

–CLEAR FLOOR SPACE
A CLEAR FLOOR SPACE OF 30 IN. BY 48 IN. (760 mm BY 1220 mm) MINIMUM SHALL ALLOW A FORWARD APPROACH TO THE COUNTER. THE CLEAR FLOOR SPACE SHALL BE PERMITTED TO EXTEND 19 IN. (485 mm) MAXIMUM UNDERNEATH THE COUNTER. THE KNEE SPACE SHALL HAVE A CLEAR WIDTH OF 30 IN. (760 mm) MINIMUM. CLEAR FLOOR AREA TO BE CENTERED ON THE FIXTURE.

SINKS

–COUNTERTOPS.
A MINIMUM LINEAR LENGTH OF 30 IN. OF COUNTERTOP SHALL BE PROVIDED FOR THE KITCHEN SINK, WHICH SHALL BE DESIGNED TO ENABLE REPOSITIONING TO A MINIMUM HEIGHT OF 28 IN. THE BASE CABINETS DIRECTLY UNDER THE SINK SHALL BE REMOVABLE TO PROVIDE CLEARANCE FOR A WHEELCHAIR. THE SIDES AND BACK OF ADJACENT CABINETS, WHICH MAY BECOME EXPOSED TO MOISTURE OR FOOD HANDLING WHEN A COUNTERTOP IS LOWERED, SHALL BE CONSTRUCTED OF DURABLE, NONABSORBENT MATERIALS APPROPRIATE FOR SUCH USES. FINISH FLOORING SHALL BE INSTALLED ON THE FLOOR BENEATH SUCH COUNTERTOP. THE WORK SURFACE SHALL BE 34" MAXIMUM ABOVE THE FLOOR. ADJUSTABLE COUNTERS SHALL PROVIDE A WORK SURFACE OF 29" MINIMUM AND 36" MAXIMUM.

–SINK DEPTHS
THE DEPTH OF A SINK BOWL SHALL BE 6 1/2 IN. (165 mm) MAXIMUM. ONLY ONE BOWL OF A DOUBLE-BOWL OR TRIPLE-BOWL SINKS NEEDS TO MEET THIS REQUIREMENT.

–CLEAR FLOOR SPACE
A CLEAR FLOOR SPACE OF 30 IN. BY 48 IN. (760 mm BY 1220 mm) MINIMUM SHALL ALLOW FORWARD APPROACH TO THE SINK. THE CLEAR FLOOR SPACE SHALL BE PERMITTED TO EXTEND 19 IN. (485 mm) MAXIMUM UNDERNEATH THE SINK. THE KNEE SPACE SHALL HAVE A CLEAR WIDTH OF 30 IN. (760 mm) MINIMUM. CLEAR FLOOR AREA TO BE CENTERED ON THE FIXTURE.

–PLUMBING PROJECTIONS
WATER SUPPLY PIPES AND DRAIN PIPES UNDER SINKS SHALL BE PROTECTED IN ACCORDANCE WITH ALL APPLICABLE REQ.

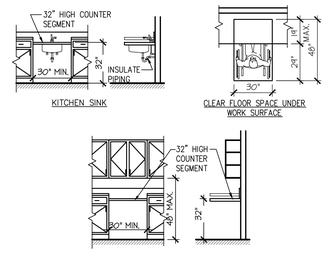
9 KITCHENS/CABINETS
ANSI 2017
SCALE: N/A



–URINALS.
WHERE URINALS ARE PROVIDED, AT LEAST ONE SHALL HAVE A CLEAR FLOOR SPACE 30 IN. BY 48 IN. IN FRONT OF THE URINAL TO ALLOW FORWARD APPROACH.

–FLUSH CONTROLS.
FLUSH CONTROLS SHALL BE HAND OPERATED w/ 5lbs MAX. PRESSURE OR AUTOMATIC. HAND OPERATED FLUSH CONTROLS, SHALL BE MOUNTED BETWEEN 15 IN. (380 mm) MINIMUM AND 44 IN. (1120 mm) MAXIMUM ABOVE THE FLOOR.

8 URINALS
ANSI 2017
SCALE:N/A



APPLIANCES

–RANGE OR COOKTOP.
RANGES AND COOKTOPS SHALL COMPLY WITH APPLICABLE REQ. IF OVENS OR COOKTOPS HAVE KNEE SPACES UNDERNEATH, THEY SHALL BE INSULATED OR OTHERWISE PROTECTED ON THE EXPOSED CONTACT SURFACES FOR PROTECTION AGAINST BURNS, ABRASIONS, OR ELECTRICAL SHOCK. THE CLEAR FLOOR SPACE SHALL BE PERMITTED TO OVERLAP THE KNEE SPACE, IF PROVIDED, BY 19 IN. (485 mm) MAXIMUM. THE LOCATION OF CONTROLS FOR RANGES AND COOKTOPS SHALL NOT REQUIRE REACHING ACROSS BURNERS.

–OVENS.
OVENS SHALL COMPLY WITH ALL APPLICABLE REQ. OVENS SHALL BE OF THE SELF-CLEANING TYPE OR BE LOCATED ADJACENT TO AN ADJUSTABLE HEIGHT COUNTER WITH A 30 IN. (760 mm) WIDE MINIMUM KNEE SPACE BELOW. FOR SIDE-OPENING OVENS, THE DOOR LATCH SIDE SHALL BE NEXT TO THE OPEN COUNTER SPACE, AND THERE SHALL BE A PULLOUT SHELF UNDER THE OVEN EXTENDING THE FULL WIDTH OF THE OVEN AND PULLING OUT 10 IN. (255 mm) MINIMUM WHEN FULLY EXTENDED. OVENS SHALL HAVE CONTROLS ON FRONT PANELS. CONTROLS SHALL BE PERMITTED TO BE LOCATED ON EITHER SIDE OF THE DOOR.

–REFRIGERATOR/FREEZERS.
REFRIGERATORS AND FREEZERS SHALL COMPLY WITH ALL APPLICABLE REQ.. SIDE-BY-SIDE COMBINATION FREEZER AND REFRIGERATOR APPLIANCES SHALL HAVE AT LEAST 50 PERCENT OF THE FREEZER SPACE AND AT LEAST 50 PERCENT OF THE REFRIGERATOR SPACE LOCATED 54 IN. (1370 mm) MAXIMUM ABOVE THE FLOOR. OTHER COMBINATION REFRIGERATORS AND FREEZERS SHALL HAVE AT LEAST 50 PERCENT OF THE FREEZER SPACE AND 100 PERCENT OF THE REFRIGERATOR SPACE AND CONTROLS 54 IN. (1370 mm) MAXIMUM ABOVE THE FLOOR. FREEZERS SHALL BE THE SELF-DEFROSTING TYPE.

–DISHWASHERS.
CLEAR FLOOR OR GROUND SPACE SHALL BE POSITIONED ADJACENT TO THE DISHWASHER DOOR. THE DISHWASHER DOOR IN THE OPEN POSITION SHALL NOT OBSTRUCT THE CLEAR FLOOR OR GROUND SPACE FOR THE DISHWASHER OR SINK.

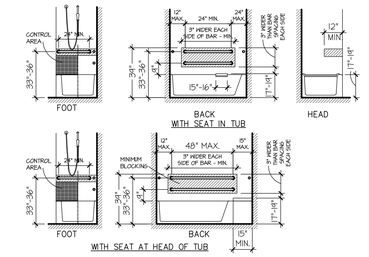
STORAGE

–LOWER SHELVING.
LOWER SHELVING AND/OR DRAWER SPACE SHALL BE PROVIDED AT A HEIGHT OF NO MORE THAN 48 INCHES

–CABINETS/ DRAWERS
CABINETS, DRAWERS, AND SHELF STORAGE AREAS SHALL COMPLY WITH ALL APPLICABLE CODE REQ.

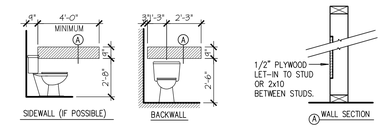
–CABINET DOOR PULLS
DOOR PULLS OR HANDLES FOR WALL CABINETS SHALL BE MOUNTED AS CLOSE TO THE BOTTOM OF CABINET DOORS AS POSSIBLE. DOOR PULLS OR HANDLES FOR BASE CABINET INSETS SHALL BE MOUNTED AS CLOSE TO THE TOP OF CABINET DOORS AS POSSIBLE.

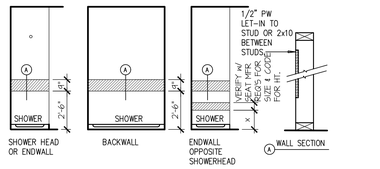
7 CABINETS
SCALE: N/A



6 BATHTUB REINF.
ANSI 2017
SCALE: N/A

BLOCKING TO BE A MIN. 6" WIDER THAN THE GRAB BAR BEING INSTALLED.





–ROLL-IN TYPE SHOWER.
IF A FIXED FOLDING SEAT IS PROVIDED THEN THE GRAB BARS THAT EXTEND OVER THE SEAT ARE TO BE REMOVED.

–GRAB BARS.
PROVIDE GRAB BARS ON THREE SIDES OF SHOWER & A MAX. OF 6" AWAY FROM THE CORNERS AS SHOWN ABOVE.

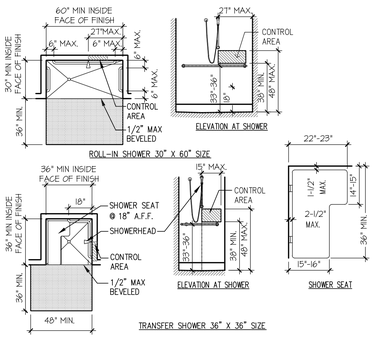
–THRESHOLDS.
SHOWER COMPARTMENT THRESHOLDS SHALL BE 1/2"HIGH MAX. WITH A BEVELED EDGE AT 1:2 SLOPE.

–WATER CONTROLS.
WATER CONTROLS SHALL BE MOUNTED AS SHOWN ABOVE AND COMPLY WITH THE OPERATIONS PART OF THE CODE. THE TEMPERATURE FROM THE SHOWER HEAD SHALL BE ANTI-SCALDING TYPE NOT TO EXCEED 110 DEGREES.

–HAND-HELD SPRAYER UNIT.
PROVIDE A SHOWER SPRAY UNIT WITH A HOSE TO BE AT LEAST 60 IN. LONG AND CAN BE USED BOTH AS A SHOWER HEAD AND HAND HELD SHOWER. LOCATE AS SHOWN ABOVE.

–FLOOR SLOPE.
THE MAX. SLOPE OF THE FLOOR SHALL BE 2 PERCENT PER FT. IN ANY DIRECTION. WHERE DRAINS ARE PROVIDED, GRATE OPENINGS SHALL BE 1/4 IN. AND LOCATED FLUSH WITH THE FLOOR SURFACE.

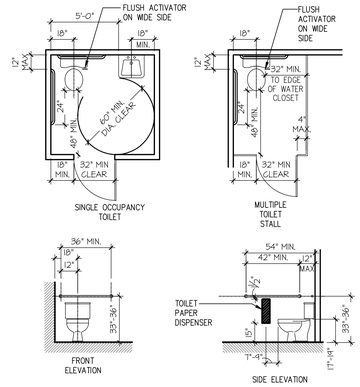
–ENCLOSURES.
ENCLOSURES, WHEN PROVIDED FOR SHOWER STALLS, SHALL NOT OBSTRUCT CONTROLS OR OBSTRUCT TRANSFER FROM WHEELCHAIRS ONTO SHOWER SEATS.



5 SHOWER STALLS
ANSI 2017
SCALE: N/A

5 WATER CLOSET/SHOWER REINF.
SCALE: N/A

BLOCKING TO BE A MIN. 6" WIDER THAN GRAB BAR BEING INSTALLED.

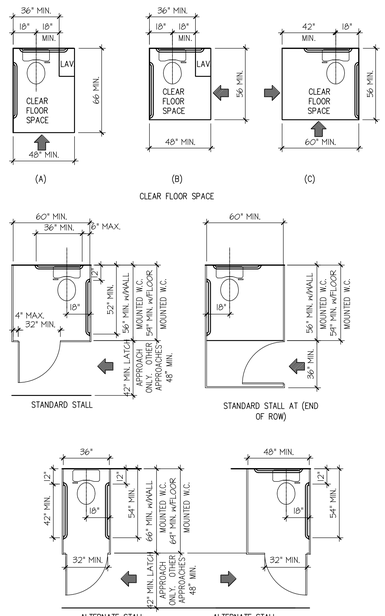


–TOILET FACILITIES.
A WATER CLOSET FIXTURE SHALL PROVIDE A MINIMUM 36 IN. WIDE CLEAR SPACE FROM A FIXTURE OR A MIN. 32 IN. WIDE CLEAR SPACE FROM A WALL AT ONE SIDE OF THE WATER CLOSET (AS SHOWN ABOVE). THE OTHER SIDE SHALL PROVIDE 18 IN. FROM THE CENTERLINE OF THE WATER CLOSET TO THE WALL A MIN. 48 IN. LONG CLEAR SPACE SHALL BE PROVIDED IN FRONT OF THE WATER CLOSET.

–TOILET TISSUE DISPENSERS.
TOILET TISSUE DISPENSERS SHALL BE LOCATED WITHIN REACH FROM THE FRONT EDGE OF THE TOILET SEAT. DISPENSERS THAT CONTROL DELIVERY, OR THAT DO NOT PERMIT CONTINUOUS PAPER FLOW SHALL NOT BE USED. THE OUTLINE OF THE DISPENSOR SHALL BE 15" MIN. AND 48" MAX. ABOVE THE FLOOR w/ 1 1/2" CLEARANCE BELOW & 12" ABOVE THE GRAB BAR. CENTERLINE OF DISPENSER SHALL BE 7"-9" IN FRONT OF TOILET.

–FLUSH CONTROLS.
FLUSH CONTROLS SHALL BE HAND OPERATED w/ 5lbs MAX. PRESSURE OR AUTOMATIC. HAND OPERATED CONTROLS FOR FLUSHOMETERS SHALL BE MOUNTED 44 IN. (1120 mm) MAXIMUM ABOVE THE FLOOR ON THE WIDE SIDE OF THE TOILET STALL.

3 WATER CLOSETS
ANSI 2017
SCALE: N/A



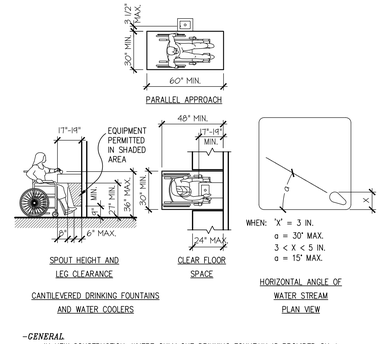
–LAVATORY FIXTURES.
THE REQUIREMENTS OF THIS SUBSECTION SHALL APPLY TO LAVATORY FIXTURES, VANITIES AND BUILT-IN LAVATORIES.
–(1) A CLEAR FLOOR SPACE 30 IN. BY 48 IN. SHALL BE PROVIDED IN FRONT OF A LAVATORY TO ALLOW A FORWARD APPROACH. SUCH CLEAR SPACE SHALL ADJOIN OR OVERLAP AN ACCESSIBLE ROUTE AND SHALL EXTEND INTO KNEE AND TOE SPACE UNDERNEATH THE LAVATORY.
–(2) MIRRORS SHALL BE MOUNTED WITH THE BOTTOM EDGE NO HIGHER THAN 40 INCHES FROM THE FLOOR AND 74" HIGH MINIMUM IF INTENDED FOR BOTH AMBULATORY AND WHEELCHAIR USERS.

–SINKS.
SINKS SHALL BE 6-1/2 IN. (165 mm) DEEP MAXIMUM. FRONT OF SINK SHALL BE 34" MAX. ABOVE FINISHED FLOOR. MULTIPLE COMPARTMENT SINKS SHALL HAVE AT LEAST 1 COMPARTMENT COMPLYING WITH THIS REQUIREMENT.

–EXPOSED PIPES AND SURFACES.
WATER SUPPLY AND DRAIN PIPES UNDER LAVATORIES AND SINKS SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES AND SINKS.

–FAUCETS.
FAUCETS SHALL BE HAND-OPERATED AND SELF-CLOSING. WHEN USED, THEY SHALL REMAIN OPEN FOR 10 SECONDS MINIMUM.

2 LAVATORIES AND SINKS
ANSI 2017
SCALE: N/A



–GENERAL.
IN NEW CONSTRUCTION, WHERE ONLY ONE DRINKING FOUNTAIN IS PROVIDED ON A FLOOR, THERE SHALL BE A DRINKING FOUNTAIN ACCESSIBLE TO INDIVIDUALS WHO USE WHEELCHAIRS AND ONE ACCESSIBLE TO THOSE WHO HAVE DIFFICULTY BENDING OR STOOPING.

–ALCOVES.
WATER FOUNTAINS SHALL BE LOCATED COMPLETELY WITHIN ALCOVES OR OTHERWISE POSITIONED SO AS NOT TO ENCROACH INTO PEDESTRIAN WAYS. THE ALCOVE IN WHICH THE WATER FOUNTAIN IS LOCATED SHALL NOT BE LESS THAN 32 IN. IN WIDTH AND 18 IN. IN DEPTH.

–SPOUT.
SPOUTS SHALL BE A MAXIMUM OF 36 INCHES ABOVE THE FLOOR AND PROVIDE A FLOW OF WATER 4 IN. (100 mm) HIGH MINIMUM SO AS TO ALLOW THE INSERTION OF A CUP OR GLASS UNDER THE FLOW OF WATER. MEASURED HORIZONTALLY, RELATIVE TO THE FRONT FACE OF THE UNIT, THE ANGLE OF THE WATER STREAM FROM SPOUTS LOCATED WITHIN 3 IN. (75 mm) OF THE FRONT OF THE UNIT SHALL BE 30 DEGREES MAXIMUM AND SPOUTS LOCATED BETWEEN 3 IN. AND 5 IN. (75 mm AND 125 mm) FROM THE FRONT SHALL BE 15 DEGREES MAXIMUM.

–OPERABLE PARTS.
OPERABLE PARTS SHALL BE LOCATED AT OR NEAR THE FRONT EDGE OF THE FOUNTAIN OR WATER COOLER.

–BASIN / SPOUT ASSEMBLY.
WHERE THE BASIN AND SPOUT ASSEMBLY IS SUPPORTED ON A CANTILEVERED ARM 8 IN. (205 mm) WIDE MAXIMUM, THE CLEAR SPACE BETWEEN THE BOTTOM OF THE ARM AND FLOOR SHALL BE 25 IN. (635 mm) MINIMUM.

1 WATER FOUNTAINS (DRINKING)
SCALE: N/A
602

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Issued Date	Description
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05.04.2023	REVISIONS 1
09.13.2024	CITY REVISIONS - ELEVATIONS 2

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Proposed New Development for:
The Courtyard At Congress Station
551 Congress Parkway, Crystal Lake, Illinois

Issue Date: 09.08.2022
Drawn By: PAI

Sheet:
ACCESSIBILITY STANDARDS
2017 ICC ANSI A117.1

A0.6

PAI PROJECT NUMBER
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GENERAL NOTES:CITY REQUIREMENTS:

1. THE BUILDING PLANS UNDER REVIEW REQUIRES THE DESIGN & INSTALLATION OF A FIRE SUPPRESSION SYSTEM. THE LICENSED SPRINKLER CONTRACTOR SHALL PREPARE THE PLANS TO INCLUDE THE DESIGNS, DRAWINGS, SPECIFICATIONS, STUDIES, AND OTHER TECHNICAL REPORTS & CALCULATIONS THAT ESTABLISH THE STANDARD OF QUALITY OF MATERIALS, WORKMANSHIP, EQUIPMENT, AND THE SYSTEMS. THE LICENSED PERSONNEL SHALL SUBMIT ALL REQUIRED TO THE LOCAL FIRE DEPT. FOR THEIR REVIEW & APPROVAL.
2. THE FULLY OPERATIONAL & APPROVED SMOKE DETECTORS SHALL BE PROVIDED PER SECTION 907.2.11.2, INTERNATIONAL BUILDING CODE. REFER TO ELECTRICAL PLANS FOR FURTHER INFORMATION ON LOCATIONS AND REQUIREMENTS.
3. THE FULLY OPERATIONAL & APPROVED FIRE ALARM SYSTEM SHALL BE INSTALLED PER SECTION 907.2.9, INTERNATIONAL BUILDING CODE.
4. THE FULLY OPERATIONAL & APPROVED CARBON MONOXIDE DETECTORS SHALL BE PROVIDED PER ILLINOIS CARBON MONOXIDE DETECTOR ACT. REFER TO ELECTRICAL PLANS FOR FURTHER INFORMATION ON LOCATIONS AND REQUIREMENTS.
5. SUBMIT A CONTRACTORS LIST WITH BUSINESS NAME OF ALL CONTRACTORS WORKING ON THE PROJECT. CONTRACTORS LIST AVAILABLE ONLINE AT WWW.CRYSTALLAKE.ORG \ DOWNLOAD DOCUMENTS \ BUILDING.
6. PLUMBING CONTRACTOR MUST SUBMIT A COPY OF THEIR CURRENT ILLINOIS (OR CITY OF CHICAGO) PLUMBING LICENSE AND ILLINOIS PLUMBING CONTRACTOR REGISTRATION.
7. PLUMBING CONTRACTOR MUST SUBMIT A LETTER OF INTENT. THE ORIGINAL LETTER IS REQUIRED: SHALL BE ON COMPANY LETTERHEAD, SIGNED BY THE LICENSED PLUMBER AND HAVE CORPORATE SEAL OR BE NOTARIZED.
8. DESIGN LOAD: SNOW LOAD 30 P.S.F. PER CITY AMENDMENT
9. PROVIDE AND MAINTAIN FENCING BARRICADES, TRAFFIC SIGNS AND OTHER SAFEGUARDING MEASURES DURING THE COURSE OF WORK TO PROTECT THE PUBLIC FROM CONSTRUCTION OPERATIONS.
10. PROVIDE A SOILS INSPECTION REPORT AT THE FOOTING INSPECTION. IF ENGINEERED FILL IS TO BE USED FOR FOUNDATION, SUBMIT COMPACTION REPORTS INDICATING PROPER PLACEMENT / BEARING CAPACITY OF FILL.
11. SUBMIT AN AS-BUILT FOUNDATION SURVEY (SPOT SURVEY) PRIOR TO THE BACKFILL INSPECTION. SPOT SURVEY SHALL INDICATE EASEMENTS, SETBACK OF FOUNDATION WALL FROM PROPERTY LINES, TOP OF FOUNDATION ELEVATION AND BE A LEGAL PLAT BY AN ILLINOIS LAND SURVEYOR. THE BACKFILL INSPECTION WILL **NOT** BE APPROVED (NO CONSTRUCTION ON TOP OF FOUNDATION ALLOWED) UNTIL THE SPOT SURVEY HAS BEEN RECEIVED AND REVIEWED.
12. SPECIAL INSPECTIONS REQUIRED FOR SOIL BEARING AT FOOTINGS,CONCRETE, MASONRY. SUBMIT REPORTS AS COMPLETED FOR CITY APPROVAL AND A FULL SET OF REPORTS, SIGNED AND SEALED BY A STRUCTURAL ENGINEER, PRIOR TO THE FINAL INSPECTION. 2018 IBC, SECTION 1704.
13. SPECIAL INSPECTIONS REQUIRED FOR THE FIRE STOPPING. THE CONTRACTOR SHALL SCHEDULE AN IN-PROGRESS FIRE-STOPPING INSPECTION WHILE THE SYSTEM IS BEING INSTALLED. FAILURE TO SCHEDULE THE IN-PROGRESS INSPECTION WILL RESULT IN DESTRUCTIVE TESTING (I.E. REMOVAL OF A PORTION OF THE JOINT) TO MAKE SURE THE SYSTEM WAS INSTALLED PROPERLY. SUBMIT REPORTS AS COMPLETED FOR CITY APPROVAL AND A FULL SET OF REPORTS, SIGNED AND SEALED BY A FIRE STOPPING INSPECTOR, PRIOR TO THE FINAL INSPECTION. 2018 IBC, SECTION 713
14. ANY FIELD CHANGES THAT DIFFER FROM THE PLANS SHALL BE SUBMITTED BY THE ARCHITECT FOR REVIEW AND APPROVAL. A FINAL AS-BUILT PLAN SHALL BE SUBMITTED UPON FINAL INSPECTION (IF APPLICABLE).
15. **SUBMIT THE APPROVED BUILDING PLANS WITH ALL FIELD CHANGES IN ELECTRONIC FORMAT ON A PRIOR TO THE ROUGH INSPECTION.** ALL PLAN SHEETS FOR THE BUILDING SHOULD BE IN ADOBE PDF FORMAT.
16. **SUBMIT A FINAL PLAT OF SURVEY AT LEAST 10 DAYS PRIOR TO THE FINAL INSPECTION.** FINAL SURVEY SHALL INCLUDE BUT NOT LIMITED TO BUILDING DIMENSIONS, SETBACKS, SITE IMPROVEMENTS, EASEMENTS AND RIGHT-OF-WAYS, ETC. FINAL SURVEY SHALL BE SIGNED AND STAMPED BY A LEGAL LAND SURVEYOR.
17. **SUBMIT AS-BUILT CIVIL DRAWINGS (RECORD DRAWINGS) AT LEAST 10 DAYS PRIOR TO THE FINAL INSPECTION.** AS-BUILT SHALL INCLUDE ALL SITE IMPROVEMENTS, STRUCTURES, GRADES, DETENTION CALCS., MEASUREMENTS, EASEMENTS, RIGHT-OF-WAYS, ETC. THE SITE PLAN DESIGN FILES SHOULD BE IN CADD FORMAT (AUTOCAD DWG OR MICROSTATION DGN FORMAT - ENGINEER'S CHOICE) USING STATE PLANE COORDINATES, IF POSSIBLE.
18. ALL EXTERIOR SIGNAGE MUST MEET THE REQUIREMENTS OF THE UNIFIED DEVELOPMENT ORDINANCE AND THE PUD ORDINANCE. ALL EXTERIOR SIGNAGE (INCLUDING TEMPORARY) REQUIRES A SEPARATE BUILDING PERMIT SUBMITTAL AND APPROVAL. SIGNAGE SHOWN ON PLANS IS NOT INCLUDED IN THIS BUILDING PERMIT APPROVAL.
19. THE FOLLOWING REQUIRE A SEPARATE PERMIT SUBMITTAL (APPLICATION AND PLANS) THROUGH THE COMMUNITY DEVELOPMENT, BUILDING DIVISION (815 356-3605) OR AS NOTED:
    a. ALL EXTERIOR SIGNAGE (ALL SIGNAGE TO MATCH THE APPROVED PLANS)
    b. FIRE SPRINKLER AND FIRE ALARM SYSTEMS.
    c. LAWN IRRIGATION SYSTEM (IF APPLICABLE)

GENERAL NOTES:FLOOR P LAN

1. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL CODES AND REGULATIONS.
2. ADA ISSUES COMPLY TO THE ACCESSIBILITY CODE AS ESTABLISHED BY THE STATE.
3. THE GENERAL CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS, APPROVALS, LICENSES AND CERTIFICATES TO COMPLETE THE PROJECT.
4. THE GENERAL CONTRACTOR SHALL CARRY WORKMAN'S COMPENSATION, PUBLIC LIABILITY, AND PROPERTY DAMAGE INSURANCE AND PAY FOR SAME.
5. THE GENERAL CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO THE START OF WORK. A COMPLETE LAYOUT AND VERIFICATION OF ALL DIMENSIONS SHALL BE COMPLETED. VERIFY LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO START OF DEMOLITION. REPORT ANY DISCREPANCIES AND/OR CONFLICTS TO THE ARCHITECT/FRANCHISOR'S PROJECT MANAGER PRIOR TO PROCEEDING WITH THE WORK.
6. THE GENERAL CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, AIR DUCTS, MECHANICAL EQUIPMENTS, METERS, PANELS, RPZ VALVES, ETC AND LOCATIONS OF PROPOSED CONNECTIONS TO SAME. ANY DISCREPANCIES AND/OR CONFLICTS SHALL BE REPORTED TO THE ARCHITECT/FRANCHISOR'S PROJECT MANAGER PRIOR TO PROCEEDING WITH THE WORK.
7. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK, WHETHER PERFORMED BY HIS/HER FORCES OR SUBCONTRACTORS, AS WELL AS WORK COMPLETED BY FRANCHISOR OR OTHERS.
8. ALL CONTRACTORS WILL PROVIDE ADEQUATE BRACING AND/OR SHORING TO INSURE STRUCTURAL STABILITY OF THE BUILDING AND ALL RELATED BUILDING COMPONENTS I.E. STRUCTURE WALLS, INTERIOR WALL ASSEMBLIES, ETC DURING THE CONSTRUCTION PHASE OF THIS PROJECT.
9. ALL MATERIALS USED WILL BE NEW AND BEAR U.L. LABLES WHERE REQUIRED AND MEET APPROPRIATE N.E.M.A. STANDARDS.
10. ALL CONTRACTOR WILL GUARANTEE ALL LABOR AND MATERIAL FOR A PERIOD OF ONE YEAR FROM DATE OF ISSUE OF FINAL OCCUPANCY PERMIT AND/ OR AT THE FINAL PAY OUT FROM OWNER.
11. THE GENERAL CONTRACTOR SHALL MAINTAIN A CLEAN WORKSITE DURING CONSTRUCTION AND SHALL PROVIDE THROUGH FINAL CLEANING OF AREAS UNDER THIS CONTRACT PRIOR TO ACCEPTANCE BY OWNER.
12. THE GENERAL CONTRACTOR SHALL PROTECT ALL EXISTING SURFACES, MATERIALS, FIXTURES, EQUIPMENTS, ETC. SO THAT THEY WILL REMAIN FREE FROM DAMAGE DURING THE COURSE OF THE PROJECT. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY AND ALL DAMAGE CAUSED BY HIMSELF OR HIS SUBCONTRACTORS DURING THE COURSE OF THE PROJECT. REPAIRS SHALL MATCH ADJOINING EXISTING MATERIALS / SURFACES AND BE ACCEPTABLE TO THE OWNER, LANDLORD AND LOCAL BUILDING OFFICIALS.
13. THE GENERAL CONTRACTOR SHALL FURNISH AND INSTALL CONSTRUCTION BARRICADES AS REQUIRED AROUND AREAS OF CONSTRUCTION TO PROTECT THE SAFETY OF THE CUSTOMER, EMPLOYEES AND ALL OTHER USERS OF THE SPACE.
14. THE SIGN CONTRACTOR, WHERE APPLICABLE, SHALL BE RESPONSIBLE FOR SUBMITTING FOR AND OBTAINING ALL REQUIRED PERMITS AND APPROVALS FROM LOCAL CODE OFFICIALS AND LANDLORD PRIOR TO THE INSTALLATION.
15. EACH BIDDER SHOULD VISIT THE SITE AND FULLY ACQUAINT THEMSELVES WITH THE EXISTING CONDITIONS AND THE SCOPE OF THE PROJECT PRIOR TO SUBMITTING THEIR BIDS.
16. THE ARCHITECT SHALL NEITHER HAVE CONTROL OVER OR CHARGE OF, NOR BE RESPONSIBLE FOR, THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, SINCE THESE ARE SOLELY THE GENERAL CONTRACTOR / CONTRACTOR'S RIGHTS AND RESPONSIBILITIES UNDER THE CONTRACT DOCUMENTS.
17. GENERAL CONTRACTOR TO SCHEDULE PRE-CONSTRUCTION MEETING WITH OWNER/ LANDLORD'S PROPERTY MANAGEMENT TEAM, IF APPLICABLE, PRIOR TO START OF ANY WORK
18. CONTRACTOR SHALL CONTROL NOISE PRODUCING ITEMS (STEREOS) AT ALL TIMES AS REQUIRED BY THE LANDLORD.
19. FACILITY TO BE REFURBISHED TO LOOK LIKE NEW CONDITION.
20. REFER TO THE EQUIPMENT SCHEDULE FOR OWNER SUPPLIED, OWNER INSTALLED, E.T. EQUIPMENT. IF ANY PIECE OF EQUIPMENT IS NOT SPECIFICALLY LISTED, THAN IT SHALL BE PROVIDED AND INSTALLED BY THE GENERAL CONTRACTOR.
21. DO NOT SCALE DRAWINGS.

DISABLED ACCESS NOTES

1. ALL FLOOR MATERIALS SHALL BE SLIP-RESISTANT TO COMPLY WITH CURRENT / APPLICABLE IAC VERSION.
2. ALL ACCESSIBILITY SIGNAGE SHALL COMPLY WITH CURRENT / APPLICABLE IAC VERSION.
3. LATCHING AND LOCKING DOORS THAT ARE HAND ACTIVATED AND WHICH ARE IN A PATH OF TRAVEL SHALL BE OPERABLE WITH A SINGLE EFFORT BY LEVER TYPE HARDWARE, PANIC BARS, PUSH-PULL ACTIVATING BARS, OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING THE ABILITY TO GRASP THE OPENING HARDWARE. MOUNT DOOR OPENING HARDWARE BETWEEN 30" AND 44" ABOVE FLOOR FINISH. CENTER HAND ACTIVATED DOOR OPENING HARDWARE BETWEEN 30" AND 44" ABOVE THE FLOOR.
4. MAXIMUM PULL OR PUSH EFFORT TO OPERATE DOORS SHALL NOT EXCEED 8.5 POUNDS FOR EXTERIOR DOORS AND 5 POUNDS FOR INTERIOR DOORS, MEASURED AT RIGHT ANGLES TO HINGED DOORS AND AT CENTER PLANE OF SLIDING OR FOLDING DOORS. CORRESPONDING DEVICES OR AUTOMATIC DOOR OPERATORS MAY BE UTILIZED TO MEET THE ABOVE STANDARDS. MAXIMUM EFFORT TO OPERATE REQUIRED FIRE DOORS MAY BE INCREASED NOT TO EXCEED 15 POUNDS.
5. EVERY REQUIRED ENTRANCE OR PASSAGE DOORWAY SHALL BE NOT LESS THAN 3' IN WIDTH AND NOT LESS THAN 6'-8" IN HEIGHT. DOORS SHALL BE CAPABLE OF OPENING AT LEAST 90 DEGREES AND SHALL BE SO MOUNTED THAT THE CLEAR WIDTH OF THE DOORWAY IS NOT LESS THAN 32". WHERE A PAIR OF DOORS IS UTILIZED, AT LEAST ONE OF THE DOORS SHALL PROVIDE A CLEAR, UNOBSTRUCTED OPENING WIDTH OF 32" WITH THE LEAF POSITIONED AT AN ANGLE OF 90 DEGREES FROM ITS CLOSED POSITION.
6. THE FLOOR OR LANDING ON EACH SIDE OF AN ENTRANCE OR PASSAGE DOOR SHALL BE LEVEL AND CLEAR. THE LEVEL AND CLEAR AREA SHALL HAVE A LENGTH IN THE DIRECTION OF DOOR SWING OF AT LEAST 60" AND THE LENGTH OPPOSITE THE DIRECTION OF DOOR SWING OF 44" AS MEASURED AT RIGHT ANGLES TO THE PLANE OF THE DOOR IN ITS CLOSED POSITION. FLOORS OR LANDINGS SHALL BE NOT MORE THAN 1/2" LOWER THAN THE THRESHOLD OF THE DOORWAY. CHANGE IN LEVEL BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2.
7. CENTER ELECTRICAL RECEPTACLE OUTLETS NOT LESS THAN 15" ABOVE THE FLOOR OR WORKING PLATFORM.
8. TOILET ROOM ACCESSORIES
   8.1. MOUNT BOTTOM EDGE OF MIRRORS/ REFLECTIVE SURFACE NO HIGHER THAN 40" FROM THE FLOOR.
   8.2. MOUNT TOILET TISSUE DISPENSERS BETWEEN 7" TO 9" FROM THE FRONT EDGE OF THE TOILET SEAT.
   8.3. MOUNT DISPENSING AND DISPOSAL FIXTURES (TOWEL, SANITARY NAPKINS, WASTE, COIN SLOTS, ETC.) WITH OPERATING PARTS NO HIGHER THAN 40" FROM THE FLOOR.
9. SINGLE ACCOMMODATION TOILET FACILITY
   9.1. WATER CLOSET TO HAVE A 28" CLEARANCE FROM A FIXTURE AND 32" FROM A WALL.
   9.2. MINIMUM CLEAR SPACE IN FRONT OF WATER CLOSET TO BE 46".
   9.3. A SPACE 36" X 48" IS PERMITTED IN FRONT OF EXISTING WATER CLOSET ACCESSIBLE TO THE HANDICAPPED.
10. THE HEIGHT OF THE WATER CLOSET (TOP OF SEAT) SHALL BE BETWEEN 17" AND 19". MOUNT FLUSH VALVE CONTROL NO MORE THAN 44" ABOVE THE FLOOR, ON THE SIDE OF THE TOILET WITH THE GREATEST SEPARATION FROM ADJACENT WALL OR OTHER SURFACE.
11. PROVIDE GRAB BARS ON EACH SIDE, OR ONE SIDE AND BACK OF WATER CLOSET.
   11.1. GRAB BARS TO BE 33" ABOVE AND PARALLEL TO THE FLOOR.
   11.2. SIDE BARS TO BE 42" LONG AND PROJECT 24" IN FRONT OF WATER CLOSET STOOL. GRAB BAR AT BACK TO BE 36" LONG.
   11.3. DIAMETER OF GRAB BARS TO BE 1-1/4" TO 1-1/2".
   11.4. PROVIDE 1-1/2" CLEARANCE BETWEEN GRAB BARS AND WALL.
   11.5. GRAB BARS (INCLUDING CONNECTORS, FASTENERS, SUPPORT BACKING, ETC.) SHALL SUPPORT A 250 POUND LOAD.
   11.6. GRAB BARS SHALL NOT ROTATE WITHIN THEIR FITTINGS.
   11.7. GRAB BARS AND ANY ADJACENT SURFACE SHALL BE FREE OF SHARP OR ABRASIVE ELEMENTS.
   11.8. EDGES SHALL HAVE A MINIMUM RADIUS OF 1/8".
12. PROVIDE A CLEAR FLOOR SPACE 30" X 48" IN FRONT OF LAVATORY TO PERMIT A FORWARD APPROACH. MOUNT LAVATORIES WITH A MINIMUM CLEARANCE OF 29" FROM THE FLOOR TO THE BOTTOM OF THE APRON. PROVIDE KNEE CLEARANCE UNDER THE FRONT LIP EXTENDING A MINIMUM OF 30" IN WIDTH WITH 8" MINIMUM WIDTH, AND SHALL BE A MINIMUM OF 9" HIGH FROM THE FLOOR A MINIMUM OF 17" DEEP FROM THE FRONT OF THE LAVATORY. INSULATE OR OTHERWISE COVER HOT WATER AND DRAIN PIPES UNDER LAVATORIES. THERE SHALL BE NO SHARP OR ABRASIVE SURFACE UNDER LAVATORIES.
13. FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 POUNDS. LEVER OPERATED, PUSH TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. SELF CLOSING ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS.

ENERGY CONSERVATION NOTES

1. ALL COMMERCIAL BUILDING NEED TO COMPLY WITH THE REQUIREMENTS OF THE 2018 INTERNATIONAL ENERGY CONSERVATION CODE, CHAPTER 5.
2. PROVIDE BI-LEVEL SWITCHING OR OCCUPANT-SENSING DEVICES IN ALL AREAS WITH MORE THAN 1 LUMINAIRE, OTHER THAN CORRIDORS, STOREROOMS OR BATHROOMS IN ACCORDANCE WITH THE ILLINOIS ENERGY CONSERVATION LAW (2018 IECC).
3. THE THERMOSTAT SHALL BE PROGRAMMABLE, AND SHALL HAVE SETBACK CAPABILITIES (2018 IECC).

FLOOR PLAN NOTES

1. DIMENSIONS SHOWN ARE TO THE FACE OF FINISH, UNLESS OTHERWISE NOTED.
2. DIMENSIONS SHOWN ON THIS PLAN ARE FOR GUIDANCE ONLY. CONTRACTOR TO COORDINATE ALL REQUIRED DIMENSIONS FOR SITE SPECIFIC LOCATIONS.
3. PROVIDE ADEQUATE BLOCKING AT THE SHELVING, 3 COMPARTMENT SINK, T AND S SPRAY BRACKET, POT RACK, HAND SINKS, MOP SINK FAUCETS, GRAB BARS, LAVATORIES, HAND DRYERS, MIRRORS, PAPER TOWEL DISPENSERS, SOAP DISPENSERS, OTHER ACCESSORIES AS REQUIRED, UNLESS OTHERWISE NOTED.
4. FURNISH AND INSTALL FIRESTOPS IN ALL RATED/NON-RATED VERTICAL AND HORIZONTAL ASSEMBLIES AS REQUIRED BY PUBLIC AUTHORITIES GOVERNING THE WORK.
5. ALL FLOOR DRAINS AND FLOOR SINKS SHOWN ON THIS PLAN RELATE TO SPECIFIC EQUIPMENT ITEMS. GENERAL FLOOR DRAINS FOR CLEANING PURPOSES OR AS REQUIRED BY LOCAL CODE ARE NOT SHOWN ON THIS DRAWING.
6. ALL PARTITIONS, CEILINGS, LIGHT FIXTURES, DUCT WORK, ETC. SHALL BE BRACED TO BUILDING STRUCTURE IN A WAY ACCEPTABLE TO LOCAL CODE OFFICIALS TO RESIST LOCAL SEISMIC LOADING.
7. ALL NEW AND EXISTING HOT WATER LINES SHALL BE INSULATED. THE CONTRACTOR SHALL PROVIDE PROTECTIVE PIPE COVERS FOR ALL EXPOSED PIPING UNDER NEW AND EXISTING HAND SINK (TYPICAL). PIPE COVERS' FINISH SHALL BE WHITE IN COLOR.
8. ALL FLOOR AND FLOOR/CEILING PENETRATIONS IF APPLICABLE SHALL BE SLEEVED AND SEALED COMPLETELY IN A WAY ACCEPTABLE TO THE LANDLORD/ OWNER AND TO THE LOCAL BUILDING OFFICIALS.
9. ALL RETURN AIR GRILLES SHALL BE COVERED AT ALL TIMES DURING CONSTRUCTION, TYPICAL.
10. CONTRACTOR SHALL INSTALL ALL RESTROOM DISPENSER FURNISHED BY THE OWNER.

DEMOLITION NOTES

1. COMPLY WITH APPLICABLE LOCAL, STATE AND FEDERAL CODES AND REGULATIONS PERTAINING TO SAFETY OF PERSONS, PROPERTY AND ENVIRONMENTAL PROTECTION.
2. PROVIDE AND MAINTAIN BARRICADES, LIGHTING, AND GUARDRAILS AS REQUIRED BY APPLICABLE CODES AND REGULATIONS TO PROTECT OCCUPANTS OF BUILDING AND WORKERS.
3. PROVIDE SHORING, BRACING, &/OR SUPPORT AS NEEDED TO PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF THE STRUCTURE/ ELEMENTS THAT IS TO REMAIN. PROTECT EXISTING ADJACENT FINISH WORK THAT IS TO REMAIN IN PLACE .
4. ERECT AND MAINTAIN DUSTPROOF PARTITIONS AS & IF REQUIRED TO PREVENT SPREAD OF DUST, FUMES, AND SMOKE, ETC. TO OTHER PARTS OF THE BUILDING. ON COMPLETION, REMOVE PARTITIONS AND REPAIR DAMAGED SURFACES TO MATCH ADJACENT SURFACES.
5. REMOVE FROM SITE DAILY AND LEGALLY DISPOSE OF REFUSE, DEBRIS, RUBBISH, AND OTHER MATERIALS RESULTING FROM DEMOLITION OPERATIONS.
6. REMOVE DESIGNATED PARTITIONS, COMPONENTS, BUILDING EQUIPMENT, AND FIXTURES AS REQUIRED FOR NEW WORK.
7. REMOVE ALL ABANDONED HVAC EQUIPMENT, INCLUDING DUCT WORK.
8. REMOVE ALL ABANDONED ELECTRICAL, TELEPHONE AND DATA CABLING AND DEVICES, UNLESS OTHERWISE NOTED.
10. REMOVE EXISTING FLOOR FINISHES AND PREPARE SUBFLOOR AS REQUIRED TO RECEIVE NEW FLOOR FINISHES.
11. TERMINATE AND CAP ALL ABANDONED PLUMBING LINES

FINISH NOTES

1. THE FLAME SPREAD OF ALL INTERIOR FINISHES SHALL BE LESS THAN 200 PER TABLE 803.5, INTERNATIONAL BUILDING CODE.
2. ENSURE SURFACES TO RECEIVE FINISHES ARE CLEAN, TRUE, AND FREE OF IRREGULARITIES. DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.
3. REPAIR EXISTING SURFACES TO REMAIN AS REQUIRED FOR APPLICATION OF NEW FINISHES.
4. PROVIDE STRAIGHT, FLUSH RESILIENT BASE AT CARPETED AREAS, AND COVED, TOP SET RESILIENT BASE AT RESILIENT FLOORING, UNLESS OTHERWISE NOTED.

REFLECTED CEILING NOTES

1. DESIGN SUSPENDED CEILING FRAMING SYSTEMS TO RESIST A LATERAL FORCE OF 20 % OF THE WEIGHT OF THE CEILING ASSEMBLY AND ANY LOADS TRIBUTARY TO THE SYSTEM. USE A MINIMUM CEILING WEIGHT OF 5 POUNDS PER SQUARE FOOT TO DETERMINE THE LATERAL FORCE.
2. WHERE CEILING LOADS DO NOT EXCEED 5 POUNDS PER SQUARE FOOT AND WHERE PARTITIONS ARE NOT CONNECTED TO THE CEILING SYSTEM, THE FOLLOWING BRACING METHODS MAY BE EMPLOYED:
   2.1. PROVIDE LATERAL SUPPORT BY FOUR WIRES OF MINIMUM NO. 12 GAUGE SPLAYED IN FOUR DIRECTIONS 90 DEGREES APART, AND CONNECTED TO THE MAIN RUNNER WITHIN 2" OF THE CROSS RUNNER AND TO THE STRUCTURE ABOVE AT AN ANGLE NOT EXCEEDING 45 DEGREES FROM THE PLANE OF THE CEILING. PROVIDE THESE LATERAL SUPPORT POINTS 12 FEET ON CENTER IN EACH DIRECTION, WITH THE FIRST POINT WITHIN 4' FROM EACH WALL.
   2.2. ALLOW FOR LATERAL MOVEMENT OF THE SYSTEM. ATTACH MAIN RUNNERS AND CROSS RUNNERS AT TWO ADJACENT WALLS; MAINTAIN CLEARANCE BETWEEN THE WALL AND THE RUNNERS AT THE OTHER TWO WALLS.
   2.3. PROVIDE VERTICAL SUPPORT AS REQUIRED IN BUILDING CODES. IN ADDITION, VERTICALLY SUPPORT ENDS OF RUNNERS WITHIN 8" OF DISCONTINUITIES SUCH AS MAY OCCUR WHERE THE CEILING IS INTERRUPTED BY A WALL.
   2.4. SUPPORT LIGHT FIXTURES AND AIR DIFFUSERS DIRECTLY BY WIRES TO THE STRUCTURE ABOVE.
3. LOCATE REGISTERS AND LIGHTING FIXTURES WITHIN GRID LINES. CENTER SPRINKLER HEADS, SPEAKERS, RECESSED FIXTURES, AND SIMILAR CEILING ELEMENTS IN ACOUSTICAL UNITS, UNLESS OTHERWISE NOTED.
4. FINISH HVAC DIFFUSERS, MATCH ADJACENT FINISH, UNLESS OTHERWISE NOTED.
5. ALL RECESSED "DROP-IN" CEILING LIGHT FIXTURES SHALL BE SECURED TO BAR JOISTS OR THE DECK ABOVE BY A MINIMUM OF 2 SUSPENSION WIRES AT OPPOSITE ENDS OF EACH FIXTURE.

HEALTH & SANITATION NOTES(AS APPLICABLE)

1. VERIFY THAT ALL OPEN WIRE SHELVING UNITS, WALL SHELF, PREP TABLES ARE 'NSF' STAINLESS STEEL AND DUNNAGE RACKS IN WALK-IN FREEZER, IF ANY ARE TO BE HEAVY DUTY 'NSF' APPROVED.
2. PROVIDE SEPARATE DESIGNATED WATERLINES WITH A TESTABLE RPZ (REDUCED PRESSURE ZONE BACKFLOW DEVICE) FOR ANY CHEMICAL FEEDS AT JANITORIAL SINK OR 3-COMPARTMENT SINK.
3. PROVIDE 'WATTS N9' (DUAL CHECK WITH A VENT BACKFLOW DEVICE) ON PRE-RINSE SPRAYERS.
4. PROVIDE ALL THE CABINETRY IN THE SERVERY WITH 6" HIGH STAINLESS STEEL LEGS OR OPEN-TO-FLOOR DESIGN PER LOCAL HEALTH DEPARTMENT'S REQUIREMENTS.
5. EXISTING/ NEW WALK-IN FREEZER, IF ANY SHALL HAVE A VAPOR PROOF FLUORESCENT FIXTURE WITH COLD TOLERANT BALLASTS WITH QUICK STARTS OR MULTIPLE INCANDESCENT LIGHTS.
6. BOTTLED BEVERAGES AND MISCELLANEOUS ITEMS NEED TO BE STORED AT LEAST 6 INCHES OFF THE FLOOR.
7. PROVIDE BACK SPLASH (SOLID SURFACE OR STAINLESS STEEL) AT ANY CABINETRY USED FOR FOOD PREPARATION.
8. ALL EQUIPMENTS IN THE KITCHEN SHALL ADHERE TO THE FOOD ESTABLISHMENT PLAN REVIEW GUIDE 2000 SECTION 3, AS PUBLISHED BY THE FOOD AND DRUG ADMINISTRATION.

CABINETRY INSTALLATION (AS APPLICABLE)

1. PROVIDE SHOP DRAWINGS FOR ALL THE BUILT-IN CASEWORK/ MILLWORK TO THE ARCHITECT FOR FINAL APPROVAL BEFORE MANUFACTURING OR INSTALLING IT.
2. INTERIOR OF ALL CABINETS - EXCEPT WERE NOTED TO BE WHITE LAMINATE.
3. SECURELY ATTACH WORK TO BUILDING ELEMENTS IN ACCORDANCE WITH WITH APPROVED SHOP DRAWINGS AND/OR INSTALLATION MANUAL. PROVIDE FASTENERS APPROPRIATE FOR CONDITION OF USE.
4. PROVIDE ALL CUTOUTS IN FIXTURES NECESSARY TO ACCOMMODATE ELECTRICAL, TELEPHONE, MECHANICAL, OR PLUMBING EQUIPMENT.
5. INSTALL ALL FINISH WORK USING CONCEALED FASTENERS TO FULLEST EXTENT POSSIBLE.
6. WHERE SURFACE NAILING IS UNAVOIDABLE, SET NAIL HEADS APPROXIMATELY 3/32" BELOW SURFACE. FILL WITH COLOR MATCHING FILLER FOR ADJACENT MATERIAL.
7. CUT JOINTS ACCURATELY TO A HAIRLINE FIT, MITER EXTERNAL CORNERS, COPE INTERNAL CORNERS. FILL, SAND SMOOTH ALL JOINTS TO AN INVISIBLE CONDITION. PRIME SURFACE FOR PAINT.
8. IDENTIFY KEYS FOR LOCKING HARDWARE, AND DELIVER KEYS TO OWNER.
9. PROVIDE REQUIRED BLOCKING PER MANUFACTURES INSTRUCTIONS FOR ALL FIXTURES BEFORE ANY INSTALLATION.

FIRE DEPARTMENT NOTES

1. ALL EGRESS DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT. SPECIAL LOCKING DEVICES SHALL BE OF AN APPROVED TYPE. ALL NEW DOORS SHALL HAVE APPROVED LEVER HANDLES.
2. THE MEANS OF EGRESS SHALL BE ILLUMINATED SUCH THAT THE INITIAL ILLUMINATION LEVEL IS AT LEAST AN AVERAGE OF ONE FOOT-CANDLE MEASURED ALONG THE PATH OF TRAVEL AT THE FLOOR LEVEL. PROVIDE BATTERY BACK-UP DEVICES TO ILLUMINATE THE MEANS OF EGRESS ON ALL LEVELS AS INDICATED. DEVICES IN TOILET ROOMS MUST BE DOUBLE HEAD TYPE AND PER THE APPLICABLE NEC, ALL DEVICES SHALL BE LED TYPE.
3. PROVIDE MINIMUM OF 1 FOOT CANDLE OF EMERGENCY LIGHTING AT THE FLOOR LEVEL ALONG ALL AREAS OF THE EGRESS CORRIDOR (WITHIN THE PROPOSED AREA OF CONSTRUCTION).
4. PROVIDE EXIT SIGN WITH 6" LETTERS OVER REQUIRED EXITS, WHERE SHOWN ON DRAWINGS, AND ADDITIONAL SIGNS AS REQUIRED BY FIRE PREVENTION BUREAU. CONNECT EXIT SIGNS TO EMERGENCY POWER CIRCUITS.
5. EXIT SIGNS AND EMERGENCY LIGHTING ARE TO BE BATTERY BACK-UP TYPE, MINIMUM 90 MINUTE. ALL EMERGENCY EXIT AND EGRESS LIGHTING LOCATIONS SHALL MEET THE REQUIREMENTS OF THE APPLICABLE IBC SECTIONS.
6. MAINTAIN AISLES AT LEAST 44" WIDE AT PUBLIC AREAS.
7. EXIT DOORS SHALL SWING IN THE DIRECTION OF TRAVEL WHEN SERVING 50 OR MORE PERSONS AND IN ANY HAZARDOUS AREA.
8. STORAGE, DISPENSING OR USE OF ANY FLAMMABLE OR COMBUSTIBLE LIQUIDS, FLAMMABLE GAS AND HAZARDOUS SUBSTANCES SHALL COMPLY WITH NATIONAL FIRE CODE REGULATIONS.
9. BRANCH CIRCUIT FEEDING THE EMERGENCY LIGHTS SHALL BE THE SAME BRANCH CIRCUIT AS THAT FEEDING THE NORMAL LIGHTING FIXTURES IN THE AREA.
10. PROVIDE FIRE DAMPERS OR DOORS WHERE AIR DUCTS PENETRATE FIRE-RATED WALLS OR CEILINGS.
11. WOOD BLOCKING SHALL BE FIRE TREATED IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS.
12. LOCATE THE CENTER OF FIRE ALARM INITIATING DEVICES 48" ABOVE THE LEVEL OF THE FLOOR, WORKING PLATFORM, GROUND SURFACE OR SIDEWALK.
13. EMERGENCY WARNING SYSTEMS SHALL ACTIVATE A MEANS OF WARNING THE HEARING IMPAIRED. FLASHING VISUAL WARNING SHALL HAVE A FREQUENCY OF NOT MORE THAN 60 FLASHES PER MINUTE.

FIRE EXTINGUISHER NOTES

1. THE CLASSIFICATION AND RATING OF FIRE EXTINGUISHERS AND THEIR INSTALLATION SHALL BE IN THE MANNER PRESCRIBED IN NFPA 10 "STANDARD FOR THE INSTALLATION OF PORTABLE FIRE EXTINGUISHERS", PUBLISHED BY

LIGHT FIXTURE SCHEDULE:

- REFER TO ELECTRICAL DRAWING FOR SWITCHING, DIMMER & CIRCUITING INFORMATION.
- ALL FIXTURE LOCATIONS, QUANTITIES & TYPES SHALL BE VERIFIED WITH OWNER OR INTERIOR DESIGNER IN FIELD PRIOR TO ROUGH-IN. ALL FIXTURES SHALL BE PROVIDED BY THE OWNER & INSTALLED BY THE CONTRACTOR.
- ALL FIXTURES SHALL BE U.L. LISTED FOR A SPECIFIED USE AND LOCATION SUCH AS INTERIOR USE OR EXTERIOR USE WITH WEATHER PROOF LABEL AS NECESSARY.

	TAG	SYMBOL	DESCRIPTION	MANUF./ SUPPLY	LAMP TYPE	EXTERIOR	INTERIOR	MOUNTING: WALL	MOUNTING: CEILING	MOUNTING: RECESSED	MOUNTING: SURFACE	NOTES:
EXTERIOR PARKING LOT	A1	LED	POLE MOUNTED EXTERIOR RATED LED LIGHT FIXTURE FOR PARKING LOT - SINGLE (MONO-HEAD) ARRANGEMENT - VERIFY ORIENTATION OF THE FIXTURE WITH THE OWNER IN FIELD	OSQM-B-18L-40K7-4M-UL-NM-BZ w/ OSQ-ML-B-DA-__ BY "CREE" LIGHTING	LED LAMP: 104W, 16000 LUMENS, 4000K TOTAL WATTS: 153W, 208V WITH SWIVEL PHOTOCELL OPTION	X						POLE: CL-SSP-4011-12-06-BZ (12' x 4" x 11GA STEEL SQUARE POLE) BOLT: 411 - PROVIDE BACKLIGHT SHIELD MEDIUM (BLSMF) FOR LIGHT FIXTURE ALONG THE NORTH & SOUTH PROPERTY LIGHTS. TYPICAL - 12' POLE + 2' CONCRETE BASE)
	B1	LED	EXTERIOR (WET) RATED LED BOLLARD LIGHT FIXTURE FOR CONCRETE WALK - VERIFY ORIENTATION OF THE FIXTURE WITH THE OWNER IN FIELD	TEXTURED BOLLARD PATH LIGHT BY "CREE" LIGHTING	LED LAMP: 10W, 100 LUMENS, 2800K TOTAL WATTS: 10W, 12V	X						ALL BOLLARDS SHALL BE INSTALLED ON A CONCRETE SONO-TUBE FOUNDATION

SITE CIVIL DATUM REFERENCES

TOP OF FIRST FLOOR CONC. SLAB = (+)100'-0"

551 CONGRESS PARKWAY, CRYSTAL LAKE IL

Building "A": 911.50'(CIVIL) = (+)100'-0"(ARCH)

Building "B": 915.00'(CIVIL) = (+)100'-0"(ARCH)

Building "C": 913.00'(CIVIL) = (+)100'-0"(ARCH)

SITEPLAN GENERAL NOTES:

1. REFER TO CIVIL DRAWINGS FOR ALL SITE DIMENSIONS, GRADING & UTILITY RELATED DETAILS & FEATURES.

2. REFER TO LANDSCAPE DRAWINGS FOR PROJECT SIGNAGE, RETAINING WALLS & OTHER SITE RELATED FEATURES & DETAILS AS APPLICABLE.

3. G.C. TO COORDINATE ALL CIVIL & LANDSCAPE DETAILS AMONG VARIOUS CONTRACTORS & TRADES INVOLVED, TYPICAL.

4. REFER TO SHEET A0.6, FAIR HOUSING ACCESSIBILITY STANDARDS APPLICABLE REQUIREMENTS & DETAILS FOR SITE ACCESSIBILITY REQUIREMENTS.

5. REFER TO SITE ELECTRICAL DRAWING FOR SITE POWER REQUIREMENTS.

6. THE G.C. SHALL COORDINATE ALL UTILITY ENTRANCE & METER LOCATIONS WITH THE LOCAL UTILITY COMPANY AND COORDINATE THE LOCATIONS WITH ALL TRADES INVOLVED. - LOCATIONS SHOWN ON SITE PLAN FOR SUCH ITEMS ARE SUGGESTIONS ONLY.

PROPERTY LINE (REFER TO CIVIL DRAWINGS)

PROPOSED 1-STORY NORTH GARAGE BUILDING (UNDER THIS PERMIT)

DOG PARK AREA (REFER TO CIVIL): MIN. 5'-0" HIGH WOOD FENCE WITH GATE WITH LATCH - PROVIDE MIN. 8" DIA. x 3'-6" DEEP CONC SONO-TUBE PIER FOR FOUNDATION FOR EACH 6x6 P.T. WOOD FENCE POST - DISTANCE BETWEEN POST NOT TO EXCEED 8-FOOT, TYPICAL

SUGGESTED LOCATION FOR ELECTRIC TRANSFORMER ON GRADE - PROVIDE 4" THICK CONCRETE SLAB OVER MIN. 6" COMPACTED GRAVEL - VERIFY LOCATION W/ UTILITY COMPANY - COORDINATE W/ LANDSCAPING PLAN

TRASH ENCL. ON CONCRETE SLAB - SEE DETAIL THIS SHEET, TYPICAL FOR TWO (2) LOCATIONS

BUILDING "A"
PROPOSED 3-STORY
APARTMENT BUILDING
(NOT PART OF THIS PERMIT)

SUGGESTED LOCATION FOR GAS METER & PRV - VERIFY LOCATION W/ UTILITY COMPANY - COORDINATE W/ LANDSCAPING PLAN

SUGGESTED LOCATION FOR ELECTRIC TRANSFORMER ON GRADE - PROVIDE 4" THICK CONCRETE SLAB OVER MIN. 6" COMPACTED GRAVEL - VERIFY LOCATION W/ UTILITY COMPANY - COORDINATE W/ LANDSCAPING PLAN

BOLLARD LIGHTS (B1) ALONG THE FRONT OF THE CONCRETE WALK - REFER TO SITE ELECTRICAL & LIGHT FIXTURE SCHEDULE - TYPICAL FOR EIGHTEEN (18) FIXTURES

TYPICAL SIDE WALK - SEE CIVIL DRAWINGS

GAZEBO ON CONCRETE PATIO - PROVIDE 4" THICK CONCRETE PATIO WITH CONTROL JOINTS AT 15' O.C. EACH WAY - OVER MIN. 6" COMPACTED GRAVEL - SEE CIVIL DRAWINGS

BUILDING "B"
PROPOSED 3-STORY
APARTMENT BUILDING
(NOT PART OF THIS PERMIT)

SUGGESTED LOCATION FOR GAS METER & PRV - VERIFY LOCATION W/ UTILITY COMPANY - COORDINATE W/ LANDSCAPING PLAN

SUGGESTED LOCATION FOR ELECTRIC TRANSFORMER ON GRADE - PROVIDE 4" THICK CONCRETE SLAB OVER MIN. 6" COMPACTED GRAVEL - VERIFY LOCATION W/ UTILITY COMPANY - COORDINATE W/ LANDSCAPING PLAN

TRASH ENCL. ON CONCRETE SLAB - SEE DETAIL ON SHEET A0.3, TYPICAL FOR TWO (2) LOCATIONS

POLE MOUNTED MOND-HEAD PARKING LOT LIGHT (FIXT. .A1) - REFER TO SITE ELECTRICAL & LIGHT FIXTURE SCHEDULE - TYPICAL FOR TWENTY (20) FIXTURES - REFER TO FOUNDATION DETAIL ON SHEET A0.3

PROPOSED 1-STORY SOUTH GARAGE BUILDING (UNDER THIS PERMIT)

SUGGESTED LOCATION FOR GAS METER & PRV - VERIFY LOCATION W/ UTILITY COMPANY - COORDINATE W/ LANDSCAPING PLAN

CONCRETE PATIO FOR DWELLING UNIT ON GRADE, TYPICAL - PROVIDE 4" THICK CONCRETE SLAB OVER MIN. 6" COMPACTED GRAVEL - SEE STRUCTURAL DRAWINGS

BUILDING "C"
PROPOSED 3-STORY
APARTMENT BUILDING
(UNDER THIS PERMIT)

CONCRETE TERRACE - PROVIDE 4" THICK CONCRETE PATIO WITH CONTROL JOINTS (CJ) AS SHOWN - OVER MIN. 6" COMPACTED GRAVEL - SEE CIVIL DRAWINGS

PROPERTY LINE (REFER TO CIVIL DRAWINGS)

PROPERTY LINE (REFER TO CIVIL DRAWINGS)

ONLY

ONLY

01 Proposed Architectural Site Plan

SCALE: NOT TO SCALE

Siteplan.dwg

N

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Document Record:

Issued Date	Description
09.08.2022	ISSUED FOR BUILDING PERMIT
05.04.2023	REVISIONS 1
09.13.2024	CITY REVISIONS - ELEVATIONS 2

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Proposed New Development for:

The Courtyard At Congress Station

551 Congress Parkway, Crystal Lake, Illinois

Issue Date: 09.08.2022

Drawn By: PAI

Sheet: PROPOSED ARCHITECTURAL SITE PLAN

A1.1

PAI PROJECT NUMBER
22116.00



2 2ND FLOOR LIFE SAFTEY PLAN

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

1 1ST FLOOR LIFE SAFTEY PLAN

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

KEY NOTES:

1. NONE

LIFE SAFETY - SYMBOLS LEGEND:

ROOM NAME & NUMBER

R — OCCUPANCY TYPE (I.B.C. TAB. 1004)

800 sf — AREA

(200) — FLOOR AREA (SF) PER OCCUPANT

04 — TOTAL OCCUPANTS

28 — OCCUPANCY THRU EXIT AND DIRECTION OF TRAVEL

220 — MAXIMUM OCCUPANCY RATING OF EGRESS DOORS

— MAXIMUM OCCUPANCY RATING OF EGRESS CORRIDOR

FE — SURFACE MOUNTED FIRE EXTINGUISHER

FEC — FIRE EXTINGUISHER CABINET

FHC — FIRE HOSE CONNECTION CABINET

SP/HC — STANDPIPE & FIRE HOSE CONNECTION

EXTERIOR EXIT DOOR / EXIT STAIR

HORIZONTAL EXIT

HORZ EXIT — EXIT SIGN / FACE

200' - 0" TRAVEL DISTANCE

(PATH OF TRAVEL AND DISTANCE)

LIFE SAFETY - DOOR SIZING & CAPACITY:

NUMBER OF OCCUPANTS PER EXIT DOOR FOR EGRESS WIDTH (SECTION 1005.3.2) W/ EMERGENCY VOICE/ ALARM COMMUNICATION SYSTEM.
0.2" PER OCCUPANT- **WITHOUT** AUTOMATIC SPRINKLER SYSTEM
0.15" PER OCCUPANT- **WITH** AUTOMATIC SPRINKLER SYSTEM

230	270	310	460
SINGLE LEAF	SINGLE LEAF	SINGLE LEAF	DOUBLE LEAF
36" DOOR (TYPICAL)	42" DOOR	48" DOOR	2 - 36" DOORS
34.5" CLEAR OPENING	40.5" CLEAR OPENING	46.5" CLEAR OPENING	68" CLEAR OPENING

DOOR HOLD-OPENS (ELECTRO-MAGNETIC), U.N.O.

LIFE SAFETY - EGRESS CORRIDOR CAPACITIES:

NUMBER OF OCCUPANTS FOR EGRESS CORRIDORS (0.15" PER OCCUPANT, SECTION 1005.3.2) W/ AUTOMATIC SPRINKLER SYSTEM & EMERGENCY VOICE/ ALARM COMMUNICATION SYSTEM.

— MAXIMUM OCCUPANCY RATING OF EGRESS CORRIDOR

LIFE SAFETY - EGRESS STAIR CAPACITIES:

NUMBER OF OCCUPANTS FOR EGRESS CORRIDORS (0.2" PER OCCUPANT, SECTION 1005.3.2) W/ AUTOMATIC SPRINKLER SYSTEM & EMERGENCY VOICE/ ALARM COMMUNICATION SYSTEM.

— MAXIMUM OCCUPANCY RATING OF EGRESS STAIR

LIFE SAFETY - OCCUPANCY CALCULATIONS:

OCCUPANCY CALCULATIONS ARE PROVIDED BASED ON THE TABLE 1004.1.2 (INTERNATIONAL BUILDING CODE) WITHIN THE INDIVIDUAL ROOMS / SPACES. PLEASE REFER TO LIFE SAFETY PLAN FOR ACTUAL OCCUPANCY CALCULATIONS.

FIRE RATED PARTITION LEGEND:

1 HR. RATED PARTITION (UP TO THE UNDERSIDE OF DECK)

2 HR. RATED PARTITION

2 HR FIRE RESISTANT RATED SHAFT ENCLOSURE

3 HR. RATED PARTITION

3 HR. RATED STRUCTURE LOAD BEARING WALL (NOT FIRE SEPARATION)

4 HR. RATED PARTITION

1/2 HR. RATED PARTITION IN CONCEALED ROOF SPACES

MEANS OF EGRESS NOTES:

GENERAL NOTES:

1. ENTIRE BUILDING SHALL BE PROTECTED BY AN AUTOMATIC FIRE SUPPRESSION SYSTEM PER NFPA-13.
2. PER SECTION 703.5 IBC : PROVIDE A HIGH CONTRAST 3 INCH TALL SOLID LETTERS LABEL IN THE FLOOR & CEILING SPACE AT ALL FIRE WALL, FIRE BARRIERS & FIRE PARTITIONS AT INTERVAL NOT EXCEEDING 30 FEET. " FIRE AND/ OR SMOKE BARRIER- PROTECT ALL OPENINGS".
3. ALL FIRE RATED WALL ASSEMBLIES SHALL BE CONTINUOUS FROM TOP OF SLAB / FOUNDATION TO UNDERSIDE OF THE RATED FLOOR OR ROOF DECK ABOVE OR UP TO RATED CEILING ABOVE.
4. FILL ALL CONSTRUCTION VOIDS WITHIN THE FIRE RATED ASSEMBLIES WITH FIRE RESISTING RATED MATERIAL (SEALANT / CAULK) TO MAINTAIN REQ'D FIRE RATING
5. THE CLASSIFICATION AND RATING OF FIRE EXTINGUISHERS AND THEIR INSTALLATION SHALL BE IN THE MANNER PRESCRIBED IN NFPA 10 "STANDARD FOR THE INSTALLATION OF PORTABLE FIRE EXTINGUISHERS", PUBLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION IN 1973 & THE LOCAL JURISDICTION. FIRE EXTINGUISHERS SHOWN ON PLAN AT 75 FEET MAX. SPACING. FINAL LOCATION AND QUANTITY TO BE DETERMINES WITH FIRE MARSHAL.
6. REFER TO "GENERAL NOTES" ON "SHEET A000b"

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Proposed New Development for:

The Courtyard At Congress Station

551 Congress Parkway, Crystal Lake, Illinois

Issue Date: 09.08.2022
Drawn By: PAI

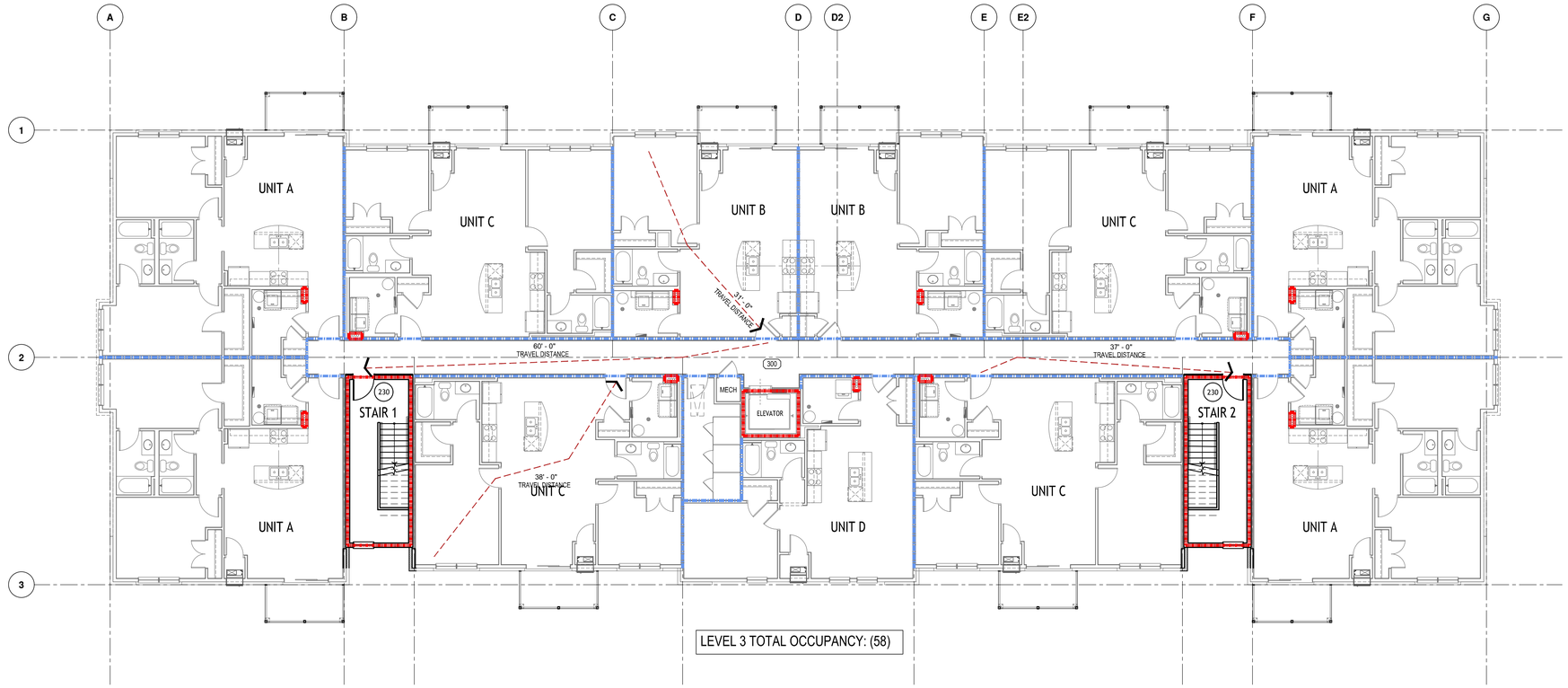
Sheet:
1ST & 2ND FLOOR LIFE SAFETY PLAN

A1.2

PAI PROJECT NUMBER
22116.00

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1 3RD FLOOR LIFE SAFETY PLAN
SCALE: 1/8" = 1'-0"

KEY NOTES:

1. NONE

LIFE SAFETY - SYMBOLS LEGEND:

ROOM NAME & NUMBER

R — OCCUPANCY TYPE (I.B.C. TAB. 1004)
800 sf — AREA
(200) — FLOOR AREA (SF) PER OCCUPANT
04 — TOTAL OCCUPANTS

28 — OCCUPANCY THRU EXIT AND DIRECTION OF TRAVEL

220 — MAXIMUM OCCUPANCY RATING OF EGRESS DOORS

— MAXIMUM OCCUPANCY RATING OF EGRESS CORRIDOR

FE — SURFACE MOUNTED FIRE EXTINGUISHER

FEC — FIRE EXTINGUISHER CABINET

FHC — FIRE HOSE CONNECTION CABINET

SP/HC — STANDPIPE & FIRE HOSE CONNECTION

EXTERIOR EXIT DOOR / EXIT STAIR

HORIZONTAL EXIT

HORZ EXIT — EXIT SIGN / FACE

200' - 0" TRAVEL DISTANCE
(PATH OF TRAVEL AND DISTANCE)

LIFE SAFETY - DOOR SIZING & CAPACITY:

NUMBER OF OCCUPANTS PER EXIT DOOR FOR EGRESS WIDTH (SECTION 1005.3.2) W/ EMERGENCY VOICE/ ALARM COMMUNICATION SYSTEM.
0.2" PER OCCUPANT- **WITHOUT** AUTOMATIC SPRINKLER SYSTEM
0.15" PER OCCUPANT- **WITH** AUTOMATIC SPRINKLER SYSTEM

230	270	310	460
SINGLE LEAF	SINGLE LEAF	SINGLE LEAF	DOUBLE LEAF
36" DOOR (TYPICAL)	42" DOOR	48" DOOR	2 - 36" DOORS
34.5" CLEAR OPENING	40.5" CLEAR OPENING	46.5" CLEAR OPENING	69" CLEAR OPENING

DOOR HOLD-OPENS (ELECTRO-MAGNETIC), U.N.O.

LIFE SAFETY - EGRESS CORRIDOR CAPACITIES:

NUMBER OF OCCUPANTS FOR EGRESS CORRIDORS (0.15" PER OCCUPANT, SECTION 1005.3.2) W/ AUTOMATIC SPRINKLER SYSTEM & EMERGENCY VOICE/ ALARM COMMUNICATION SYSTEM.

— MAXIMUM OCCUPANCY RATING OF EGRESS CORRIDOR

LIFE SAFETY - EGRESS STAIR CAPACITIES:

NUMBER OF OCCUPANTS FOR EGRESS CORRIDORS (0.2" PER OCCUPANT, SECTION 1005.3.2) W/ AUTOMATIC SPRINKLER SYSTEM & EMERGENCY VOICE/ ALARM COMMUNICATION SYSTEM.

— MAXIMUM OCCUPANCY RATING OF EGRESS STAIR

LIFE SAFETY - OCCUPANCY CALCULATIONS:

OCCUPANCY CALCULATIONS ARE PROVIDED BASED ON THE TABLE 1004.1.2 (INTERNATIONAL BUILDING CODE) WITHIN THE INDIVIDUAL ROOMS / SPACES. PLEASE REFER TO LIFE SAFETY PLAN FOR ACTUAL OCCUPANCY CALCULATIONS.

FIRE RATED PARTITION LEGEND:

- 1 HR. RATED PARTITION (UP TO THE UNDERSIDE OF DECK)
- 2 HR. RATED PARTITION
- 2 HR FIRE RESISTANT RATED SHAFT ENCLOSURE
- 3 HR. RATED PARTITION
- 3 HR. RATED STRUCTURE LOAD BEARING WALL (NOT FIRE SEPARATION)
- 4 HR. RATED PARTITION
- 1/2 HR. RATED PARTITION IN CONCEALED ROOF SPACES

MEANS OF EGRESS NOTES:

GENERAL NOTES:

1. ENTIRE BUILDING SHALL BE PROTECTED BY AN AUTOMATIC FIRE SUPPRESSION SYSTEM PER NFPA-13.
2. PER SECTION 703.5 IBC : PROVIDE A HIGH CONTRAST 3 INCH TALL SOLID LETTERS LABEL IN THE FLOOR & CEILING SPACE AT ALL FIRE WALL. FIRE BARRIERS & FIRE PARTITIONS AT INTERVAL NOT EXCEEDING 30 FEET. " FIRE AND/ OR SMOKE BARRIER- PROTECT ALL OPENINGS".
3. ALL FIRE RATED WALL ASSEMBLIES SHALL BE CONTINUOUS FROM TOP OF SLAB / FOUNDATION TO UNDERSIDE OF THE RATED FLOOR OR ROOF DECK ABOVE OR UP TO RATED CEILING ABOVE.
4. FILL ALL CONSTRUCTION VOIDS WITHIN THE FIRE RATED ASSEMBLIES WITH FIRE RESISTING RATED MATERIAL (SEALANT / CAULK) TO MAINTAIN REQ'D FIRE RATING
5. THE CLASSIFICATION AND RATING OF FIRE EXTINGUISHERS AND THEIR INSTALLATION SHALL BE IN THE MANNER PRESCRIBED IN NFPA 10 "STANDARD FOR THE INSTALLATION OF PORTABLE FIRE EXTINGUISHERS", PUBLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION IN 1973 & THE LOCAL JURISDICTION. FIRE EXTINGUISHERS SHOWN ON PLAN AT 75 FEET MAX. SPACING. FINAL LOCATION AND QUANTITY TO BE DETERMINES WITH FIRE MARSHAL.
6. REFER TO "GENERAL NOTES" ON "SHEET A000b"

Document Record:

Issued Date	Description
09.08.2022	ISSUED FOR BUILDING PERMIT
05.04.2023	REVISIONS 1
09.13.2024	CITY REVISIONS - ELEVATIONS 2

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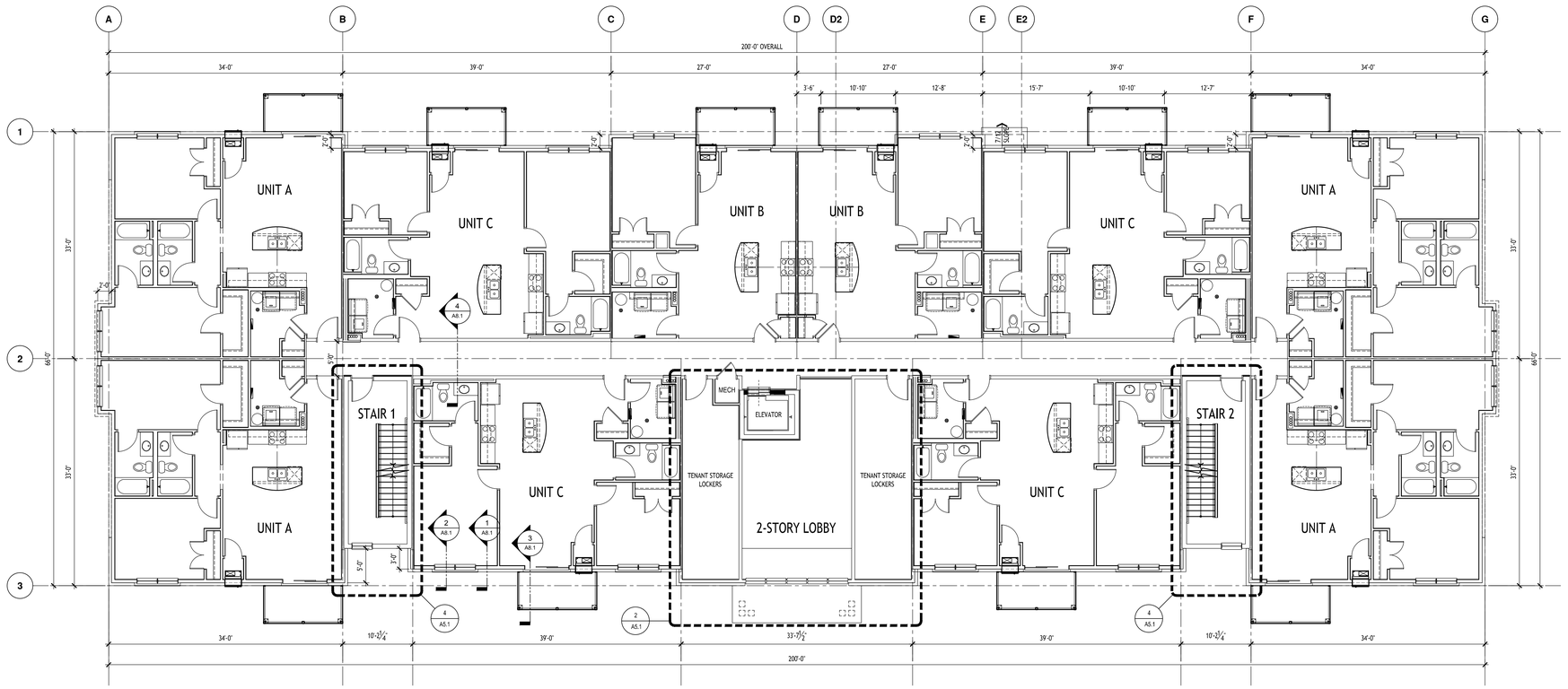
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3RD FLOOR LIFE SAFETY PLAN

A1.3

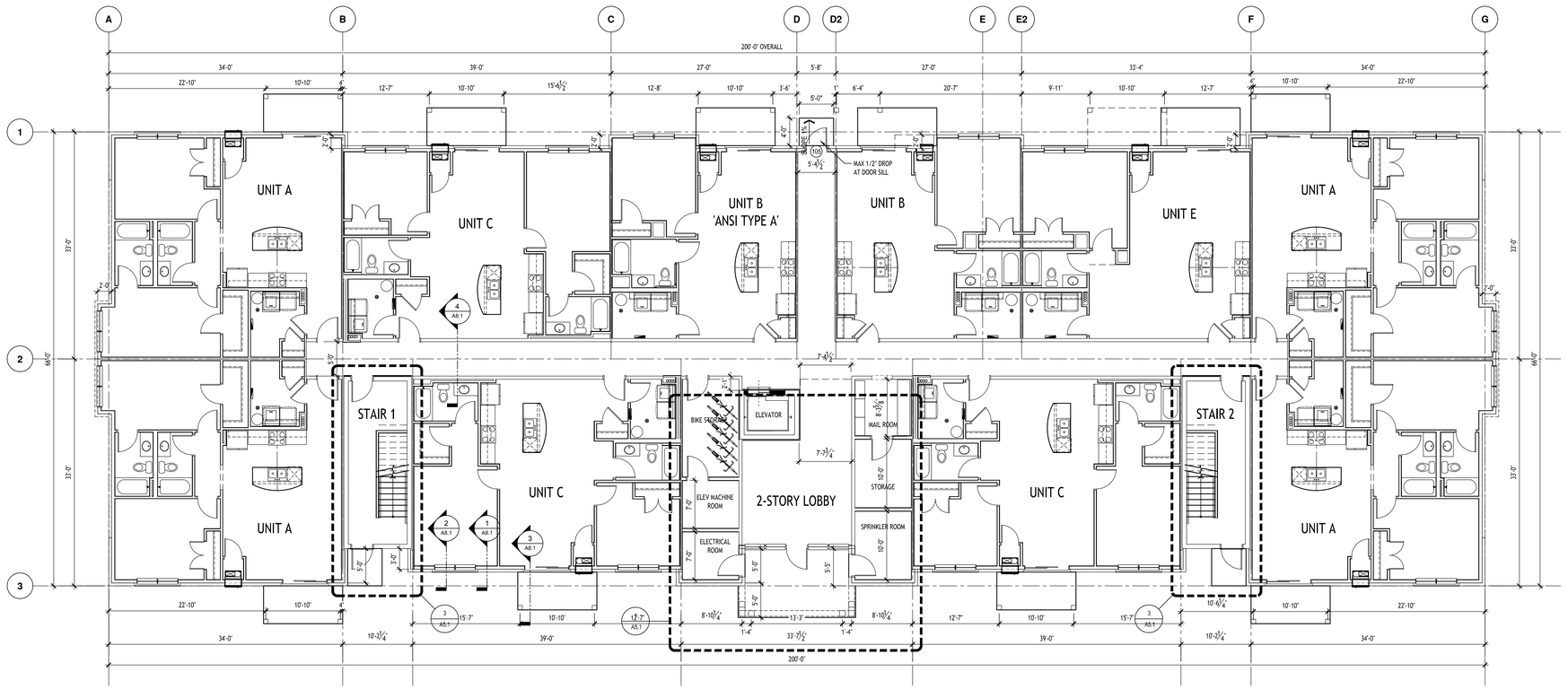
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2 2ND FLOOR
SCALE: 1/8" = 1'-0"



1 1ST FLOOR
SCALE: 1/8" = 1'-0"

TYPICAL FLOOR PLAN GENERAL NOTES:

1. REFER TO UNIT PLAN SHEETS FOR FURTHER INFORMATION ON UNIT LAYOUT & REQUIREMENTS OF ADAPTABLE UNITS.

2. REFER TO SHEET A9.1 FOR INFORMATION ON WALL CONSTRUCTION.

3. G.C. TO COORDINATE ALL PLUMBING / MECHANICAL / FIRE PROTECTION PENETRATION THROUGH FLOORS / WALLS AMONG VARIOUS CONTRACTORS & TRADES INVOLVED, TYPICAL.

4. ALL DIMENSIONS ARE FROM ONE (1) OF THE FOLLOWING TWO (2) CASES (U.N.O.).
- FROM CENTERLINE OF UNIT SEPARATION WALL TO CENTERLINE OF UNIT SEPARATION WALL, OR TO FACE OF STUD (AT EXTERIOR WALL).
- FROM FACE OF STUD TO FACE OF STUD (ALL INTERIOR DIMENSIONS).

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Sheet:
1ST & 2ND FLOOR PLAN

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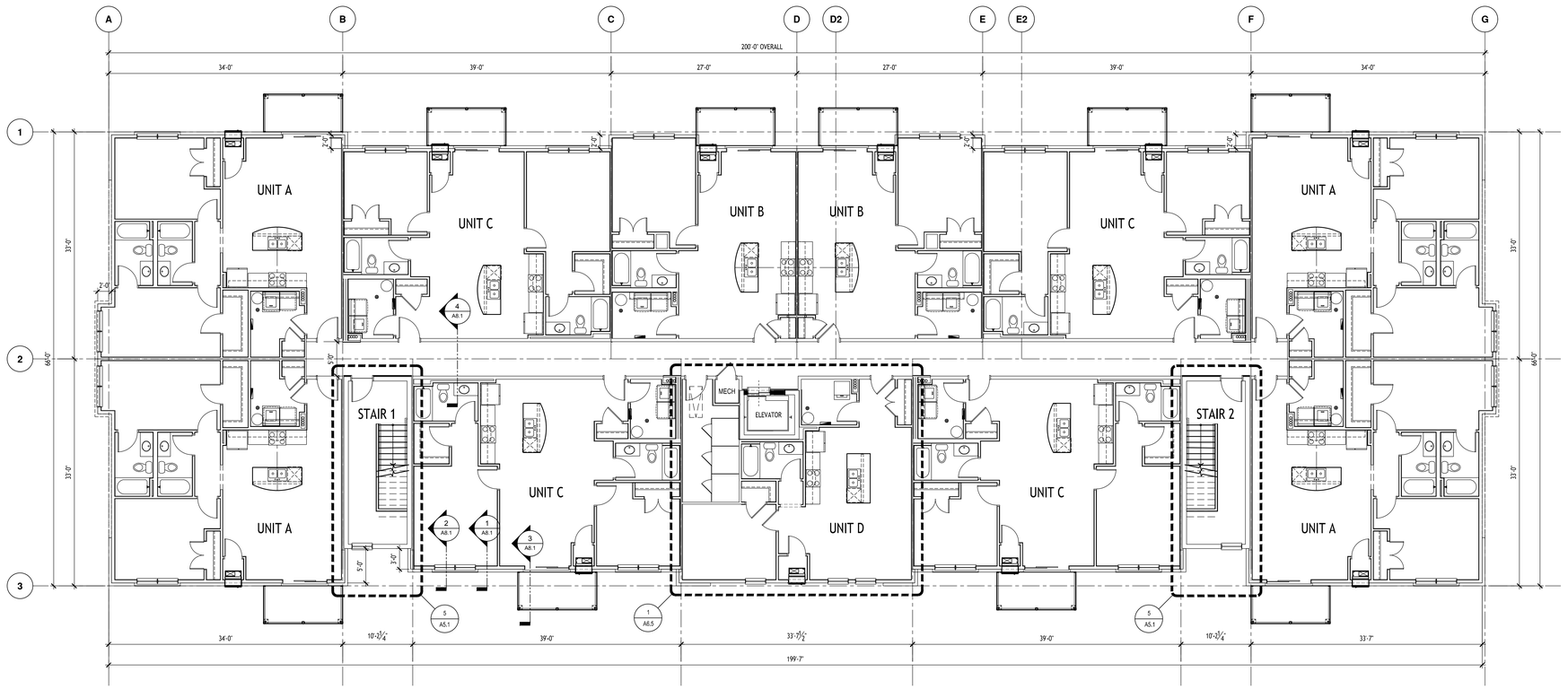
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2. REFER TO SHEET A4.1 FOR INFORMATION ON WALL CONSTRUCTION.

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1 3RD FLOOR PLAN
SCALE: 1/8" = 1'-0"

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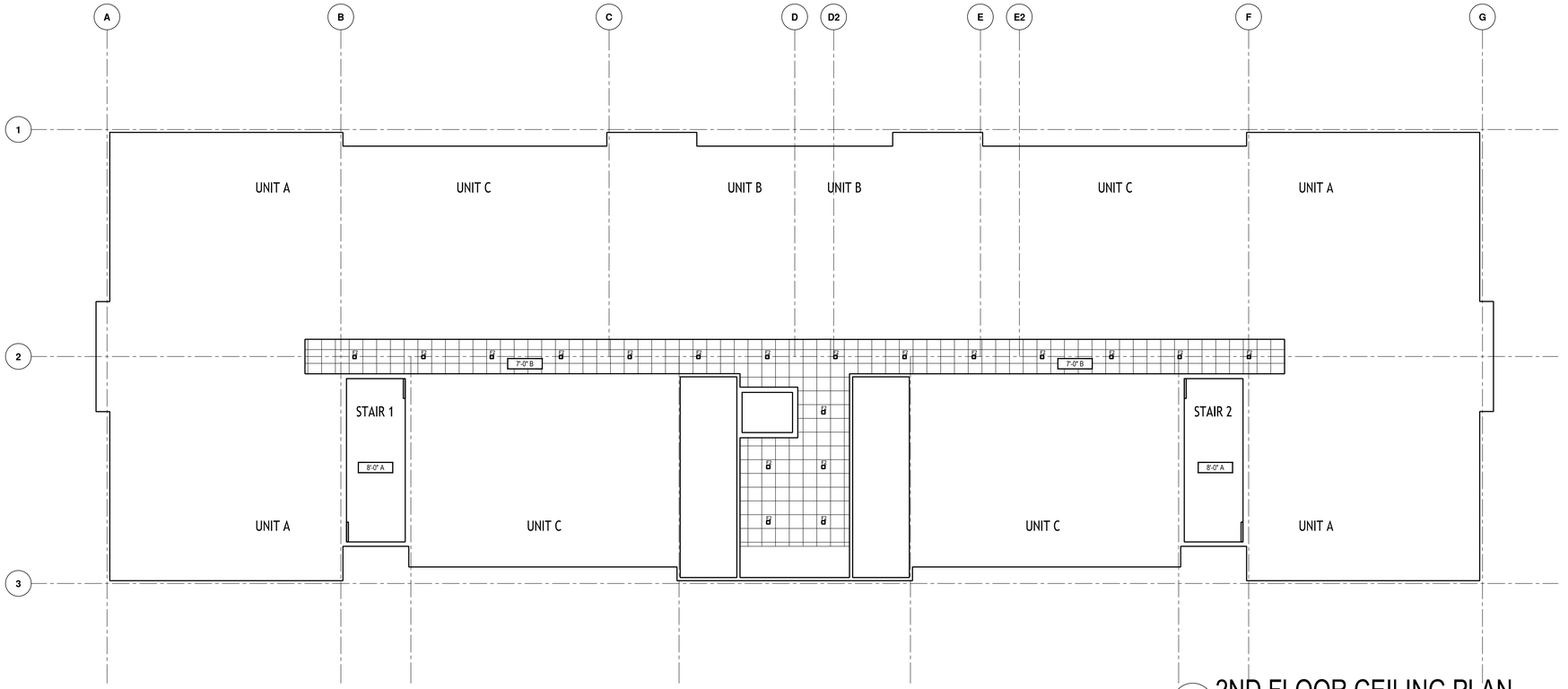
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2 2ND FLOOR CEILING PLAN

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

LIGHT FIXTURE SCHEDULE

- REFER TO ELECTRICAL DRAWING FOR SWITCHING, DIMMER & CIRCUITING INFORMATION.
- ALL FIXTURES LOCATIONS, QUANTITIES & TYPES SHALL BE VERIFIED WITH OWNER OR INTERIOR DESIGNER IN FIELD PRIOR TO ROUGH-IN. ALL FIXTURES SHALL BE U.L. LISTED FOR A SPECIFIED USE AND LOCATION SUCH AS INTERIOR USE OR EXTERIOR USE WITH WEATHER PROOF LABEL AS NECESSARY.

	TAG	SYMBOL	DESCRIPTION	MANUF./ SUPPLY	LAMP TYPE	SYSTEM	MOUNTING: INTERIOR	WALL	CEILING	SURFACE	NOTES
EXTERIOR LIGHTING			EMERGENCY EXIT LIGHT COMBO - LED BULBS	CREE (BUDG-ARMATURE MODEL SURFMW)	LAMP: 2 C 7 W, VOLTS: 120, TOTAL WATTS: 14.0, 120V		X	X			X EMERGENCY EXIT LIGHT
			EMERGENCY LIGHT - LED BULBS	CREE (BUDG-ARMATURE MODEL SWF2RW)	LAMP: 2 C 5 W, VOLTS: 120, TOTAL WATTS: 7.8, 120V		X	X			EMERGENCY LIGHT
	F1		RAIN LAY-IN MOUNTED LED LIGHT PANEL WITH LENSE	EDGEPOINT CREE MODEL: PFD-06-WW-W	LED LAMP: 6W, 3400 LUMENS, 1000LPW, 4000K TOTAL WATTS: 6W, 277 V		X			X	X PROVIDE SPECIFIED OR EQUAL
	F2		6" LED RECESSED CAN LIGHT	"CREE" OR EQUAL	LED LAMP: 13W, 1000 LUMENS, 4000K TOTAL WATTS: 13W, 120 V		X		X	X	X PROVIDE SPECIFIED OR EQUAL, PAINT CLEAR TO MATCH WITH THE CANOPY
	F3		DECORATIVE ACCENT LED PENDENT LIGHT FIXTURE, SUSPENDED WITH MONEY CABLES FROM THE PANEL POST OF ROOF STRUCTURE ABOVE	BY OWNER	LED LAMP: 15W, 1600 LUMENS, 4000K TOTAL WATTS: 15W, 120 V		X			X	X PROVIDE SPECIFIED OR EQUAL, PAINT CLEAR TO MATCH WITH THE CANOPY
	F4		SUSPENDED CHANDELIER LED LIGHTING WITH LED BULB SUSPENDED WITH MONEY CABLES FROM REINFORCED CONCRETE ROOF ABOVE	BY OWNER			X			X	X TO BE CENTERED WITHIN THE ROOM
	F5		Rev-E - 48x10 SUSPENDED LED LIGHT PANEL WITH LENSE	CS SERIES BY CREE MODEL: CS16-48-WW-WH-10- MODEL: CS16-48-WW-WH-10-	LED LAMP: 10W, 6000 LUMENS, 114LPW, 4000K TOTAL WATTS: 10W, 120 V		X		X		X PROVIDE SPECIFIED OR EQUAL
EXTERIOR LIGHTING	A1		POLE MOUNTED DESIGN IN RETRO LED LIGHT FIXTURE FOR PARKING LOT, WALK TO BACK ARRANGEMENT - WHITE COLOR AS PER THE OWNER'S FIELD	ALED STAR BY "NEW" LIGHTING	LED LAMP: 160W, 16000 LUMENS, 4000K TOTAL WATTS: 160W, 120 VOLTS (50/60), PHOTOCELL OPTION	X					POLE PER FLYERS BRACKET: ARM SIZE AS SHOWN
	A2		POLE MOUNTED OUTDOOR RETRO LED LIGHT FIXTURE FOR PARKING LOT, WALK TO BACK ARRANGEMENT - WHITE COLOR AS PER THE OWNER'S FIELD	(2) ALED STAR BY "NEW" LIGHTING	LED LAMP: (2) 80W, 8000 LUMENS, 4000K TOTAL WATTS: 160W, 120 VOLTS (50/60), PHOTOCELL OPTION	X					POLE PER FLYERS BRACKET: ARM SIZE AS SHOWN
	A3		EXPOSED WATTPROOF LED WALL MOUNT FIXTURE FOR CONCRETE WALL - VERIFY DIRECTION OF THE FIXTURE WITH THE OWNER IN FIELD	"SURFACE MOUNTED PATTY LIGHT" BY "SHOALS" LIGHTING	LED LAMP: 14W, 1400 LUMENS, 3000K TOTAL WATTS: 14W, 120	X					ALL MOUNTED SHALL BE INSTALLED AT APPROX. EQUAL DISTANCE FROM EACH OTHER
INTERIOR LIGHTING	A10		6" LED RECESSED CAN LIGHT	"CREE" OR EQUAL	LED LAMP: 15W, 1200 LUMENS, 4000K TOTAL WATTS: 15W, 120 V		X		X	X	X PROVIDE SPECIFIED OR EQUAL, PAINT CLEAR TO MATCH WITH THE CANOPY
	A12		DECORATIVE ACCENT LED PENDENT LIGHT FIXTURE, SUSPENDED FROM RECESSED JUNCTION BOX ABOVE	BY OWNER	LED LAMP: 15W, 1600 LUMENS, 4000K TOTAL WATTS: 15W, 120		X			X	X TO BE CENTERED ABOVE THE KITCHEN ISLAND, KITCHEN ISLAND
	A13		DECORATIVE LED WALL MOUNTED LIGHT FIXTURE - FROM RECESSED WALL MOUNTED JUNCTION BOX	BY OWNER	LED LAMP: 15W, 1600LUMENS, 4000K TOTAL WATTS: 15W, 120		X		X		X TO BE CENTERED ABOVE THE FIREPLACE MANTLE, MANTLE FIXTURE TO BE AT 8'-0" A.F.F.
	A14		SURFACE MOUNTED LED LIGHT FIXTURE WITH LENSE	"CREE" OR EQUAL	LED LAMP: 15W, 1200 LUMENS, 4000K TOTAL WATTS: 15W, 120 V		X		X		X TO BE CENTERED WITHIN THE CLOSET OR HALL
	A15		DECORATIVE LED WALL MOUNTED FIXTURE (ART) MOUNTED ON THE WALL - FROM RECESSED WALL MOUNTED JUNCTION BOX	BY OWNER	LED LAMP: 15W, 1600LUMENS, 4000K TOTAL WATTS: 15W, 120	X			X		X TO BE MOUNTED ON THE CLOSET WALL, MANTLE FIXTURE TO BE AT 8'-0" A.F.F.
	A16		DECRATIVE WATTPROOF LIGHT FIXTURE WITH X-SWITCH - REPLACE FROM RECESSED CEILING MOUNTED PATTED JUNCTION BOX - VERIFY LOCATION OF SUPPORT OF OPT HOUSINGS FOR FIXTURE STRUCTURE	BY OWNER	LED LAMP: 21W, 1600LUMENS, 4000K TOTAL WATTS: 21W, 120		X		X		X TO BE CENTERED WITHIN THE ROOM

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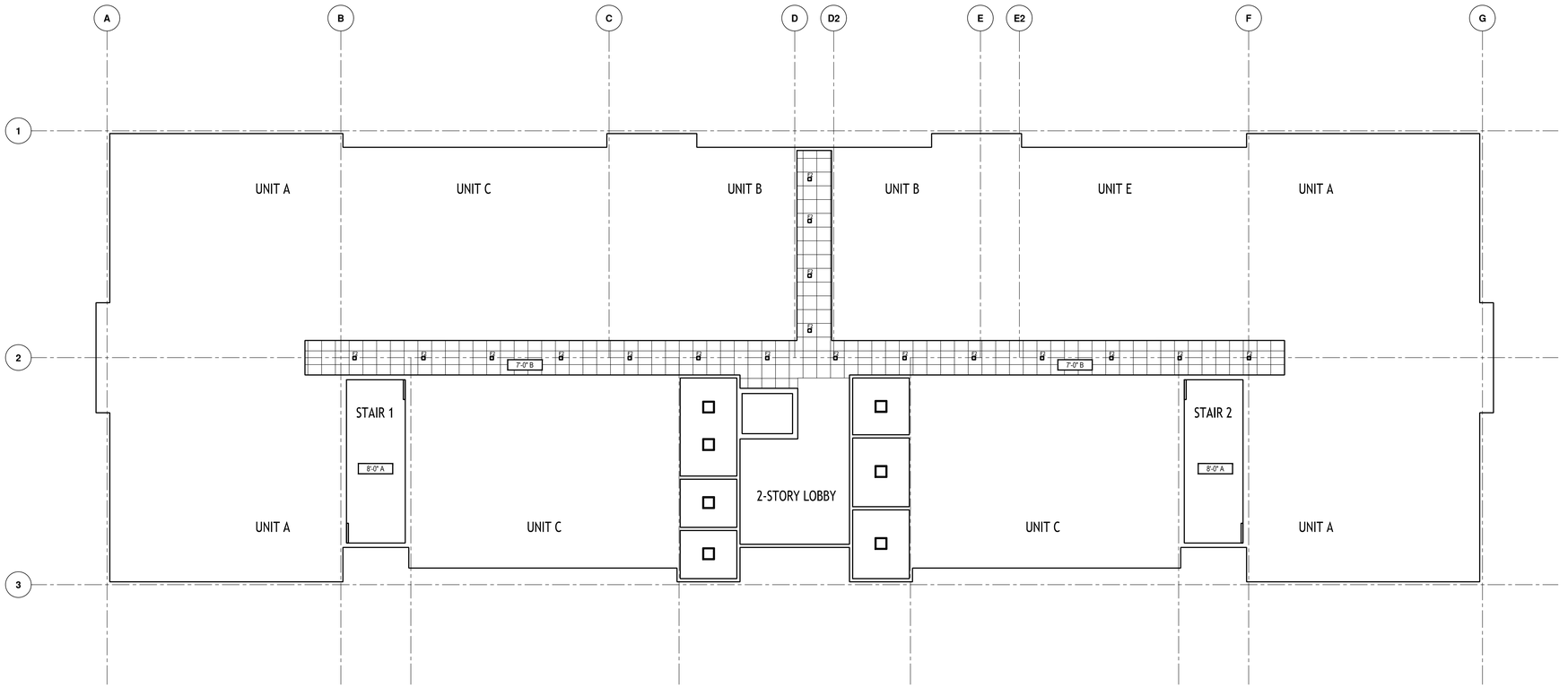
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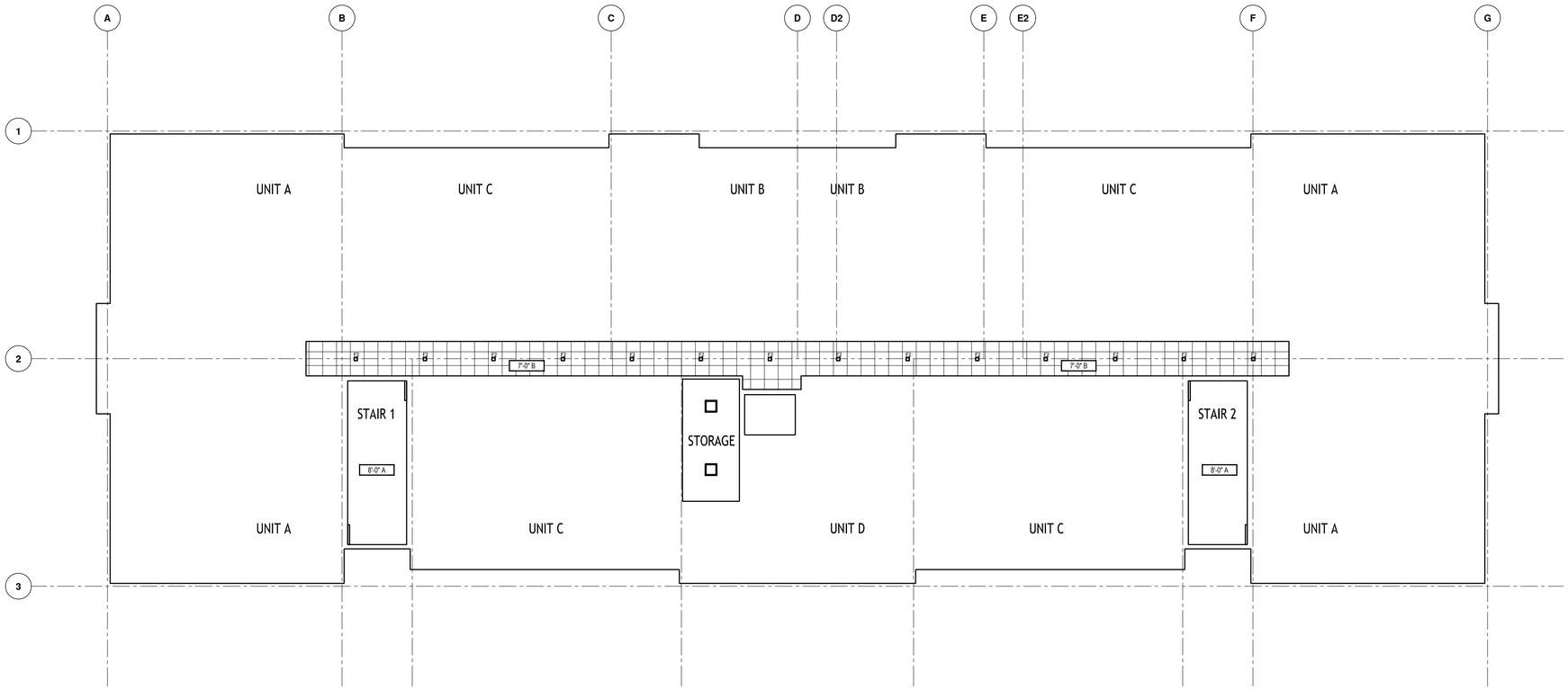
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LIGHT FIXTURE SCHEDULE

- REFER TO ELECTRICAL DRAWING FOR SWITCHING, DIMMER & CIRCUITING INFORMATION.
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	TAG	SYMBOL	DESCRIPTION	MANUF. / SUPPLY	LAMP TYPE	VOLTAGE	MOUNTING: INTERIOR	WALL	CEILING	SURFACE	NOTES
EGRESS LIGHTING			EMERGENCY EXIT LIGHT COMBO - LED BULBS	CREE (RUDD) HERMITAGE MODEL: EXPOWH	LAMP: 2 C 7 W, LED, TOTAL WATTS: 5 W, 120V		X	X			X	EMERGENCY EXIT LIGHT
			EMERGENCY LIGHT - LED BULBS	CREE (RUDD) HERMITAGE MODEL: EMPOWH	LAMP: 2 C 7W LED, TOTAL WATTS: 5 W, 120V		X	X				EMERGENCY LIGHT
	P1		RAIN LIFE IN MOUNTED LED LIGHT PANEL WITH LENSE	EDISWAN MF12600 MODEL: FPD-30-L/65-1M	LED LAMP, 3940, 3685 LUMENS, 1000K- 4000K TOTAL WATTS: 3940_3717 =		X		X	X		PROVIDE SPECIFIED OR EQUAL
	F2		4" LED RECESSED CAN LIGHT	"CREE" OR EQUAL	LED LAMP, 1100, 1000 LUMENS, 4000K TOTAL WATTS: 1100 - 1000 =		X		X	X		PROVIDE SPECIFIED OR EQUAL FIXTURE QUANTITY SHALL BE VERIFIED WITH THE OWNER
	F3		RECESSED FIXTURE WITH FROSTED LIGHT FIXTURE, SUSPENDED WITH ANCHOR T CABLES FROM THE FINAL POST OF WOOD STRUCTURE ABOVE	BY OWNER	LED LAMP, 1500, 1400 LUMENS, 4000K TOTAL WATTS: 1500 - 1400 =		X		X			PROVIDE SPECIFIED OR EQUAL FIXTURE QUANTITY SHALL BE VERIFIED WITH THE OWNER
	F4		SUSPENDED CHANDELIER LARGE CRYSTAL WITH LED BULBS SUSPENDED WITH ANCHOR T CABLES FROM REINFORCED CONCRETE ROOF ABOVE	BY OWNER			X		X		X	TO BE CENTERED WITHIN THE ROOM
	F5		Rail 5 - 48x10 SUSPENDED LED LIGHT PANEL WITH LENSE	CE SERIES BY CREE* MODEL: CE5-48-40 -WW-1M MODEL: CE5-48-40-NW-1M =	LED LAMP, 1991, 3685 LUMENS, 1144.7W, 4000K TOTAL WATTS: 1991-1201 =		X		X		X	PROVIDE SPECIFIED OR EQUAL
EXTERIOR STAIRWELLS	A1		POLE MOUNTED EXTERIOR RETRO LED LIGHT FIXTURE FOR PARKING LOT - BIKE TRAIL ARRANGEMENT - WHITE ALUMINUM HOUSING WITH CLEAR TEMPERED GLASS LENS	ALED STAR-R7 "R&R" LIGHTING	LED LAMP, 16296, 16296 LUMENS, 4000K TOTAL WATTS: 16296, 120-16176 (NOTE), PHOTOCELL OPTION	X						POLE TRU FLARE BRACKET: ARM 30A SA BALL 4.5
	A2		POLE MOUNTED EXTERIOR RETRO LED LIGHT FIXTURE FOR PARKING LOT - BIKE TRAIL ARRANGEMENT - WHITE ALUMINUM HOUSING WITH CLEAR TEMPERED GLASS LENS	(2) ALED STAR-R7 "R&R" LIGHTING	LED LAMP, (2) 8296, 32592 LUMENS, 4000K TOTAL WATTS: 16296, 120-16176 (NOTE), PHOTOCELL OPTION	X						POLE TRU FLARE BRACKET: ARM 30A SA BALL 4.5
	A3		EXPOSED ARCHITECTED LED WELLARD LIGHT FIXTURES FOR CONCRETE WALL - VERIFY DIRECTION OF THE FIXTURE WITH THE OWNER IN FIELD	"SURFASES WELLARD PATH LIGHT 24 "SHALLOW" LIGHTING	LED LAMP, 1008, 1000 LUMENS, 3000K TOTAL WATTS: 1008, 120	X						ALL BOLLARDS SHALL BE MOUNTED AT APPROX. EQUAL DISTANCE FROM EACH OTHER
	A4											
KITCHEN LIGHTING	F01		4" LED RECESSED CAN LIGHT	"CREE" OR EQUAL	LED LAMP, 1100, 1000 LUMENS, 4000K TOTAL WATTS: 1100 - 1000 =		X		X	X	X	PROVIDE SPECIFIED OR EQUAL QUICK QUANTITY SHALL BE VERIFIED WITH THE OWNER
	F02		RECESSED PLASTIC LED LIGHT FIXTURE WITH LIGHT SUSPENDED FROM RECESSED JUNCTION BOX ABOVE	BY OWNER	LED LAMP, 1500, 1400 LUMENS, 4000K TOTAL WATTS: 1500 - 1400 =		X		X	X	X	TO BE CENTERED ABOVE THE KITCHEN ISLAND
	F03		RECESSED LED WALL MOUNTED LIGHT FIXTURE - FROM RECESSED WALL MOUNTED JUNCTION BOX	BY OWNER	LED LAMP, 1500, 1400LUMENS, 4000K TOTAL WATTS: 1500 - 1400		F		X			TO BE CENTERED ABOVE THE KITCHEN ISLAND FIXTURE TO BE 8'-0" A.F.F.
	F04		SURFACE MOUNTED LED LIGHT FIXTURE WITH LENSE	"CREE" OR EQUAL	LED LAMP, 1391, 1300 LUMENS, 4000K TOTAL WATTS: 1391 - 1201 =		X		X	X		TO BE CENTERED WITHIN THE FLOOR OR WALL
	F05		RECESSED PLASTIC LED WALL MOUNTED FIXTURE (MATCH WHITE WALL COLOR) - FROM RECESSED WALL MOUNTED JUNCTION BOX	BY OWNER	LED LAMP, 1500, 1400LUMENS, 4000K TOTAL WATTS: 1500 - 1201	X			X			TO BE INSTALLED ON THE 1 CLASS ROOF SIDE OF THE BUILDING FIXTURE TO BE AT 8'-0" A.F.F.
	F06		WALL MOUNTED WITH LIGHT FIXTURE WITH 4 DIRECTIO - INSTALLED FROM RECESSED CEILING MOUNTED FROM RECESS JUNCTION BOX ABOVE - PROVIDE ADEQUATE SUPPORT OF 24" HOUSING FOR EMBED STRUCTURE	BY OWNER/R	LED LAMP, 2100, 1400LUMENS, 4000K TOTAL WATTS: 2100 - 1201		X		X		X	TO BE CENTERED WITHIN THE ROOM



1 3RD FLOOR CEILING PLAN
SCALE: 1/8" = 1'-0"

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Proposed New Development for:

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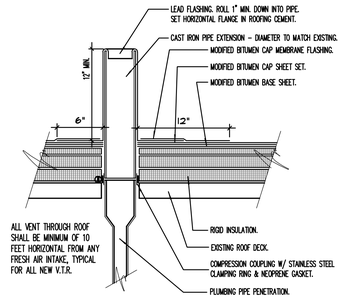
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Sheet:
3RD FLOOR CEILING PLAN

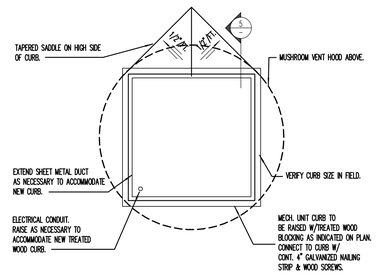
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TYPICAL VENT PIPE EXTENSION DET. 3
SCALE: NTS



TYPICAL MECHANICAL UNIT CURB 4
SCALE: NTS

ATTIC VENTILATION SCHEDULE (2012 IRC)

AREA	ATTIC AREA (SQ FT)	TOTAL NET FREE VENTED AREA REQ. (1/300) (SQ IN)	TOTAL NET FREE VENTED AREA REQ. (1/150) (SQ IN)	LOWER - SOFFIT (SQ IN / LF)				UPPER - RIDGE & POD (SQ IN / LF)					
				REQ*		PROVIDED **	LINEAR FT	REQ*		PROVIDED ***	LINEAR FT	PROVIDED ****	COUNT
				REMAINING REQUIRED				40% (MIN.)	50% (MAX.)				
MAIN ROOF	12501	6000		3000	3600	3000	300	2400	3000	2400	200	600	12

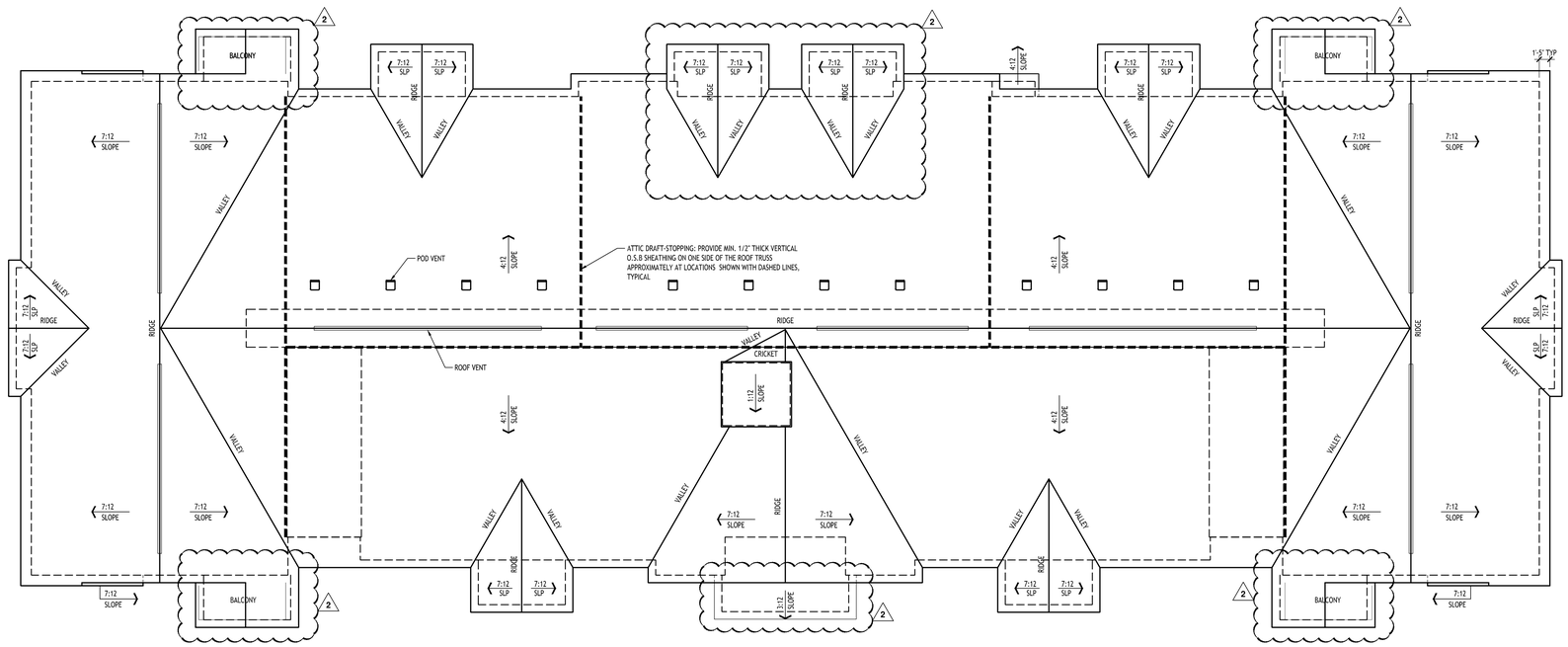
NOTE:
* REQUIRED NET FREE VENTED AREAS ARE CALCULATED BY MULTIPLYING THE ACTUAL ATTIC AREA (SQ FT) IN COLUMN 1 BY 1/300 AND MULTIPLYING SUM BY 144 SQ IN/SQ FT 40%-50% OF TOTAL NET FREE VENTED AREA IS REQUIRED AT THE RIDGE (HIGH) AND THE REMAINING IS THE REQUIRED IN THE SOFFIT (LOW). WHEN NO "HIGH/LOW" VENTING IS PROVIDED, THE REQUIRED NET FREE AREA IS 1/150 OF THE ACTUAL AREA AND 100% OF THIS VENTED AREA SHALL BE PROVIDED AT THE SOFFIT.

** ACTUAL NET FREE VENTED SOFFIT AREAS ARE CALCULATED BY DIVIDING THE REQUIRED NET FREE VENTED SOFFIT AREA (FT) BY THE MANUFACTURERS STATED ACTUAL VENTED NET FREE AREA PER VENT - MANUFACTURER TO VERIFY THE SOFFIT VENT NET FREE AREA = MIN 10.0 SQ IN/VENT, WHEN APPLICABLE, THE ACTUAL TOTAL NUMBER OF SOFFIT VENTS SHALL BE DIVIDED EQUALLY BETWEEN EACH EAVE AND SPACED AN EQUAL DISTANCE APART FROM ONE ANOTHER.

ACTUAL NET FREE VENTED RIDGE AREAS ARE CALCULATED BY DIVIDING THE REQUIRED NET FREE VENTED RIDGE AREA (FT) BY THE MANUFACTURERS STATED ACTUAL VENTED NET FREE AREA PER VENT -

*** MANUFACTURER TO VERIFY THE RIDGE VENT NET FREE AREA = MIN 12.0 SQ IN/LF.

**** MANUFACTURER TO VERIFY THE POD (ROOF) VENT NET FREE AREA = MIN 50.0 SQ IN/VENT.



PROPOSED ROOF PLAN
SCALE: 1/8" = 1'-0" **1**

KEY NOTES

ALL KEY NOTES ARE TAGGED WITH A CIRCLE AROUND THEM IN THE PLANS (2)

1. REFER TO ASSEMBLY TYPES ON SHEET A9.1 OR A9.1a FOR ROOF CONSTRUCTION, TYPICAL.
2. PROVIDE 12" DIAMETER COMBINATION MAIN ROOF DRAIN & OVERFLOW ROOF DRAIN WITH LOW SILHOUETTE DOMES AND DOUBLE TOP-SET DECK PLATES - ZURN Z164 OR EQUAL.
3. PROVIDE 6" Ø PVC ROOF DRAIN - TYPICAL FOR (6) - REFER TO PLUMBING PLANS
4. PROVIDE 6" DIA. PVC SCH 40 OVER-FLOW ROOF DRAIN RISER BELOW ROOF DECK W/ MIN. 1/8" TO FOOT SLOPE, TYPICAL FOR (6) COMBINATION ROOF DRAINS.
5. SADDLE OR CRICKET WITH BUILT-UP RIGID ROOF INSULATION AS REQUIRED TO PROVIDE ADEQUATE PITCH TO DRAIN.
6. FACE OF EXTERIOR WALL BELOW - REFER TO FLOOR PLANS.
7. PROVIDE WALK-OFF MATS AS AND IF REQUIRED FOR MECHANICAL RTU, BATHROOM EXHAUSTS, HEAT PUMPS, ETC.
8. MIN. 48" x 48" SIZE ROOF HATCH - REFER TO DETAIL THIS SHEET
9. RAISED ROOF OVER THE ELEVATOR HOISTWAY - REFER TO SECTION DETAILS.
10. VENT FOR TRASH CHUTE - PROVIDE FLASHING AT ROOF PENETRATION.
11. HVAC UNIT FOR LOBBY & COMMON SPACE AT 1ST FLOOR - SUPPLY & RETURN DUCTS TO GO DOWN WITHIN A RATED CHASE BELOW.
12. HEAT PUMP FOR APARTMENT UNITS - MOUNTED ON A RAIL, TYPICAL.
13. DASH LINE REPRESENT 5/8" THICK GYPSUM BOARD DRAFT-STOPPING AT EACH DEMISING WALL - TO GO UP TO UNDERSIDE OF THE ROOF DECK ON EACH SIDE.

LEGENDS

INDICATES STRUCTURAL SLOPE OR SLOPED INSULATION

R.D. ROOF DRAIN WITH 4'X4' TAPERED INSULATION SUMP

O.D. OVERFLOW DRAIN

FLASHING NOTES:

1. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING THE SHOP DRAWINGS &/OR FABRICATION.
2. ISOMETRIC DRAWINGS ARE DIAGRAMMATIC.
3. ALL FLASHING FLANGES ARE TO BE SET IN SEALANT.
4. FOLLOWING INSTALLATION OF THE FLASHING, APPLY SEALANT TO ALL EXPOSED LEADING EDGE.
5. ALL SCREW ANCHOR LOCATIONS TO HAVE PRE-DRILLED 5/16" PILOT HOLES.
6. NON-EXPOSED SCREW ANCHORS INTO MASONRY ARE TO BE 1-1/4" X 3/16" TAPCONS.
7. EXPOSED SCREW ANCHORS INTO MASONRY ARE TO BE 1-1/4" X 3/16" TAPCONS WITH CLIMASEAL CORROSION RESISTIVE COATING AND NEOPRENE WASHERS.
8. EXPOSED SCREW FASTENERS INTO SHEET METAL TO BE 3/4" X 1/4" TEKS 1 WITH NEOPRENE WASHERS.
9. ALL EXPOSED SCREW FASTENERS ARE TO BE COVERED WITH SEALANT.

SHEET NOTES

1. REFER TO MECHANICAL PLANS AND COORDINATE ROOF TOP UNITS, EXHAUST FANS, MAKE-UP AIR & GAS PIPING LOCATIONS.
2. PROVIDE PROPER SHEET METAL FLASHING OR ROOF FLASHING AND SEALANT AT ALL CURBS, MECHANICAL UNIT CURBS, ROOF INTERSECTIONS & AT ALL ROOF PENETRATIONS, FOLLOWING INSTALLATION OF THE FLASHING, APPLY SEALANT TO ALL EXPOSED LEADING EDGE.
3. PROVIDE PRE-MOLDED PIPE BOOT ADHEARED TO ROOF FLASHING FOR ALL PLUMBING VENTS' PENETRATIONS, TYPICAL.
4. ALL ROOF PENETRATIONS, INCLUDING VENT STACKS, ROOF CURBS, AND PIPE SUPPORT CURBS ARE TO BE A MINIMUM OF 8" ABOVE THE ROOFING MEMBRANE.
5. ALL COUNTER FLASHING, COPING, AND MISC. METAL FLASHING PIECES ARE TO HAVE CONTINUOUS BEAD OF SEALANT APPLIED AT THEIR END CONDITIONS.
6. ALL EXPOSED FASTENERS TO BE CORROSION RESISTIVE, HAVE NEOPRENE WASHERS, AND BE COVERED W/ SEALANT.
7. PROVIDE COUNTER FLASHING FOR ALL VERTICAL FLANGES ON END WALL FLASHING PIECES.
8. WHEN CONDITIONS REQUIRE END WALL FLASHING TO BE INSTALLED, COORDINATE INSTALLATION SO THAT END WALL FLASHING AND COUNTER FLASHING COVERING IT ARE NOT DOUBLE FASTENED - ONLY ONE FASTENER IS REQUIRED TO SECURE BOTH PIECES.

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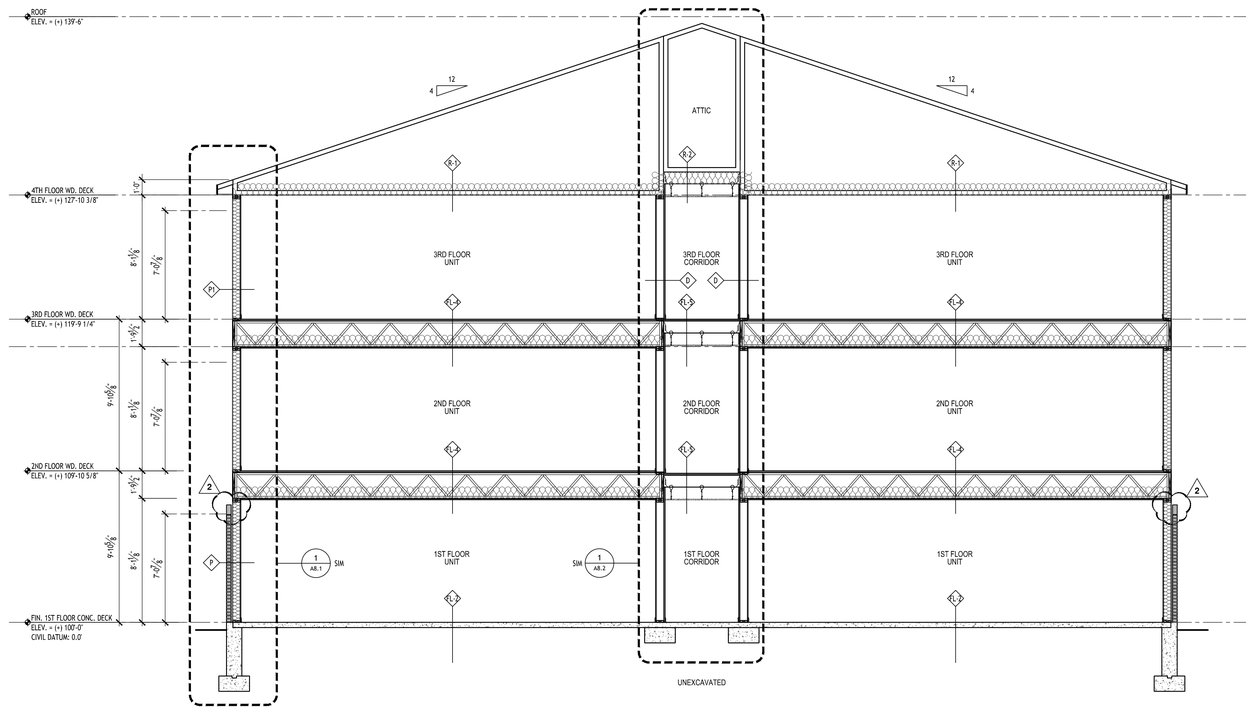
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ROOF PLAN & DETAILS

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1 BUILDING SECTION

SCALE: 1/4" = 1'-0"

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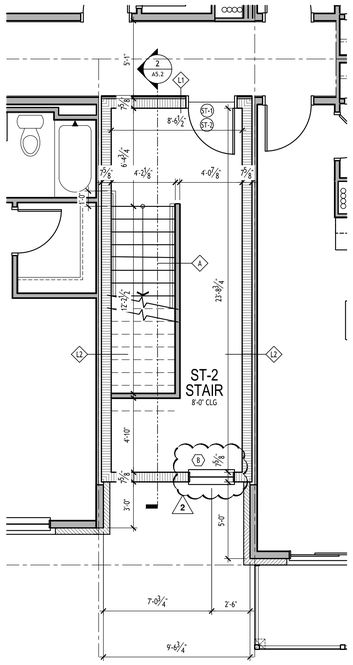
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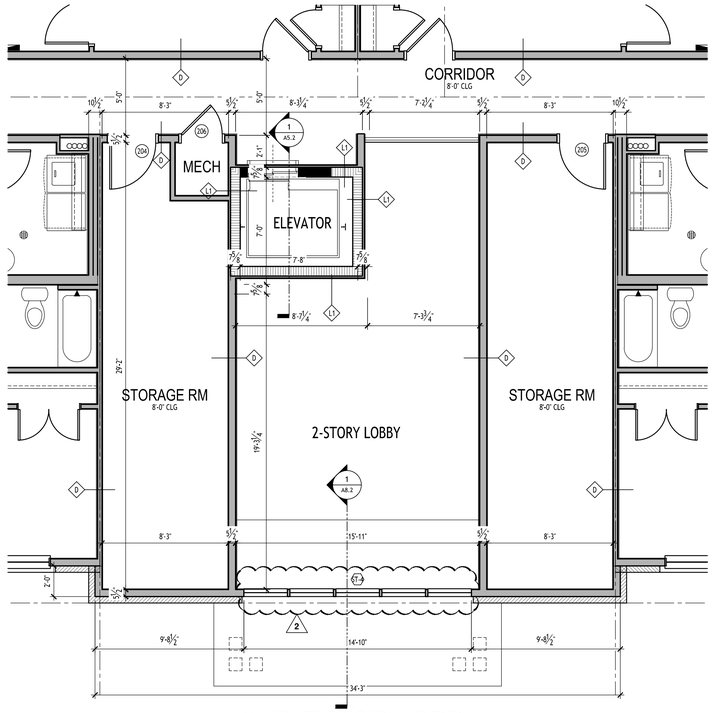
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5 3RD FLOOR STAIR
SCALE: 1/2" = 1'-0"

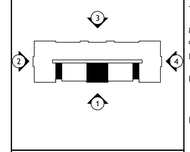


2 2ND FLOOR LOBBY
SCALE: 1/2" = 1'-0"

STAIR CONSTRUCTION:

PROVIDE MIN. 2x12 WOOD STRINGERS (MIN. THREE (3) PER WIDTH OF STAIRS W/ MIN. 2x TREADS & CLOSED Ix RISERS - PROVIDE 1-1/4" DIA. STD. METAL PIPE GUARDRAIL & HANDRAIL W/ POST @ 4'-0" MAX. O.C. - SEE DETAIL - ALL EXPOSED STEEL RAILS TO BE PAINTED - HANDRAIL ON OPEN SIDE SHALL RETURN TO THE FLOOR AT THE FIRST RISER - HANDRAIL ON WALL SIDE SHALL RETURN TO THE WALL - HANDRAIL AT LANDINGS SHALL BE CONTINUOUS, TYPICAL.

ELEVATION KEY PLAN



UNIT KEY PLAN

- (101) DOOR TAG
- (A) WINDOW / PATIO TAG
- (A) WALL TAG
- 1 KEY NOTE
- ACCESSIBLE CLEAR FLOOR SPACES
- BLOCKING IN WALLS FOR GRAB BARS

ELEVATOR SPECIFICATIONS:
(note_Elevators)

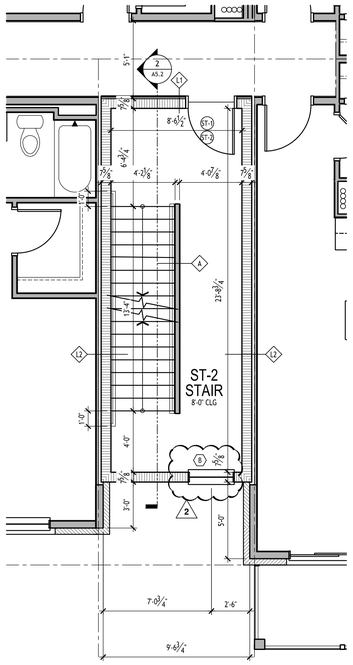
GENERAL NOTE:
- REFER TO DETAIL(S) ON 6/A0.5 FOR ADDITIONAL REQUIREMENTS.

'ELEV 1' TO INCLUDE FOLLOWING:

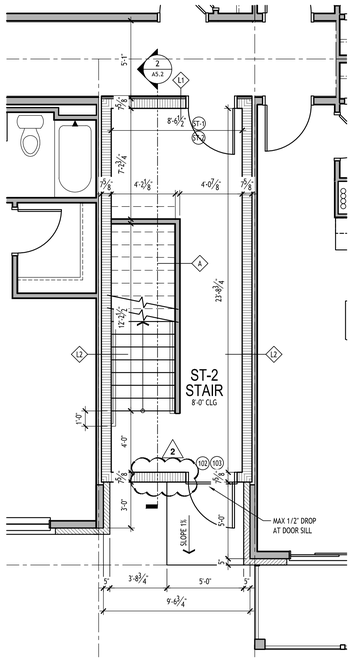
1. HOLED HYDRAULIC ELEVATOR; 2100 LBS. (PASS) CAPACITY 'ENDURA', TWIN-POST 3-STAGE, 125 FPM SPEED, 3-STOP, RIGHT HAND FRONT ENTRANCES (SEE FLOOR PLANS). (BY "TKE - THYSSENKRUPP" OR EQUIVALENT).
2. 7'-0" H. x 3'-0" W. SIDE OPENING SLIDE DOOR (PASS).
3. RECALL SYSTEM AND INDICATOR LIGHT ON EACH FLOOR.
4. A.D.A. COMPLIANT PHONE WITH ACCESSIBLE POINT OUTSIDE HOISTWAY, TELEPHONE AND OTHER REQUIREMENTS PER LOCAL FIRE DEPARTMENT.
5. MOVING PASS FOR ALL WALLS.
6. 8'-0" INTERIOR HEIGHT.
7. CAB FLOOR FINISH PER INTERIOR DESIGNER'S SPEC'S.
   - ALLOWABLE THICKNESS TO BE VERIFIED W/ ELEV. MANUFACTURER.
8. STAINLESS STEEL, SATIN FINISH, FRONT CAB WALLS.
9. 20 HP, 120/208V, 3 PHASE. VERIFY W/ ELEV MFR.
10. LOBBY SMOKE DETECTORS WITH SENSING DEVICE TO CONTROLLER ON ALL FLOORS AND RETURN TO FIRST FLOOR, TYP.
11. ACCEPTABLE ALTERNATES: KONE, OTIS, SCHINDLER. CONTRACTOR TO PROVIDE THE SHOP DRAWINGS OF THE ELEVATOR AND THE ASSOCIATED MACHINE RELATED SPACE FOR REVIEW & APPROVAL. OWNER TO SELECT FINISHES.
12. PIT DEPTH: MIN. 5'-0", CAB HEIGHT: 7'-9", CLEAR OVERHEAD: MIN. 12'-3", TOTAL RISE: 19'-9 1/4" (VERIFY WITH SECTION).

ELEVATOR GENERAL NOTES:

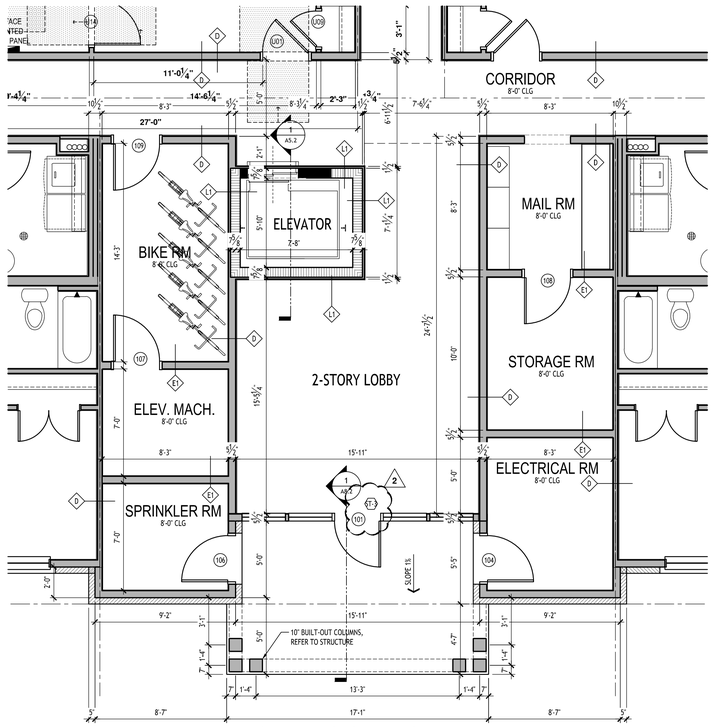
1. GENERAL CONTRACTOR TO COORDINATE ELEVATOR MANUFACTURER'S REQUIREMENTS WITH ALL RELATED TRADES INCLUDING CONCRETE, MASONRY & FRAMING CONTRACTORS.
2. RECALL SYSTEM AND INDICATOR LIGHT ON EACH FLOOR.
3. DESIGNATED PHASE I STOP: 1ST FLOOR ENTRANCE LOBBY (ELEV.: 100'-0"), ALTERNATE PHASE I STOP: 2ND FLOOR (ELEV.: 109'-11 3/8"), EGRESS DESIGNATED STOP: 1ST FLOOR ENTRANCE LOBBY FLOOR (*L).
4. A.D.A. COMPLIANT PHONE / CALL BUTTON WITH ACCESSIBLE POINT OUTSIDE HOISTWAY. TELEPHONE / COMMUNICATION / OTHER REQUIREMENTS PER LOCAL FIRE DEPARTMENT.
5. CONTRACTOR TO FURNISH ONE (1) DEDICATED OUTSIDE TELEPHONE LINE PER MFR.'S REQUIREMENTS - TO BE TERMINATED AT THE ELEVATOR CONTROLLER.
6. SMOKE DETECTORS, LOCATED AS REQUIRED BY MFR. AND A.H.J., WITH WIRING FROM THE SENSING DEVICES TO THE CONTROLLER DESIGNATED BY MFR., TYP.
7. CONTRACTOR TO PROVIDE THE SHOP DRAWINGS OF ELEVATORS AND THE ASSOCIATED MACHINE RELATED SPACE FOR REVIEW & APPROVAL. OWNER TO SELECT FINISHES.



4 2ND FLOOR STAIR
SCALE: 1/2" = 1'-0"



3 1ST FLOOR STAIR
SCALE: 1/2" = 1'-0"



1 1ST FLOOR LOBBY
SCALE: 1/2" = 1'-0"

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Sheet:
ENLARGED PLANS

A5.1

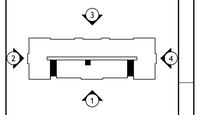
PAI PROJECT NUMBER
22116.00

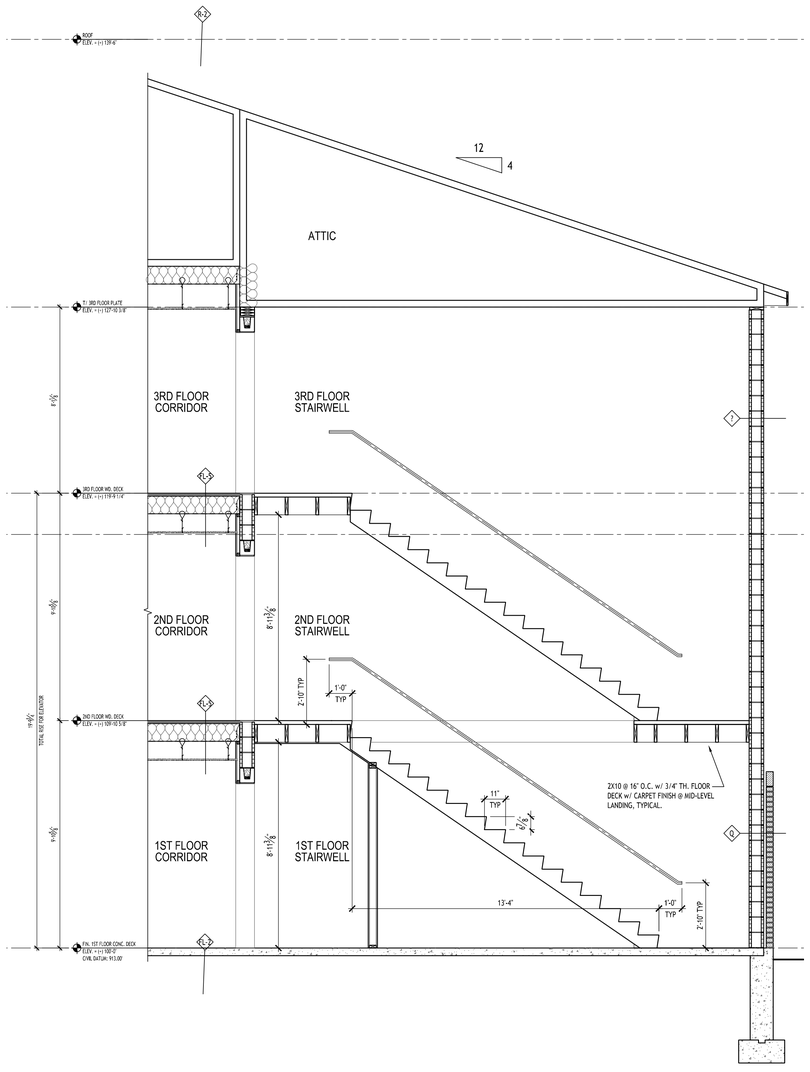
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STAIR CONSTRUCTION:

PROVIDE MIN. 2x12 WOOD STRINGERS (MIN. THREE (3) PER WIDTH OF STAIRS W/ MIN. 2x TREADS & CLOSED 1x RISERS - PROVIDE 1-1/4" DIA. STD. METAL PIPE GUARDRAIL & HANDRAIL W/ POST @ 4'-0" MAX. O.C. - SEE DETAIL - ALL EXPOSED STEEL RAILS TO BE PAINTED - HANDRAIL ON OPEN SIDE SHALL RETURN TO THE FLOOR AT THE FIRST RISER - HANDRAIL ON WALL SIDE SHALL RETURN TO THE WALL - HANDRAIL AT LANDINGS SHALL BE CONTINUOUS, TYPICAL.

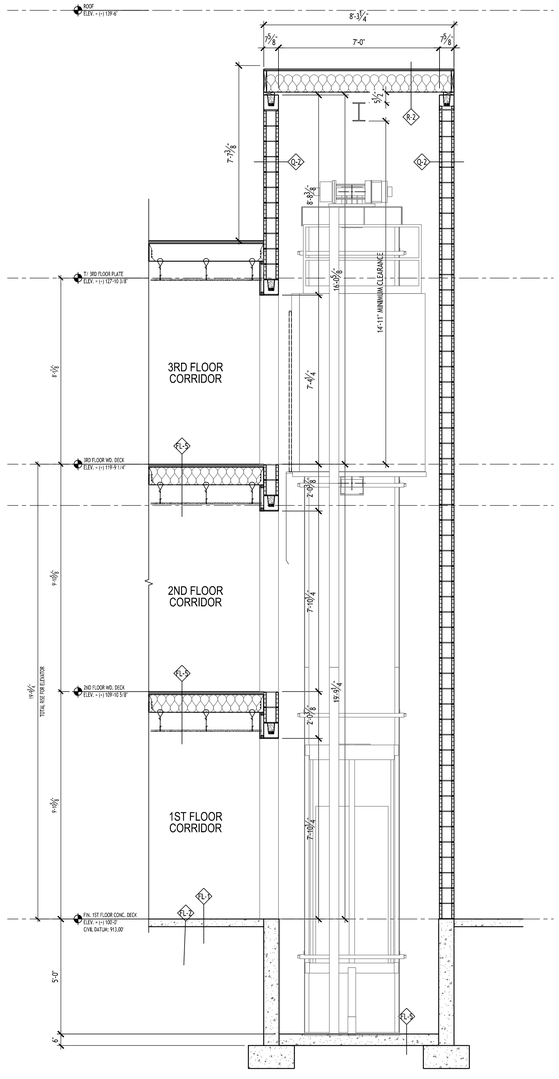
ELEVATION KEY PLAN





2 1ST-3RD STAIR SECTION

SCALE: 1/2" = 1'-0"



1 1ST-3RD ELEVATOR SECTION

SCALE: 1/2" = 1'-0"

Document Record:

Issued Date	Description
09.08.2022	ISSUED FOR BUILDING PERMIT
05.04.2023	REVISIONS 1
09.13.2024	CITY REVISIONS - ELEVATIONS 2

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Proposed New Development for:

The Courtyard At Congress Station

551 Congress Parkway, Crystal Lake, Illinois

Issue Date: 09.08.2022
Drawn By: PAI

Sheet:
ELEVATOR & STAIR SECTION

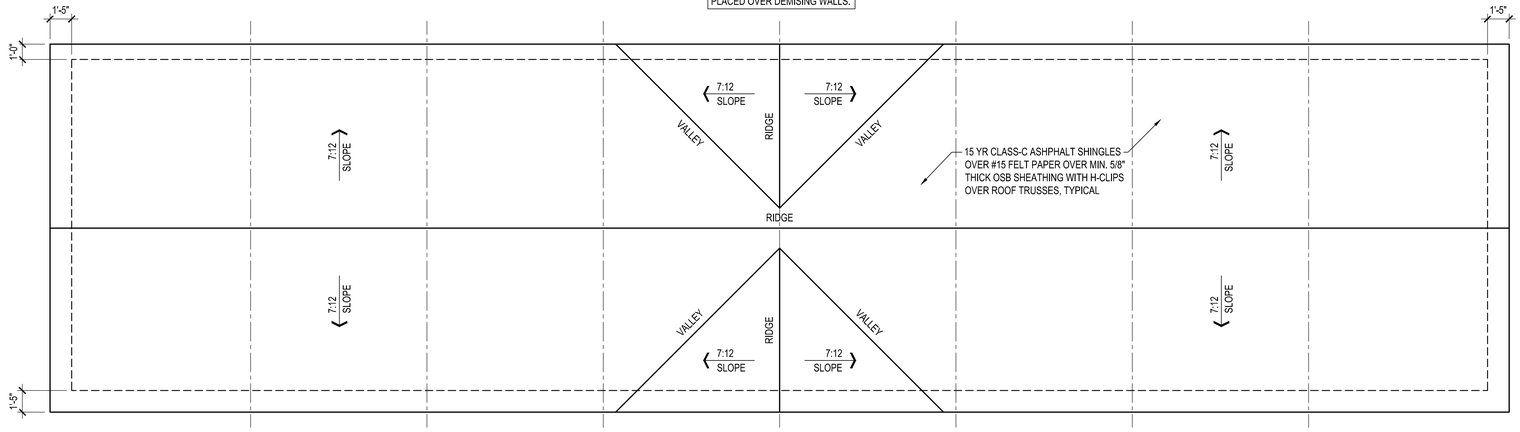
A5.2

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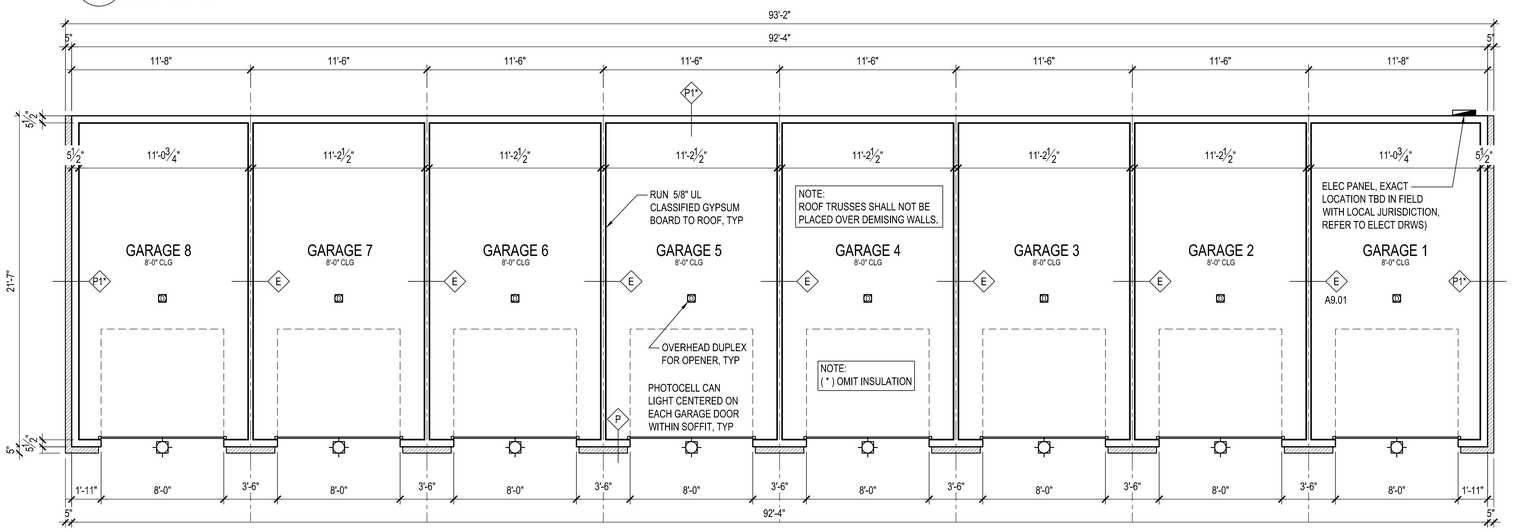
NOTE:
ROOF TRUSSES SHALL NOT BE PLACED OVER DEMISING WALLS.



3 GARAGE ROOF PLAN

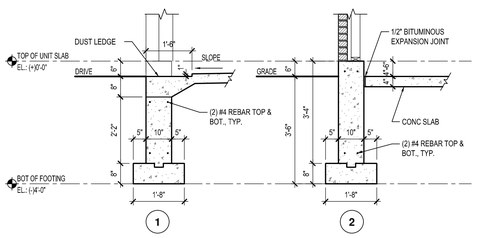
SCALE: 1/4" = 1'-0"

ELECTRICAL NOTES:
1. NORTH GARAGE BUILDING: PANEL 'P-GN'
2. SOUTH GARAGE BUILDING: PANEL 'P-GS'
3. FOR LOCATION OF GARAGE BUILDINGS, REFER TO ARCHITECTURAL SITE PLAN, CIVIL DRAWINGS AND ELECTRICAL DRAWINGS.
4. ELECTRICAL CIRCUITS: CONNECT ALL GARAGE DOOR AND LIGHTING CIRCUITS TO EITHER PANEL 'P-GN' OR 'P-GS' - REFER TO ELECTRICAL DRAWINGS



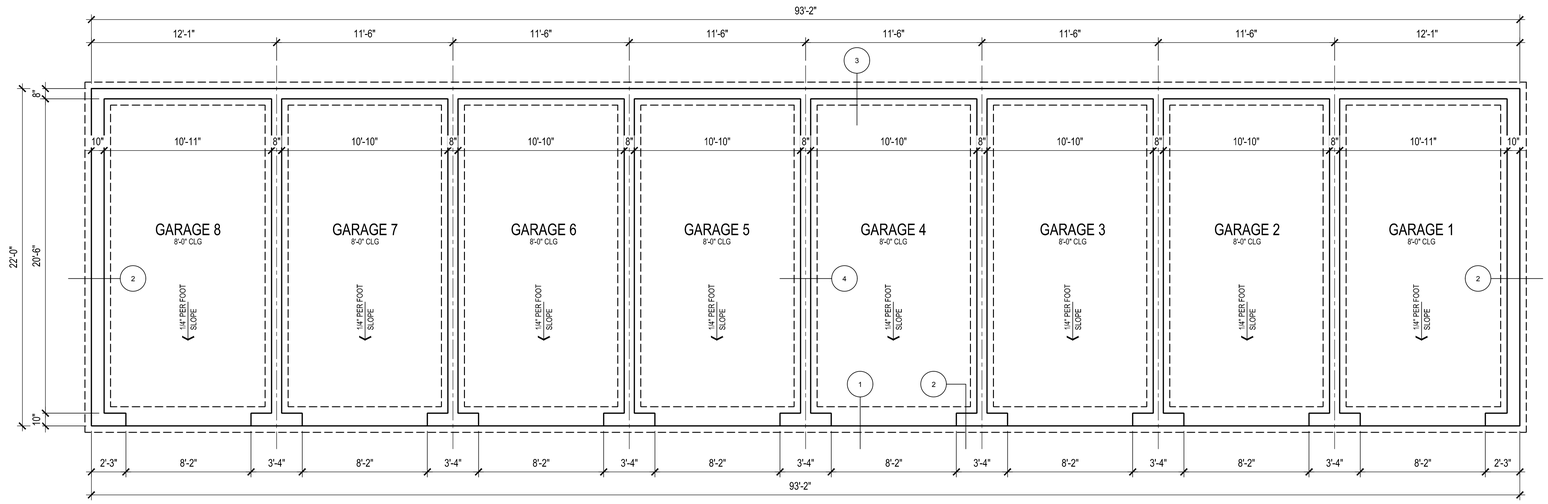
2 GARAGE FLOOR PLAN

SCALE: 1/4" = 1'-0"



4 FOUNDATION SECTIONS

SCALE: 1/4" = 1'-0"



1 GARAGE SLAB PLAN

SCALE: 1/4" = 1'-0"

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Proposed New Development for: The Courtyard At Congress Station

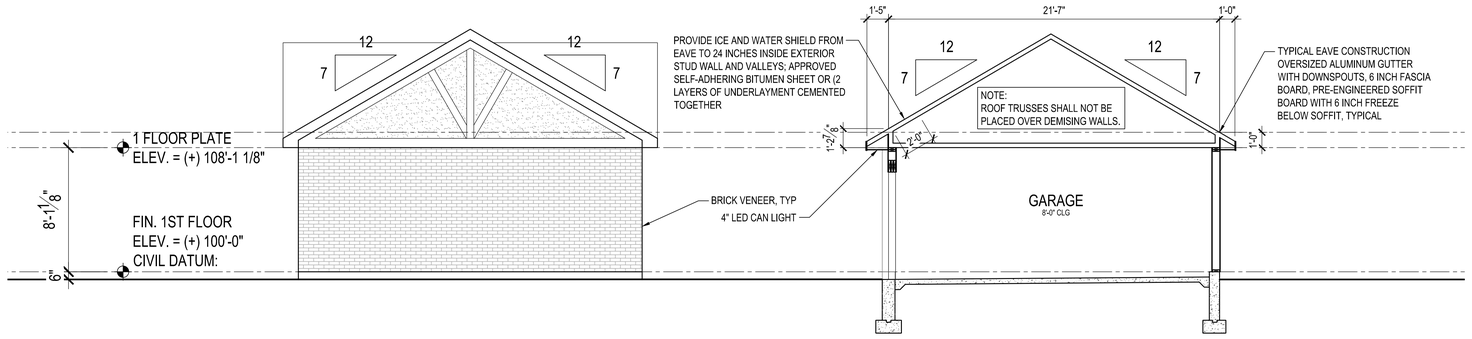
551 Congress Parkway, Crystal Lake, Illinois

Issue Date: 09.08.2022
Drawn By: PAI

Sheet:
GARAGE SLAB PLAN- FLOOR PLAN & ROOF PLAN

A5.3

PAI PROJECT NUMBER
22116.00

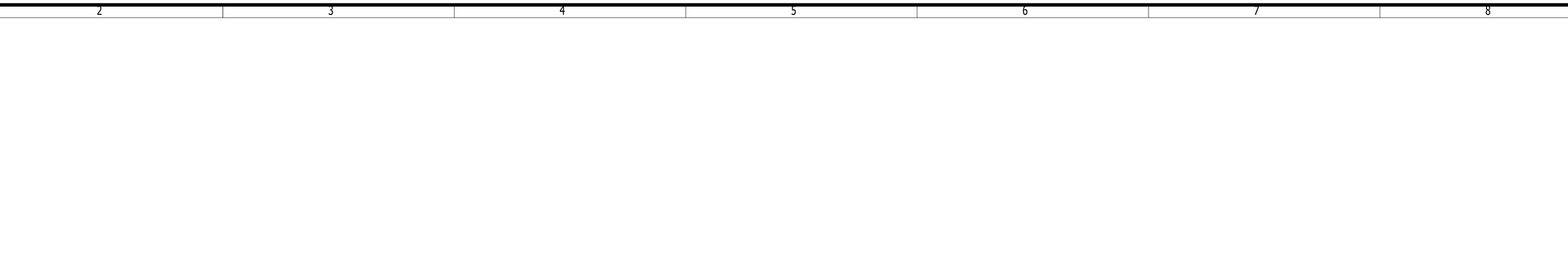


3 GARAGE SIDE ELEVATION

SCALE: 3/16" = 1'-0"

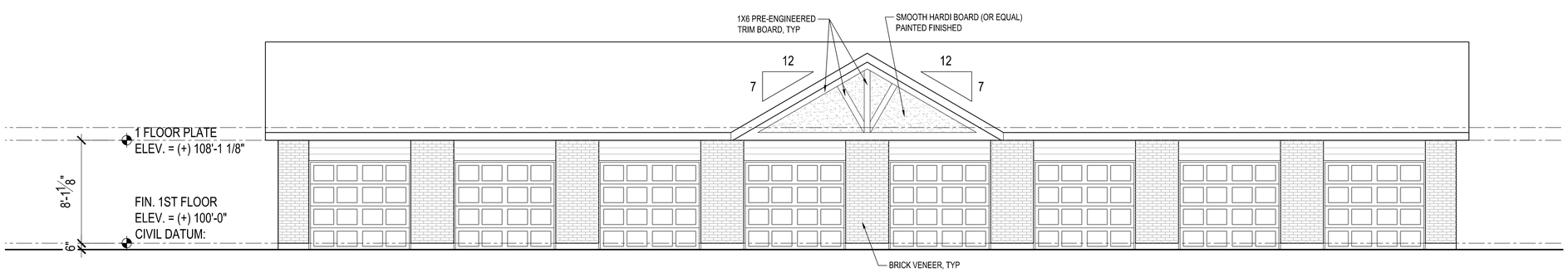
4 GARAGE SECTION

SCALE: 3/16" = 1'-0"



2 GARAGE - REAR ELEVATION

SCALE: 3/16" = 1'-0"



1 GARAGE - FRONT ELEVATION

SCALE: 3/16" = 1'-0"

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Proposed New Development for:

The Courtyard At Congress Station

551 Congress Parkway, Crystal Lake, Illinois

Issue Date: 09.08.2022
Drawn By: PAI

Sheet:
GARAGE ELEVATIONS & SECTION

A5.4 (1)

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UNIT INTERIOR FINISH SCHEDULE

ROOM NAME	FLOORS			BASE	WALLS			CEILING		
	CARPET (CPT)	LUXURY VINYL PLANK (LVP)	CERAMIC TILE (CT)	VINYL COMPOSITE TILE (VCT)	PRIMED *MDF (SEMI-GLOSS)	CERAMIC TILE (CT)	PAINTED (FLAT)	BACKSPLASH (MOSAIC)	PAINTED (SATIN)	PAINTED (FLAT)
ENTRY		●			●		●			●
KITCHEN		●			●		●			●
LAUNDRY CLOSET		●			●		●			●
UTILITIES CLOSET				●	●		●			●
BATHROOM		●			●				●	●
LIVING ROOM		●			●		●			●
BEDROOM	●				●		●			●
CLOSETS	●				●		●			●
MECHANICAL ROOM				●			●			●

LIGHT FIXTURE SCHEDULE:

- REFER TO ELECTRICAL DRAWING FOR SWITCHING, DIMMER & CIRCUITING INFORMATION.
- ALL FIXTURE LOCATIONS, QUANTITIES & TYPES SHALL BE VERIFIED WITH OWNER OR INTERIOR DESIGNER IN FIELD PRIOR TO ROUGH-IN. ALL FIXTURES SHALL BE PROVIDED BY THE OWNER & INSTALLED BY THE CONTRACTOR.
- ALL FIXTURES SHALL BE U.L. LISTED FOR A SPECIFIED USE AND LOCATION SUCH AS INTERIOR USE OR EXTERIOR USE WITH WEATHER PROOF LABEL AS NECESSARY.

	TAG	SYMBOL	DESCRIPTION	MANUF / SUPPLY	LAMP TYPE	EXTERIOR	INTERIOR	MOUNTING: WALL	MOUNTING: CEILING RECESSED	MOUNTING: SURFACE	NOTES:
INTERIOR COMMON AREAS		EMX	EMERGENCY & EXIT LIGHT COMBO - LED BULBS	CREE (RUDD)+HERMITAGE MODEL: EXPCWH	LAMP: 2 (1.1 W) TYPE: LED TOTAL WATTS: 2.2 W, 120V		X	X		X	EMERGENCY / EXIT LIGHT
		EM	EMERGENCY LIGHT - LED BULBS	CREE (RUDD)+HERMITAGE MODEL: EMP2WH	LAMP: 2 (1 W) TYPE: LED TOTAL WATTS: 2 W, 120V		X	X			EMERGENCY LIGHT
	F1		24x24 LAY-IN MOUNTED LED LIGHT PANEL WITH LENSE	ESSENTIA BY "CREE" MODEL: FP22-34L-40K-10V	LED LAMP: 34W, 3400 LUMENS, 100LPW, 4000K TOTAL WATTS: 34W, 277 V		X		X	X	PROVIDE SPECIFIED OR EQUAL
	F2		6" LED RECESSED CAN LIGHT	"CREE" OR EQUAL	LED LAMP: 13W, 1200 LUMENS, 4000K TOTAL WATTS: 13W, 120 V		X		X	X	PROVIDE SPECIFIED OR EQUAL - EXACT QUANTITY SHALL BE DETERMINED WITH THE OWNER
	F3		DECORATIVE ACCENT LED PENDENT LIGHT FIXTURE - SUSPENDED WITH AIRCRAFT CABLES FROM THE PANEL POINT OF ROOF STRUCTURE ABOVE	BY OWNER	LED LAMP: 15W, 1400LUMENS, 4000K TOTAL WATTS: 15W, 12V		X		X		PROVIDE SPECIFIED OR EQUAL- EXACT QUANTITY AS DETERMINED BY OWNER
	F4		SUSPENDED CHANDELIER AREA LIGHTING WITH LED BULBS - SUSPENDED WITH AIRCRAFT CABLES FROM REINFORCED JUNCTION BOX ABOVE	BY OWNER	-		X		X	X	TO BE CENTERED WITHIN THE ROOM
	F5		96x10 / 48x10 SUSPENDED LED LIGHT PANEL WITH LENSE	CS SERIES BY "CREE" MODEL: CS18-8SL-HE-40K-10V MODEL: CS18-40LHE-40K-10V	LED LAMP: 70W, 8000 LUMENS, 114LPW, 4000K TOTAL WATTS: 70W, 120 V		X		X	X	PROVIDE SPECIFIED OR EQUAL
EXTERIOR PARKING LOT	A1	LED	POLE MOUNTED EXTERIOR RATED LED LIGHT FIXTURE FOR PARKING LOT - SINGLE ARRANGEMENT - VERIFY ORIENTATION OF THE FIXTURE WITH THE OWNER IN FIELD	ALED 3T150N BY "RAB" LIGHTING	LED LAMP: 150W, 16253 LUMENS, 4000K TOTAL WATTS: 153W, 120V WITH SWIVEL PHOTOCELL OPTION	X					POLE: PSA-11-2002, BRACKET / ARM: BOK-54 BOLT: 4/11
	A2	LED	POLE MOUNTED EXTERIOR RATED LED LIGHT FIXTURE FOR PARKING LOT - BACK-TO-BACK ARRANGEMENT - VERIFY ORIENTATION OF THE FIXTURE WITH THE OWNER IN FIELD	(2) ALED 3T150N BY "RAB" LIGHTING	LED LAMP: (2)150W, 32506 LUMENS, 4000K TOTAL WATTS: 306W, 120V WITH SWIVEL PHOTOCELL OPTION	X					POLE: PSA-11-2002, BRACKET / ARM: BOK-54 BOLT: 4/11
	B1	LED	EXTERIOR (WET) RATED LED BOLLARD LIGHT FIXTURE FOR CONCRETE WALK - VERIFY ORIENTATION OF THE FIXTURE WITH THE OWNER IN FIELD	TEXTURED BOLLARD PATH LIGHT BY "KICHLER" LIGHTING	LED LAMP: 10W, 100 LUMENS, 2800K TOTAL WATTS: 10W, 12V	X					ALL BOLLARDS SHALL BE INSTALLED AT APPROX. EQUAL DISTANCE FROM EACH OTHER
DWELLING UNITS	F21	LED	6" LED RECESSED CAN LIGHT	"CREE" OR EQUAL	LED LAMP: 13W, 1200 LUMENS, 4000K TOTAL WATTS: 13W, 120 V		X		X	X	PROVIDE SPECIFIED OR EQUAL - EXACT QUANTITY SHALL BE DETERMINED WITH THE OWNER
	F22	LED	DECORATIVE ACCENT LED PENDENT LIGHT FIXTURE - SUSPENDED FROM RECESSED JUNCTION BOX ABOVE	BY OWNER	LED LAMP: 15W, 1400LUMENS, 4000K TOTAL WATTS: 15W, 12V		X		X	X	TO BE CENTERED ABOVE THE KITCHEN SINK / KITCHEN ISLAND
	F23	LED	DECORATIVE LED WALL MOUNTED LIGHT FIXTURE - FROM RECESSED WALL MOUNTED JUNCTION BOX	BY OWNER	LED LAMP: 15W, 1400LUMENS, 4000K TOTAL WATTS: 15W, 12V		X	X		X	TO BE CENTERED ABOVE THE BATHROOM MIRROR - BOTTOM OF FIXTURE TO BE AT 6'-8" A.F.F.
	F24	LED SURF	SURFACE MOUNTED LED LIGHT FIXTURE WITH LENSE	"CREE" OR EQUAL	LED LAMP: 13W, 1200 LUMENS, 4000K TOTAL WATTS: 13W, 120 V		X		X	X	TO BE CENTERED WITHIN THE CLOSET OR SPACE
	F25	LED	DECORATIVE LED WALL MOUNTED EXTERIOR (WET) RATED LIGHT FIXTURE - FROM RECESSED WALL MOUNTED JUNCTION BOX	BY OWNER	LED LAMP: 15W, 1400LUMENS, 4000K TOTAL WATTS: 15W, 12V	X		X		X	TO BE INSTALLED ON ONE (1) SIDE OF THE BALCONY DOOR - BOTTOM OF FIXTURE TO BE AT 6'-8" A.F.F.
	F26	LED	CEILING FAN WITH LIGHT FIXTURE WITH A SWITCH - INSTALLED FROM RECESSED CEILING MOUNTED REINFORCED JUNCTION BOX WITH ADEQUATE SUPPORT OF OFF ADJOINING FLOOR/ROOF STRUCTURE	BY OWNER	LED LAMP: 21W, 1400LUMENS, 4000K TOTAL WATTS: 21W, 12V		X		X	X	TO BE CENTERED WITHIN THE ROOM

LIGHT AND VENTILATION SCHEDULE - UNIT A

ROOM NAME	AREA (SQFT)	LIGHT (8%) REQUIRED	LIGHT ACTUAL	VENT (4%) REQUIRED	VENT ACTUAL	MECH REQUIRED	MECH ACTUAL
LIVING RM. / KITCHEN	361	28.88	31.27	14.44	15.54		
BEDROOM 1	162	12.96	20.76	6.48	11.58		
BEDROOM 2	167	13.36	20.76	6.68	11.58		
BATH 1	50					100 CFM	100 CFM
BATH 2	46					100 CFM	100 CFM

LIGHT AND VENTILATION SCHEDULE - UNIT B

ROOM NAME	AREA (SQFT)	LIGHT (8%) REQUIRED	LIGHT ACTUAL	VENT (4%) REQUIRED	VENT ACTUAL	MECH REQUIRED	MECH ACTUAL
LIVING RM. / KITCHEN	390	31.20	31.27	15.60	15.54		
BEDROOM 1	173	13.84	20.76	6.92	11.58		
BATH 1	41					100 CFM	100 CFM

LIGHT AND VENTILATION SCHEDULE - UNIT B 'ANSI TYPE A'

ROOM NAME	AREA (SQFT)	LIGHT (8%) REQUIRED	LIGHT ACTUAL	VENT (4%) REQUIRED	VENT ACTUAL	MECH REQUIRED	MECH ACTUAL
LIVING RM. / KITCHEN	390	31.20	31.27	15.60	15.54		
BEDROOM 1	154	12.32	20.76	6.16	11.58		
BATH 1	59					100 CFM	100 CFM

LIGHT AND VENTILATION SCHEDULE - UNIT C

ROOM NAME	AREA (SQFT)	LIGHT (8%) REQUIRED	LIGHT ACTUAL	VENT (4%) REQUIRED	VENT ACTUAL	MECH REQUIRED	MECH ACTUAL
LIVING RM. / KITCHEN	403	32.24	31.27	16.12	15.54		
BEDROOM 1	177	14.16	20.76	7.08	11.58		
BEDROOM 2	132	10.56	20.76	5.28	11.58		
BATH 1	49					100 CFM	100 CFM
BATH 2	41					100 CFM	100 CFM

LIGHT AND VENTILATION SCHEDULE - UNIT D

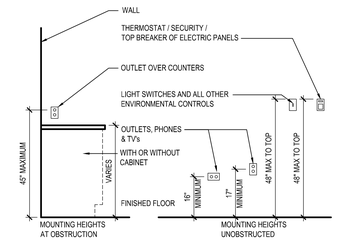
ROOM NAME	AREA (SQFT)	LIGHT (8%) REQUIRED	LIGHT ACTUAL	VENT (4%) REQUIRED	VENT ACTUAL	MECH REQUIRED	MECH ACTUAL
LIVING RM. / KITCHEN	362	28.96	31.27	14.48	15.54		
BEDROOM 1	148	11.84	20.76	5.92	11.58		
BATH 1	47					100 CFM	100 CFM

LIGHT AND VENTILATION SCHEDULE - UNIT E

ROOM NAME	AREA (SQFT)	LIGHT (8%) REQUIRED	LIGHT ACTUAL	VENT (4%) REQUIRED	VENT ACTUAL	MECH REQUIRED	MECH ACTUAL
LIVING RM. / KITCHEN	451	36.08	31.27	18.04	15.54		
BEDROOM 1	192	15.36	20.76	7.68	11.58		
BATH 1	49					100 CFM	100 CFM

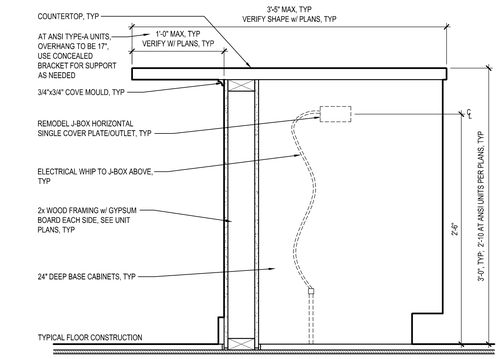
UNIT NOTES

1. ALL UNDESIGNATED DIMENSIONED WALLS TO BE 3 1/2" WOOD STUD.
2. DIMENSIONS IN PLANS ARE FACE OF STUD TO FACE OF STUD, UNLESS OTHERWISE NOTED.
3. ALL UNDIMENSIONED DOORS TO BE CENTERED OR TO BE LOCATED 4" OFF OF THE SIDE WALL STUD TO THE TO THE WALL SIDE OF THE HINGE JAMB.
4. ALL CABINETRY SHALL BE DESIGNED BY OTHERS AND SHALL MEET ALL APPLICABLE CODES ACCORDING TO THE LAYOUT GENERALLY SHOWN ON THE UNIT PLANS. VERIFY DIMENSIONS AND CONNECTIONS OF ALL APPLIANCES WITH MANUFACTURER BEFORE CABINET INSTALLATION. CABINET SHOP DRAWINGS TO BE SUBMITTED TO ARCHITECT FOR REVIEW PRIOR TO INSTALLATION.
5. SEE SHEET A0.07 FOR TYPICAL GRAB BAR BLOCKING REQUIREMENTS AND DETAILS FOR TOILETS, TUBS AND SHOWERS.
6. SEE ELECTRICAL DRAWINGS FOR UNIT ELECTRICAL LAYOUTS.
7. SEE BUILDING PLANS AND ELEVATIONS FOR TYPICAL WINDOW & EXTERIOR DOOR LOCATIONS.
8. SEE SHEET A5.01 FOR TYPICAL INTERIOR PROFILES.
9. REFER TO INTERIOR ELEVATIONS FOR DIMENSIONS AND ADDITIONAL INFORMATION.
10. UNLESS NOTED OTHERWISE, ALL ANGLED WALLS ARE TO BE 45-DEGREES.
11. SEE SHEETS A7.01 AND A7.03 FOR BUILDING DOOR SCHEDULE AND WINDOW ELEVATIONS.
12. CONTRACTOR TO VERIFY AND COORDINATE PLUMBING ROUGH-IN DIMENSIONS.
13. SEE FINISH SCHEDULES FOR ACTUAL UNIT FINISH MATERIALS. ALL FINISH AND COLOR SELECTIONS TO BE APPROVED BY OWNER AND/OR ARCHITECT.
14. FLOOR DEMARCATION LINES ON PLANS ARE FOR REFERENCE WHEN MATERIALS ARE TO DIFFER. PROVIDE FLOOR TRANSITION AS NECESSARY.
15. PROVIDE BLOCKING FOR ALL CABINETS, CEILING FANS, HANDRAILS, GUARDRAILS, BATH ACCESSORIES AND GRAB BARS.
16. INSPECT, REPAIR, AND PREPARE FLOORS AS REQUIRED TO PROVIDE A SATISFACTORY SUB-FLOOR FOR FLOOR FINISH MATERIALS. SATISFACTORY SUB-FLOOR IS DEFINED AS A SUBSURFACE THAT IS FREE FROM IMPAIRED PERFORMANCE OR APPEARANCE OF THE FINISH MATERIALS.
17. CONTRACTOR TO COORDINATE WITH CABINET MANUFACTURER FOR EXACT LOCATIONS OF KITCHEN EQUIPMENT AND FIXTURES. CONTRACTOR TO REVIEW PLUMBING, ELECTRICAL, AND FINISH LOCATIONS WITH CABINET DESIGN.
18. KITCHEN COUNTERTOP JOINT LOCATIONS MUST BE APPROVED BY THE OWNER AND ARCHITECT PRIOR TO COUNTERTOP FABRICATION.
19. REFERENCE BUILDING PLANS AND ELEVATIONS FOR MASONRY LOCATIONS
20. ICE MAKER AND WASHER PLUMBING BOXES SHALL BE GYPSUM BOARD PRE-ROCKED TO MEET UL RATING.
21. ALL EXTERIOR DIMENSIONS ARE SHOWN TO THE OUTSIDE FACE OF STUD UNLESS NOTED OTHERWISE.
22. 5/8" DENSHIELD TILE BACKER BOARD SHALL BE USED IN BOTH TUB AND SHOWER COMPARTMENTS, UNLESS NOTED OTHERWISE.
23. ALL WET WALLS SHALL HAVE WATER RESISTANT GYPSUM BOARD PER CODE.
24. USE MANUFACTURER APPROVED SEALANT WHERE BATHTUB/SHOWER MEETS FLOOR.
25. ALL SHELVING TO BE VINYL COATED WIRE SHELVING UNLESS NOTED OTHERWISE.
26. SEE UNIT PLAN SHEETS FOR UNIT CABINET ELEVATIONS.
27. SEE SHEETS A0.07 AND A0.08 FOR TYPICAL DETAILS INCLUDING MOUNTING HEIGHTS, CLEARANCES, ETC. FOR BOTH TYPE-A AND TYPE-B UNITS.
28. SEE INTERIOR ELEVATIONS FOR KITCHEN PANTRY SIZES.
29. SEE INTERIOR ELEVATIONS FOR BATHROOM LINEN CABINET SIZES.
30. DO NOT SCALE OFF DRAWINGS; DIMENSIONS IN QUESTION SHALL BE CLARIFIED BY ARCHITECT.
31. ALL SPACES, GRAB BAR LOCATIONS AND APPLIANCES SHALL COMPLY W/ ACCESSIBILITY REQUIREMENTS AS PER CHAPTER 11 OF THE 2017 OHIO BUILDING CODE AND ANSI 117.1-2009.
32. ALL UNITS TO RECEIVE PORTABLE FIRE EXTINGUISHERS, AS REQUIRED BY THE INTERNATIONAL FIRE CODE
33. ALL FLOOR MATERIAL TRANSITIONS TO OCCUR AT DOOR TRANSITIONS UNLESS NOTED OTHERWISE.
34. BATHTUB SEATS IN ANSI UNITS ARE NOT PERMANENTLY MOUNTED.
35. FIELD VERIFY DIMENSIONS PRIOR TO INSTALLING BATHROOM MIRRORS.
36. TOWEL BARS TO BE MOUNTED AT 48" AFF U.N.O
37. SEE SHEET FOR TYPICAL ANSI REQUIRED KNEE CLEARANCES AT SINKS AND LAVATORIES.
38. EXTEND FLOOR FINISHES UNDER SINKS AT ANSI AND ADAPTABLE UNIT KITCHENS AND BATHROOMS.
39. GYPCRETE TO BE INSTALLED UNDER ALL SHOWER UNITS/TUBS AND MAY REQUIRE AN INSPECTION HOLE TO VERIFY GYPCRETE COVERAGE.
40. WALL CLEAN-OUTS TO BE 12" AFF IN ORDER TO AVOID CUTTING THE WALL BASE AROUND THE CLEAN-OUT COVER.
41. SHOWER SEATS ARE NOT IN CONTRACT. PROVIDE BLOCKING ONLY PER ANSI 117.1, 608.4 EXCEPTION 2.
42. DIMENSIONS SHOWN FOR PLUMBING FIXTURES ARE FROM THE CENTER LINE OF FIXTURE AND ARE ASSUMED 'CLEAR' TO MAINTAIN REQUIRED CLEARANCES.
43. AT LOCATIONS WHERE 2X4 UNIT DEMISING WALL EXTENDS BEYOND ADJACENT UNIT TOWARDS THE BUILDING EXTERIOR, THE EXTERIOR WALL FRAMING WILL BE REQUIRED TO TRANSITION TO 2X6 WALL FRAMING. ALIGN OUTSIDE FACE OF STUDS WITH EDGE OF SLAB BELOW. CONTINUE 2X6 STUD FRAMING TO CORNER OF CLOSEST INTERIOR PERPENDICULAR WALL, TYP.
44. MAINTAIN MINIMUM 7'-0" (84") HEADROOM CLEARANCE ABOVE FINISHED FLOOR AT BATHROOMS, KITCHENS, STORAGE AND LAUNDRY ROOMS.
45. PRE-ROCK RATED WALL. TWO LAYERS OF DRYWALL - ONE PRIOR TO SHOWER/TUB INSTALLATION, ONE AFTER SHOWER/TUB INSTALLATION BY FRAMING CONTRACTOR. SEE DETAILS 11, 13, 14, 15/A8.04.



2 TYPICAL MOUNTING HEIGHTS

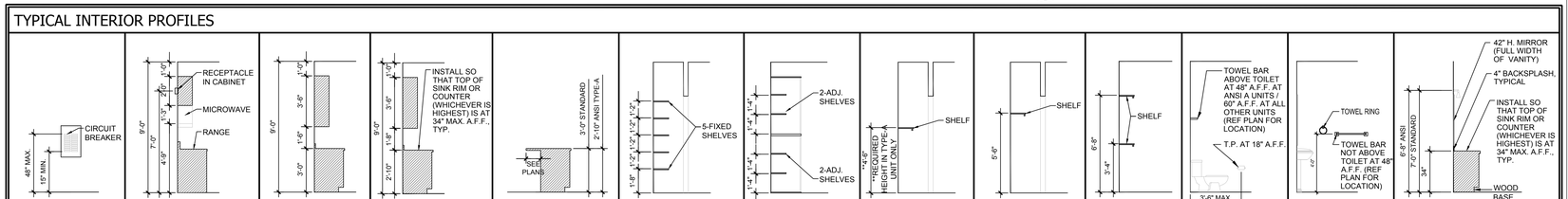
SCALE: NTS



1 TYPICAL COUNTERTOP

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

TYPICAL INTERIOR PROFILES



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Document Record:

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09.08.2022	ISSUED FOR BUILDING PERMIT
05.04.2023	REVISIONS 1
09.13.2024	CITY REVISIONS - ELEVATIONS 2

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Proposed New Development for:

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551 Congress Parkway, Crystal Lake, Illinois

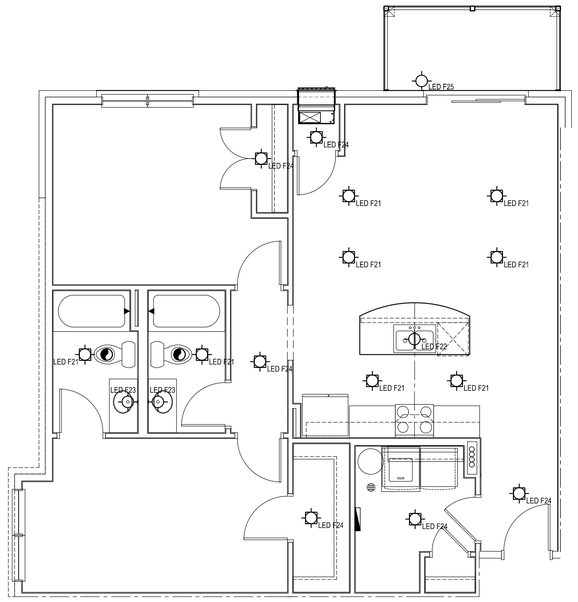
Issue Date: 09.08.2022
Drawn By: PAI

Sheet:
UNIT INFORMATION

A6.1

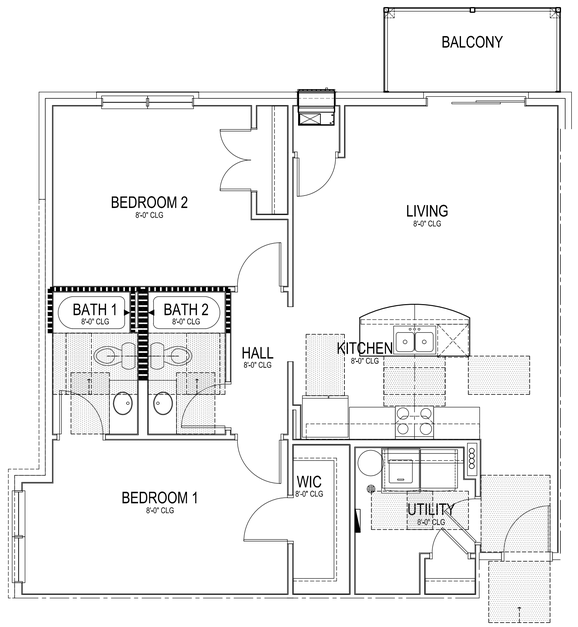
PAI PROJECT NUMBER
22116.00

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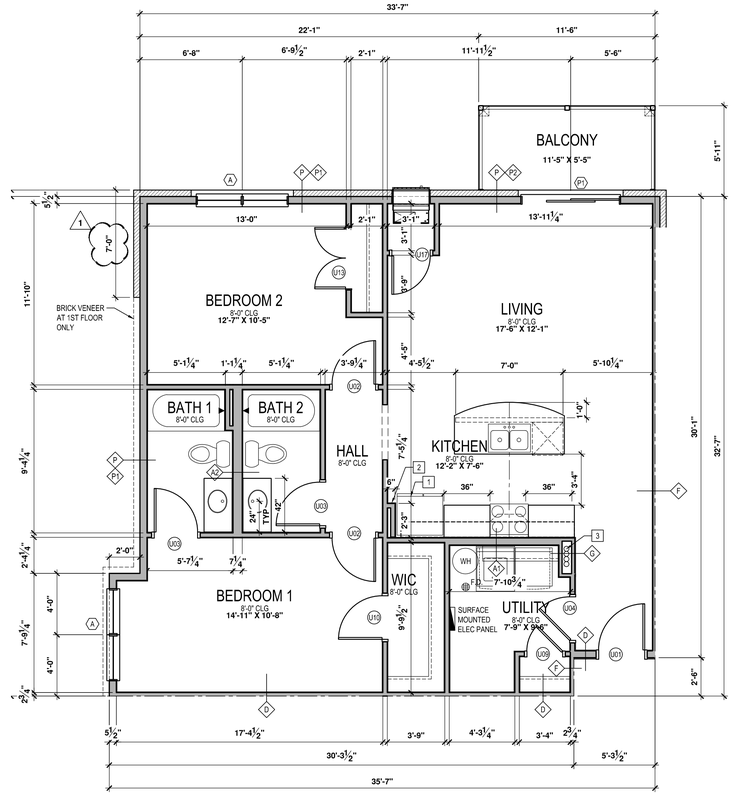
3 UNIT A1 CEILING PLAN

SCALE: 1/4" = 1'-0"



FLOOR SPACE CLEARANCE
2 UNIT A FLOOR PLAN

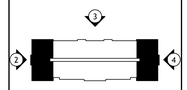
SCALE: 1/4" = 1'-0"



1 UNIT A FLOOR PLAN (1016 SQFT)

SCALE: 1/4" = 1'-0"

ELEVATION KEY PLAN



UNIT KEY PLAN

- (101) DOOR TAG
- (A) WINDOW / PATIO TAG
- (A) WALL TAG
- [1] KEY NOTE
- ACCESSIBLE CLEAR FLOOR SPACES
- BLOCKING IN WALLS FOR GRAB BARS

ELECTRICAL KEY NOTES:

- LED CEILING MOUNT LED LIGHT
- LED WALL MOUNT LED LIGHT
- LED RECESSED LED LIGHT

UNIT PLAN GENERAL NOTES:

1. REFER TO FLOOR PLAN SHEETS FOR FURTHER INFORMATION ON OVERALL FLOOR LAYOUT & DISTRIBUTION OF VARIOUS UNIT TYPES INCLUDING ADAPTABLE UNITS.

2. REFER TO DOOR SCHEDULE SHEET A7.1 & WINDOW SCHEDULE SHEET A7.2 FOR INFORMATION ON OPENINGS AND SHEET A6.1 FOR LIGHT & VENT REQUIREMENTS.

3. REFER TO SHEET A9.1 FOR INFORMATION ON WALL ASSEMBLY CONSTRUCTION.

4. G.C. TO COORDINATE ALL PLUMBING / MECHANICAL / FIRE PROTECTION PENETRATION THROUGH FLOORS / WALLS AMONG VARIOUS CONTRACTORS & TRADES INVOLVED, TYPICAL.

5. ALL DIMENSIONS ARE FROM ONE (1) OF THE FOLLOWING THREE (3) CASES (U.N.O.):
- FROM CENTERLINE OF SEPARATION WALL TO CENTERLINE OF OPENING, OR TO FACE OF STUD (AT EXTERIOR WALL);
- FROM CENTERLINE OF OPENING TO CENTERLINE OF OPENING (AT EXTERIOR WALL);
- FROM FACE OF STUD TO FACE OF STUD (ALL UNIT INTERIOR DIMENSIONS).

6. REFER TO SHEET A0.6, FAIR HOUSING ACCESSIBILITY STANDARDS FOR BLOCKING REQUIREMENTS FOR GRAB BAR LOCATIONS IN BATHROOMS. PER FHAA REQUIREMENT, PROVIDE LET-IN 1/4" TH. PLYWOOD SHEATHING OR 2x8 WOOD BLOCKING BETWEEN WALL STUDS FOR FUTURE INSTALLATION OF GRAB BARS AROUND TOILET, TUB, AND SHOWER STALLS IN ALL UNITS.

7. TYPICAL BALCONY RAIL: MIN. 42" H. METAL GUARD RAIL SYSTEM - REFER TO DETAILS & SPECIFICATIONS.

8. ALL DIAGONAL WALLS TO BE 45 DEGREES U.N.O.

9. R.O. FOR PLUMBING FIXTURES: G.C. SHALL VERIFY ALL PLUMBING FIXTURE MODELS ON THE DRAWINGS WITH DEVELOPER - G.C. SHALL COORDINATE REQUIRED ROUGH OPENING DIMENSIONS FOR BATHTUBS & SHOWERS AMONG VARIOUS CONTRACTORS & TRADES INVOLVED, TYPICAL.

10. BATHROOM ACCESSORIES:
- CURTAIN ROD: PROVIDE STAINLESS STEEL CURTAIN ROD @ 6'-8" A.F.F. AT ALL TUB-SHOWER COMBOS, TYPICAL.
- SHOWER DOOR: PROVIDE SINGLE FROSTED TEMPERED GLASS DOOR W/ SIDE PANEL & S.S. FRAME PER LOCATION.
- TOWEL BAR, NAPKIN HOLDER, TOILET TISSUE HOLDER: REFER TO INTERIOR DESIGNER'S DWGS.

11. SHAFT RATING: ALL SHAFTS (INCLUSIVE OF ALL MECHANICAL EXHAUST, ROOF DRAINS, OVERFLOW DRAINS, ETC.) COMMUNICATING WITH MORE THAN ONE STORY SHALL BE 1-HR FIRE RATED WITH SHAFT WALLS, TYPICAL - SEE PLANS, WALL TYPES & CODE REVIEW DATA SHEET

UNIT PLAN KEY NOTES: (#)

1. PROVIDE COLD WATER LINE FOR REFRIGERATOR IN EACH UNIT, TYPICAL - REFER TO PLUMBING PLANS.

2. PROVIDE 2x4 WOOD STUD FILLER FRAMING WITH GYPSUM BOARD FINISH WHEN REFRIGERATOR IS AT CORNER IN EACH UNIT, TYPICAL.

3. PROVIDE 2x4 WOOD STUD FRAMING WITH GYPSUM BOARD FINISH ON ONE SIDE TO CREATE A CHASE FOR PLUMBING AND MECHANICAL IN EACH UNIT, TYPICAL - ALL REQUIRED CORES FOR PLUMBING PIPES & EXHAUST DUCTS WITHIN CHASE SHALL BE FIRE-STOPPED ALL AROUND AT THE FIRE RATED FLOOR-CEILING ASSEMBLY, TYPICAL - SEE DETAILS.

4. PROVIDE 2x4 WOOD STUD FRAMING WITH GYPSUM BOARD FINISH ON ONE SIDE TO CREATE A CHASE FOR PLUMBING AND MECHANICAL THAT IS INDEPENDENT OF FIRE RATED WALL ASSEMBLY NEXT TO IT, TYPICAL WHERE SHOWN.

ICC A117.1 TYPE B DWELLING UNITS:

- SECTION 1107.6.2.2.2:
IN STRUCTURES WITH FOUR (4) OR MORE D.U.s INTENDED TO BE OCCUPIED AS A RESIDENCE, EVERY D.U. SHALL BE TYPE B UNIT, U.N.O.

ICC A117.1 TYPE B D.U. PLAN NOTES:

1. (A117.1 - SEC. 1104.11) GRAB BAR AND SHOWER SEAT REINFORCEMENT:
REINFORCEMENT SHALL BE PROVIDED FOR THE FUTURE INSTALLATION OF GRAB BARS AND SHOWER SEATS AT WATER CLOSETS, BATHTUBS, AND SHOWER COMPARTMENTS. REFER TO FLOOR PLAN ON THIS SHEET FOR LOCATION OF SOLID BLOCKING REQUIRED WITHIN BATHROOMS.

2. CLEAR WIDTH FOR USER PASSAGE DOORWAYS:
DOORWAYS SHALL HAVE A CLEAR OPENING OF 31 3/4 INCHES MINIMUM. CLEAR OPENING OF SWINGING DOORS SHALL BE MEASURED BETWEEN THE FACE OF THE DOOR AND STOP, WITH THE DOOR OPEN 90 DEGREES.

3. LAUNDRY EQUIPMENTS:
A CLEAR FLOOR SPACE SHALL BE PROVIDED FOR EACH WASHING MACHINE AND CLOTHES DRYER. A PARALLEL APPROACH SHALL BE PROVIDED FOR A TOP LOADING MACHINE. A FORWARD OR PARALLEL APPROACH SHALL BE PROVIDED FOR A FRONT LOADING MACHINE.

4. TOILET AND BATHING AREAS:

ALL TOILET AND BATHING AREAS PROVIDED SHALL COMPLY WITH FOLLOWING REQUIREMENT AS DESCRIBED UNDER NOTES 5 THRU' 8, TYPICAL.

5. LAVATORY:

A CLEAR FLOOR SPACE POSITIONED FOR A PARALLEL APPROACH SHALL BE PROVIDED AT A LAVATORY. THE CLEAR FLOOR SPACE SHALL BE CENTERED ON THE LAVATORY. PROVIDE OFF-CENTER INTEGRAL BOWL WITHIN (42") WIDE LAVATORY AS SHOWN ON THE PLAN.

PROVIDE CABINETRY UNDER THE LAVATORY, PROVIDED THE FOLLOWING CRITERIA ARE MET:

(A) THE CABINETRY CAN BE REMOVED WITHOUT REMOVAL OR REPLACEMENT OF THE LAVATORY. THAT MEANS THE LAVATORY SHALL BE HANGED FROM THE WALL WITH TWO (2) BRACKETS. PROVIDE ALL NECESSARY BLOCKING BEHIND THE LAVATORY FOR BRACKET INSTALLATION.
(B) THE FLOOR FINISH SHALL EXTEND UNDER THE CABINETRY.
(C) ALL THE WALLS BEHIND AND SURROUNDING THE CABINETRY SHALL BE FINISHED.

6. WATER CLOSET:

THE CENTERLINE OF THE WATER CLOSET SHALL BE 16 INCHES MINIMUM AND 18 INCHES MAXIMUM FROM ONE SIDE (FROM THE ADJACENT BATHTUB) OF THE REQUIRED CLEARANCE.

W.C. CLEARANCE WIDTH:
CLEARANCE AROUND THE WATER CLOSET SHALL BE 48 INCHES MINIMUM IN WIDTH, MEASURED PERPENDICULAR FROM THE SIDE OF THE CLEARANCE THAT IS 16 INCHES MINIMUM AND 18 INCHES MAXIMUM FROM THE WATER CLOSET CENTERLINE.

W.C. CLEARANCE DEPTH:
CLEARANCE AROUND THE WATER CLOSET SHALL BE 56 INCHES MINIMUM IN DEPTH, MEASURED PERPENDICULAR FROM THE REAR WALL.

W.C. CLEARANCE OVERLAP:
A VANITY OR OTHER OBSTRUCTION 24 INCHES MAXIMUM IN DEPTH, MEASURED PERPENDICULAR FROM THE REAR WALL, SHALL BE PERMITTED TO OVERLAP THE REQUIRED CLEARANCE, PROVIDED THE WIDTH OF THE REMAINING CLEARANCE AT THE WATER CLOSET IS 33 INCHES MINIMUM.

7. BATHTUB:

FORWARD APPROACH BATHTUBS:
A CLEARANCE 60 INCHES MINIMUM IN LENGTH AND 48 INCHES MINIMUM IN WIDTH SHALL BE PROVIDED IN FRONT OF BATHTUBS WITH A FORWARD APPROACH. A WATER CLOSET AND A LAVATORY SHALL BE PERMITTED IN THE CLEARANCE AT ONE END OF THE BATHTUB.

8. KITCHEN:

MINIMUM CLEARANCE:
CLEARANCE BETWEEN ALL OPPOSING BASE CABINETS, COUNTERTOPS, APPLIANCES, OR WALLS WITHIN KITCHEN WORK AREAS SHALL BE 40 INCHES MINIMUM.

CLEAR FLOOR SPACE AT ALL APPLIANCES & SINK: A CLEAR FLOOR SPACE, POSITIONED FOR A PARALLEL OR FORWARD APPROACH SHALL BE PROVIDED. REFER TO FLOOR PLAN.

Document Record:

Issued Date	Description
09.08.2022	ISSUED FOR BUILDING PERMIT
05.04.2023	REVISIONS 1
09.13.2024	CITY REVISIONS - ELEVATIONS 2

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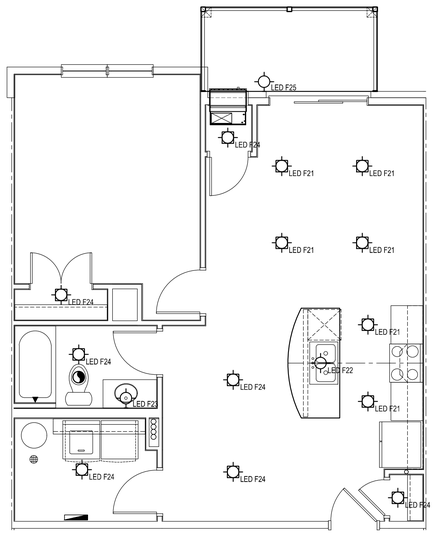
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Sheet:
UNIT A FLOOR PLAN

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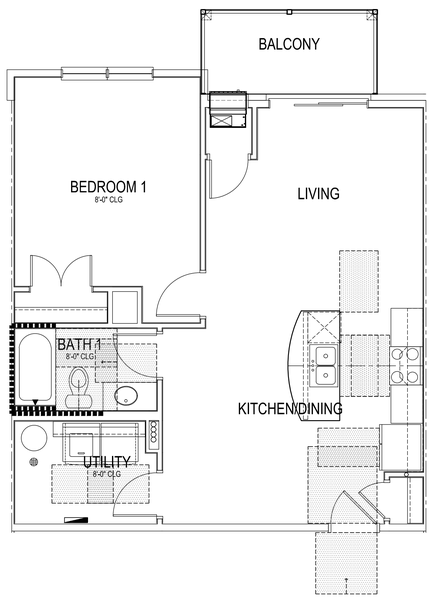
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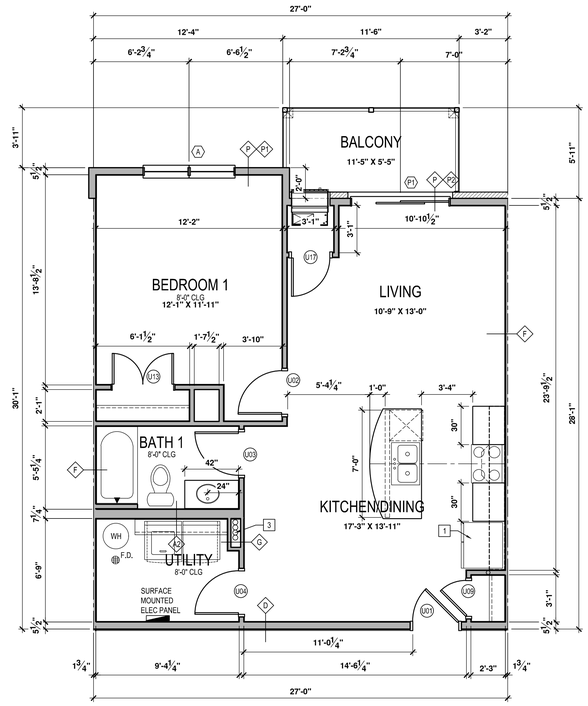
3 UNIT B CEILING PLAN

SCALE: 1/4" = 1'-0"



FLOOR SPACE CLEARANCE
2 UNIT B FLOOR PLAN

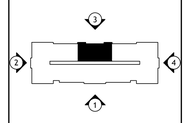
SCALE: 1/4" = 1'-0"



1 UNIT B FLOOR PLAN (730 SQFT)

SCALE: 1/4" = 1'-0"

ELEVATION KEY PLAN



UNIT KEY PLAN

- (U01) DOOR TAG
- (A) WINDOW / PATIO TAG
- (A) WALL TAG
- (1) KEY NOTE
- ACCESSIBLE CLEAR FLOOR SPACES
- BLOCKING IN WALLS FOR GRAB BARS

ELECTRICAL KEY NOTES:

- LED CEILING MOUNT LED LIGHT
- LED WALL MOUNT LED LIGHT
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UNIT PLAN KEY NOTES: (##)

1. PROVIDE COLD WATER LINE FOR REFRIGERATOR IN EACH UNIT, TYPICAL - REFER TO PLUMBING PLANS.

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3. PROVIDE 2x4 WOOD STUD FRAMING WITH GYPSUM BOARD FINISH ON ONE SIDE TO CREATE A CHASE FOR PLUMBING AND MECHANICAL IN EACH UNIT, TYPICAL - ALL REQUIRED CORES FOR PLUMBING PIPES & EXHAUST DUCTS WITHIN CHASE SHALL BE FIRE-STOPPED ALL AROUND AT THE FIRE RATED FLOOR-CEILING ASSEMBLY, TYPICAL - SEE DETAILS.

4. PROVIDE 2x4 WOOD STUD FRAMING WITH GYPSUM BOARD FINISH ON ONE SIDE TO CREATE A CHASE FOR PLUMBING AND MECHANICAL THAT IS INDEPENDENT OF FIRE RATED WALL ASSEMBLY NEXT TO IT, TYPICAL WHERE SHOWN.

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4. TOILET AND BATHING AREAS:
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5. LAVATORY:
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(A) THE CABINETRY CAN BE REMOVED WITHOUT REMOVAL OR REPLACEMENT OF THE LAVATORY. THAT MEANS THE LAVATORY SHALL BE HANGED FROM THE WALL WITH TWO (2) BRACKETS. PROVIDE ALL NECESSARY BLOCKING BEHIND THE LAVATORY FOR BRACKET INSTALLATION.
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A VANITY OR OTHER OBSTRUCTION 24 INCHES MAXIMUM IN DEPTH, MEASURED PERPENDICULAR FROM THE REAR WALL, SHALL BE PERMITTED TO OVERLAP THE REQUIRED CLEARANCE, PROVIDED THE WIDTH OF THE REMAINING CLEARANCE AT THE WATER CLOSET IS 33 INCHES MINIMUM.

7. BATHTUB:

FORWARD APPROACH BATHTUBS:
A CLEARANCE 60 INCHES MINIMUM IN LENGTH AND 48 INCHES MINIMUM IN WIDTH SHALL BE PROVIDED IN FRONT OF BATHTUBS WITH A FORWARD APPROACH. A WATER CLOSET AND A LAVATORY SHALL BE PERMITTED IN THE CLEARANCE AT ONE END OF THE BATHTUB.

8. KITCHEN:

MINIMUM CLEARANCE:
CLEARANCE BETWEEN ALL OPPOSING BASE CABINETS, COUNTERTOPS, APPLIANCES, OR WALLS WITHIN KITCHEN WORK AREAS SHALL BE 40 INCHES MINIMUM.

CLEAR FLOOR SPACE AT ALL APPLIANCES & SINK: A CLEAR FLOOR SPACE, POSITIONED FOR A PARALLEL OR FORWARD APPROACH SHALL BE PROVIDED REFER TO FLOOR PLAN.

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Proposed New Development for:

The Courtyard At Congress Station

551 Congress Parkway, Crystal Lake, Illinois

Issue Date: 09.08.2022
Drawn By: PAI

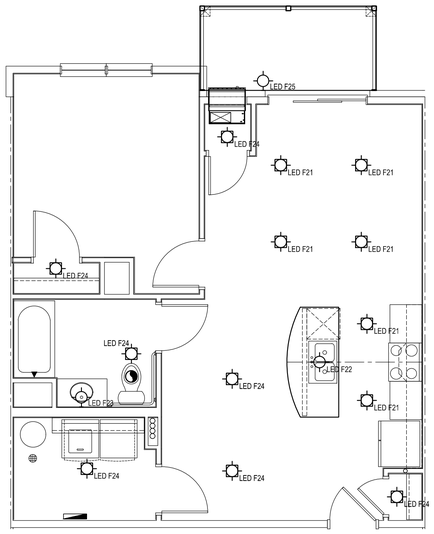
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UNIT B FLOOR PLAN

A6.3

PAI PROJECT NUMBER
22116.00

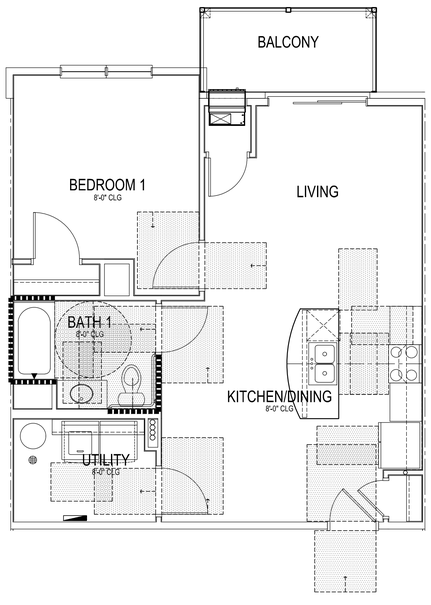
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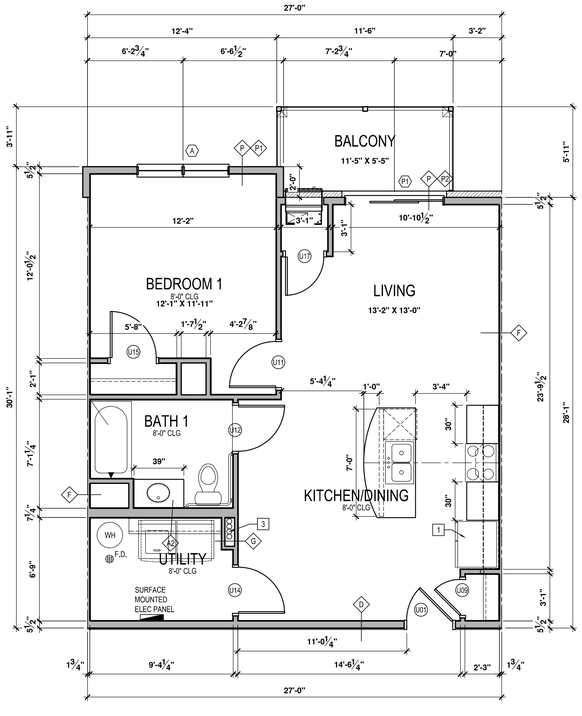
UNIT B 'ANSI TYPE A' CEILING PLAN

3 SCALE: 1/4" = 1'-0"



FLOOR SPACE CLEARANCE UNIT B 'ANSI TYPE A' FLOOR PLAN

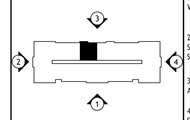
2 SCALE: 1/4" = 1'-0"



UNIT B 'ANSI TYPE A' FLOOR PLAN (730 SQFT)

1 SCALE: 1/4" = 1'-0"

ELEVATION KEY PLAN



UNIT KEY PLAN

- (101) DOOR TAG
- (A) WINDOW / PATIO TAG
- (A) WALL TAG
- 1 KEY NOTE
- ACCESSIBLE CLEAR FLOOR SPACES
- BLOCKING IN WALLS FOR GRAB BARS

ELECTRICAL KEY NOTES:

- LED CEILING MOUNT LED LIGHT
- LED WALL MOUNT LED LIGHT
- LED RECESSED LED LIGHT

UNIT PLAN GENERAL NOTES:

1. REFER TO FLOOR PLAN SHEETS FOR FURTHER INFORMATION ON OVERALL FLOOR LAYOUT & DISTRIBUTION OF VARIOUS UNIT TYPES INCLUDING ADAPTABLE UNITS.

2. REFER TO DOOR SCHEDULE SHEET A7.1 & WINDOW SCHEDULE SHEET A7.2 FOR INFORMATION ON OPENINGS AND SHEET A6.1 FOR LIGHT & VENT REQUIREMENTS.

3. REFER TO SHEET A9.1 FOR INFORMATION ON WALL ASSEMBLY CONSTRUCTION.

4. G.C. TO COORDINATE ALL PLUMBING / MECHANICAL / FIRE PROTECTION PENETRATION THROUGH FLOORS / WALLS AMONG VARIOUS CONTRACTORS & TRADES INVOLVED, TYPICAL.

5. ALL DIMENSIONS ARE FROM ONE (1) OF THE FOLLOWING THREE (3) CASES (U.N.O.):
- FROM CENTERLINE OF SEPARATION WALL TO CENTERLINE OF OPENING, OR TO FACE OF STUD (AT EXTERIOR WALL);
- FROM CENTERLINE OF OPENING TO CENTERLINE OF OPENING (AT EXTERIOR WALL);
- FROM FACE OF STUD TO FACE OF STUD (ALL UNIT INTERIOR DIMENSIONS).

6. REFER TO SHEET A0.6, FAIR HOUSING ACCESSIBILITY STANDARDS FOR BLOCKING REQUIREMENTS FOR GRAB BAR LOCATIONS IN BATHROOMS. PER FHAA REQUIREMENT, PROVIDE LET-IN 3/4" TH. PLYWOOD SHEATHING OR 2x8 WOOD BLOCKING BETWEEN WALL STUDS FOR FUTURE INSTALLATION OF GRAB BARS AROUND TOILET, TUB, AND SHOWER STALLS IN ALL UNITS.

7. TYPICAL BALCONY RAIL: MIN. 42" H. METAL GUARD RAIL SYSTEM - REFER TO DETAILS & SPECIFICATIONS.

8. ALL DIAGONAL WALLS TO BE 45 DEGREES U.N.O.

9. R.O. FOR PLUMBING FIXTURES: G.C. SHALL VERIFY ALL PLUMBING FIXTURE MODELS ON THE DRAWINGS WITH DEVELOPER - G.C. SHALL COORDINATE REQUIRED ROUGH OPENING DIMENSIONS FOR BATHTUBS & SHOWERS AMONG VARIOUS CONTRACTORS & TRADES INVOLVED, TYPICAL.

10. BATHROOM ACCESSORIES:
- CURTAIN ROD: PROVIDE STAINLESS STEEL CURTAIN ROD @ 6'-8" A.F.F. AT ALL TUB-SHOWER COMBOS, TYPICAL.
- SHOWER DOOR: PROVIDE SINGLE FROSTED TEMPERED GLASS DOOR W/ SIDE PANEL @ S.S. FRAME PER LOCATION.
- TOWEL BAR, NAPKIN HOLDER, TOILET TISSUE HOLDER: REFER TO INTERIOR DESIGNER'S DWGS.

11. SHAFT RATING: ALL SHAFTS (INCLUSIVE OF ALL MECHANICAL EXHAUST, ROOF DRAINS, OVERFLOW DRAINS, ETC.) COMMUNICATING WITH MORE THAN ONE STORY SHALL BE 1-HR FIRE RATED WITH SHAFT WALLS, TYPICAL - SEE PLANS, WALL TYPES & CODE REVIEW DATA SHEET

UNIT PLAN KEY NOTES: (##)

1. PROVIDE COLD WATER LINE FOR REFRIGERATOR IN EACH UNIT, TYPICAL - REFER TO PLUMBING PLANS.

2. PROVIDE 2x4 WOOD STUD FILLER FRAMING WITH GYPSUM BOARD FINISH WHEN REFRIGERATOR IS AT CORNER IN EACH UNIT, TYPICAL.

3. PROVIDE 2x4 WOOD STUD FRAMING WITH GYPSUM BOARD FINISH ON ONE SIDE TO CREATE A CHASE FOR PLUMBING AND MECHANICAL IN EACH UNIT, TYPICAL - ALL REQUIRED CORES FOR PLUMBING PIPES & EXHAUST DUCTS WITHIN CHASE SHALL BE FIRE-STOPPED ALL AROUND AT THE FIRE RATED FLOOR-CEILING ASSEMBLY, TYPICAL - SEE DETAILS.

4. PROVIDE 2x4 WOOD STUD FRAMING WITH GYPSUM BOARD FINISH ON ONE SIDE TO CREATE A CHASE FOR PLUMBING AND MECHANICAL THAT IS INDEPENDENT OF FIRE RATED WALL ASSEMBLY NEXT TO IT, TYPICAL WHERE SHOWN.

ICC A117.1 TYPE A DWELLING UNITS:

- SECTION 1107.6.2.2.1:
IN GROUP R-2 OCCUPANCIES CONTAINING MORE THAN 20 DWELLING UNITS, AT LEAST 2 PERCENT BUT NOT LESS THAN ONE OF THE UNITS SHALL BE A TYPE A UNIT.

ICC A117.1 TYPE A D.U. PLAN NOTES:

1. (A117.1 - SEC. 1104.11.1) GRAB BAR AND SHOWER SEAT REINFORCEMENT:
REINFORCEMENT SHALL BE PROVIDED FOR THE FUTURE INSTALLATION OF GRAB BARS AND SHOWER SEATS AT WATER CLOSETS, BATHTUBS, AND SHOWER COMPARTMENTS. REFER TO FLOOR PLAN ON THIS SHEET FOR LOCATION OF SOLID BLOCKING REQUIRED WITHIN BATHROOMS.

2. CLEAR WIDTH FOR USER PASSAGE DOORWAYS:
DOORWAYS SHALL HAVE A CLEAR OPENING OF 32 INCHES MINIMUM. CLEAR OPENING OF SWINGING DOORS SHALL BE MEASURED BETWEEN THE FACE OF THE DOOR AND STOP, WITH THE DOOR OPEN 90 DEGREES.

3. LAUNDRY EQUIPMENTS:
A CLEAR FLOOR SPACE SHALL BE PROVIDED FOR EACH WASHING MACHINE AND CLOTHES DRYER. A PARALLEL APPROACH SHALL BE PROVIDED FOR A TOP LOADING MACHINE.

4. TOILET AND BATHING AREAS:
ALL TOILET AND BATHING AREAS PROVIDED SHALL COMPLY WITH FOLLOWING REQUIREMENT AS DESCRIBED UNDER NOTES 5 THRU' 8, TYPICAL.

5. LAVATORY:
LAVATORY CLEAR FLOOR SPACE:
A CLEAR FLOOR SPACE POSITIONED FOR FORWARD APPROACH, SHALL BE PROVIDED. KNEE AND TOE CLEARANCE SHALL BE PROVIDED.

LAVATORY HEIGHT:
THE FRONT OF LAVATORIES AND SINKS SHALL BE 34 INCHES MAX. ABOVE THE FLOOR, MEASURED TO THE HIGHER OF THE RIM OR COUNTER SURFACE.

ONLY PROVIDE CABINETRY UNDER THE LAVATORY, PROVIDED THE FOLLOWING CRITERIA ARE MET:
(A) THE CABINETRY CAN BE REMOVED WITHOUT REMOVAL OR REPLACEMENT OF THE LAVATORY. THAT MEANS THE LAVATORY SHALL BE HANGED FROM THE WALL WITH TWO (2) BRACKETS. PROVIDE ALL NECESSARY BLOCKING BEHIND THE LAVATORY FOR BRACKET INSTALLATION.
(B) THE FLOOR FINISH SHALL EXTEND UNDER THE CABINETRY.
(C) ALL THE WALLS BEHIND AND SURROUNDING THE CABINETRY SHALL BE FINISHED.

EXPOSED PIPES AND SURFACES:
WATER SUPPLY AND DRAINPIPES UNDER LAVATORIES AND SINKS SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES AND SINKS.

MIRRORS:
MIRRORS ABOVE LAVATORIES SHALL HAVE THE BOTTOM EDGE OF THE REFLECTING SURFACE 40 INCHES MAX. ABOVE THE FLOOR.

6. WATER CLOSET: REFER TO DETAIL 5/A0.6.

W.C. LOCATION:
THE WATER CLOSET SHALL BE POSITIONED WITH A WALL TO THE REAR AND TO ONE SIDE. THE CENTERLINE OF THE WATER CLOSET SHALL BE 16 INCHES MIN. AND 18 INCHES MAX. FROM THE SIDEWALL.

W.C. CLEARANCE WIDTH:
CLEARANCE AROUND THE WATER CLOSET SHALL BE 60 INCHES MIN. IN WIDTH, MEASURED PERPENDICULAR FROM THE SIDE WALL.

W.C. CLEARANCE DEPTH:
CLEARANCE AROUND THE WATER CLOSET SHALL BE 66 INCHES MINIMUM IN DEPTH, MEASURED PERPENDICULAR FROM THE REAR WALL.

W.C. CLEARANCE OVERLAP:
THE REQUIRED CLEARANCE AROUND THE WATER CLOSET SHALL BE PERMITTED TO OVERLAP THE WATER CLOSET, ASSOCIATED GRAB BARS, PAPER DISPENSERS, COAT HOOKS, SHELVES, ACCESSIBLE ROUTES, CLEAR FLOOR SPACE REQUIRED AT OTHER FIXTURES, AND THE WHEELCHAIR TURNING SPACE. NO OTHER FIXTURES OR OBSTRUCTIONS SHALL BE LOCATED WITHIN THE REQUIRED WATER CLOSET CLEARANCE WITH AN EXCEPTION OF A LAVATORY MEASURING 24 INCHES MAX. IN DEPTH SHALL BE PERMITTED ON THE REAR WALL 18 INCHES MIN. FROM THE CENTERLINE OF THE WATER CLOSET TO THE SIDE EDGE OF THE LAVATORY WHERE THE CLEARANCE AT THE WATER CLOSET IS 66 INCHES MIN. MEASURED PERPENDICULAR FROM THE REAR WALL.

W.C. HEIGHT:
THE TOP OF THE WATER CLOSET SEAT SHALL BE 15 INCHES MIN. AND 19 INCHES MAX. ABOVE THE FLOOR, MEASURED TO THE TOP OF THE SEAT.

FLUSH CONTROLS:
HAND-OPERATED FLUSH CONTROLS SHALL BE LOCATED ON THE OPEN SIDE OF THE WATER CLOSET.

7. BATHTUB: REFER TO DETAIL 6/A0.6.

BATHTUB CLEARANCE:
A CLEARANCE IN FRONT OF BATHTUBS EXTENDING THE LENGTH OF THE BATHTUB AND 30 INCHES MIN. IN DEPTH SHALL BE PROVIDED. PROVIDE REMOVABLE IN-TUB SEAT.

GRAB BARS FOR BATHTUB:
PROVIDE GRAB BARS FOR BATH AS SHOWN IN DETAIL 6/A0.6 ALONG WITH ALL NECESSARY SOLID BLOCKING WITHIN WALLS, TYPICAL.

HAND SHOWER:
A HAND SHOWER WITH A HOSE 59 INCHES MIN. IN LENGTH, THAT CAN BE USED AS BOTH A FIXED SHOWER HEAD AND AS A HAND SHOWER, SHALL BE PROVIDED. THE HAND SHOWER SHALL HAVE A CONTROL WITH A NONPOSITIVE SHUTOFF FEATURE. WHERE PROVIDED, AN ADJUSTABLE-HEIGHT HAND SHOWER MOUNTED ON A VERTICAL BAR SHALL BE INSTALLED SO AS TO NOT OBSTRUCT THE USE OF GRAB BARS.

8. KITCHEN.

HEIGHT OF COUNTERTOPS:
ALL COUNTERTOP SURFACE SHALL BE 34 INCHES (34") MAX. ABOVE FINISHED FLOOR IN AN ENTIRE KITCHEN, TYPICAL.

MINIMUM CLEARANCE:
CLEARANCE BETWEEN ALL OPPOSING BASE CABINETS, COUNTERTOPS, APPLIANCES, OR WALLS WITHIN KITCHEN WORK AREAS SHALL BE 40 INCHES MIN.

KITCHEN "WORK SURFACE":
REFER TO DETAIL 1/A0.6.

AT LEAST ONE SECTION OF COUNTER SHALL PROVIDE AN ACCESSIBLE WORK SURFACE THAT HAS MIN. 30" WIDE REMOVABLE BASE CABINET UNDER KITCHEN COUNTERTOP TO GIVE CLEARANCES REQUIRED FOR MIN. 30"W x 19"D x 27"H "WORK SURFACE" - THE CABINETRY CAN BE REMOVED WITHOUT REMOVAL OR REPLACEMENT OF THE WORK SURFACE - FINISH FLOOR SHALL EXTEND TO THE WALL UNDER CABINETRY - THE WALLS BEHIND AND SURROUNDING THE CABINETRY ARE FINISHED.

KITCHEN SINK:
REFER TO DETAIL 1/A0.6.

PROVIDE SINK WITHIN 30" WIDE COUNTERTOP.
A CLEAR FLOOR SPACE, POSITIONED FOR A FORWARD APPROACH TO THE SINK, SHALL BE PROVIDED.

CABINETRY SHALL BE PERMITTED TO BE ADDED UNDER THE SINK, PROVIDED THE FOLLOWING CRITERIA ARE MET:
(A) THE CABINETRY CAN BE REMOVED WITHOUT REMOVAL OR REPLACEMENT OF THE SINK,
(B) THE FLOOR FINISH EXTENDS UNDER THE CABINETRY, AND
(C) THE WALLS BEHIND AND SURROUNDING THE CABINETRY ARE FINISHED.

EXPOSED PIPES AND SURFACES UNDER SINK:
WATER SUPPLY AND DRAIN PIPES UNDER SINKS SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER SINKS.

CLEAR FLOOR SPACE AT ALL APPLIANCES & SINK: A CLEAR FLOOR SPACE, POSITIONED FOR A PARALLEL OR FORWARD APPROACH SHALL BE PROVIDED. REFER TO FLOOR PLAN.

COOK TOP & OVEN CONTROLS:
THE LOCATION OF CONTROLS SHALL NOT REQUIRE REACHING ACROSS BURNERS.

REFRIGERATOR/FREEZER:
COMBINATION REFRIGERATORS AND FREEZERS SHALL HAVE AT LEAST 50 PERCENT OF THE FREEZER COMPARTMENT SHELVES, INCLUDING THE BOTTOM OF THE FREEZER 54 INCHES MAX. ABOVE THE FLOOR WHEN THE SHELVES ARE INSTALLED AT THE MAXIMUM HEIGHTS POSSIBLE IN THE COMPARTMENT. A CLEAR FLOOR SPACE, POSITIONED FOR A PARALLEL APPROACH TO THE REFRIGERATOR/FREEZER, SHALL BE PROVIDED.

9. CLOSET SHELVES:
REFER TO SHELVING PROFILES ON SHEET A6.1.

10. MEDICINE CABINET:
BOTTOM OF THE MEDICINE CABINET SHALL BE LOCATED WITH A USABLE SHELF NO HIGHER THAN 44" A.F.F.

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05.04.2023	REVISIONS 1
09.13.2024	CITY REVISIONS - ELEVATIONS 2

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Proposed New Development for:

The Courtyard At Congress Station

551 Congress Parkway, Crystal Lake, Illinois

Issue Date: 09.08.2022
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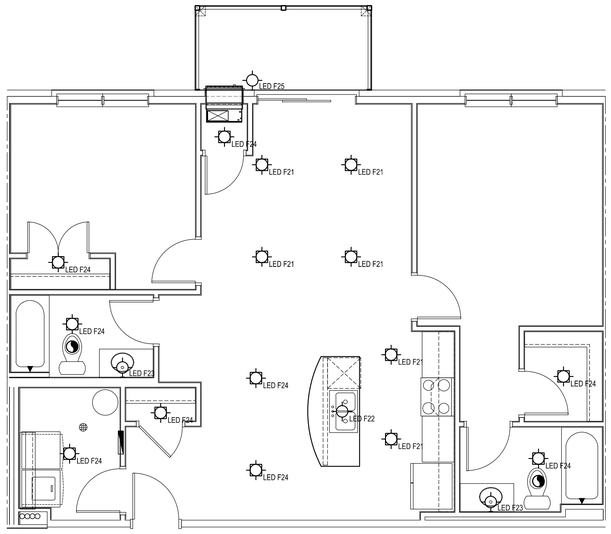
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UNIT B 'ANSI TYPE A' FLOOR PLAN

A6.3A

PAI PROJECT NUMBER
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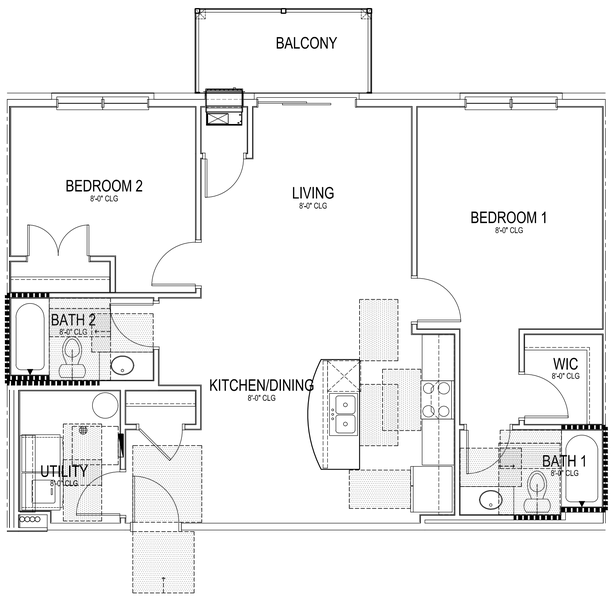
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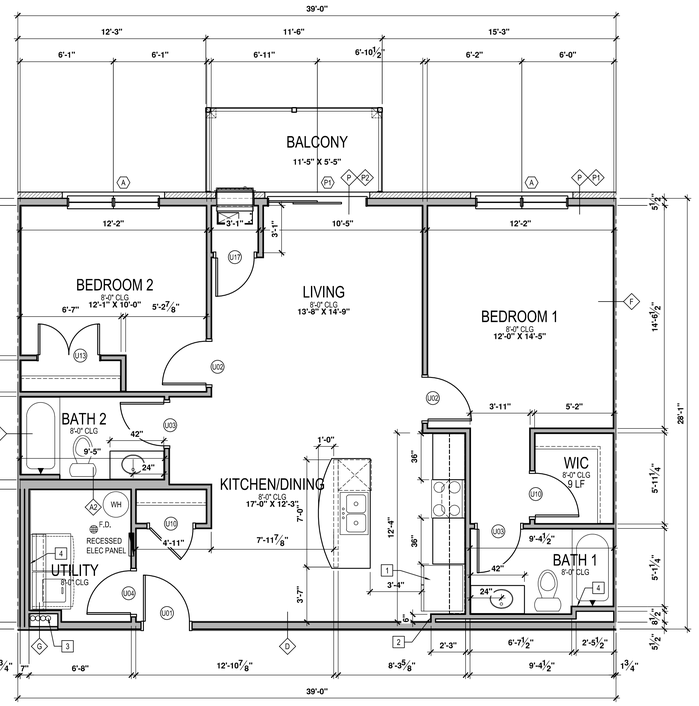
3 UNIT C CEILING PLAN

SCALE: 1/4" = 1'-0"



FLOOR SPACE CLEARANCE
2 UNIT C FLOOR PLAN

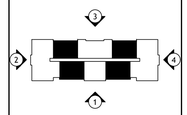
SCALE: 1/4" = 1'-0"



1 UNIT C FLOOR PLAN (1095 SQFT)

SCALE: 1/4" = 1'-0"

ELEVATION KEY PLAN



UNIT KEY PLAN

- (101) DOOR TAG
- (A) WINDOW / PATIO TAG
- (A) WALL TAG
- (1) KEY NOTE
- ACCESSIBLE CLEAR FLOOR SPACES
- BLOCKING IN WALLS FOR GRAB BARS

ELECTRICAL KEY NOTES:

- LED CEILING MOUNT LED LIGHT
- LED WALL MOUNT LED LIGHT
- LED RECESSED LED LIGHT

UNIT PLAN GENERAL NOTES:

1. REFER TO FLOOR PLAN SHEETS FOR FURTHER INFORMATION ON OVERALL FLOOR LAYOUT & DISTRIBUTION OF VARIOUS UNIT TYPES INCLUDING ADAPTABLE UNITS.

2. REFER TO DOOR SCHEDULE SHEET A7.1 & WINDOW SCHEDULE SHEET A7.2 FOR INFORMATION ON OPENINGS AND SHEET A6.1 FOR LIGHT & VENT REQUIREMENTS.

3. REFER TO SHEET A9.1 FOR INFORMATION ON WALL ASSEMBLY CONSTRUCTION.

4. G.C. TO COORDINATE ALL PLUMBING / MECHANICAL / FIRE PROTECTION PENETRATION THROUGH FLOORS / WALLS AMONG VARIOUS CONTRACTORS & TRADES INVOLVED, TYPICAL

5. ALL DIMENSIONS ARE FROM ONE (1) OF THE FOLLOWING THREE (3) CASES (U.N.O.):
- FROM CENTERLINE OF SEPARATION WALL TO CENTERLINE OF OPENING, OR TO FACE OF STUD (AT EXTERIOR WALL);
- FROM CENTERLINE OF OPENING TO CENTERLINE OF OPENING (AT EXTERIOR WALL);
- FROM FACE OF STUD TO FACE OF STUD (ALL UNIT INTERIOR DIMENSIONS).

6. REFER TO SHEET A0.6, FAIR HOUSING ACCESSIBILITY STANDARDS FOR BLOCKING REQUIREMENTS FOR GRAB BAR LOCATIONS IN BATHROOMS. PER FHAA REQUIREMENT, PROVIDE LET-IN 1/4" TH. PLYWOOD SHEATHING OR 2x8 WOOD BLOCKING BETWEEN WALL STUDS FOR FUTURE INSTALLATION OF GRAB BARS AROUND TOILET, TUB, AND SHOWER STALLS IN ALL UNITS.

7. TYPICAL BALCONY RAIL: MIN. 42" H. METAL GUARD RAIL SYSTEM - REFER TO DETAILS & SPECIFICATIONS.

8. ALL DIAGONAL WALLS TO BE 45 DEGREES U.N.O.

9. R.O. FOR PLUMBING FIXTURES: G.C. SHALL VERIFY ALL PLUMBING FIXTURE MODELS ON THE DRAWINGS WITH DEVELOPER - G.C. SHALL COORDINATE REQUIRED ROUGH OPENING DIMENSIONS FOR BATHTUBS & SHOWERS AMONG VARIOUS CONTRACTORS & TRADES INVOLVED, TYPICAL.

10. BATHROOM ACCESSORIES:
- CURTAIN ROD: PROVIDE STAINLESS STEEL CURTAIN ROD @ 6'-0" A.F.F. AT ALL TUB-SHOWER COMBOS, TYPICAL.
- SHOWER DOOR: PROVIDE SINGLE FROSTED TEMPERED GLASS DOOR W/ SIDE PANEL & S.S. FRAME PER LOCATION.
- TOWEL BAR, NAPKIN HOLDER, TOILET TISSUE HOLDER: REFER TO INTERIOR DESIGNER'S DWGS.

11. SHAFT RATING: ALL SHAFTS (INCLUSIVE OF ALL MECHANICAL EXHAUST, ROOF DRAINS, OVERFLOW DRAINS, ETC.) COMMUNICATING WITH MORE THAN ONE STORY SHALL BE 1-HR FIRE RATED WITH SHAFT WALLS, TYPICAL - SEE PLANS, WALL TYPES & CODE REVIEW DATA SHEET

UNIT PLAN KEY NOTES: (#)

1. PROVIDE COLD WATER LINE FOR REFRIGERATOR IN EACH UNIT, TYPICAL - REFER TO PLUMBING PLANS.

2. PROVIDE 2x4 WOOD STUD FILLER FRAMING WITH GYPSUM BOARD FINISH WHEN REFRIGERATOR IS AT CORNER IN EACH UNIT, TYPICAL.

3. PROVIDE 2x4 WOOD STUD FRAMING WITH GYPSUM BOARD FINISH ON ONE SIDE TO CREATE A CHASE FOR PLUMBING AND MECHANICAL IN EACH UNIT, TYPICAL - ALL REQUIRED CORES FOR PLUMBING PIPES & EXHAUST DUCTS WITHIN CHASE SHALL BE FIRE-STOPPED ALL AROUND AT THE FIRE RATED FLOOR-CEILING ASSEMBLY, TYPICAL - SEE DETAILS.

4. PROVIDE 2x4 WOOD STUD FRAMING WITH GYPSUM BOARD FINISH ON ONE SIDE TO CREATE A CHASE FOR PLUMBING AND MECHANICAL THAT IS INDEPENDENT OF FIRE RATED WALL ASSEMBLY NEXT TO IT, TYPICAL WHERE SHOWN.

ICC A117.1 TYPE B DWELLING UNITS:

- SECTION 1107.6.2.2.2:
IN STRUCTURES WITH FOUR (4) OR MORE D.U.s INTENDED TO BE OCCUPIED AS A RESIDENCE, EVERY D.U. SHALL BE TYPE B UNIT, U.N.O.

ICC A117.1 TYPE B D.U. PLAN NOTES:

1. (A117.1 - SEC. 1104.11) GRAB BAR AND SHOWER SEAT REINFORCEMENT:
REINFORCEMENT SHALL BE PROVIDED FOR THE FUTURE INSTALLATION OF GRAB BARS AND SHOWER SEATS AT WATER CLOSETS, BATHTUBS, AND SHOWER COMPARTMENTS. REFER TO FLOOR PLAN ON THIS SHEET FOR LOCATION OF SOLID BLOCKING REQUIRED WITHIN BATHROOMS.

2. CLEAR WIDTH FOR USER PASSAGE DOORWAYS:
DOORWAYS SHALL HAVE A CLEAR OPENING OF 31 3/4 INCHES MINIMUM. CLEAR OPENING OF SWINGING DOORS SHALL BE MEASURED BETWEEN THE FACE OF THE DOOR AND STOP, WITH THE DOOR OPEN 90 DEGREES.

3. LAUNDRY EQUIPMENTS:
A CLEAR FLOOR SPACE SHALL BE PROVIDED FOR EACH WASHING MACHINE AND CLOTHES DRYER. A PARALLEL APPROACH SHALL BE PROVIDED FOR A TOP LOADING MACHINE. A FORWARD OR PARALLEL APPROACH SHALL BE PROVIDED FOR A FRONT LOADING MACHINE.

4. TOILET AND BATHING AREAS:

ALL TOILET AND BATHING AREAS PROVIDED SHALL COMPLY WITH FOLLOWING REQUIREMENT AS DESCRIBED UNDER NOTES 5 THRU' 8, TYPICAL.

5. LAVATORY:

A CLEAR FLOOR SPACE POSITIONED FOR A PARALLEL APPROACH SHALL BE PROVIDED AT A LAVATORY. THE CLEAR FLOOR SPACE SHALL BE CENTERED ON THE LAVATORY. PROVIDE OFF-CENTER INTEGRAL BOWL WITHIN (42") WIDE LAVATORY AS SHOWN ON THE PLAN.

PROVIDE CABINETRY UNDER THE LAVATORY, PROVIDED THE FOLLOWING CRITERIA ARE MET:

(A) THE CABINETRY CAN BE REMOVED WITHOUT REMOVAL OR REPLACEMENT OF THE LAVATORY. THAT MEANS THE LAVATORY SHALL BE HANGED FROM THE WALL WITH TWO (2) BRACKETS. PROVIDE ALL NECESSARY BLOCKING BEHIND THE LAVATORY FOR BRACKET INSTALLATION.
(B) THE FLOOR FINISH SHALL EXTEND UNDER THE CABINETRY.
(C) ALL THE WALLS BEHIND AND SURROUNDING THE CABINETRY SHALL BE FINISHED.

6. WATER CLOSET:

THE CENTERLINE OF THE WATER CLOSET SHALL BE 16 INCHES MINIMUM AND 18 INCHES MAXIMUM FROM ONE SIDE (FROM THE ADJACENT BATHTUB) OF THE REQUIRED CLEARANCE.

W.C. CLEARANCE WIDTH:
CLEARANCE AROUND THE WATER CLOSET SHALL BE 48 INCHES MINIMUM IN WIDTH, MEASURED PERPENDICULAR FROM THE SIDE OF THE CLEARANCE THAT IS 16 INCHES MINIMUM AND 18 INCHES MAXIMUM FROM THE WATER CLOSET CENTERLINE.

W.C. CLEARANCE DEPTH:
CLEARANCE AROUND THE WATER CLOSET SHALL BE 56 INCHES MINIMUM IN DEPTH, MEASURED PERPENDICULAR FROM THE REAR WALL.

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A VANITY OR OTHER OBSTRUCTION 24 INCHES MAXIMUM IN DEPTH, MEASURED PERPENDICULAR FROM THE REAR WALL, SHALL BE PERMITTED TO OVERLAP THE REQUIRED CLEARANCE, PROVIDED THE WIDTH OF THE REMAINING CLEARANCE AT THE WATER CLOSET IS 33 INCHES MINIMUM.

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A CLEARANCE 60 INCHES MINIMUM IN LENGTH AND 48 INCHES MINIMUM IN WIDTH SHALL BE PROVIDED IN FRONT OF BATHTUBS WITH A FORWARD APPROACH. A WATER CLOSET AND A LAVATORY SHALL BE PERMITTED IN THE CLEARANCE AT ONE END OF THE BATHTUB.

8. KITCHEN:

MINIMUM CLEARANCE:
CLEARANCE BETWEEN ALL OPPOSING BASE CABINETS, COUNTERTOPS, APPLIANCES, OR WALLS WITHIN KITCHEN WORK AREAS SHALL BE 40 INCHES MINIMUM.

CLEAR FLOOR SPACE AT ALL APPLIANCES & SINK: A CLEAR FLOOR SPACE, POSITIONED FOR A PARALLEL OR FORWARD APPROACH SHALL BE PROVIDED. REFER TO FLOOR PLAN.

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09.08.2022	ISSUED FOR BUILDING PERMIT
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Proposed New Development for:

The Courtyard At Congress Station

551 Congress Parkway, Crystal Lake, Illinois

Issue Date: 09.08.2022
Drawn By: PAI

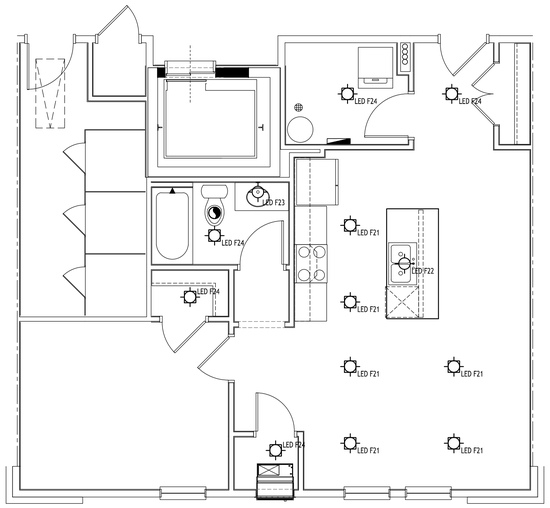
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UNIT C FLOOR PLAN

A6.4

PAI PROJECT NUMBER
22116.00

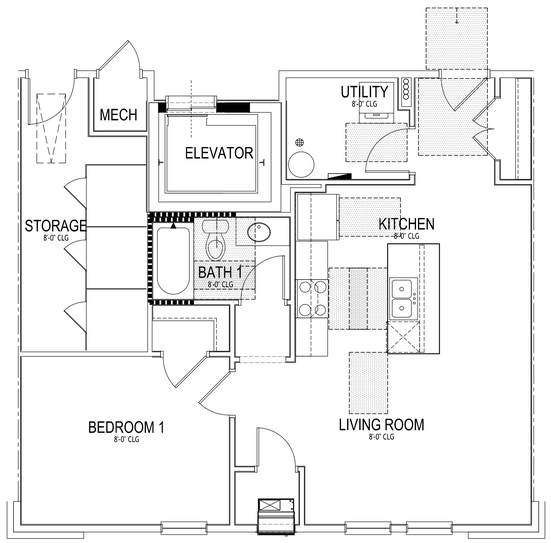
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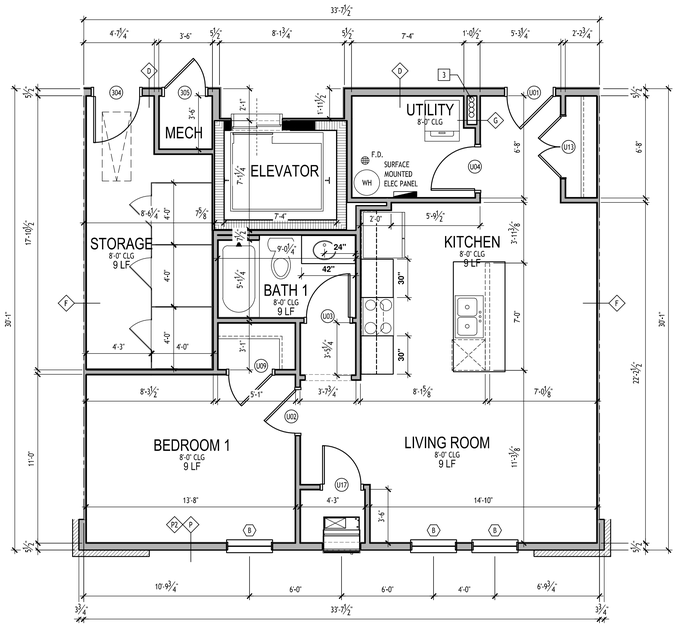
3 UNIT D CEILING PLAN

SCALE: 1/4" = 1'-0"



FLOOR SPACE CLEARANCE
2 UNIT D FLOOR PLAN

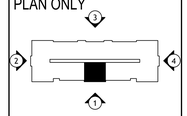
SCALE: 1/4" = 1'-0"



1 UNIT D FLOOR PLAN (1127 SQFT)

SCALE: 1/4" = 1'-0"

ELEVATION KEY PLAN



UNIT KEY PLAN

- (101) DOOR TAG
- (A) WINDOW / PATIO TAG
- (A) WALL TAG
- 1 KEY NOTE
- ACCESSIBLE CLEAR FLOOR SPACES
- BLOCKING IN WALLS FOR GRAB BARS

ELECTRICAL KEY NOTES:

- LED CEILING MOUNT LED LIGHT
- LED WALL MOUNT LED LIGHT
- LED RECESSED LED LIGHT

UNIT PLAN GENERAL NOTES:

1. REFER TO FLOOR PLAN SHEETS FOR FURTHER INFORMATION ON OVERALL FLOOR LAYOUT & DISTRIBUTION OF VARIOUS UNIT TYPES INCLUDING ADAPTABLE UNITS.

2. REFER TO DOOR SCHEDULE SHEET A7.1 & WINDOW SCHEDULE SHEET A7.2 FOR INFORMATION ON OPENINGS AND SHEET A6.1 FOR LIGHT & VENT REQUIREMENTS.

3. REFER TO SHEET A9.1 FOR INFORMATION ON WALL ASSEMBLY CONSTRUCTION.

4. G.C. TO COORDINATE ALL PLUMBING / MECHANICAL / FIRE PROTECTION PENETRATION THROUGH FLOORS / WALLS AMONG VARIOUS CONTRACTORS & TRADES INVOLVED, TYPICAL

5. ALL DIMENSIONS ARE FROM ONE (1) OF THE FOLLOWING THREE (3) CASES (U.N.O.):
- FROM CENTERLINE OF SEPARATION WALL TO CENTERLINE OF OPENING, OR TO FACE OF STUD (AT EXTERIOR WALL);
- FROM CENTERLINE OF OPENING TO CENTERLINE OF OPENING (AT EXTERIOR WALL);
- FROM FACE OF STUD TO FACE OF STUD (ALL UNIT INTERIOR DIMENSIONS).

6. REFER TO SHEET A0.6, FAIR HOUSING ACCESSIBILITY STANDARDS FOR BLOCKING REQUIREMENTS FOR GRAB BAR LOCATIONS IN BATHROOMS. PER FHAA REQUIREMENT, PROVIDE LET-IN 1/4" TH. PLYWOOD SHEATHING OR 2x8 WOOD BLOCKING BETWEEN WALL STUDS FOR FUTURE INSTALLATION OF GRAB BARS AROUND TOILET, TUB, AND SHOWER STALLS IN ALL UNITS.

7. TYPICAL BALCONY RAIL: MIN. 42" H. METAL GUARD RAIL SYSTEM - REFER TO DETAILS & SPECIFICATIONS.

8. ALL DIAGONAL WALLS TO BE 45 DEGREES U.N.O.

9. R.O. FOR PLUMBING FIXTURES: G.C. SHALL VERIFY ALL PLUMBING FIXTURE MODELS ON THE DRAWINGS WITH DEVELOPER - G.C. SHALL COORDINATE REQUIRED ROUGH OPENING DIMENSIONS FOR BATHTUBS & SHOWERS AMONG VARIOUS CONTRACTORS & TRADES INVOLVED, TYPICAL.

10. BATHROOM ACCESSORIES:
- CURTAIN ROD: PROVIDE STAINLESS STEEL CURTAIN ROD @ 6'-0" A.F.F. AT ALL TUB-SHOWER COMBOS, TYPICAL.
- SHOWER DOOR: PROVIDE SINGLE FROSTED TEMPERED GLASS DOOR W/ SIDE PANEL & S.S. FRAME PER LOCATION.
- TOWEL BAR, NAPKIN HOLDER, TOILET TISSUE HOLDER: REFER TO INTERIOR DESIGNER'S DWGS.

11. SHAFT RATING: ALL SHAFTS (INCLUSIVE OF ALL MECHANICAL EXHAUST, ROOF DRAINS, OVERFLOW DRAINS, ETC.) COMMUNICATING WITH MORE THAN ONE STORY SHALL BE 1-HR FIRE RATED WITH SHAFT WALLS, TYPICAL - SEE PLANS, WALL TYPES & CODE REVIEW DATA SHEET

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1. PROVIDE COLD WATER LINE FOR REFRIGERATOR IN EACH UNIT, TYPICAL - REFER TO PLUMBING PLANS.

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3. PROVIDE 2x4 WOOD STUD FRAMING WITH GYPSUM BOARD FINISH ON ONE SIDE TO CREATE A CHASE FOR PLUMBING AND MECHANICAL IN EACH UNIT, TYPICAL - ALL REQUIRED CORES FOR PLUMBING PIPES & EXHAUST DUCTS WITHIN CHASE SHALL BE FIRE-STOPPED ALL AROUND AT THE FIRE RATED FLOOR-CEILING ASSEMBLY, TYPICAL - SEE DETAILS.

4. PROVIDE 2x4 WOOD STUD FRAMING WITH GYPSUM BOARD FINISH ON ONE SIDE TO CREATE A CHASE FOR PLUMBING AND MECHANICAL THAT IS INDEPENDENT OF FIRE RATED WALL ASSEMBLY NEXT TO IT, TYPICAL WHERE SHOWN.

ICC A117.1 TYPE B DWELLING UNITS:

- SECTION 1107.6.2.2.2:
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1. (A117.1 - SEC. 1104.11.1) GRAB BAR AND SHOWER SEAT REINFORCEMENT:
REINFORCEMENT SHALL BE PROVIDED FOR THE FUTURE INSTALLATION OF GRAB BARS AND SHOWER SEATS AT WATER CLOSETS, BATHTUBS, AND SHOWER COMPARTMENTS. REFER TO FLOOR PLAN ON THIS SHEET FOR LOCATION OF SOLID BLOCKING REQUIRED WITHIN BATHROOMS.

2. CLEAR WIDTH FOR USER PASSAGE DOORWAYS:
DOORWAYS SHALL HAVE A CLEAR OPENING OF 31 3/4 INCHES MINIMUM. CLEAR OPENING OF SWINGING DOORS SHALL BE MEASURED BETWEEN THE FACE OF THE DOOR AND STOP, WITH THE DOOR OPEN 90 DEGREES.

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ALL TOILET AND BATHING AREAS PROVIDED SHALL COMPLY WITH FOLLOWING REQUIREMENT AS DESCRIBED UNDER NOTES 5 THRU' 8, TYPICAL.

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05.04.2023	REVISIONS 1
09.13.2024	CITY REVISIONS - ELEVATIONS 2

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Proposed New Development for:

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551 Congress Parkway, Crystal Lake, Illinois

Issue Date: 09.08.2022
Drawn By: PAI

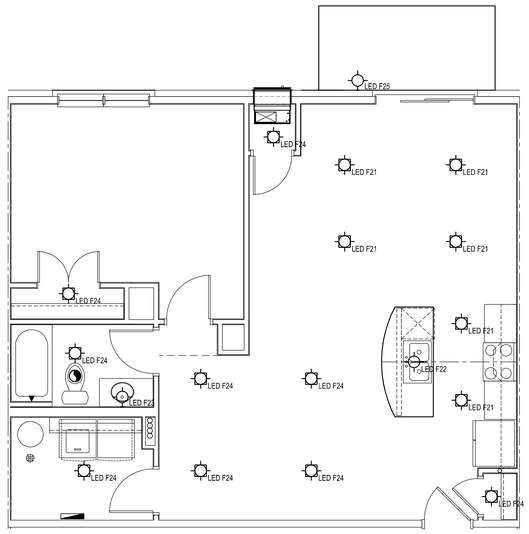
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UNIT D FLOOR PLAN

A6.5

PAI PROJECT NUMBER
22116.00

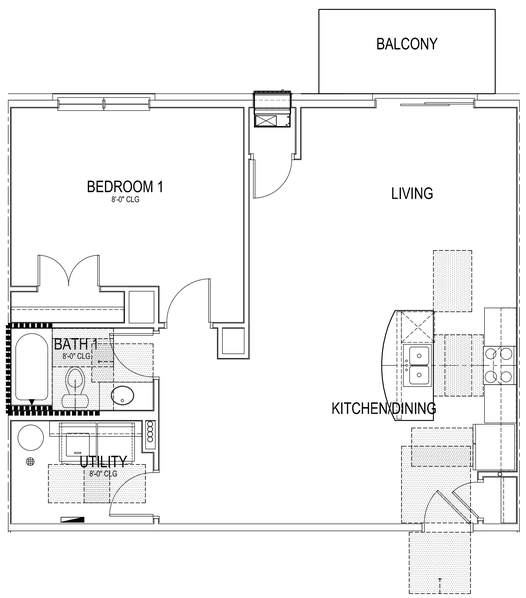
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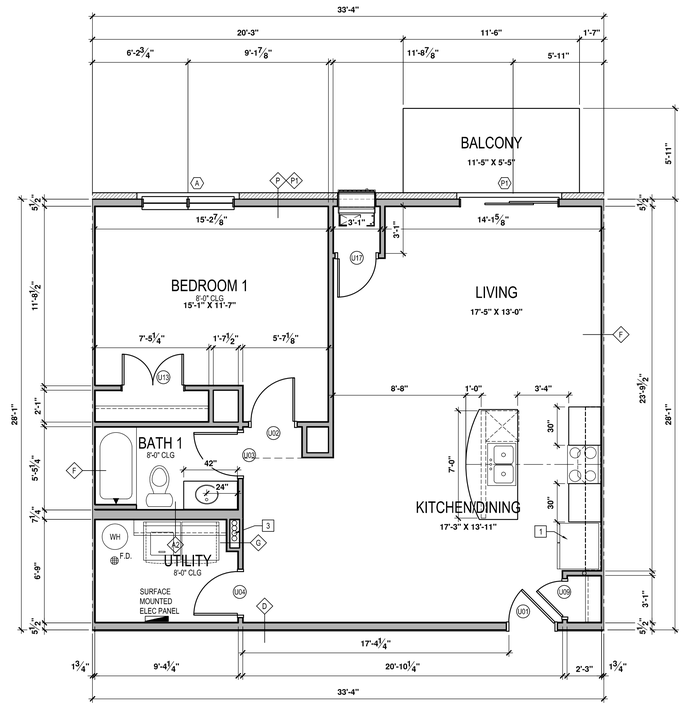
3 UNIT E CEILING PLAN

SCALE: 1/4" = 1'-0"



FLOOR SPACE CLEARANCE
2 UNIT E FLOOR PLAN

SCALE: 1/4" = 1'-0"

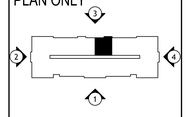


1 UNIT E FLOOR PLAN (625 SQFT)

SCALE: 1/4" = 1'-0"

ELEVATION KEY PLAN

1ST FLOOR PLAN ONLY



UNIT KEY PLAN

- (101) DOOR TAG
- (A) WINDOW / PATIO TAG
- (A) WALL TAG
- (1) KEY NOTE
- ACCESSIBLE CLEAR FLOOR SPACES
- BLOCKING IN WALLS FOR GRAB BARS

ELECTRICAL KEY NOTES:

- LED CEILING MOUNT LED LIGHT
- LED WALL MOUNT LED LIGHT
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UNIT PLAN GENERAL NOTES:

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UNIT PLAN KEY NOTES: (##)

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05.04.2023	REVISIONS 1
09.13.2024	CITY REVISIONS - ELEVATIONS 2

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Proposed New Development for:

The Courtyard At Congress Station

551 Congress Parkway, Crystal Lake, Illinois

Issue Date: 09.08.2022
Drawn By: PAI

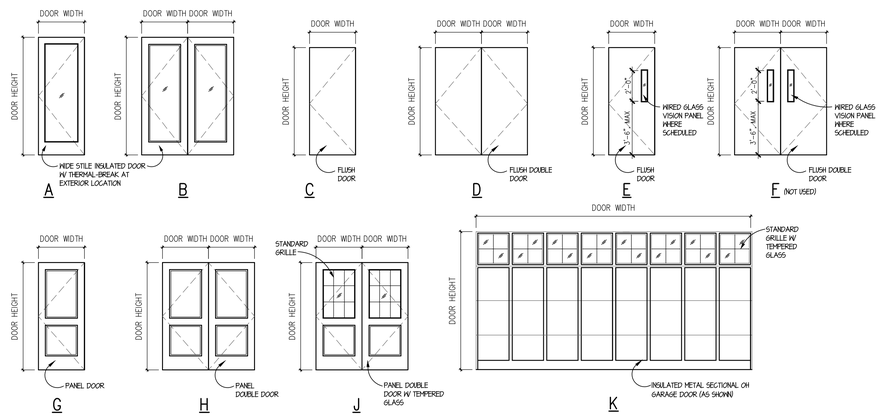
Sheet:
UNIT E FLOOR PLAN

A6.6

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22116.00

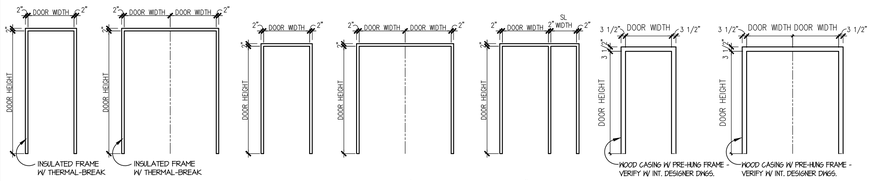
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Door Types

SCALE: 1/4" = 1'-0"



Frame Types

SCALE: 1/4" = 1'-0" xDrFrms

HARDWARE SET SCHEDULE

NOTE: ALL DOOR HARDWARE SHALL HAVE "LEVER TYPE" HANDLE THAT SHALL FULLY COMPLY WITH THE MOST CURRENT EDITION OF ILLINOIS ACCESSIBILITY CODE, TYPICAL.

SET # 01 UNIT ENTRY DOOR
- 2 PAIRS BB BUTT HINGES PER EACH DOOR LEAF
- 1 ENTRY LOCKSET
- 1 MORTISED DEAD BOLT
- 1 CLOSER WITH BACK-CHECK (MAX. 5 LB. PULL)
- 1 WALL STOP (@ FLOOR OR HINGE)
- 1 PRE-FINISHED ADA COMPLIANT ALUMINUM THRESHOLD
- 3 SILENCERS PER EACH DOOR LEAF
- 1 DOOR KNOCKER W/ INTEGRAL UNIT NUMBER AND VIEWER HOLE (180 DEG) INSTALLED @ 60" A.F.F.
- PROVIDE ADDITIONAL VIEWER HOLE (180 DEG) INSTALLED @ 48" A.F.F. AT ALL "I.A.C. ADAPTABLE UNIT" ENTRY

SET # 02 PRIVACY DOOR
- 1 1/2 PAIR BUTT HINGES PER EACH DOOR LEAF
- 1 PRIVACY LOCKSET
- 1 WALL STOP (@ FLOOR OR HINGE)

SET # 03 PASSAGE / CLOSET DOOR
- 1 1/2 PAIR BUTT HINGES PER EACH DOOR LEAF
- 1 PASSAGE LATCHSET
- 1 WALL STOP (@ FLOOR OR HINGE)

SET # 04 CLOSET / DEN DOOR
- 1 1/2 PAIR BUTT HINGES PER EACH DOOR LEAF
- 1 BALL CATCH LATCHSET (PROVIDE FULL DUMMY AT ALL WALK-IN SPACES)
- 1 WALL STOP (@ FLOOR OR HINGE)

SET # 05 POCKET DOOR
- 1 HEAVY-DUTY POCKET DOOR HARDWARE
- TWO (2) LOOP HANDLES
- 1 DOOR STOP (TO PREVENT DOOR FROM SLIDING TOO FAR INTO POCKET TO HIT HANDLE)

SET # 06 EXTERIOR ENTRY DOOR (S) (HEAVY DUTY USE)
- 2 PAIR(S) BB BUTT HINGES (EACH LEAF)
- 1 CLOSER WITH BACKCHECK & HOLD-OPEN DEVICE AT EACH LEAF (MAX. 5 LB. PULL)
- 1 ENTRANCE LOCKSET W/ PUSH/PULL HARDWARE & PANIC DEVICE
- 1 ELECTRIC BUZZER LOCK CONNECTED W/ PHONE ENTRY SYSTEM
- FLUSH BOLT, TOP & BOTTOM ON INACTIVE LEAF
- 1 SET WEATHER-STRIPPING, 4 SIDES
- 1 ALUMINUM THRESHOLD
- 1 WALL STOP (@ FLOOR OR HINGE)

BUILDING ENTRY SYSTEM: PROVIDE "ENTERPHONE 2000" OR AN EQUAL AS BASE BID. PANEL & FEATURES TO BE SELECTED BY DEVELOPER.

SET # 07 INTERIOR ENTRY DOOR(S) (HEAVY DUTY USE)
- 2 PAIR(S) BB BUTT HINGES (EACH LEAF)
- 1 CLOSER WITH BACKCHECK & HOLD-OPEN DEVICE AT EACH LEAF (MAX. 5 LB. PULL)
- PUSH/PULL HARDWARE & PANIC DEVICE
- FLUSH BOLT, TOP & BOTTOM ON INACTIVE LEAF
- 1 WALL STOP (@ FLOOR OR HINGE)

SET # 08 EXTERIOR EGRESS DOOR
- 2 PAIR(S) BB BUTT HINGES (TAMPERPROOF)
- 1 LOCKSET W/PANIC DEVICE
- 1 CLOSER WITH BACKCHECK (MAX. 5 LB. PULL)
- 1 ALUMINUM THRESHOLD
- 1 SET WEATHER-STRIPPING, 4 SIDES
- 1 WALL STOP (@ FLOOR OR HINGE)

SET # 09 INTERIOR EGRESS DOOR (HEAVY DUTY USE)
- 1-1/2 PAIR BB BUTT HINGES (EACH LEAF) @ 8'-8" H. DOOR
- 2 PAIR(S) BB BUTT HINGES (EACH LEAF) @ 7'-0" H. DOOR
- 1 PASSAGE LATCHSET AT ALL TRASH & STORAGE ROOMS
- PUSH-PULL HARDWARE AT REMAINING LOCATIONS (STAIRWAY DOORS SHALL BE OPENABLE FROM BOTH SIDES WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT)
- 1 CLOSER WITH BACK CHECK (MAX. 5 LB. PULL)
- 1 WALL STOP (@ FLOOR OR HINGE)

SET # 10 UTILITY (OR PRIVACY) DOOR
- 2 PAIR(S) BB BUTT HINGES (EACH LEAF)
- 1 LOCKSET WITH KEY OUTSIDE
- 1 CLOSER WITH BACKCHECK (MAX. 5 LB. PULL) WITH HOLD-OPEN DEVICE
- 1 WALL STOP (@ FLOOR OR HINGE)

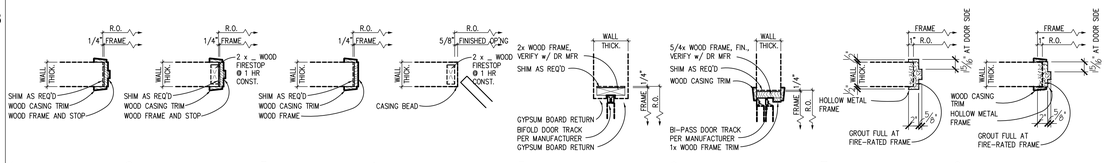
SET # 11 INTERIOR EGRESS DOORS
- 1-1/2 PAIR BB BUTT HINGES EACH LEAF
- 1 PASSAGE LATCHSET WITH PANIC DEVICE & WITH ELECTRO-MAGNETIC "HOLD-OPEN" DEVICE TIED TO BUILDING FIRE ALARM SYSTEM
- 1 CLOSER WITH BACK CHECK (MAX. 5 LB. PULL)
- 1 WALL STOP (@ FLOOR OR HINGE)

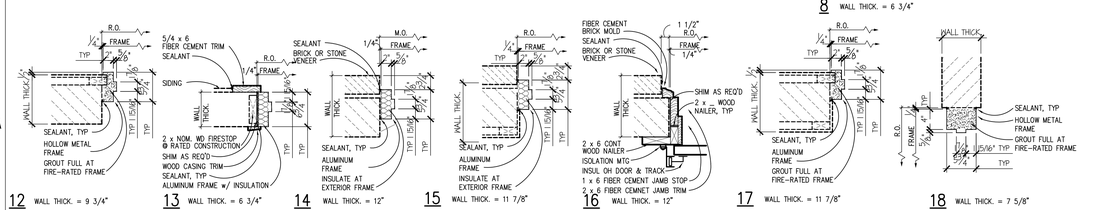
SET # 12 CLOSET DOOR
- 1-1/2 PAIR BB BUTT HINGES (EACH LEAF)
- 1 LOCKSET WITH KEY OUTSIDE
- 1 WALL STOP (@ FLOOR OR HINGE)

SET # 13 OFFICE DOOR
- 2 PAIR(S) BB BUTT HINGES (EACH LEAF)
- 1 LOCKSET WITH KEY OUTSIDE - OFFICE FUNCTION
- 1 CLOSER WITH BACKCHECK (MAX. 5 LB. PULL) WITH HOLD-OPEN DEVICE
- 1 WALL STOP (@ FLOOR OR HINGE)

SET # 14 RESTROOM DOOR
- 2 PAIR(S) BB BUTT HINGES (EACH LEAF)
- 1 LOCKSET WITH PUSH BUTTON INSIDE - RESTROOM FUNCTION
- 1 CLOSER WITH BACKCHECK (MAX. 5 LB. PULL) WITH HOLD-OPEN DEVICE
- 1 WALL STOP (@ FLOOR OR HINGE)

NOTE TO DOOR VENDOR/SUPPLIER: DOOR VENDOR/SUPPLIER SHALL VERIFY THROAT SIZES FOR ALL DOOR FRAMES WITH ARCHITECTURAL WALL ASSEMBLIES PRIOR TO PLACING AN ORDER. THERE SHALL BE NO EXCEPTIONS.





Door Details

SCALE: 1" = 1'-0" DOORDETS

DOOR SCHEDULE xDrSched

NOTE: COMMON DOORS ARE TAGGED / LABELED BY LEVEL, NOT BY FLOOR.

	DOOR NUMBER	DOOR LOCATION	DOOR SIZE WIDTH	HEIGHT	THICK	DOOR TYPE	MAT'L	FINISH	GLAZING	LABEL DOOR & FRAME	FRAME TYPE	MAT'L	FINISH	GLAZING	SIDELITE	TRSM	DETAILS HEAD	JAMB	SILL	HARDWARE SET	REMARKS	DOOR NUMBER
DWELLING UNITS	101	UNIT ENTRY	3'-0"	7'-0"	1-3/4"	G	SC WOOD	PT	-	20 Min	c	HOL MTL	PT	-	-	-	2 Sim	2	-	SET # 01	1 1/4" WALL THICKNESS	101
	102	UNIT BEDROOM	2'-10"	6'-8"	1-3/8"	G	MASONITE	PT	-	-	g	WOOD	PT	-	-	-	1 Sim, 2 Sim	1, 2	-	SET # 02	-	102
	103	UNIT BATH/FYNDR	2'-10"	6'-8"	1-3/8"	G	MASONITE	PT	-	-	g	WOOD	PT	-	-	-	1 Sim	1	-	SET # 02	-	103
	104	UNIT LAUNDRY	2'-10"	6'-8"	1-3/8"	G	MASONITE	PT	-	-	g	WOOD	PT	-	-	-	1 Sim, 2 Sim	1, 2	-	SET # 03	-	104
	106	UNIT UTILITY	(2) 2'-6"	6'-8"	1-3/8"	H	MASONITE	PT	-	-	h	WOOD	PT	-	-	-	1 Sim	1	-	SET # 04		106
	109	UNIT CLOSET	2'-4"	6'-8"	1-3/8"	G	MASONITE	PT	-	-	g	WOOD	PT	-	-	-	6	3	-	SET # 04	-	109
	110	UNIT CLOSET	(2) 2'-8"	6'-8"	1-3/8"	H	MASONITE	PT	-	-	h	WOOD	PT	-	-	-	1 Sim	1	-	SET # 04	-	110
	111	UNIT BEDROOM	3'-0"	6'-8"	1-3/8"	G	MASONITE	PT	-	-	g	WOOD	PT	-	-	-	1 Sim, 2 Sim	1, 2	-	SET # 02	-	111
	112	UNIT BATH/FYNDR	3'-0"	6'-8"	1-3/8"	G	MASONITE	PT	-	-	g	WOOD	PT	-	-	-	1 Sim	1	-	SET # 02	-	112
	113	UNIT CLOSET	(2) 2'-4"	6'-8"	1-3/8"	H	MASONITE	PT	-	-	h	WOOD	PT	-	-	-	1 Sim	1	-	SET # 04	-	113
	114	UNIT LAUNDRY	3'-0"	6'-8"	1-3/8"	G	MASONITE	PT	-	-	g	WOOD	PT	-	-	-	1 Sim, 2 Sim	1, 2	-	SET # 03		114
	115	UNIT CLOSET	3'-0"	6'-8"	1-3/8"	G	MASONITE	PT	-	-	g	WOOD	PT	-	-	-	6	3	-	SET # 04	-	115
	117	UNIT MECH. CLOS.	2'-6"	6'-8"	1-3/8"	G	MASONITE	PT	-	-	g	WOOD	PT	-	-	-	1 Sim, 2 Sim	1, 2	-	SET # 03		117
FIRST FLOOR LEVEL	101	MAIN ENTRY	3'-0"	7'-0"	1-3/4"	B	GALV HOL MTL	PT	TEMPERED INSULATED	-	e	GALV HOL MTL	PT	TEMPERED INSULATED	-	SEE FRAME	14 Sim	14	-	SET # 06	PROXIMITY CARD READER ACCESS	101
	102	STAIR No. 1 /EXTERIOR	3'-0"	7'-0"	1-3/4"	C	GALV HOL MTL	PT	-	C 3/4 HR.	a	GALV HOL MTL	PT	-	-	-	14 Sim	14	-	SET # 08	-	102
	103	STAIR No. 2 /EXTERIOR	3'-0"	7'-0"	1-3/4"	C	GALV HOL MTL	PT	-	C 3/4 HR.	a	GALV HOL MTL	PT	-	-	-	18	10	-	SET # 08	-	103
	104	EXTERIOR ELECTRICAL	3'-4"	7'-0"	1-3/4"	C	GALV HOL MTL	PT	-	C 3/4 HR.	c	GALV HOL MTL	PT	-	-	-	18	10	-	SET # 08	-	104
	105	CORR./ EXTERIOR	3'-0"	7'-0"	1-3/4"	A	HOL MTL	PT	TEMPERED INSULATED	C 3/4 HR.	f	GALV HOL MTL	PT	-	-	-	-	11 Sim	11	-	SET # 09	-	105
	106	EXTERIOR SPRINKLER	3'-0"	7'-0"	1-3/4"	C	HOL MTL	PT	-	C 3/4 HR.	c	HOL MTL	PT	-	-	-	-	7 Sim	7	-	SET # 10	-	106
	107	ELEV. MACH ROOM	3'-0"	6'-8"	1-3/4"	C	HOL MTL	PT	-	C 3/4 HR.	c	HOL MTL	PT	-	-	-	-	7 Sim	7	-	SET # 10	-	107
	108	MAIL/ STORAGE	3'-0"	6'-8"	1-3/4"	C	HOL MTL	PT	-	C 3/4 HR.	c	HOL MTL	PT	-	-	-	-	-	-	SET # 10	-	108
	109	CORR./ STORAGE	3'-0"	6'-8"	1-3/4"	C	HOL MTL	PT	-	C 3/4 HR.	c	HOL MTL	PT	-	-	-	-	-	-	SET # 10	-	109
SECOND FLOOR LEVEL	GT-1	CORRIDOR/ STAIR No. 1	3'-0"	7'-0"	1-3/4"	E	HOL MTL	PT	FIRE RATED 100 SQ IN MAX	B 1-1/2 HR.	c	HOL MTL	PT	-	-	-	19	12	-	SET # 09	-	GT-1
	GT-2	CORRIDOR/ STAIR No. 2	3'-0"	7'-0"	1-3/4"	E	HOL MTL	PT	FIRE RATED 100 SQ IN MAX	B 1-1/2 HR.	c	HOL MTL	PT	-	-	-	19	12	-	SET # 09	-	GT-2
	204	CORRIDOR/ STORAGE	3'-0"	6'-8"	1-3/4"	C	HOL MTL	PT	-	C 3/4 HR.	c	HOL MTL	PT	-	-	-	9 Sim	9	-	SET # 10	-	204
	205	CORRIDOR/ STORAGE	3'-0"	6'-8"	1-3/4"	C	HOL MTL	PT	-	C 3/4 HR.	c	HOL MTL	PT	-	-	-	9 Sim	9	-	SET # 10	-	205
	206	CORRIDOR/ CLOSET	3'-0"	6'-8"	1-3/4"	C	HOL MTL	PT	-	C 3/4 HR.	c	HOL MTL	PT	-	-	-	9 Sim	9	-	SET # 10	-	206
THIRD FLOOR LEVEL	GT-1	CORRIDOR/ STAIR No. 1	3'-0"	7'-0"	1-3/4"	E	HOL MTL	PT	FIRE RATED 100 SQ IN MAX	B 1-1/2 HR.	c	HOL MTL	PT	-	-	-	19	12	-	SET # 09	-	GT-1
	GT-2	CORRIDOR/ STAIR No. 2	3'-0"	7'-0"	1-3/4"	E	HOL MTL	PT	FIRE RATED 100 SQ IN MAX	B 1-1/2 HR.	c	HOL MTL	PT	-	-	-	19	12	-	SET # 09	-	GT-2
	304	CORRIDOR/ STORAGE	3'-0"	6'-8"	1-3/4"	C	HOL MTL	PT	-	C 3/4 HR.	c	HOL MTL	PT	-	-	-	9 Sim	9	-	SET # 10	-	304
	305	CORRIDOR/ CLOSET	3'-0"	6'-8"	1-3/4"	C	HOL MTL	PT	-	C 3/4 HR.	c	HOL MTL	PT	-	-	-	9 Sim	9	-	SET # 10	-	305

GENERAL NOTES:
1. CONTRACTOR MUST VERIFY ALL ROUGH OPENING AND MASONRY DIMENSIONS, WITH DOOR AND WINDOW MANUFACTURER PRIOR TO ORDERING, FABRICATING, OR INSTALLATION.
2. REFER TO PROJECT SPECIFICATIONS FOR COMPLETE INFORMATION AND REQUIREMENTS FOR HARDWARE.
3. ALL MEANS OF EGRESS DOORS SHALL BE READILY OPENABLE FROM THE SIDE FROM WHICH EGRESS IS TO BE MADE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.
4. ALL DOORS AND HARDWARE SHALL COMPLY WITH APPLICABLE ACCESSIBILITY CODE REQUIREMENTS.
5. CLOSERS INDICATED WITH "HD" SHALL BE HEAVY DUTY RATED. ALL CLOSERS SHALL BE GRADE 1 ADA COMPLIANT.
INTERIOR DOORS: CLOSER SHALL BE MOUNTED TOWARD "UNFINISHED" SPACE. PARALLEL ARM SHALL BE USED WHEN MOUNTED TOWARD FINISHED SPACE.
EXTERIOR DOORS: CLOSER SHALL BE MOUNTED TOWARD INTERIOR SPACE.
6. DOORS WITH CLOSERS SHALL REQUIRE NO MORE THAN FIVE (5) LBS. TO PUSH/PULL OPEN AT INTERIOR HINGED LOCATIONS & SHALL REQUIRE NO MORE THAN EIGHT-AND-A-HALF (8.5) LBS. MAX. AT EXTERIOR HINGED LOCATIONS.
7. ALL DOOR OPERATING DEVICES SHALL BE CAPABLE OF OPERATION WITH ONE HAND AND SHALL NOT REQUIRE GRASPING, TIGHT PINCHING OR TWISTING OF THE WRIST TO OPERATE.
8. OPENING FORCE FOR ALL DOORS SHALL NOT EXCEED FIVE (5) LBS. FORCE.
9. COORDINATE VOLTAGE REQUIREMENTS FOR ELECTRIC LOCK(S), CARD READER(S) w/ SECURITY VENDOR AND HARDWARE SELECTED.
10. PROVIDE SOLID REINFORCING AT LOCATIONS OF ALL LOCK & LATCH SETS AND AT LOCATIONS OF CLOSERS WHERE APPLICABLE.
11. 2'-10" WIDE INTERIOR UNIT DOORS SHALL HAVE HARDWARE PRODUCING A CLEAR WIDTH OF 32" WITH THE DOOR FULLY OPENED AT 90 DEGREES.
12. CHANGES IN FLOOR LEVEL AT DOORS SHALL HAVE A THRESHOLD (WHERE APPLICABLE) IN COMPLIANCE WITH DETAIL ON SHEET A0.5.
13. UPON ACTIVATION OF THE FIRE ALARM SYSTEM OR LOSS OF POWER TO THE BUILDING, ALL ELECTRIC STRIKES AND MAGNETIC "HOLD OPEN" LOCKS SHALL RELEASE AND THOSE DOORS SHALL BE READILY OPENABLE.
14. ALL DOOR GLAZING SHALL BE CLEAR & SHALL BE TEMPERED (T) SAFETY GLASS. PROVIDE 3/4" INSULATED CLEAR GLAZING AT EXTERIOR LOCATIONS.
15. ALL DOOR OPENING DEVICE SHALL BE "LEVER" TYPE.
16. SEE UNIT / FLOOR PLANS FOR DOOR NUMBERS, LOCATIONS, AND SWING OF DOOR(S).
17. ALL INTERIOR DOORS TO BE PRE-HUNG, U.N.O.
18. ALL INTERIOR DOORS TO BE PRIMED AND PAINTED, U.N.O. REFER TO INTERIOR DESIGNER DRAWINGS' FOR DOOR FINISH. FINISH FRAME SAME AS TRIM.
19. ALL SAFETY / TEMPERED GLASS AND FIRE LABELED DOORS & FRAMES SHALL BEAR A PERMANENT MARKING/LABEL, INDICATING THE MANUFACTURER & THE TYPE OF GLASS OR SHALL BEAR THE UL RESISTANCE LABEL, TYPICAL.
20. ALL EXTERIOR HOLLOW METAL DOORS & FRAMES SHALL BE GALVANIZED AND INSULATED. ALL H.M. FRAMES TO BE FULLY WELDED.
21. ALL HARDWARE TO BE BRUSHED CHROME FINISH, U.N.O.
22. ALL HOLLOW METAL FRAMES SHALL BE EQUIPPED WITH MINIMUM THREE (3) DOOR SILENCERS, TYPICAL.
23. PROVIDE A TACTILE MARKING (KNURLING) ON ALL DOOR HANDLES FOR DOORS THAT LEAD TO POTENTIALLY DANGEROUS AREAS, SUCH AS ELECTRICAL, MECHANICAL OR TRASH ROOMS.

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05.04.2023	REVISIONS 1
09.13.2024	CITY REVISIONS - ELEVATIONS 2

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Proposed New Development for:

The Courtyard At Congress Station

551 Congress Parkway, Crystal Lake, Illinois

Issue Date: 09.08.2022
Drawn By: PAI

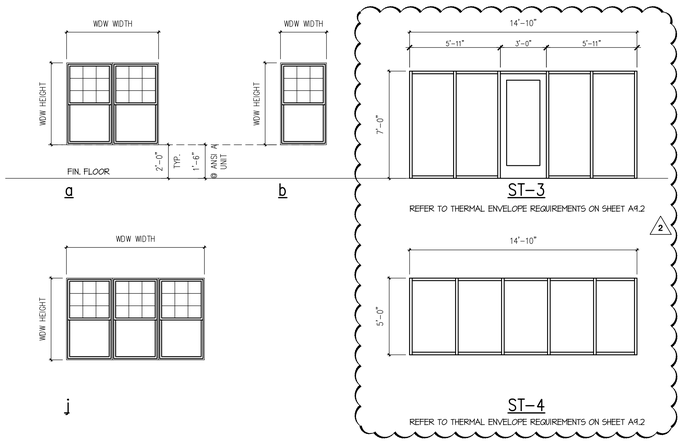
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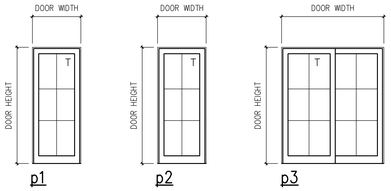
DOOR SCHEDULE & DETAILS

A7.1

PAI PROJECT NUMBER
22116.00

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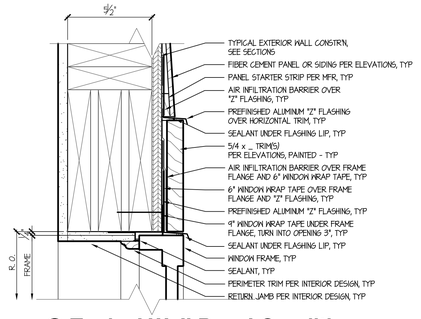
Window & Patio Door Types

SCALE: 1/4" = 1'-0" xWndTypes

WINDOW / PATIO DOOR SCHEDULE xWndSched

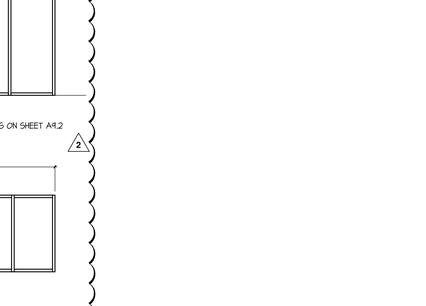
MARK	DESCRIPTION	WINDOW SIZE		TYPE	WINDOW MATERIAL		LABEL	DETAILS			REMARKS
		WIDTH	HEIGHT		MATERIAL	GLAZING		HEAD	JAMB	SILL	
A	(2) 3050 SINGLE HUNG	6'-0"	5'-0"	a	VINYL	3/4" INSULATED, CLEAR, 'LOW-E'	-	5, 6	4	8	-
B	3050 SINGLE HUNG	3'-0"	5'-0"	b	VINYL	3/4" INSULATED, CLEAR, 'LOW-E'	-	5, 6	4, 7	8	-
C											
D											
P1	6070 BALCONY SWING DR	6'-0"	7'-0"	p3	VINYL	3/4" INSULATED, CLEAR, 'LOW-E'	-	5	4	-	-

GENARAL NOTES:
1. ALL UNITS SHALL BE FACTORY MULLED, U.N.O.
2. CONTRACTOR MUST VERIFY ALL ROUGH OPENING AND MASONRY DIMENSIONS, WITH DOOR AND WINDOW MANUFACTURER PRIOR TO ORDERING, FABRICATING, OR INSTALLATION.
3. REFER TO PROJECT SPECIFICATIONS FOR COMPLETE INFORMATION AND REQUIREMENTS FOR HARDWARE.
4. ALL WINDOWS AND HARDWARE SHALL COMPLY WITH APPLICABLE ACCESSIBILITY CODE REQUIREMENTS.
5. ALL GLAZING SHALL BE TEMPERED WHEN MARKED WITH "T".
6. ALL VINYL FRAME & SASH SHALL BE INSERTED WITH ALUMINUM REINFORCEMENTS AND ALL CORNERS SHALL BE FUSION WELDED.
7. EXTERIOR FINISH: VINYL WITH STANDARD COLOR
   INTERIOR FINISH: VINYL WITH STANDARD COLOR
   HARDWARE FINISH: STANDARD
   GRILLE: AS SHOWN ON WINDOW TYPES
   SCREENS: STANDARD WITH EACH VENTING UNIT
   SCREEN FINISH: TO MATCH VINYL FRAME FINISH
   SCREEN MESH: STANDARD 'CHARCOAL' FIBERGLASS MESH



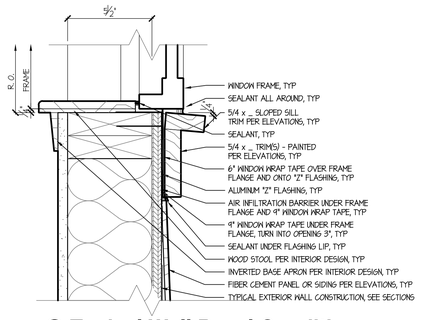
@ Typical Wall Panel Condition Window Head Detail

12 SCALE: 3" = 1'-0" xWndHdDet



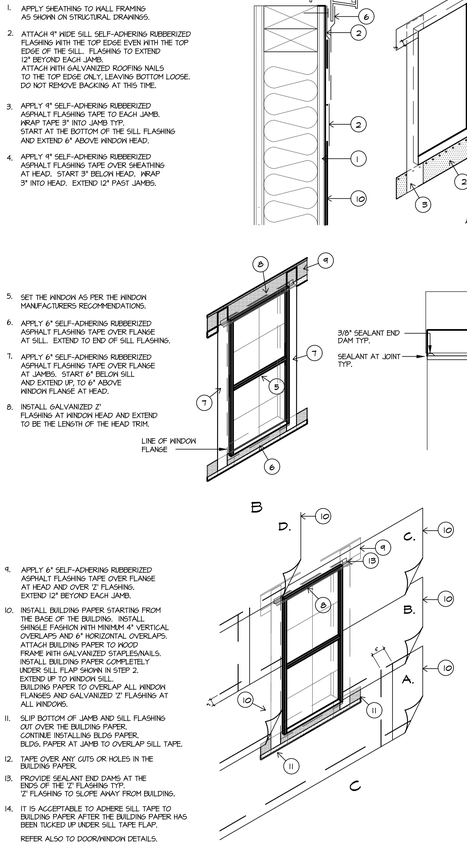
@ Typical Wall Panel Condition Window Jamb Detail

11 SCALE: 3" = 1'-0" xWndJmbDet



@ Typical Wall Panel Condition Window Sill Detail

10 SCALE: 3" = 1'-0" xWndSillDet



1. APPLY SHEATHING TO WALL FRAMING AS SHOWN ON STRUCTURAL DRAWINGS.
2. ATTACH 9" WIDE SILL SELF-ADHERING RUBBERIZED FLASHING WITH THE TOP EDGE EVEN WITH THE TOP EDGE OF THE SILL. FLASHING TO EXTEND 12" BEYOND EACH JAMB. ATTACH WITH GALVANIZED ROOFING NAILS TO THE TOP EDGE ONLY, LEAVING BOTTOM LOOSE. DO NOT REMOVE BACKING AT THIS TIME.
3. APPLY 9" SELF-ADHERING RUBBERIZED ASPHALT FLASHING TAPE TO EACH JAMB. WRAP TAPE 3" INTO JAMB TYP. START AT THE BOTTOM OF THE SILL FLASHING AND EXTEND 6" ABOVE WINDOW HEAD.
4. APPLY 9" SELF-ADHERING RUBBERIZED ASPHALT FLASHING TAPE OVER SHEATHING AT HEAD. START 3" BELOW HEAD. WRAP 3" INTO HEAD. EXTEND 12" PAST JAMBS.
5. SET THE WINDOW AS PER THE WINDOW MANUFACTURERS RECOMMENDATIONS.
6. APPLY 6" SELF-ADHERING RUBBERIZED ASPHALT FLASHING TAPE OVER FLANGE AT SILL. EXTEND TO END OF SILL FLASHING.
7. APPLY 6" SELF-ADHERING RUBBERIZED ASPHALT FLASHING TAPE OVER FLANGE AT JAMBS. START 6" BELOW SILL AND EXTEND UP, TO 6" ABOVE WINDOW FLANGE AT HEAD.
8. INSTALL GALVANIZED 'Z' FLASHING AT WINDOW HEAD AND EXTEND TO BE THE LENGTH OF THE HEAD TRIM.

9. APPLY 6" SELF-ADHERING RUBBERIZED ASPHALT FLASHING TAPE OVER FLANGE AT HEAD AND OVER 'Z' FLASHING. EXTEND 12" BEYOND EACH JAMB.
10. INSTALL BUILDING PAPER STARTING FROM THE BASE OF THE BUILDING. INSTALL SHINGLE FASHION WITH MINIMUM 4" VERTICAL OVERLAPS AND 6" HORIZONTAL OVERLAPS. ATTACH BUILDING PAPER TO WOOD FRAME WITH GALVANIZED STAPLES/NAILS. INSTALL BUILDING PAPER COMPLETELY UNDER SILL FLAP SHOWN IN STEP 2. EXTEND UP TO WINDOW SILL. BUILDING PAPER TO OVERLAP ALL WINDOW FLANGES AND GALVANIZED 'Z' FLASHING AT ALL WINDOWS.
11. SLIP BOTTOM OF JAMB AND SILL FLASHING OUT OVER THE BUILDING PAPER. CONTINUE INSTALLING BLDG PAPER. BLDG. PAPER AT JAMB TO OVERLAP SILL TAPE.
12. TAPE OVER ANY CUTS OR HOLES IN THE BUILDING PAPER.
13. PROVIDE SEALANT END DAMS AT THE ENDS OF THE 'Z' FLASHING TYP. 'Z' FLASHING TO SLOPE AWAY FROM BUILDING.
14. IT IS ACCEPTABLE TO ADHERE SILL TAPE TO BUILDING PAPER AFTER THE BUILDING PAPER HAS BEEN TUCKED UP UNDER SILL TAPE FLAP.

REFER ALSO TO DOOR/WINDOW DETAILS.

Flashing / Building Paper Installation

13 SCALE: N.T.S. (TO BE VERIFIED WITH WINDOW MANUFACTURER'S INSTALLATION INSTRUCTIONS)

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Proposed New Development for:

The Courtyard At Congress Station

551 Congress Parkway, Crystal Lake, Illinois

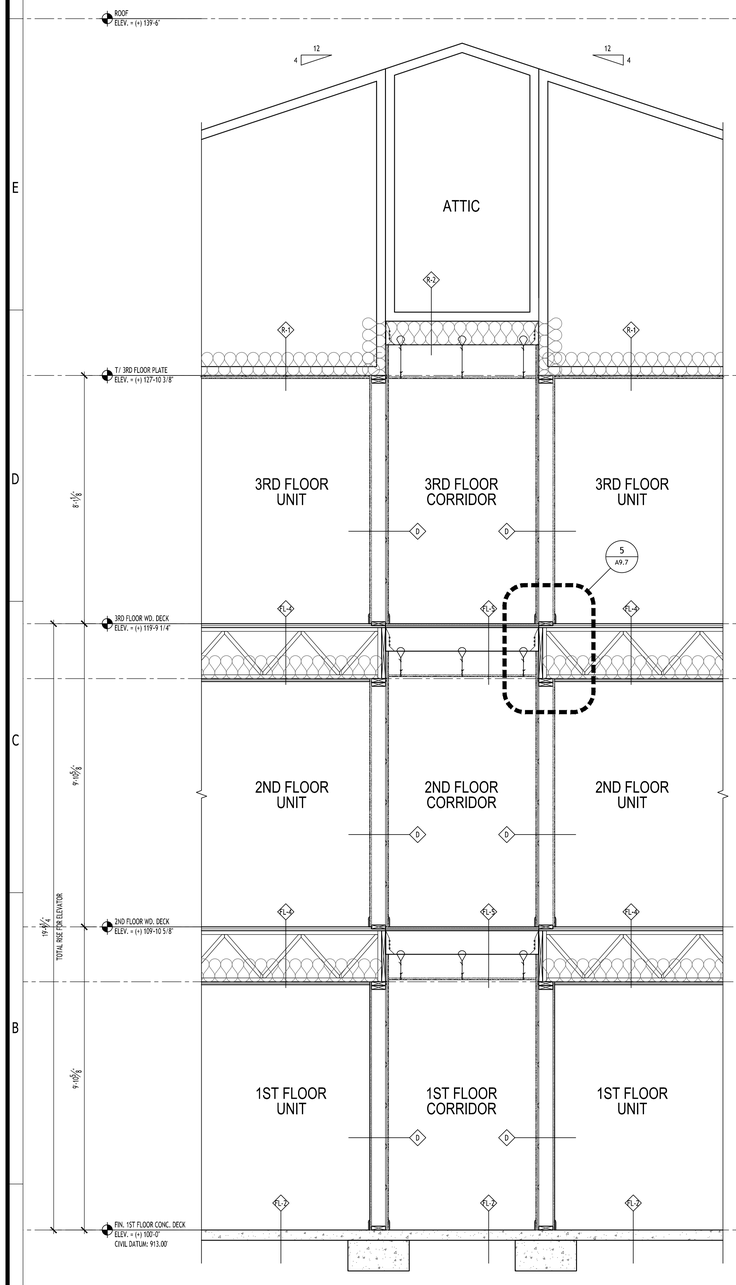
Issue Date: 09.08.2022
Drawn By: PAI
Sheet:

WINDOW & PATIO DOOR SCHEDULE & DETAILS

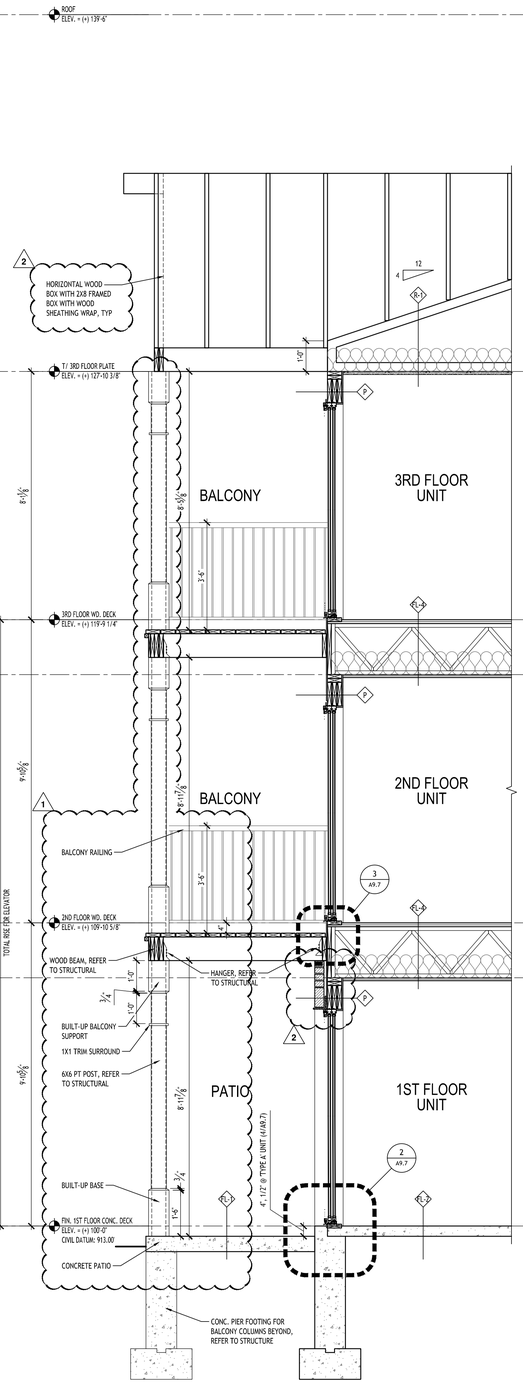
A7.2

PAI PROJECT NUMBER
22116.00

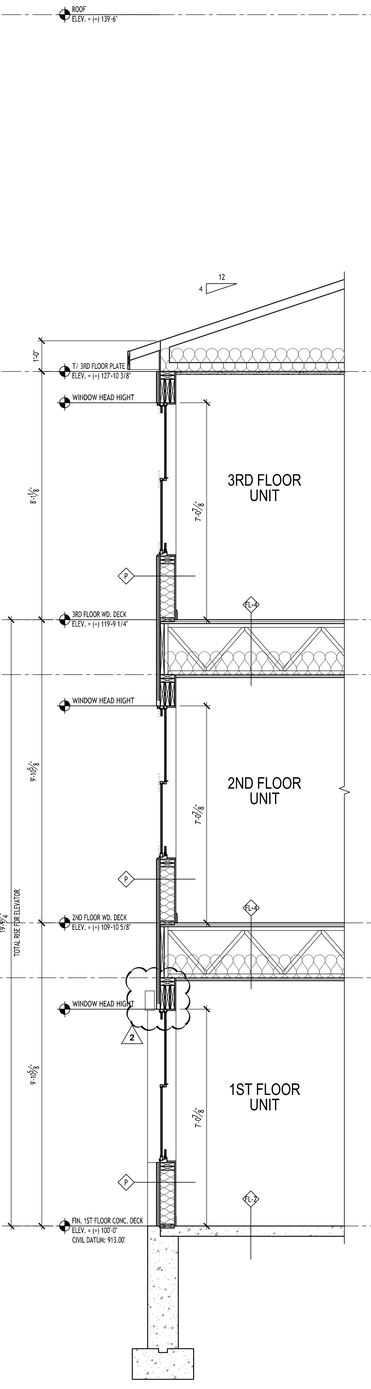
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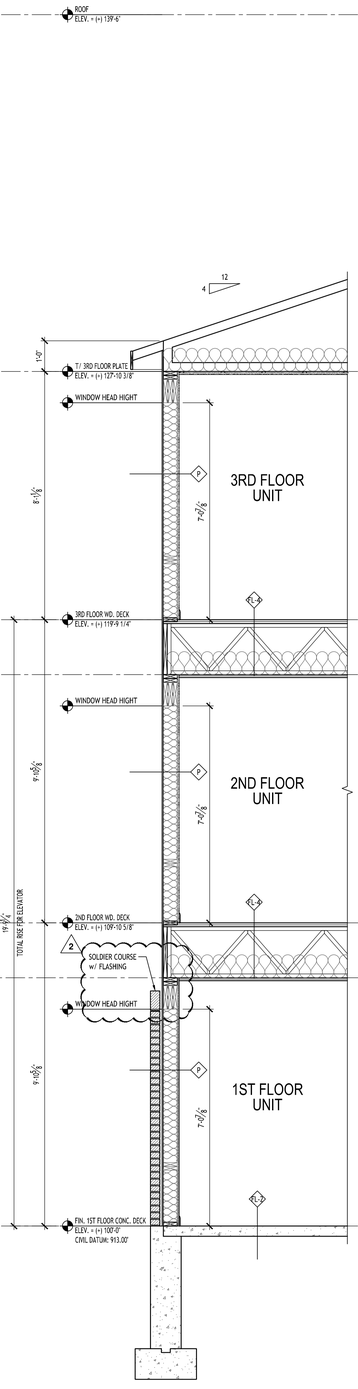
4 WALL SECTION - CORRIDOR
SCALE: 1/2" = 1'-0"



3 WALL SECTION - DOOR
SCALE: 1/2" = 1'-0"



2 WALL SECTION - WINDOW
SCALE: 1/2" = 1'-0"



1 WALL SECTION - EXTERIOR
SCALE: 1/2" = 1'-0"

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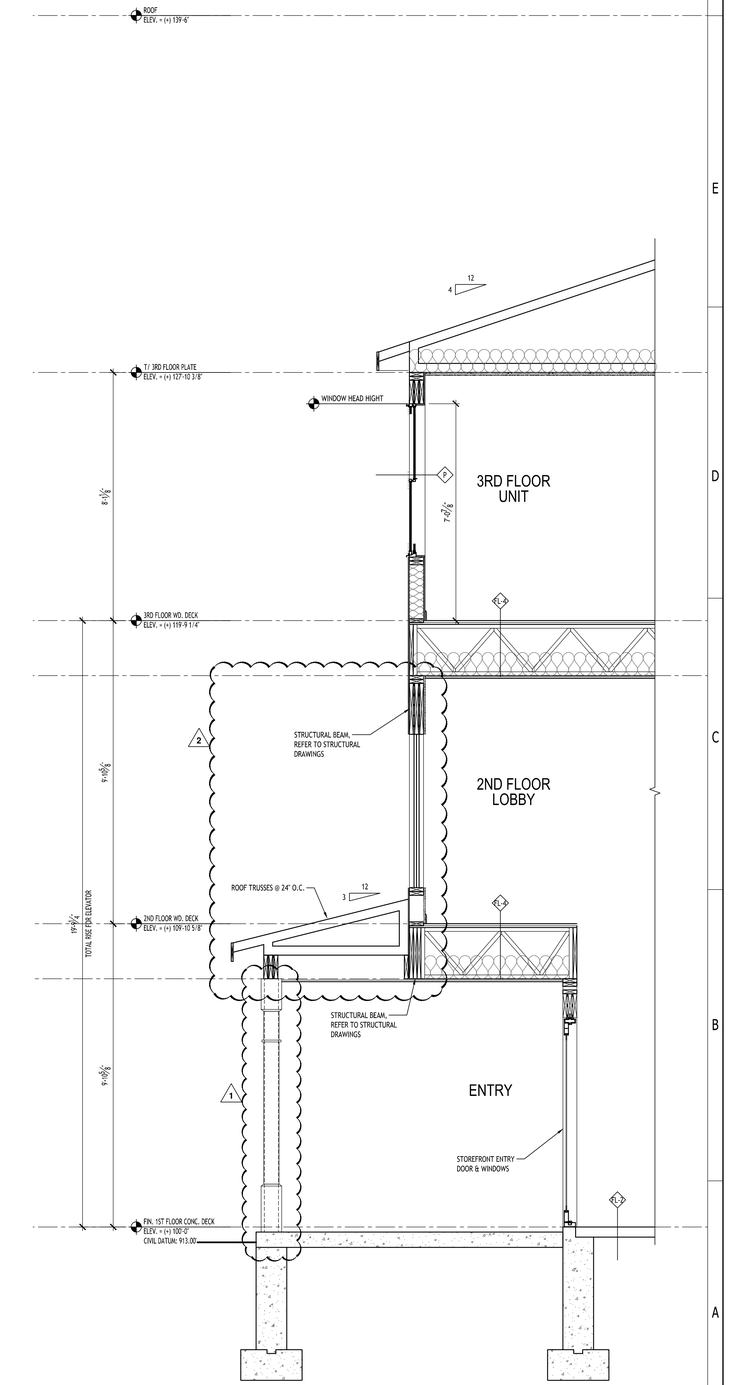
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WALL SECTIONS

A8.1

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1 WALL SECTION - EXTERIOR

SCALE: 1/2" = 1'-0"

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Proposed New Development for:

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551 Congress Parkway, Crystal Lake, Illinois

Issue Date: 09.08.2022
Drawn By: PAI

Sheet:
WALL SECTIONS

A8.2

PAI PROJECT NUMBER
22116.00

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INTERIOR

NON-RATED ASSEMBLY



5/8" GYPSUM BOARD (PROVIDE WATER RESISTANT AT TUBS AND SHOWERS)

2 x 4 WOOD STUDS @ 24" OC

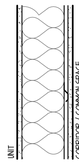
5/8" GYPSUM BOARD (PROVIDE WATER RESISTANT AT TUBS AND SHOWERS)

◇A **TYPICAL, AS SHOWN**
UNLESS NOTED OTHERWISE

◇A1 REPLACE STUDS IN "ASSEMBLY A" W/ FOLLOWING:
2 x 6 WOOD STUDS @ 24" OC

◇A2 REPLACE STUDS IN "ASSEMBLY A" W/ FOLLOWING:
2 x 8 WOOD STUDS @ 24" OC

RATED ASSEMBLY



5/8" U.L. CLASSIFIED GYPSUM BOARD (ALSO WATER RESISTANT AT TUBS AND SHOWERS)

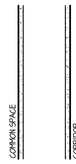
2 x 6 WOOD STUDS @ 16" OC MAX.

FILL CAVITY W/ FRICTION FIT R-21 UNFACED FIBERGLASS INSULATION BATTS

1 1/4" x 1/2", NO. 25 MSG GALVANIZED STEEL RESILIENT (RC) CHANNELS @ 24" OC MAX.) RUN PERPENDICULAR TO STUDS

5/8" U.L. CLASSIFIED GYPSUM BOARD (ALSO WATER RESISTANT AT TUBS AND SHOWERS)

◇D **AS SHOWN - 1 HR REQ'D**
U.L. DESIGN # U305
BEARING WALL / NON-BEARING WALL
STC RATING: 56 PER U.L. DESIGN # U305



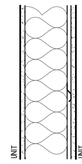
5/8" U.L. CLASSIFIED GYPSUM BOARD (ALSO WATER RESISTANT AT TUBS AND SHOWERS)

2 x 6 WOOD STUDS @ 16" OC MAX.

5/8" U.L. CLASSIFIED GYPSUM BOARD (ALSO WATER RESISTANT AT TUBS AND SHOWERS)

◇E **AS SHOWN - 1 HR REQ'D**
U.L. DESIGN # U305
BEARING WALL

◇E1 **AS SHOWN - 1 HR REQ'D**
U.L. DESIGN # U305, NON-BEARING WALL
REPLACE STUDS IN "ASSEMBLY E" W/ FOLLOWING:
2 x 4 WOOD STUDS @ 16" OC
FILL CAVITY W/ FRICTION FIT R-15 UNFACED FIBERGLASS INSULATION BATTS



5/8" U.L. CLASSIFIED GYPSUM BOARD (ALSO WATER RESISTANT AT TUBS AND SHOWERS)

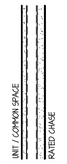
2 x 4 WOOD STUDS @ 16" OC MAX.

FILL CAVITY W/ FRICTION FIT R-21 UNFACED FIBERGLASS INSULATION BATTS

2 3/8" x 7/8", NO. 25 MSG GALVANIZED STEEL RESILIENT CHANNELS @ 24" OC MAX.) RUN PERPENDICULAR TO STUDS

5/8" U.L. CLASSIFIED GYPSUM BOARD (ALSO WATER RESISTANT AT TUBS AND SHOWERS)

◇F **AS SHOWN - 1 HR REQ'D**
U.L. DESIGN # U305, SIMILAR
BEARING / NON-BEARING WALL
STC RATING: 56 PER U.L. DESIGN # U305

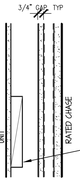


5/8" U.L. CLASSIFIED GYPSUM BOARD (ALSO WATER RESISTANT AT TUBS AND SHOWERS)

MIN. 2 1/2" DEEP, NO. 25 MSG GALVANIZED STEEL 'C-H' STUDS @ 24" OC MAX.

1" U.L. CLASSIFIED GYPSUM BOARD LINER PANEL

◇G **AS SHOWN - 2 HR REQ'D**
U.L. DESIGN # U415, SYSTEM A
STC RATING: 39 PER TEST # US6-040901



5/8" GYPSUM BOARD (ALSO WATER RESISTANT AT TUBS AND SHOWERS)

2 x 4 WOOD STUDS @ 24" OC

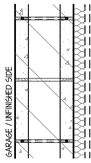
5/8" U.L. CLASSIFIED GYPSUM BOARD (ALSO WATER RESISTANT AT TUBS AND SHOWERS)

MIN. 2 1/2" DEEP, NO. 25 MSG GALVANIZED STEEL 'C-H' STUDS @ 24" OC MAX.

1" U.L. CLASSIFIED GYPSUM BOARD LINER PANEL

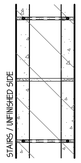
BLOCKING FOR F. H. A. ACT REQUIRED GRAB BAR MOUNTING, SEE ASSEMBLY PLANS FOR THIS PARTITION LOCATIONS, TYP

◇H **AS SHOWN - 1 HR REQ'D**
U.L. DESIGN # U415, SYSTEM A



8" NOMINAL CONCRETE MASONRY UNIT w/ 9 GAUGE GALVANIZED STEEL WIRE TRUSS-TYPE JOINT REINFORCEMENT @ 16" OC VERTICALLY

◇J **AS SHOWN - 1 HR REQ'D**
INTERNATIONAL CODE SECTION 1201 - PRESCRIPTIVE METHOD. 2.1 to 2.8 MIN CMU THKNS

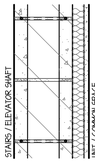


8" NOMINAL CONCRETE MASONRY UNIT (CLASSIFICATION D-2) w/ 9 GAUGE GALVANIZED STEEL WIRE TRUSS-TYPE JOINT REINFORCEMENT @ 16" OC VERTICALLY

◇L **AS SHOWN - 2 HR REQ'D**
U.L. DESIGN # U905
BEARING / NON-BEARING WALL

◇L1 ADD FOLLOWING TO ASSEMBLY "L":
2 x 2 WOOD FURRING @ 24" OC
STUD CAVITY COMPLETELY FILLED W/ ACOUSTICAL INSULATION
5/8" GYPSUM BOARD

◇L2 ADD FOLLOWING TO ASSEMBLY "L":
2 x 4 WOOD STUDS @ 24" OC
STUD CAVITY COMPLETELY FILLED W/ ACOUSTICAL INSULATION
5/8" GYPSUM BOARD



8" NOMINAL CONCRETE MASONRY UNIT (CLASSIFICATION D-2) w/ 9 GAUGE GALVANIZED STEEL WIRE TRUSS-TYPE JOINT REINFORCEMENT @ 16" OC VERTICALLY

2 x 2 WOOD FURRING @ 24" OC

STUD CAVITY COMPLETELY FILLED W/ ACOUSTICAL INSULATION

5/8" GYPSUM BOARD (ALSO WATER RESISTANT AT TUBS AND SHOWERS)

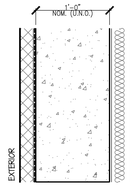
◇M **AS SHOWN - 2 HR REQ'D**
U.L. DESIGN # U905

◇M1 REPLACE WOOD FURRING' IN ASSEMBLY "M" W/ FOLLOWING: 2 x 4 WOOD STUDS @ 24" OC

1 Wall Types
SCALE: 1 1/2"=1'-0" xwall-types

NOTES:
- ELECTRICAL PENETRATIONS: OFFSET ALL BACK TO BACK ELECTRICAL CONDUIT BOXES AND DEVICES LOCATED IN DWELLING UNIT DEMISING WALL ASSEMBLIES BY A MINIMUM OF ONE STUD BAY, TYPICAL.
- CAULK / SEALANT FOR ALL FIRE RATED ASSEMBLIES SHALL BE U.L. LISTED FIRE RATED TYPE, TYPICAL.
- REFER TO THE CEILING PLAN & THE LIFE SAFETY PLAN IN ORDER TO DETERMINE THE HEIGHTS OF THE PARTITION.
- NON-RATED PARTITION WALLS WITHIN D.U. TO GO UP TO UNDERSIDE OF THE BOTTOM CHORD OF FLOOR/ROOF TRUSS, TYPICAL. SEE DETAIL THIS SHEET.
- ALL CORRIDOR PARTITIONS SHALL BE FURNISHED WITH AN OUTSIDE LAYER OF ABUSE RESISTANT GYPSUM BOARD ON THE CORRIDOR SIDE IN LIEU OF REGULAR GYPSUM BOARD, TYPICAL.
- ALL WALLS AT THE FITNESS ROOM SHALL BE FURNISHED WITH AN OUTSIDE LAYER OF ABUSE RESISTANT GYPSUM BOARD IN LIEU OF REGULAR GYPSUM BOARD, TYPICAL.

EXTERIOR



2" (+/-) THICK POLYISOCYANURATE RIGID INSULATION WITH MIN. L.T.T.R. R-VALUE OF 11.4 (PER ASTM C1289-11A) - MECHANICALLY ATTACHED TO THE CONCRETE WALL, FULL HEIGHT

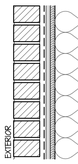
PROVIDE FIBER REINFORCED ASPHALT BASED DAMP PROOFING COATING THAT COMPLIES WITH ASTM D 1227, TYPE II, CLASS 1 SPECIFICATIONS - THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE WITH MANUFACTURER SPECIFIED COVERAGE RATES.

12" THICK (REFER TO STRUCTURAL PLANS FOR LOCATIONS) NOMINAL CAST-IN-PLACE CONCRETE WALL w/ REINFORCEMENT - EXPOSED CONCRETE CONSTRUCTION TO BE SEALED FROM INSIDE AT ALL UNFINISHED LOCATIONS, TYP. - REFER TO STRUCTURAL DWGS.

◇R **NON-RATED CONCRETE WALL, AS SHOWN**
UNLESS NOTED OTHERWISE, BEARING / NON-BEARING WALL

◇R1 ADD FOLLOWING TO ASSEMBLY "R":
- 3 5/8" x 22 GA. GALV. METAL STUD @ 24" O.C. (ON INTERIOR SIDE, WHERE INDICATED)
- FILL CAVITY W/ MIN. R-15 GLASS FIBER INSULATION BATTS
- MIN. 6 MIL VAPOR DIFFUSION RETARDER (VAPOR BARRIER) - PROVIDE POLYETHYLENE VAPOR RETARDERS THAT COMPLIES WITH ASTM E 1745 - ON HEATED SIDE
- 5/8" THICK GYPSUM BOARD FINISH, TAPED / SEALED - TO RECEIVE SCHEDULED WALL FINISH

NOTE TO MASONRY CONTRACTOR:
- THE CONTRACTOR TO PROVIDE VERTICAL & HORIZONTAL MASONRY CONTROL JOINTS AS REQUIRED BY THE MASONRY ADVISORY COUNCIL'S PUBLISHED TECHNICAL BULLETIN. THE VERTICAL CONTROL JOINT SHALL BE LOCATED NOT MORE THAN 25' HORIZONTALLY INCLUDING AT CORNERS OF THE BUILDING.
- THE CONTRACTOR TO PROVIDE MASONRY BASE FLASHING WITH CELL VENTS / COTTON WICKS AT 24" O.C. MAX. HORIZONTALLY WITH STAINLESS STEEL DRIP EDGE & WITH CONTINUOS "MORTAR NET" ALONG THE ENTIRE BASE OF THE BUILDING.
- THE CONTRACTOR TO PROVIDE MASONRY HEAD FLASHING WITH END DAMS AT EACH END WITH CELL VENTS / COTTON WICKS AT 24" O.C. MAX. HORIZONTALLY WITH STAINLESS STEEL DRIP EDGE, CONTINUOUS AT EACH HEAD ABOVE EXTERIOR OPENING, WHERE APPLICABLE.



CLAY FACE BRICK VENEER - NOM. 4" H x 4" H x 12" L (UTILITY SIZE) - PROVIDE ALTERNATE FOR: MODULAR SIZE) - SEE ELEVATIONS FOR MASONRY BANDS & BRICK LOCATIONS

BRICK TIES 26 GAUGE GALV STEEL, SPACED @ 8" OC VERTICALLY

MIN. 1" AIR SPACE

AIR INFILTRATION BARRIER OVER 1/2" MIN. POLYISO RIGID INSULATION (MIN. R-VALUE 3.1) OVER 5/8" MIN. EXT. GRADE O.S.B. SHEATHING PANEL - REFER TO STRUCT. PLANS FOR EXT. SHEATHING

2 x 6 WOOD STUDS @ 16" OC MAX. - REFER TO STRUCT. PLANS

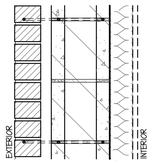
FILL CAVITY w/ FRICTION FIT R-21 FIBER-GLASS INSULATION BATTS W/ INTEGRAL VAPOR BARRIER (MIN. 1.0 PERM) TO HEATED SIDE

5/8" U.L. CLASSIFIED GYPSUM BOARD (ALSO WATER RESISTANT AT TUBS AND SHOWERS)

◇P **AS SHOWN - 1 HR REQ'D**
U.L. DESIGN # U356, SIMILAR
BEARING WALL / NON-BEARING WALL

◇P1 REPLACE FACE BRICK VENEER IN ASSEMBLY "P" W/ FOLLOWING: FIBER-CEMENT PANELING (REFER TO EXTERIOR ELEVATIONS FOR SPECIFIC LOCATIONS, TYPICAL) - SHALL BE INSTALLED PER MFR.'S INSTRUCTIONS

◇P2 ADD FOLLOWING TO ASSEMBLY "P1":
2" THICK RIGID POLYISO INSULATION BOARD BEHIND AIR INFILTRATION BARRIER -SHALL BE INSTALLED PER MFR.'S INSTRUCTIONS



CLAY FACE BRICK VENEER - NOM. 4" H x 4" H x 12" L (UTILITY SIZE) - PROVIDE ALTERNATE FOR: MODULAR SIZE) - SEE ELEVATIONS FOR MASONRY BANDS & BRICK LOCATIONS

MIN. 1 3/8" AIR SPACE

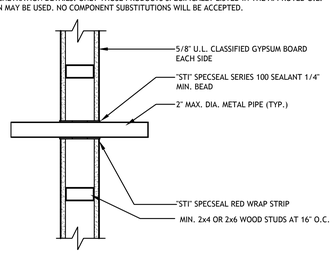
8" NOMINAL CONCRETE MASONRY UNIT w/ 9 GAUGE GALVANIZED STEEL WIRE TRUSS-TYPE JOINT REINFORCEMENT @ 16" OC VERTICALLY TO TIE BOTH C.M.U. & MASONRY VENEER

◇Q **AS SHOWN - 1 HR REQ'D**
INTERNATIONAL CODE SECTION 1201 - PRESCRIPTIVE METHOD. 2.1 to 2.8 MIN CMU THKNS

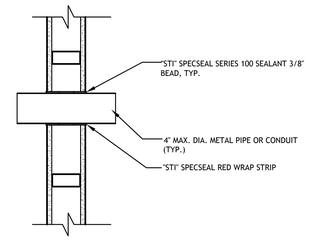
◇Q1 ADD FOLLOWING TO ASSEMBLY "Q":
2 x 4 WOOD STUDS @ 24" OC MAX. (FINISH SIDE)
FILL CAVITY w/ R-15 FIBER-GLASS INSULATION BATTS W/ INTEGRAL VAPOR BARRIER TO HEATED SIDE
5/8" GYPSUM BOARD

◇Q2 REPLACE FACE BRICK VENEER' IN ASSEMBLY "Q" W/ FOLLOWING: FIBER-CEMENT SHINGLE SIDING (STRAIGHT EDGE NOTCHED PANELS) OVER 2 x 2 P.T. WOOD FURRING @ 24" OC WITH 1/2" SHEATHING AS REQUIRED - SHALL BE INSTALLED PER MFR.'S INSTRUCTIONS

NOTE TO CONTRACTORS:
1. IF HEAD OF WALL DESIGN IS SUBSTITUTED, THEN A CURRENT COPY OF THE U.L. APPROVED DESIGN MUST BE MAINTAINED ON SITE FOR THE INSPECTORS' USE.
2. FOR PENETRATION DETAILS: ONLY THOSE PRODUCTS SPECIFICALLY LISTED IN THE APPROVED U.L. DESIGN MAY BE USED. NO COMPONENT SUBSTITUTIONS WILL BE ACCEPTED.

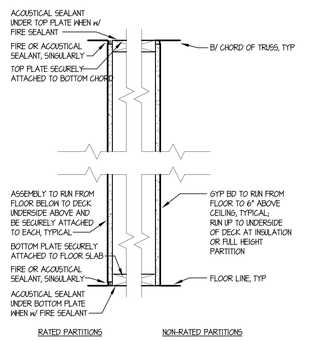


D1 1 HR. RATING: UL DES. NO.: WL2048, SIM.

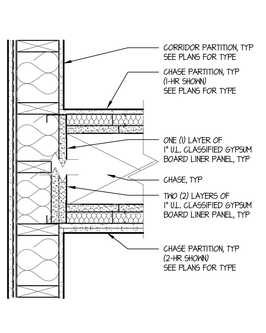


D2 1 HR. RATING: UL DES. NO.: CA-J-2038

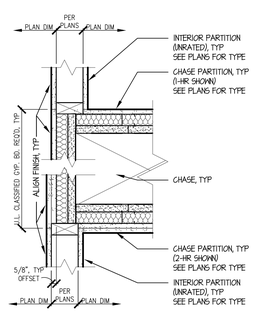
DETAILS



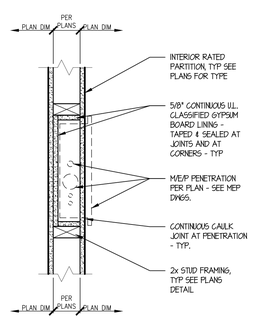
2 Typical Partition Construction
SCALE: 1 1/2"=1'-0" xwall-types



3 Typical Corridor Partition To Chase Construction
SCALE: 1 1/2"=1'-0" xwall-types

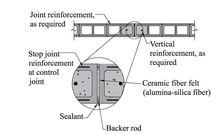


4 Typical Interior Partition To Chase Construction
SCALE: 1 1/2"=1'-0" xwall-types



5 @ Interior Rated Partition Typical Fire Rated Stud Bay
SCALE: 1 1/2"=1'-0" xwall-types

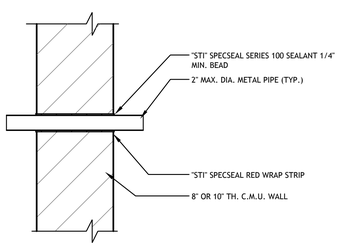
LOCATION OF CONTROL JOINT FOR MASONRY WALL:
- AT SIGNIFICANT CHANGE IN HEIGHT OF THE WALL
- EVERY 30' MAX.



3b—4-Hour Fire Rated* Control Joint

NOTE: VERTICAL REINFORCEMENT (REFER TO STRUCTURAL DRAWINGS) SHALL BE PROVIDED IN A FULLY GROUTED CELL ON EACH SIDE OF THE CONTROL JOINT,

6 For Masonry Wall Typical Control Joint
SCALE: Not To Scale xwall-types



D3 1 HR. RATING (@ SHAFT WALLS): UL DES. NO.: CA-J-2064, SIM.

7 Penetration Details
SCALE: 1 1/2"=1'-0" xwall-types

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Document Record:

Issued Date	Description
09.08.2022	ISSUED FOR BUILDING PERMIT
05.04.2023	REVISIONS 1
09.13.2024	CITY REVISIONS - ELEVATIONS 2

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www.purohitarchitects.com

Proposed New Development for:

The Courtyard At Congress Station

551 Congress Parkway, Crystal Lake, Illinois

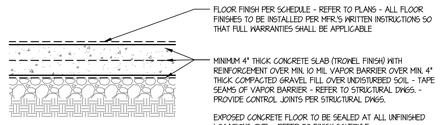
Issue Date: 09.08.2022
Drawn By: PAI

Sheet:
WALL ASSEMBLIES & TYPICAL DETAILS

A9.1

PAI PROJECT NUMBER
22116.00

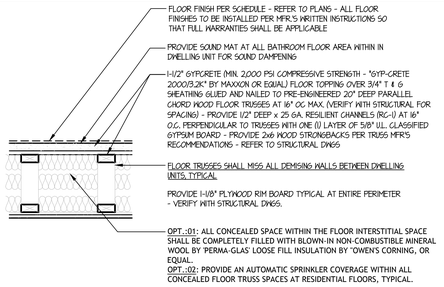
NON-RATED ASSEMBLY



FL-2 AT GRADE FLOOR ASSEMBLY

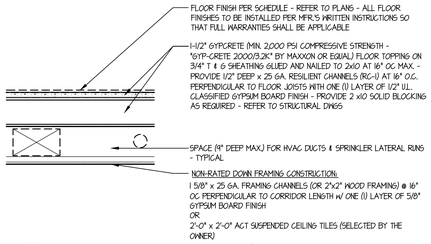
1ST FLOOR RESIDENTIAL CONCRETE SLAB ON GRADE
AS SHOWN - NON-RATED

RATED ASSEMBLY



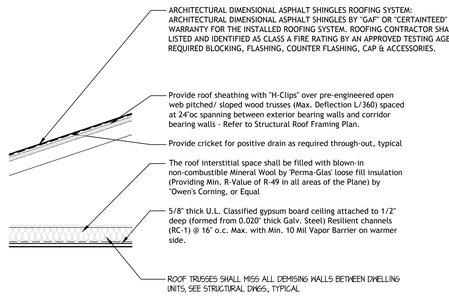
FL-4 TYPICAL RESIDENTIAL FLOOR/CLG. SEPARATION ASSEMBLY

PRE-ENGINEERED OPEN WEB WOOD FLOOR TRUSSES
AS SHOWN - REQUIRED: **1-HOUR FIRE RATED**
U.L. DESIGN # L526
STC 58 (Per Test OC-2147)



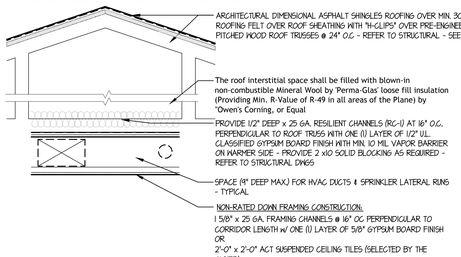
FL-5 TYPICAL CORRIDOR FLOOR/CLG. SEPARATION ASSEMBLY

2x10 DIMENSIONAL LUMBER
AS SHOWN - REQUIRED: **1-HOUR FIRE RATED**
U.L. DESIGN # L503, SIMILAR



R-1 TYPICAL ROOF/CLG. SEPARATION ASSEMBLY

PRE-ENGINEERED SLOPED TOP OPEN WEB WOOD FLOOR TRUSSES
AS SHOWN - REQUIRED: **1-HOUR FIRE RATED**
U.L. DESIGN # L522



R-2 TYPICAL ROOF/CLG. SEPARATION ASSEMBLY OVER CORRIDOR

2x10 DIMENSIONAL LUMBER
AS SHOWN - REQUIRED: **1-HOUR FIRE RATED**
U.L. DESIGN # L503, SIMILAR

1 Floor & Roof Types

SCALE: 1 1/2"=1'-0" xwall-types

CONCRETE MASONRY UNIT**: ALL CONCRETE MASONRY UNIT (C.M.U.) SHALL COMPLY WITH ASTM C90 AND SHALL BE NORMAL WEIGHT, TYPICAL.

VAPOR DIFFUSION RETARDER (VAPOR BARRIER) NOTE TO CONTRACTOR:
ALL POLYETHYLENE VAPOR DIFFUSION RETARDER (VAPOR BARRIER) THAT IS TORN AFTER INSTALLATION MUST BE FULLY TAPED AND REPAIRED OR REPLACED PRIOR TO INSTALLATION OF GYPSUM BOARD ON ALL WALLS, TYPICAL.

TREATED WOOD SPECIFICATIONS:

ALL WOOD USED IN THIS PROJECT SHALL BE TREATED WOOD. ALL TREATED WOOD BLOCKING AND SHEATHING SHALL COMPLY WITH ONE OF THE FOLLOWING CATEGORY RATING AS PRESCRIBED BY THE AMERICAN WOOD-PRESERVER'S ASSOCIATION (A.W.P.A.), TYPICAL.

ALL WOOD BLOCKING / SHEATHING IN THIS PROJECT SHALL BE FIRE PRESERVATIVE TREATED PER SPECIFICATIONS BELOW, UNLESS NOTED OTHERWISE, TYPICAL.

CATEGORY RATING:	LOCATION OF USE / DESCRIPTION:
UCFA	INTERIOR ABOVE GROUND FIRE PRESERVATIVE TREATED, TYPICAL
UCFB	EXTERIOR ABOVE GROUND FIRE PRESERVATIVE TREATED, TYPICAL
UC1	ALL INTERIOR DRY LOCATIONS
UC2	ALL INTERIOR DAMP LOCATIONS (KITCHEN, RESTROOM, JANITOR, UTILITY ROOMS, ETC.)
UC3A	ALL EXTERIOR ABOVE GROUND LOCATIONS, COATED WITH RAPID WATER RUNOFF
UC4A	GROUND OR CONCRETE CONTACT, GENERAL USE

THERMAL ENVELOPE REQUIREMENTS (2018 I.E.C.C.)

OPAQUE THERMAL ENVELOPE REQUIREMENTS BY COMPONENT - COMMERCIAL:

COMPONENT	INSULATION REQUIREMENT
ROOFS 'R-VALUE' - INSULATION ENTIRELY ABOVE DECK	MIN. R-30 ci
WALLS ABOVE GRADE: MASS WALLS (EXTERIOR)	MIN. R-11.4 ci
WALLS ABOVE GRADE: FRAMED WALLS (EXTERIOR)	MIN. R-13 + 7.5 ci
WALLS BELOW GRADE: EXTERIOR WALLS (N/A)	MIN. R-7.5 ci
SLAB-ON-GRADE: UNHEATED SLAB	MIN. R-10 FOR 24" Below
SLAB-ON-GRADE: HEATED SLAB (N/A)	MIN. R-15 FOR 36" Below
OPAQUE DOORS: SWINGING	MAX. U-0.37

FENESTRATION ENVELOPE REQUIREMENTS BY COMPONENT - COMMERCIAL:

COMPONENT (TAB. C402.4, 2018 I.E.C.C.)	FENESTRATION REQUIREMENT
FIXED FENESTRATION, VERTICAL: U-Factor	MAX. U-0.38 (SHGC: 0.40)
OPERABLE FENESTRATION, VERTICAL: U-Factor	MAX. U-0.45 (SHGC: 0.40)
ENTRANCE DOORS: U-Factor	MAX. U-0.77 (SHGC: 0.40)
FIXED FENESTRATION, SKYLIGHTS: U-Factor	MAX. U-0.50 (SHGC: 0.40)
SHGC (PF < 0.2)	SEW: 0.38 & N: 0.51

AIR LEAKAGE REQUIREMENTS - BUILDING THERMAL ENVELOPE:

THE SEALING METHODS BETWEEN DISSIMILAR MATERIALS SHALL ALLOW FOR DIFFERENTIAL EXPANSION AND CONTRACTION. THE FOLLOWING SHALL BE CAULKED, GASKETED, WEATHER STRIPPED OR OTHERWISE SEALED WITH AIR BARRIER MATERIAL, SUITABLE FILM OR SOLID MATERIAL:

(1) ALL JOINTS, SEAMS & PENETRATIONS.
(2) SUITE-BUILT WINDOWS, DOORS & SKYLIGHTS.
(3) OPENINGS BETWEEN WINDOWS AND DOOR ASSEMBLIES AND THEIR RESPECTIVE JAMBS & FRAMING.
(4) UTILITY PENETRATIONS.
(5) DROPPED CEILINGS OR CHASES ADJACENT TO THE THERMAL ENVELOPE. (6) WALLS & CEILINGS SEPARATING A GARAGE FROM CONDITIONED SPACES. (7) BEHIND TUBS & SHOWERS OR EXTERIOR WALLS
(8) COMMON WALLS BETWEEN DWELLING UNITS.

MAXIMUM AIR LEAKAGE ALLOWED (TESTED PER NFRC400 OR AAMA/WDMA/CSA101/1.5.2.A440):
WINDOWS, SKYLIGHTS & SLIDING GLASS DOORS: 0.3 CFM PER SQ. FT.
SWINGING DOORS: 0.5 CFM PER SQ. FT.
EXCEPTIONS: SITE CONSTRUCTED WINDOWS & DOORS THAT ARE WEATHER-STRIPPED OR SEALED PER CBC 18-13-502.4.3

INSTALL GRAVITY DAMPERS ON ALL OUTDOOR AIR INTAKES AND EXHAUST OPENINGS INTEGRAL TO THE BUILDING ENVELOPE, TYPICAL. REFER TO MECHANICAL SHEET FOR SUCH DAMPER LOCATIONS.

SIGNAGE SPECIFICATIONS:

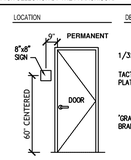
LOCATIONS: SIGNAGE SHALL BE PROVIDED FOR ALL PUBLIC RESTROOM(S) & FOR ALL OTHER AREAS OR SPACES REQUIRED BY THE LOCAL AUTHORITY. FINAL SIGNAGE TYPE, COLOR & FINISH SELECTION BY THE FRANCHISOR.

SIGNS SIZE
8" X 8"

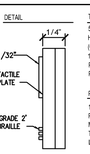
MATERIAL & COLOR
MATERIAL: PLASTIC
COLOR: "BEIGE" BACKGROUND WITH BLACK LETTERS (TO BE VERIFIED WITH FRANCHISOR), EXCEPT AT SPRINKLER ROOM WHICH IS TO BE RED BACKGROUND WITH WHITE LETTERS (TO BE VERIFIED WITH LOCAL FIRE DEPARTMENT).

BRAILLE
GRADE 2 BRAILLE
POSITIONED DIRECTLY BELOW TEXT
KROY RECOMMENDATIONS

LOCATION



DETAIL



TEXT
5/8" HIGH, UPPERCASE HELVETICA MEDIUM (OR SANS SERIF)
1/32" RAISED LETTERS POSITIONED DIRECTLY BELOW PICTOGRAM

PICTOGRAM
1/32" RAISED TACTILE PICTOGRAM AREA MUST BE 6" MINIMUM HEIGHT.
TO BE IN CONFORMANCE WITH IAC 400.310.(a)(3).

2 Typical Room I.D. Detail

SCALE: Not To Scale xwall-types

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Document Record:

Issued Date	Description
09.08.2022	ISSUED FOR BUILDING PERMIT
05.04.2023	REVISIONS 1
09.13.2024	CITY REVISIONS - ELEVATIONS 2

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Proposed New Development for:

The Courtyard At Congress Station

551 Congress Parkway, Crystal Lake, Illinois

Issue Date: 09.08.2022
Drawn By: PAI

Sheet:
FLOOR & ROOF ASSEMBLIES, TYPICAL DETAILS

A9.2

PAI PROJECT NUMBER
22116.00

Design No. U305
February 14, 2022

Bearing Wall Rating — 1 Hr
Finish Rating — See Items 3, 3A, 3D, 3E, 3F, 3G, 3H, 3J and 3L.
STC Rating - 56 (See Item 9)
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

1. Wood Studs — Nom 2 by 4 in. spaced 16 in. OC max, effectively firestopped.
2. Joints and Nail-Heads — Joints covered with joint compound and paper tape. Joint compound and paper tape may be omitted when square edge boards are used. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard with the joints reinforced with paper tape. Nailheads exposed or covered with joint compound.
3. Gypsum Board* — 5/8 in. thick paper or vinyl surfaced, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. When used in widths other than 48 in., gypsum panels are to be installed horizontally. For an alternate method of attachment of gypsum panels, refer to Items 6 through 6F, Steel Framing Members*.
When Items 6, 6B, 6C, 6D, 6E, or 6F, Steel Framing Members*, are used, gypsum panels attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC.

When Item 6A, Steel Framing Members*, is used, two layers of gypsum panels attached to furring channels. Base layer attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC. Face layer attached to furring channels with 1-5/8 in. long Type S bugle-head steel screws spaced 12 in. OC. All joints in face layers staggered with joints in base layers. One layer of gypsum board attached to opposite side of wood stud without furring channels as described in Item 3.

When Item 7, resilient channels are used, 5/8 in. thick, 4 ft wide gypsum panels applied vertically. Screw attached furring channels with 1 in. long, self-drilling, self-tapping Type S or S-12 steel screws spaced 8 in. OC, vertical joints located midway between studs.

AMERICAN GYPSUM CO — Types AGX-1 (finish rating 23 min.), M-Glass (finish rating 23 min.), Type AGX-11 (finish rating 26 min), Type AGX-12 (finish rating 22 min), Type LightRoc (finish rating 23 min.) or Type AG-C

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — Type DBX-1 (finish rating 24 min)

CABOT MANUFACTURING ULC — Type X (finish rating 22 min), 5/8 Type X, Moisture Resistant Type X, Gypsum Sheathing Type X, Mold & Mildew Resistant Type X and Mold & Mildew Resistant AR Type X, Type Blueglass Exterior Sheathing

CERTAINTEED GYPSUM INC — Type C, Type X or Type X-1 (finish rating 26 min); Type EGRG or GlasRoc (finish rating 23 min), GlasRoc-2, Type Habito (finish rating 26 min).

CGC INC — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SCX (finish rating 24 min), Type SHX (finish rating 24 min), Type ULX (finish rating 22 min), Type WRC (finish rating 24 min), Type WRX (finish rating 24 min), Type ULIX (finish rating 20 min)

CERTAINTEED GYPSUM INC — Type LGFC6A (finish rating 34 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX (finish rating 21 min), Type CLLX (finish rating 24 min)

GEORGIA-PACIFIC GYPSUM L L C — Type 5 (finish rating 26 min), Type 6 (finish rating 23 min), Type 9 (finish rating 26 min), Type C (finish rating 26 min), Type DGG (finish rating 20 min), Type GPFS1 (finish rating 20 min), Type GPFS2 (finish rating 20 min), Type GPFS6 (finish rating 26 min), Type DS, Type DAP, Type DD (finish rating 20 min), Type DA, Type DAPC, Type LS (finish rating 23 min), Type X, Veneer Plaster Base - Type X, Water Rated - Type X, Sheathing - Type X, Soffit - Type X, Type LWX (finish rating 22 min), Veneer Plaster Base-Type LWX (finish rating 22 min), Water Rated-Type LWX (finish rating 22 min), Sheathing Type-LWX (finish rating 22 min), Soffit-Type LWX (finish rating 22 min), Type DGLW (finish rating 22 min), Water Rated-Type DGLW (finish rating 22 min), Sheathing Type- DGLW (finish rating 22 min), Soffit-Type DGLW (finish rating 22 min), Type LWX (finish rating 22 min), Type LW2X (finish rating 22 min), Veneer Plaster Base - Type LW2X (finish rating 22 min), Water Rated - Type LW2X (finish rating 22 min), Sheathing - Type LW2X (finish rating 22 min), Soffit - Type LW2X (finish rating 22 min), Type DGL2W (finish rating 22 min), Water Rated - Type DGL2W (finish rating 22 min), Sheathing - Type DGL2W (finish rating 22 min)

NATIONAL GYPSUM CO — Type FSK (finish rating 20 min), Type FSK-G (finish rating 20 min), Type FSW (finish rating 20 min), Type FSW-2 (finish rating 24 min), Type FSW-3 (finish rating 20 min), Type FSW-5 (finish rating 22 min), Type FSW-G (finish rating 20 min), Type FSK-C (finish rating 20 min), Type FSW-C (finish rating 20 min), Type FSMR-C, Type FSW-6 (finish rating 20 min), Type FSL (finish rating 24 min), Type FSW-8, Type FSLX (finish rating 21 min), Type RSX (finish rating 26 min).

NATIONAL GYPSUM CO — Riyadh, Saudi Arabia — Type FR, or WR.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types C, PG-2 (finish rating 20 min), PG-3 (finish rating 20 min), Types PG-3W, PG-5W (finish rating 20 min), Type PG-4 (finish rating 20 min), Type PG-6 (finish rating 23 min), Types PG-3WS, PG-5WS, PGS-WRS (finish rating 20 min), Types PG-5, PG-9 (finish rating 26 min), PG-11 PG-13 (Nails increased to 2 in.), Type PG-C or PGI (finish rating 26 min)

PANEL REY S A — Type ARX, GREX, GRIX, PRX, PRC, PRC2; Types RHX, Guard Rey, MDX, ETX (finish rating 22 min), PRX2 (finish rating 21 min)

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1 (finish rating 26 min)

THAI GYPSUM PRODUCTS PCL — Type C, Type X (finish rating 26 min)

UNITED STATES GYPSUM CO — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type FRX-G (finish rating 29 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type SCX (finish rating 24 min), Type SGX (finish rating 24 min), Type ULX (finish rating 22 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type ULIX (finish rating 20 min)

USG BORAL DRYWALL SFZ LLC — Type SGX (finish rating 24 min).

USG MEXICO S A DE C V — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), SCX (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type ULX (finish rating 22 min)

3A. Gypsum Board* — (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.

AMERICAN GYPSUM CO — Types AGX-1 (finish rating 25 min.), M-Glass (finish rating 25 min.), AG-C (finish rating 25 min.), LighttRoc (finish rating 25 min.)

CERTAINTEED GYPSUM INC — Type C, Type X, Type X-1 (finish rating 26 min), Type EGRG or GlasRoc.

CGC INC — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SCX (finish rating 24 min), Type SHX (finish rating 24 min), Type WRC (finish rating 24 min), Type WRX (finish rating 24 min)

NATIONAL GYPSUM CO — Type FSW (finish rating 24 min)

UNITED STATES GYPSUM CO — Type AR (finish rating 24 min), Type SCX (finish rating 24 min), Type SGX (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type FRX-G (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min)

USG BORAL DRYWALL SFZ LLC — Types C, SCX, SGX (finish rating 24 min).

USG MEXICO S A DE C V — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type SCX, Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min)

3B. Gypsum Board* — (As an alternate to Item 3) — Nom 3/4 in. thick, installed with 1-7/8 in. long cement coated nails as described in Item 3 or 1-3/8 in. long Type W coarse thread gypsum panel steel screws as described in Item 3A.
CGC INC — Types AR, IP-AR

UNITED STATES GYPSUM CO — Types AR, IP-AR

USG MEXICO S A DE C V — Types AR, IP-AR

3C. Gypsum Board* — (As an alternate to Items 3, 3A and 3B) — 5/8 in. thick, 2 ft wide, tongue and groove edge, applied horizontally to one side of the assembly. Installed with 1-7/8 in. long cement coated nails as described in Item 3 or 1-1/4 in. long Type W coarse thread gypsum panel steel screws as described in Item 3A. Joint covering (Item 2) not required.
CGC INC — Type SHX

UNITED STATES GYPSUM CO — Type SHX

USG MEXICO S A DE C V — Type SHX

3D. Gypsum Board* — (As an alternate to Items 3, 3A, 3B, or 3C — Not Shown) — For Direct Application to Studs Only- Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs or tabs may be used in lieu of or in addition to the lead batten strips or optional at other locations. Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum underneath screw locations prior to the installation of the screws. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".
RAY-BAR ENGINEERING CORP — Type RB-LBG (finish rating 24 min)

3E. Gypsum Board* — (As an alternate to Items 3, 3A, 3B, 3C, and 3D) — 5/8 in. thick gypsum panels, with square edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last 2 screws 1 and 4 in. from edge of board or nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.
GEORGIA-PACIFIC GYPSUM L L C — Type DGG (finish rating 20 min), GreenGlass Type X (finish rating 23 min)

3F. Gypsum Board* — (As an alternate to Items 3, 3A, 3B, 3C, 3D, and 3E) — 5/8 in. glass-mat faced with square edges, applied either horizontally or vertically. Gypsum panels nailed 7 in. OC around the perimeter and in the field with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Nails shall be placed 1 inch and 3 inch from horizontal joints and 7 inch OC thereafter.
CGC INC — Type USGX (finish rating 22 min)

UNITED STATES GYPSUM CO — Type USGX (finish rating 22 min.)

USG BORAL DRYWALL SFZ LLC — , Type USGX (finish rating 22 min.)

USG MEXICO S A DE C V — Type USGX (finish rating 22 min.)

3G. Gypsum Board* — (As an alternate to Items 3 through 3F) — 5/8 in. thick paper surfaced applied vertically. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads.
GEORGIA-PACIFIC GYPSUM L L C — Type X ComfortGuard Sound Deadening Gypsum Board (finish rating 27 min)

3H. Gypsum Board* — (As an alternate to Items 3) — Not to be used with items 6 or 7. 5/8 in. thick paper surfaced applied vertically only. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads.
NATIONAL GYPSUM CO — Type SBWB

3I. Gypsum Board* — (As an alternate to Items 3 through 3H, Not Shown) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically. Panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Panel joints covered with paper tape and two layers of joint compound. Nailheads covered with two layers of joint compound.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock ES (finish rating 20 min)

3J. Gypsum Board* — (As an alternate to Item 3) — 5/8 in. thick paper surfaced applied vertically or horizontally. Gypsum panels secured with 1-1/4 in. Type W coarse thread gypsum panel steel screws spaced a maximum of 12 in. OC.
CERTAINTEED GYPSUM INC — Type SilentFX

3K. Gypsum Board* — (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 8 in. OC with the last screw 1 in. from the edge of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally.
NATIONAL GYPSUM CO — Type FSK (finish rating 20 min), Type FSK-G (finish rating 20 min), Type FSW (finish rating 20 min), Type FSW-2 (finish rating 24 min), Type FSW-3 (finish rating 20 min), Type FSW-5 (finish rating 22 min), Type FSW-G (finish rating 20 min), Type FSK-C (finish rating 20 min), Type FSW-C (finish rating 20 min), Type FSMR-C, Type FSW-6 (finish rating 20 min), Type FSL (finish rating 24 min).

3L. Gypsum Board* — (As an alternate to Item 3) — For Direct Application to Studs Only — Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 10 ft long with a max thickness of 0.140 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, max 5/16 in. diam by max 0.140 in. thick. compression fitted or adhered over the screw heads. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D".
MAYCO INDUSTRIES INC — "X-Ray Shielded Gypsum"

3M. Gypsum Board* — (As an alternate to Items 3) — For Direct Application to Studs Only — For use as the base layer or as the face layer. Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field when applied as the base layer. When applied as the face layer screw length to be increased to 2-1/2 in. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Fasteners for face layer gypsum panels (Items 4, 4A or 4B) when installed over lead backed board to be min 2-1/2 in. Type S-12 bugle head steel screws spaced as described in Item 4.
RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

3N. Gypsum Board* — (As an alternate to Item 3) — 5/8 in. thick, 4 ft. wide, applied horizontally or vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Secured as described in Item 3 or 3A.
CERTAINTEED GYPSUM INC — Easi-Lite Type X (finish rating 24 min), Easi-Lite Type X-2 (finish rating 24 min)

3O. Wall and Partition Facings and Accessories* — (As an alternate to Item 3, Not Shown) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically. Panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Panel joints covered with paper tape and two layers of joint compound. Nailheads covered with two layers of joint compound.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527 (finish rating 24 min).

3P. Gypsum Board* — (As an alternate to Item 3, Not Shown) — Two layers nom. 5/16 in. thick gypsum panels applied vertically or horizontally. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed by wood studs. Horizontal joints on the same side between face and base layers need not be staggered. Base layer gypsum panels fastened to studs with 1-1/4 in. long drywall nails spaced 8 in. OC. Face layer gypsum panels fastened to studs with 1-7/8 in. long drywall nails spaced 8 in. OC starting with a 4" stagger.
NATIONAL GYPSUM CO — Type FSW (finish rating 25 min)

3Q. Gypsum Board* — (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 10 in. OC with the last two screws 4 and 1 in. from the edges of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally.
CERTAINTEED GYPSUM INC — Type LGFC6A (finish rating 21 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX

3R. Gypsum Board* — (As an alternate to Item 3. For use with Item 5H) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 3 above. Applied either horizontally or vertically, and screwed to panels with 1-5/8 in. long Type W coarse thread steel screws at 8 in. OC at perimeter and in the field with the last two screws 4 and 3/4 in. from the edges of the board when applied as the base layer. When used in widths other than 48 in., gypsum panels are to be installed horizontally.
3S. Gypsum Board* — 3/4 in. thick paper or vinyl surfaced, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels secured as described in Item 3 with nail length increased to 2 in.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type PG-13

3T. Wall and Partition Facings and Accessories* — (As an alternate to 5/8 in. thick board as outlined in Item 3) — Nominal 1-3/8 in. thick, 4 ft wide panels, applied vertically or horizontally. Fastened with #6 x 2 in. long drywall screws spaced 8 in. OC along the perimeter and 12 in. OC in the field.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 545

3U. Gypsum Board* — (As an alternate to Item 3 - For use with Foamed Plastic products, Item 5J) — 5/8 in. thick, 4 ft. wide, applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads.
AMERICAN GYPSUM CO — Types AGX-1

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — Type DBX-1

CABOT MANUFACTURING ULC — Type X

CERTAINTEED GYPSUM INC — Type X

CGC INC — Type SCX

PANEL REY S A — Type ARX, PRX

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1

THAI GYPSUM PRODUCTS PCL — Type X

UNITED STATES GYPSUM CO — Types SCX and SGX

USG BORAL DRYWALL SFZ LLC — Types SCX and SGX

USG MEXICO S A DE C V — Type SCX

3V. Gypsum Board* — (As an alternate to Item 3. For use with Item 5K) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 3 above. Applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field.
4. Steel Corner Fasteners — (Optional) — For use at wall corners. Channel shaped, 2 in. long by 1 in. high on the back side with two 1/8 in. wide cleats protruding into the 5/8 in. wide channel, fabricated from 24 gauge galv steel. Fasteners applied only to the end or cut edge (not along tapered edges) of the gypsum board, no greater than 2 in. from corner of gypsum board, max spacing 16 in. OC. Nailed to adjacent stud through tab using one No. 6d cement coated nail per fastener. Corners of wall board shall be nailed to top and bottom plate using No. 6d cement coated nails.
5. Batts and Blankets* — (Optional — Required when Item 6A is used (RC-1)) — Glass fiber or mineral wool insulation. Placed to completely or partially fill the stud cavities. When Item 6A is used, glass fiber or mineral wool insulation shall be friction-fitted to completely fill the stud cavities.
CERTAINTEED CORP

JOHNS MANVILLE

KNAUF INSULATION LLC

MANSON INSULATION INC

ROCKWOOL — Types Acoustical Fire Batts and Type AFB, min. density 1.69 pcf / 27.0 kg/m3

ROCKWOOL MALAYSIA SDN BHD — Type Acoustical Fire Batts

ROCK WOOL MANUFACTURING CO — Delta Board

THERMAFIBER INC — Type SAFB, SAFB FF

5A. Fiber, Sprayed* — (Not Shown — Not for use with Item 6) — As an alternate to Batts and Blankets (Item 5) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. When 6B is used, Fiber, Sprayed shall be INS735, INS745, INS750LD, INS765LD, INS773LD or SANCTUARY.

U S GREENFIBER L L C — INS735, INS745, INS750LD and SANCTUARY for use with wet or dry application.
INS515LD, INS541LD, INS735, INS765LD, and INS773LD are to be used for dry application only

5B. Fiber, Sprayed* — (Not Shown - Not for use with Item 6) — As an alternate to Batts and Blankets (Item 5) - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.
NU-WOOL CO INC — Cellulose Insulation

5C. Batts and Blankets* — Required for use with resilient channels, Item 7, 3 in. thick mineral wool batts, friction-fitted to fill interior of wall.
THERMAFIBER INC — Type SAFB, SAFB FF

5D. Glass Fiber Insulation — (As an alternate to Item 5C) — 3 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, friction-fitted to fill the interior of the wall. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.
5E. Batts and Blankets* — (Required for use with Wall and Partition Facings and Accessories, Item 3D) — Glass fiber insulation, nom 3-1/2 in. thick, min. density of 0.80 pcf, with a flame spread of 25 or less and a smoke developed of 50 or less, friction-fitted to completely fill the stud cavities. See Batts and Blankets Category (BKNV) for names of manufacturers.
5F. Fiber, Sprayed* — (Optional, Not Shown — Not for use with Items 6, 6A, 6B, 6C, or 6D) — As an alternate to Batts and Blankets (Item 5) and Item 5A - Spray applied granulated mineral fiber material. The fiber is applied with adhesive, at a minimum density of 4.0 pcf, to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. See Fiber, Sprayed (CCAZ).
AMERICAN ROCKWOOL MANUFACTURING, LLC — Type Rockwool Premium Plus

5G. Fiber, Sprayed* — (Optional, Not Shown — Not for use with Items 6, 6A, 6B, 6C, or 6D). — As an alternate to Batts and Blankets (Item 5) and Item 5A - Brown Colored Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft3.
INTERNATIONAL CELLULOSE CORP — Celbar-RL

5H. Foamed Plastic* — (Optional -For use with Item 3R) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity.
SES FOAM INC — Nexseal™ 2.0 or Nexseal™ 2.0 LE Spray Foam and Sucraseal Spray Foam.

5I. Fiber, Sprayed* — (Not Shown — Not for use with Item 6) — As an alternate to Batts and Blankets (Item 5) - Spray-applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. To facilitate the installation of the material, any thin, woven or non-woven netting may be attached by any means possible to the outer face the studs. The material shall reach equilibrium moisture content before the installation of materials on either face of the studs. The minimum dry density shall be 5.79 lbs/ft3.
APPLEGATE HOLDINGS L L C — Applegate Advanced Stabilized Cellulose Insulation

5J. Foamed Plastic* — (Optional, Not Shown - For use with Item 3U) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity.
GACO WESTERN L L C — Types GacoEZSpray F4500, GacoProFill FR6500R, Goco 502N, GacoOnePass F1850, GacoOnePass Low GWP F1880, and Gaco WallFoam 183M

5K. Foamed Plastic* — (Optional, Not Shown - For use with Item 3V) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity.
CARLISLE SPRAY FOAM INSULATION — Types SealTite Pro Closed Cell (CC), SealTite Pro Open Cell (OC), SealTite Pro OCX, SealTite Pro No Trim 21, SealTite Pro One Zero, Foamulate Closed Cell, Foamulate OCX, Foamulate 70, and Foamulate HFO.

6. Steel Framing Members* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3.
b. Steel Framing Members* — Used to attach furring channels (Item 6a) to studs. Clips spaced 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75)

6A. Steel Framing Members* — (Optional, Not Shown) — Furring channels and Steel Framing Members on one side of studs as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. Batts and Blankets placed in stud cavity as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 3.
b. Steel Framing Members* — Used to attach furring channels (Item 6Aa) to one side of studs only. Clips spaced 48 in. OC., and secured to studs with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips.
KINETICS NOISE CONTROL INC — Type Isomax

6B. Steel Framing Members* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3.
b. Steel Framing Members* — Used to attach furring channels (Item 6Ba) to studs. Clips spaced 48 in. OC. Genie clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
PLITEQ INC — Type Genie Clip

6C. Steel Framing Members* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 3.
b. Steel Framing Members* — Used to attach furring channels (Item 6Ca) to studs. Clips spaced 48 in. OC., and secured to studs with No. 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R

6D. Steel Framing Members* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with a double strand of No. 18 AWG twisted steel wire. Gypsum board attached to furring channels as described in Item 3.
b. Steel Framing Members* — Used to attach furring channels (Item 6Da) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
REGUPOL AMERICA — Type SonusClip

6E. Steel Framing Members* — (Optional, Not Shown) — Resilient channels and Steel Framing Members as described below:
a. Resilient Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 3.
b. Steel Framing Members* — Used to attach resilient channels (Item 6Ea) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw.
KEENE BUILDING PRODUCTS CO INC - Type RC+ Assurance Clip

6F. Steel Framing Members* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3.
b. Steel Framing Members* — Used to attach furring channels (Item 6Fa) to studs. Clips spaced 48 in. OC. Clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips.
CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip

6G. Steel Framing Members* — (Optional, Not Shown) — Used as an alternate method to attach resilient channels to wall studs. A resilient sound isolation accessory shall be used at each attachment point of the resilient channels and spaced max 16 in. O.C. Channel ends butted and centered under the structural members and attached with one accessory at each end. Additional accessories used to hold resilient channels that support the gypsum board end joints. The accessory envelops the mounting edge of the resilient channel. The accessory and resilient channel are fastened to the structural members with the screws supplied with the accessory and per the accessory manufacturer's installation instructions.
PAC INTERNATIONAL L L C — Type RC-1 Boost

7. Furring Channel — Optional — Not Shown — For use on one side of the wall - Resilient channels, 25 MSG galv steel, spaced vertically 24 in. OC, flange portion screw attached to one side of studs with 1-1/4 in. long diamond shaped point, double lead Phillips head steel screws. When resilient channels are used, insulation, Items 5C or 5D is required.
8. Caulking and Sealants — (Not Shown, Optional) — A bead of acoustical sealant applied around the partition perimeter for sound control.
9. STC Rating — The STC Rating of the wall assembly is 56 when it is constructed as described by Items 1 through 6, except:
A. Item 2, above — Nailheads Shall be covered with joint compound.
B. Item 2, above — Joints As described, shall be covered with fiber tape and joint compound.
C. Item 5, above — Batts and Blankets* The cavities formed by the studs shall be friction fit with R-19 unfaced fiberglass insulation batts measuring 6-1/4 in. thick and 15- 1/4 in. wide.
D. Item 6, above — Steel Framing Members* Type RSIC-1 clips shall be used to attach gypsum board to studs on either side of the wall assembly.
E. Item 8, above — Caulking and Sealants (Not Shown) A bead of acoustical sealant shall be applied around the partition perimeter for sound control.
F. Steel Corner Fasteners (Item 4), Fiber, Sprayed (Items 5A and 5B) and Steel Framing Members (Item 6A), not evaluated as alternatives for obtaining STC rating.
10. Wall and Partition Facings and Accessories* — (Optional, Not Shown) — Nominal 1/2 in. thick, 4 ft wide panels

Design No. U415
February 14, 2022

Nonbearing Wall Ratings — 1, 2, 3 or 4 Hr
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

1. Floor, Side and Ceiling Runners — "J" - shaped runner, min 2-1/2 in. deep (min 4 in. deep when System C is used), with unequal legs of 1 in. and 2 in., fabricated from min 24 MSG (min 20 MSG when Item 4A, 4B, 4C, 4D or 7 are used) galv steel. Runners positioned with short leg toward finished side of wall. Runners attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 24 in. OC. "E" - shaped studs (Item 2A) may be used as side runners in place of "J" - shaped runners.
2. Steel Studs — "C-H" - shaped studs, min 2-1/2 in. deep (min 4 in. deep when System C is used), fabricated from min 25 MSG (min 20 MSG when Items 2D, 4A, 4B, 4C, 4D or 7 is used) galv steel. Cut to lengths 3/8 to 1/2 in. less than floor-to-ceiling height and spaced 24 in. or 600 mm OC (max 16 in. OC when Items 4A, 4B, 4C, or 4D are used).
2A. Steel Studs — (Not Shown) — "E" - shaped studs installed back to back in place of "C-H" - shaped studs (Item 2) "E" - shaped studs secured together with steel screws spaced a maximum 12 in. OC. Fabricated from min 25 MSG (min 20 MSG when Item 2D, 4A, 4B or 7 is used) galv steel, min 2-1/2 in. deep (min 4 in. deep when System C is used), with one leg 1 in. long and two legs 3/4 in. long. Shorter legs 1 in. apart to engage gypsum liner panels. Cut to lengths 3/8 to 1/2 in. less than floor to ceiling heights.
2B. Furring Channels — (Optional, Not Shown) — For use with single or double layer systems. Resilient furring channels fabricated from min 25MSG corrosion protected steel, installed horizontally, and spaced vertically a max 24 in. OC. Flange portion of channel attached to each intersecting "C-H" or "E" stud on side of stud opposite the 1 in. liner panels with 1/2 in. long Type S or S-12 pan-head steel screws. When furring channels are used, wallboard to be installed vertically only. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
2C. Furring Channels — For use with System I - "Hat" - shaped, 25 MSG galv steel furring channels attached directly over the inner layers of wallboard to each stud with 2 in. long Type S pan head steel screws. Screws alternate from top flange to bottom flange at each stud intersection. Furring channels spaced vertically max 24 in. OC.
2D. Steel Framing Members* — (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. Furring Channels — Formed of No. 25 MSG galv steel, 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 4.
b. Steel Framing Members* — Used to attach furring channels (Item 2D) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC., and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL (VAL) L L C — Types RSIC-1, RSIC-1 (2.75)

2E. Steel Framing Members* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 4.
b. Steel Framing Members* — Used to attach furring channels (Item 2Ea) to studs. Clips spaced 24 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

2F. Steel Framing Members* — (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. Furring Channels — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 4.
b. Steel Framing Members* — Used to attach furring channels (Item 2Da) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC. GENIECLIPS secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.
PLITEQ INC — Type GENIECLIP

2G. Steel Framing Members* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 2Gb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 4.
b. Steel Framing Members* — Used to attach furring channels (Item 2Ga) to studs. Clips spaced 24 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
REGUPOL AMERICA — Type SonusClip

2H. Steel Framing Members* — (Optional, Not Shown) — Resilient channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. Resilient Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 4.
b. Steel Framing Members* — Used to attach resilient channels (Item 2Ha) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw.
KEENE BUILDING PRODUCTS CO INC — Type RC* Assurance Clip

2I. Steel Framing Members* — (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. Furring Channels — Formed of No. 25 MSG galv steel. 2-3/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 4.
b. Steel Framing Members* — Used to attach furring channels (Item 2Ia) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC., and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.
CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip

3. Gypsum Board* — Gypsum liner panels, nom 1 in. thick, 24 in. or 600 mm (for metric spacing) wide. Panels cut 1 in. less in length than floor to ceiling height. Vertical edges inserted in "H" portion of "C-H" studs or the gap between the two 3/4 in. legs of the "E" studs. Free edge of end panels attached to long leg of vertical "J" - runners with 1-5/8 in. long Type S steel screws spaced not greater than 12 in. OC. When wall height exceeds liner panel length, liner panel may be butted to extend to the full height of the wall. Horizontal joints need not be backed by steel framing. In System I, butt joints in liner panels are staggered min 36 in. Butt joints backed with 6 in. by 22 in. strips of 3/4 in. thick gypsum wallboard (Item 4). Wallboard strips centered over butt joints between liner panels with six 1-1/2 in. long Type G steel screws, three screws along the 22 in. dimension at the top and bottom of the strips.
CGC INC — Type SLX

UNITED STATES GYPSUM CO — Type SLX

USG BORAL DRYWALL SFZ LLC — Type SLX

USG MEXICO S A DE C V — Type SLX

4. Gypsum Board* —
System A — 1 Hr
Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type S steel screws spaced 12 in. when installed vertically or 8 in OC when installed horizontally. Horizontal joints need not be backed by steel framing.

CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULIX, USGX, WRC, WRX

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX

UNITED STATES GYPSUM CO — Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.

USG BORAL DRYWALL SFZ LLC — Types C, SCX, SGX, USGX

USG MEXICO S A DE C V — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System E — 2 Hr
Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type S steel screws spaced 12 in. OC when installed vertically or 8 in. when installed horizontally. Horizontal joints need not be backed by steel framing.

CGC INC — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX

UNITED STATES GYPSUM CO — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, USGX

USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System F — 2 Hr
Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically in two layers. Inner or base layer attached to resilient furring channels (Item 2B) with 1 in. long Type S steel screws spaced 24 in. Outer or face layer attached to resilient furring channels (Item 2B) with 1-5/8 in. long Type S steel screws spaced 12 in. OC and staggered 12 in. from base layer screws. Joints between inner and outer layers staggered 24 in.

CGC INC — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX

UNITED STATES GYPSUM CO — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX

USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System G — 3 Hr
Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in three layers. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in OC when installed horizontally. Middle layer attached to studs with 1-5/8 in. long Type S steel screws spaced 24 in. when installed vertically or 16 in. OC when installed horizontally. Outer or face layer attached to studs with 2-1/4 in. long Type S steel screws spaced 16 in. when installed vertically or 12 in. OC when installed horizontally. Screws offset 6 in. from layer below. Horizontal joints on adjacent layers staggered a min of 12 in. . Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in. on adjacent layers.

CGC INC — Types C, IP-X2, IPC-AR, ULIX, WRC

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Type C

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR, ULIX, WRC

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR, WRC

System I — 4 Hr
Gypsum panels, with beveled, square or tapered edges, nom 3/4 in. thick, 4 ft wide (or 1200 mm for metric spacing) wallboard with square or tapered edges. Total of four layers to be used. First and second (inner) layers applied vertically or horizontally over the steel studs. Horizontal joints need not be backed by steel framing. When applied vertically, joints centered over studs and staggered min 24 in., otherwise all joints staggered min 12 in. First layer attached with 1-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 24 in. OC. Second layer secured to studs with 2-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. Third layer applied vertically over the furring channels (Item 2C) with a 1-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. Fourth layer applied vertically or horizontally with 2-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. When applied vertically, joints to be staggered min 24 in. from third layer, otherwise all joints staggered min 12 in.

CGC INC — Types IP-X3 or ULTRACODE

UNITED STATES GYPSUM CO — Types IP-X3 or ULTRACODE

USG BORAL DRYWALL SFZ LLC — Type ULTRACODE

USG MEXICO S A DE C V — Types IP-X3 or ULTRACODE

4A. Gypsum Board* — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nom 5/8 in. or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1, 2, 2A, 2B and 2D. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 9) or Lead Discs or Tabs (see Item 10).
RAY-BAR ENGINEERING CORP — Type RB-LBG

4B. Gypsum Board* — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 (or #8 by 1-1/4 in. long bugle head fine driller) steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.
NEW ENGLAND LEAD BURNING CO INC, DBA NELCO — Type Nelco

4C. Gypsum Board* — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nom 5/8 or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1, 2, 2A, 2B and 2D. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 9A) or Lead Discs (see Item 10A). Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 10 ft long with a max thickness of 0.140 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip.
MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

4D. Gypsum Board* — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws gypsum panel steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".
RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

5. Joint Tape and Compound — (Not Shown)
Systems A, B, C, E, F, G, H, I
Joints on outer layers of gypsum boards (Item 4 and 4A) covered with paper tape and joint compound. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges. Exposed screw heads covered with joint compound.

6. Batts and Blankets* —
Systems A, B, E, F, G, H, I
(Optional) — Mineral wool or glass fiber batts partially or completely filling stud cavity. Any mineral wool or glass fiber batt mineral bearing the UL Classification Marking as to Fire Resistance.

Systems C & D
Min 3 in. (System C) and min 1-1/2 in. (System D) thick mineral wool batts, friction fitted between the studs and floor and ceiling runners.

ROCKWOOL — Type AFB, min. density 1.8 pcf / 28.8 kg/m3

THERMAFIBER INC — Type SAFB, SAFB FF

7. Cementitious Backer Units* — (System D) — Nom 1/2 or 5/8 in. thick panels, square edge, attached to studs over gypsum wallboard with 1-5/8 in. long, Type S-12, corrosion resistant steel screws spaced 8 in. OC and staggered 8 in. from gypsum wall board screws. Joints covered with glass fiber mesh tape. Vertical joints staggered one stud cavity from gypsum wallboard joints. Horizontal joints staggered a min of 12 in. from the gypsum wallboard joints.
UNITED STATES GYPSUM CO — Type DCB

8. Laminating Adhesive* — (Optional, Not Shown) — Used to bond outer layer of Cementitious Backer Units (Item 7) to inner layers of Gypsum Board (Item 4) in System D. ANSI A136.1 Type I Exterior Adhesives (BULZ) in the Building Materials Directory for names of Classified companies.
9. Lead Batten Strips — (Not Shown, For Use With Item 4A) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4A) and optional at remaining stud locations. Required behind vertical joints.
9A. Lead Batten Strips — (Not Shown, for use with Item 4C) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 6) and optional at remaining stud locations.
10. Lead Discs or Tabs — (Not Shown, For Use With Item 4A) — Used in lieu of or in addition to the lead batten strips (Item 9) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 4A) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".
10A. Lead Discs — (Not Shown, for use with Item 4C) — Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ-L-201f, Grades "B, C or D".
11. Lead Batten Strips — (Not Shown, For Use With Item 4B) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4B) and optional at remaining stud locations.
12. Lead Tabs — (Not Shown, For Use With Item 4B) — 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs friction-fit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where a screw (that secures the gypsum boards, Item 4B) will penetrate the steel stud. Lead tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary.
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.
Last Updated on 2022-02-14

Design No. P522
May 22, 2021
Unrestrained Assembly Rating — 1 Hr
Finish Rating — 25 Min (See Items 3 or 3A)
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

1. Roofing System* — Any UL Class A, B or C Roofing System (TGFU) or Prepared Roof Covering (TFWZ) acceptable for use over nom 15/32 in. thick wood structural panels, min. grade "C-D" or "Sheathing". Nom 15/32 in. thick wood structural panels secured to trusses with No. 6d ringed shank nails spaced 12 in. OC along each truss. Shingles having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Construction adhesive may be used with either the nails or staples.
2. Trusses — Pitched or parallel chord wood trusses, spaced a max of 24 in. OC, fabricated from nom 2 by 4 lumber, with vertical webs and horizontally. Truss members secured together with nom. 0.056 in. thick galv steel plates. Plates have 5/16 in. long teeth projecting perpendicular to the plane of the plate. The teeth are in pairs facing each other (made by the same punch), forming a split tooth type plate. Each tooth has a chisel point on its outside edge. These points are diagonally opposite each other for each pair. The top half of each tooth has a twist for stiffness. The pairs are repeated on approximately 7/8 in. centers with four rows of teeth per inch of plate width. Minimum parallel chord truss depth shall be 18 in. Where the truss intersects with the interior face of the exterior walls, the min truss depth shall be reduced to 5-1/4 in. with a min roof slope of 3/12 and a min. area in the plane of the truss of 21 sq/ft. Where the truss intersects with the interior face of the exterior walls, the min truss depth may be reduced to 3 in. if the batts and blankets (Item 3) are used as shown in the above illustration (Alternate Insulation Placement) and are firmly packed against the intersection of the bottom chords and the plywood sheathing.
3. Batts and Blankets* — (Optional) — Required when Item 6B is used — Glass fiber insulation, secured to the wood structural panels with staples spaced 12 in. OC or to the trusses with 0.090 in. diam galv steel wires spaced 12 in. OC. Any glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance, having a min density of 0.5 pcf. As an option, the insulation may be fitted in the concealed space, draped over the resilient channel/gypsum board ceiling membrane when resilient channels and gypsum board attachment is modified as specified in Items 6 and 7. When Batts and Blankets (Item 6B) are used, max 3-1/2 in. thick insulation shall be draped over the furring channels (Item 6Ba) and gypsum board ceiling membrane, and friction-fitted between trusses and Steel Framing Members (Item 6Bd). The finished ceiling has not been determined to have the insulation is secured to the decking.
3A. Fiber, Sprayed* — As an alternate to Item 3 (not evaluated for use with Item 6B) — Any thickness of spray-applied cellulose insulation material, having a min density of 0.5 lb/ft3, applied with water, over the resilient channel/gypsum board ceiling membrane when resilient channels and gypsum board attachment is modified as specified in Items 6 and 7. Fiber, Sprayed is applied with moisture in accordance with the application instructions supplied with the product. The finish rating when Fiber Sprayed is used has not been determined. Alternate application method: The fiber is applied without water or adhesive in accordance with the application instructions supplied with a minimum density of 0.5 lb/ft3 over the resilient channel/gypsum board ceiling membrane when resilient channels and gypsum board attachment is modified as specified in Items 6 and 7. Alternate application method: The fiber is applied with an adhesive in a nominal density of 3.5 lb/ft3 behind a netting (Item 9) stapled to the rafters. The netting is stapled at both lower edges of the rafters creating a cavity to accept the cellulose fiber.
U S GREENFIBER L L C — INS735, INS745, INS750LD, and SANCTUARY for use with wet or dry application. INS510LD, INS515LD, INS541LD, INS735, INS765LD, and INS773LD are to be used for dry application only.

3B. Foamed Plastic* — (As an alternate to Item 3 or 3A, Not Shown) — Spray foam insulation applied directly to the underside of the underside of the roofing system (Item 1). Spray foam insulation installed to a maximum thickness of 10 in. at a nominal 0.5 lb/ft3 density, while maintaining a minimum 8-1/2 in. clearance between the spray foam insulation and the gypsum board (Item 7). When spray foam insulation is used, resilient channels (Item 6) shall be installed maximum 12 in. OC, with channels adjacent to butt joints of gypsum board (Item 7) spaced maximum 3 in. away from gypsum butt joints. Gypsum board (Item 7) to be installed using minimum 1-1/4 in. long Type S screws, spaced maximum 8 in. OC, and butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. If used with a fire damper (Items 5 through 5H) in the concealed space, minimum 1 in. clearance to be maintained between damper housing and spray foam insulation. Not evaluated for use with Items 6A through 6F.
BASF CORP — Enertite® NM, Enertite® G, FE178®, Spraytite® 178, Spraytite® 81206, Wallitite® 200, Wallitite® US, Wallitite® US-N, and Wallitite® HP+

3E. Foamed Plastic* — (As an alternate to Item 3, 3A, 3B, 3C, or 3D, Not Shown) — Spray foam insulation applied directly to the underside of the underside of the roofing system (Item 1). Spray foam insulation installed to a maximum thickness of 10 in. at a nominal 0.5 lb/ft3 density, while maintaining a minimum 1-1/2 in. clearance between the spray foam insulation and the gypsum board (Item 7). When spray foam insulation is used, resilient channels (Item 6) shall be installed maximum 12 in. OC, with channels adjacent to butt joints of gypsum board (Item 7) spaced maximum 3 in. away from gypsum butt joints. Gypsum board (Item 7) to be installed using minimum 1-1/4 in. long Type S screws, spaced maximum 8 in. OC, and butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. If used with a fire damper (Items 5 through 5K) in the concealed space, no clearance is necessary between damper housing and spray foam insulation. Not evaluated for use with Items 6A through 6F.
SES FOAM INC — EasySeal.5

3F. Foamed Plastic* — (As alternate to Item 3 - not to be used in combination with any alternates to item 3) — Spray foam insulation applied directly to the underside of the roofing system (Item 1). Spray foam insulation installed to a maximum thickness of 11 in. at a nominal 1.0 lb/ft3 - 2.5 lb/ft3 density, while maintaining a minimum 7 in. clearance between the spray foam insulation and the gypsum board (Item 7). When spray foam insulation is installed, resilient channels (Item 6) shall be installed maximum 12 in. OC, with channels adjacent to butt joints of gypsum board spaced maximum 3 in. away from gypsum butt joints. Gypsum board to be installed using minimum 1-1/4 in. long Type S screws, spaced maximum 8 in. OC, and butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. If used with a fire damper (Items 5 through 5K) in the concealed space, no clearance is necessary between damper housing and spray foam insulation. Only for use with Item 6 not evaluated for use with alternates to item 6.
CARLISLE SPRAY FOAM INSULATION — Types SealTite Pro Closed Cell (CC), SealTite Pro Open Cell (OC), SealTite Pro OCX, SealTite Pro No Trim 21, SealTite Pro One Zero, Foamsulate Closed Cell, Foamsulate OCX, Foamsulate 70, and Foamsulate HFO.

4. Air Duct* — Any UL Class 0 or Class 1 flexible air duct installed in accordance with the instructions provided by the damper manufacturer.
5. Ceiling Damper* — Max nom area, 324 sq in. Max square size, 18 in. by 18 in. rectangular sizes not to exceed 324 sq in. with a max width of 18 in. Max damper height is 14 in. Installed in accordance with manufacturers installation instructions provided with the damper. Max damper openings not to exceed 162 sq in. per 100 sq ft of ceiling area.
C&S AIR PRODUCTS — Model RD-521

POTTORFF — Model CFD-521

5A. Alternate Ceiling Damper* — Max nom area, 196 sq in. Max square size, 14 in. by 14 in. Rectangular sizes not to exceed 196 sq in. with a max width of 26 in. Max overall damper height is 7 in. Installed in accordance with the manufacturers installation instructions provided with the damper. Max damper openings not to exceed 98 sq in. per 100 sq ft of ceiling area.
C&S AIR PRODUCTS — Model RD-521-BT

POTTORFF — Model CFD-521-BT.

5B. Alternate Ceiling Damper* — Max nom area shall be 256 sq in. with the length not to exceed 24 in. and the width not to exceed 20 in. Max height of damper shall be 17 in. Aggregate damper openings shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille shall be installed in accordance with installation instructions.
C&S AIR PRODUCTS — Model RD-521-IP, RD-521-NP

POTTORFF — Models CFD-521-IP, CFD-521-NP

5C. Alternate Ceiling Damper* — Ceiling damper & fan assembly. Max nom area shall be 75 sq in. with the length not to exceed 8-9/16 in. and the width not to exceed 8-3/4 in. Max height of damper shall be 9-7/8 in. Aggregate damper openings shall not exceed 38 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturers installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions.
DELTA ELECTRONICS INC — Models CRD2, GBR-CRD, ITG-CRD

5D. Alternate Ceiling Damper* — Ceiling damper & fan. Max nom area shall be 75 sq in. with the length not to exceed 9-1/4 in. and the width not to exceed 9-3/4 in. Max height of damper shall be 9-7/8 in. Aggregate damper openings shall not exceed 45 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions.
DELTA ELECTRONICS INC — Model SIG-CRD

5E. Alternate Ceiling Damper* — Max nom area shall be 144 sq in. with the length not to exceed 14 in. and the width not to exceed 12 in. Max height of damper shall be 17-7/8 in. Aggregate damper openings shall not exceed 74 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille shall be installed in accordance with installation instructions.
C&S AIR PRODUCTS — Model RD-521-90, RD-521-NP90

POTTORFF — Models CFD-521-90, CFD-521-90NP

5F. Alternate Ceiling Damper* — Ceiling damper & fan assembly. Max nom area shall be 131 sq in. with the length not to exceed 11-1/16 in. and the width not to exceed 11-7/8 in. Aggregate damper openings shall not exceed 66 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions.
DELTA ELECTRONICS INC — Model SMT-CRD

5G. Alternate Ceiling Damper* — Ceiling damper & fan assembly. Max nom area shall be 103 sq in. with the length not to exceed 10-1/8 in. and the width not to exceed 10-1/8 in. Aggregate damper openings shall not exceed 52 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions.
PANASONIC CORPORATION, PANASONIC CORPORATION OF NORTH AMERICA — Model PC-RD05C5

5H. Alternate Ceiling Damper* — Ceiling damper & fan assembly. Max nom area shall be 113 sq. in. with the length not to exceed 10-1/8 in. and the width not to exceed 11-1/16 in. Aggregate damper openings shall not exceed 57 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions.
BROAN-NUTONE L L C — Model RDFUWT

5I. Alternate Ceiling Damper* — Ceiling damper & fan. Max nom area shall be 79 sq in. with the length not to exceed 10 in. and the width not to exceed 7-15/16 in. Aggregate damper openings shall not exceed 40 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A metallic grille shall be installed in accordance with installation instructions.
BROAN-NUTONE L L C — Models RDJ1 and RDH

5J. Alternate Ceiling Damper* — Ceiling damper & fan assembly. Max nom area shall be 87 sq in. with the length not to exceed 9 in. and the width not to exceed 9-11/16 in. Aggregate damper openings shall not exceed 44 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions.
BROAN-NUTONE L L C — Model RDMWT

5K. Alternate Ceiling Damper* — Ceiling damper & fan assembly. Max nom area shall be 87 sq in. with the length not to exceed 9 in. and the width not to exceed 9-11/16 in. Aggregate damper openings shall not exceed 44 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions.
BROAN-NUTONE L L C — Model RDMWT2

6. Furring Channels — Resilient channels formed of 25 MSG thick galv steel. Installed perpendicular to the trusses (Item 2), spaced a max of 16 in. OC when no insulation (Item 3 or 3A) is fitted in the concealed spaced, or a max of 12 in. OC when insulation (Item 3 or 3A) is fitted in the concealed space, draped over the resilient channel/gypsum board ceiling membrane, or when insulation (Item 3B, 3D or

Design No. L528
February 3, 2022

Unrestrained Assembly Rating - 1 Hr.
Finish Rating - 22 Min.
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

1. Flooring System — The flooring system shall consist of one of the following:
System No. 1
Subflooring — Min 23/32 in. thick T & G wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with end joints staggered 4 ft. Panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. TetraGRIP™ nails measuring 2-3/8 in. long, 0.113 in. diameter, 0.272 in. round head, and helically threaded shank with barbed features on the helix meeting ASTM F1667 and having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

System No. 2
Subflooring — Min 23/32 in. thick T & G wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with end joints staggered 4 ft. Panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. TetraGRIP™ nails measuring 2-3/8 in. long, 0.113 in. diameter, 0.272 in. round head, and helically threaded shank with barbed features on the helix meeting ASTM F1667 and having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Vapor Barrier — (Optional) — Commercial asphalt saturated felt, 0.030 in. thick.

Vapor Barrier — (Optional) — Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring — Min 3/4 in. thickness of lightweight insulating concrete with Perlite Aggregate* or Vermiculite Aggregate*, or gypsum concrete.

See Perlite Aggregate (CFFX) and Vermiculite Aggregate (CJZZ) categories for names of manufacturers.

System No. 3
Subflooring — Min 23/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with joints staggered.

Vapor Barrier — (Optional) — Commercial asphalt saturated felt, 0.030 in. thick.

Floor Mat Materials* — (Optional)— Floor mat material nom 5/64 in. (2 mm) thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1 in. of floor-topping mixture.

HACKER INDUSTRIES INC — Type Hacker Sound-Mat.

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/4 in. (6 mm) thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1-1/4 in. (32 mm) of floor-topping mixture.

HACKER INDUSTRIES INC — Type Hacker Sound-Mat II.

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/8 in. (3 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 3/4 in. (19 mm)

HACKER INDUSTRIES INC — FIRM-FILL SCM 125

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/4 in. (6 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1 in. (25 mm)

HACKER INDUSTRIES INC — Type FIRM-FILL SCM 250, Quiet Qurl 55/025

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 3/8 in. (10 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/4 in. (32 mm)

HACKER INDUSTRIES INC — FIRM-FILL SCM 400, Quiet Qurl 60/040

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 3/4 in. (19 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/2 in. (38 mm)

HACKER INDUSTRIES INC — Type FIRM-FILL SCM 750, Quiet Qurl 65/075

Metal Lath — (Optional) — For use with 3/8 in. (10 mm) floor mat materials, 3/8 in. expanded steel diamond mesh, 3.4 lbs/sq yd placed over the floor mat material. Hacker Floor Primer to be applied prior to the placement of the metal lath. When metal lath is used, floor topping thickness a nom 1-1/4 in. over the floor mat.

Finish Flooring — Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1100 psi. Mixture shall consist of 6.8 gal of water to 80 lbs of floor topping mixture to 1.9 cu ft of sand.

HACKER INDUSTRIES INC — Firm-Fill Gypsum Concrete, Firm-Fill 2010, Firm-Fill 3310, Firm-Fill 4010, Firm-Fill High Strength, Gyp-Span Radiant

System No. 4
Subflooring — Min 23/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with joints staggered.

Vapor Barrier — (Optional) — Commercial asphalt saturated felt, 0.010 in. thick.

Finish Flooring — Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a minimum compressive strength of 1800 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

UNITED STATES GYPSUM CO — Types LRK, HSLRK, CSD

LATICRETE SUPERCAP L L C — Types LRK, HSLRK

USG MEXICO S A DE C V — Types LRK, HSLRK, CSD

Floor Mat Materials* — (Optional) — Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

UNITED STATES GYPSUM CO — Types SAM, LEVELROCK® Brand Sound Reduction Board, LEVELROCK® Brand Floor Underlayment SRM-25

Alternate Floor Mat Materials* — (Optional) — Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding minimum thickness of floor topping over floor mat.

GRASSWORX L L C — SC Types

Alternate Floor Mat Material* — (Optional) - Floor mat material nominal 3/8 in. thick loose laid over the subfloor. Floor topping shall be a min 3/4 in. thick.

System No. 5
Subflooring — Min 23/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with joints staggered.

Vapor Barrier — (Optional) — Commercial asphalt saturated felt, 0.030 in. thick.

Finish Flooring — Floor Topping Mixture* — Min 1-1/2 in. thickness of floor topping mixture having a min compressive strength of 1000 psi and a cast density of 100 plus or minus 5 pcf. Foam concentrate mixed 40:1 by volume with water and expanded at 100 psi through nozzle. Mixture shall consist of 1.4 cu feet of preformed foam concentrate to 94 lbs Type I Portland cement, 300 lbs of sand with 5-1/2 gal of water.

ELASTIZELL CORP OF AMERICA — Type FF

System No. 6
Subflooring — Min 23/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with joints staggered.

Vapor Barrier — (Optional) — Commercial asphalt saturated felt, 0.030 in. thick.

Finish Flooring — Floor Topping Mixture* — Min 1-1/2 in. thickness of floor topping mixture having a min compressive strength of 1000 psi and a cast density of 100 plus or minus 5 pcf. Foam concentrate mixed 40:1 by volume with water and expanded at 100 psi through nozzle. Mixture shall consist of 1.2 cu feet of preformed foam concentrate to 94 lbs Type I Portland cement, 300 lbs of sand with 5-1/2 gal of water.

AERIX INDUSTRIES — Floor Topping Mixture

System No. 7
Deleted.

System No. 8
Subflooring — Min 23/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with joints staggered.

Vapor Barrier — (Optional) — Commercial asphalt saturated felt, 0.030 in. thick.

Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a minimum compressive strength of 1500 psi. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

MAXXON CORP — Types Maxxon Standard and Maxxon High Strength

Floor Mat Materials* — (Optional) - Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

MAXXON CORP — Type Encapsulated Sound Mat.

Floor Mat Reinforcement — (Optional) - Refer to manufacturer's instructions regarding minimum thickness of floor topping for use with floor mat reinforcement.

Metal Lath — (Optional) - 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd loose laid over the floor mat material.

Fiber Glass Reinforcement - (Optional, Not Shown) - 0.015 in. thick PVC coated non-woven fiberglass mesh, 0.368 lbs/sq yd loose laid over the floor mat material.

System No. 9
Subflooring — Min 23/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with joints staggered.

Vapor Barrier — (Optional) — Commercial asphalt saturated felt, 0.030 in. thick.

Finish Flooring — Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1000 psi. Mixture shall consist of 5 to 8 gal of water to 80 lbs of floor topping mixture to 2.1 cu ft of sand. Refer to the manufacturer's instructions accompanying the material and/or contact the manufacturer's technical support for specific mix design and minimum thickness recommended for use with eligible floor mat(s).

ULTRA QUIET FLOORS — UQF-A, UQF-Super Blend, UQF-Plus 200

System No. 10
Subflooring — Min 23/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with joints staggered.

Vapor Barrier — (Optional) Commercial asphalt saturated felt, 0.030 in. thick.

Finish Flooring — Floor Topping Mixture* — Min 3/4 in. thickness of floor topping having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

FORMULATED MATERIALS LLC — Types FR-25, FR-30, and SiteMix

Alternate Floor Mat Material* — (Optional) Floor mat material nominal 2 - 9.5 mm thick loose laid over the subfloor. Floor topping shall be a min of 3/4 in.

FORMULATED MATERIALS LLC — Types M1, M2, M3, Elite, Duo, R1, and R2

System No. 11
Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to trusses, or min 15/32 in. thick plywood or min 7/16 in. thick oriented strand board (OSB) wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered.

Finish Floor - Mineral and Fiber Board* — Min 1/2 in. thick, supplied in sizes ranging from 3 ft by 4 ft to 8 ft by 12 ft. All joints to be staggered a min of 12 in. with adjacent sub-floor joints.

HOMASOTE CO — Type 440-32 Mineral and Fiber Board

System No. 12
Subflooring — Min 23/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with joints staggered.

Vapor Barrier — (Optional) — Commercial asphalt saturated felt, 0.030 in. thick.

Finish Flooring — Floor Topping Mixture* — Min 3/4 in. thickness of floor topping having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

ARCOSA SPECIALTY MATERIALS — AccuCrete® Types NexGen, Green, Prime and PrePour, AccuRadiant®, AccuLevel® Types G40, G50 and SD30

Alternate Floor Mat Material* — (Optional) — Floor mat material nominal 2 - 9.5 mm thick loose laid over the subfloor. Floor topping shall be a min of 3/4 in.

ARCOSA SPECIALTY MATERIALS — AccuQuiet® Types D13, D-18, D25, DX38, EM.125, EM.125S, EM.250, EM.250S, EM.375, EM.375S, EM.750, and EM.750S.

System No. 13
Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered.

Vapor Barrier — (Optional) — Commercial asphalt saturated felt, 0.030 in. thick.

Vapor Barrier — (Optional) — Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies.

Floor Mat Materials* — (Optional) — Nom. 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 55/025 and Quiet Qurl 55/025 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 60/040 and Quiet Qurl 60/040 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 65/075, Quiet Qurl 65/075 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 1/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 52/013 and Quiet Qurl 52/013 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 1/4 in. entangled net core with a compressible fabric attached to the bottom loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Quiet Qurl 55/025 MT and Quiet Qurl 55/025 N MT

System No. 14
Subflooring — Min 23/32 in. thick T&G wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with end joints staggered 4 ft. Panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. TetraGRIP™ nails measuring 2-3/8 in. long, 0.113 in. diameter, 0.272 in. round head, and helically threaded shank with barbed features on the helix meeting ASTM F1667 and having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Gypsum Board* — One layer of nom 5/8 in. thick, 4 ft wide gypsum board, installed with long dimension perpendicular to joists. Gypsum board secured with 1 in. long No. 6 Type W bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. The joints of the gypsum board are to be staggered a minimum of 12 inches from the joints of the subfloor.

GEORGIA-PACIFIC GYPSUM L L C — Type DS

Floor Mat Materials* — (As an alternate to the single layer gypsum board) — Floor mat material loose laid over the subfloor.

MAXXON CORP — Type Encapsulated Sound Mat.

Gypsum Board* — (For use when floor mat is used) Two layers of nom 5/8 in. thick, 4 ft wide gypsum board, installed with long dimension perpendicular to joists on top of the floor mat material. Gypsum board secured to each other with 1 in. long No. 6 Type G bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. The joints of the gypsum board are to be staggered a minimum of 12 inches in between layers and from the joints of the subfloor.

GEORGIA-PACIFIC GYPSUM L L C — Type DS

System No. 15
Subflooring — Min 23/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with joints staggered.

Vapor Barrier — (Optional) — Commercial asphalt saturated felt, 0.030 in. thick.

Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

DEPENDABLE LLC — GSL M3.4, GSL K2.6, GSL-CSD, GSL RH and SKIMFLOW

Floor Mat Materials* — (Optional) — Nom. 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 55/025 and Quiet Qurl 55/025 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 60/040 and Quiet Qurl 60/040 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 65/075, Quiet Qurl 65/075 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 1/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 52/013 and Quiet Qurl 52/013 N

Alternate Floor Mat Materials* — (Optional) — Floor mat material Nom. 1/4 in. entangled net core with a compressible fabric attached to the bottom loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Quiet Qurl 55/025 MT and Quiet Qurl 55/025 N MT

System No. 16
Subflooring — Min 23/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered.

Vapor Barrier — (Optional) — Commercial asphalt saturated felt, 0.030 in. thick.

Vapor Barrier — (Optional) — Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies. Refer to the manufacturer's instructions accompanying the material and/or contact the manufacturer's technical support for specific mix design and minimum thickness recommended for use with eligible floor mat(s).

Floor Mat Materials* — (Optional) — Nom 3/32 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

PLITEQ INC — Type GenieMat RST02

Floor Mat Materials* — (Optional) — Nom 3/16 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

PLITEQ INC — Type GenieMat FF03NP

Floor Mat Materials* — (Optional) — Nom 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

PLITEQ INC — Type GenieMat FF06

Floor Mat Materials* — (Optional) — Nom 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

PLITEQ INC — Type GenieMat FF10

Floor Mat Materials* — (Optional) — Nom 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

PLITEQ INC — Type GenieMat FF17

Floor Mat Materials* — (Optional) — Nom 1 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

PLITEQ INC — Type GenieMat FF25

System No. 17
Subflooring — Nom. 1-1/2 in. thick T & G laminated composite plywood sub-floor panels to be perpendicular to the trusses with end joints staggered 4 ft. End joints centered over top chord of trusses. Subfloor panels secured to trusses with construction adhesive and #8 by 3 in. wood screws spaced 12 in. OC in the field and 6 in. OC at the end joints.
RSP INDUSTRIES INC — SAP board

System No. 18
Subflooring — Min 15/32 in. thick wood structural panels, min grade "Underlayment" or "Single-Floor". Panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. Wall and Partition Facings and Accessories* - Sound Barrier (Optional) — Acoustic Sleeper pads stapled to the top of the subfloor and centered on the finish floor, or to 5/16 in. thick by 1-1/2 in. wide wood strips and centered over wood trusses. Acoustic Sleeper pads are to be spaced appropriately so that the finish floor panels are fastened through Acoustic Sleeper pads to the trusses.
STC ARCHITECTURAL PRODUCTS L L C DBA STC SOUND CONTROL — Acoustic Sleeper

Finish Floor — Min 23/32 in. thick T & G wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with end joints staggered 4 ft. Butt joints of panels have the option of being sealed with any UL Classified caulk or sealant found under - Fill, Void or Cavity Materials* (XHHW).

System No. 19
Structural Cement-Fiber Units* — For use with UNITED STATES GYPSUM CO Types C, IP-X2, IPC-AR and ULIX or AMERICAN GYPSUM CO Type AG-C, gypsum boards only. Nom 3/4 in. thick, with long edges tongue and grooved. Long dimension of panels to be perpendicular to wood trusses with end joints staggered a min of 2 ft and centered over the trusses. Panels secured to wood trusses with 1-5/8 in. long, No. 8, self- countersinking wood screw spaced a max of 12 in. OC in the field with a screw located 1 in. and 2 in. from each edge, and 8 in. OC on the perimeter with a screw located 2 in. from each edge, located 1/2 in. from the end edges of the panel.
UNITED STATES GYPSUM CO — Types STRUCTO-CRETE, USGSP

System No. 20
Subflooring — Min 23/32 in. thick T & G wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with end joints staggered 4 ft. Panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. TetraGRIP™ nails measuring 2-3/8 in. long, 0.113 in. diameter, 0.272 in. round head, and helically threaded shank with barbed features on the helix meeting ASTM F1667 and having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.
Finish Flooring - Floor Topping Mixture* — Min 1 in. thickness of floor topping mixture having a min compressive strength of 4500 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.
SIKA DEUTSCHLAND GMBH — Type SCHONOX AP Rapid Plus

System No. 21
Subflooring — Min 23/32 in. thick T & G wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with end joints staggered 4 ft. Panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. TetraGRIP™ nails measuring 2-3/8 in. long, 0.113 in. diameter, 0.272 in. round head, and helically threaded shank with barbed features on the helix meeting ASTM F1667 and having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.
Vapor Barrier — (Optional) - Nom 0.010 in. thick commercial rosin-sized building paper.
Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies. Refer to the manufacturer's instructions accompanying the material and/or contact the manufacturer's technical support for specific mix design and minimum thickness recommended for use with eligible floor mat(s).
Floor Mat Materials* — (Optional) - Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.
LOW & BONAR INC — EnkaSonic® by Colbond a member of the Low & Bonar group Types 125, 250, 250 Plus, 400, 400 Plus, 750, and 750 Plus.

Floor Mat Reinforcement — (Optional) - Refer to manufacturer's instructions regarding minimum thickness of floor topping for use with floor mat reinforcement.
Metal Lath — (Optional) — Expanded steel diamond mesh, 2.5 lb / sq yd loose laid over floor mat material.
Fiberglass Mesh Reinforcement — (Optional) — Coated non-woven glass fiber mesh grid loose laid over floor mat material.
System No. 22
Subflooring — Min 23/32 in. thick T & G wood structural panels described and installed as shown in System No. 1.
Finish Floor - Building Units* — Min 1/2 in. thick magnesium oxide panels installed parallel, perpendicular, or diagonally to trusses with panel edges offset a min of 4 in. between subfloor and magnesium oxide panels. Panels secured to subfloor with construction adhesive and corrosion resistant fasteners, spaced 12 in. OC around the perimeter and in the field of the panel. Fasteners must be placed no closer than 1/2 in. from all panel edges and no closer than 2 in. from panel corners
HUBER ENGINEERED WOODS L L C — Type 1/2 in. Square Edge Exacor™ Board

System No. 23
Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with joints staggered. Fastened with 8d ringed shank nails spaced 12 in. OC along each truss.
Finish Floor - Building Units* — Min 1/2 in. thick, supplied in 4 by 8 ft panels, fastened to trusses through subfloor with 8d ringed shank nails spaced a max of 12 in. OC. All joints to be staggered a min of 12 in. with adjacent sub-floor joints.
ECTEK INTERNATIONAL INC — Type MegaBoard, 1/2 in. thick

System No. 24

Subflooring — Building Units* — Nom 3/4 in. thick, tongue and grooved boards. Long dimension of boards to be perpendicular to wood trusses with end joints staggered a min of 4 ft. and centered over the trusses. Boards secured to trusses with min 1-1/4 in. long screws or 2 in. x 0.113 in. Ring Shank nails spaced a max of 12 in. OC in the field with screws/nails located 1 in. from long edge, and max 8 in. OC along the end joints with screws/nails located 1/2 in. from end joint.

ECTEK INTERNATIONAL INC — Type MegaBoard, 3/4 in. thick

Finish Floor (optional) — Building Units* — Min 1/2 in. thick, supplied in 4 by 8 ft panels, fastened to trusses through subfloor with 2-3/8 in. long 8d ringed shank nails spaced a max of 12 in. OC. All joints to be staggered a min of 12 in. with adjacent sub-floor joints.

ECTEK INTERNATIONAL INC — Type MegaBoard, 1/2 in. thick

System No. 25

Subflooring — Min 23/32 in. thick T & G wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with end joints staggered 4 ft. Panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. TetraGRIP™ nails measuring 2-3/8 in. long, 0.113 in. diameter, 0.272 in. round head, and helically threaded shank with barbed features on the helix meeting ASTM F1667 and having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Floor Mat Materials* — (Optional) — Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

GRASSWORX L L C — SC Types

Finish Flooring* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies. Refer to the manufacturer's instructions accompanying the material and/or contact the manufacturer's technical support for specific mix design and minimum thickness recommended for use with eligible floor mat(s).

Floor Mat Reinforcement — (Optional) - Refer to manufacturer's instructions regarding minimum thickness of floor topping for use with floor mat reinforcement.

Metal Lath — (Optional) — Expanded steel diamond mesh, 2.5 lb / sq yd loose laid over floor mat material.

Fiberglass Mesh Reinforcement — (Optional) — Coated non-woven glass fiber mesh grid loose laid over floor mat material.

2. Trusses — Parallel chord trusses, spaced a max 24 in. OC, fabricated from nom 2 by 4 in. lumber with lumber oriented vertically or horizontally. Min truss depth is 12 in. when item 9 is not employed. Min truss depth is 18 in. when item 9 is employed. Truss members secured together with min No. 20 MSG galv steel truss plates. Plates have 5/16 in. long teeth projecting perpendicular to the plane of the plate. The teeth are in pairs facing each other (made by the same punch), forming a split-tooth-type plate. Each tooth has a chisel point on its outside edge. These points are diagonally opposite each other for each pair. The top half of each tooth has a twist for stiffness. The pairs are repeated on approx 7/8 in. centers with four rows of teeth per in. of plate width.
3. Furring Channels — Hat channels, 7/8 in. deep by 2-9/16 in. or 2-11/16 in. or 2-23/32 in. wide at the base and 1-7/16 in. wide at the face, formed from No. 25 ga galv steel, spaced 24 in. OC perpendicular to trusses. Channels secured to trusses with double strand of No. 18 SWG galv steel wire spaced 48 in. OC. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. Two furring channels used at end joints of gypsum board (Item 4), each extending a min of 6 in. beyond both side edges of the board.
3A. Resilient Channels — (Not Shown) — As an alternate to Item 3, resilient channel formed from No. 26 MSG galv steel, spaced 16 in. OC perpendicular to trusses. Channels secured to each truss with 1-1/4 in. long No. 6 Type S bugle head steel screw. Channels overlapped at splices 4 in. Two resilient channels used at end joints of gypsum board (Item 4), each extending a min of 6 in. beyond both side edges of the board.
3B. Steel Framing Members* — (Optional) — Used as an alternate method to attach furring channels to trusses (Item 2). Clips spaced 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to the bottom chord of alternating trusses with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to the bottom chord of alternating trusses with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped as described in Item 3. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two min 7/16 in. long No. 8 self-tapping framing screws, at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 4. When Fiber, Sprayed (Item 6) is used, furring channel spacing reduced to 16 in. OC and two layers of nom 5/8 in. thick, 4 ft wide gypsum board shall be installed as described in Item 4.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75).

3C. Steel Framing Members* — (Optional, Not Shown) — Used as an alternate method to attach furring channels to trusses. Clips spaced 48 in. OC., and secured to the bottom chord to alternating trusses with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 4. Two layers of gypsum board required as described in Item 4. Not evaluated for use with Item 6. When Item 3C is used and Batts and Blankets* are added per Section III Item 18 Blanket Insulation in the General Information of this Directory (BXUV), clips spaced 48 in. OC, furring channels spaced 16 in. OC max, 3-1/2 in. max. Batts and Blankets* secured to plywood subfloor with staples spaced 12 in. OC or to the trusses with 0.090 in. diam galv steel wires spaced 12 in. OC, and two layers of gypsum board required as described in Item 4A. When the Batts and Blankets* are draped over the furring channel/gypsum panel ceiling membrane, the clip spacing shall be reduced to 24 in. OC and secured to consecutive trusses, the furring channel spacing shall be reduced to 12 in. OC, and two layers of gypsum board required as described in Item 4A.
KINETICS NOISE CONTROL INC — Type Isomax.

3D. Steel Framing Members* — (Optional, Not Shown) — Used as an alternate method to attach furring channels to trusses. Clips spaced 48 in. OC. and secured to the bottom chord to alternating trusses with one No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 4. Not evaluated for use with Item 6.
PLITEQ INC — Type Genie Clip

3E. Steel Framing Members* — (Optional, Not Shown) — For use with Item 7B - Used as an alternate method to attach furring channels to trusses. Clips spaced at 48" OC and secured to the bottom of the trusses with one 2 in. Coarse Drywall Screw with 1 in. diam. washer through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire .Additional clips are required to hold the Gypsum Butt joints as described in item 4. Not evaluated for use with Item 6.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R

3F. Resilient Channels — For use with Item 4B and 7A - Resilient channels, formed from No. 25 MSG galv steel and shaped as shown, spaced 12 in. OC perpendicular to joist. Channels overlapped 4 in. at splices and secured to each joist with 1-1/4 in. Type S screws. Min end clearance of channels to wall to be 1/2 in. Additional resilient channels positioned so as to coincide with end joints of gypsum board.
3G. Resilient Channels — For Use With Item 4C and 7C. Formed from min 25 MSG galv steel installed perpendicular to trusses and spaced 16 in. OC. Channels secured to each truss with 1-5/8 in. long Type S bugle head steel screws. Channels overlapped 4 in. at splices. Two channels, spaced 6 in. OC, oriented opposite each gypsum panel end joint. Additional channels shall extend min 6 in. beyond each side edge of panel. Insulation, Item 7C is applied over the resilient channel/gypsum panel ceiling membrane.
3H. Steel Framing Members* — (Optional, Not Shown) — Used as an alternate method to attach furring channels to trusses. Clips spaced at 48" OC and secured to the bottom of the trusses with one 2-1/2 in. Coarse Drywall Screw with 1 in. diam. washer through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire .Additional clips are required to hold the Gypsum Butt joints as described in item 4. Not evaluated for use with Item 6.
REGUPOL AMERICA — Type SonusClip

3I. Steel Framing Members — (Not Shown) — As an alternate to Item 3, main runners, cross tees, cross channels and wall angle as listed below.
a. Main Runners — Nom 10 or 12 ft long, 15/16 in. or 1-1/2 in. wide face, spaced 4 ft. OC. Main runners suspended by min 12 SWG galv. steel hanger wires spaced 48 in. OC. Hanger wires to be located adjacent to main runner/cross.tee intersections. Hanger wires wrapped and twist-tied on 16d nails driven in to side of trusses at least 5 in. above the bottom face.
b. Cross Tees or Channels — Nom 4 ft long cross tees, with 15/16 in. or 1-1/2 in. wide face, or nom 4 ft long cross channels, with 1-1/2 in. wide face, spaced 16 in. OC, installed perpendicular to the main runners. Additional cross tees or channels used 8 in. from each side of butted gypsum board end joints. The cross tees or channels may be riveted or screw-attached to the wall angle or channel to facilitate the ceiling installation.
c. Wall Angle or Channel — Painted or galv. steel angle with 1 in. legs or channel with 1 in. legs, 1-9/16 in. deep attached to walls at perimeter of ceiling with fasteners 16 in. OC. To support steel framing member ends and for screw-attachment of the gypsum panel.
USG INTERIORS LLC — Type DGL or RX

3J. Steel Framing Members* — (Optional

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Design No. L528
February 3, 2022

Unrestrained Assembly Rating - 1 Hr.
Finish Rating - 22 Min.
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

4. Gypsum Board* — One layer of nom 5/8 in. thick, 4 ft wide gypsum board, installed with long dimension perpendicular to furring or resilient channels. Gypsum board secured with 1 in. long No. 6 Type S bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. End joints secured to both resilient channels as shown in the end joint detail. When Steel Framing Members (Item 3B and 3P) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimension perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long No. 6 Type S bugle head screws spaced 12 in. OC in the field of the board. Gypsum board butt joints shall be staggered 2 ft within the assembly, and shall occur between the main furring channels. At the gypsum board butt joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 6 in. on each end. The two furring channels at each butt joint shall be spaced approximately 3-1/2 in. OC, and be attached to the bottom chord of the truss with one clip at each end of the channel. Screw spacing along the gypsum board butt joint shall be 8 in. OC. Outer layer secured to furring channels using 1-5/8 in. long No. 6 Type S screws spaced 8 in. OC and 1-1/2 in. from the end joint. Butted end joints to be offset a min. of 8 in. from base layer end joints. Butted side joints of outer layer to be offset min. 18 in. from butted side joints of base layer. When Steel Framing Members (Item 3C) are used, two layers of nom 5/8 in. thick, 4 ft wide are installed with long dimensions perpendicular to furring channels. Base layer attached to the furring channels using 1 in. long No. 6 Type S bugle-head steel screws spaced 12 in. OC in the field of the board. Butted end joints shall be staggered min 2 ft. within the assembly, and occur midway between the continuous furring channels. Each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 6 in. on each end. The two furring channels shall be spaced approximately 4 in. OC, and be attached to underside of the truss with one Isomax clip at each end of the channel. Screw spacing along the gypsum board butt joint shall be 8 in. OC. Outer layer attached to the furring channels using 1-5/8 in. long No. 6 Type S bugle-head steel screws spaced 12 in. OC in the field. The end of the outer layer boards at the butt joint shall be attached to the base layer boards with 1-5/8 in. long Type G screws spaced 8 in. OC and 1-1/2 in. from the end joint. Butted end joints to be offset a min of 8 in. from base layer end joints. Butted side joints of outer layer to be offset min 18 in. from butted side joints of base layer. When Steel Framing Members (Item 3D) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long No. 6 Type S bugle-head steel screws spaced 12 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 16 in. within the assembly. . At the gypsum board butt joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 6 in. on each end. These additional furring channels shall be attached to underside of the truss with Genie clips as described in Item 3D. Screw spacing along the gypsum board butt joint shall be 6 in. OC. When Steel Framing Members (Item 3E) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 48 in. and centered over main furring channels. At the gypsum board butt joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 3 in. on each end. The two support furring channels shall be spaced approximately 3 in. in from joint. Screw spacing along the gypsum board butt joint and along both additional channels shall be 8 in. OC. Additional screws shall be placed in the adjacent section of gypsum board into the aforementioned 3 in. extension of the extra butt joint channels as well as into the main channel that runs between . Butt joint furring channels shall be attached with one RESILMOUNT Sound Isolation Clip at each end of the channel. When Fiber, Sprayed (Items 6 or 6A) is used, two layers of nom 5/8 in. thick, 4 ft wide gypsum board are installed with long dimensions perpendicular to furring channels. Base layer gypsum board secured with 1 in. long No. 6 Type S bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. End joints secured to both resilient channels as shown in the end joint detail. Outer layer gypsum board secured with 1-5/8 in. long No. 6 Type S bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. Outer layer shall be finished as described in Item 5. When Foamed Plastic insulation (Item 7E) is applied to the underside of the subflooring, screw spacing shall be reduced to 8 in. OC with minimum 1-1/4 in. long Type S screws to install gypsum to the resilient channels (Item 3A). Resilient channels (Item 3A) to be spaced maximum 12 in. OC. Butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. End joints secured to both resilient channels as shown in end joint detail. When Steel Framing Members (Item 3E) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 48 in. and centered over main furring channels. At the gypsum board butt joints, an additional single length of furring channel shall be installed and be spaced approximately 3 in. from the butt joint (6 in. from the continuous furring channels) to support the floating end of the gypsum board. Each of these shorter sections of furring channel shall extend one truss beyond the width of the gypsum panel and be attached to the adjacent trusses with one SonusClip at every truss involved with the butt joint.

When Steel Framing Members* (Item 3I) are used, one layer of 5/8 in. thick, 48 in. wide gypsum board, installed with long dimension perpendicular to cross channels with side joints centered along main runners. Gypsum board fastened to cross channels with 1 in. long No. 8 Type S bugle head steel screws located 1/2 in. from end joints and 1-3/4 in. from side joints and spaced 8 in. OC along the end joints and in the field. Panels fastened to cross tees with 1 in. long, Type S bugle-head screws spaced in the field and 8 in. OC along end joints. Panels fastened to main runners with 1 in. long Type S bugle-head screws spaced midway between cross tees. Screws along sides and ends of panels spaced 3/8 to 1/2 in. from panel edge. Gypsum board sheets screw attached to leg of wall angle with 1 in. long No. 8 Type S bugle head steel screws spaced 12 in. OC. End joints of panels shall be staggered with spacing between joints on adjacent panels not less than 4 ft OC.

When Steel Framing Members (Item 3J) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to resilient channels. Gypsum board secured to resilient channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board and located 3/4 in. from side joints and 1-1/2 in. from end joints. Gypsum board joints are to be staggered by a minimum of 24 in.

When Steel Framing Members (Item 3M) are used, nom 5/8 in. thick, 4 ft wide gypsum board, installed as described in Item 4. Adjacent butt joints staggered minimum 48 in. OC.

When Steel Framing Members (Item 3N) are used, nom 5/8 in. thick, 4 ft wide gypsum board, installed as described in Item 4. Butt joints staggered minimum 24 in. OC.

AMERICAN GYPSUM CO — Type AG-C

CERTAINTEED GYPSUM INC — Type C

CGC INC — Types C, IP-X2, IPC-AR

CERTAINTEED GYPSUM INC — Type LGFC-C/A

GEORGIA-PACIFIC GYPSUM L L C — Types 5, DAPC, TG-C

NATIONAL GYPSUM CO — Types eXP-C, FSK-C, FSW-C, FSW-G

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type C

THAI GYPSUM PRODUCTS PCL — Type C

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR

4A. Gypsum Board — For use when Item 3C is used and Batts and Blankets* are secured to the plywood subfloor, to the trusses or draped over the furring channel/gypsum panel ceiling membrane as described in Item 3C. For method of gypsum board installation, see Item 4.
CGC INC — Types C, IP-X2, IPC-AR

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR

4B. Gypsum Board* — For use when Batts and Blankets* (Item 7A) and Resilient Channels (Item 3F) are used. Nom 5/8 in. thick, 4 ft wide gypsum board installed with long dimension perpendicular to resilient channels. Nom 1 in. long No. Type S bugle head screws are driven through channel spaced 8 in. OC. End joints of gypsum board similarly fastened to additional resilient channels positioned at end joint locations.
AMERICAN GYPSUM CO — Type AG-C.

CERTAINTEED GYPSUM INC — Type LGFC-C/A

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type C

4C. Gypsum Board* — For use with Items 3G and 7C or 3I and 7F, and 7C. Nom 5/8 in. thick, 48 in. wide gypsum panels installed with long dimension perpendicular to resilient channels. Gypsum panels secured with 1 in. long Type S bugle head steel screws spaced 8 in. OC and located a min of 1/2 in. from side joints and 3 in. from the end joints. Finish Rating with this ceiling system is 20 min.
CGC INC — Type ULIX

UNITED STATES GYPSUM CO — Type ULIX

4D. Gypsum Board* — For use when Flooring System (Item 1) consists of both System No. 1 and min 15/32 in. plywood, min grade "Underlayment" or "Sturd-I-Floor" with T & G edges and conforming with PS1-83 specifications, or min 3/4 in. thickness of any Floor Topping Mixture (CCOX) bearing the UL Classification Marking as to Fire Resistance, min Truss depth (Item 2) is 18 in. and Batts and Blankets (Item 7D) and Resilient Channels (Item 3A) are used. One layer of nom 5/8 in. thick, 48 in. wide gypsum board installed with long dimension perpendicular to resilient channels. Gypsum board secured with 1 in. long Type S bugle head steel screws. Screws spaced 1 in. from side joints, and 12 in. OC in the rest of the field. Screws spaced 1-1/2 in. from the end joints. End joints secured to both resilient channels as shown in end joint detail. When batt insulation (Item 7D) is draped over the resilient channel/gypsum board ceiling membrane, the resilient channel (Item 3A) spacing shall be reduced to 12 in. OC., and gypsum board screws spaced 1 in. from side joints, and 8 in. OC in the rest of the field. For use only with Ceiling Damper described in Item 9R.
PANEL REY S A — Type PRC2

4F. Gypsum Board* — For use with Items 3K, 3L, and 7G— One layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to resilient channels. Gypsum board secured to resilient channels with min nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board and located 3/4 in. from side joints and 1-1/2 in. from end joints. Gypsum board butt joints are to be staggered by a minimum of 24 in.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type C

4G. Gypsum Board* — For use with Items 3G and 7C. Nom 5/8 in. thick, 48 in. wide gypsum panels installed with long dimension perpendicular to resilient channels. Gypsum panels secured with 1 in. long Type S bugle head steel screws spaced 8 in. OC and located a min of 1/2 in. from side joints and 3 in. from the end joints.
AMERICAN GYPSUM CO — Type AG-C.

5. Finishing System — (Not Shown) — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads. Nom 2 in. wide paper tape embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum board.
6. Fiber, Sprayed* — (Dry Dense Packed 100% Borate Formulation) — (Not Shown, Optional) — The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft3, in accordance with the application instructions supplied with the product. When Item 6 (Fiber, Sprayed, Dry Dense Packed) is used, Furring Channels (Item 3F) or Resilient Channels (Item 3A) spacing shall be reduced to 12 in. OC. When Item 6 (Fiber, Sprayed, Dry Dense Packed) is used, two layers of gypsum board required as described in Item 4. Not evaluated for use with Item 3C.
U S GREENFIBER L L C — INS735, INS745, INS750LD, INS765LD, INS773LD, and SANCTUARY to be used with dry application only.

6A. Fiber, Sprayed* — (Loose Fill 100% Borate Formulation) — (Not Shown, Optional) — The finished rating when Fiber, Sprayed is used has not been determined. The fiber is applied without water or adhesive at a minimum dry density of 0.5 lb/ft3 and at a max thickness of 3-1/2 in., in accordance with the application instructions supplied with the product. When Item 6A (Fiber, Sprayed, Loose Fill) is used, Furring Channels (Item 3F) or Resilient Channels (Item 3A) spacing shall be reduced to 12 in. OC. When Item 6A (Fiber Sprayed, Loose Fill) is used, two layers of gypsum board required as described in Item 4. Not evaluated for use with Item 3C.
U S GREENFIBER L L C — INS735, INS745, INS750LD, INS765LD, INS773LD, & SANCTUARY to be used with dry application only.

7. Batts and Blankets* — (Not Shown) — For use with Item 3D — Nom 3 in. thick mineral wool insulation held suspended in the concealed space with 0.090 in. diam galv steel wires attached to the wood trusses at 18 in. OC.
7A. Batts and Blankets* — For Use With Items 3F and 4B — Glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance having a min. density of 0.5 pcf, draped over the resilient channel/gypsum panel ceiling membrane. No limit on overall thickness.
7B. Batts and Blankets* — (Not Shown) — For use with Item 3E — Nom 3-1/2 in. thick, min. 2 pcf fiber glass insulation held suspended in the concealed space with nominal 0.090 in. diam galv steel wires attached to the wood trusses at nominally 16 in. OC.
7C. Batts and Blankets* or Fiber, Sprayed* — For Use with Item 4C (Not Shown) — Min. 3-1/2 in thick with no limit on maximum thickness fitted in the concealed space, draped over the resilient channel (Item 3G)/gypsum board (Item 4C or 4G) ceiling membrane.
7D. Batts and Blankets* — For Use With Item 4D — Insulation may be secured to plywood subfloor with staples spaced 12 in. OC or to the trusses with 0.090 in. diam galv steel wires spaced 12 in. OC. Insulation may alternatively be draped over the resilient channels and gypsum board ceiling membrane, and the resilient channels and gypsum board attachment shall be modified as specified in Item 4D. Any glass fiber insulation bearing the UL Classification Marking for Surface Burning Characteristics and/or Fire Resistance, and having a min density of 0.5 pcf and max thickness of 3-1/2 in. may be used.
7E. Foamed Plastic* — (As alternate to Item 6 and 6A, Not Shown) — Spray foam insulation applied directly to the underside of the plywood subflooring. Spray foam insulation installed to a maximum thickness of 10 in. at a nominal 0.5 lb/ft3 or 2.0 lb/ft3 density, depending on the product installed. Spray foam insulation is limited to use with minimum 18 in. deep trusses (Item 2). When spray foam insulation is installed, resilient channels (Item 3A) shall be installed maximum 12 in. OC, with channels adjacent to butt joints of gypsum board (Item 4) spaced maximum 3 in. away from gypsum butt joints. Gypsum board (Item 4) to be installed using minimum 1-1/4 in. long Type S screws, spaced maximum 8 in. OC, and butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. If used with a ceiling damper (Item 9) in the concealed space, no clearance is necessary between damper housing and spray foam insulation. Only for use with Item 3A not evaluated for use with alternates to Item 3A.
CARLISLE SPRAY FOAM INSULATION — Types SealTite Pro Closed Cell (CC), SealTite Pro Open Cell (OC), SealTite Pro OCX, SealTite Pro No Trim 21, SealTite Pro One Zero, Foamsulate Closed Cell, Foamsulate OCX, Foamsulate 70, and Foamsulate HFO.

8. Air Duct* — (Optional) — Any UL Class 0 or Class 1 flexible air duct installed in accordance with the instructions provided by the damper manufacturer.
9. Ceiling Damper* — (Optional. To be used with Air Duct Item 8.) — For use with min. 18 in. deep trusses. Not for use with flooring system 1 or 17. Max. nom area shall be 349 sq in. Max. overall length and width shall not exceed 18-11/16 in. by 18-11/16 in. with max. 16 in. by 16 in. register opening. Aggregate damper openings shall not exceed 175 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. An aluminum or steel grille (Item 10) shall be installed in accordance with installation instructions.
MIAMI TECH INC — Model Series RxCRD, RxCRDS or RxCRPD

9A. Alternate Ceiling Damper* — (Optional. To be used with Air Duct Item 8.) — For use with min. 18 in. deep trusses. Not for use with flooring system 1 or 17. Max damper assembly size nom 18 in. long by 18 in. wide and 4-1/4 in. high, or 8 in. diam. fabricated from galv steel. Aggregate damper openings shall not exceed 162 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper.
RUSKIN COMPANY — Model CFD7T, CFD7T-END-BT, CFD7T-90-BT, CFD7T-ST-BT, CFD7T-SB, CFD7T-R6-DB, CFD-7T-IB6 or CFDR7T

9B. Deleted.
9C. Alternate Ceiling Damper* — (Optional. To be used with Air Duct Item 8.) — For use with min. 18 in. deep trusses. Not for use with flooring system 1 or 17. Max 12 in. diameter damper with insulated register box assembly. The maximum size of the register box assembly is nom. 20 in. long by 20 in. wide and 4 in. high fabricated from galv steel. Aggregate area of the register opening(s) through the ceiling membrane shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper assembly installed in accordance with the manufacturers installation instructions.
AIRE TECHNOLOGIES INC — Series 57

9D. Alternate Ceiling Damper* — (Optional. To be used with Air Duct Item 8.) — For use with min. 18 in. deep trusses. Not for use with flooring system 1 or 17. Max 20 in. long by 16 in. wide by 4 in. high rectangular damper with duct board register box assembly. The maximum outer dimensions of the plenum box assembly are 23-1/2 in. long by 19-1/2 in. wide and 17 in. high fabricated from 6pcf, 1-1/2 to 2 in. thick Knauf Air Duct Board M*. Aggregate area of the register opening(s) through the ceiling membrane shall not exceed 160 sq in. per 100 sq ft ceiling area. Damper assembly installed in accordance with the manufacturers installation instructions.
AIRE TECHNOLOGIES INC — Series 58

9E. Alternate Ceiling Damper* — (Optional. To be used with Air Duct Item 8.) — For use with min. 18 in. deep trusses. Not for use with flooring system 1 or 17. Max 14 in. long by 14 in.wide by rectangular damper with 90° boot. The maximum size of damper/boot assembly is 14 in. long by 14 in. wide and 18 in. high fabricated from galv steel. The aggregate area of the register opening(s) through the ceiling membrane shall not exceed 98 sq in. per 100 sq ft ceiling area. Damper assembly installed in accordance with the manufacturers installation instructions.
AIRE TECHNOLOGIES INC — Models 50 w/ Boot, 50EA w/ Boot, 51 w/Boot, 50 w/ Box, 50EA w/ Box or 51 w/Box

9F. Alternate Ceiling Damper* — (Optional. To be used with Air Duct Item 8). — For use with min 18 in. deep trusses Not for use with flooring system 1 or 17. Max plenum box size nom 19 in. long by 19 in. wide and 11-7/8 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper.
LLOYD INDUSTRIES INC — Model CRD 50-BT, CRD 50-EA-BT, CRD 55-BT, CRD 55 EA-BT

UNITED ENERTECH CORP — Model C-S/R-WT-L, C-S/R-EA-L, C-S/R-BT, C-S/R-EA-BL

9G. Alternate Ceiling Damper* — (Optional. To be used with Air Duct Item 8). For use with min 18 in. deep trusses Not for use with flooring system 1 or 17. Max plenum box size nom 13 in. long by 13 in. wide and 11-7/8 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 50 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper.
LLOYD INDUSTRIES INC — Model CRD 50-BT-6, CRD 50-EA-BT-6, CRD 55-BT-6, CRD 55 EA-BT-6

9H. Alternate Ceiling Damper* — (Optional. To be used with Air Duct Item 8). Ceiling damper & fan assembly for use with min 18 in. deep trusses. Not for use with flooring system 1 or 17. Max nom area shall be 103 sq in. with the length not to exceed 10-1/8 in. and the width not to exceed 10-1/8 in. Aggregate damper openings shall not exceed 52 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille (Item 10) shall be installed in accordance with installation instructions.
PANASONIC CORPORATION, PANASONIC CORPORATION OF NORTH AMERICA — Model PC-RD05C5

9I. Alternate Ceiling Damper* — (Optional. To be used with Air Duct Item 8). Ceiling damper & fan assembly for use with min 18 in. deep trusses. Not for use with flooring system 1 or 17. Max nom area shall be 113 sq in. with the length not to exceed 10-1/8 in. and the width not to exceed 11-1/8 in. Aggregate damper openings shall not exceed 57 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille (Item 10) shall be installed in accordance with installation instructions.
BROAN-NUTONE L L C — Model RDFUWT

9J. Alternate Ceiling Damper* — (Optional. To be used with Air Duct Item 8). Ceiling damper & fan assembly for use with min 18 in. deep trusses. Not for use with flooring system 1 or 17. Max nom area shall be 79 sq in. with the length not to exceed 10 in. and the width not to exceed 7-15/16 in. Aggregate damper openings shall not exceed 40 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A metallic grille (Item 10) shall be installed in accordance with installation instructions.
BROAN-NUTONE L L C — Models RDJ1 and RDH

9K. Alternate Ceiling Damper* — (Optional. To be used with Air Duct Item 8). For use with min 18 in. deep trusses. Not for use with flooring system 1 or 17. Max plenum box size nom 19 in. long by 19 in. wide and 11-7/8 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper.
METAL-FAB INC — Models MSCD-HC and MRCD-HC

9L. Alternate Ceiling Damper* — (Optional, To be used with Air Duct Item 8). Ceiling damper & fan assembly for use with min 18 in. deep trusses. Not for use with flooring system 1 or 17. Max nom area shall be 87 sq in. with the length not to exceed 9 in. and the width not to exceed 9-11/16 in. Aggregate damper openings shall not exceed 44 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille (Item 10) shall be installed in accordance with installation instructions.
BROAN-NUTONE L L C — Model RDMWT

9M. Alternate Ceiling Damper* — Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 87 sq in. with the length not to exceed 9 in. and the width not to exceed 9-11/16 in. Aggregate damper openings shall not exceed 44 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille (Item 10) shall be installed in accordance with installation instructions.
BROAN-NUTONE L L C — Model RDMWT2

9N. Alternate Ceiling Damper* — (Optional. To be used with Air Duct Item 8) — For use with min 18 in. deep trusses. Not for use with flooring system 1 or 17. Max nom 21 in. long by 18 in. wide, fabricated from galvanized steel. Plenum box max size nom 21 in. long by 18 in. wide by 14 in. high (inner dimension) fabricated from either galvanized steel or min 1 in. thick Listed Duct Board bearing the UL Listing Marking having a min R-Value of 4.3. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 180 sq in. per 100 sq ft of ceiling area.
GREENHECK FAN CORP — Model CRD-1WT

9O. Alternate Ceiling Damper* — (Optional. To be used with Air Duct Item 8) — For use with min 18 in. deep trusses. Not for use with flooring system 1 or 17. Max nom 12 in. long by 12 in. wide with an 8 in. diameter damper. Fabricated from galvanized steel. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 72 sq in. per 100 sq ft of ceiling area.
GREENHECK FAN CORP — Model CRD-2WT

9P. Alternate Ceiling Damper* — For use with min 18 in. deep trusses. Not for use with flooring system 1 or 17. Max nom area shall be 324 sq in. with the length not to exceed 24 in. and the width not to exceed 20 in. Max height of damper shall be 14 in. Aggregate damper openings shall not exceed 162 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 10) shall be installed in accordance with installation instructions.
C&S AIR PRODUCTS — Model RD-521

POTTORFF — Model CFD-521

9Q. Alternate Ceiling Damper* — For use with min 18 in. deep trusses. Not for use with flooring system 1 or 17. Max nom area shall be 196 sq in. with the length not to exceed 26 in. and the width not to exceed 14 in. Max height of damper shall be 7 in. Aggregate damper openings shall not exceed 98 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 10) not to exceed 144 in.2 shall be installed in accordance with installation instructions.
C&S AIR PRODUCTS — Model RD-521-BT

POTTORFF — Model CFD-521-BT

9R. Alternate Ceiling Damper* — For use with min 18 in. deep trusses. Not for use with flooring system 1 or 17. Max nom area shall be 256 sq in. with the length not to exceed 24 in. and the width not to exceed 20 in. Max height of damper shall be 17 in. Aggregate damper openings shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 10) shall be installed in accordance with installation instructions.
C&S AIR PRODUCTS — Models RD-521-IP, RD-521-NP

POTTORFF — Models CFD-521-IP, CFD-521-NP

9S. Alternate Ceiling Damper* — For use with min 18 in. deep trusses. Not for use with flooring system 1 or 17. Max nom area shall be 144 sq in. with the length not to exceed 14 in. and the width not to exceed 12 in. Max height of damper shall be 17-7/8 in. Aggregate damper openings shall not exceed 74 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 10) shall be installed in accordance with installation instructions.
C&S AIR PRODUCTS — Models RD-521-90, RD-521-NP90

POTTORFF — Models CFD-521-90, CFD-521-90NP

9T. Alternate Ceiling Damper* — (Optional. To be used with Air Duct Item 8.) — For use with min 18 in. deep trusses. For use with Item 4D only. Not for use with flooring system 1. Maximum 20 in. long by 18 in. wide by 2-1/8 in. high, fabricated from galvanized steel. Plenum box maximum size nom. 21 in. long by 18 in. wide by 16 in. high fabricated from either galvanized steel or Classified Air Duct Materials bearing the UL Class 0 or Class 1 rigid air duct material. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 180 sq in. per 100 sq ft of ceiling area.
NAILOR INDUSTRIES INC — Types 0755, 0755A, 0756, 0756D, 0757, 0757D, 0757FP, 0757DFP, 0763

SAFE AIR DOWCO — 0455, 0455A, 0456, 0456D, 0457, 0457D, 0457-DB, 0457-CB, 0463-FB, 0457-EB, 0463-GB, 0463-HB

9U. Alternate Ceiling Damper* — (Optional, to be used with Air Duct Item 8) For use with min 18 in. deep trusses. Max nom 11-1/8 in. long by 13-5/8 in. wide, fabricated from galvanized steel. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 76 sq in. per 100 sq ft of ceiling area.
GREENHECK FAN CORP — Model CRD-310WT

9V. Alternate Ceiling Damper* — (Optional, to be used with Air Duct Item 8) For use with min 18 in. deep trusses. Max nom 12-3/8 in. long by 14-1/2 in. wide, fabricated from galvanized steel. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 90 sq in. per 100 sq ft of ceiling area.
GREENHECK FAN CORP — Model CRD-310WT

9W. Alternate Ceiling Damper* — — (Optional, to be used with Air Duct Item 8) For use with min. 18 in. deep trusses. Not for use with flooring system 1 or 17. Max 12 in. diameter damper within max 15 in. by 15 in. register box with max 12 in. by 12 in. register opening fabricated from galvanized steel. Aggregate area of the register opening(s) through the ceiling membrane shall not exceed 72 sq. in. per 100 sq. ft. of ceiling area. Damper assembly installed in accordance with the manufacturer's installation instructions.
RUSKIN COMPANY — Model CFD7T-SR

9X Ceiling Damper* — (Optional. To be used with Air Duct Item 8.) — For use with min. 18 in. deep trusses. Not for use with flooring system 1 or 17. Max 12 in. diameter damper and insulated register box assembly. The maximum size of the register box assembly is nom. 20 in. long by 20 in. wide and 4 in. high fabricated from galv steel. The aggregate area of the register opening(s) through the ceiling membrane shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper assembly installed in accordance with the manufacturers installation instructions.
SOUTHWARK METAL MFG CO — Model 800 w/Box

9Y Alternate Ceiling Damper* — (Optional. To be used with Air Duct Item 8.) — For use with min. 18 in. deep trusses. Not for use with flooring system 1 or 17. Max 20 in. long by 16 in. wide by 4 in. high rectangular damper with plenum box assembly. The maximum outer dimensions of the plenum box assembly are 23-1/2 in. long by 19-1/2 in. wide and 17 in. high fabricated from 6pcf, 1-1/2 to 2 in. thick Knauf Air Duct Board M*. The aggregate area of the register opening(s) through the ceiling membrane shall not exceed 160 sq in. per 100 sq ft ceiling area. Damper assembly installed in accordance with the manufacturers installation instructions.
SOUTHWARK METAL MFG CO — CRD w/DB Box

9Z Alternate Ceiling Damper* — (Optional. To be used with Air Duct Item 8.) — For use with min. 18 in. deep trusses. Not for use with flooring system 1 or 17. Max 14 in. long by 14 in. wide and 18 in. high ceiling damper with boot or box assembly, fabricated from galv steel. The aggregate area of the register opening(s) through the ceiling membrane shall not exceed 98 sq in. per 100 sq ft of ceiling area. Damper assembly installed in accordance with the manufacturers installation instructions.
SOUTHWARK METAL MFG CO — Model 500 w/Boot, 510 w/Boot, 500 w/Box or 510 w/Box

9AA. Alternate Ceiling Damper* — (Optional, to be used with Air Duct Item 8) For use with min 18 in. deep trusses. Max nom 10-3/8 in. long by 10-3/8 in. wide, fabricated from galvanized steel. Installed in accordance with the instructions provided by the manufacturer. Max damper openings not to exceed 54 sq in. per 100 sq ft of ceiling area.

GREENHECK FAN CORP — Model CRD-300WT

10. Grille — Aluminum or Steel grille, installed in accordance with the installation instructions provided with the ceiling damper.
11. Discrete Products Installed in Air-handling Spaces* — Automatic Balancing Valve/Damper — (Not Shown - Optional) — For use with item 9A, Ruskin Company's Model CFD7T damper (CABS). Ceiling damper to be provided with plenum box per damper manufacturer's instructions with side outlet only. Entire assembly to be installed into any UL Class 0 or Class 1 flexible air duct in accordance with the instructions provided by the automatic balancing valve/damper manufacturer.
NAILOR INDUSTRIES INC — Model ABV-4, ABV-5, ABV-6

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.
Last Updated on 2022-02-03

Design No. J919

Restrained Assembly Rating — 2, 3 and 4 Hr.(See Items 1 and 8)
Unrestrained Assembly Rating — 2 Hr.
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

1. Concrete Topping — 3000 psi compressive strength, 110 to 153 pcf unit weight. Normal weight aggregate. The min concrete topping thickness is 1-3/4 when Item Nos. 6 and 7 are used. When Item Nos. 6 and 7 are not used, the minimum concrete topping thickness shall be:
Rating Hr Mtl Thkns In.
2 0
3 1-3/4
1A. Floor Topping Mixture* — Alternate to Item 1 - Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1100 psi. Mixture shall consist of 6.8 gal of water to 80 lbs of floor topping mixture to 1.9 cu ft of sand.
HACKER INDUSTRIES INC — Firm-Fill Gypsum Concrete, Firm-Fill 2010, Firm-Fill 3310, Firm-Fill 4010, Gyp-Span Radiant

Floor Mat Materials — (Optional) — Floor mat material nom 1/8 in. (3 mm) thick loose laid over the precast concrete unit. Floor topping thickness shall be a min of 3/4 in. (19 mm).
HACKER INDUSTRIES INC — FIRM-FILL SCM 125

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/4 in. (6 mm) thick loose laid over the precast concrete unit. Floor topping thickness shall be a min of 1 in. (25 mm).
HACKER INDUSTRIES INC — Type FIRM-FILL SCM 250

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 3/8 in. (10 mm) thick loose laid over the precast concrete unit. Floor topping thickness shall be a min of 1-1/4 in. (32 mm)
HACKER INDUSTRIES INC — FIRM-FILL SCM 400

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 3/4 in. (19 mm) thick loose laid over the precast concrete unit. Floor topping thickness shall be a min of 1-1/2 in. (38 mm).
HACKER INDUSTRIES INC — Type FIRM-FILL SCM 750

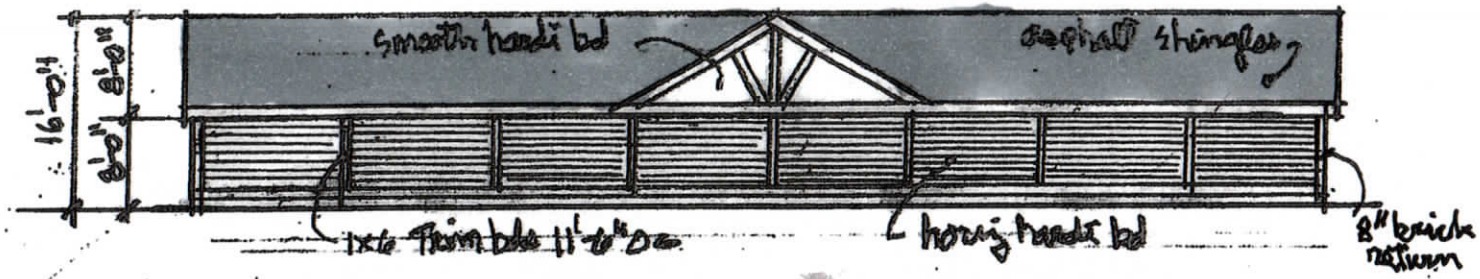
Metal Lath (Optional) — For use with 3/8 in. (10 mm), or greater, floor mat materials, 3/8 in. expanded steel diamond mesh, 3.4 lbs/sq yd placed over the floor mat material. Hacker Floor Primer to be applied prior to the placement of the metal lath. When metal lath is used, floor topping thickness a nom 1 in. (25 mm) over the floor mat.
1B. Floor Topping Mixture* — Alternate to Items 1 and 1A - Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1100 psi. Mixture shall consist of 6.8 gal of water to 80 lbs of floor topping mixture to 1.9 cu ft of sand.
HACKER INDUSTRIES INC — Firm-Fill Gypsum Concrete, Firm-Fill High Strength, Gyp-Span Radiant

Floor Mat Materials* — (Optional) — Floor mat material nom 5/64 in. (2 mm) thick adhered to precast concrete unit with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of floor-topping mixture. Floor topping thickness a min 1 in. over the floor mat.

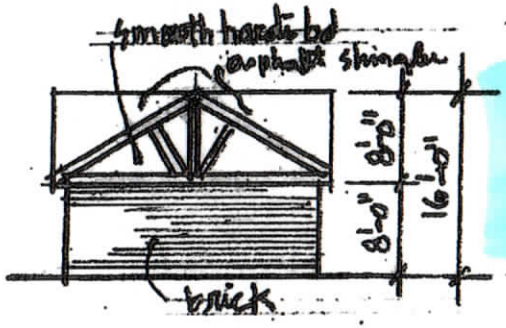
HACKER INDUSTRIES INC — Type Hacker Sound-Mat

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/4 in. (6 mm) thick adhered to precast concrete unit with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1-1/4 in. (32 mm) of floor-topping mixture.

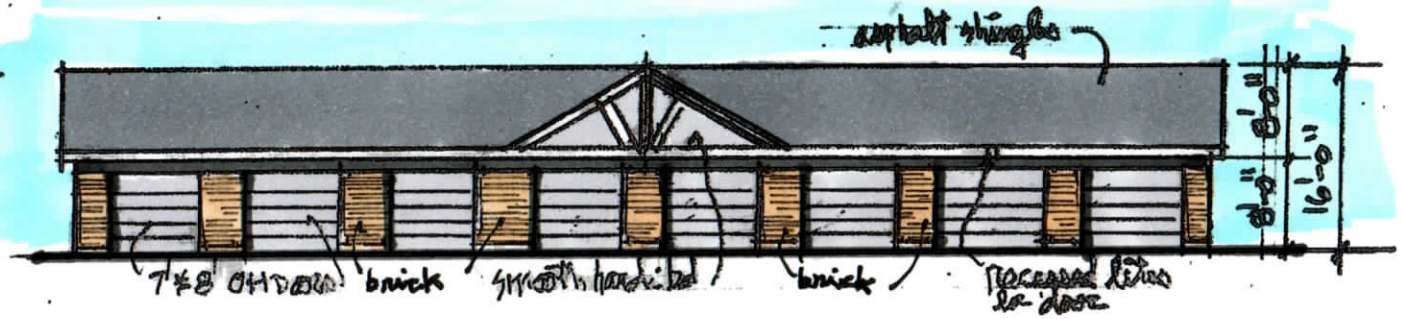
HACKER INDUSTRIES INC — Type Hacker Sound-M



BACK ELEVATION 1/16"

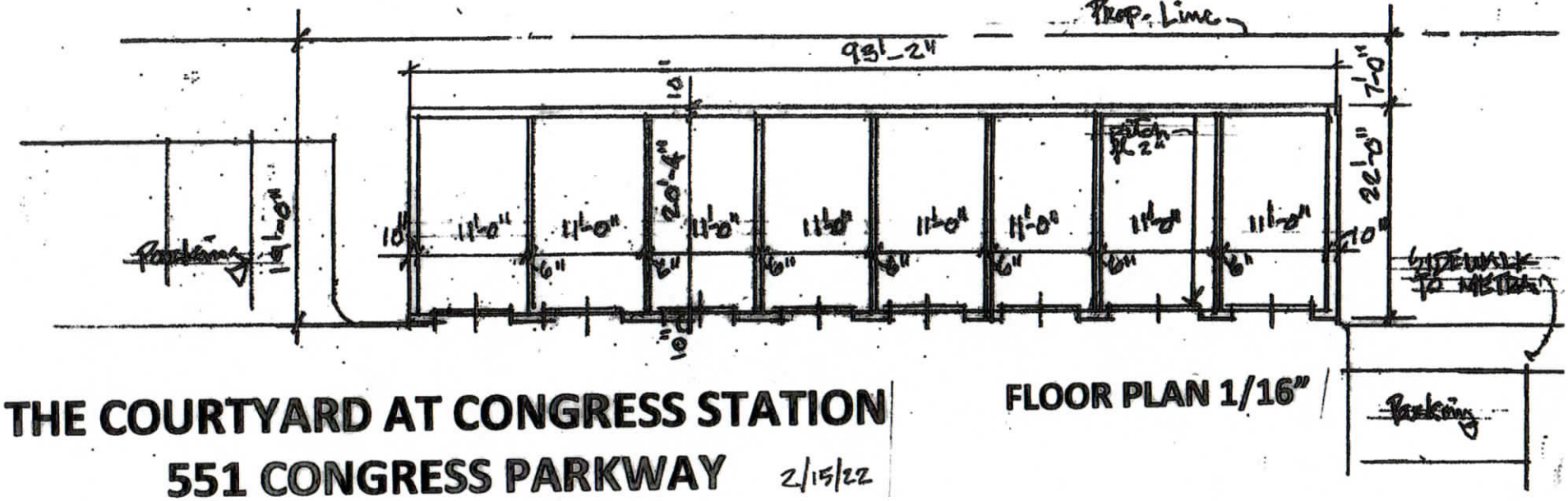


SIDE ELEVATION 1/16"



FRONT ELEVATION 1/16"

8 CAR GARAGE BUILDING

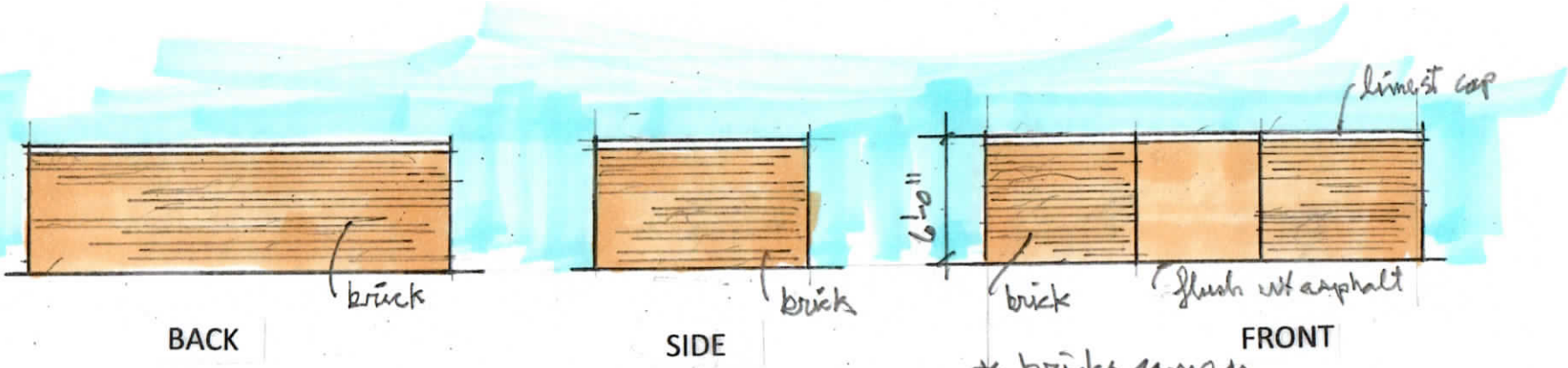


FLOOR PLAN 1/16"

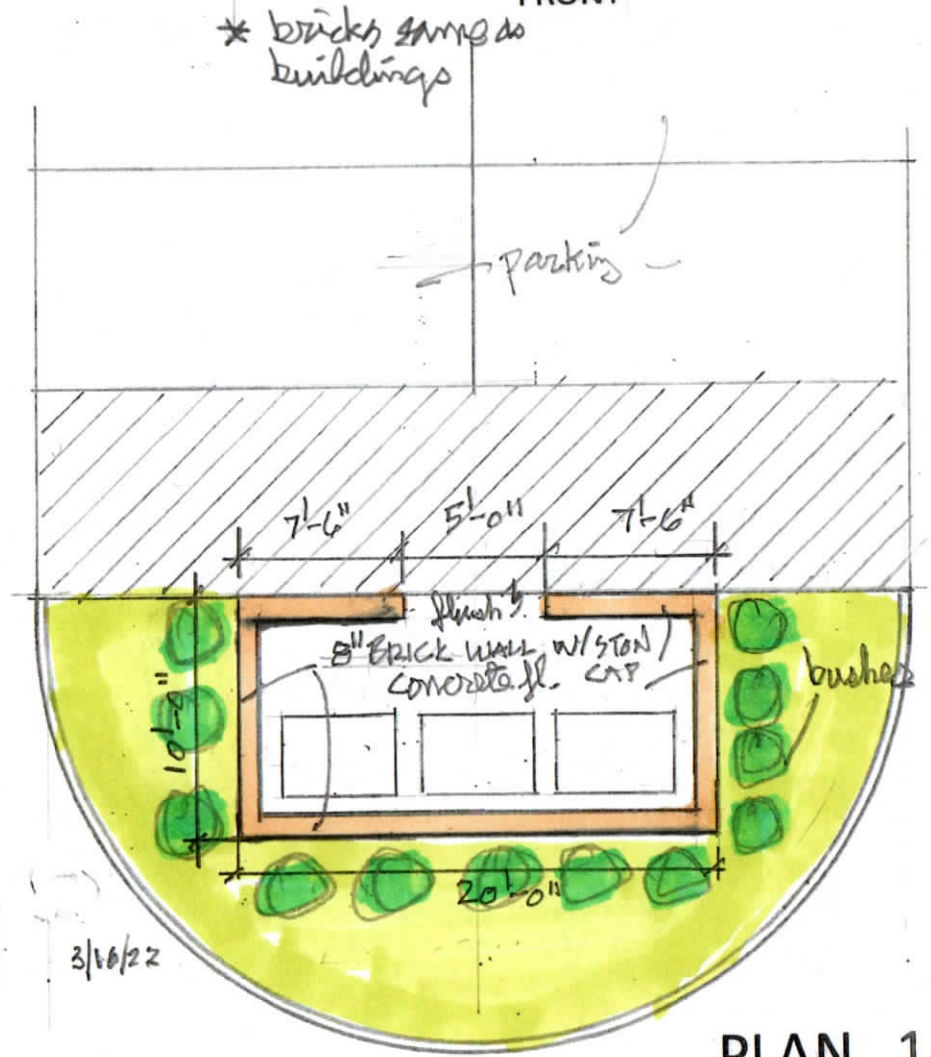
THE COURTYARD AT CONGRESS STATION

551 CONGRESS PARKWAY

2/15/22



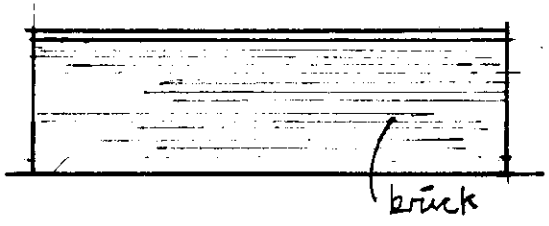
ELEVATIONS 1/8



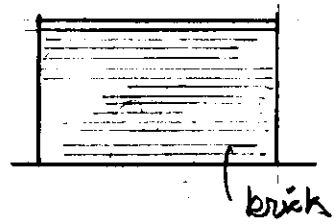
TRASH ENCLOSURES

551 CONGRESS PKWY

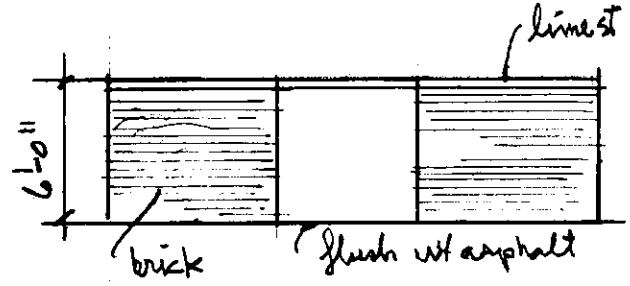
PLAN 1/8



BACK

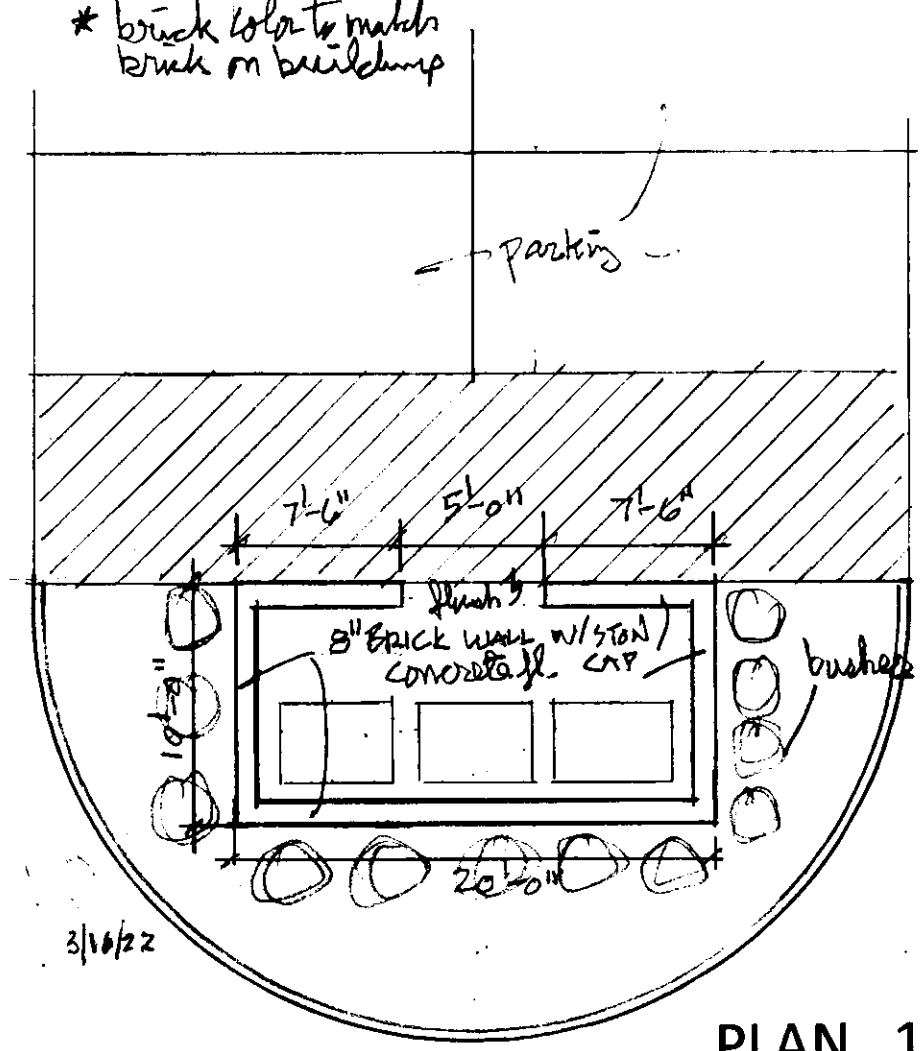


SIDE



FRONT

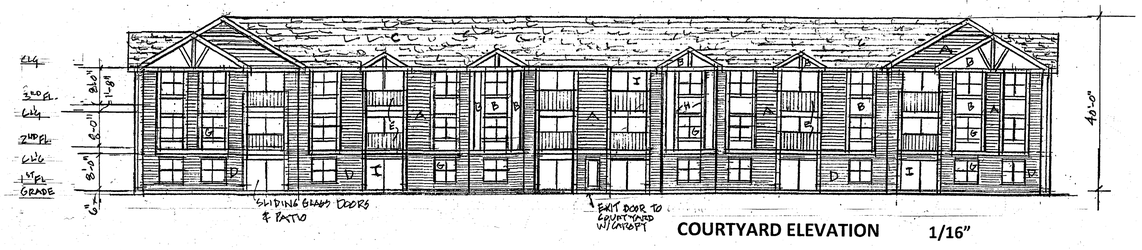
ELEVATIONS 1/8



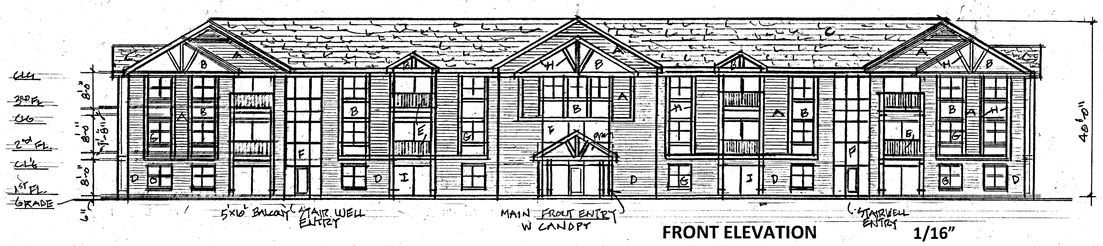
PLAN 1/8

TRASH ENCLOSURES

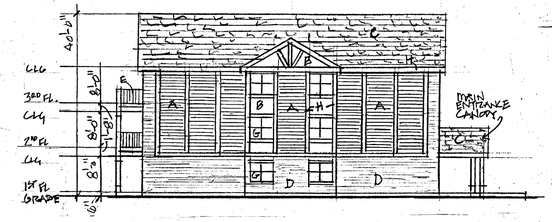
551 CONGRESS PKWY



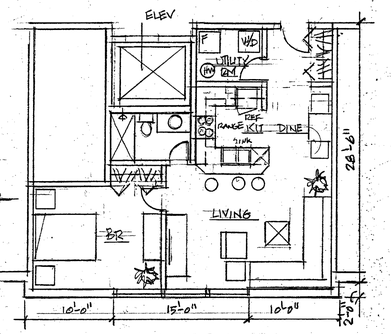
COURTYARD ELEVATION 1/16"



FRONT ELEVATION 1/16"



SIDE ELEVATION 1/16"



SUITE D 1/8"

766 SF

BUILDING EXTERIOR FINISH SCHEDULE

A. **SIDING –** HORIZONTAL BOARDS HARDI BOARD SIDING

B. **SIDING –** SMOOTH HARDI BOARD SIDING

C. **ROOF –** ARCHITECTURAL DIMENSIONAL ASPHALT SHINGLES

D. **FACEBRICK –**

E. **BALCONY RAILINGS –** BRONZE ANONDIZED ALUMINUM

F. **CURTAIN WALL –** BRONZE ANODIZED ALUMINUM FRAMES WITH CLEAR INSULATED GLASS

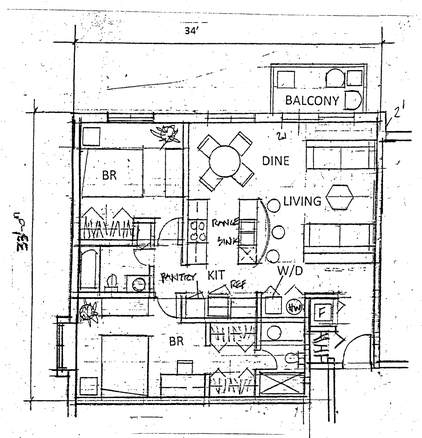
G. **WINDOWS –** BRONZE FIBERGLASS FRAMES WITH CLEAR INSULATED GLASS

H. **TRIM BOARDS –** 1 X 6 TRIM 1 X 12 FASCIA

I. **SLIDING GLASS DOORS –** BRONZE ANODIZED ALUMINUM WITH CLEAR INSULATED GLASS

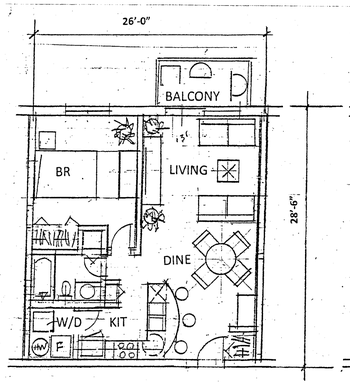
RENTAL UNITS

UNITS/BUILDINGS	1 BR	7
	2 BR	24
TOTAL UNITS (3 BUILDINGS)	1 BR	21 (23%)
	2 BR	72
TOTAL		93 UNITS



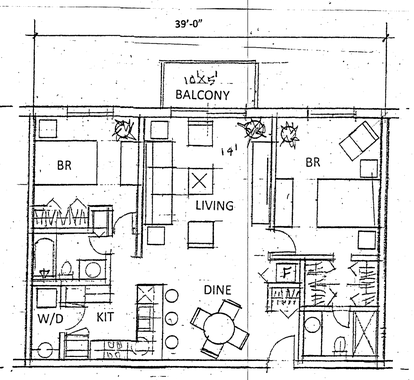
SUITE A 1/8"

1,102 SF



SUITE B 1/8"

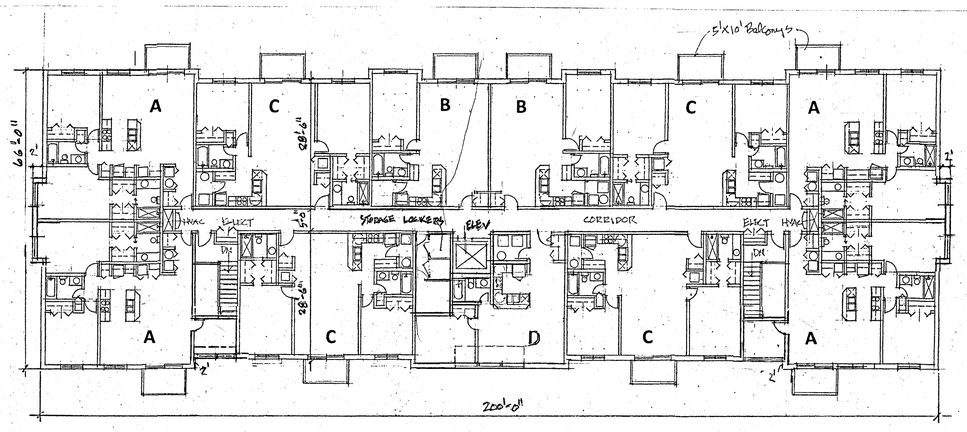
741 SF



SUITE C 1/8"

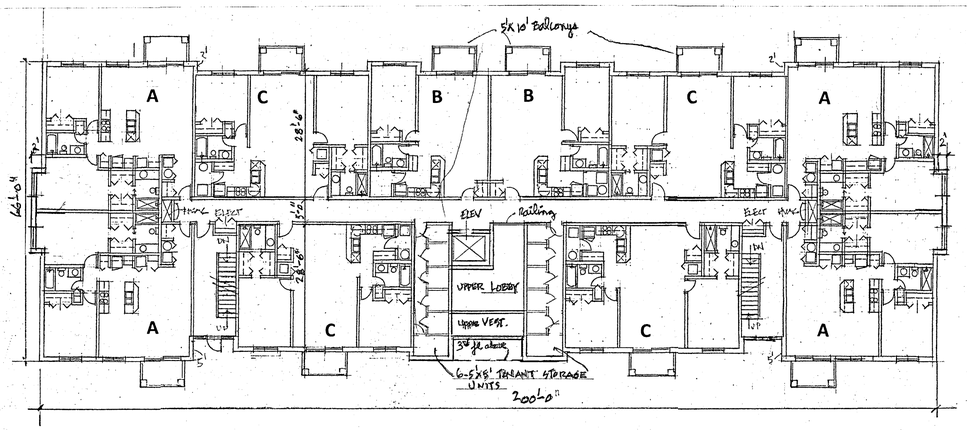
1,112 SF

INDIVIDUAL UNIT FLOOR PLANS 1/8"



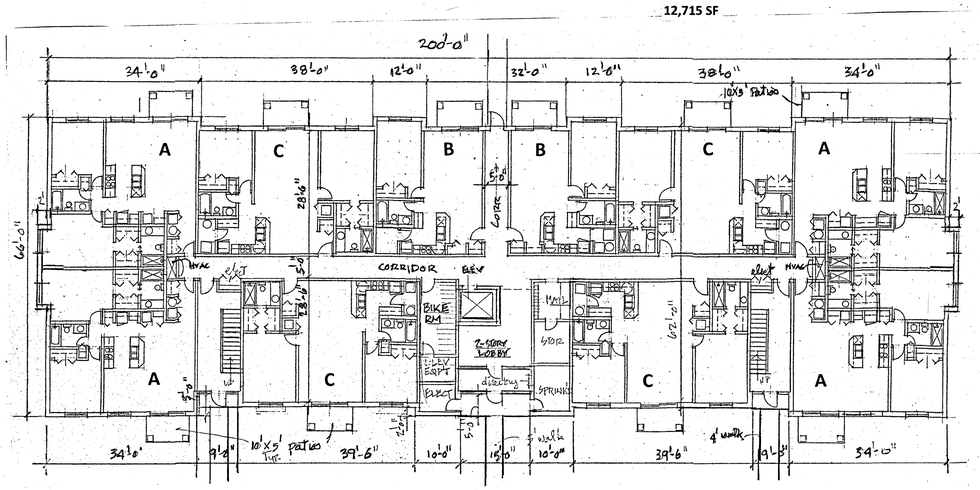
THIRD FLOOR PLAN 1/16" = 1' – 0"

12,790 SF



SECOND FLOOR PLAN 1/16" = 1' – 0"

12,715 SF



TOTAL BUILDING SF 38,220 SF

FIRST FLOOR PLAN 1/16" = 1' – 0"

12,715 SF

Architectural Services
arthur swanson & associates, llc.
10500 WEST LUNT AVENUE • ROSEMONT, ILLINOIS 60018
Phone (708) 635-6111 • FAX: (708) 635-6926

REVISIONS

NO	DATE	REVISIONS

THE COURTYARD AT CONGRESS STATION

551 CONGRESS PARKWAY
CRYSTAL LAKE, ILLINOIS

DATE 11/8/21
JOB NO. ESV 12/19/21
SHEET NO. A1

551 CONGRESS PARKWAY
SITE IMPROVEMENT PLANS

SECTION 4 TOWNSHIP 43 NORTH RANGE 8 EAST
CRYSTAL LAKE, ILLINOIS
MCHENRY COUNTY



LOCATION MAP
Not To Scale

OWNER / DEVELOPER:
Paul Swanson Associates, Inc.
401 E Prospect Ave, Suite 201
Mount Prospect, Illinois 60056
Tel: (847) 670-6710

PREPARED BY:
Haeger Engineering LLC
Illinois Prof. Design Firm #184-003152
100 E. State Parkway, Schaumburg, IL 60173
Tel: (847) 394-6600
Fax: (847) 394-6608
www.haegerengineering.com

CITY OF CRYSTAL LAKE:
100 W. Woodstock Street
Crystal Lake, IL 60014
Tel: (815) 459-2020

BENCHMARKS:

Site Benchmarks:

Cut Cross on curb located in parking lot Northeast corner of property & Southeast of Congress Parkway.
Elevation = 906.46

Cut Cross on curb East side of Exchange Drive & South of Station Drive.
Elevation = 913.78

INDEX TO SHEETS

NO.	DESCRIPTION
C1.0	TITLE SHEET
C2.0	GENERAL NOTES & SPECIFICATIONS
C2.1	GENERAL NOTES & SPECIFICATIONS
C2.2	CITY OF CRYSTAL LAKE NOTES & SPECIFICATIONS
C3.0	EXISTING CONDITIONS & DEMOLITION PLAN
C4.0	GEOMETRY, PAVING, STRIPING, & SIGNAGE PLAN
C5.0	GRADING PLAN
C6.0	UTILITY PLAN
C7.0	CITY OF CRYSTAL LAKE STANDARD DETAILS
C7.1	CITY OF CRYSTAL LAKE STANDARD DETAILS
C7.2	CITY OF CRYSTAL LAKE STANDARD DETAILS
C7.3	CITY OF CRYSTAL LAKE STANDARD DETAILS
C7.4	IDOT STANDARD DETAILS
C7.5	IDOT STANDARD DETAILS
C7.6	TYPICAL DETAILS

INDEX TO STORM WATER POLLUTION PREVENTION PLAN SHEETS

NO.	DESCRIPTION
EC1.0	SWPPP TITLE SHEET
EC2.0	SWPPP GENERAL NOTES & SPECIFICATIONS
EC3.0	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
EC4.0	SWPPP DETAILS

LEGEND

Existing Symbol	Description	Proposed Symbol
	Storm Sewer Manhole	
	Catch Basin	
	Inlet	
	Flared End Section	
	Headwall	
	Area Drain	
	Sanitary Sewer Manhole	
C.O.	Clean Out	C.O.
	Storm Sewer	
	Storm Sewer Service	
	Perforated Underdrain	
	Sanitary Sewer	
	Sanitary Sewer Service	
	Combined Sewer	
FM	Force Main	FM
W	Water Main	W
	Water Main Service	
	Fire Hydrant	
	Valve Vault	
	Valve Box	
	B-Box	
	Well Head	
	Light Pole	
	Light Pole With Mast Arm	
	Traffic Signal	
	Traffic Signal With Mast Arm	
	Hand Hole	
	Fence	
	Guardrail	
	Pipe Bollard	
	Sign	
	Gas Valve	
G	Gas Line	G
E	Electric Line	E
OHW	Overhead Utility Line	OHW
FO	Fiber Optic Line	FO
	Electrical Pedestal	
	Electric Manhole	
	Guy Wire	
	Utility Pole	
	Telephone Pedestal	
	Telephone Manhole	
T	Telephone Line	T
CATV	Cable TV Line	CATV
	Cable TV Pedestal	
	Flagpole	
	Mailbox	
	Handicapped Parking Stall	
X	Number of Parking Stalls	X
	Curb & Gutter	
	Reverse Pitch Curb & Gutter	
	Depressed Curb	
	Retaining Wall	
C XXX.XX	Curb Elevation and	C XXX.XX
G/P XXX.XX	Gutter/Pavement Elevation	G XXX.XX
XXX.XX	Pavement Elevation	P XXX.XX
XXX.XX	Sidewalk Elevation	W XXX.XX
XXX.X +	Ground Elevation	XXX.X
T/W XXX.XX	Top of Wall Elevation	TW XXX.XX
B/W XXX.XX	Bottom of Wall Elevation	BW XXX.XX
Gr XXX.XX	Open Lid Frame & Grate	Gr XXX.XX
Rim XXX.XX	Closed Lid Frame & Lid	Rim XXX.XX
FG XXX.XX	Finish Grade	FG XXX.XX
GF XXX.XX	Garage Floor	GF XXX.XX
TF XXX.XX	Top of Foundation	TF XXX.XX
	Swale	
	Hardscape Flow	
	Softscape Flow	
XXX	Contour Line	XXX
	Wetland	
	Wetland Buffer	
	Normal Water Level	
	High Water Level	
	Flood Plain	
	Flood Way	
	Deciduous Tree	
	Coniferous Tree	
	Bush	
	Brushline	
B-1	Soil Boring	B-1
	Over Land Flow Route	

Know what's **below.**
Call before you dig.

Note:
Call 811 at least 48 hours, excluding weekends and holidays, before you dig.

062-072037
LICENSED PROFESSIONAL ENGINEER
OF
EXPIRES 02-28-22

No.	Revision	Date

HAEGER ENGINEERING
consulting engineers | land surveyors
100 East State Parkway, Schaumburg, IL 60173 • tel. 847.394.6600 • fax. 847.394.6608
Illinois Professional Design Firm License No. 184-003152
www.haegerengineering.com

TITLE SHEET

SITE IMPROVEMENT PLANS
551 CONGRESS PARKWAY
CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

Project Manager:	D J V
Engineer:	D J V
Date:	02/22/2022
Project No.	21-215
Sheet	C1.0 / C7

©Haeger Engineering, LLC

Plot Date: Feb 22, 2022 - 8:42am Plotted By: dvore
File Name: P:\2021\215\215\Drawings\Final Engineering\215TITLE ENGINEERING.dwg

GENERAL NOTES

1. Definition of Terms:
   a. "Owner" shall mean the person or entity with which Haeger Engineering, LLC has been contracted with to prepare the Plans and Specifications.
   b. "Engineer" shall mean Haeger Engineering, LLC.
   c. "Contractor" shall mean the persons or entities responsible for performing and constructing the work described in the Plans, Specifications and other Construction Documents including but not limited to furnishing all labor, materials, tools, equipments, and other incidentals necessary.
   d. "Plans and Specifications" shall mean the Engineering Drawings and any Specifications prepared by Haeger Engineering, LLC, the Engineer.
   e. "Jurisdictional Agency" shall mean any local, municipal, county, township, state or federal entity of government or other entity having jurisdiction of some aspect of the project from whom approval, permit and/or review and approval was required.
2. The Specifications governing this project are as follows:
   a. All applicable Village/City and other applicable Jurisdictional Agency Ordinances, Codes, Regulations, Requirements, Policies, Specifications, Standards, etc.
   b. Roadway and Earthwork construction shall conform to the Illinois Department of Transportation (IDOT) "Standard Specifications for Road and Bridge Construction"; latest edition and any subsequent "Supplemental Specifications and Recurring Special Provisions" as well as any applicable IDOT Highway Standards. Hereafter these items shall be collectively be referred to as the IDOT Standard Specifications.
   c. Water Main, Storm Sewer, and Sanitary Sewer construction shall conform to the "Standard Specifications for Water and Sewer Construction in Illinois", latest edition.
   d. Soil Erosion and Sedimentation Control shall conform to the Illinois Environmental Protection Agency (IEPA) "Illinois Urban Manual" (IUM), latest edition and "Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Control"; latest edition.
   e. Traffic Control shall conform to the "Manual of Uniform Traffic Control Devices" (MUTCD), latest edition, as well as the latest edition of the "Illinois Supplement to the MUTCD", and IDOT "Quality Standard for Work Zone Traffic Control Devices", latest edition.
   f. All handicap accessibility items shall conform to the Illinois Accessibility Code (IAC), latest edition.
   g. General Notes and Specifications contained herein or elsewhere as a separate document.

If a conflict, contradiction, or discrepancy occurs between any of the above Specifications the more stringent requirement shall apply, unless directed otherwise by the applicable Jurisdictional Agency.

3. Contract Documents:
   a. The Engineer's Plans and Specifications shall be included as part of the Contract Documents,
   b. All Contractors shall carefully examine the Plans and Specifications, and other Contract Documents prepared for the work. They shall visit the site of the work and acquaint themselves with all local conditions, codes, and requirements affecting the contract. If awarded the contract, they shall not be allowed extra compensation by reason of any unforeseen difficulties or obstacles which the Contractor could have discovered or reasonably anticipated or inferred prior to bidding or start of construction.
   c. Should it appear that the work covered by the Plans and Specifications or other Contract Documents is not sufficiently detailed or explained, a Request For Information (RFI) Form shall be submitted to the Engineer for further explanations and drawings as may be necessary to clarify the point in question prior to the contract award, it is the intention of the Contract Documents to provide a job complete in every respect. Incidental items or accessories necessary to complete the work may not be specifically noted or detailed, but that are necessary to complete the project shall be considered incidental to the Contract. The Contractor is responsible for this and is not entitled to turn over the project in complete operating condition, irrespective of whether the contract documents cover every detailed item in minute detail.
4. Should any apparent errors, omissions, discrepancies or conflicts be discovered on the Plans, Specifications, Quantities or other Contract Documents by the Contractor, whether prior to or after the award of the contract, the Engineer's attention shall be called to the same before work is begun thereon, so that proper clarification can be provided or revision made. If any work is done without contacting the Engineer, it shall be considered that the Contractor has proceeded at their own risk and expense.
5. Whenever the performance of work is indicated on the Plans, and no specific item is included in the Contract for payment, that work shall be considered incidental to the Contract and no additional compensation will be allowed. The Contractor shall provide all necessary labor, material, equipment, etc. necessary to perform all the work required for construction of the proposed improvements.
6. The base plan/drawing for the Engineering Plans, existing conditions, site topography, utilities, rights-of-way, etc.) was obtained from the topographic survey prepared by:

   Vandersteppen Land Surveying, Inc.
   1316 N. Madison Street, Woodstock, IL 60098
   Ph: (815) 337-4310
   Job Number: 210678
   Date: 09/20/2021

7. The Owner shall obtain the necessary approvals from the following Jurisdictional Agencies:
   a. City of Crystal Lake
   b. Illinois Environmental Protection Agency (IEPA) - Water and Sewer Division
   c. Illinois Environmental Protection Agency (IEPA) - Notice of Intent (NOI) General Permit to Discharge Storm Water from Construction Site Activities
8. The Contractor, unless otherwise agreed upon in writing with the Owner prior to the start of Construction, shall at his own expense, obtain all other approvals including permits, licenses, etc., as may be required for the execution of this work as well as provide all necessary notices, pay all fees required, post bonds, obtain all necessary insurance, and shall comply with all laws, ordinances, rules, and regulations relating to the work and to the preservation of public health and safety. The Contractor shall also provide all necessary insurance bonds as may be required by the Jurisdictional Agencies. In addition, the Contractor shall meet all of the requirements of any permits as might be issued for this work by other Agencies, and shall pay for at their sole expense any surety, insurance or bonds as may be required by the Jurisdictional Agencies.
9. No work shall proceed until the appropriate permit or permits have been obtained for the item or items to be constructed. If any work does proceed without the appropriate permits or approvals, it is being done without the permission or consent of the Engineer, and the Contractor or party authorizing the work to proceed shall be assumed to be proceeding at their own risk and the Engineer shall not be held liable or responsible for any work only being performed in part.
10. The Contractor shall indemnify and hold harmless the Owner, Engineer, Village/City, and other Jurisdictional Agencies as well as all of their respective officers, employees, agents, and Engineers from and against all losses, claims, demands, payments, suits, actions, recoveries, and judgments of every nature and description brought or recovered against them, by reason of any act, error or omission of said Contractor, their agents or employees in the execution of the work or in the guarding of it.
11. The construction shall be under the general inspection and observation of the designated individual authorized by the Village/City or other applicable Jurisdictional Agencies. The Village/City, Jurisdictional Agencies, Owner, and Engineer shall be notified at least two working days prior to the commencement of work.
12. The location of existing underground utilities such as water mains, sewers, gas lines, electric lines, cable TV lines, their optic lines, etc., as shown on the Plans, has been determined from the best available information and has been provided for the convenience of the Contractor. However, the Owner and Engineer do not assume responsibility for the exact location of such utilities, utilities other than those shown may be encountered and that the actual location of those which are shown may be different from the location as shown on the Plans. The Contractor is to verify the location of all utilities prior to the start of work and shall be damaging to the same. The Contractor shall contact J.U.L.I.E. or Digger by dialing 811 (Outside the City of Chicago - J.U.L.I.E.- 1-800-892-0123 or within the City of Chicago - Digger- 312-744-7000) and the Village/City Public Works Department for utility locates at least 48 hours, excluding weekends and holidays, before digging. For any utility companies which are not members of JULIE or DIGGER, the Contractor shall contact the Owners of each respective utility directly for utility locates at least 48 hours, excluding weekends and holidays, before digging.
13. In some instances, the existing utilities are shown on the Plans according to information obtained from the utility companies (atlas information) and/or surveys performed By Others. The Owner and Engineer do not guarantee the accuracy or completeness of this information. The Contractor shall be aware of potential conflicts with existing or other proposed utilities as indicated on the Plans or that become apparent as the result of field locates By Others. The Contractor shall perform their own investigations as necessary to determine the existence, nature, and location of all utility lines and related appurtenances within the limits or adjacent to the proposed improvements. The Contractor shall locate all utilities far enough in advance to avoid all conflicts between existing utilities and proposed improvements and make the Engineer aware of any such conflicts. If the Contractor encounters a conflict between the proposed improvements and existing utility that was not located in advance by the Contractor, then the Contractor shall at no cost to Owner, relocate the proposed improvements and/or utility to avoid the conflict.
14. The Contractor will be required to cooperate with all utility companies involved in connection with the removal, temporary relocation, construction, reconstruction or abandonment by these companies of any and all services or facilities owned or operated by them within the limits or general vicinity of the proposed improvements. Further, at the direction of the Owner and Utility Companies the Contractor shall coordinate the location and install PVC sleeves as necessary under the proposed pavement, curbs, walks, etc. for utility companies to run their proposed utility lines.
15. Before doing any work which will damage, disturb or destroy any unprotected, or unprotected any utility lines or related appurtenances encountered, the Contractor shall notify the respective Owner thereof, who will make all arrangements for relocating, adjusting, bracing, or otherwise maintaining or abandoning service on lines that fall within the limits of the proposed construction without cost to the Contractor, including the removal of all cables, manhole covers and other related appurtenances which the Owner desires to salvage. After such arrangements have been made, the Contractor will proceed with the work as directed by the Engineer. All utility lines and related appurtenances which are abandoned shall be removed if necessary and legally disposed of legally off-site by the Contractor.
16. No extra compensation will be allowed by the Contractor for any expense incurred for complying with all of these aforementioned utility coordination and cooperation requirements, or because of delays, inconvenience or interruptions in their work resulting from the failure of any utility company to remove, relocate, construct, reconstruct or abandon their services. The responsibility for prompt and timely removal, relocation, reconstruction or abandonment of their facilities by all utility companies involved, and the coordination of their own work with that of these companies to the end that work on this improvement is not delayed because of the necessary changes in the existing utilities, public or private, shall rest upon the Contractor.
17. Prior to commencing work, the Contractor is to field check and verify all critical locations, elevations, materials, sizes, dimensions, and conditions affecting the work, and notify the Engineer immediately if there are any suspected discrepancies. No work shall be performed until the suspected discrepancy has been resolved. The Contractor shall also call to the attention of the Engineer any errors or discrepancies which may be suspected in the lines and grades which are established by the Surveyor, and shall not proceed with the work until any lines and grades which are to believed to be in error have been verified or corrected by the Engineer.
18. The Contractor shall maintain positive drainage at all times during construction. Construction shall not block off-site drainage and the flow from any drainage ways, field tiles, storm sewers or similar draining off-site properties. All on-site existing field tiles, storm sewers, drainage ways or similar encountered or damaged during construction shall be maintained, restored to their original pre-construction condition or better, properly re-routed, and/or connected to the proposed stormwater drainage system. If this can't be accomplished a field tile shall be located and re-routed with new pipe of similar diameter to the original line and put back in service. The Contractor shall notify the Engineer if any such field tiles are encountered. Whenever during any construction activities any loose material is deposited in the flow line of ponds, ditches, drainage structures, etc. such that the natural flow of water is obstructed, this material shall be removed by the responsible party.
19. Prior to commencement of construction, on sites that will ultimately result in the disturbance of one (1) acre or more, the Contractor shall be responsible for obtaining a copy of the notice of coverage letter and the IEPA National Pollutant Discharge Elimination System (NPDES) General Permit ILR10 from the Owner. The Owner together along with the Contractor and/or other entities if so designated by the Owner, shall be responsible for ensuring that all the requirements of the General Permit and the Storm Water Pollution Prevention Plan (SWPPP) including but not limited to the installation, maintenance as well as the installation of any additional measures necessary that may be required, and inspections of the soil erosion and sediment control measures as well as completing all of the necessary applicable certifications, reports, logs, etc. Inspections are required to be performed at least once every seven (7) calendar days and within 24 hours of the end of a storm event of 0.5 inches of rain (or equivalent snowfall) or greater. The SWPPP and all the required paperwork shall be kept on-site and be updated and ready for viewing.
20. No construction activities, disturbance or fill shall occur within the limits of natural resources such as wetlands, floodplains, creeks, streams, ponds, lakes, basins, reservoirs, etc. or their respective buffers unless specifically specified on the Plans and further that this work has been permitted. The Contractor shall take sufficient precautions to protect these natural resources that are to remain, whether on-site or on adjacent property, to protect them from sediment, fuels, oils, bitumens, calcium chloride, or other harmful materials that may be detrimental. The Contractor shall conduct and schedule their Construction so as to avoid siltation, or other disturbance or impact to these natural resource areas, The Contractor shall not disturb or otherwise impact these designated natural resource areas, or areas that have been designated to be protected or as essential habitat for State or Federal listed endangered or threatened species, or Prairie or Savannah areas where the Owner has made commitments during the acquisition of these areas. If previously unidentified natural resource areas, prairies, savannahs, or areas or locations suspected of containing protected species are identified during construction, the Contractor shall not disturb them unless written permission to do so is granted by the Owner or applicable Jurisdictional Agency. The Owner, Engineer, or applicable Jurisdictional Agency determines that additional measures are necessary to prevent or mitigate project effects on natural resource areas, prairies, savannahs, protected species, or essential habitat the Contractor shall cooperate in accomplishing these measures.
21. The Contractor shall confine their activities to within the project boundaries, work areas, or easements specified. No work shall be performed on adjacent private property or public lands for the project work areas without the written permission of each respective owner. The Contractor shall be liable for damage caused to existing or newly installed improvements as well as any damage on adjacent property or areas outside designated work areas, provided damage as a result of Contractor action, or lack thereof.
22. The Contractor is responsible for returning all areas affected by equipment, materials and/or laborers to pre-construction condition or better. All existing improvements, including but not limited to paved pavements, curbs, drives, trees, and parkways damaged or removed during construction shall be promptly restored to their respective original pre-construction condition or better. The Contractor is also responsible for providing all compacted earth embankment fill material in areas over excavated completed and has been approved and accepted by the Owner.
23. Clean-up and final restoration shall be considered incidental upon completion of each phase of the work or when directed to do so by the Owner, so that these areas will be restored as nearly as possible to their original pre-construction condition or better, and shall include but not be limited to, restoration of maintained lawns and ground-cover, fences, landscaping, trees, sod, shrubs, plantings, fences, mailboxes, storm sewers, drain tiles, sanitary sewers, water mains, etc. It shall also be the responsibility of the Contractor to remove from the site any and all materials and debris which results from their construction operations and dispose of legally off-site.
24. All proposed grades shown on the Plans shall be considered to be finished grade surface elevations unless noted otherwise.
25. Construction staking/layout shall be provided by the Contractor and shall be included in the Contract Price unless otherwise agreed upon in writing with the Owner prior to the start of Construction.
26. All Construction means and methods, techniques, procedures, scheduling, sequencing, and job site safety is the sole responsibility of the Contractor.
27. The Contractor shall observe and comply with all the Occupational Safety and Health Administration (OSHA) standards, rules and regulations, as well as any other applicable local, state and federal safety requirements.
28. All trenching, excavating, bracing and construction work performed shall be in accordance with the Occupational Safety and Health Administration (OSHA) standards.
29. The Contractor shall take whatever steps necessary to protect the public from open trenches, excavations, and other site conditions during construction, and shall maintain adequate barricades, fences, or pavement or parkway are to be left open over a holiday, weekend, or after 3 p.m. on the day preceding a holiday or weekend.
30. During construction the Contractor and their Sub-Contractors shall keep the premises clean by removing all rubbish, debris, waste material and other accumulations as necessary. The Contractor shall clean the premises to the satisfaction of the Village/City and Owner.
31. The Contractor shall have adequate sweeping equipment available to operate wheeled street sweepers and end loaders available on-site at all times when equipment or vehicles are using existing public or private roads and/or pavement. The Contractor shall immediately remove any sediment or debris including but not limited to dirt, mud, gravel, stone, concrete, asphalt, or any other construction debris, garbage, oil, grease, etc. deposited on any roadway, street, walk, alley or other pavement by any equipment, vehicles or personnel associated with this project. This work shall be considered incidental to the Contract.
32. The Contractor shall at all times maintain proper dust control at the site and shall have a watering truck ready available at all times. Contractor shall implement dust control measures wherever necessary as the site conditions become unhealthy due to blowing soil or dust. The site shall be watered as many times per day as necessary to maintain a healthy work site as determined by the Owner or Engineer. Water for non-emergency use shall be obtained from any fire hydrant in the area, but only with the permit with a proper backflow preventer in accordance with Village/City or Jurisdictional Agency requirements. The cost to furnish dust control shall be incidental to the cost of Construction.
33. Trees not marked for removal shall be protected as necessary by the Contractor. In the event that a tree is damaged by the Contractor during construction, the Contractor shall replace such tree with a tree of three (3) inch caliper measurement, unless otherwise noted. Where does not have specific tree replacement requirements, the damaged existing or newly planted tree shall be replaced in accordance with the procedures outlined in Section 201 of the IDOT Standard Specifications. The Contractor shall be responsible for the care of trees within the limits of construction, Trees to be saved or protected shall be held responsible for the replacement of all damaged trees not designed for removal, and any penalties associated with the unapproved removal of trees.
34. Where overhanging branches, limbs, or roots interfere with the required construction activities, said branches, limbs, or roots shall be trimmed or pruned as necessary in accordance with Section 201 of the IDOT Standard Specifications. This work shall be performed under the supervision of an approved arborist or landscape architect.
35. The Contractor is responsible for the installation and maintenance of adequate signs, traffic control devices, and warning lights necessary to provide safe, efficient traffic flow in all areas where the work will interrupt or cause a change in any form, the conditions of traffic flow that existed prior to the commencement of any portions of the work. Roadways shall remain open to a degree satisfactory to the Owner or applicable Jurisdictional Agency. Barricades, devices, equipment, personnel, etc. necessary to provide adequate and efficient traffic flow in all areas where the work will interrupt or cause a change in any form, the conditions of traffic flow that existed prior to the commencement of any portions of the work, Roadways shall remain open to a degree satisfactory to the Owner or applicable Jurisdictional Agency. Barricades, devices, equipment, personnel, etc. necessary to provide adequate and efficient traffic flow in all areas where the work will interrupt or cause to change in any form, the conditions of traffic flow that existed prior to the commencement of any portions of the work, Roadways shall remain open to a degree satisfactory to the Owner or applicable Jurisdictional Agency. The Contractor shall provide all signage, barricades, devices, equipment, personnel, etc. necessary to provide safe

WATER MAIN

1. Refer to Sewer and Water Main General Notes for additional requirements.
2. Water Main Pipe shall be constructed from one or more of the following materials as specified on the Plans:
   a. Ductile Iron Pipe (DIP). Class 52 conforming to ANSI A21.51 and AWWA C151 with a 150 psi working pressure, with push-on double sealing rubber gasket joints conforming to ANSI A21.11 and AWWA C111. The interior of the pipe and fittings shall be cement-mortar lined in accordance with ANSI A21.4 and AWWA C104. The exterior of all pipes and fittings shall be coated with an asphaltic coating per ANSI A21.51 and AWWA C151 for ductile iron pipe, and ANSI A21.10/A21.53 and AWWA C110/C153 for fittings. If specified, the ductile iron pipe and fittings shall be encased by a polyethylene encasement with an 8 mil thickness, Class C (Black) conforming to ANSI A21.5 and AWWA C105. Installation of DIP and fittings shall be in accordance with AWWA C600.
   b. Polyvinyl Chloride (PVC) Pipe. SDR 18 conforming to AWWA C900 (4"-12" diameters) and AWWA C905 (14"-48" diameters) with a pressure rating of 235 conforming to ASTM D2241 and joints in accordance with ASTM D3139 with elastomeric seals in accordance with ASTM F477. Installation of PVC pipe and fittings shall be in accordance with AWWA C605.
   c. High Density Polyethylene (HDPE) pressure pipe and fittings for water main in accordance with AWWA C906, DR 11. 160 psi, with ductile iron pipe outside dimension.
3. Ductile iron fittings or cast iron fittings shall conform to ANSI A21.10 and AWWA C111; and compact ductile iron fittings shall conform to ANSI A21.53 and AWWA C153.
4. All water structures shall be constructed of precast reinforced concrete sections with tongue and groove joints conforming to ASTM C478 and shall have a minimum inside diameter of 48-inches. If structure diameter is not specified in the Plans the required structure diameter shall be determined by size of pipes and appurtenances that need to be located within said structure. The precast reinforced concrete base and bottom section shall be monolithically cast. All pipe openings in the structure shall be precast into the structure walls at the proper invert elevation and orientation. Water structures shall have concentric cones, except where necessary due to height and opening restrictions, where a precast reinforced concrete flat top slab section shall be provided in-lieu of an eccentric cone section. Flat top slabs shall conform to IDOT Standard Detail 602601 as well as meet the H-20/HS-20 loading requirement. Concrete adjusting rings will be permitted where necessary and shall be limited to two (2) adjusting rings totaling not more than eight (8) inches in height. All joints between structure sections, adjusting rings and frames shall be securely sealed to one another using a resilient, flexible, non-hardening bituminous mastic or butyl sealing compound in accordance with ASTM C990, or flexible rubber gasket in accordance with ASTM C443 in order to provide a watertight joint. The Contractor shall remove all excess mastic on inside of structure and butter joints with mortar. All water structures shall be watertight.
5. Valve vaults shall have minimum inside diameter of forty-eight (48) inches for eight (8) inch diameter and smaller valves, and have a minimum inside diameter of sixty (60) inches for ten (10) inch and larger valves.
6. Water services 2 ½ inches in diameter and smaller shall be Type K Copper for underground services conforming to ASTM B88 and ASTM B251. Larger diameter water services shall be of same pipe and joint materials as the mainline water main or as noted on the Plans.
7. The minimum cover from finished grade to the top of the water main and water services shall be 5.5 feet.
8. Water main fittings (i.e., bends, elbows, tees, reducers, etc.) may not be specifically referenced on the Plans and are to be considered as required and included in the linear footage cost of the watermain.
9. The standards for maximum deflection at pipe joints and laying radius for the various pipe types and lengths shall be per the following:
   a. Ductile Iron Pipe (DIP) – AWWA C600.
   b. Polyvinyl Chloride (PVC) Pipe – AWWA C900.
   c. High Density Polyethylene (HDPE) – Per Manufacturer's requirements.
10. Thrust blocking shall be installed on water mains at all tees, elbows, plugs, and bends 11 ¼ degrees or greater etc, per the "Standard Specifications for Water and Sewer Construction", latest edition. Thrust blocking shall be poured in place Portland Cement Concrete.
11. All bends greater than 10 degrees, hydrants, tees and fittings shall be mechanical joint with Mega-Lug retaining glands or Field Lok gasket in casings, between fittings and at grade changes.
12. All bolts and nuts shall be stainless steel.
13. A tracer wire shall be installed on all non-metallic water mains. The wire shall be continuous from valve vault to valve vault.
14. Frame and lids for water structures shall be Neenah R-1713 or approved equal and lids shall be imprinted with the word "WATER" cast into the lid.
15. All water valves, fire hydrants, t-boxes, corporation stops, curb stops, ground key stops, service boxes, tapping sleeves, and other water main related appurtenances shall conform to Village/City or applicable Jurisdictional Agency Requirements and shall furnish and install the same. Contractor shall verify exact model, style, type, and manufacturer required prior to ordering. All fire hydrants shall be painted in accordance with the applicable Jurisdictional Agency requirements.
16. Valves shall be non-rising stem type and shall close by turning clockwise. All valves shall be resilient wedge gate or ball valves, except that butterfly valves shall be installed on all water mains 16" diameter and larger, conforming to AWWA C500 with a minimum rated working pressure of 200 psi and in accordance with applicable Jurisdictional Agency requirements. Specialty valves and fittings such as butterfly valves, tapping sleeves and valves, pressure reducing valves, insertion valves, and air release valves shall conform to the requirements of the applicable Jurisdictional Agency requirements and shall be installed at locations indicated on the Plans.
17. When making connections to existing water mains requires a shutdown that requires an interruption in service, the Contractor shall contact the Owner of the water main and they shall mutually agree upon a date and a time for connection to the system which will allow ample time to perform the work required in order to make the required connection. Notifications of all users to be affected by the interruption shall be provided a minimum of twenty-four (24) hours prior to the service interruption. All water mains opened to atmosphere must be disinfected prior to returning the water main to service.
18. Water Main and related appurtenances shall be tested in accordance with the following:
   a. All water mains shall be tested by means of a pressure test and leakage test, in accordance with the "Standard Specifications for Water and Sewer Construction", latest edition, AWWA C600, and in accordance with applicable Jurisdictional Agency requirements.
   b. All water structures (i.e., valve vaults) shall be subject to a leakage test in accordance with IEPA guidelines and Jurisdictional Agency requirements.
19. After completion of the water main testing, the water mains and related appurtenances shall be flushed clean and disinfected (chlorinated) in accordance with the "Standard Specifications for Water and Sewer Construction", latest edition and in accordance with applicable Jurisdictional Agency requirements.

WATER MAIN PROTECTION REQUIREMENTS

Water mains, water services and related appurtenances shall be protected from any existing or proposed drains, sanitary sewers, storm sewers, combined sewers, force mains, and sewer services. All these previously mentioned items shall collectively be referred to as "sewer(s)" for the remainder of this section. Horizontal and vertical separation requirements between water mains and sewers as well as other water main protection requirements shall be in accordance with "Standard Specifications for Water and Sewer Construction in Illinois", latest edition and per the following:

1. Horizontal Separation:
   a. Whenever possible, an existing or proposed water main must be at least ten (10) feet horizontally from any existing or proposed drain, storm sewer, sanitary sewer, combined sewer or sewer service.
   b. Should local conditions exist which would prevent a lateral separation of ten (10) feet, an existing or proposed water main may be closer than ten (10) feet to a sewer provided that the water main invert is at least eighteen (18) inches above the crown of the sewer, and is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.
   c. If it is impossible to obtain proper horizontal and vertical separation as described in items 1a and 1b above, both the water main and sewer must be constructed of pipe and joint material that conforms to water main quality pipe and joint standards, and be pressure tested to the maximum expected surcharge head to assure water tightness before backfilling.
2. Vertical Separation:
   a. Whenever water mains cross sewers, the water main shall be laid at such an elevation that the invert of the water main is at least eighteen (18) inches above the crown of the sewer. This vertical separation shall be maintained for that portion of the water main located within ten (10) feet horizontally of any sewer crossed. This must be measured as the perpendicular distance from the water main to the sewer. A length of water main pipe shall be centered over the sewer to be crossed with joints placed equidistant from the sewer.
   b. Where conditions exist that the minimum vertical separation set forth in Item 2a above cannot be maintained, or it is necessary for the water main to pass under a sewer, one of the following two measures must be taken:
      i. The water main shall be installed within a PVC casing pipe that conforms to water main quality pipe and joint standards and the casing pipe shall extend on each side of the crossing until the normal distance from the water main to the sewer is at least ten (10) feet.
      ii. The involved sewer shall be constructed of pipe and joint material which would conform to water main quality pipe and joint standards until the normal distance on either side of the crossing from the water main to the sewer is at least ten (10) feet.
   c. In making such crossings, a length of water main pipe shall be centered over the sewer to be crossed with joints equidistant from the sewer. Where a water main must cross under a sewer, a vertical separation of eighteen (18) inches between the invert of the sewer and the crown of the water main shall be maintained, along with means to support the sewer to prevent their settling and breaking the water main.
3. The horizontal and vertical separation between water service lines and sewers or undersized service lines should be the same as for water mains, as detailed above, except that when minimum horizontal and vertical separation cannot be maintained, water main quality pipe and joints as described under Vertical Separation above, may be used for sewer or related service lines.
4. Water mains or services shall not be allowed to pass through or come into contact with sewer structures.
5. Water mains shall be separated from septic tanks, disposal fields, seepage beds, and sewage lift stations by a minimum of twenty-five (25) feet.
6. Water mains shall be separated from sanitary sewer force mains by a minimum of at least ten (10) feet horizontally and there shall be an eighteen (18) inch vertical separation at crossings.
7. The Contractor shall protect water mains and service lines from the entrance of hydrocarbons through diffusion through any material used in the construction of the line.
8. Casing pipe shall be installed in locations and of material specified on the Plans or where necessary to meet the water main protection requirements. The carrier pipe shall be securely blocked and banded with appropriately spaced spacers, and sanitary and storm sewers shall maintain the specified gradient. Upon installing the carrier pipe the voids between the casing and carrier pipe shall be filled with sand, pea gravel or flowable fill and the ends shall be sealed.

PAVEMENT, CURB & GUTTER, AND WALKS

1. All work under this Section shall be performed in accordance the IDOT Standard Specifications or as specified in the Plans.
2. Concrete curb or curb and gutter shall be constructed in accordance with the Plans and Section 606 of the IDOT Standard Specifications. A ½" pre-molded fiber joint filler along with two (2) 18" long x ½" (#4) epoxy coated smooth round dowel bars with greased end caps, centered on joint, shall be provided at expansion joints. Expansion joints shall be provided at a maximum of sixty (60) foot intervals and at all points of curvature and tangency, curb returns, five (5) feet either side of edge of structures, and at the end of each pour. Construction joints shall be provided at maximum twenty (20) foot intervals.
3. Where proposed curb or curb and gutter connects to an existing curb or curb and gutter, the existing curb or curb and gutter shall be saw-cut and then two 18" long x ½" (#4) epoxy coated smooth round dowel bars with greased end caps shall be drilled and installed nine (9) inches into the existing and proposed curb. Bars shall be installed in a location similar to that of the expansion joint in the curb or curb and gutter as applicable.
4. All curb and curb and gutter constructed over a utility trench shall be reinforced with two (2) #4 epoxy coated reinforcing bars for a length of ten (10) feet centered over the trench or as shown on the plans.
5. Reversed pitched curb and gutter shall be installed in areas where pavement slopes away from the curb.
6. Sidewalks and walks shall be constructed in accordance with the Plans and Section 424 of the IDOT Standard Specifications. Concrete sidewalks and walks shall be thickened to a minimum of 8" at all driveways. All sidewalks and walks shall be IDOT Portland Cement Concrete, Class SI, on compacted aggregate base course as shown on the Plans. Scored contraction joints shall be provided at five (5) foot intervals or as specified in the Plans. Expansion joints consisting of a ½" pre-molded fiber joint filler shall be provided at maximum fifty (50) foot intervals, and adjacent to concrete curbs, drives, foundations, ramps, etc, as well as when meeting existing concrete walks.
7. Sidewalks and walks constructed over a utility trench shall be reinforced with three (3) #4 round epoxy coated reinforcing bars for a length of ten (10) feet centered over the utility trench or as shown on the plans.
8. Curb ramps accessible to the disabled with raised truncated dome detectable warning surface of standard brick red color or other contrasting color shall be provided at all locations where sidewalk meets curb and at other locations shown on the Plans in accordance with the Illinois Accessibility Code (IAC), latest edition and IDOT Standard 424001, latest revision.
9. Curing and protection of all exposed concrete surfaces shall be in accordance with the IDOT Standard Specifications. No "honey-combed" or other similar failures of the concrete surfaces will be accepted.
10. Aggregate base course shall be in accordance with the Plans and Section 351 of the IDOT Standard Specifications. Aggregate base course material shall be CA-6, Type B, 100% crushed gravel conforming to Section 1004 of the IDOT Standard Specifications.
11. Bituminous binder and surface courses shall be Hot Mix Asphalt (HMA) of type and compacted thickness as specified in the Plans and shall be constructed in accordance with Section 406 of the IDOT Standard Specifications. The surface course shall be made with virgin materials; no recycled materials shall be allowed unless specified otherwise on the Plans. The Contractor shall provide and pay for the services of a competent paving laboratory to design and supervise the control of the paving mixture. All paving materials and mixes shall be IDOT certified.
12. Portland cement concrete (PCC) pavement shall be Class PV with reinforcement as specified on Plans and be constructed in accordance with Section 420 of the IDOT Standard Specifications.
13. All concrete work shall be finished with a broom finish unless specified otherwise in the Plans.
14. The Contractor shall saw-cut the exposed edges of all existing pavement adjacent to any proposed pavement, apron, sidewalk, curb and gutter or similar to provide a smooth, clean edge that is free of loose material. A proper transition butt joint and/or taper shall also be provided as necessary. Refer to butt joint detail for additional information.
15. The testing of the subgrade, aggregate base course, bituminous aggregate material, binder course, surface course, and concrete work shall be required and be performed in accordance with the IDOT Standard Specifications and requirements of the applicable Jurisdictional Agency. A qualified testing firm shall be employed to perform the required tests, ensure quality and conformance, and provide the results to the Engineer, Owner, and Jurisdictional Agency. The Contractor shall provide the Owner with a construction schedule and shall coordinate all required testing with the testing firm.
16. Prior to the commencement of any paving activities, a proof-roll must be performed by the Contractor and approved by the Village/City or applicable Jurisdictional Agency, and the Owner. All areas not passing the proof-roll shall be remediated as recommended by the Soils/Geotechnical Engineer and approved by the Owner. Any remediate areas shall be re-tested.
17. Prior to installation of the aggregate base course:
   a. The subgrade shall be prepared in accordance with Section 301 of the IDOT Standard Specifications.
   b. The Contractor shall be responsible for all subgrade compaction and preparation to within 0.1-ft of the proposed subgrade elevation. Subgrade shall be compacted to a minimum 95% of the modified proctor density in accordance with ASTM D1557.
   c. Sub-grade shall pass a proof-roll and any unsuitable areas in the subgrade shall be remediated as recommended by the Soils/Geotechnical Engineer and approved by the Owner.
18. Prior to the installation of the binder course:
   a. The aggregate base course shall be prepared in accordance with Section 351 of the IDOT Standard Specifications.
   b. The aggregate base course shall be clean and dry.
   c. The bituminous priming material shall be prepared and applied according to Section 403 of the IDOT Standard Specifications.
   d. The Contractor shall prime the aggregate base course at a rate of 0.25 gallons per square yard prior to the placement of the binder course.
   e. The binder course shall be placed only when the temperature in the shade is at least 40° F and the forecast is for rising temperatures.
19. Prior to the installation of the surface course:
   a. The Contractor shall patch and repair all damaged and failed areas in the binder course to the satisfaction of the Village/City or applicable Jurisdictional Agency, and the Owner.
   b. The Contractor shall repair all damaged curb and gutter or other concrete pavement to the satisfaction of the Village/City or applicable Jurisdictional Agency, and the Owner.
   c. Structures within pavement shall be adjusted to final surface grade.
   d. The Contractor shall clean and prime the binder course at a rate of 0.05 gallons per square yard prior to the placement of the surface course.
   e. The surface course shall be placed only when the air temperature in the shade is at least 45° F and the forecast is for rising temperatures.
20. Pavement marking/striping:
   a. All Pavement markings shall be in accordance with Section 780 of the IDOT Standard Specifications and the MUTCD, and be of the material type, size and color specified on the Plans.
   b. Pavement marking on freeways shall be placed with truck-mounted equipment. Markings on roads other than freeways may be placed with either truck-mounted or hand-operated equipment.
   c. Before applying the pavement marking material, the pavement shall be clean, dry, and free of debris or any other material that would reduce the adhesion of the markings on the pavement.
   d. Pavement markings shall be applied in accordance with the manufacturer's recommended instructions.
   e. Pavement markings shall be uniform and have clean, straight edges.
   f. Pavement marking words and symbols shall conform closely to the dimensions and spacing specified in the MUTCD, IDOT Standard Details, and the Plans.
   g. Deviations from the required dimensions and spacing or other departures from reasonable standards of professionalism will be cause for rejection by the Engineer.
21. Handicapped stalls shall be striped and signed in accordance with the Illinois Accessibility Code (IAC), latest edition and any other applicable ADA guidelines. Handicapped stalls shall be a minimum of sixteen (16) feet wide and signage shall be affixed to a post permanently mounted in the ground or wall and located in the center of the space no further than five (5) feet from the front of the accessible space. The minimum height to the bottom of the fine sign shall be four (4) feet. Handicapped stall striping shall be yellow in color.
22. All signs shall be in accordance with Section 720 of the IDOT Standard Specifications and the MUTCD, and be of the material type, size, and color specified on the Plans.
23. Raised reflective pavement markers shall be in accordance with Section 781 of the IDOT Standard Specifications and be recessed into the pavement as required by the applicable Jurisdictional Agency.
24. Pavement marking and marker removal shall be in accordance with Section 783 of the IDOT Standard Specifications.
25. All pavements, curb, curb and gutters, walks, etc. shall be cleaned to the satisfaction of the Village/City or applicable Jurisdictional Agency, Owner, and Engineer as necessary during construction and at the end of the project prior to the final acceptance.

SOIL EROSION AND SEDIMENTATION CONTROL GENERAL NOTES

1. All soil erosion and sedimentation control (SESC) measures shall be installed and properly maintained in accordance with the Illinois Environmental Protection Agency's (IEPA) "Illinois Urban Manual", latest edition and "Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Control", latest edition, and shall be followed as directed by the Village/City and Engineer. In addition, on sites that will ultimately result in the disturbance of one (1) acre or more the provisions outlined in the General National Pollutant Discharge Elimination System (NPDES) General Permit No. ILR10, latest edition, shall also be followed.
2. Prior to commencement of construction, on sites that will ultimately result in the disturbance of one (1) acre or more, the Contractor shall be responsible for obtaining a copy of the notice of coverage letter and the IEPA National Pollutant Discharge Elimination System (NPDES) General Permit ILR10 from the Owner. The Owner together along with the Contractor and/or other entities if so designated by the Owner, shall be responsible for ensuring that all the requirements of the General Permit and the Storm Water Pollution Prevention Plan (SWPPP) including but not limited to the installation, maintenance as well as the installation of any additional measures necessary that may be required, and inspections of the soil erosion and sediment control measures as well as completing all of the necessary applicable certifications, reports, logs, etc. Inspections are required to be performed at least once every seven (7) calendar days and within 24 hours of the end of a storm event of 0.5 inches of rain (or equivalent snowfall) or greater. The SWPPP and all the required paperwork shall be kept on-site and be organized and ready for viewing.
3. All erosion control measures are to be installed prior to any demolition, earth moving activities or other disturbance.
4. Soil Erosion Control measures shall include the provision of an erosion control fence as required along the area of disturbance, a stabilized construction entrance, and sediment traps or other inlet protection method at each inlet or catch basin.
5. Contractor to establish a temporary stabilized construction entrance as well as install all perimeter silt fence prior to the start of any clearing or grading activities.
6. Temporary gravel stabilized construction entrance shall be maintained, adjusted, and/or relocated as necessary to prevent mud and other debris from being tracked onto adjacent public roadways. Any mud or other debris that is tracked onto a public road shall be properly removed as soon as practical, but before the end of each working day.
7. After the start of mass grading and before all storm water conveyance improvements are in place and functional, all on-site storm water shall be temporarily diverted into the detention basin or a properly constructed temporary sedimentation basin or collection device, as per local requirements, so as to prevent surface waters from flowing onto adjacent property.
8. Disturbed areas shall be stabilized by seeding within seven (7) calendar days of the completion of disturbance. If construction activity on a portion of the site is to resume within fourteen (14) calendar days of the end of the last disturbance, then stabilization measures do not have to be initiated on that portion of the site by the 7th day after the completion of said disturbance. Areas with slopes 3H:1V or greater shall be stabilized with erosion control blanket or mat in addition to seeding.
9. The Contractor shall provide adequate planning and supervision during the project construction period for implementing construction methods, processes and cleanup procedures necessary to prevent water pollution and control erosion.
10. No sediment or debris shall be allowed to enter the existing storm sewer system or flow off-site.
11. All temporary and permanent erosion and sedimentation control measures shall be maintained, repaired and/or replaced as necessary to ensure effective performance. If required, a designated erosion control inspector shall inspect all measures every seven (7) calendar days, or within twenty-four (24) hours of a 0.5-inch rain event or equivalent snowfall, and report where items are in non-compliance. Otherwise, the Contractor shall be responsible for the inspection as well as maintenance of all measures and shall be subject to the terms of Federal, State, and local requirements.
12. All temporary erosion and sedimentation control measures are to remain in place and be functioning until final stabilization. After final stabilization, the Contractor is to remove and properly dispose of all erosion and sedimentation measures according to Jurisdictional Agency requirements within thirty (30) days. All disturbed areas or trapped sediment that accumulates from said measures shall be permanently stabilized.
13. Topsoil stockpiles shall not be located in flood prone areas or buffers protecting wetlands, or waters of the United States or County. Stockpiles shall be protected from erosion by installing silt fence around the perimeter of the stockpile(s). Stockpiles shall be seeded within seven (7) calendar days of completion.
14. If dewatering services are used, adjoining properties and discharge locations shall be protected from erosion. Discharges shall be routed through an effective sediment control measure (i.e., sediment Trap, sediment Basin, or other appropriate measure).
15. All storm sewers, drainage structures, catch basin sumps and/or retention/detention/sedimentation basins provided within this project are to be cleaned at the end of construction and prior to final acceptance. Cleaning may also be required during the course of construction if it is determined that the structures are not properly functioning and their performance is impaired.
16. Storm water conveyance swales, channels, streams or similar, if disturbed, are to be stabilized within 48 hours after the end of active disturbance.
17. Extreme caution shall be taken by the Contractor to prevent erosion and siltation during construction. The Contractor shall inspect catch basins and clean out if necessary. The contractor shall use silt/erosion control fence staked in place to prevent siltation of all drainage structures.
18. The Contractor shall water the site, as required during dry weather to control dust.
19. Erosion Control Maintenance and Responsibilities Statement Notes:
   a. Silt fences are to be cleaned as required during the course of the construction of the project or if the Engineer determines that they are not properly functioning and their performance is impaired.
   b. Sediment traps and basins shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately.
   c. Should the fabric decomposed or become ineffective prior to the end of the expected life and the barrier still be necessary, the fabric shall be replaced promptly.
   d. Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately half the height of the barrier.
   e. Mud or dust which is deposited on adjacent roadways shall be removed at the end of each day.
20. The sediment and erosion control measures indicated on the plans are the minimum requirements. Additional measures may be required, as directed by the Engineer or Jurisdictional Agency.
21. The Contractor shall assume responsibility for maintenance of all soil erosion and sedimentation control measures during and after construction. However, the Contractor shall not transfer these improvements for the purpose of maintenance until they have completed with the above and until they have received final inspection and approval from the Jurisdictional Agency or designated erosion control inspector and a Notice of Termination has been filed (NOT).
22. The work shall generally follow the following typical Construction Sequencing:
   a. Installation of them soil erosion and sediment control (SE/SC) measures:
      1. Selective vegetation removal for silt fence installation
      2. Silt fence installation
      3. Construction fencing around areas not to be disturbed
      4. Stabilized construction entrance
   b. Install tree protection fencing and tree removal where necessary (clear & grub)
   c. Construct sediment trapping devices-sediment traps, basins, etc.)
   d. Construct detention facilities and outlet control structure with restrictor.
   e. Strip and stockpile topsoil and mass grade the site
   f. Temporarily stabilize topsoil stockpiles (seed and silt fence around toe of slope)
   g. Install sanitary sewer, storm sewer, watermain and associated inlet & outlet protection
   h. Permanently stabilize detention basins with seed and erosion control blanket
   i. Temporarily stabilize all areas including lots that have reached temporary grade
   j. Install roadways, parking areas, etc.
   k. Final grade and permanently stabilize all outlet areas with topsoil and seed
   l. Install structures and grade individual lots
   m. Permanently stabilize site with topsoil and seed
   n. Remove all temporary SE/SC measures after the site is stabilized with vegetation

Contractor shall review Crystal Lake City Code and Standards for City specific requirements. City Code and Standards shall supersede the notes and specifications shown on this plan if a conflict occurs.

No.	Date	Revision

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GENERAL NOTES & SPECIFICATIONS

SITE IMPROVEMENT PLANS
551 CONGRESS PARKWAY
CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

Project Manager:	D J V
Engineer:	D J V
Date:	02/22/2022
Project No.	21-215
Sheet	C2.1 / C7

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Plot Date: Feb 22, 2022 - 8:40pm Plotted By: dvane
File Name: P:\2021\21215\Drawings\Final Engineering\21215-ENGINEERING.dwg

GE-02a

GENERAL SITE-WORK:

1. Pre-Construction meeting shall be conducted with City Staff and all Contractors prior tocommencing any grading or underground utility construction activities (schedule meeting with the Community Development Department at 815-356-3615).
2. 24-hour Emergency contact numbers shall be provided to City Staff at the Pre-Construction meeting.
3. Working hours shall be limited to the hours of 7:00 a.m. and 7:00 p.m. on weekdays only (except in cases of emergency). Non-emergency work on weekends or holidays is not permitted wr City Code except under written permission from the City Engineer. The owner is responsible for thr City Inspector cost of overtime inspection beyond the normal eight (8) hour day, including weekends and holidays.
4. Publicprivate streets shall be kept free of dirt and debris with regular cleaning, sweeping, and scraping conducted by the Contractor. Junk and debris shall not be allowed to accumulate, blow, or scatter onto streets or adjacent properties.
5. J.U.L.I.E. shall be contacted for utility locations on-site and in the adjacent rights-of-wr.
6. Contractor shall provide and maintain fencing, barricades, traffic control signs, and other safeguarding measures during the course of all work to protect the public from the construction operations.
7. Maintain access to adjacent streets during construction. No closing of streets unless approval is first obtained from the agency with jurisdiction (City of Crystal Lake, McHenry County Department of Transportation, Illinois Department of Transportation, etc).
8. Any damage to public right-of-way, public utilities, streets, curb, etc. shall be repaired/replaced as soon as possible and as directed by the City Engineer.
9. The contractor shall give the City of Crystal Lake, Illinois Decartment of Transportation and any other governmental agency having jurisdiction, at least two (2) working days notice excuting Saturday and Sunday prior to the initiation of any phase of construction. Contractor shall immediately notify if construction has ceased and renew the two (2) working day notification thereafter.
10. The Contractor shall be responsible for obtaining all required permits for construction prior to commencement along or across existing streets or highways. The Contractor shall maxe arrangements for the proper bracing, shoring and other protection of all roadways before construction begins.

GRADING:

1. The grading and construction of the site improvements shall not cause ponding of storm sewer water. All areas adjacent to these improvements shall be graded to allow positive drainage.
2. The proposed grading elevations shown on the plans are finished grade. A minimum of six (6) inches rf topsoil is to be placed before finished grade elevations are achieved.
3. Embankment material within parkway and open space areas shall be compacted to a minimum of ninety percent(90%) of maximum density in accordance with ASTM Specification D-1557 (modified proctor method), or to such other density as may be determined appropriately the soils engineer.
4. All subgrade material shallhave a minimum CBR (California Bearing Ratio) of 3.0 as determined by the soils engineer, or base replacement and pavement design revisions shall be provided which are adequate to obtain equivalent pavement strength.
5. Proposed pavement areas building pads, driveways and sidewalks and yard/open space areas shall be excavated or filled to plus or minus 0.1 foot of design subgrade elevations by the Contractor.
6. Any borrow pit locations shall be identified by the Contractor on a copy of the approved site plans and forwarded to the Engineering Division at least 24-hours prior to excavation. Provide backfill compaction reports from a geotechnical engineer and as-built plans to the Engineering Division for any borrow pt area.
7. Backfill shall be monitored by a geotechnical engineer on-site with compaction reports forwarded to the Eqineering Division for review.
8. Water truck shall be on-site at all times during mass-grading operations and be available as needed for the purposes of dust control or at the request of City Staff.
9. Use of City fire hydrants isnot allowed unless approved (separate from this permit) by the Public Works Department and a hydrant meter and RPZ is obtained from the City of Crystal Lake Water Division (815-356-3614). Only the City of Crystal Lake Water Division may operate valves and hydrants.

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	STANDARD NOTES ANC SPECIFICATIONS	GE-02a	City of Crystal Lake Illinois
2.		Date: 01/30/15	
3.		Drawn DD Checked AW	
4.			

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GE-02b

TOPSOIL STOCKPILING:

1. Location of any on-site topsoil stockpiles shall be identified on the approved plans with silt fence installed around the perimeter of the stockpile.
2. Topsoil stockpiled for future use shall be relatively free from large roots, sticks, weeds, brush, stones larger than one (1) inch diarmeter, or other filter and waste products including other extraneous materials not conducive to plant growth.
3. Topsoil shall be stockpiled in sequence to eliminate any re-handling or double movements by the Contractor. Failure to properly sequence the stockpiling operations shall not constitute a claim for additional compensation. No material shall be stockpiled in front yards, in utility easements, or in the right-of-way lines.
4. If a stockpile is to remain in place for more than (14) calendar days, it is required that the stockpile meet the requirements as outlined in section 595 of the City Code.

UNDERGROUND UTILITY:

1. The Contractor shall coordinate water main, water service, sanitary and storm sewer inspections and testing with the Community Development at least 24 hours in advance.
2. All main line sanitary shall be cleaned and televised (provide DVD to the City's Engineering Division).
3. All manhole or valve covers shall be imprinted "City of Crystal Lake Sanitary", or "City of Crystal Lake Storm", or "City of Crystal Lake Water" as directed by the City.
4. Reference the latest edition of the Standard Specifications for Water and Sewer Main Construction in Illinois.
5. Existing manholes to be circular cored and booted.

EROSION CONTROL:

1. All specified erosion control measures shall be installed and maintained per the requirements of the Crystal Lake Stormwater Ordinance in accordance with the active NPDES permit.
2. All slopes 4:1 or steeper shall be sodded or blanketed immediately after mass earthwork.
3. All overland flow routes to be stabilized by sod or blanket.
4. Erosion control measures to be inspected and approved by City Engineering Division prior to additional work on site.
5. Continuous monitoring of erosion control measures is required. Maintain records of weekly reports per the City of Crystal Lake Stormwater Ordinance.
6. The Contractor shall implement an additional erosion control measures deemed necessary by the City per the standards of theCity Of Crystal Lake Stormwater Ordinance.
7. All storm sewer catch basins, sumps and/or retention basins provided are to be cleaned at the end of construction of the projet prior to final acceptance. Cleaning may also be requiqd during the course of the construction of the project if it is determined that the silt and debris traps are not properly functioning and their performance is impaired.
8. Rip-rap material RR 2 (6") - RR4 (12") shall be in accordance with Article 281
9. Projects of 1 Acre or greater must obtain an NPDES permit prior to commencement of any construction activity.

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	STANDARD NOTES AND SPECIFICATIONS	GE-02b	City of Crystal Lake Illinois
2. 02/25/2020		Date: 01/30/15	
3.		Drawn DD Checked AW	
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GE-02c

SANITARY SEWER:

1. Non-shear stainless steel couplings shall be used when connecting sewer pipes of dissimilar materials and pipes with no hub joints. When connecting to an existing sanitary sewer by means other than an existing wye ormanhole, contractor shall use a Sewer-Tap and hub-wye or hub-tee saddle.
2. Unless an alternate method is approved, water stop gaskets shall be provided at all sanitary sewer manhole connections. Type rnd manufacturer to be approved by the City.
3. PVC plastic sewer pipe and fittings sf sizes 4-inch through 15-inch shall conform to the latest revised specification requirements of ASTM D3034 for type PSM polyvinyl chloride (PVC) sewer pipe and fittings rf minimum wall thickness SDR 26.
4. Joints shall be either the solvent weld type conforming to the latest revised specification requirements of ASTM D2564 and JSTM D3855, or elastomeric gasket type conforming to the latest revised specification requirements o ASTM D1869 and ASTM D3212.
5. A thicker walled pipe such as SDR 15 may be specified by the engineer depending on design and/or field conditions.
6. PVC plastic sewer pipe and fittings sf sizes 18-inch through 36-inch shall conform to the latest revised specification requirements of ASTM F679 or polyvinyl chloride (PVC) large diameter ribbed gravity sewer pipe and fittings, with integral bell gasketed joints and elastomeric gaskets to form a watertight seal conforming to the latest revised specification requirements of ASTM F477 or ASTd D3212.
7. Pipe and fittings shall be the products of one approved manufacturer only, and there shall not be any mixing of pipe and fittings of different manufacturers between manholes.
8. The handling and installation of pipe assembly or joints, and manhole connections shall be in accordance with the manufacturer's recommendations.
9. Gasket-type watertop collars consist of a neoprene collar and a stainless steel band or other approved manhole waterstop shall b installed wherever the pipe passes through the manhole walls to provide a watertight joint to inhibit infiltration into the sewer system.
10. PVC pipe shall be installed in accordance with the latest revised specification requirements of ASTM D0321 using sithr compacted class I or class II granular embedment materials for bedding, haunching and initial backfl l of 12 inches over the top of pipe to provide the necessary support for the pipe so tht the maximum deflection does not exceed five percent of the pipe's original internal diameter.
11. The Contractor shall provide the necessary tools and equipment and perform the work necessary to test the deflection in the initial 1,200 feet of installed sewer and not less than ten percent (10%) of the remainder of the sewer project at random locations selected by the engineers no sooner than 30 days after backfilling has been completed. In the event that deflection exceeds the maximum limit of five percent (5%), the Contractor shall test all other new flexible pipe for deflection. Deflection shall be tested by use of either a mandrel or rigd ball having a diameter equal to ninety-five percent (95%) of the inside diameter of the pipe, and the test shall be performed without using mechanical pulling devices. Wherever the deflection limitation is exceeded, the contractor shall uncover the pipe, carefully replace compacted embedment and backfill material, and retest for deflection.
12. The Contractor shall subject all sanitary sewers, including service lines, to an air test. Air testing shall be performed in accordance with the latest Standard Specifications for Water and Sewer.
13. The Contractor shall subject all newly constructed sanitary manholes to the Negative Pressure (Vacuum) Test in accordance with ASTM C 1244.The Contractor shall also televise all public sanitary sewers. Televising of sanitary sewer, cost for televising, and testing shall be the responsibility of the Contractor.
14. Cast Iron Soil Pipe: service weight cast iron soil pipe and fittings conforming C.I.S.P.I. Specification HS-67 with compression type rubber gasket joints conforming to ASTM specification C564, or other suitable materials approved by the City Engineer.

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	STANDARD NOTES AND SPECIFICATIONS	GE-02c	City of Crystal Lake Illinois
2. 01/25/2021 KL Vacuum Test Note 13		Date: 01/30/15	
3.		Drawn DD Checked AW	
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GE-02d

WATER MAIN:

1. Water main shall be Ductile Iron or Molecularly Oriented Polyvinyl Chloride (PVCO).
   a) Ductile Iron water main shall be Class 52 conforming to ANSI/AWWA C151/A21.51-09.
   b) Ductile Iron fittings shall conform to ANSI/AWA C153/A21.53 with mechanical joint gaskets.
   c) PVCO - See City Detail UW-12 and UW-13.
2. All bolted connections shall be torqued to the manufacturer's specification. The Contractor shal verify the manufacturer's specification with an approved torque wrench.
3. Thrust blocking or Mega-Lugs with Mega-Bond coating or pre-approved equal shall be installec on water mains at all bends, tees, elbows, etc. except as noted below.
4. Thrust blocks not permitted with 45 degree vertical bends in water main (these shall be restraind with Mega-Lug or pre-approved equal.
5. When specified, ductile iron pipe shall be encased in polyethylene and shall conform with ANSI/AWWA C105/A21.10 - 10 and ASTM A674-10.
6. Minimum cover from finished grade to top of water main shall be six (6) feet; Maximum cover slall be eight (8) feet.
7. Water Main Taps: An Illinois licensed plumber is required for any water main tap.
8. All water mains shall be subjected to a pressure test and a separate leakage test at system pressure for 24 hours by the Contractor. Hydrostatic pressure test and leakage test shall be based on 125 PSI for two (2) hours. Water mains shall be chlorinated in accordance with the Standard Specificatlins.
9. The Underground Contractor shall consider incidental to the contract any chlorination and testing of existing water main where connections to and conclusion of such mains is indicated on the drawing.

PAVING:

1. All subgrades and bases shall be proof-rolled and approved by the Engineering Division prior to base or binder installation.
2. Subgrade and proposed pavements sall be finished by the Excavation Contractor to within 0.1 foot plus or minus, of plan elevatin.
3. The Paving Contractor shall ensure that the subgrade has been properly prepared and that the finished top of subgrade elevationhas been graded within the tolerances allowed in these specifications. Unless the Paving Contractor advises the owner and engineer in writing prior to fine grading for base course construction, it is understood that the Contractor has approved and acceptsresponsibility for the subgrade.
4. For the purpose of providing handicapaccessibility and complying with the American Disability Act and City Standards, curbs shall be depressed at locations where public walks or pedestrian paths intersect curb lines at street intersections and other locations as directed.
5. ½ inch thick premolded fiber expansicn joints with two (2) No. 4 plain round steel dowel bars shall be installed at designated intervals and at all P.C., P.T., curb returns and at the end of each pour. Alternate ends of the dowel bars shall be greased and fitted wm mesa expansion sases.
6. ½ inch thick fiber expansion joints shll be used in every case where the sidewalk coincides with the curb and gutter. Contraction joints shall be saw cut at designated intervals in the curb. The cost of these joints shall be considered as incidental to the cost of the contract.
7. All poured in place concrete curb and gutter shall incorporate two (2) No. 4 reinforcing bars installed wherever the curb and gutter crosses utility service lines, the cost of which shall be considered incidental ti the cost of concrete curb and gutter.
8. Sidewalks (where required) shall be o the thickness and dimensions as shown in the construction plans. All sidewalk concrete shall be a minimum of 6.1 bag mix (or IDOT class SI concrete) and shall develop aminimum of 3,500 psi concressive strength at fourteen (14) days. Contraction jointsshall be set at five (5) foot centers, and one-half inch (½ inch) premolded fibexpansion joints at fifty (50) foot centers and where the sidewalk meets the curb ornother sidewalk, or at the end of each pour. All sidewalks constructed over utility trenhes and/or abutting driveway aprons shall be reinforced with three (3) No. 4 reinforcing bars (10 foot minimum length).

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	STANDARD NOTES AND SPECIFICATIONS	GE-02d	City of Crystal Lake Illinois
2. KL 01/25/2021 Torque Specification		Date: 01/30/15	
3.		Drawn DD Checked AW	
4.			

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UW-08

CITY OF CRYSTAL LAKE WATER MAIN CHLORINATION SPECIFICATIONS:

1. DISINFECTION OF WATER MAINSSHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION, CURRENT EDITION.
2. THE CITY ENGINEERING DIVISION AND WATER DIVISION SHALL BE NOTIFIED 48 HOURS IN ADVANCE FOR SCHEDULING OF ANY TESTING, CHLORINATING, FLUSHING, OR SAMPLING.
3. ONLY CITY WATER DIVISION PERSONNEL MAY OPERATE WATER VALVES ON LIVE MAINS.
4. A WATER VALVE JUMPER IS REQUIRED TO MAINTAIN PRESSURE ON THE CHLORINATED LINES DURING THE SAMPLING PROCEDURE. FOR PROPER INSTALLATION AND REQUIREMENTS SEE THE STANDARD WATER VALVE JUMPER DETAIL UW-05.
5. WATER MAINS SHALL BE FLUSHED WITH A MINIMUM VELOCITY OF 2.5 FPS.
6. THE INITIAL CHLORINE CONCEN'RATION SHALL BE 50 mg/L WITH A MINIMUM 24 HOUR RESIDUAL OF 25 mg/L.
7. THE METHOD OF CHLORINE APPLICATION SHALL BE APPROVED BY THE CITY:
   a. LIQUID CHLORINE W/CHLORINATING DEVICE WITH BACKFLOW PREVENTER
   b. CHLORINE BEARING COMPOUNDS IN WATER.
   c. TABLET DISINFECTION.
8. ALL NEW VALVES AND HYDRANTS SHALL BE OPERATED WHILE LINE IS BEING CHLORINATED.
9. THE CITY ENGINEERING DIVISION SHALL DETERMINE LOCATION AND QUANTITY OF CORPORATION STOPS FOR FLUSHING AND CHLORINATING. MAXIMUM SPACING BETWEEN SAMPLES SHALL BE 1,200 FEET. THE CHLORINE SOURCE AND ALL DEAC ENDS SHALL BE SAMPLED.
10. THE FINAL FLUSHING RESIDUAL IN THE NEW CHLORINATED LINES SHALL BE BETWEEN 0.2 AND 2.0 mg/L.
11. ALL WATER SAMPLES SHALL BE COLLECTED ON TWO (2) CONSECUTIVE DAYS AND PASS BACTERIOLOGICAL TEST RESULTS. IN THE EVENT THAT THE FIRST SET OF SAMPLES TAKEN TWO (2) CONSECUTIVE DAYS APART FAIL TO PASS, ANOTHER SET OF SAMPLES MAY BE TAKEN TWO (2) DAYS APART (PER STATE SPECS). IF THE SECOND SET FAILS TO PASS TESTING, THEN THE CHLORINATED LINES SHALL BE RE-FLUSHED WITH THE MAIN BEING RECHLORINATED, REFLUSHED, AND RESAMPLED.
12. IF THE WATER MAIN FALLS BELOW 20 PSI AFTER CHLORINATION, THE LINE SHALL BE RESAMPLED ON TWO (2) CONSECUTIVE DAYS AND PASS BACTERIOLOGICAL TEST RESULTS.
13. STATE CERTIFIED LAB MUST BE JSED FOR SAMPLES.

CHLORINE REQUIREMETS TO PRODUCE 50 mg/L CONCENTRATION IN 10LFEET OF PIPE-BY DIAMETER

PIPE SIZE IN INCHES	LBS CHLORINE REQUIRED	OUNCES CHLORINE REQUIRED
4	0.021	0.33
6	0.052	0.73
8	0.09	1.50
10	0.15	2.04
12	0.20	3.26
16	0.40	6.66

NUMBER OF 5-GRAIN HYPOCOLORITE TABLETS REQUIRED FOR A DOSAGE OF 50MG/L PER LENGTH OF PIPE SECTION

PIPE SIZE IN INCHES	UP TO 13	14	16	18	20	30
4	1	1	1	1	1	1
6	1	1	1	1	1	1
8	1	1	1	1	1	1
10	1	1	1	1	1	1
12	1	1	1	1	1	1
16	1	1	1	1	1	1

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	CHLORINATION SPECIFICATIONS	UW-08	City of Crystal Lake Illinois
2. 4/30/2021 KL 20 PSI RESAMPLE, SAMPLING FREQUENCY		Date: 09/20/2012	
3.		Drawn DD Checked VR	
4.			

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UW-09A

WATERMAIN TESTING AND CHLORINATION PROCEDURE

STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS (LATEST EDITION) AND AWWA STANDARD C600-17 SHALL APPLY ALONG WITH THE KOLLOWING:

2 HOUR PRESSURE AND LEAKAGE TEST

1. PRETEST: THE CONTRACTOR SHALL PROVIDE A MAP OF THE FACILITIES (WATER MAINS, HYDRANTS, VALTES, ETC.) TO BE INCLUDED DURING THE TEST TO THE ENGINEER. SEE UW-08B WORKSHEET. ALL FIRE HYDRANT AUXILIARY VALVES SHALL BE OPENED SO TESTING IS PERFORMED AGAINST FIRE HYDRANTS. THE ENGINEER WILL COORDINATE WITH THE WATER DEPARTMEN' TO SCHEDULE OPENING OF CITY VALVES AND FILLING (F NEW WATER MAIN A MINIMUM OF 48 HOURS IN ADVANCE OF THE TEST. THE CONTRACTOR SHALL NOT OPERATE ANY VALVES ON EXISTING CITY WATER MAIN WITHOU' WRITTEN PERMISSION.
2. HYDROSTATIC PRESSURE TESTING. ALL TESTING EQUIPMENT AND LABOR NECESSARY TO SETUP AND RIN THE TEST SHALL BE PROVIDED BY THE CONTRACTORAND SHALL INCLUDE:
   A) PRESSURE GAUGE LOCATED AT HIGHEST POINT OF ELEVATION OF THE WATER MAIN
   B) PUMP
   C) TANK
   D) FITTINGS FOR TESTING EQUIPMENT TO BE CONNECTED TO WATER MAIN
   E) ACCURATE WATER VOLUME MEASURING DEVICE (CALIBRATED VOLUMETRIC METER OR 1 GALLON GRADUATED CYLINDER IN OUNCES)
3. AIR REMOVAL: AFTER FILLING THE WATERMAIN, AIR SHALL BE EXPELLED BY FLUSHING WATER OUT OF THE MAIN AT FIRE HYDRANTS OR CORPORATION STOPS LOCATED AT HIGH POINTS ALONG THE WATER MAIN.
4. PRESSURIZATION: AFTER ALL AIR HAS BEEN REMOVED, THE MAIN SHOULD BE PRESSURIZED TO MINIMUM 150 PSI BY PUMPING ADDITIONAL WATER INTO THE WATER MAIN.
5. TWO HOUR TEST: ONCE TESTING PRESSURE IS OBTAINED, THE PUMP SHALL BE SHUT OFF AND TIMINGSTARTED. THE PRESSURE GAUGE SHOULD BE CHECKED INTERMITTENTLY AND THE PRESSURE READING RECORDED AFTER TWO HOURS. IF THE PRESSURE READING VARIES MORE THAN +/- 5 PSI FROM THE INITIAL PRESSURE, THE TEST FAILS. THE LEAK SHALL BE FOUND AND ADDRESSED PRIOR TO RETESTING.
6. MAKE UP VOLUME: IF THE PRESSURE IS MAINTAINED WITHIN +/- 5 PSI FOR THE TWO HOUR TEST. THE MAKE-UP VOLUME SHALL BE DETERMINED BY PUMPING WATER BACK INTO THE WATER MAIN TO REACH THE INITIAL TST PRESSURE. THIS WILL NORMALLY BE DONE BY EXCEEDING THE TEST PRESSURE, AND USING THE BLEED OFF VALVE TO DROP THE PRESSURE TO THE INITIAL TEST PRESSURE. ONCE THE INITIAL TEST PRESSURE HAS BEEN REACHED, THE BLEED OFF VALVE SHALL BE OPENED AND WATER THAT LEAVES THE SYSTEM SHALL BE COLLECTED IN THE VOLUME MEASURING DEVICE. ONCE THE GAUGE REACHES THE FINAL TWO HOUR TEST PRESSURE, THE VOLUME OF WATER COLLECTED SHALL BE MEASURED.
7. ALLOWABLE MAKE-UP VOLUME: THE MEASURED VOLUME OF "MAKE UP" WATER SHALL BE COMPARED TC THE ALLOWABLE LEAKAGE. THE ALLOWABLE LEAKAGE SHALL BE CALCULATED BY THE ENGINEER USING THE FORMULA ABOVE. IF THE WATER COLLECTED IS LESS THAN THE ALLOWABLE MAKE UP VOLUME, THE TEST PASSES. IF THE WATER COLLECTED IS MORE THAN THE ALLOWBLE MAKE UP VOLUME, THE TEST FAILS. THE LEAK SHALL BE FOUND AND ADDRESSED PRIOR TO RETESTING.
8. FINAL VALVE CHECK: PRIOR TO BLEEDING OFF THE PRESSURE, ALL HYDRANTS ON THE TESTING MAP SHALL BE SLOWLY OPENED TO ENSURE THAT THEY HAD PRESSURE AGAINST THEM DURING TESTING. THE PRESSURE GAUGE SHOULD DROP AS THE HYDRANTS ARE OPENED ENSURING THAT ALL VALVES IN THE SYSTEM WERE PROPERLY OPENED/CLOSED DURING TESTING.
9. IF THE WATER MAIN HAS PASSED THE PRESSURE TEST, THE PRESSURE SHALL BE REDUCED TO THE CITT'S SYSTEM PRESSURE.

CHLORINATION

1. PRE-CHLORINATION: THE ENGINEER WILL COORDINATE WITH THE WATER DEPARTMENT TO SCHEDULE OPENING OF CITY VALVES FOR CHLORINATION. A MINIMUM OF 48 HOURS IN ADVANCE OF THE CHLORINATION. THE FOLLOWING METHODS OF CHLORINE APPLICATION ARE APPROVED BY THE CITY
   A) LIQUID CHLORINE WITH CHLORINATION DEVICE AND BACKFLOW PREVENTER
   B) CHLORINE BEARING COMPOUNDS IN WATER
   C) TABLET DISINFECTION.
2. SAMPLING LOCATIONS: THE ENGINEER SHALL DETERMINE THE LOCATION AND QUANTITY OF SAMPLING LOCATIONS. MAXIMUM SPACING BETWEEN SAMPLES SHALL BE 1,200 FEET. THE CHLORINE SOURCE AND DEADENDS SHALL BE SAMPLED. SEE UW-08B WORKSHEET.
3. CHLORINATION: THE INITIAL CHLORINE CONCENTRATION SHALL BE 50 mg/L WITH A MINIMUM 24-HOUR RESIDUAL OF 25 mg/L. ALL NEW VALVES AND HYDRANTS SHALL BE OPERATED WHILE THE LINE IS BEING CHLORINATED. THE FINAL FLUSHING RESIDUAL IN THE NEW CHLORINATED LINES SHALL BE BETWEEN 0.2-2.0 mg/L.
4. TESTING: ALL WATER SAMPLES SHALL BE ON TWO (2) CONSECUTIVE DAYS AND PASS BACTERIOLOGICAL TEST RESULTS. IN THE EVENT THAT THE FIRST SET OF SAMPLES TAKEN TWO CONSECUTIVE DAYS APART FAIL TO PASS, ANOTHER SET OF SAMPLES MAY BE TAKEN TWO (2) DAYS APART (PER STATE SPECS). IF THE SECOND SET FAILS TO PASS TESTING, THEN THE CHLORINATED LINES SHALL BE RE-FLUSHED WITH THE MAIN BEING RECHLORINATED, REFLUSHED, AND RESAMPLED.
5. MAINTAIN PRESSURE: IMMEDIATELY AFTER THE SECOND DAY SAMPLE HAS BEEN TAKEN, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO INSTALL A CERTIFIED WATER VALVE JUMPER (SEE UW-05) TO MAINTAIN PRESSURE ON THE NEW WATER MAIN UNTIL THE IEPA PERMIT IS RECEIVED. AFTER RECEIVING THE IEPA OPERATNA PERMIT, THE CITY OF CRYSTAL LAKE SHALL OPEN THEVALVE BETWEEN THE NEW AND EXISTING WATERMAIN AND THE WATER VALVE JUMPER MAY BE REMOVED. WATER VALVE JUMPERS ARE AVAILABLE FOR RENT AT THE CITY OF CRYSTAL LAKE WATER DEPARTMENT. IF WATER IN EXCESS OF THE ALLOWABLE LEAKAGE ENTERS THE NEW WATER MAIN THROUGH THE WATER VALVE JUMPER ,THE CONTRACTOR SHALL LOCATE THE LEAK. IF THE NEW WATER MAIN MUST BE DEPRESSURIZED TO FIX A LEAK, THE SYSTEM SHALL BE RETESTED, RECHLORINATEA, REFLUSHED, AND RESAMPLED.

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	WATER MAIN PRESSURE TEST AND CHLORINATION PROCEDURE	UW-09A	City of Crystal Lake
2. 7/13/2021 - KL Leakage formula, procedure, delete 24 hour test		Date: 09/20/2012	
3.		Drawn DD Checked VR	
4.			

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No.	Date	Revision

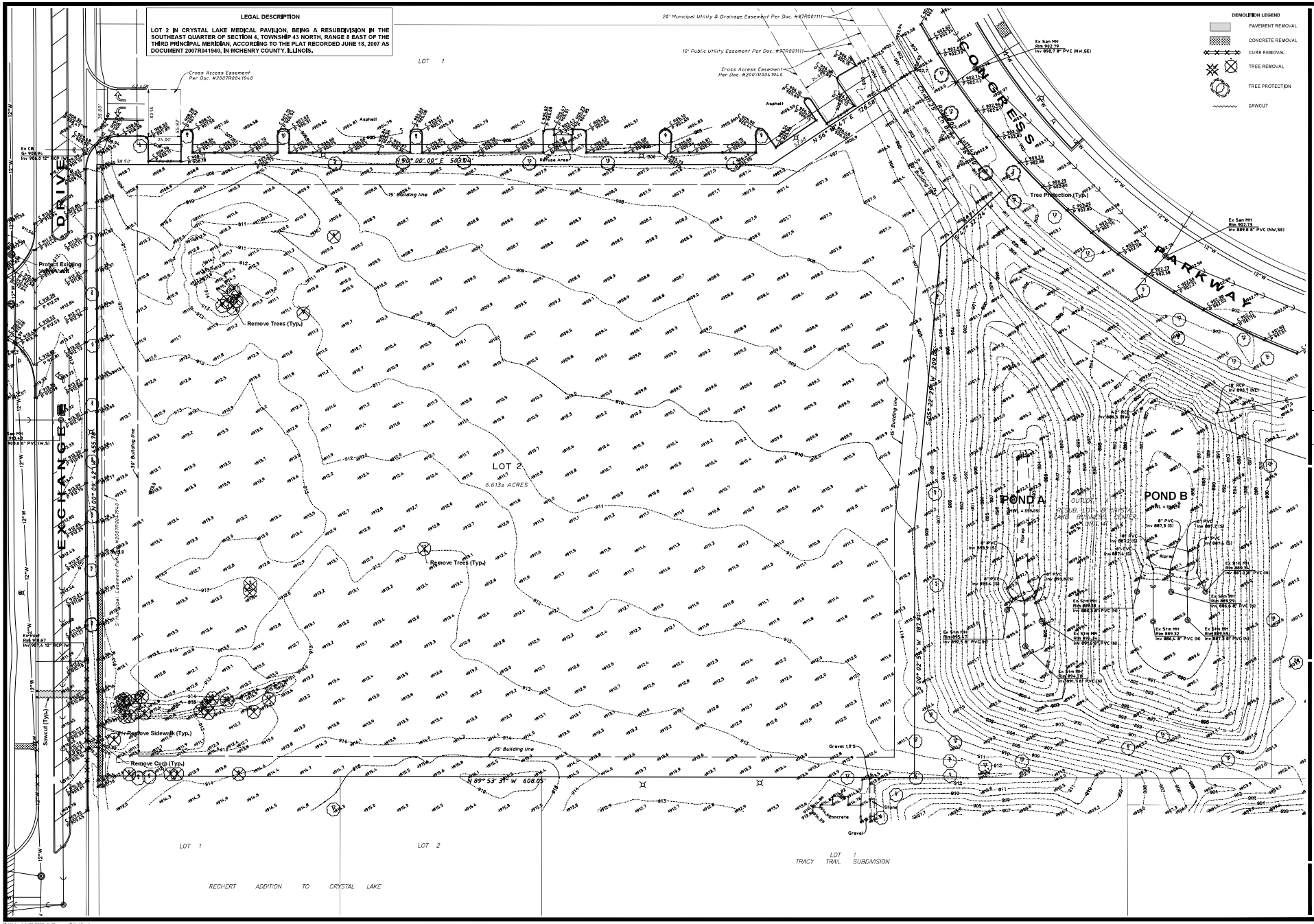
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CITY OF CRYSTAL LAKE
NOTES & SPECIFICATIONS
SITE IMPROVEMENT PLANS
551 CONGRESS PARKWAY
CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

Project Manager:	D J V
Engineer:	D J V
Date:	02/22/2022
Project No.	21-215
Sheet	C2.2 / C7

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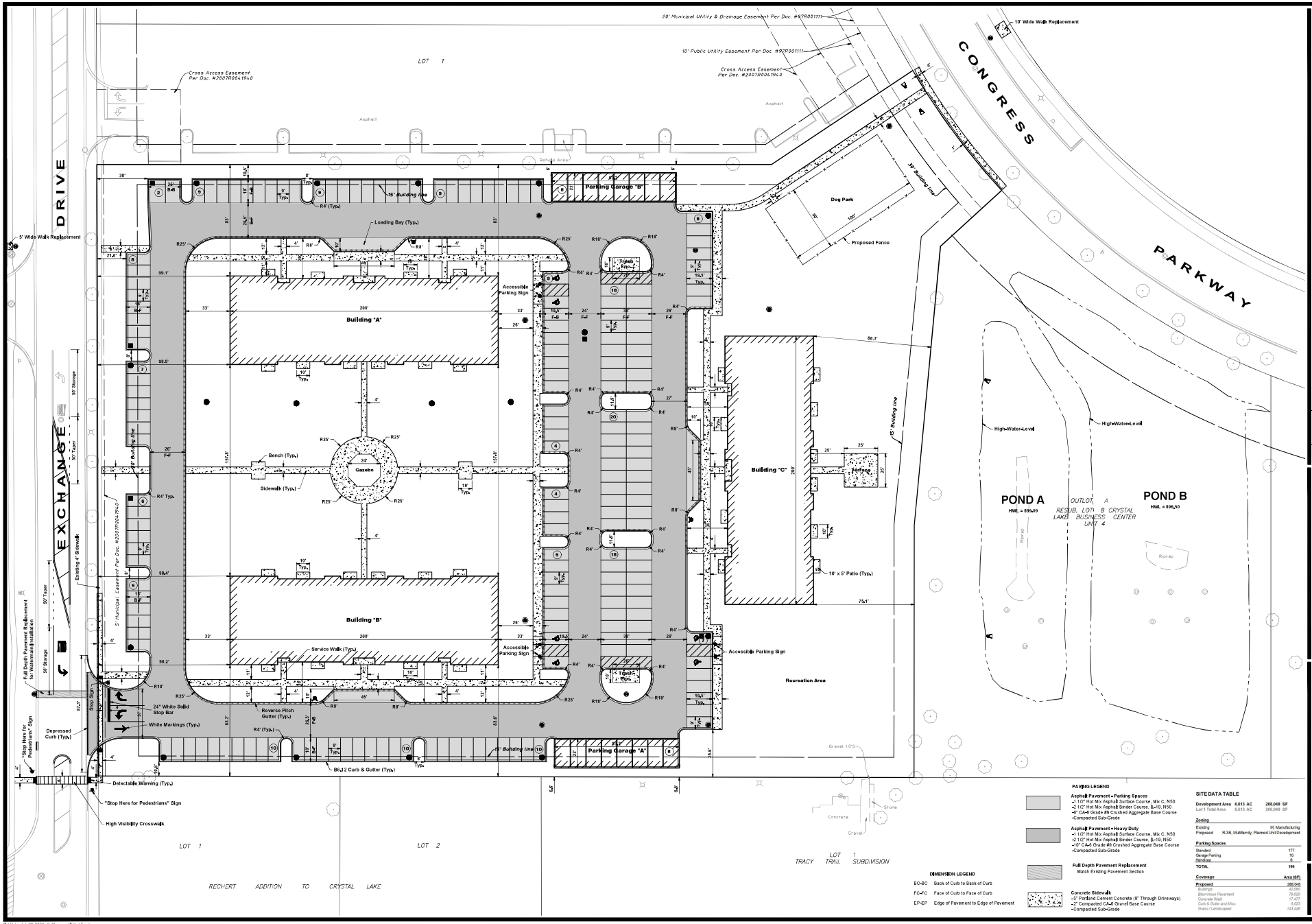
EXISTING CONDITIONS & DEMOLITION PLAN

SITE IMPROVEMENT PLANS
551 CONGRESS PARKWAY
CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

Project Manager:	D J V
Engineer:	D J V
Date:	02/22/2022
Project No.	21-215
Sheet	C3.0 / C7

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DIMENSION LEGEND

BC-BC	Back of Curb to Back of Curb
FC-FC	Face of Curb to Face of Curb
EP-EP	Edge of Pavement to Edge of Pavement

PAVING LEGEND

Asphalt Pavement - Parking Spaces
- 1 1/2" Hot Mix Asphalt Surface Course, Mix C, N50
- 2 1/2" Hot Mix Asphalt Binder Course, IL-19, N50
- 8" CA-6 Grade #6 Crushed Aggregate Base Course
- Compacted Sub-Grade

Asphalt Pavement - Heavy Duty
- 1 1/2" Hot Mix Asphalt Surface Course, Mix C, N50
- 2 1/2" Hot Mix Asphalt Binder Course, IL-19, N50
- 10" CA-6 Grade #6 Crushed Aggregate Base Course
- Compacted Sub-Grade

Full Depth Pavement Replacement
Match Existing Pavement Section

Concrete Sidewalk
- 5" Portland Cement Concrete (6" Through Driveways)
- 2" Compacted CA-6 Gravel Base Course
- Compacted Sub-Grade

SITE DATA TABLE

Development Area	6.813 AC	288,048 SF
Lot 1 Total Area	6.813 AC	288,048 SF
Zoning		
Existing		M, Manufacturing
Proposed		R-5B, Multifamily; Planned Unit Development
Parking Spaces		
Standard		177
Garage Parking		18
Handicap		6
TOTAL		199
Coverage		**Area (SF)**
Proposed		288,048
Buildings		62,000
Bituminous Pavement		79,000
Concrete Walk		17,477
Curb & Gutter and Misc.		6,023
Grass / Landscaped		143,448

NORTH
Scale: 1" = 30'

No.	Date	Revision

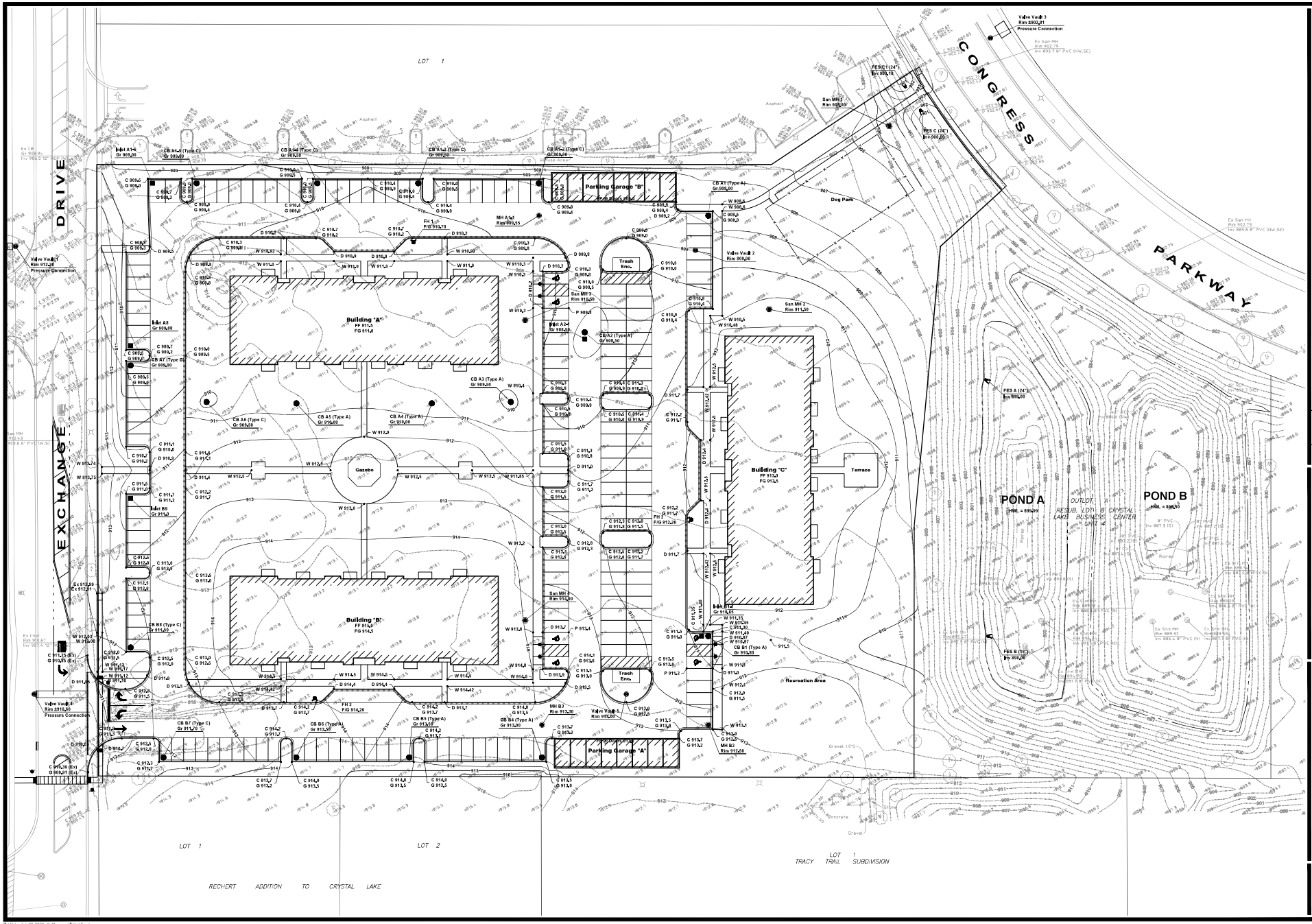
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GEOMETRY, PAVING STRIPING, & SIGNAGE PLAN
SITE IMPROVEMENT PLANS
551 CONGRESS PARKWAY
CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

Project Manager:	D J V
Engineer:	D J V
Date:	02/22/2022
Project No.	21-215
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No.	Date	Revision

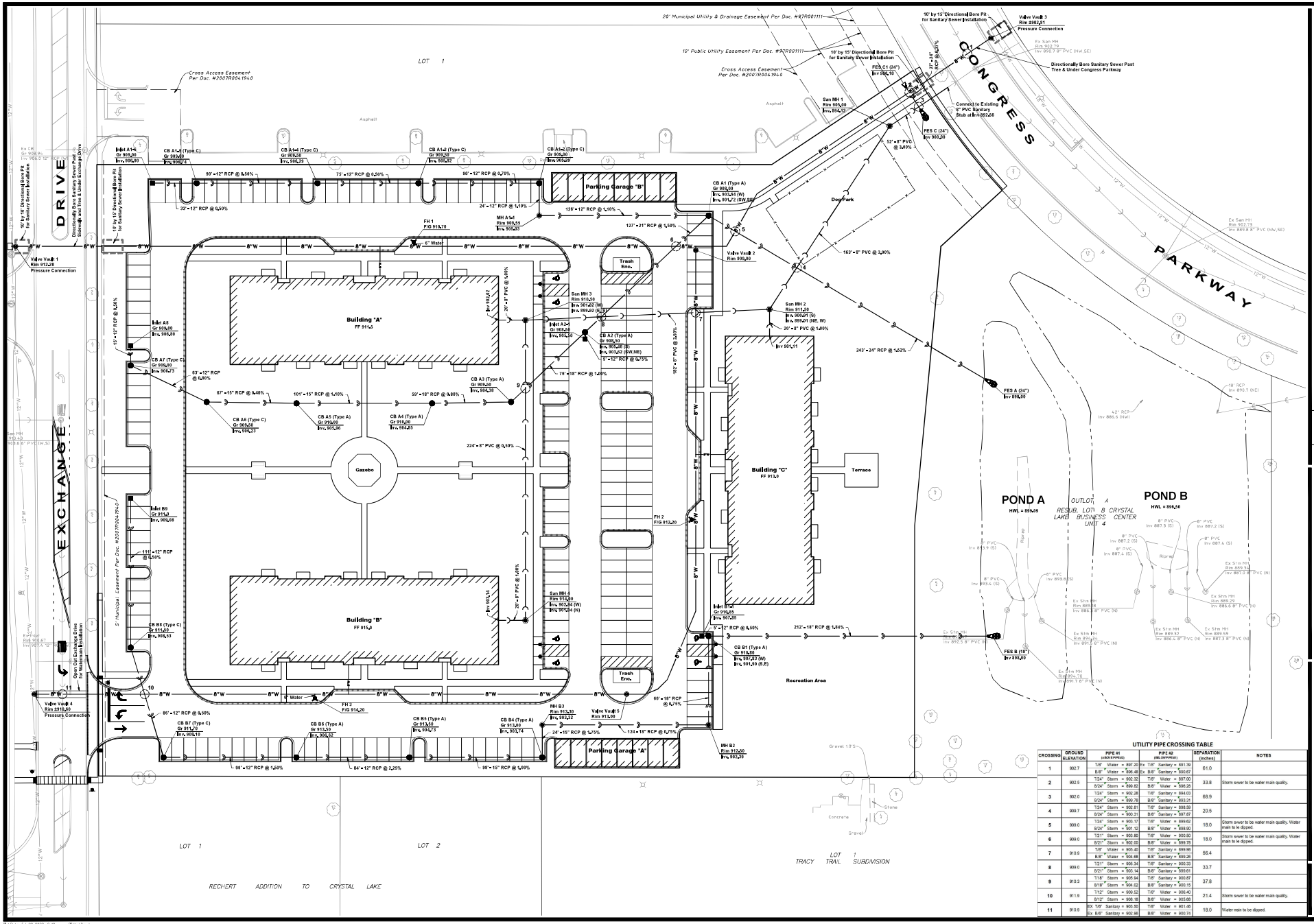
GRADING PLAN

SITE IMPROVEMENT PLANS
551 CONGRESS PARKWAY
CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

Project Manager:	D J V
Engineer:	D J V
Date:	02/22/2022
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UTILITY PIPE CROSSING TABLE

CROSSING	GROUND ELEVATION	PIPE #1 (ABOVE/PIPE#2)	PIPE #2 (BELOW/PIPE#1)	SEPARATION (Inches)	NOTES
1	902.7	T/8" Water = 897.20 B/8" Water = 896.48	Ex T/8" Sanitary = 891.39 Ex B/8" Sanitary = 890.67	61.0	
2	902.5	T/24" Storm = 902.32 B/24" Storm = 899.82	T/8" Water = 897.90 B/8" Water = 896.28	33.8	Storm sewer to be water main quality.
3	902.0	T/24" Storm = 902.28 B/24" Storm = 899.78	T/8" Sanitary = 894.03 B/8" Sanitary = 893.31	68.9	
4	909.7	T/24" Storm = 902.81 B/24" Storm = 900.31	T/8" Sanitary = 898.59 B/8" Sanitary = 897.87	20.5	
5	909.0	T/24" Storm = 903.17 B/24" Storm = 901.12	T/8" Water = 899.62 B/8" Water = 898.90	18.0	Storm sewer to be water main quality. Water main to le dipped.
6	909.0	T/21" Storm = 903.80 B/21" Storm = 902.00	T/8" Water = 900.50 B/8" Water = 899.78	18.0	Storm sewer to be water main quality. Water main to le dipped.
7	910.0	T/8" Water = 905.40 B/8" Water = 904.68	T/8" Sanitary = 899.98 B/8" Sanitary = 899.26	56.4	
8	909.0	T/21" Storm = 905.34 B/21" Storm = 903.14	T/8" Sanitary = 900.33 B/8" Sanitary = 899.61	33.7	
9	910.3	T/18" Storm = 905.94 B/18" Storm = 904.02	T/8" Sanitary = 900.87 B/8" Sanitary = 900.15	37.8	
10	911.9	T/12" Storm = 909.52 B/12" Storm = 908.16	T/8" Water = 908.40 B/8" Water = 903.68	21.4	Storm sewer to be water main quality.
11	910.8	EX T/6" Sanitary = 903.50 Ex B/8" Sanitary = 902.96	T/8" Water = 901.46 B/8" Water = 900.74	18.0	Water main to be dipped.

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UTILITY PLAN

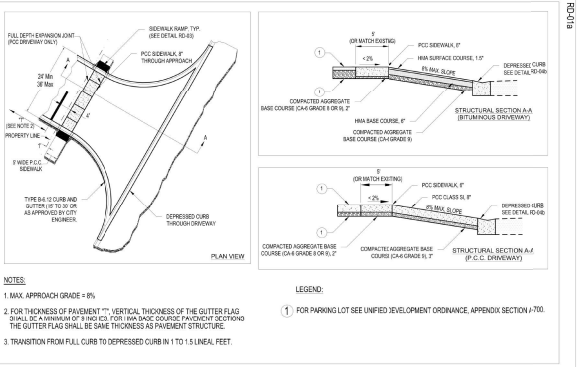
SITE IMPROVEMENT PLANS
551 CONGRESS PARKWAY
CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

Project Manager:	D J V
Engineer:	D J V
Date:	02/22/2022
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RD-01a



NOTES:

1. MAX. APPROACH GRADE = 8%
2. FOR THICKNESS OF PAVEMENT "T", VERTICAL THICKNESS OF THE GUTTER FLAG SHALL BE A MINIMUM OF 9 INCHES FOR HMA BASE COURSE PAVEMENT SECTIONS THE GUTTER FLAG SHALL BE SAME THICKNESS AS PAVEMENT STRUCTURE.
3. TRANSITION FROM FULL CURB TO DEPRESSED CURB IN 1 TO 1.5 LINEAL FEET.

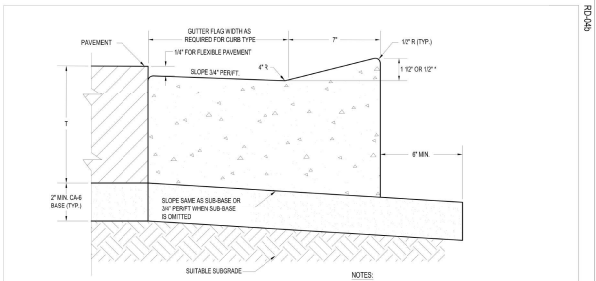
LEGEND:

(1) FOR PARKING LOT SEE UNIFIED DEVELOPMENT ORDINANCE, APPENDIX SECTION J-700.

Revised:	Drawing Name	Drawing Number
1. 06/12/2015	DRIVEWAY: COMMERCIAL APPROACH	RD-01a
2.		Date: 01/30/15
3.		Drawn DD / Checked AW
4.		City of Crystal Lake Illinois

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RD-04b



* ADJACENT TO CURB RAMP ACCESSIBLE TO THE DISABLED

NOTES:

1. THE TOP OF CURB SHALL BE DEPRESSED WHERE THE CURB AND GUTTER IS CONSTRUCTED ACROSS ALLEYS AND FOR PRIVATE DRIVES OR WHERE DIRECTED BY THE ENGINEER.
2. THICKNESS OF PAVEMENT "T", WHEN CURB AND GUTTER IS CONSTRUCTED ADJACENT TO FLEXIBLE PAVEMENT, THE VERTICAL THICKNESS OF THE GUTTER FLAG SHALL BE 9 INCHES. FOR BAM PAVEMENT SECTIONS THE FLAG SHALL BE THE SAME THICKNESS AS THE PAVEMENT.

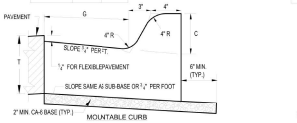
Revised:	Drawing Name	Drawing Number
1. 06/12/2015	DEPRESSED CURB: DETAIL	RD-04b
2.		Date: 01/30/15
3.		Drawn DD / Checked AW
4.		City of Crystal Lake Illinois

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RD-05a

MOUNTABLE CURB DIMENSIONS FOR "B" AND "C"

CURB TYPE	"B" (INCHES)	"C" (INCHES)
TYPE M-6.24	24	9
TYPE M-6.12	12	6
TYPE M-6.06	6	6
TYPE M-6.12	12	6
TYPE M-6.18	18	6
TYPE M-6.24	24	6



MOUNTABLE CURB

NOTES:

THICKNESS - T - THICKNESS OF PAVEMENT WHEN CURB AND GUTTER IS CONSTRUCTED ADJACENT TO FLEXIBLE OR RIGID PAVEMENT, THE VERTICAL THICKNESS OF THE GUTTER FLAGSHALL BE 9", ALSO, TIE BARS SHALL BE OMITTED.

DRAINAGE OPENINGS - AT ALL LOCATIONS WHERE METAL CASTINGS ARE TO BE INCORPORATED IN THE CURB AND GUTTER, A 1" THICK PRE FORMED EXPANSION JOINT FILLER, CONFORMING TO THE CROSS SECTIONS OF THE CURB AND GUTTER, SHALL BE INSTALLED IN THE CURB AND GUTTER A DISTANCE OF 5 FT. FROM EACH SIDE OF THE METAL CASTING. WHEN THE WIDTH OF THE METAL CASTING IS LESS THAN THE WIDTH OF THE CURB AND GUTTER, 2 - NO. 4 REBARS (L = 12' + CASTING LENGTH + 12") SHALL BE INCORPORATED IN THE CONTINUOUS OF CONCRETE GUTTER IN FRONT OF THE CASTING.

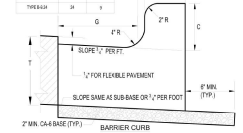
TRANSITIONS - THE TRANSITION FROM FULL HEIGHT CURB TO DEPRESSED CURB SHALL BE MADE AT THE RATE OF 1" PER FOOT OF LENGTH OR FLATTER.

(3) - NO. 4 STEEL REINFORCING BARS SHALL BE INCORPORATED OVER TRENCH CROSSINGS IF REQUIRED BY THE 2FY ENGINEER.

JOINTS - IN ADDITION TO THE REQUIREMENTS OF ARTICLE 606.09 OF THE STANDARD SPECIFICATIONS, JOINTS SHALL B CONSTRUCTED AS FOLLOWS:

BARRIER CURB DIMENSIONS FOR "E" AND "C"

CURB TYPE	"E" (INCHES)	"C" (INCHES)
TYPE B-6.12	12	6
TYPE B-6.18	18	6
TYPE B-6.24	24	6
TYPE B-6.12	12	6
TYPE B-6.18	18	6
TYPE B-6.24	24	6



BARRIER CURB

CONTRACTION JOINTS AND EXPANSION JOINTS SHALL BE INSTALLED IN THE CURB OR CURB AND GUTTER IN PROLONGATION WITH JOINTS IN ADJACENT P.C.C. PAVEMENT OR BASE COURSE.

WHEN CURB AND GUTTER IS CONSTRUCTED ADJACENT TO A FLEXIBLE PAVEMENT, A 1" THICK PRE FORMED EXPANSION JOINT FILLER, CONFORMING TO THE CROSS SECTION OF THE CURB AND GUTTER, SHALL BE INSTALLED AT POINTS OF CURVATURE FOR SHORT RADIUS CURVES AND AT CONSTRUCTION JOINTS. CONTRACTION JOINTS SHALL BE PLACED BETWEEN EXPANSION JOINTS AT DISTANCES NOT TO EXCEED 15 FEET.

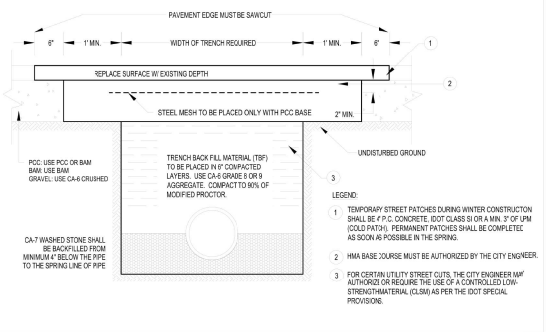
ALL EXPANSION JOINTS SHALL BE PROVIDED WITH A 1 / 2" DIA. X 18" COATED SMOOTH DOWEL BAR CONFORMING TO ARTICLE 1006.10 OF THE STANDARD SPECIFICATIONS. THE DOWEL BAR SHALL BE PROVIDED WITH A CAP HAVING A PINCHED STOP THAT WILL PROVIDE 1" OF EXPANSION.

ALL CONSTRUCTION JOINTS SHALL BE PROVIDED WITH 1" DIA. DEFORMED STEEL TIE BARS 30" LONG CONFORMING TO AASHTO M-31 GR M-53. TIE BARS SHALL BE PLACED ON 9" CENTERS (MINIMUM 2 PER JOINT).

EXPANSION JOINTS SHALL BE PLACED AT INTERVALS NOT TO EXCEED 100 FEET.

Revised:	Drawing Name	Drawing Number
1. 06/12/2015	CURB: CONCRETE CURB AND GUTTER	RD-05a
2. KL 1/25/2021 M-4.12 ADDED		Date: 08/21/2018
3.		Drawn DD / Checked AW
4.		City of Crystal Lake Illinois

RD-06



LEGEND:

1. TEMPORARY STREET PATCHES DURING WINTER CONSTRUCTION SHALL BE 4" P.C. CONCRETE, IDOT CLASS SI OR A MIN. 3" OF UPM (COLD PATCH). PERMANENT PATCHES SHALL BE COMPLETEE AS SOON AS POSSIBLE IN THE SPRING.
2. HMA BASE JOURSE MUST BE AUTHORIZED BY THE CITY ENGINEER.
3. FOR CERTAIN UTILITY STREET CUTS, THE CITY ENGINEER MAY AUTHORIZI OR REQUIRE THE USE OF A CONTROLLED LOW-STRENGTHMATERIAL (CLSM) AS PER THE IDOT SPECIAL PROVISIONS.

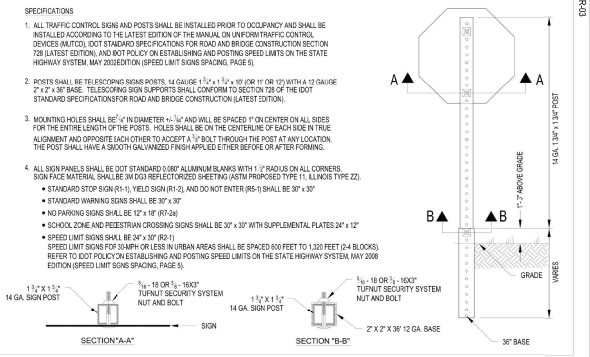
Revised:	Drawing Name	Drawing Number
1. 06/12/2015	PAVEMENT CUT AND REPLACEMENT	RD-06
2. 9/8/2021 KL - CA-7 TO SPRING LINE OF PIPE		Date: 05/19/2015
3.		Drawn JH / Checked AW
4.		City of Crystal Lake Illinois

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TR-03

SPECIFICATIONS

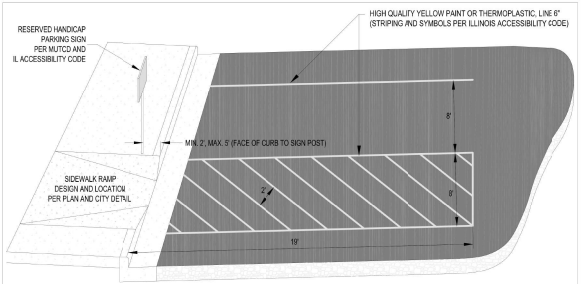
1. ALL TRAFFIC CONTROL SIGNS AND POSTS SHALL BE INSTALLED PRIOR TO OCCUPANCY AND SHALL BE INSTALLED ACCORDING TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SECTION 728 (LATEST EDITION), AND IBOT POLICY ON ESTABLISHING AND POSTING SPEED LIMITS ON THE STATE HIGHWAY SYSTEM, MAY 2002EDITION (SPEED LIMIT SIGNS SPACING, PAGE 5).
2. POSTS SHALL BE TELESCOPING SIGNS POSTS, 14 GAUGE 1 3/4" x 1 3/4" x 15' (OR 11' OR 12') WITH A 13 GAUGE 2" x 2" x 36" BASE. TELESCOPING SIGN SUPPORTS SHALL CONFORM TO SECTION 728 OF THE IDOT STANDARD SPECIFICATIONSFOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION).
3. MOUNTING HOLES SHALL BE 13/16" IN DIAMETER +/- 3/16" AND WILL BE SPACED 1" ON CENTER ON ALL SIDES FOR THE ENTIRE LENGTH OF THE POSTS. HOLES SHALL BE ON THE CENTERLINE OF EACH SIDE IN TRUE ALIGNMENT AND OPPOSITE EACH OTHER TO ACCEPT A 5/16" BOLT THROUGH THE POST AT ANY LOCATION. THE POST SHALL HAVE A SMOOTH GALVANIZED FINISH APPLIED EITHER BEFORE OR AFTER FORMING.
4. ALL SIGN PANELS SHALL BE DOT STANDARD 0.080" ALUMINUM BLANKS WITH 1 1/2" RADIUS ON ALL CORNERS. SIGN FACE MATERIAL SHALL BE 3M DG3 REFLECTORIZED SHEETING (ASTM PROPOSED TYPE I1, ILLINOIS TYPE ZZ).
   - STANDARD STOP SIGN (R1-1), YIELD SIGN (R1-2), AND DO NOT ENTER (R5-1) SHALL BE 30" x 30"
   - STANDARD WARNING SIGNS SHALL BE 30" x 30"
   - NO PARKING SIGNS SHALL BE 12" x 18" (R7-2a)
   - SCHOOL ZONE AND PEDESTRIAN CROSSING SIGNS SHALL BE 30" x 30" WITH SUPPLEMENTAL PLATES 24" x 12"
   - SPEED LIMIT SIGNS SHALL BE 24" x 30" (R2-1)
     SPEED LIMIT SIGNS FOR 30 MPH OR LESS IN URBAN AREAS SHALL BE SPACED 600 FEET TO 1,320 FEET (2-4 BLOCKS). REFER TO IDOT POLICY ON ESTABLISHING AND POSTING SPEED LIMITS ON THE STATE HIGHWAY SYSTEM, MAY 2008 EDITION (SPEED LIMIT SIGNS SPACING, PAGE 5).



Revised:	Drawing Name	Drawing Number
1. 06/12/2015	TRAFFIC CONTROL SIGN AND POST	TR-03
2.		Date: 04/15/2007
3.		Drawn EM / Checked AW
4.		City of Crystal Lake Illinois

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TR-06



NOTES:

1. CONCRETE PARKING BUMPERS REQUIRED IF BARRIER CURB NOT PRESENT.
2. REFER TO CURRENT EDITIONOF THE ILLINOIS ACCESSIBILITY CODE, SECTION 400.310(c) AND ILLUSTRATIONS "B" (FIGURE I), "C", AND "D".

Revised:	Drawing Name	Drawing Number
1. 06/12/2015	TYPICAL HANDICAP ACCESSIBLE PARKING STALL	TR-06
2.		Date: 06/01/2007
3.		Drawn EM / Checked AW
4.		City of Crystal Lake Illinois

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No.	Date	Revision

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CITY OF CRYSTAL LAKE
STANDARD DETAILS

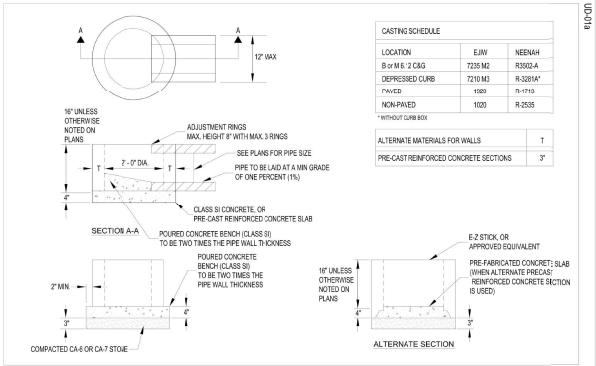
SITE IMPROVEMENT PLANS
551 CONGRESS PARKWAY
CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

Project Manager:	D J V
Engineer:	D J V
Date:	02/22/2022
Project No.	21-215
Sheet	C7.0 / C7

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Plot Date: Feb 23, 2022 - 8:40am Plotted By: dvane
File Name: P:\2021\21215\Drawings\Final Engineering\21215-ENGINEERING.dwg

UD-01a



CASTING SCHEDULE		
LOCATION	EJIW	NEENAH
B or M 6 ' 2 C&G	7235 M2	R3502-A
DEPRESSED CURB	7210 M3	R-2871*
PAVED	1920	R-1713
NON-PAVED	1020	R-2535

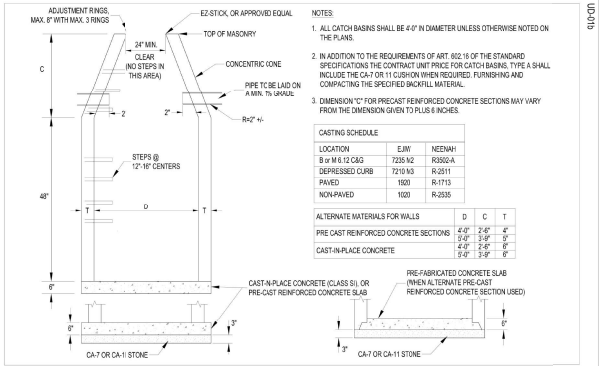
* WITHOUT CURB BOX

ALTERNATE MATERIALS FOR WALLS	T
PRE-CAST REINFORCED CONCRETE SECTIONS	3"

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015 2. 3. 4.	DRAINAGE STRUCTURES: INLET, TYPE A	UD-01a Date: 05/28/2015 Drawn JH Checked AW	City of Crystal Lake Illinois

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UD-01b



NOTES:

1. ALL CATCH BASINS SHALL BE 4'-0" IN DIAMETER UNLESS OTHERWISE NOTED ON THE PLANS.
2. IN ADDITION TO THE REQUIREMENTS OF ART. 602.16 OF THE STANDARD SPECIFICATIONS THE CONTRACT UNIT PRICE FOR CATCH BASINS, TYPE A SHALL INCLUDE THE CA-7 OR 11 CUSHION WHEN REQUIRED. FURNISHING AND COMPACTING THE SPECIFIED BACKFILL MATERIAL.
3. DIMENSION "C" FOR PRECAST REINFORCED CONCRETE SECTIONS MAY VARY FROM THE DIMENSION GIVEN TO PLUS 6 INCHES.

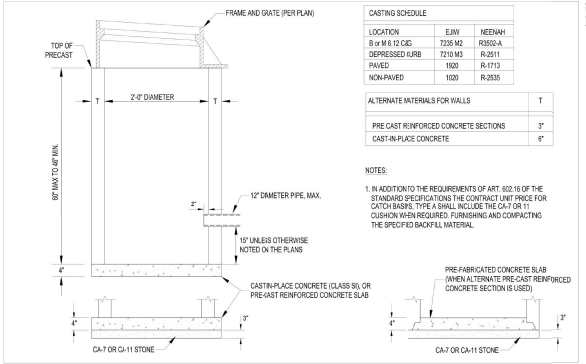
CASTING SCHEDULE		
LOCATION	EJIW	NEENAH
B or M 6.12 C&G	7235 M2	R3502-A
DEPRESSED CURB	7210 M3	R-2511
PAVED	1920	R-1713
NON-PAVED	1020	R-2535

ALTERNATE MATERIALS FOR WALLS	D	C	T
PRE CAST REINFORCED CONCRETE SECTIONS	4'-0"	2'-6"	4"
	5'-0"	3'-0"	5"
CAST-IN-PLACE CONCRETE	4'-0"	2'-6"	6"
	5'-0"	3'-0"	6"

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015 2. 3. 4.	CATCH BASIN TYPE A	UD-01b Date: 09/18/2012 Drawn DD Checked AW	City of Crystal Lake Illinois

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UD-01c



CASTING SCHEDULE		
LOCATION	EJIW	NEENAH
B or M 6.12 C&G	7235 M2	R3502-A
DEPRESSED CURB	7210 M3	R-2511
PAVED	1920	R-1713
NON-PAVED	1020	R-2535

ALTERNATE MATERIALS FOR WALLS	T
PRE CAST REINFORCED CONCRETE SECTIONS	3"
CAST-IN-PLACE CONCRETE	6"

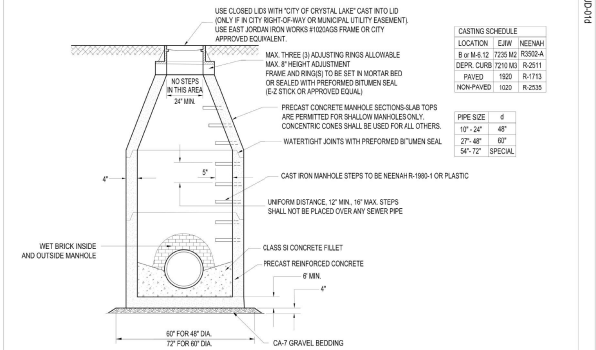
NOTES:

1. IN ADDITION TO THE REQUIREMENTS OF ART. 602.16 OF THE STANDARD SPECIFICATIONS THE CONTRACT UNIT PRICE FOR CATCH BASINS, TYPE A SHALL INCLUDE THE CA-7 OR 11 CUSHION WHEN REQUIRED. FURNISHING AND COMPACTING THE SPECIFIED BACKFILL MATERIAL.

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015 2. 3. 4.	CATCH BASIN TYPE C	UD-01c Date: 05/19/2015 Drawn JH Checked AW	City of Crystal Lake Illinois

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UD-01d



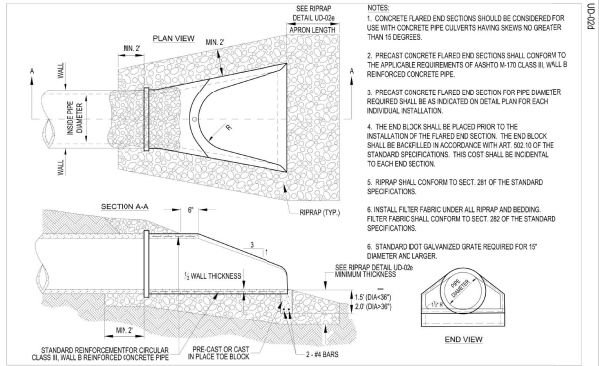
CASTING SCHEDULE		
LOCATION	EJIW	NEENAH
B or M-6.12	7235 M2	R3502-A
DEPR. CURB	7210 M3	R-2511
PAVED	1920	R-1713
NON-PAVED	1020	R-2535

PIPE SIZE	d
10" - 24"	48"
27" - 48"	60"
54" - 72"	SPECIAL

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015 2. 3. 4.	STORM MANHOLE TYPE A	UD-01d Date: 05/19/2015 Drawn JH Checked AW	City of Crystal Lake Illinois

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UD-02d



NOTES:

1. CONCRETE FLARED END SECTIONS SHOULD BE CONSIDERED FOR USE WITH CONCRETE PIPE CULVERTS HAVING SKEWS NO GREATER THAN 15 DEGREES.
2. PRECAST CONCRETE FLARED END SECTIONS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-170 CLASS III, WALL B REINFORCED CONCRETE PIPE.
3. PRECAST CONCRETE FLARED END SECTION FOR PIPE DIAMETER REQUIRED SHALL BE AS INDICATED ON DETAIL PLAN FOR EACH INDIVIDUAL INSTALLATION.
4. THE END BLOCK SHALL BE PLACED PRIOR TO THE INSTALLATION OF THE FLARED END SECTION. THE END BLOCK SHALL BE BACKFILLED IN ACCORDANCE WITH ART. 502.10 OF THE STANDARD SPECIFICATIONS. THIS COST SHALL BE INCIDENTAL TO EACH END SECTION.
5. RIPRAP SHALL CONFORM TO SECT. 281 OF THE STANDARD SPECIFICATIONS.
6. INSTALL FILTER FABRIC UNDER ALL RIPRAP AND BEDDING. FILTER FABRIC SHALL CONFORM TO SECT. 282 OF THE STANDARD SPECIFICATIONS.
6. STANDARD IDOT GALVANIZED GRATE REQUIRED FOR 15" DIAMETER AND LARGER.

Revised:	Drawing Name	Drawing Number	
1. 06/12/2015 2. 8/27/2015 3. 4.	FLARED END SECTION (PRECAST CONCRETE PIPE)	UD-02d Date: 04/15/2007 Drawn DD Checked AW	City of Crystal Lake Illinois

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UD-02e

ROCK RIPRAP SPECIFICATIONS AND BEDDING

IDOT GRADATION	MAXIMUM ROCK SIZE (lb)*	EQUIVALENT DIAMETER (SPHERICAL)(in)*	MINIMUM BEDDING THICKNESS (in)	MINIMUM THICKNESS (in)
RR-3	50	10	-	8
RR-4	150	15	6	16
RR-5	400	21	8	22
RR-6	600	24	10	26
RR-7	1000	28	12	30

*ASSUMES A MINIMUM SPECIFIC GRAVITY OF 2.450 AND A MINIMUM UNIT WEIGHT OF 153 lbs/

NOTES:

1. RIPRAP SHALL CONFORM TO SECT. 281 OF THE STANDARD SPECIFICATIONS.
2. INSTALL FILTER FABRIC UNDEF ALL RIPRAP AND BEDDING. FILTER FABRIC SHALL CONFORM TO SECT. 282 OF THE STANDARD SPECIFICATIONS.

ROCK RIPRAP SIZE REQUIREMENTS AND THICKNESS

CULVERT DIAMETER (in)	MINIMUM TAILWATER				MAXIMUM TAILWATER			
	MAX CONDUIT VELOCITY = 5 fps		MAX CONDUIT VELOCITY = 10 fps		MAX CONDUIT VELOCITY= 5 fps		MAX CONDUIT VELOCITY = 10 fps	
	IDOT GRADATION	APRON LENGTH (ft)	IDOT GRADATION	APRON LENGTH (ft)	IDOT GRADATION	APRON LENGTH (ft)	IDOT GRADATION	APRON LENGTH (ft)
12	RR-3	10	RR-3	12	RR-3	12	RR-3	15
18	RR-3	14	RR-4	16	RR-3	12	RR-3	16
24	RR-3	16	RR-4	20	RR-3	14	RR-4	17
30	RR-3	18	RR-4	22	RR-3	16	RR-4	20
36	RR-4	20	RR-5	24	RR-3	16	RR-4	22
48	RR-4	24	RR-6	28	RR-4	20	RR-4	24
60	RR-5	32	RR-6	36	RR-4	22	RR-5	26
72	RR-6	40	RR-6	44	RR-5	24	RR-5	29
96	RR-7	50	RR-7	54	RR-5	26	RR-5	32

NOTES.

1. IF TAILWATER DEPTH FROM THE PIPE INVERT IS LESS THAN HALF THE DIAMETER OI THE PIPE, THEN MINIMUM TAILWATER CONDITIONS EXIST.
2. ADAPTED FROM THE ILLINOIS URBAN MANUAL

Revised:	Drawing Name	Drawing Number	
1. 2. 3. 4.	RIPRAP DETAILS	UD-02e Date: 08/27/2015 Drawn DD Checked AW	City of Crystal Lake Illinois

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No.	Date	Revision

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CITY OF CRYSTAL LAKE
STANDARD DETAILS

SITE IMPROVEMENT PLANS
551 CONGRESS PARKWAY
CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

Project Manager:	D J V
Engineer:	D J V
Date:	02/22/2022
Project No.	21-215
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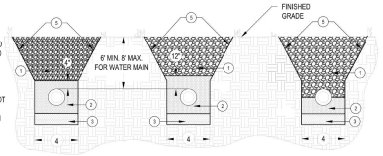
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Plot Date: Feb 23, 2022 - 8:42am Plotted By: dvane
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UG-03

LEGEND:

1. TRENCH BACKFILL TO SUBGRADE AND WITHIN 2 FEET OF PROPOSED PAVEMENT, DRIVEWAY, CURB AND GUTTER OR SIDEWALK. TRENCH BACKFILL MATERIALS SHALL BE IDOT APPROVED GRADATION CA-6, GRADE 7, 8, OR 9 COMPACTED TO 95% OF MODIFIED PROCTOR DENSITY. IN NON-STRUCTURAL AREAS BACKFILL WITH APPROVED EXCAVATED MATERIALS.
2. PIPE BEDDING SHALL BE WASHED MATERIAL IDOT GRADATION CA-7 OR CA-11FROM 4 INCHES BELOW BOTTOM OF PIPE TO HEIGHT SHOWN ON EACH SECTION
3. UNSUITABLE MATERIAL TO BE REMOVED WHERE DIRECTED BY THE ENGINEER AND REPLACED WITH COMPACTED SUITABLE MATERIAL.
4. TRENCH WIDTH:
   PIPE O.D. + 12 INCHES MINIMUM
   PIPE I.D. + 18 INCHES MAXIMUM
5. CONTRACTORS SHALL COMPLY WITH ALL CURRENT OSHA STANDARDS.



SECTION A:
WATER MAIN DIP

FORCE MAIN DIP

SANITARY SEWER MAIN & SERVICES DIP

SECTION B:
SANITARY SEWER MAIN & SERVICES (PVC)

STORM SEWER (PVC)

WATER MAIN, C909 FORCE MAIN (PVC) (HDPE)

SECTION C:
STORM SEWER (RCP)

* NOTE: ALL DUCTILE IRON SHALL BE WRAPPED WITH APPROVED POLYETHYLENE PIPE WRAP

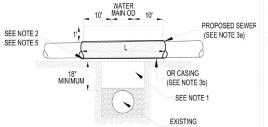
Revised:	Drawing Name	Drawing Number
1. 06/12/2015 2. 02/04/2021 KL CA-7 WASHED STONE 3. 4.	TYPICAL TRENCH CROSS SECTION	UG-03 Date: 05/29/2015 Drawn JH, Checked AW

City of Crystal Lake Illinois

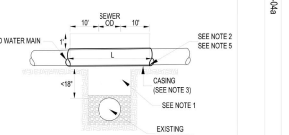
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UG-04a

PROPOSED SEWER LINE ABOVE EXISTING WATER MAIN WITH 18" MINIMUM SEPARATION.



PROPOSED WATER MAIN ABOVE EXISTING SEWER LINE WITH LESS THAN 18" SEPARATION.



NOTES

1. IF THE SELECT GRANULAR BACKFILL EXISTS; REMOVE WITHIN WIDTH OF PROPOSED SEWER TRENCH AND REPLACE WITH SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
2. OMIT SELECT GRANULAR CRADLE AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP OF THE WATER MAIN AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT OVER LENGTH "L".
3a. CONSTRUCT "L" FEET OF PROPOSED SEWER OF WATER MAIN MATERIAL AND PRESSURE TEST, OR
3b. USE CASING LENGTH "L" FOR PROPOSED SEWER AND SEAL ENDS OF CASING. SEE UW-14 FOR CASING DETAILS.
4. POINT LOADS SHALL NOT BE ALLOWED BETWEEN SEWER OR SEWER CASING AND WATER MAIN.
5. PROVIDE ADEQUATE SUPPORT FOR EXISTING SEWER LINE TO PREVENT DAMAGE DUE TO SETTLEMENT OF WATER MAIN TRENCH.
6. PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH.

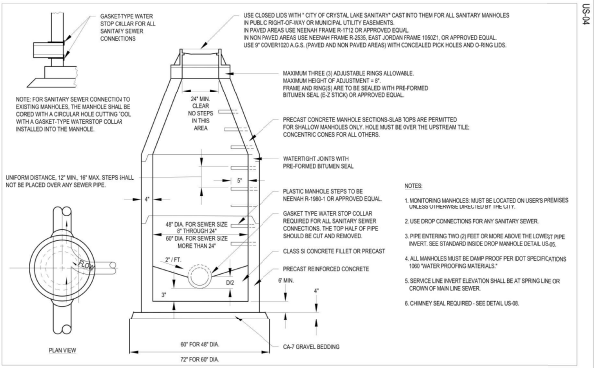
ADDITIONAL NOTES:
THE REQUIREMENTS ON THIS DETAIL ARE TAKEN FROM THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, CURRENT EDITION
CLASS IV MATERIAL TO BE COMPACTED TO 95% OF STANDARD PROCTOR MAXIMUM DENSITY
OUTER DIAMETER = OD

Revised:	Drawing Name	Drawing Number
1. 06/12/2015 2. 8/30/2021 KL - SEWER AND WATER 2014 UPDATE 3. 4.	WATER AND SEWER SEPARATION REQUIREMENTS	UG-04a Date: 04/15/2007 Drawn EM, Checked AW

City of Crystal Lake Illinois

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US-04



NOTES:
1. MONITORING MANHOLES: MUST BE LOCATED ON USER'S PREMISES UNLESS OTHERWISE APPROVED BY THE CITY.
2. USE DROP CONNECTIONS FOR ANY SANITARY SEWER.
3. PIPE ENTERING TWO (2) FEET OR MORE ABOVE THE LOWEST PIPE INVERT. SEE STANDARD INSIDE DROP MANHOLE DETAIL US-05.
4. ALL MANHOLES MUST BE DAMP PROOF PER IDOT SPECIFICATIONS 1060 "WATER PROOFING MATERIALS."
5. SERVICE LINE INVERT ELEVATION SHALL BE AT SPRING LINE OR CROWN OF MAIN LINE SEWER.
6. CHIMNEY SEAL REQUIRED - SEE DETAIL US-06.

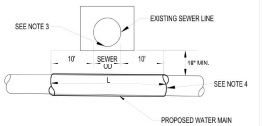
Revised:	Drawing Name	Drawing Number
1. 06/12/2015 2. 08/21/2018 3. 4.	STANDARD SANITARY AND MONITORING MANHOLE	US-04 Date: 06/12/2015 Drawn JH, Checked VR

City of Crystal Lake Illinois

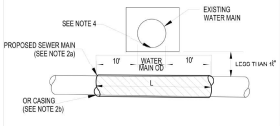
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UG-04b

PROPOSED WATER MAIN BELOW EXISTING SEWER LINE WITH 18" MINIMUM SEPARATION



PROPOSED SEWER LINE BELOW EXISTING WATER MAIN WITH LESS THAN 18" SEPARATION



NOTES

1. OMIT SELECT GRANULAR CRADLE AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP OF PROPOSED WATER MAIN AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT OVER LENGTH "L".
2. IF THE SELECT GRANULAR BACKFILL EXISTS; REMOVE WITHIN WIDTH OF PROPOSED SEWER TRENCH AND REPLACE WITH SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
3. PROVIDE ADEQUATE SUPPORT FOR EXISTING SEWER LINE TO PREVENT DAMAGE DUE TO SETTLEMENT.
4. USE A CASING PIPE LENGTH "L" FOR PROPOSED WATER MAIN AND SEAL ENDS OF CASING. SEE UW-14 FOR CASING DETAILS.

2a. CONSTRUCT "L" FEET OF PROPOSID SEWER OF WATER MAIN MATERIAL AND PRESSURE TEST, OR

2b. CONSTRUCT "L" FEET OF CASING IOR PROPOSED SEWER AND SEAL ENDS OF CASING. SEE UW-14 FOR CASING IETAILS OR

3. POINT LOADS SHALL NOT BE ALLOVED BETWEEN SEWER OR SEWER CASING AND WATER MAIN.
4. PROVIDE ADEQUATE SUPPORT FOI EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TIENCH.

ADDITIONAL NOTES
THE REQUIREMENTS ON THIS DETAIL ARE TAKEN FROM THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS (SEE PAGES 100-173)
CLASS IV MATERIALS SHALL BE COMPACTED TO 95% OF STANDARDS PROCTOR DENSITY.
OD = OUTSIDE DIAMETER

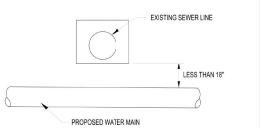
Revised:	Drawing Name	Drawing Number
1. 06/12/2015 2. 8/30/2021 KL - SEWER AND WATER 2014 UPDATE 3. 4.	WATER AND SEWER SEPARATION REQUIREMENTS	UG-04b Date: 04/15/2007 Drawn EM, Checked AW

City of Crystal Lake Illinois

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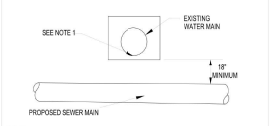
UG-04b

PROPOSED WATER MAIN BELOW EXISTING SEWER LINE WITH < 18" MIN. SEPARATION



NOT ALLOWED: MUST MAINTAIN 18" VERTICAL SEPARATION

PROPOSED SEWER LINE BELOW EXISTING WATER MAIN WITH 18" MINIMUM SEPARATION



NOTES

1. PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH.

ADDITIONAL NOTES:
THE REQUIREMENTS ON THIS DETAIL ARE TAKEN FROM THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS (SEE PAGES 100-173)

Revised:	Drawing Name	Drawing Number
1. 06/12/2015 2. 8/30/2021 KL - SEWER AND WATER 2014 UPDATE 3. 4.	WATER AND SEWER SEPARATION REQUIREMENTS	UG-04c Date: 04/15/2007 Drawn EM, Checked AW

City of Crystal Lake Illinois

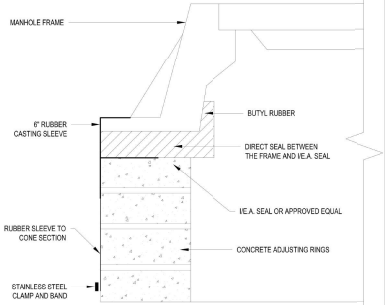
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US-06

INTERNAL / EXTERNAL CHIMNEY SEAL I/E.A. SEAL

ALL SANITARY MANHOLES SHALL BE INSTALLED WITH AN INTERNAL / EXTERNAL CHIMNEY SEAL WITH A RUBBER SLEEVE TO SEAL THE MANHOLE CHIMNEY FROM THE TOP OF THE CORBEL TO THE MANHOLE FRAME. THE SEAL SHALL BE INSTALLED PER THE INSTALLATION INSTRUCTIONS AND AS DIRECTED BY THE ENGINEER.

CHIMNEY SEAL TO BE ADAPTER INC. BRAND OR APPROVED EQUAL. THEY SHALL BE INSTALLED DURING CONSTRUCTION AND SET TO FINAL GRADE. ANY STRUCTURE THAT IS IN THE ROADWAY MUST BE RAMPED UNTIL FINAL SURFACE S PLACED.



THE INTERNAL/EXTERNAL ADAPTER SEAL IS MANUFACTURED TO FIT ALL MANHOLE FRAMES TO ANY DIMENSIONS OF HEIGHT AND INSIDE OR OUTSIDE DIAMETERS.

Revised:	Drawing Name	Drawing Number
1. 06/12/2015 2. 3. 4.	INTERNAL / EXTERNAL CHIMNEY SEAL	US-06 Date: 05/29/2015 Drawn JH, Checked VR

City of Crystal Lake Illinois

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CITY OF CRYSTAL LAKE
STANDARD DETAILS

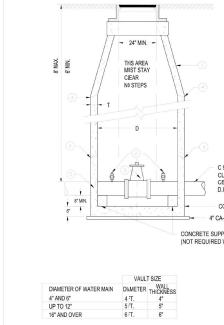
SITE IMPROVEMENT PLANS
551 CONGRESS PARKWAY
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Project Manager: D J V
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UW-01



VAULT SIZE		
DIAMETER OF WATER MAIN	DIAMETER	WALL THICKNESS
4" AND 6"	4' T.	5"
UP TO 12"	5' T.	5"
16" AND OVER	6' T.	6"

LEGEND:

1. CONCENTRIC CONES REQUIRED
2. 1" (MIN) MUELLER, A.Y. McDONALD, OR FORD 10 LEAD CORPORATION STOP EACH SIDE OF VALVE MUST BE A COMPRESSION FITTING
3. MUELLER 2361 OR AMERICAN FLOW CONTROL2500-1 RESILIENT SEAT GATE VALVE
4. WATERTIGHT JOINTS USING EZ STIK PREMIUM BUTYL SEALANT ASTM C990 OR EQUAL FOR FRAMES ADJUSTING RINGS AND BARREL SECTIONS.
5. GASKET-TYPE WATERSTOP COLLAR FOR ALL WATER MAIN CONNECTIONS

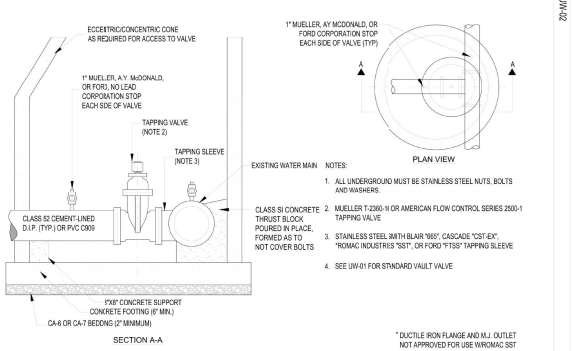
NOTES:

1. ALL MANHOLES MUST BE DAMP PROOF PER IDOT SPECIFICATIONS 1090.
2. DRAIN FOR VALVE VAULT SHALL BE CONSTRUCTED ONLY WHEN SHOWN ON THE PLANS.
3. CAST IRON MANHOLE FRAME I COVER SIMILAR TO NEENAH R-1712, OR EQUAL WITH STANDARD DUTY, NON-ROCKING TYPE LIDS WITH "CITY OF CRYSTAL LAKE WATER" CAST INTO LID. (NEENAH R-2535, OR EQUAL MAY BE USED IN GRASSY AREAS)
4. HDPE PLASTIC MANHOLE ADJUSTING RINGS CONFORMING TO THE REQUIREMENTS OF M.E.N. OF THE AASHTO STANDARD SPECIFICATIONS AND ASTM D1248-84. ALL ADJUSTING RINGS SHALL BE STABALIZED AGAINST ULTRA VIOLET LIGHT. ADJUSTING RING HEIGHT NOT TO EXCEED 8" WITH A MAXIMUM OF THREE (3) ADJUSTMENT RING. THE ANNULAR SPACE BETWEEN RINGS AND CONE BASIN, THE RINGS AND THE RINGS COVER FRAME SHALL BE SEALED UTILIZING AND APPROVED BUTYL SEALANT. ALL ADJUSTMENT FOR MATCHING ROAD GRADE SHALL SE MADE UTILIZING A MOLDED AND INDEXED SLOPE RING.
5. ALL UNDERGROUND NUTS, BOLTS & WASHERS MUST BE STAINLESS STEEL.
6. VALVE VAULT REQUIRED FORWATER SERVICES GREATER THAN OR EQUAL TO 4". SEE VAULT SIZE TABLE.
7. STEPS WITHIN VAULT TO BE REMOVED PRIOR TO CITY ACCEPTANCE.

Revised:	Drawing Name	Drawing Number
1. 06/12/2015	STANDARD VALVE VAULT	UW-01
2. 09/9/2021 - KL 1" CORP AND STEPS REMOVED		Date: 05/29/2015
3.		Drawn JH / Checked VR
4.		City of Crystal Lake Illinois

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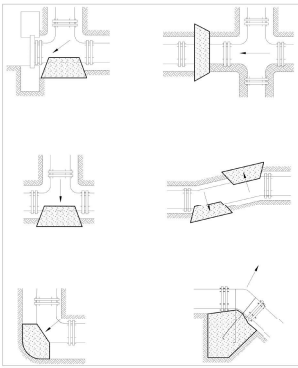
UW-02



Revised:	Drawing Name	Drawing Number
1. 06/12/2015	WATER MAIN PRESSURE CONNECTION	UW-02
2. KL 1-25-2021 1" CORPORATION STOPS		Date: 05/29/2015
3.		Drawn JH / Checked VR
4.		City of Crystal Lake Illinois

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UW-03



BEARING AREA (SQ. FT.)					
PIPE SIZE	TEE/PLUG	90°	45°	21 1/2°	11 1/4°
6	4	2	1	1	1
8	6	4	3	1	1
10	7	5	3	1	1
12	8	6	4	2	2
14	12	9	6	3	3
16	15	12	7	3	3
18	18	15	9	4	4
24	40	30	15	5	5

NOTES:

ALL BLOCKING SHAL BE POURED CLASS SI CONCRETE AGAINST UNDISTURBED EARTH.

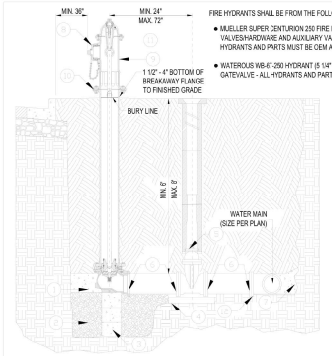
ALL BENDS OR ELBOWS GREATER THAN OR EQUAL TO 11 1/4° SHALL HAVE THRUST BLOCKING. *ORM AS TO NOT COVER BOLTS.

IN LIEU OF THRUST BLOCKING, "MEGA LUG" (EBAA) JOINT RESTRAINTS OR APPROVED EQUAL CAN BE USED AS APPROVED BY THE ENGINEER.

Revised:	Drawing Name	Drawing Number
1. 06/12/2015	THRUST BLOCK INSTALLATION	UW-03
2.		Date: 05/29/2015
3.		Drawn JH / Checked VR
4.		City of Crystal Lake Illinois

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UW-06



FIRE HYDRANTS SHALL BE FROM THE FOLLOWING LIST, AS APPROVED IY THE CITY:

- MUELLER SUPER 'ZENTURION 250 FIRE HYDRANT, A-423 (5 1/4" BARREL) WITH MUELLER VALVES/HARDWARE AND AUXILIARY VALVE 0" GATE VALVE NO. 2361RESILIENT WEDGE - ALL HYDRANTS AND PARTS MUST BE OEM AND COMPLY WITH NO LEAD REQUIREMENTS.
- WATEROUS WB-6'-250 HYDRANT (5 1/4" PACER) WITH SERIES 2500-1RESILIENT WEDGE GATEVALVE - ALL HYDRANTS AND PARTS MUST COMPLY WITH NO LEAD REQUIREMENTS

LEGEND:

1. PROVIDE CLASS SI ICONCRETE BASE AND BLOCKING AGAINST UNDISTURBED EARTH
2. DRAIN SUMP TO BE 1/4 CUBIC YARD OF 3/4" WASHED STONE
3. CONCRETE SUPPORT
4. CONCRETE BLOCK OR BRICK SUPPORT
5. RUBBER VALVE BOO STABILIZER
6. USE MEGALUG RES'RAINTS WITH GRADE 304 STAINLESS STEEL NUTS AND BOLTS AT ALL MECHANICAL JOINTS.
7. CONCRETE BLOCKING
8. 4 1/2" PORT TO FACE 'AVEMENT OR AS DIRECTED BY CITY ENGINEER
9. ALL NEWLY INSTALLED HYDRANTS MUST HAVE 2.4 MILS AMERICO AT PRIMER OR EQUIL. AND FINISH COAT SHERWIN WILLIAMS POLANE B MIN 4.1 MILS + 6.5 MILS TOTAL DRY FILM THICKNESS. COLOR (SAFETY RED)
10. MIN. 48" BETWEEN HYDRANT AND ANY VERTICAL OBSTRUCTIONS.
11. MIN. 72" BETWEEN HYDRANT AND ANY LANDSCAPING WITH A MATURE HEIGHT GREATER TIAN 12".
12. ALL UNDERGROUNC HARDWARE MUST BE STAINLESS STEEL INCLUDING NUTS, BIALTS, AND WASHERS.

Revised:	Drawing Name	Drawing Number
1. 09/12/2015	FIRE HYDRANT	UW-06
2. 01/25/2021 KL Mueller Super Centurion 250 FH Specification		Date: 06/01/2015
3.		Drawn JH / Checked VR
4.		City of Crystal Lake Illinois

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No.	Date	Revision

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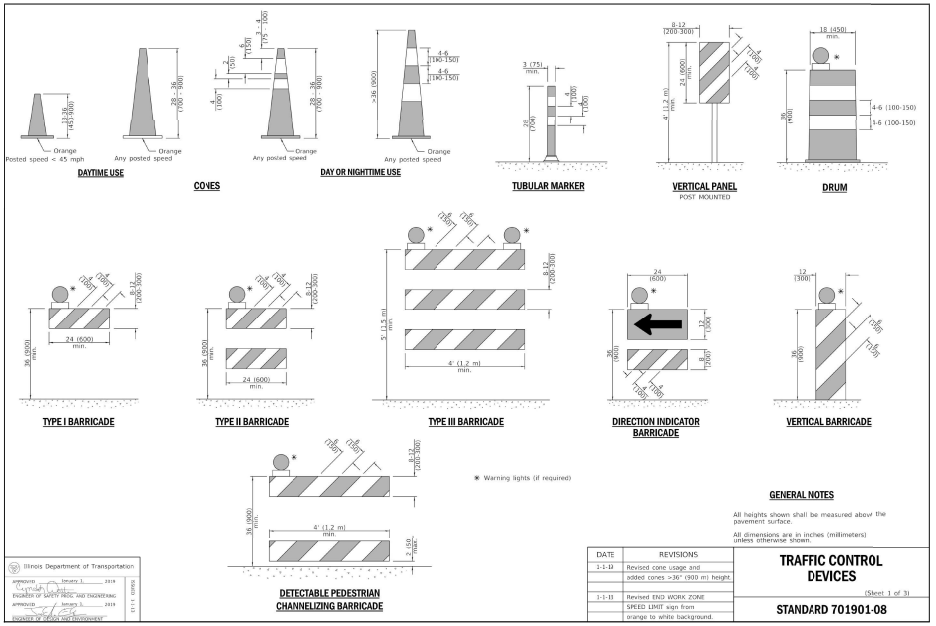
CITY OF CRYSTAL LAKE STANDARD DETAILS

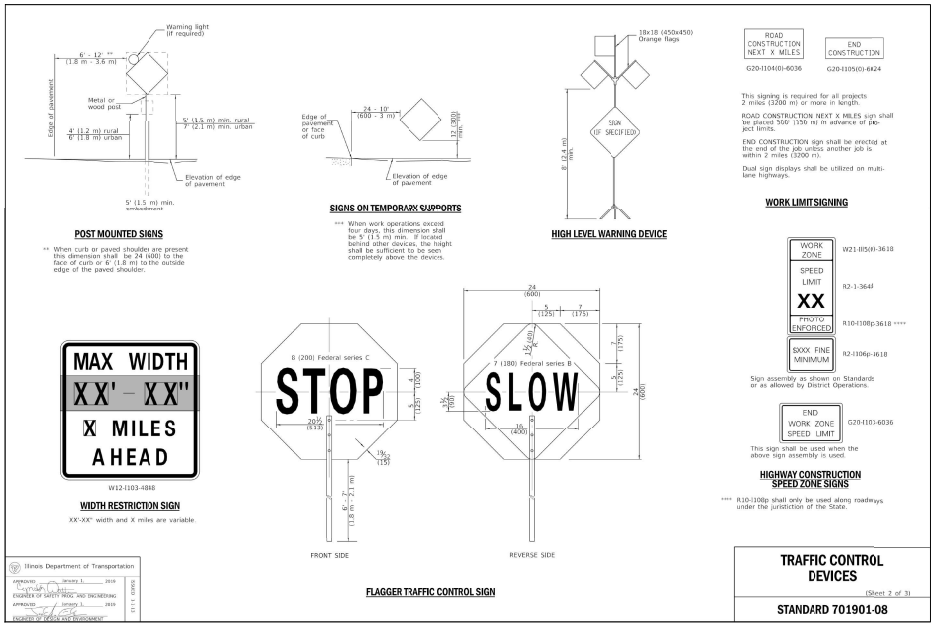
SITE IMPROVEMENT PLANS
551 CONGRESS PARKWAY
CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

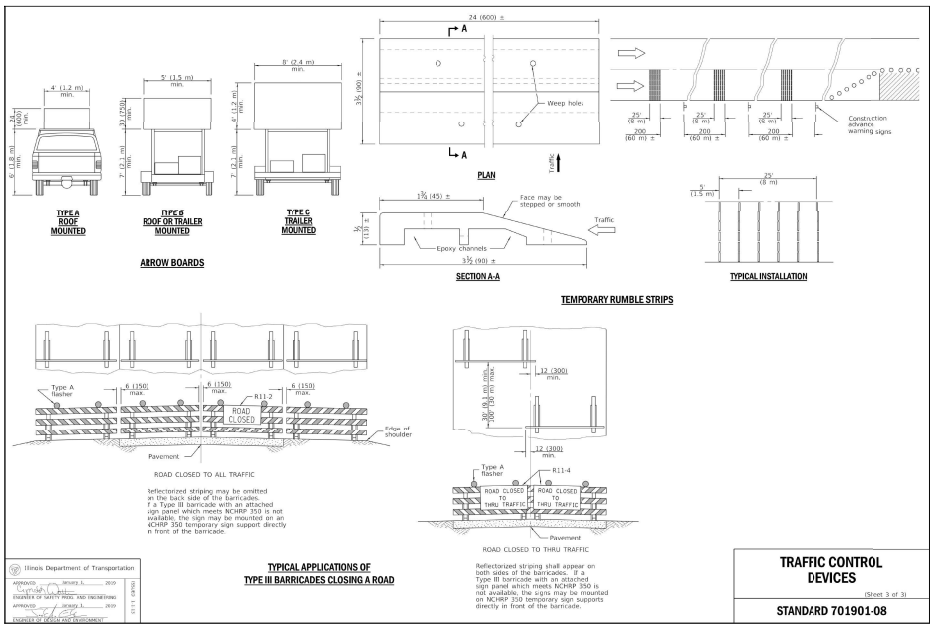
Project Manager:	D J V
Engineer:	D J V
Date:	02/22/2022
Project No.	21-215
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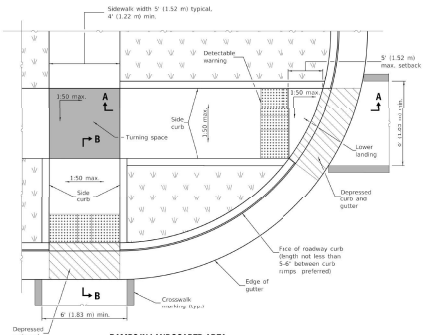
IDOT
STANDARD DETAILS

SITE IMPROVEMENT PLANS
551 CONGRESS PARKWAY
CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

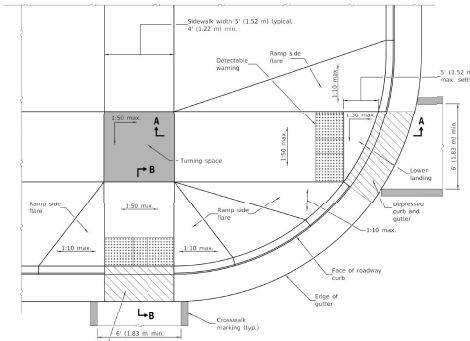
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Engineer: D J V
Date: 02/22/2022
Project No. 21-215
Sheet C7.4 / C7

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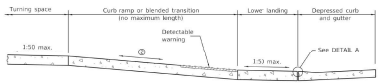
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RAMPS IN LANDSCAPED AREA
SETBACK ≤ 5'

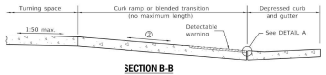


RAMPS IN PAVED AREA
SETBACK ≤ 5'



SECTION A-A

② The running slope of a curb ramp shall be 1:20 min. and 1:12 max. The running slope of a blended transition shall be 1:20 max

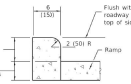


SECTION B-B

② The running slope of a curb ramp shall be 1:20 min. and 1:12 max. The running slope of a blended transition shall be 1:20 max.



DETAIL A



SIDE CURB DETAIL

See Sheet 2 for GENERAL NOTES.

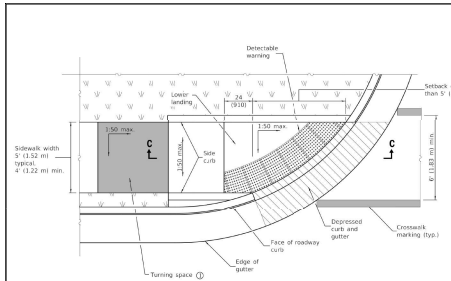
Illinois Department of Transportation
PASSED January 1, 2019
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2019
ENGINEER OF BUREAU OF ENVIRONMENT
DIST 1 CHICAGO

DATE	REVISIONS
1-1-19	Removed "15-foot rule", added "Blended transitions" and placement tolerances for detectable warnings.
1-1-18	Omitted diagonal slope at turning spaces and lower landings.

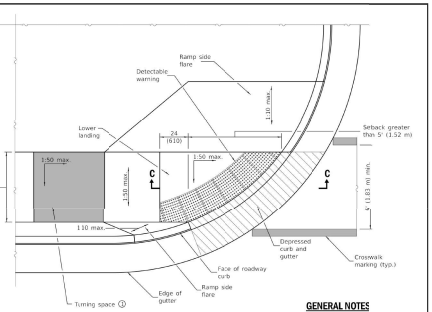
PERPENDICULAR CURE RAMPS FOR SIDEWALKS

(Sheet 1 of 2)

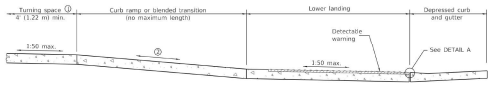
STANDARD 424001-11



RAMP IN LANDSCAPED AREA
SETBACK > 5'



RAMP IN PAVED AREA
SETBACK > 5'



SECTION C-C

① This turning space not required for blended transitions.

② The running slope of a curb ramp shall be 1:20 min. and 1:12 max. The running slope of a blended transition shall be 1:20 max.

GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

Where the turning space is constrained on a side opposite a ramp, the minimum length of the turning space in the direction of the ramp-run shall be 5' (1.52 m).

Where 1:50 maximum slope is shown, 1:64 is preferred.

Detectable warnings are shown in their ideal locations but the following placement tolerances are allowed.

Side Border - Detectable warnings should extend the full width of the walking surface (excluding flared sides) but a border along each side up to 2 in. (50 mm) in width is allowed.

Curb Set-Back - Detectable warnings located at the back of curb should closely align with the curb but a gap up to 6 in. (150 mm) behind the curb is allowed.

See Standard 606001 for details of depressed curb adjacent to curb ramp.

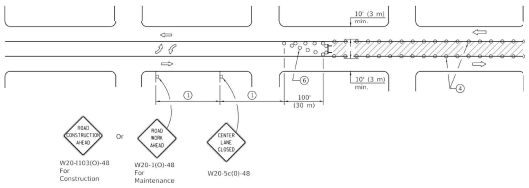
All dimensions are in inches (millimeters) unless otherwise shown.

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DIST 1 CHICAGO

PERPENDICULAR CURE RAMPS FOR SIDEWALKS

(Sheet 2 of 2)

STANDARD 424001-11



CASE I

(Signs required for both directions)

SIGN SPACING	
Posted Speed	Sign Spacing
55	500' (150 m)
50-45	350' (105 m)
<45	200' (60 m)

① Refer to SIGN SPACING TABLE for distances.

② Required for speeds > 40 mph (70 km/h).

③ Required if work exceeds 500' (164 m) or 1 block.

④ Cones at 25' (8 m) centers or 250' (75 m) on approach. Additional cones may be placed at 50' (15 m) center. When drums or type I or II barricades are used, the interval between devices may be doubled.

⑤ For approved sideroad closures.

⑥ Cones, drums or barricades at 20' (6 m) centers in taper.

⑦ Use flagger sign only when lagger is present.

SYMBOLS

- Work area
- Barricade or drum with flashing light
- Flagger with traffic control sign
- Cone, drum or barricade
- Sign on portable or permanent support
- Type III barricade with flashing lights

GENERAL NOTES

This Standard is used to close one lane of an urban, two lane, two way roadway with a bidirectional turn lane.

Case I applies when no workers are present. When workers are present, two lanes shall be closed and traffic control shall be according to Standard 701501.

Calculate L as follows:

SPEED LIMIT	FORMULAS English	(Metric)
40 mph (70 km/h) or less:	$L=\frac{WS^2}{60}$	$L=\frac{WS^2}{150}$
45 mph (80 km/h) or greater:	L=(W)(S)	=0.65(W)(S)

W = Width of offset in feet (meters).

S = Normal posted speed mph (km/h).

All dimensions are in inches (millimeters) unless otherwise shown.

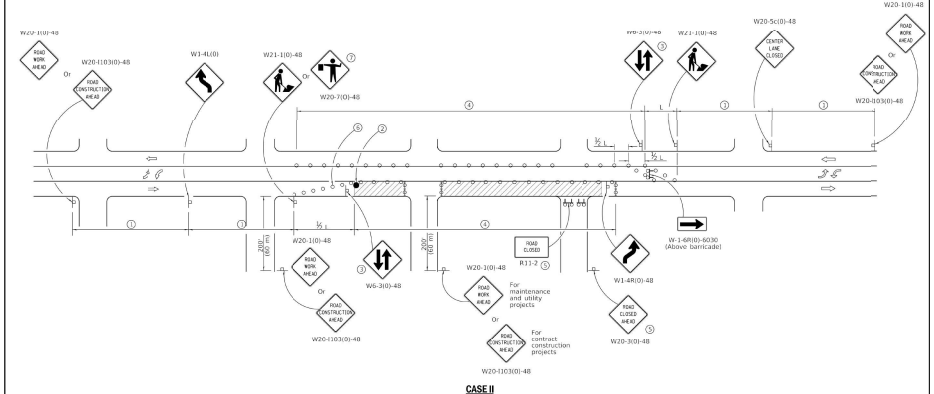
Illinois Department of Transportation
APPROVED January 1, 2019
ENGINEER OF POLICY AND ENGINEERING
APPROVED January 1, 2019
ENGINEER OF BUREAU OF ENVIRONMENT
DIST 1 CHICAGO

DATE	REVISIONS
1-1-19	Revised to allow cones at night.
1-1-18	Corrected sign number for TWO WAY TRAFFIC sign for CASE II.

URBAN LANE CLOSURE, 2L, 2W, WITH BIDIRECTIONAL LEFTTURN LANE

(Sheet 1 of 2)

STANDARD 701502-09



CASE II

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APPROVED January 1, 2019
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URBAN LANE CLOSURE, 2L, 2W, WITH BIDIRECTIONAL LEFTTURN LANE

(Sheet 2 of 2)

STANDARD 701502-09

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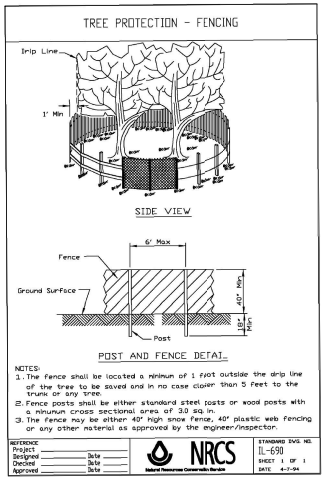
IDOT
STANDARD DETAILS

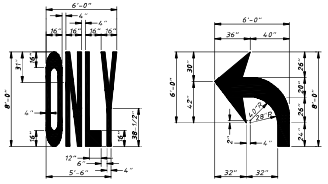
SITE IMPROVEMENT PLANS
551 CONGRESS PARKWAY
CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

Project Manager:	D J V
Engineer:	D J V
Date:	02/22/2022
Project No.	21-215
Sheet	C7.5 / C7

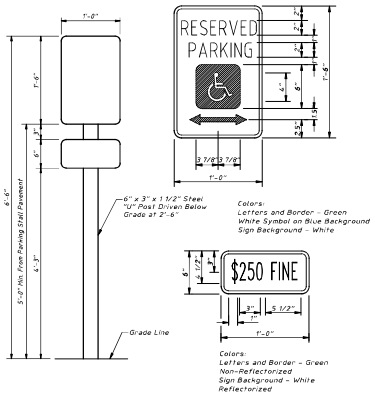
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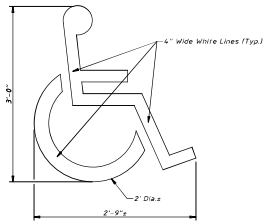




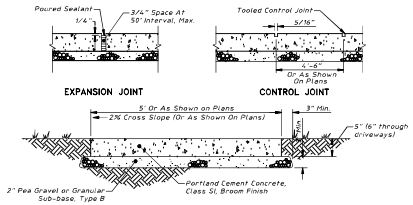
PAVEMENT MARKINGS



ACCESSIBLE PARKING SIGN



ACCESSIBLE PARKING STALL



PORTLAND CEMENT CONC. SIDEWALK

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GENERAL NOTES AND SPECIFICATIONS

SITE IMPROVEMENT PLANS
551 CONGRESS PARKWAY
CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

Project Manager:	D J V
Engineer:	D J V
Date:	02/22/2022
Project No.	21-215
Sheet	C7.6 / C7

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551 CONGRESS PARKWAY
STORMWATER POLLUTION PREVENTION PLAN
SECTION 4 TOWNSHIP 43 NORTH RANGE 8 EAST
CRYSTAL LAKE, ILLINOIS
MCHENRY COUNTY

OWNER / DEVELOPER:
Paul Swanson Associates, Inc.
401 E Prospect Ave, Suite 201
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PREPARED BY:
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CITY OF CRYSTAL LAKE:
100 W. Woodstock Street
Crystal Lake, IL 60014
Tel: (815) 459-2020



LOCATION MAP
Not To Scale

BENCHMARKS:

Site Benchmarks:

Cut Cross on curb located in parking lot Northeast corner of property & Southeast of Congress Parkway.
Elevation = 906.46

Cut Cross on curb East side of Exchange Drive & South of Station Drive.
Elevation = 913.78

INDEX TO STORM WATER POLLUTION PREVENTION PLAN SHEETS

NO.	DESCRIPTION
EC1.0	SWPPP TITLE SHEET
EC2.0	SWPPP GENERAL NOTES & SPECIFICATIONS
EC3.0	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
EC4.0	SWPPP DETAILS

LEGEND

Existing Symbol	Description	Proposed Symbol
	Storm Sewer Manhole	
	Catch Basin	
	Inlet	
	Flared End Section	
	Headwall	
	Area Drain	
	Sanitary Sewer Manhole	
C.O.	Clean Out	C.O.
	Storm Sewer	
	Storm Sewer Service	
	Perforated Underdrain	
	Sanitary Sewer	
	Sanitary Sewer Service	
	Combined Sewer	
FM	Force Main	FM
W	Water Main	W
	Water Main Service	
	Fire Hydrant	
	Valve Vault	
	Valve Box	
	B-Box	
	Well Head	
	Light Pole	
	Light Pole With Mast Arm	
	Traffic Signal	
	Traffic Signal With Mast Arm	
	Hand Hole	
	Fence	
	Guardrail	
	Pipe Bollard	
	Sign	
	Gas Valve	
G	Gas Line	G
E	Electric Line	E
OHW	Overhead Utility Line	OHW
FO	Fiber Optic Line	FO
	Electrical Pedestal	
	Electric Manhole	
	Guy Wire	
	Utility Pole	
	Telephone Pedestal	
	Telephone Manhole	
T	Telephone Line	T
CATV	Cable TV Line	CATV
	Cable TV Pedestal	
	Flagpole	
	Mailbox	
	Handicapped Parking Stall	
X	Number of Parking Stalls	X
	Curb & Gutter	
	Reverse Pitch Curb & Gutter	
	Depressed Curb	
	Retaining Wall	
C XXX.XX	Curb Elevation and	C XXX.XX
G/P XXX.XX	Gutter/Pavement Elevation	G XXX.XX
XXX.XX	Pavement Elevation	P XXX.XX
XXX.XX	Sidewalk Elevation	W XXX.XX
XXX.X +	Ground Elevation	XXX.X
T/W XXX.XX	Top of Wall Elevation	TW XXX.XX
B/W XXX.XX	Bottom of Wall Elevation	BW XXX.XX
Gr XXX.XX	Open Lid Frame & Grate	Gr XXX.XX
Rim XXX.XX	Closed Lid Frame & Lid	Rim XXX.XX
FG XXX.XX	Finish Grade	FG XXX.XX
GF XXX.XX	Garage Floor	GF XXX.XX
TF XXX.XX	Top of Foundation	TF XXX.XX
	Swale	
	Hardscape Flow	
	Softscape Flow	
XXX	Contour Line	XXX
	Wetland	
	Wetland Buffer	
	Normal Water Level	
	High Water Level	
	Flood Plain	
	Flood Way	
	Deciduous Tree	
	Coniferous Tree	
	Bush	
	Brushline	
B-1	Soil Boring	B-1
	Over Land Flow Route	

Know what's **below.**
Call before you dig.

Note:
Call 811 at least 48 hours, excluding weekends and holidays, before you dig.

062-072037
LICENSED PROFESSIONAL ENGINEER
OF ILLINOIS
EXPIRES 02-28-22

No.	Date	Revision

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TITLE SHEET

SITE IMPROVEMENT PLANS
551 CONGRESS PARKWAY
CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

Project Manager:	D J V
Engineer:	D J V
Date:	02/22/2022
Project No.	21-215
Sheet	EC1.0 / EC4

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Plot Date: Feb 22, 2022 - 8:43am Plotted By: dvane
File Name: P:\2021\215\215\Drawings\Final Engineering\215 ENGINEERING.dwg

Stormwater Pollution Prevention Plan

This plan has been prepared to comply with the provisions of the NPDES Permit Number _____ issued by the Illinois Environmental Protection Agency for storm water discharges from Construction Site Activities.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____ _____

Owner's Name *Signature*

_____ _____

Title *Date*

_____

Name of Firm/Company

I. Site Description:

A. The following is a description of the project location:

The project is located at 551 Congress Parkway, Crystal Lake, McHenry County, Illinois (See Location Map on Title Sheet for additional information).

B. The following is a description of the construction activity which is the subject of this plan:

Redevelopment of the entire site to accommodate three appartment buildings with drive aisles, parking, and related improvements to utilities including storm sewer, sanitary sewer, and water main.

C. The following is a description of the intended sequence of major activities which will disturb soils for major portions of the construction site, such as grubbing, excavation and grading:

Exact phasing and sequencing has yet to be determined. Generally, pavement and trees will be removed as required, and then clearing and grubbing will occur. Next, mass grading will commence for the building pad and parking areas. Then the underground utilities will be constructed. Finally, the buildings, parking lots, etc. will be constructed, followed by the installation of landscaping.

D. The total area of the construction site is estimated to be approximately ± 6.4 acres.

E. The following is a weighted average of the runoff coefficient for this project after construction activities are completed:

The weighted runoff coefficient after completion of all construction activities is approximately 0.65.

F. The following is a description of the soil types found at the project site followed by information regarding their erosivity:

The site's soils are described as Warsaw Loam per the NRCS,

G. The following is a description of potentially erosive areas associated with this project:

Areas with side slopes exceeding 4:1 slopes. These slope areas on the site shall be stabilized with a turf reinforcement mat and hydroseeded growing media system,

H. The following is a description of soil disturbing activities, their locations, and their erosive factors (e.g. steepness of slopes, length of slopes, etc):

The soil disturbing activities consist of grading and general infrastructure improvements over the entire site. The Contractor shall be responsible for maintaining all disturbances within the site, and shall protect all off-site areas as needed.

I. See the erosion control plans and/or drainage plans for this contract for information regarding drainage patterns, approximate slopes anticipated before and after major grading activities, locations where vehicles enter or exit the site and controls to prevent offsite sediment tracking (to be added after contractor identifies locations), areas of soil disturbance, the location of major structural and non-structural controls identified in the plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands) and locations where storm water is discharged to surface water including wetlands.

J. The following is a list of receiving water(s) and the ultimate receiving water(s), and aerial extent of wetland acreage at the site. The location of the receiving waters can be found on the erosion and sediment control plans:

The site does not drain to a receiving water. All stormwater infiltrates.

K. The following pollutants of concern will be associated with this construction project:

Soil sediment and dust, and construction of bituminous pavement.

II. Controls:

This section of the plan addresses the controls that will be implemented for each of the major construction activities described in I.C. above and for all use areas, borrow sites, and waste sites. For each measure discussed, the contractor will be responsible for its implementation as indicated. The contractor shall provide to the resident engineer a plan for the implementation of the measures indicated. The contractor, and subcontractors, will notify the resident engineer of any proposed changes, maintenance, or modifications to keep construction activities compliant with the permit. Each such contractor has signed the required certification on forms which are attached to, and are a part of, this plan:

A. Erosion and Sediment Controls

1. Stabilized Practices: Provided below is a description of interim and permanent stabilization practices, including site specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices may include but are not limited to: temporary seeding, permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided below in II(A)(1)(a) and II(A)(3), stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has temporarily or permanently ceases on all disturbed portions of the site where construction will not occur for a period of 14 or more calendar days.

a. Where the initiation of stabilization measures by the 7th day after construction activity temporarily or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable thereafter.

The following Stabilization Practices will be used for this project: Temporary blanket & seeding, permanent seeding, as shown on the Plans.

Describe how the Stabilization Practices listed above will be utilized: Seed & blanket.

See Storm Water Pollution Prevention (SWPP) Plan. SWPP Plan shall be modified as necessary by the Contractor during construction to prevent sediment from leaving the site or entering the offsite storm sewer.

2. Structural Practices: Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include but are not limited to perimeter erosion barrier, earth dikes, drainage swales, sediment traps, ditch checks, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. The installation of these devices may be subject to Section 404 of the Clean Water Act.

The following Structural Practices will be used for this project: Perimeter erosion control (silt) fence.

Describe how the Structural Practices listed above will be utilized:

See Storm Water Pollution Prevention (SWPP) Plan. SWPP Plan shall be modified as necessary by the Contractor during construction to prevent sediment from leaving the site.

3. Storm Water Management: Provided below is a description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

Such practices may include but are not limited to: storm water detention structures (including wet ponds), storm water retention structures, flow attenuation by use of open vegetated swales and natural depressions, infiltration of runoff on site, and sequential systems (which combine several practices).

The practices selected for implementation were determined on the basis of the technical guidance in Chapter 41 (Construction Site Stormwater Pollution Control) of the Illinois Department of Transportation Bureau of Design and Environment Manual. If practices other than those discussed in Chapter 41 are selected for implementation or if practices are applied to situations different from those covered in Chapter 41, the technical basis for such decisions will be explained below.

b. Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g. maintenance of hydrologic conditions such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities);

Description of Storm Water Management Controls: Installation of a storm sewer system. All inlets will be protected with silt baskets.

4. Other Controls:

a. Vehicle Entrances and Exits - Stabilized construction entrances and exits must be constructed to prevent tracking of sediments onto roadways.

The contractor will provide the resident engineer with a written plan identifying the location of stabilized entrances and exits and the procedures (s)he will use to construct and maintain them.

b. Material Delivery, Storage, and Use - The following BMPs shall be implemented to help prevent discharges of construction materials during delivery, storage, and use:

- All products delivered to the project site must be properly labeled.
- Water tight shipping containers and/or semi trailers shall be used to store hand tools, small parts, and most construction materials that can be carried by hand, such as paint cans, solvents, and grease.
- A storage/containment facility should be chosen for larger items such as drums and items shipped or stored on pallets. Such material is to be covered by a tin roof or large sheets of plastic to prevent precipitation from coming in contact with the products being stored.
- Large items such as light stands, framing materials and lumber shall be stored in the open in a general storage area. Such material shall be elevated with wood blocks to minimize contact with storm water runoff.
- Spill clean-up materials, material safety data sheets, an inventory of materials, and emergency contact numbers shall be maintained and stored in one designated area and each Contractor is to inform his/her employees and the resident engineer of this location.

c. Stockpile Management - BMPs shall be implemented to reduce or eliminate pollution of storm water from stockpiles of soil and paving materials such as but not limited to portland cement concrete rubble, asphalt concrete, asphalt concrete rubble, aggregate base, aggregate sub base, and pre-mixed aggregate. The following BMPs may be considered:

- Perimeter Erosion Barrier
- Temporary Seeding
- Temporary Mulch
- Plastic Covers
- Soil Binders
- Storm Drain Inlet Protection

The contractor will provide the resident engineer with a written plan of the procedures (s)he will use on the project and how they will be maintained.

d. Waste Disposal. No materials, including building materials, shall be discharged into Waters of the State, except as authorized by a Section 404 permit.

e. The provisions of this plan shall ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.

f. The contractor shall provide a written and graphic plan to the resident engineer identifying where each of the above areas will be located and how they are to be managed.

5. Approved State or Local Laws

The management practices, controls and provisions contained in this plan will be in accordance with IDOT specifications, which are at least as protective as the requirements contained in the Illinois Environmental Protection Agency's Illinois Urban Manual, 1995. Procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials shall be described or incorporated by reference in the space provided below. Requirements specified in sediment and erosion site plans, site permits, storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI, to be authorized to discharge under permit ILR10 incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

Description of procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials:

See Storm Water Pollution Prevention (SWPP) Plan. SWPP Plan shall be modified as necessary by the Contractor during construction to prevent sediment from leaving the site or entering the offsite storm sewer.

III. Maintenance:

The following is a description of procedures that will be used to maintain, in good and effective operating conditions, the vegetation, erosion and sediment control measures and other protective measures identified in this plan. The resident engineer will provide maintenance guides to the contractor for the practices associated with this project.

All disturbed areas shall be graded to keep runoff and sediment on-site to the greatest extent possible. Site shall be graded in such a matter to direct runoff to storm structures with catch-all inlet protection. Contractor shall maintain, replace, clean, and add additional measures as needed during the progression of construction to prevent sediment, debris, etc from leaving the site.

IV. Inspections:

Qualified personnel shall inspect disturbed areas of the construction site which have not yet been finally stabilized, structural control measures, and locations where vehicles and equipment enter and exit the site. Such inspections shall be conducted at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater or equivalent snowfall.

A. Disturbed areas, use areas (storage of materials, stockpiles, machine maintenance, fueling, etc.), borrow sites, and waste sites shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Discharge locations or points that are accessible, shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off site sediment tracking.

B. Based on the results of the inspection, the description of potential pollutant sources identified in section I above and pollution prevention measures identified in section II above shall be revised as appropriate as soon as practicable after such inspection. Any changes to this plan resulting from the required inspections shall be implemented within ½ hour to 1 week based on the urgency of the situation. The resident engineer will notify the contractor of the time required to implement such actions through the weekly inspection report.

C. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of this storm water pollution prevention plan, and actions taken in accordance with section IV(B) shall be made and retained as part of the plan for at least three (3) years after the date of the inspection. The report shall be signed in accordance with Part VI. G of the general permit.

D. If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the resident engineer shall notify the appropriate IEPA Field Operations Section office by email at: epa.swnoncomp@illinois.gov, telephone or fax within 24 hours of the incident. The resident Engineer shall then complete and submit an "Incidence of Noncompliance" (ION) report for the identified violation within 5 days of the incident. The resident engineer shall use forms provided by the Illinois Environmental Protection Agency and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of noncompliance shall be signed by a responsible authority in accordance with Part VI. G of the general permit.

The Incidence of Non-Compliance shall be mailed to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Compliance Assurance Section
1021 North Grand East
Post Office Box 19276
Springfield, Illinois 62794-9276

V. Non-Storm Water Discharges:

Except for flows from fire fighting activities, sources of non-storm water that is combined with storm water discharges associated with the industrial activity addressed in this plan must be described below. Appropriate pollution prevention measures, as described below, will be implemented for the non-storm water component(s) of the discharge.

A. Spill Prevention and Control - BMPs shall be implemented to contain and clean-up spills and prevent material discharges to the storm drain system. The contractor shall produce a written plan stating how his/her company will prevent, report, and clean up spills and provide a copy to all of his/her employees and the resident engineer. The contractor shall notify all of his/her employees on the proper protocol for reporting spills. The contractor shall notify the resident engineer of any spills immediately.

B. Concrete Residuals and Washout Wastes - The following BMPs shall be implemented to control residual concrete, concrete sediments, and rinse water:

- Temporary Concrete Washout Facilities shall be constructed for rinsing out concrete trucks. Signs shall be installed directing concrete truck drivers where designated washout facilities are located.
- The contractor shall have the location of temporary concrete washout facilities approved by the resident engineer.
- All temporary concrete washout facilities are to be inspected by the contractor after each use and all spills must be reported to the resident engineer and cleaned up immediately.
- Concrete waste solids/liquids shall be disposed of properly.

C. Litter Management - A proper number of dumpsters shall be provided on site to handle debris and litter associated with the project. The Contractor is responsible for ensuring his/her employees place all litter including marking paint cans, soda cans, food wrappers, wood lathe, marking ribbon, construction string, and all other construction related litter in the proper dumpsters.

D. Vehicle and Equipment Cleaning - Vehicles and equipment are to be cleaned in designated areas only, preferably off site.

E. Vehicle and Equipment Fueling - A variety of BMPs can be implemented during fueling of vehicles and equipment to prevent pollution. The contractor shall inform the resident engineer as to which BMPs will be used on the project. The contractor shall inform the resident engineer how (s)he will be informing his/her employees of these BMPs (i.e. signs, training, etc.). Below are a few examples of these BMPs:

- Containment
- Spill Prevention and Control
- Use of Drip Pans and Absorbents
- Automatic Shut-Off Nozzles
- Topping Off Restrictions
- Leak Inspection and Repair

F. Vehicle and Equipment Maintenance - On site maintenance must be performed in accordance with all environmental laws such as proper storage and no dumping of old engine oil or other fluids on site.

VI. Failure to Comply:

Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of an Erosion and Sediment Control Deficiency Deduction against the contractor and/or penalties under the NPDES permit which could be passed onto the contractor.

SUPPLEMENTARY EROSION CONTROL NOTES

1. Prior to commencement of construction, on sites that will ultimately result in the disturbance of one (1) acre or more, the Contractor shall be responsible for obtaining a copy of the notice of coverage letter and the IEPA National Pollutant Discharge Elimination System (NPDES) General Permit ILR10 from the Owner. The Owner together along with the Contractor and/or other entities if so designated by the Owner, shall be responsible for ensuring that all the requirements of the General Permit and the Storm Water Pollution Prevention Plan (SWPPP) including but not limited to the installation, maintenance as well as the installation of any additional measures necessary that may be required, and inspections of the soil erosion and sediment control measures as well as completing all of the necessary applicable certifications, reports, logs, etc. Inspections are required to be performed at least once every seven (7) calendar days and within 24 hours of the end of a storm event of 0.5 inches of rain (or equivalent snowfall) or greater. The SWPPP and all the required paperwork shall be kept on-site and be organized and ready for viewing.
2. All erosion control measures are to be installed prior to any demolition, earth moving activities or other disturbance.
3. Contractor to establish a temporary stabilized construction entrance as well as install all perimeter fencing prior to the start of any clearing or grading activities.
4. Temporary gravel stabilized construction entrance shall be maintained, adjusted, and/or relocated as necessary to prevent mud and other debris from being tracked onto adjacent public roadways. Any mud or other debris that is tracked onto a public road shall be properly removed as soon as practical but before the end of each working day.
5. Disturbed areas shall be stabilized by seeding within seven (7) calendar days of the completion of disturbance. If construction activity on a portion of the site is to resume within fourteen (14) calendar days of the end of the last disturbance, then stabilization measures do not have to be initiated on that portion of the site by the 7th day after the completion of said disturbance. Areas with slopes 3H:1V or greater shall be stabilized with erosion control blanket or mat in addition to seeding.
6. The Contractor shall provide adequate planning and supervision during the project construction period for implementing construction methods, processes and cleanup procedures necessary to prevent water pollution and control erosion.
7. No sediment or debris shall be allowed to enter the existing storm sewer system or flow offsite.
8. All temporary and permanent erosion and sedimentation control measures shall be maintained, repaired and/or replaced as necessary to ensure effective performance. If required, a designated erosion control inspector shall inspect all measures every seven (7) calendar days, or within twenty-four (24) hours of a 0.5-inch rain event or equivalent snowfall, and report where items are in non-compliance. Otherwise, the Contractor shall be responsible for the inspection as well as maintenance of all measures and shall be subject to the terms of Federal, State, and local requirements.
9. All temporary erosion and sedimentation control measures are to remain in place and be functioning until final stabilization. After final stabilization, the Contractor is to remove and properly dispose of all erosion and sedimentation measures according to Jurisdictional Agency requirements within thirty (30) days. All disturbed areas or trapped sediment that accumulates from said measures shall be permanently stabilized.
10. Topsoil stockpiles shall not be located in flood prone areas or buffers protecting wetlands, or waters of the United States or County. Stockpiles shall be protected from erosion by installing silt fence around the perimeter of the stockpile(s). Stockpiles shall be seeded within seven (7) calendar days of completion.
11. If dewatering services are used, adjoining properties and discharge locations shall be protected from erosion. Discharges shall be routed through an effective sediment control measure (i.e., sediment Trap, sediment Basin, or other appropriate measure).
12. Extreme caution shall be taken by the Contractor to prevent erosion and siltation during construction. The Contractor shall inspect catch basins and clean out if necessary. The contractor shall use silt/erosion control fence staked in place to prevent siltation of all drainage structures.
13. The Contractor shall assume responsibility for maintenance of all soil erosion and sedimentation control measures during and after construction. However, the Contractor shall not transfer these improvements for the purpose of maintenance until they have completed with the above and until they have received final inspection and approval from the Jurisdictional Agency or designated erosion control inspector and a Notice of Termination has been filed (NOT).
14. The work shall generally follow the following typical Construction Sequencing:
    a. Installation of the soil erosion and sediment control (SE/SC) measures:
        a.1. Selective vegetation removal for silt fence installation
        a.2. Silt fence installation
        a.3. Stabilized construction entrance
    b. Tree removal where necessary
    c. Strip and stockpile topsoil and mass grade the site
    d. Temporarily stabilize topsoil stockpiles (seed and silt fence around toe of slope)
    e. Construction of storm sewer system and other utilities, along with associated inlet protection
    f. Temporary stabilization of areas that have reached temporary grade
    g. Building construction
    h. Parking lot construction
    i. Permanently stabilize site with topsoil, seed and blanket
    j. Remove all temporary SE/SC measures after the site is stabilized with vegetation

Owner/Contractor Certification Statement

This certification statement is part of the Storm Water Pollution Prevention Plan for the 551 Congress Parkway project, in accordance with General NPDES Permit No. _____ issued by the Illinois Environmental Protection Agency.

I certify under penalty of law that I understand the terms of the general National Pollutant Discharge Elimination System (NPDES) permit (ILR 10) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

In addition, I have read and understand all of the information and requirements stated in the Storm Water Pollution Prevention Plan for the above mentioned project; I have provided all documentation required to be in compliance with the ILR10 and Storm Water Pollution Prevention Plan and will provide timely updates to these documents as necessary.

_____ _____

Name *Signature*

_____ _____

Title *Date*

_____ _____

Name of Firm/Company *Telephone*

_____ _____

Address *City/State/Zip*

The Owner, and all Contractor's and Sub-Contractor's performing work on this site are required to sign the above illustrated Certification Statement. The signed Certifications shall be maintained on the site with the SWPPP.

No.	Date	Revision

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SWPPP GENERAL NOTES & SPECIFICATIONS

SITE IMPROVEMENT PLANS
551 CONGRESS PARKWAY
CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

Project Manager:	D J V
Engineer:	D J V
Date:	02/22/2022
Project No.	21-215
Sheet	EC2.0/EC4

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Plot Date: Feb 22, 2022 - 8:43am Plotted By: dvane
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STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

SITE IMPROVEMENT PLANS

551 CONGRESS PARKWAY

CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

Project Manager: D. J. V.
Engineer: D. J. V.
Date: 02/22/2022
Project No. 21-215
Sheet EC3.0

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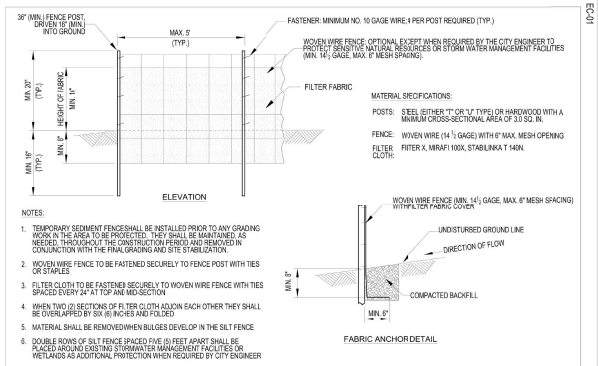
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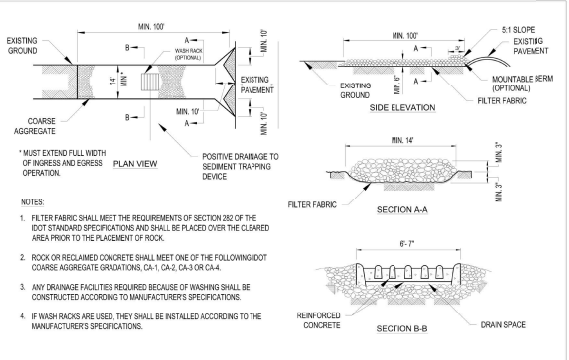
EC-01



Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	SILT FENCE	EC-01	City of Crystal Lake Illinois
2.		Date: 12/4/2012	
3.		Drawn DD / Checked AW	
4.			

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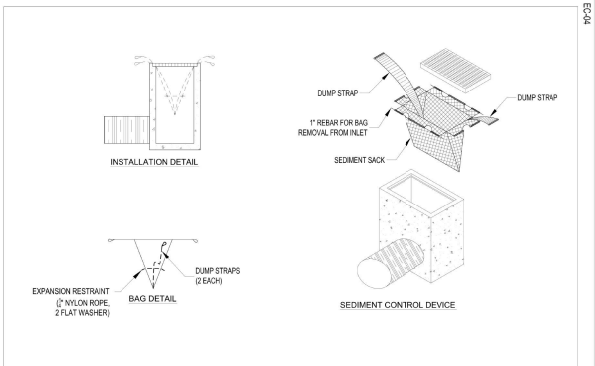
EC-02



Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	CONSTRUCTION ENTRANCE	EC-02	City of Crystal Lake Illinois
2.		Date: 07/31/2012	
3.		Drawn DD / Checked AW	
4.			

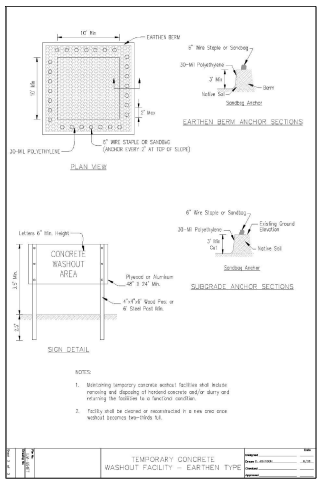
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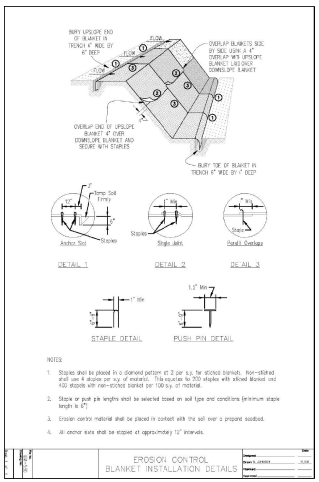
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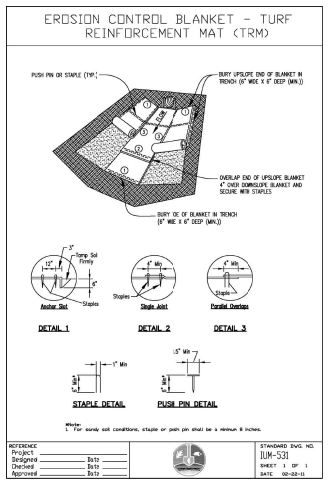


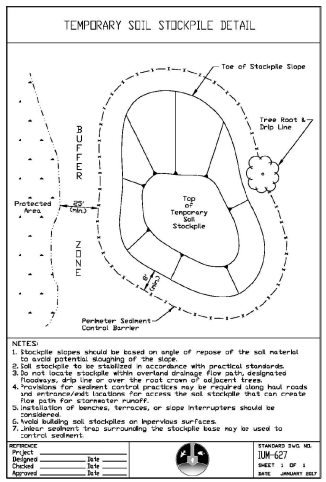
Revised:	Drawing Name	Drawing Number	
1. 06/12/2015	INLET SEDIMENT CONTROL DEVICE	EC-04	City of Crystal Lake Illinois
2.		Date: 11/2/2007	
3.		Drawn EM / Checked AW	
4.			

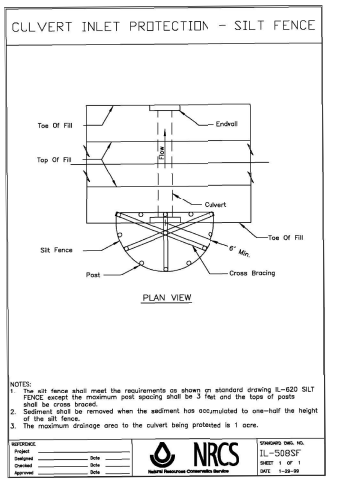
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CONSTRUCTION SEQUENCE AND RESPONSIBLE CONTRACTOR

	GRADING CONTRACTOR	UNDERGROUND CONTRACTOR	PAVING CONTRACTOR	LANDSCAPE CONTRACTOR
1. INSTALL SEDIMENT CONTROL MEASURES -STORM SEWER -EROSION CONTROL FENCE -SEDIMENT BASIN -STABILIZED CONSTRUCTION ENTRANCE -TEMPORARY SWALES -SPECIFIED STORM SEWER LINES	═══	───		
2. GRADE SITE/STOCKPILE TOPSOIL	═══			
3. INSTALL STORMWATER MANAGEMENT MEASURES -STORM SEWER -SEDIMENT TRAP (INLET PROTECTION) -DITCH/SWALES	═══	───		
4. TEMPORARY VEGETATIVE STABILIZATION -CONTROL MEASURES -TEMPORARY SEEDING -MULCHING				═══
5. INSTALL ROAD SUBGRADE: -AGGREGATE COVER			═══	
6. SITE CONSTRUCTION WORK -CURB AND GUTTER -PAVING (WALKS & DRIVEWAYS)			═══	
7. VEGETATIVE COVER ON ALL AREAS TO BE EXPOSED LONGER THAN 48 DAYS -TEMPORARY SEEDING				═══
8. SURFACE ROADS -PAVING			═══	
9. PERMANENT VEGETATIVE STABILIZATION OF ALL EXPOSED AREAS -PERMANENT SEEDING -SODDING				═══
10. INSTALL PERMANENT LANDSCAPING				═══
11. PERFORM CONTINUING MAINTENANCE	═══	═══	═══	═══

Soil Protection Chart

Stabilization Type	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Permanent Seeding			A			*	*		*			
Dormant Seeding	B									B		
Temporary Seeding			C			D						
Sodding			E**									
Mulching	F											

A KENTUCKY BLUEGRASS 90 LBS/AC MIXED WITH PERENNIAL RYE GRASS 30 LBS/AC

B KENTUCKY BLUEGRASS 135 LBS/AC MIXED WITH PERENNIAL RYE GRASS 45 LBS/AC + 2 TONS STRAW MULCH PER AC

C SPRING OATS 100 LBS/AC

D WHEAT OR CEREAL RYE 150 LBS/AC

E SOD

F STRAW MULCH 2 TONS/AC

* IRRIGATION NEEDED DURING JUNE, JULY AND SEPTEMBER
** IRRIGATION NEEDED FOR 2-3 WEEKS AFTER SODDING

SOIL PROTECTION CHART

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No.	Date	Revision

SWPPP GENERAL NOTES & SPECIFICATIONS

SITE IMPROVEMENT PLANS
551 CONGRESS PARKWAY
CRYSTAL LAKE, MCHENRY COUNTY, ILLINOIS

Project Manager:	D J V
Engineer:	D J V
Date:	02/22/2022
Project No.	21-215
Sheet	EC4.0 / EC4

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Plot Date: Feb 22, 2022 - 8:43am Plotted By: dvane
File Name: P:\2021\21215\Drawings\Final Engineering\21215-ENGINEERING.dwg

ENGINEERING REPORT

Contents:

	Drainage Narrative
Appendix A	City of Crystal Lake Flowcharts
Appendix B	Maps of the Project Area
Appendix C	Drainage Exhibits
Appendix D	Stormwater Calculations
Appendix E	2007 Final Plat of Crystal Lake Medical Pavilion
Appendix F	1996 Crystal Lake Business Center Plans & Calculations

Project:
551 Congress Parkway
Site Improvements

Location:
551 Congress Parkway
Crystal Lake, Illinois

Prepared For:
Paul Swanson Associates, Inc.
401 E Prospect Ave, Suite 201
Mount Prospect, Illinois 60056

Date:
February 22, 2022

LICENSED PROFESSIONAL ENGINEER
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OF ILLINOIS

EXP. 02-28-22

Prepared By:
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Haeger Project No.:
21-215



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INTRODUCTION

The 551 Congress Parkway Site Improvements project is proposed at 551 Congress Parkway in Crystal Lake, McHenry County, Illinois. The subject site is proposed to be re-graded to construct three apartment buildings with related site improvements. The development area's Property Index Number is 19-04-427-009. The legal description is as follows:

Legal Description

LOT 2 IN CRYSTAL LAKE MEDICAL PAVILION, BEING A RESUBDIVISION IN THE SOUTHEAST QUARTER OF SECTION 4, TOWNSHIP 43 NORTH, RANGE 8 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED JUNE 18, 2007 AS DOCUMENT 2007R041940, IN MCHENRY COUNTY, ILLINOIS.

Permits

The developer has applied for or is currently applying for the following permits.

- City of Crystal Lake (CoCL)
  - See the Crystal Lake permitting flowcharts in *Appendix A*
- Illinois Environmental Protection Agency (IEPA) Notice of Intent (NOI) General Permit to Discharge Storm Water from Construction Site Activities
- Illinois Environmental Protection Agency (IEPA) Sanitary and Watermain Permits
- Illinois Department of Natural Resources (IDNR), Consultation Agency Action Report to Identify Endangered/Threatened Species or Natural Resources (EcoCAT)
- Illinois Historic Preservation Agency (IHPA) Project Review

EXISTING CONDITIONS

Surrounding Area Description

To the north is Advocate Good Shepherd Outpatient Center & Immediate Care. To the east is the subdivision stormwater management pond and Congress Parkway. To the south is NAPA Auto Parts and Harvest Bible Chapel. To the west is Exchange Drive. There are no upstream areas that drain to the site.

Maps of the Project Area

Aerial, NRCS Soils, FEMA, USGS, Hydrologic Atlas, NWI Wetland, and Zoning exhibits are included in *Appendix B*. Per the FEMA Exhibit, no floodway or floodplain areas are located on the site. Per the Wetland Exhibit, no wetlands are located on the site.

Site History

Prior to development in 1996, the site was part of a farm. In 1996, the site was part of the Crystal Lake Business Center subdivision. The subdivision created subdivision stormwater management ponds Pond A and Pond B. The subject site has detention storage provided for up to 60% impervious area coverage. The 1996 design had the site's area split with 6.06 acres tributary to Pond A and the remaining area tributary to Pond B.

Existing Drainage

The 6.613-acre site was surveyed in 2021, and the survey points and contours were analyzed to determine the current drainage patterns. The site is mostly pervious with only 0.033 acres of impervious area coming from the sidewalk along Exchange Drive.

Existing drainage patterns:

- 0.387 acres flows to the west to Exchange Drive
- 4.661 acres flows to the north to Lot 1. This stormwater is then directed to Pond B via Lot 1 storm sewer and the swale along Congress Parkway
- 1.221 acres flows to the northeast and then flows to Pond B via the swale along Congress Parkway
- 0.384 acres flows to the east to Pond A

PROPOSED CONDITIONS

Proposed Site Plan

The developer is proposing to construct three apartment buildings with related site improvements. The related improvements consist of parking features, utilities (water, storm, sanitary, etc.), and mass grading. Each building has 7 one-bedroom units and 24 two-bedroom units. For these proposed units, a total of 199 parking spaces are required with 6 spaces being accessible spaces. The spaces area located along a ring road within the site around Building A & Building B. Two parking garages are proposed, each with 8 spaces. A full entrance is proposed onto Exchange Drive in the southwest corner of the site. Work within the Exchange Drive ROW consists of removing and adding some sidewalk, constructing a new entrance, regrading, and restriping. A sidewalk connection is proposed to Congress Parkway. For further information concerning the site plan, please see the Site Improvement Plans.

Storm Sewer Design

Stormwater is transported to the ponds via sheet flow and 100-year storm sewer from throughout the site. Overland flow routes direct stormwater to the subdivision pond for large storm events or in the situation that a component has become clogged. The system only accepts stormwater from the project site. Detailed storm sewer calculations and a storm sewer tributary area exhibit are included in *Appendix D*.

Proposed Detention Storage

The site has detention storage already provided for up to 60% impervious area coverage per the 1996 Crystal Lake Business Center subdivision calculations. The proposed site plan is 50.20% impervious area, which is less than the 60% allowable.

The 1996 design had 6.06 acres of the site tributary to Pond A, with the rest tributary to Pond B. The proposed grading & utility plans has 5.696 acres tributary to Pond A, with the rest tributary to Pond B. This is within 6% of the design tributary area.

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Sam Schwartz

Memorandum

To: Abigail Wilgreen PE CFM, City of Crystal Lake
From: Sara Disney Haufe, PE, PTOE, and Kathleen Murphy, PE
Date: December 6, 2021
Re: 551 Congress Apartments – Technical Memorandum

Sam Schwartz Consulting, LLC, (Sam Schwartz) was retained through an existing on-call contract with the City of Crystal Lake to prepare a technical memorandum detailing the projected traffic characteristics of a multifamily residential development proposed on the east side of Exchange Drive south of Congress Parkway in Crystal Lake, Illinois. Under the proposed development plan, three three-story buildings would be constructed providing a total of 93 dwelling units, including 21 one-bedroom units and 72 two-bedroom units. The development would include 199 total parking spaces (including six accessible spaces) in an on-site parking lot that would be accessed via a single driveway on Exchange Drive. A site plan is included in the Appendix.

The following memorandum documents Sam Schwartz's methodology and projections for the traffic characteristics of the proposed site. The contents of this memorandum reflect typical industry practices for estimating traffic for developments of this nature.

Trip Generation Projections

Using the Institute of Transportation Engineers (ITE) manual Trip Generation, 11th Edition, site-generated trip projections were calculated according to data provided for ITE Land Use Code (LUC) 220 – Multifamily Housing (Low-Rise). This category corresponds to multifamily dwellings with two or three stories. Within LUC 220, the ITE manual provides data for a variety of settings, including General Urban/Suburban, Dense Multi-Use Urban, and Center City Core. In addition to these settings, the ITE manual provides data for two subcategories: Close to Rail Transit (defined as within a half-mile walking distance of a rail transit station entrance) and Not Close to Rail Transit. Given the vehicle-centric nature of area development, demonstrated by the large parking lots that are generally located between the street and commercial areas, the study area fits the ITE definition of a General Urban/Suburban setting. Although the proposed site will be approximately one quarter-mile walking distance from the Pingree Road Metra commuter rail station, the Close to Rail Transit subcategory for a General Urban/Suburban setting only has data from one site during the peak hours of adjacent street traffic. Because of this small sample size, using the data for this subcategory and setting is not likely to produce reliable results. Additionally, local census data on area mode split would provide a more representative estimate of potential non-auto trips generated by the subject site than this single-survey data in the ITE manual, as further discussed in the subsequent paragraph. Therefore, data for the Not Close to Rail Transit subcategory in a General Urban/Suburban setting was utilized for the purposes of this evaluation to estimate baseline trip generation potential for the site. This data is shown in **Table 1** on the following page.

Sam Schwartz Engineering, DPC is a firm authorized to perform engineering services in different states and works in cooperation with Sam Schwartz Consulting, LLC, collectively comprising the Sam Schwartz team. Working as a team provides both companies access to the entire network of professionals.

Table 1. ITE Trip Generation Data

Land Use	Weekday Daily	Weekday Morning Peak Hour	Weekday Evening Peak Hour
Multifamily Housing (Low-Rise) *Setting: General Urban/Suburban* *Subcategory: Not Close to Rail Transit*	T = 6.41(X) + 75.31 50% in / 50% out	T = 0.40(X) 24% in / 76% out	T = 0.51(X) 63% in / 37% out

T = Trips generated
X = Number of dwelling units

Since the proposed residential development is located in close proximity to the Pingree Road Metra station, it is likely that this development would attract residents who would walk to the station to commute via Metra. Therefore, the trip projections were reduced to account for the projected non-auto mode share, which was determined using local data for commuters in the surrounding neighborhood. The American Community Survey *Means of Transportation to Work* database was referenced to obtain information about commuting patterns for Census Tract 8713.01, shown in ***Figure 1***. The location of the proposed development within this census tract is marked below.



Figure 1: Census Tract Boundaries & Area Transit Service

The resulting mode split data reveals that approximately 13.1 percent of residents in the census tract travel to and from work via non-auto modes, which include public transportation, walking, bicycling, and working from home. Census tract data is attached to this memorandum. Since the non-auto mode share for this development may be higher than the census tract average due to its close proximity to transit, a 13.1 percent non-auto mode share can be considered conservative for this evaluation. The baseline trip

generation data was therefore reduced accordingly, and the resulting vehicular trip generation projections for the proposed site are shown in **Table 2**.

Table 2. Site-Generated Vehicle Trip Projections

Land Use	Size	Weekday Daily	Weekday Morning Peak Hour			Weekday Evening Peak Hour		
			In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise)	93 dwelling units	670	10	30	40	30	20	50
Minus Non-Auto Mode Share (13.1%)		*-90*	*–*	*-5*	*-5*	*-5*	*–*	*-5*
Total Vehicle Trips (rounded to nearest multiple of five)		**580**	**10**	**25**	**35**	**25**	**20**	**45**

As shown, the proposed development is expected to generate 35 total vehicle trips in the morning peak hour and 45 trips in the evening peak hour. On a typical weekday, approximately 580 total vehicle trips are expected to be generated.

Site Access & Circulation

Access to the site is proposed via a single driveway to Exchange Drive, located approximately 300 feet south of the existing Station Drive. On the site plan, this driveway is shown to provide one left-turn lane and one right-turn lane for outbound traffic, as well as a single receiving lane. Given the relatively low trip projections for the peak hours, which are not expected to exceed 45 vehicles per hour as shown in Table 2, a single outbound lane should sufficiently accommodate peak hour demand; the outbound lane configuration as shown would therefore be expected to provide adequate capacity. The internal traffic circulation shown on the site plan was also found to be acceptable, including the placement of the site access driveway at the southern end of the property.

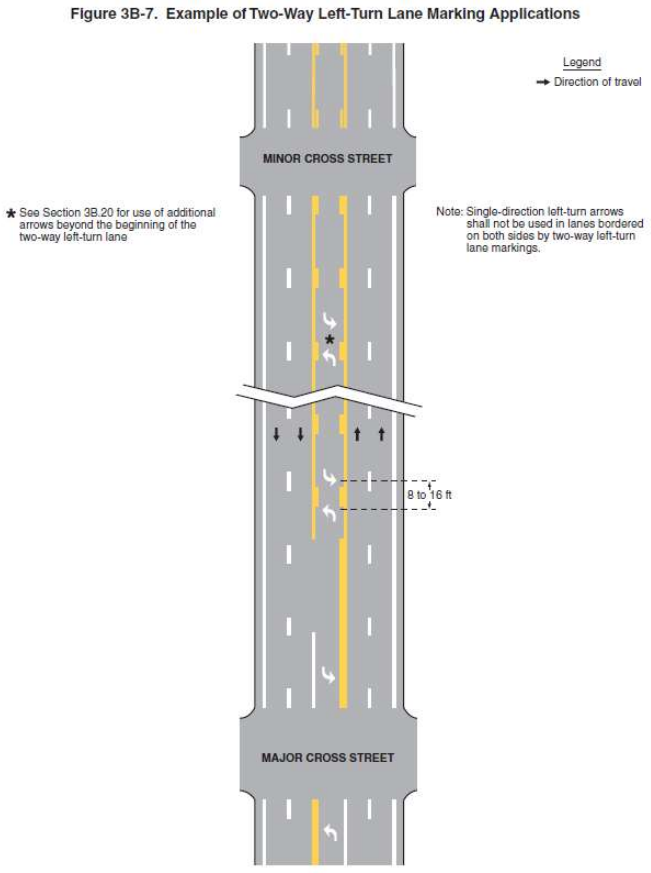


Figure 2: Two-Way Left Turn Lane Application (MUTCD)

Warrants for auxiliary turn lanes along Exchange Drive at the site driveway would not be met based on the anticipated site trip projections and a review of existing traffic volumes on Exchange Drive (which were referenced from previously collected count data

at Exchange Drive and Congress Parkway for the nearby Project Cooper development). However, because there is an existing striped median at the access location that transitions into a northbound left-turn lane on Exchange Drive at Station Drive just north of the site driveway, it is recommended that a southbound left-turn lane be striped along Exchange Drive at the site driveway. It is recommended that the median on the roadway segment between Station Drive and the site driveway be restriped as a two-way left-turn lane, with northbound and southbound left-turn lanes on either end consisting of a 50-foot storage bay and a 50-foot taper transition for each. An excerpt from the Manual on Uniform Traffic Control Devices (MUTCD) illustrating this proposed configuration is shown in ***Figure 2***.

Area Traffic Operations

The dominant routing of site-generated trips during the weekday peak hours is expected to be to and from the south on Exchange Drive to connect to Northwest Highway (US 14) approximately one quarter-mile south of the site, since this regional arterial route would connect residents to numerous employment centers throughout the metropolitan area. The intersection of Exchange Drive and US 14 currently serves as the main access point to the Bohl Farm Marketplace retail center, which includes several big-box stores, restaurant outlots, and smaller retailers. Based on the traffic projections shown previously in Table 2, anticipated site traffic from this residential development would make up a small percentage of traffic on the southbound approach of Exchange Drive at Northwest Highway. With existing dual southbound left-turn lanes on Exchange Drive at this location, as well as dedicated turn lanes onto Exchange Drive from Northwest Highway and signalized intersection control, the addition of a relatively small number of site trips at this location should have a negligible effect on operations.

Although the majority of site-generated trips are expected to travel to and from the south on Exchange Drive, it is expected that some will travel to and from the north on Exchange Drive and use Congress Parkway to access Main Street to the west or Pingree Road to the east. Using an estimated directional distribution of the site-generated trips, Sam Schwartz expects that approximately 15 percent of site trips would utilize this intersection and has identified the relative increase in traffic attributable to the proposed residential development as compared to existing volumes at the intersection of Congress Parkway and Exchange Drive, shown in **Table 3** below. Similar comparison tables were previously completed for nearby developments to facilitate discussions between the City and area developers regarding future area improvements that would provide benefits to existing and future users.

Table 3. Projected Traffic Volume Increase due to Proposed Development

Intersection	Total Intersection Traffic Volume PM Peak Hour (vehicles per hour)		Percent Increase
	Existing	Existing + Residential Development	
Congress Parkway / Exchange Drive	1,030	1,037	0.7%

Area Pedestrian Access

In addition to being located near the Pingree Road Metra Station, as discussed earlier in this memorandum, the proposed residential development is also located less than a quarter-mile from the Bohl Farm Marketplace retail center. This retail center includes a Fresh Thyme grocery store, a Target, a Planet Fitness gym, and several other retailers and restaurants that would be within walking distance for site residents. Therefore, area pedestrian infrastructure was reviewed for potential improvements that could be made to facilitate this expected pedestrian activity.

The City of Crystal Lake has indicated that there are plans to construct a roundabout at the intersection of Congress Parkway and Exchange Drive, which would include crosswalks on all four legs of the intersection. These proposed crosswalks would create a continuous pedestrian connection from the proposed residential development to the Pingree Road Metra station. A preliminary geometric plan for this intersection reconstruction can be found in the Appendix.

There are existing curb ramps on Exchange Drive at the proposed site driveway location. Since the ramp on the east side of Exchange Drive will have to be demolished in order to construct the site driveway as proposed, it is recommended that both ramps be reconstructed just south of the proposed site driveway. Since residents of the proposed development would be expected to use this crossing to access the shops at the Bohl Farm Marketplace, it is recommended that a high-visibility crosswalk be striped between these ramps and “Stop Here for Pedestrians” signage (MUTCD sign code R1-5b, shown in ***Figure 3***) be posted on both legs of Exchange Drive in accordance with the MUTCD. A continuous sidewalk should be provided across the site driveway, and a stop bar should be striped behind the sidewalk.



Figure 3: R1-5b Sign (MUTCD)

Within the proposed site, some additional sidewalk segments are recommended to connect the internal sidewalk network with the sidewalk on Exchange Drive, which will provide easier pedestrian access both to the Metra station and to the shopping center. First, a sidewalk segment should be constructed along the north side of the site driveway to provide pedestrian access between the proposed sidewalk running south of Building “B” and the sidewalk on Exchange Drive. Another sidewalk segment should be constructed near the north end of the site to connect the proposed sidewalk along the north side of Building “A” to the existing sidewalk along Exchange Drive.

Recommendations and Conclusions

Based on the assumptions and analyses detailed in this memorandum, the following recommendations should be implemented as part of the proposed residential development:

- Restripe the median on Exchange Drive between Station Drive and the proposed site driveway to provide a two-way left-turn lane, bookended by dedicated left-turn lanes into Station Drive and the proposed site access driveway, each with a 50-foot storage bay and 50-foot taper transition.
- Relocate the existing curb ramps on Exchange Drive at the proposed site driveway south of the driveway. Stripe a high-visibility crosswalk between the ramps and post “Stop Here for Pedestrians” signage on both legs of Exchange Drive.
- Provide a continuous sidewalk across the site driveway and stripe a stop bar behind the sidewalk.
- Construct sidewalks between the site parking lot and the existing sidewalk on Exchange Drive near the north and south ends of the site.

With implementation of the above recommendations, it is anticipated that area traffic operation would be generally acceptable after completion of the subject development.